Fowler™

HIGH PRECISION



Catalog 2413-8-01

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



Looking Forward

A message from CEO Cynthia Fowler-Francis and Fowler President David Francis

Now in our 67th year The Fred V. Fowler Company is globally recognized as one of today's leading suppliers of high quality inspection, leveling, control and calibration equipment. Since 1946, we have been dedicated to supplying the most innovative products available anywhere in the world. Our company's long-standing affiliations with other industry leaders such as Wyler, Sylvac, Bowers and Trimos have helped us remain dynamic, responsive and at the forefront of our industry's ever-changing demands.

As manufacturers continue to produce products that are smaller, lighter, faster, more precise and just-in-time, Fowler continues to introduce important new tools designed to lead the way in inspection, measurement and calibration.

Beyond great products Fowler is focused on people. Our technical field-sales team our repair and service technicians and every Fowler associate from the front office to the distribution center is committed to the highest level of customer service and support. Our goal is to correctly process and ship each new order every day, no questions asked.

With a strong commitment to innovative products and smart customer-focused people the Fowler Company is well positioned for continued strong growth for the next 65 years.

Thank you



Cynthia Fowler-Francis
CEO



David Francis
President

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

FOWLER WARRANTY

Fowler stands behind their products with the best industry-wide warranty and the quickest repair turnaround times.

5 YEAR WARRANTY

Against defective materials or workmanship on

ALL MAJOR INSTRUMENTS LISTED BELOW:

ALL FOWLER/BOWERS
• Bore Gages • Horizontal Measuring Systems •
• Digital Thread Systems •

ALL FOWLER/SYLVAC
• Height Gages • Horizontal Measuring Instruments
• Digital Calipers, Indicators & Protractors •
• Digital Scales • Displays & Probes •

ALL FOWLER/TRIMOS
• Vectra, Mestra & V-Series Height Gages •
• Horizontal Measuring Instruments • Tool Presetters •

1 YEAR WARRANTY

Against defective materials or workmanship on all other products listed in the Precision Tools & Instruments Catalog

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Table of Contents

Title	Page
Micrometers	7
Calipers	49
Depth Gages	65
Tool Sets	75
Indicators	87
Displays & Probes	117
Bases & Stands	123
Inside and Outside Measurement	137
Bore Gages	153
Height Gages	193
Horizontal Measurement	215
Levels & Protractors	243
Materials Testing	267
Optical Measurement	279
Reference Masters	303
Shop Tools	325
Software	389
Index	395

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Micrometers

Calipers

Depth Gages

Tool Sets

Indicators

Displays & Probes

Bases & Stands

Diameter Measurement

Bore Gages

Height Gages

Horizontal Measurement

Levels & Protractors

Materials Testing

Optical Measurement

Reference Masters

Shop Tools

Software

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



MICROMETERS

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

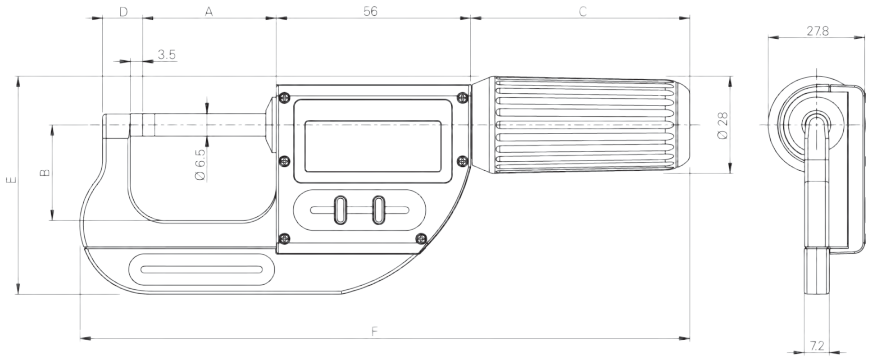
Fowler

Rapid-Mic Electronic Micrometer





- Auto On/Off
- Position recall
- IP67 with or without data cable.
- Delrin quick displacement thimble
- Adjustable measuring force, 5N/10N
- Menu customizable with free software
- Non-rotating spindle
- USB output
- Carbide anvils
- Extended Range 0-30mm, 30-66mm and 66-102mm
- Blade anvils available, Contact Fowler Technical Department.



LIFETIME WARRANTY

Swiss Quality!

IP67

Fowler PROXIMITY INTERFACE

Rapid spindle Movement

Extended range

Speciality Micrometers available, Contact the Fowler Technical Department.

Part Number	Range	Max Error
54-815-030	0-1.18"/0-30mm	.00012"/.003mm
54-815-060	1.18"-2.6"/30-60mm	.00016"/.004mm
54-815-100	2.6"-4.0"/66-102mm	.00020"/.005mm
Set		
54-815-111	0-102mm RAPID Mic Set	
Accesories		
54-815-222	Stand	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

X-SERIES

Fred V. Fowler Co., Inc.

Fowler RS-232 DIRECT

IP54

FREE!



Ball Attachment

Solid Machinists Tool

XTRA-VALUE Digi-Micrometers



No. 54-815-001

- Protected to IP54 specifications.
- Rugged steel design
- Large LCD Display.
- Absolute & incremental modes
- Automatic switch off.
- Resolution: .00005"/.001mm.
- Direct RS232 output.
- Carbide measuring faces.
- Sizes over 1"/25mm include standard.



No. 54-815-103

Part Number	Range	Resolution
54-815-001-2	0-1"/0-25mm	.00005"/.001mm
54-815-002-2	1-2"/25-50mm	.00005"/.001mm
54-815-003-2	2-3"/50-75mm	.00005"/.001mm
Set		
54-815-103	0-3"/0-75mm Set	
Replacement Battery		
54-100-350	CR2032 Replacement Battery	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic Coolant Resistant Micrometers



- Protected to IP54 specifications
- Large LCD Display
- Automatic switch off
- Resolution: .00005"/.001mm
- Direct RS-232 output
- Carbide measuring faces
- Absolute & incremental modes
- Sizes over 1"/25mm include standard

Part Number	Range	Accuracy
54-860-001-1	0—1"/0—25mm	.00016"
54-860-002-1	1—2"/25mm—50mm	.00016"
54-860-003-1	2—3"/50mm—75mm	.0002"
Set		
54-860-103	0—3"/0—75mm	
Replacement Battery		
54-902-110	LR44 Battery	

Xtra Value II Electronic Micrometers



No. 54-870-001

- Jet black and grey enamel finish.
- Large LCD display.
- Resolution: .00005"/.001mm
- Accuracy: ±.00016"/.004mm
- Direct RS 232 output.
- Carbide measuring faces.
- Absolute and incremental modes.
- Ratchet thimble.
- Includes case.

Part Number	Range	Accuracy	Resolution
54-870-001	0-1"/0-25mm	±.00016"	.00005"/.001mm
54-870-002	1-2"/25-50mm	±.00016"	.00005"/.001mm
54-870-003	2-3"/50-75mm	±.00016"	.00005"/.001mm
Set			
54-870-103	0-3"/0-75mm Set		
Replacement Battery			
54-100-350	Replacement Battery		

FREE!
Ball Attachment

IP54

XTRA-VALUE

FREE!
Ball Attachment

Protected to:
IP40
DUST RESISTANT

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Fowler RS-232 DIRECT

IP54

QuadraMic

Electronic 4-way Reading Micrometer



No. 54-866-001

Micrometer reads 4 ways for incredible versatility!



Features two displays which enable the operator to read as a right or left-handed micrometer. Simply press a button to invert the display allowing the micrometer to be used for a variety of measuring positions.

Features:

- Large 4-way reading LCD display!
- Automatic switch off.
- Resolution: .00005"/.001mm
- Absolute measuring system.
- Friction thimble
- Direct RS 232 output.
- Carbide measuring faces.
- Meets or exceeds Federal accuracy specs.
- Includes case.

Part Number	Range	Resolution	Thimble
54-866-001	0-1"/0-25mm	.00005"/.001mm	Friction
54-866-002	1-2"/25-50mm w/standard	.00005"/.001mm	Friction
54-866-003	2-3"/50-75mm w/standard	.00005"/.001mm	Friction
54-866-004	3-4"/75-100mm w/standard	.00005"/.001mm	Friction
54-866-005	4-5"/100-125mm w/standard	.00005"/.001mm	Friction
54-866-006	5-6"/125-150mm w/standard	.00005"/.001mm	Friction
Accessories			
54-115-779	Computer Connect Kit		
54-100-350	Replacement Battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Digit Counter Outside Micrometers



No. 52-224-001

Featuring clear, easy to read numbers on a digital counter, Fowler's digit counter micrometers are an economical, fast and easy-to-use addition to the machinist's toolchest, the shop floor or in the QC area.

Features:
- Hammertone grey baked enamel frame with heat insulated frames.
- Microfine graduations on satin chrome.
- Ratchet thimble.
- Anvil and spindle hardened and precision ground with microlap finish on carbide tipped measuring faces.
- Spindle thread is hardened, ground and lapped.
- Diameter of measuring faces is 2.56"
- Digital counter reads to .001"/0.1mm with .0001"/.01mm on vernier.
- Quick, easy zero adjustment on sleeve.
- Positive locking nut on spindle.
- Parallelism: .00005" for 0-1"
- Flatness: .00003"
- Meets or exceeds Federal accuracy specs.
- Includes wrench and case.

Part Number	Range	Graduation	Accuracy
Inch			
52-224-001	0-1"	.0001"	±0.00016"
52-224-002	1-2" w/standard	.0001"	±0.00016"
52-224-003	2-3" w/standard	.0001"	±0.0002"
52-224-004	3-4" w/standard	.0001"	±0.0002"
52-224-005	4-5" w/standard	.0001"	±0.00024"
52-224-006	5-6" w/standard	.0001"	±0.00024"
Metric			
52-224-009	0-25mm	.01mm	±0.004mm
52-224-010	25-50mm	.01mm	±0.004mm
52-224-011	50-75mm	.01mm	±0.005mm
Sets			
52-224-103	0-3" w/standards & case	.0001"	
52-224-104	0-4" w/standards & case	.0001"	
52-224-220	0-75mm w/standards & case	.01mm	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Outside Inch Micrometers



No. 52-229-213



No. 52-229-201

Fowler's Swiss Style micrometers are made exclusively for Fowler. A great value—they offer the same fine features and quality that you expect from comparable tools at a fraction of the cost.

Features:

- Unique friction design allows one hand operation.
- .0001"/.01mm graduations.
- Swiss style design, balance and quality.
- Friction/Ratchet thimble assures you of consistent readings at all times. Barrel, thimble and frame are satin chrome finished; microfine graduations allow easy reading.
- Measuring faces are carbide tipped.
- A wrench is included, permitting quick and easy zero adjustment on sleeve.
- Flatness: .00003". Parallelism: .00005" for the 0—1"/0—25mm measuring range.
- Fully insulated frame isolates heat from the operator's hand.
- One piece design, extremely well balanced, lightweight (0—1"/25mm size weighs only 7-3⁄4 oz.)
- Positive lever-locking clamp ensures reliable measurement at all times.
- Spindle diameter .256"/6.5mm. Anvil and spindle hardened and precision ground.
- Meets or exceeds Fed. specs for accuracy.
- Includes a case.

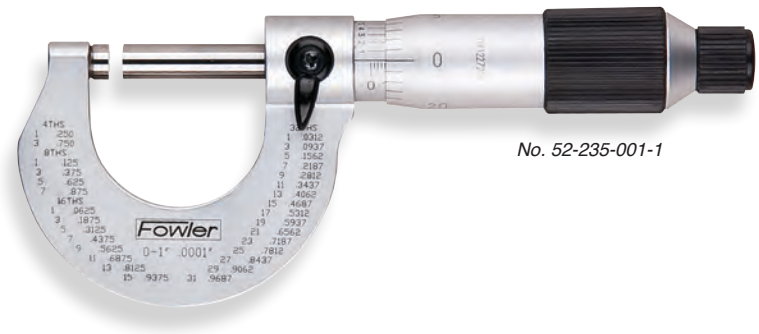
Nice Quality!

Part Number	Range	Graduation	Accuracy
Inch			
52-229-201	0-1"	.0001"	± .00016"
52-229-202	1-2" w/standard	.0001"	± .00016"
52-229-203	2-3" w/standard	.0001"	± .0002"
52-229-204	3-4" w/standard	.0001"	± .0002"
52-229-205	4-5" w/standard	.0001"	± .00024"
52-229-206	5-6" w/standard	.0001"	± .00024"
Metric			
52-229-209	0-25mm	.01mm	± .004mm
52-229-210	25-50mm w/standard	.01mm	± .004mm
52-229-211	50-75mm w/standard	.01mm	± .005mm
52-229-212	75-100mm w/standard	.01mm	± .005mm
Sets (inch)			
52-229-213	0-3" set w/standards & case	.0001"	
52-229-214	0-4" set w/standards & case	.0001"	
Sets (mm)			
52-229-215	0-75mm set w/standards & case	.01mm	
52-229-220	0-100mm set w/standards & case	.01mm	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Inch Outside Micrometers



No. 52-235-001-1

An advanced design micrometer series featuring superior quality, perfect balance and full-finish tapered frame.

Economical in price, these tools receive special care in design and workmanship to ensure high precision and long life. Fowler Micrometers meet or exceed Federal specifications for accuracy. The perfect micrometer for all around measuring.

Features:
- Satin chrome finish forged steel frame is tapered for hard to get at locations.
- Decimal equivalents on frame are black for good contrast against the satin chrome.
- Sleeve and thimble have microfine black graduations contrasted with satin chrome.
- Anvil and spindle carefully hardened and precision ground, with microlapped ends.
- Ultra-positive locking clamp to ensure reliable measurement setting at all times.
- Smooth action ratchet style thimbles for exact and repetitive settings.
- Wear-resistant carbide faces on anvil and spindle precision ground and microlapped.
- Diameter of measuring faces: .256"
- Flatness: .00003"
- Parallelism: .00005"
- Accuracy: .0001"
- A spanner wrench is included with each tool for quick and easy zero adjustment.
- Includes case.
- Includes standard for 1-2" sizes.



No. 52-235-100

Part Number	Range	Graduation	Thimble
Inch Series:			
52-235-001-1	0-1"	.0001"	Ratchet
52-235-002-2	1-2" w/standard	.0001"	Ratchet
52-235-003-2	2-3" w/standard	.0001"	Ratchet
Set (inch)			
52-235-100	0-3" set w/standards & case	.0001"	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Metric Outside Micrometers



An advanced design micrometer series featuring superior quality, perfect balance and full-finish tapered frame.

Economical in price, these tools receive special care in design and workmanship to ensure high precision and long life. Fowler Micrometers meet or exceed Federal specifications for accuracy. The perfect micrometer for all around measuring.

Features:
- Satin chrome finish forged steel frame is tapered for hard to get at locations.
- Sleeve and thimble have microfine black graduations contrasted with satin chrome.
- Anvil and spindle carefully hardened and precision ground, with microlapped ends.
- Ultra-positive locking clamp to ensure reliable measurement setting at all times.
- Smooth action friction style thimbles for exact and repetitive settings.
- Paralax free thimble.
- Wear-resistant carbide faces on anvil and spindle precision ground and microlapped.
- Diameter of measuring faces: 6.5mm
- A spanner wrench is included with each tool for quick and easy zero adjustment.
- Includes case.
- Includes standard for 25-50mm sizes.

Part Number	Range	Graduation	Accuracy
Metric Series:			
52-235-101-1	0-25mm	.001mm	±.004mm
52-235-102-1	25-50mm w/standard	.001mm	±.004mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

0-.500" Outside Micrometers



This micrometer is the 1/2" companion of the 52-235 series of micrometers.

Features:
- 0-1/2" micrometer by .001", Satin chrome finish.
- Forged steel frame.
- Anvil and spindle hardened and precision ground with microlapped ends.
- Clear, crisp graduations on barrel and thimble.
- Diameter of measuring faces: .197"
- Flatness: .00003"
- Parallelism: .00005"
- Accuracy: .001"
- Range: 0-1/2".
- Includes case.



Shown actual size!

Pocket sized!

Part Number	Description	Graduation	Accuracy
52-230-000	0-.500" Outside Micrometer	.001"	.001"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Interchangeable Anvil Micrometers



No. 52-401-222-1

Fowler's Interchangeable Anvil Micrometers are very popular in machine and auto repair and for all other applications requiring a versatile micrometer. Each micrometer is equipped with a series of easily interchangeable anvils to fulfill the ranges listed. Standards are also included to accurately adjust the required range.

Features:

- Hammertone blue baked enamel frame.
- Graduations (.001") are microfine on satin chrome for easy reading.
- Each anvil is fitted with an adjusting collar to set the overall dimension.
- Spindle thread is hardened and precision ground with microlap finish in carbide tipped measuring faces.
- Ratchet stop ensures exact readings.
- A wrench is included for fast, easy zero adjustment on the sleeve.
- Positive lever locking clamp assures accurate settings.
- Standards are included with each set.
- Parallelism: .0004"
- Flatness: .00003"
- Includes case.

Part Number	Range	Graduation	Accuracy
52-401-221-1	0-6" w/standards & case	.0001"	.00024"
52-401-222-1	6-12" w/standards & case	.0001"	.00024"
52-401-204-1	12-16" w/standards & case	.001"	.00036"
52-401-205-1	16-20" w/standards & case	.001"	.00036"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Outside Inch Micrometers



No. 52-253-001-1

.001" Graduations

The Fowler No. 52-253 series of outside micrometers features exceptional quality and accuracy.

Distinct figures and graduations on the non-glare, satin chrome background permit easy reading, and the ribbed frame allows for measuring with extra ease and comfort.

- Hammertone blue baked enamel finish.
- Microfine graduations on satin chrome finish and carbide tipped measuring faces.
- Graduation: .001"
- Includes standard with sizes 2" and over.
- Diameter of measuring faces: .256"
- Friction stop thimble for exact and repetitive readings.
- Flatness: .00003"
- Accuracy: .0001" for 0-1"
- Parallelism: .00005" for 0-1"
- Positive lever locking clamp ensures reliable measurement.
- Anvil & spindle hardened and precision ground with microlap finish on tips.
- All micrometers meet or exceed U.S. Federal specifications for accuracy.
- Includes a wrench and case.

Part Number	Range	Graduation	Accuracy	Thimble
52-253-001-1	0-1"	.001"	±.001"	Friction
52-253-101-1	0-1"	.001"	±.001"	Ratchet
52-253-002-1	1-2" w/standard	.001"	±.001"	Friction
52-253-102-1	1-2" w/standard	.001"	±.001"	Ratchet
52-253-003-1	2-3" w/standard	.001"	±.001"	Ratchet
52-253-004-1	3-4" w/standard	.001"	±.001"	Ratchet
52-253-005-1	4-5" w/standard	.001"	±.001"	Ratchet
52-253-006-1	5-6" w/standard	.001"	±.001"	Ratchet
Sets				
52-253-400-1	0-4" w/standards & case			
52-253-600-1	0-6" w/standards & case			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Outside Inch Micrometers



No. 52-240-001-1

.0001" Graduations

The Fowler No. 52-240 series offers a wide variety of sizes to cover a range of measuring needs.

Fowler micrometers are of the finest quality available, at prices that defy competition. Special care in design and workmanship create a long lasting precision tool.

Features:

- Hammertone blue baked enamel finish.
- Microfine graduations on satin chrome finish and carbide tipped measuring faces.
- Diameter of measuring faces: .256"
- Graduation: .0001"
- Flatness: .00003"
- Quick, easy zero adjustment on sleeve.
- Positive lever locking clamp
- Spindle thread hardened, ground and lapped for ultimate accuracy.
- Anvil & spindle hardened and precision ground with microlap finish on tips.
- Meets or exceeds Federal accuracy specs.
- Includes a wrench and case.

Part Number	Range	Graduation	Accuracy	Thimble
52-240-001-1	0-1"	.0001"	±.00015"	Friction
52-240-101-1	0-1"	.0001"	±.00015"	Rathet
52-240-002-1	1-2" w/standard	.0001"	±.00015"	Friction
52-240-102-1	1-2" w/standard	.0001"	±.00015"	Ratchet
52-240-003-1	2-3" w/standard	.0001"	±.0002"	Ratchet
52-240-004-1	3-4" w/standard	.0001"	±.0002"	Ratchet
52-240-005-1	4-5" w/standard	.0001"	±.00025"	Ratchet
52-240-006-1	5-6" w/standard	.0001"	±.00025"	Ratchet
52-240-007-1	6-7" w/standard	.0001"	±.0003"	Ratchet
52-240-008-1	7-8" w/standard	.0001"	±.0003"	Ratchet
52-240-009-1	8-9" w/standard	.0001"	±.0003"	Ratchet
52-240-010-1	9-10" w/standard	.0001"	±.0003"	Ratchet
52-240-011-1	10-11" w/standard	.0001"	±.00035"	Ratchet
52-240-012-1	11-12" w/standard	.0001"	±.00035"	Ratchet
Sets				
52-215-003-1	0-3" w/standards & case	3-piece Micrometer Set. (Includes No. 52-240-001-1 thru No. 52-240-003-1)		
52-215-004-1	0-4" w/standards & case	4-piece Micrometer Set. (Includes No. 52-240-001-1 thru No. 52-240-004-1)		
52-215-006-1	0-6" w/standards & case	6-piece Micrometer Set. (Includes No. 52-240-001-1 thru No. 52-240-006-1)		
52-215-012-1	0-12" w/standards & case	12-piece Micrometer Set. (Includes No. 52-240-001-1 thru No. 52-240-012-1)		
52-215-612-1	6-12" w/standards & case	6-piece Micrometer Set. (Includes No. 52-240-007-1 thru No. 52-240-012-1)		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Large Capacity Inch Micrometers



No. 52-240-013-1

For larger applications, Series No. 52-240 is available in sizes up to a 20". Each micrometer offers superior design and workmanship to ensure high precision and long life — and at economical prices.

Features:
- Hammertone blue baked enamel finish.
- Microfine graduations on satin chrome finish and carbide tipped measuring faces.
- Diameter of measuring faces: .295"
- Ratchet stop thimble for exact and repetitive readings.
- Graduation: .001"
- Flatness: .00003"
- Quick, easy zero adjustment on sleeve.
- Positive lever locking clamp ensures reliable measurement setting at all times.
- Anvil & spindle hardened and precision ground with microlap finish on tips.
- All micrometers meet or exceed U.S. Federal specifications for accuracy.
- Includes standard
- Includes a wrench and case.

Part Number	Range	Graduation	Accuracy
52-240-013	12-13" w/standard	.001"	.011"
52-240-014	13-14" w/standard	.001"	.011"
52-240-015	14-15" w/standard	.001"	.011"
52-240-016	15-16" w/standard	.001"	.011"
52-240-017	16-17" w/standard	.001"	.013"
52-240-018	17-18" w/standard	.001"	.013"
52-240-019	18-19" w/standard	.001"	.013"
52-240-020	19-20" w/standard	.001"	.013"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Outside Metric Micrometers



No. 52-248-001



No. 52-248-101

Series No. 52-248 offers Fowler standards of fine quality and accuracy. A variety of sizes covers a range of measuring applications.

Features:

- Hammertone blue baked enamel finish.
- Microfine graduations on satin chrome finish and carbide tipped measuring faces.
- Graduation: .01mm
- Diameter of measuring faces: 6.5mm
- Friction or ratchet stop thimble for exact and repetitive readings.
- Flatness: .00076mm
- Parallelism: .000125mm for 0-25mm
- Spindle thread is hardened, ground and lapped.
- Anvil & spindle hardened and precision ground with microlap finish on tips.
- All micrometers meet or exceed U.S. Federal specifications for accuracy.
- Includes a wrench and case.

Part Number	Range	Graduation	Accuracy	Thimble
52-248-001-1	0-25mm	.01mm	.004"	Friction
52-248-101-0	0-25mm	.01mm	.004"	Ratchet
52-248-002-1	25-50mm w/standard	.01mm	.004"	Friction
52-248-102-0	25-50mm w/standard	.01mm	.004"	Ratchet
52-248-003-1	50-75mm w/standard	.01mm	.005"	Ratchet
52-248-004-1	75-100mm w/standard	.01mm	.005"	Ratchet
52-248-005-1	100-125mm w/standard	.01mm	.006"	Ratchet
52-248-006-1	125-150mm w/standard	.01mm	.006"	Ratchet
52-248-007-1	150-175mm w/standard	.01mm	.007"	Ratchet
52-248-008-1	175-200mm w/standard	.01mm	.007"	Ratchet
52-248-009-1	200-225mm w/standard	.01mm	.008"	Ratchet
52-248-010-1	225-250mm w/standard	.01mm	.008"	Ratchet
52-248-011-1	250-275mm w/standard	.01mm	.009"	Ratchet
52-248-012-1	275-300mm w/standard	.01mm	.009"	Ratchet
Sets:				
52-217-075	0-75mm w/standards & case	3-piece Micrometer Set. (Includes No. 52-248-001 thru No. 52-248-003)		
52-217-150-1	0-150mm w/standards & case	6-piece Micrometer Set. (Includes No. 52-248-001 thru No. 52-248-006)		
52-217-300-1	0-300mm w/standards & case	12-piece Micrometer Set. (Includes No. 52-248-001 thru No. 52-248-012)		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic Indicating Micrometer



No. 54-245-777
Shown with No. 54-245-800 stand sold separately.

Fowler 5 FIVE YEAR WARRANTY

Fowler OPTO INTERFACE

Spring Loaded

Extended Range

0.00005" Resolution

A superior tool in quality and design, the Fowler/Bowers Electronic indicating Micrometer operates quickly and easily.

Features:
- Retractable anvil travel: .275"(7mm)
- Non-rotating spindle
- Switchable resolution 0.0005"/0.00005" (0.01/0.001mm)
- Repeatability: 0.00005"(1μm)
- Measuring force 4.5—6N
- Carbide tipped measuring faces
- Adjustable table for part
- Two reference memories
- Preset Recall function
- Hold/freeze display function
- Direct inch/metric conversion
- Tolerance indication
- Min/Max/TIR function
- Bidirectional RS-232 output.
- Includes case.

Part Number	Range	Resolution (switchable)	Accuracy
54-245-777	0-1.25"/0-30mm	0.0005"/0.00005" (0.01/0.001mm)	.00015"(4μm)
54-245-780	1.25"-2.50"/30-60mm	0.0005"/0.00005" (0.01/0.001mm)	.00020"(5μm)
Accessories			
54-245-800	Bench stand for above units		
54-245-825	Dual bench stand for above units		
54-115-525	Opto USB Cable		
Replacement Battery			
54-100-350	CR2032 Lithium replacement battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deep Throat Micrometer



No. 52-517-611-1

Fowler's "U"-frame Deep Throat Micrometers are available with depths of 6" and 12". Use Deep Throat Micrometers for taking accurate measurements of steel and plastic sheets and plates whenever a depth measurement of 2" to 12" is needed.

Features:

- Hammertone blue baked enamel frame.
- Graduations are microfine on satin chrome finish for easy reading.
- All models feature a ratchet stop thimble for exact and repetitive readings.
- The spindle thread is hardened, ground and lapped. The anvil and spindle are hardened and precision ground with microlap finish on carbide tipped measuring faces.
- Diameter of measuring faces = .256".
- Positive lever locking clamp ensures reliable measurement at all times.
- Wrench furnished with each micrometer for fast, easy zero adjustment on the sleeve.
- Accuracy: .0001"
- Flatness: .00003"
- Parallelism: .00005"
- Meets or exceeds Federal accuracy specs.
- Includes case.

Part Number	Range	Graduation	Accuracy	Throat Depth	Thimble
Inch					
52-517-611-1	0-1"	.0001"	.0002"	6"	Ratchet
52-517-612 -1	0-1"	.001"	.0002"	11.875"	Ratchet

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic IP54 Ball-Anvil Micrometers



No. 54-860-113 Ball Anvil



No. 54-860-211 Ball Anvil & Ball Spindle

Measure dimensions from inside of circular holes to outside edges and obtain accurate dimensions.

Features:
- Carbide measuring faces.
- Water Resistant to IP54 specifications.
- True inch/metric conversion.
- Resolution: .00005"/.001mm
- Direct RS232 output
- Large easy-to-read LCD display.
- Includes case.

Part Number	Description	Range	Resolution	Accuracy
54-860-113	Ball Anvil & Flat Spindle	0-1"/0-25mm	.00005"/.001mm	.00015"/.004mm
54-860-114	Ball Anvil & Flat Spindle	1-2"/25-50mm	.00005"/.001mm	.00015"/.004mm
54-860-211	Ball Anvil & Ball Spindle	0-1"/0-25mm	.00005"/.001mm	.00015"/.004mm
54-860-212	Ball Anvil & Ball Spindle	1-2"/25-50mm	.00005"/.001mm	.00015"/.004mm
Accessories				
54-115-779	Computer Connect Kit			
Replacement Battery				
54-902-110	Type 357 Replacement Battery			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

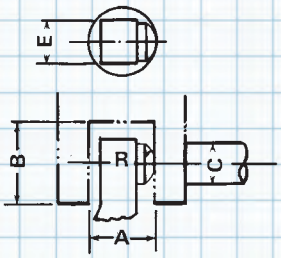
Fowler

Digit Counter Ball-Anvil Micrometers

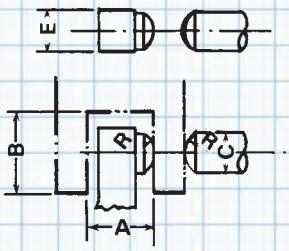


No. 52-244-201-1

Ball Anvil



Ball Anvil & Spindle



TECHNICAL DATA

	English inch
A	.430"
B	.300"
C	.256"
R	.236"
E	.256"

Ball Anvil Micrometers measure dimensions from the inside of holes to outside edges with the accuracy and convenience of easy to read numbers on a digital counter.

The spherical anvil or spindle contacts the inside curved surface at a single point for accurate gaging to .0001".

Features:
- Microfine graduations on satin chrome. Digital counter reads to .001"; sleeve reads to .0001".
- Hammertone blue baked enamel frame furnished with deluxe heat insulator.
- No. 52-244-201-1 spindle hardened and precision ground with a carbide tipped measuring face.
- No. 52-244-301-1 anvil is hardened and precision ground.
- Spindle thread hardened, ground & lapped.
- Ratchet stop thimble on all models.
- Positive locking nut on spindle.
- Accuracy = .00016".
- Meets or exceeds Federal accuracy specs.
- Includes wrench for quick, easy zero adjustment on sleeve and a case.

Part Number	Description	Range	Graduation	Accuracy
52-244-201-1	Ball Anvil	0-1"	.0001"	.00016"
52-244-202-1	Ball Anvil with standard	1-2"	.0001"	.00016"
52-244-301-1	Ball Anvil & Spindle	0-1"	.0001"	.00016"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Ball-Anvil Micrometers



No. 52-244-001-1

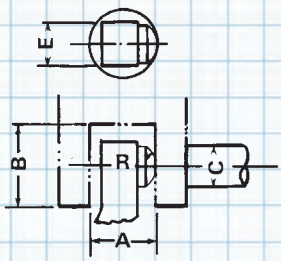
The back side of the anvil stem of Fowler Ball-Anvil Tube Micrometers is cut away, making it slim enough to insert into small parts such as sleeves, collars, tubing and other cylindrical workpieces to measure wall thickness.

Measure dimensions from inside of holes to outside edges. The spherical anvil or spindle contacts the inside curved surface at a single point, permitting accurate gaging of wall thickness to .0001" or .001mm.

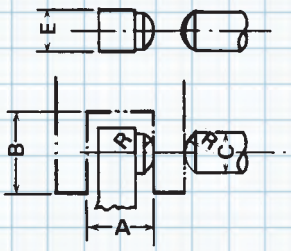
Features:
- Hammertone blue baked enamel frame.
- Microfine graduations on satin chrome.
- Anvil and spindle hardened and ground; spindle thread hardened, ground and lapped.
- Positive lever-locking clamp assures accurate settings.
- A wrench is furnished with each tool for quick and easy zero adjustment on sleeve.
- Ratchet stop thimble for exact readings.
- Accuracy: .0001".
- Meets or exceeds Federal accuracy specs.
- Includes case.

Part Number	Description	Range	Graduation	Accuracy
Inch				
52-244-001-1	Ball Anvil	0-1"	.0001"	.0001"
52-244-101-1	Ball Anvil & Ball Spindle	0-1"	.0001"	.0001"
Metric				
52-244-025	Ball Anvil	0-25mm	.001mm	.0001"
52-244-125	Ball Anvil& Ball Spindle	0-25mm	.001mm	.0001"

Ball Anvil



Ball Anvil & Spindle



TECHNICAL DATA

	English inch	Metric mm
A	.325"	8.25mm
B	.450"	11.5mm
C	.250"	6.35mm
R	.236"	6mm
E	.250"	6.35mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic IP54 Blade Micrometer



No. 54-860-241

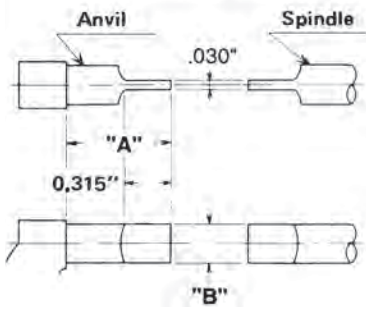
Use for measuring the outside diameters of workpieces with narrow grooves, T-slots & other dimensions blocked by shoulders or lands inaccessable by standard micrometers

Features:
- Water Resistant to IP54 specifications.
- True inch/metric conversion
- Resolution: .00005"/.001mm
- Direct RS232 output
- Large easy-to-read LCD display.
- Friction Thimble
- Sizes over 1" include standard.
- Includes case.

Fowler RS-232 DIRECT

IP54

TECHNICAL DATA



A = .600", B = .235"

Part Number	Range	Resolution	Accuracy
54-860-241	0-1"/0-25mm	.00005"/.001mm	.00015"
54-860-242	1-2"/25-50mm	.00005"/.001mm	.00015"
54-860-243	2-3"/50-75mm	.00005"/.001mm	.0002"
54-860-244	3-4"/75-100mm	.00005"/.001mm	.0002"
Accessories			
54-115-779	Computer Connect Kit		
Replacement Battery			
54-902-110	Type 357 Replacement Battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Inch Blade Micrometers

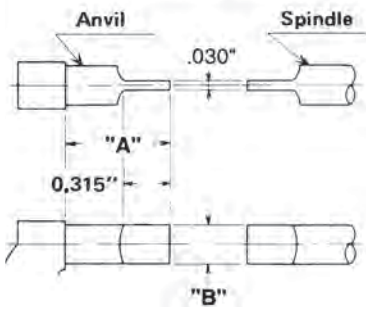


No. 52-246-001-1

Use Fowler No. 52-246 Blade Micrometers to measure the outside diameter of workpieces which have narrow grooves, "T" slots and other dimensions blocked by shoulders or lands where standard type micrometers cannot be applied.

Features:
- Hammertone blue baked enamel frame
- Microfine graduations on satin chrome finish for easy reading.
- Anvil & spindle hardened & precision ground with microlap finish on ends. Spindle thread is hardened, ground and lapped.
- Non-rotating spindle
- Ratchet thimble
- Blade thickness = .030"; blade width = .256"; blade penetration = .315"
- Accuracy = .0001" for 0—1"
- Wrench included for quick and easy zero adjustment on sleeve.
- Sizes over 1" include a standard.
- Includes case.

TECHNICAL DATA



Part Number	Range	Graduation	Dim. "A"	Dim. "B"
52-246-001-1	0-1"	.0001"	.515"	.238"
52-246-002-1	1-2"	.0001"	.515"	.238"
52-246-003-1	2-3"	.0001"	.515"	.238"
52-246-004-1	3-4"	.0001"	.710"	.238"

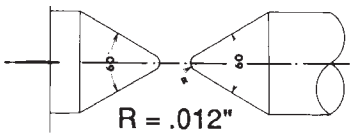
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Digit Counter Point Micrometer



No. 52-226-801-1

Technical Data



R = .012" - 0.3mm
Error of Traverse
Maximum .00012 - .003mm

Use Fowler Digital Point Micrometers for quick and accurate comparisons of thread accuracy in screw cutting operations, for taking measurements of small flutes or recesses, grooved trolley wires and for measuring small grooves, keyways and other hard to reach dimensions.

Anvil and spindle ends are conical and have a radius curvature of .012" at the extremity. Easy to read numbers on the digital counter assure you of accurate, error free readings.

Features:
- Hammertone blue baked enamel frame.
- Anvil and spindle are carbide tipped and precision ground with microlap finish on ends.
- Microfine graduations (.0001"/.001mm) on satin chrome finish for easy reading.
- Spindle thread hardened, ground & lapped.
- Quick, easy zero adjustment on sleeve.
- The radius of the measuring points is approximately .012"
- All models feature a ratchet stop thimble for exact and repetitive readings.
- Positive lever locking clamp.
- Accuracy: .00016".
- Includes wrench and case.

Part Number	Range	Graduation	Point°	Point Lenght
52-226-801-1	0-1"	.0001"	60°	.21"

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic IP54 Disc Micrometer



No. 54-860-301

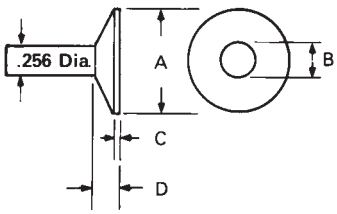
Fowler™ RS-232 DIRECT

IP54

Features extra large diameter discs which easily enter hard-to-reach narrow grooves, slots & recesses.

Features:
- Water Resistant to IP54 specifications.
- True inch/metric conversion.
- Resolution: .00005"/.001mm.
- Direct RS232 output.
- Friction thimble
- Large easy-to-read LCD display.
- Extra large .788" disc with .035" edge thickness.
- Easily enters hard-to-reach areas.
- Includes case.

TECHNICAL DATA



	English inch	Metric mm
A	.788"	20mm
B	.315"	85mm
C	.035"	.89mm
D	.130"	3.3mm

Part Number	Range	Resolution	Accuracy
54-860-301	0-1"/0-25mm	.00005"/.001mm	.00015"
54-860-302	1-2"/25-50mm w/standard	.00005"/.001mm	.00015"
Accessories			
54-115-779	Computer Connect Kit		
Replacement Battery			
54-902-110	Type 357 Replacement Battery		

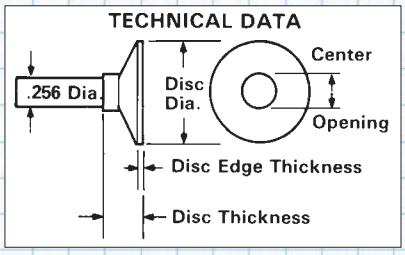
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Digit Counter Disc Micrometers



No. 52-250-301-1

Fowler's Digit-Disc Micrometers feature extra large diameter discs which easily enter hard to reach places such as narrow grooves, slots and recesses.



Special Features:

- Hammertone blue baked enamel finished frame is tapered for hard to get at places.
- Anvil and spindle are hardened and precision ground with microlap finish on measuring faces.
- Positive locking nut on the spindle.
- Quick and easy zero adjustment on sleeve.
- Flatness: .00004"
- Accuracy and Parallelism: .00016"
- Disc diameter: .708"
- Disc edge thickness: .035"
- Center opening: .280"
- Ratchet thimble
- The disc type anvil and spindle simplifies measuring the thickness of difficult, closely spaced sections, ribs, keys, fins, cutting edges on forming tools, chordal thickness of gear teeth, etc.
- Meets or exceeds Federal accuracy specs.
- Sizes over 1" include standards
- Includes wrench and case.

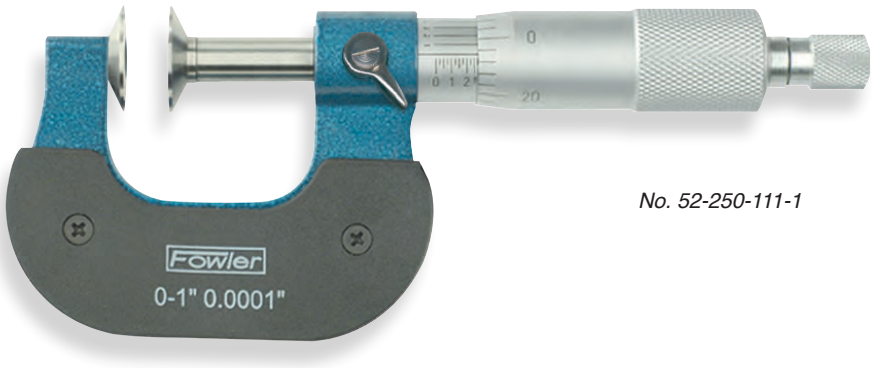
Part Number	Range	Graduation	Accuracy
52-250-301-1	0-1"	.0001"	.00016"
52-250-302-1	1-2"	.0001"	.00016"
Metric			
52-250-425-1	0-25mm	.001mm	.004mm

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Disc Micrometers

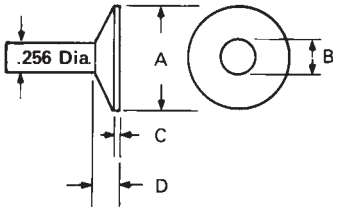


No. 52-250-111-1

Fowler Disc Micrometers simplify measuring thickness of difficult, closely spaced sections, ribs, keys, fins, cutting edges on forming tools, chordal thickness of gear teeth and more. The extra large diameter disc will enter normally inaccessible places such as narrow grooves, slots and recesses.

Features:
- Hammertone blue baked enamel frame is tapered for hard-to-get-at places.
- Anvil and spindle are hardened and precision ground with microlap finish on measuring faces.
- Positive lever locking clamp.
- Quick and easy zero adjustment on sleeve
- Ratchet thimble for repeatability
- Flatness: .00004"
- Accuracy and parallelism: 1" & 2": .00016"; 3" & 4": .00024".
- Meets or exceeds Federal accuracy specs.
- Sizes over 1" include standards
- Includes case.

TECHNICAL DATA



Dimensions				
Part Number	**Dim."A"**	**Dim."B"**	**Dim. "C"**	**Dim."D"**
52-250-111-1	.787"	.315"	.039"	.250"
52-250-112-1	.787"	.276"	.039"	.250"
52-250-113-1	.787"	.276"	.039"	.250"
52-250-114-1	.945"	.394"	.039"	.250

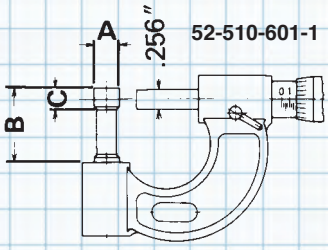
Part Number	Range	Graduations	Accuracy
52-250-111-1	0-1"	.0001"	.00016"
52-250-112-1	1-2"	.0001"	.00016"
52-250-113-1	2-3"	.0001"	.00024"
52-250-114-1	3-4"	.0001"	.00024"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

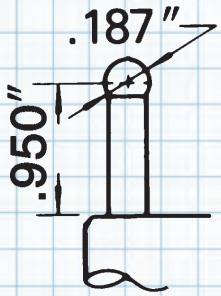
Technical Data

Cylindrical



A = .318" (8.1mm)
B = 1.115" (28.32mm)
C = .375" (9.5mm)

Spherical



Cylindrical/Spherical Tube Micrometers



No. 52-510-601-1

Fowler Rod-Anvil Tube Micrometers are positioned at a 90° angle in respect to the axis of the spindle, making it practical and convenient for measuring wall thickness of tubings and other workpieces with cylindrical walls.

Features:
- Hammertone blue baked enamel frame.
- Anvil is hardened and precision ground.
- Carbide tipped spindle
- Spindle thread is hardened, ground and lapped.
- Positive lever-locking clamp.
- Ratchet thimble
- Microfine graduations on satin chrome finish permit easy reading.
- Measurements can be taken at locations far from the end due to the protruded rod-anvil design.
- Meets or exceeds Federal accuracy specs.
- Includes wrench for quick and easy zero adjustment on sleeve and case.

Part Number	Range	Graduation	Accuracy	Type
Inch				
52-510-601-1	0-1"	.0001"	.00024"	Cylindrical
52-510-602-1	0-1"	.0001"	.00024"	Spherical
Metric				
52-510-101-1	0-25mm	.001mm	.006mm	Cylindrical

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Multi-Anvil Micrometer



No. 52-252-001

Fowler's Multi-Anvil-Micrometer with a satin chrome finish is supplied with both a rod and flat anvil.

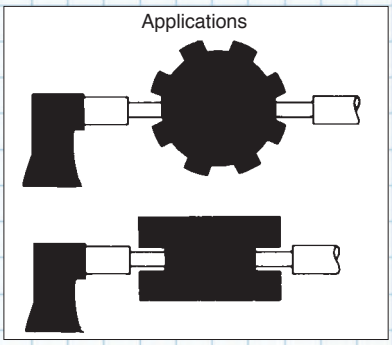
Features:
- Friction thimble for exact, repetitive readings.
- Positive lever locking clamp for reliable measurements at all times.
- Anvil rod is .120" in diameter and 1" long.
- Flat anvil thickness is .065" and 1" long.
- Spindle face is carbide tipped.
- Easily measures difficult to reach locations.
- Graduation .0001"
- Includes a rod and flat anvil, allen key and spanner wrench and a case.

Part Number	Description	Graduation
52-252-001	0-1" Multi-Anvil Micrometer	.0001"

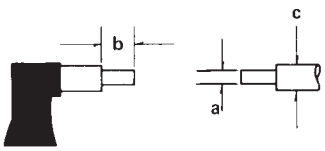
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Applications



Technical Data



Dimensions a = .118", b = .396", c = .256"

Measure recesses, grooves & splines

Digit Counter Spline Micrometers



No. 52-218-301-1

Features:
- Carbide tipped measuring faces.
- Positive knob locking clamp.
- Ratchet stop for exact readings.
- Flatness: .00002"
- Parallelism : .00005"
- Accuracy: .0001"
- Meets or exceeds Federal accuracy specs.
- Includes wrench & case.

Part Number	Range	Graduation	Accuracy
52-218-301-1	0-1"	.0001"	.0001"
52-218-302-2	1-2"	.0001"	.0001"

Vernier Spline Micrometer



No. 52-218-111

Features:
- Microfine graduations on satin chrome finish for easy reading.
- Carbide tipped measuring faces.
- Positive lever locking clamp
- Ratchet stop for exact readings.
- Flatness: .00002"
- Parallelism: .00005"
- Accuracy: .0001"
- Meets or exceeds U.S. Federal specifications for accuracy.
- Includes case.

Part Number	Range	Graduation	Accuracy
52-218-111	0-1"	.0001"	.0001"

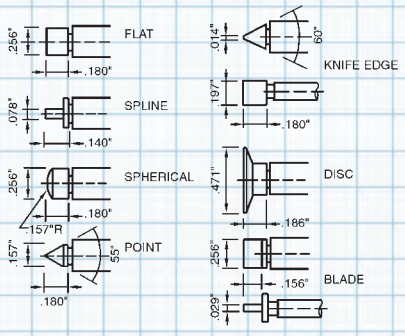
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Universal Electronic Micrometer



No. 54-817-777



Replace 7 different micrometers with one tool creating up to 49 different combinations making this a truely universal tool!

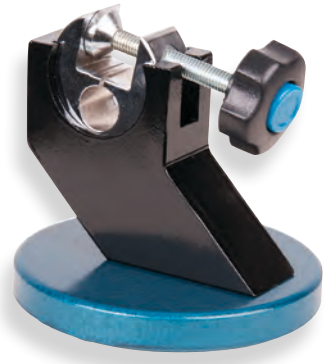
The Fowler Universal Anvil Micrometer accepts 7 pairs of individual anvils making it possible to gage a variety of dimensions unacheivable with a single micrometer.

Features:
- Resolution 0.00005"(0.001mm)
- Non-rotating spindle
- Direct inch metric conversion
- ABS/INC measuring mode
- Tolerance & preset function
- Comes complete with 7 anvil sets
- Satin chrome finish
- Includes case.
- Sizes over 1" include a standard.

Part Number	Range	Resolution	Accuracy
54-817-777	0-1"/0-25mm	.00005"/.001mm	.00015"
54-817-778	1-2"/25-50mm		
Replacement Battery			
54-902-110	Type 357 Replacement Battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Micrometer Stands



Micrometer Stand, No. 52-247-000

Features—Micrometer Stand No. 52-247-000:
- Adjust micrometer stand to any position.
- Hammertone blue baked enamel base.
- Provides a measuring position and angle for outside micrometers and other instruments.



Micrometer Stand, No. 52-247-005

Features—Micrometer Stand No. 52-247-005:
- Unique locking nut adjusts micrometer stand to any position for perfect use and viewing.
- Stand folds for storage.
- Hammertone silver baked enamel base.
- Provides a measuring position and angle for outside micrometers and other instruments.

Part Number	Description
52-247-000	Micrometer Stand
54-247-005	Micrometer Stand

Micrometer Standards

Part Number	Size
52-227-001-1	1"
52-227-002-1	2"
52-227-003-1	3"
52-227-004-1	4"
52-227-005-1	5"
52-227-006-1	6"
52-227-007-1	7"
52-227-008-1	8"
52-227-009-1	9"
52-227-010-1	10"
52-227-011-1	11"
52-227-012-1	12"
52-227-013	13"
52-227-014	14"
52-227-015	15"
52-227-016	16"
52-227-017	17"
52-227-018	18"
52-227-019	19"



Micrometer Standards, No. 52-227 series

Features:
- Measuring faces .315" diameter up to 11", .430" sizes 12" and up.
- Standards come with heat insulated covers.
- Measuring faces hardened and precision ground with microlap finish.
- Meets or exceeds Federal accuracy specs.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Micrometer Calibration Set



No. 53-670-002

Keep your mics in spec with these kits

Features:
- 11 Pc. 9 rectangular gage blocks and two optical flats.
- Includes NIST Certificate.
- Assists in meeting both Federal specification GGG-C-105c and ISO 9000 requirements.
- Contains one block of each of the following sizes: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000"
- TWO OPTICAL FLATS that vary in size by .0125" which allows checking anvil faces at half revolutions of spindle for measuring flatness.
- Supplied with fitted wooden case.

Part Number	Description	Grade
53-670-002	Calibration Set with Steel Blocks and Optical Flats	Ø

Caliper, Micrometer & Snap Gage Checking Set

Fowler's setting master is quick, easy and extremely accurate. It comes with a certificate of calibration and a fitted aluminum case. Save time and money by calibrating your own measuring tools quickly and easily.

Set Includes:
- Calibration certification traceable to N.I.S.T. standards
- Stand height: 12.5"
- 9 pc. Grade AS-0 gage block set (sizes: .625", .100", .125", .200", .250", .300", .500", 1.000" & 2.000"
- Certificate of calibration is traceable to N.I.S.T. standard & provides the individual deviation of each block
- Optical flat (flatness: .000004" ; Parallelism: .00002")
- 4.0mm ball end T-handle hex wrench





Part Number	Description
53-813-001-1	Complete Caliper, Micrometer and Snap Gage Checking Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

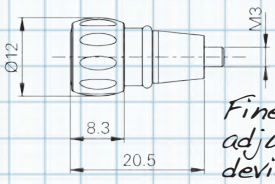
Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

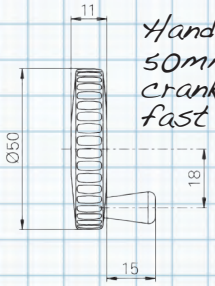
Fowler POWER INTERFACE

Fowler RS-232 DIRECT

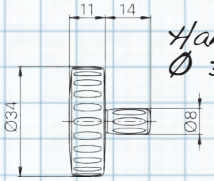
Accessories



Fine adjustment device.



Handwheel, 50mm with crank handle for fast motion.



Handwheel Ø 34mm

Make your stage travel smooth and easy to read.

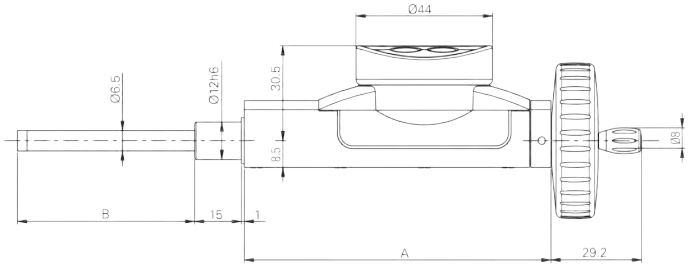
Fowler

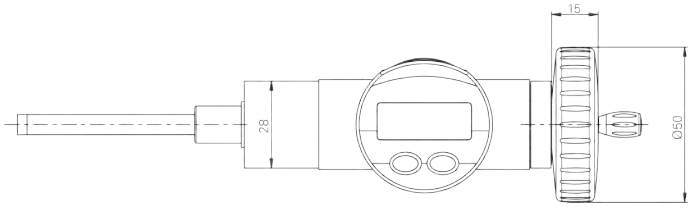
Digital Micrometer Heads





- Multiplication factor capable
- Data output RS 232/USB combined with external power supply
- Fine adjustment available (accessories)
- Type H and V (same model)
- Reduced dimensions, compact
- Menu customizable with free software
- Other handwheels on request
- Manufacturer's Calibration certificate
- Lithium battery CR2302 included





Specifications

	No. 54-210-100	No. 54-210-200
Measuring range	0-1" (0-25mm)	0-2" (0-50mm)
Max Error	0.0002"/5mm	0.00032"/8mm
Repeatability	0.000080"/2mm	0.000080"/2mm
Resolution	0.000050"/0.001mm	0.000050"/0.001mm
A	2.93"/74.5mm	3.88"/98.5mm
B	1.30"/33.1mm	2.25"/57.1mm
Selection of measuring direction	✔	
PRESET function	✔	
Absolute or relative measurement	✔	

Part Number	Description
54-210-100	0-1"/25mm Digital Micrometer Heads
54-210-200	0-2"/50mm Digital Micrometer Heads
Accessories	
54-210-301	Fine Adjustment Device
54-210-302	Handwheel, 50mm with crank handle for fast motion
54-210-303	Handwheel Ø 35mm

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic IP54 Micrometer Head



Features:
- Protected to IP54 specifications.
- True inch/metric conversion
- Resolution: .00005"/.001mm
- Large LCD display
- Friction thimble
- Direct RS232 output
- Meets or exceeds Federal accuracy specs.

Part Number	Description	Accuracy
54-220-777-1	0-1"/25mm Electronic IP54 Micrometer Head	.0001"/.003mm
Accessories		
54-115-779	Computer Connect Kit	
Replacement Battery		
54-100-350	Replacement Battery	

Digital Micrometer Head



No. 52-222 series

Fowler Micrometer heads offer unsurpassed accuracy for a wide variety of applications—used for the most demanding requirements in optical instruments, machine tools, staging fixtures, XYZ mounts, special gages & tooling, microstages, and more.

Features:
- Sharp microfine graduations on a satin chrome finish.
- Spindle dia.: .256"
- Spindle is hardened and precision ground of special steel; spindle face microlap finished. Measuring faces are carbide tipped.
- Thimble and sleeve are satin chrome finished. Zero adjustment on the sleeve.
- Meets or exceeds Federal accuracy specs.
- Includes case.

Part Number	Range	Grads.	Overall Length	Mounting Shoulder Dia.	Mounting Shoulder Length
52-222-222-1	0-1"	.0001"	5.25"	.625"	.670"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Micrometer Heads for Special Applications



In addition to our standard line of micrometer heads, we can also supply micrometer heads for your specific needs. Measurement table applications, positioning, fixturing and special mountings are just a few examples of the designs that we currently provide.

For more information, contact our Technical Department at 1-800-788-2353

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Electronic IP54 Inside Micrometer

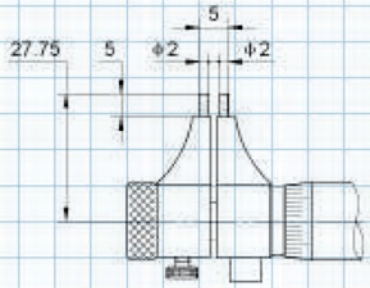


No. 54-860-275

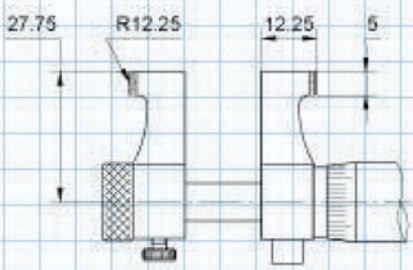
Features:
- Measuring jaws & faces fully hardened & microlapped for accuracy.
- Each gage includes appropriate setting ring.
- Water Resistant to IP54 specifications.
- True inch/metric conversion
- Resolution: .00005"/.001mm
- Direct RS232 output
- Large easy-to-read LCD display
- Friction thimble
- Includes case.

Fowler™ RS-232 DIRECT

IP54



54-860-275

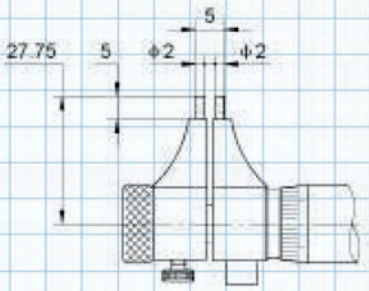


54-860-276

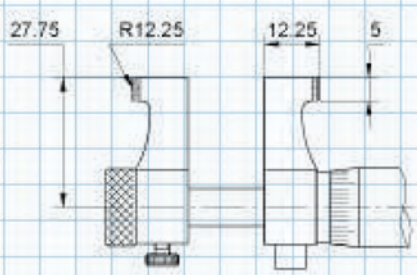
Part Number	Range	Graduation
54-860-275	.2-1.2"	.00005"/.001mm
54-860-276	1-2"	.00005"/.001mm
Accessories		
54-115-779	Computer Connect Kit	
Replacement Battery		
54-902-110	Type 357 Replacement Battery	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

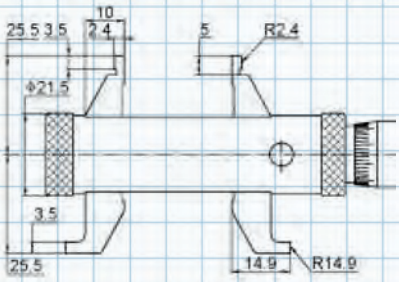
Inside Micrometers



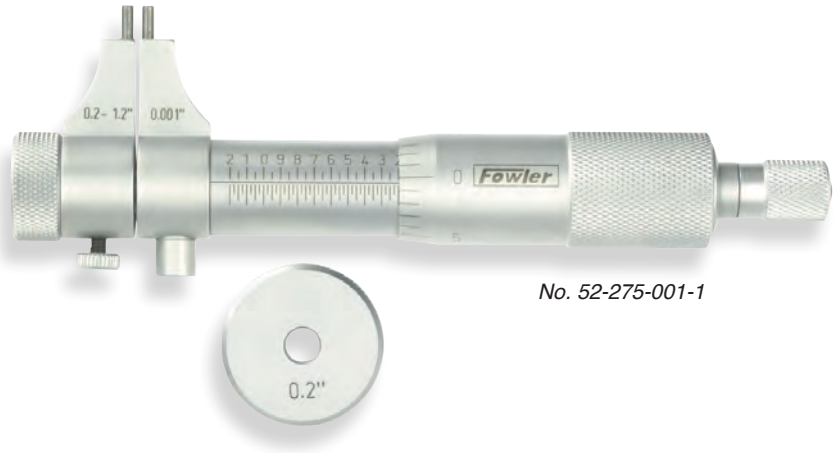
No. 52-275-001
and 52-275-025



No. 52-275-403
and 52-275-404



No. 52-275-005

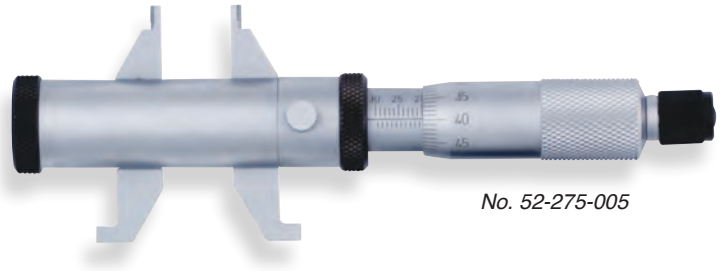


No. 52-275-001-1

With Fowler Inside Micrometer Calipers, you are assured of smooth operation and stabilized uniform accuracy. The frame is specially designed to enable the micrometer to provide extremely accurate small internal measurements.

Features:

- Satin chrome finish on barrel and thimble.
- Measuring faces are fully hardened, precision ground and microlap finished to assure exceptionally accurate measuring.
- Spindle threads are hardened and ground.
- Microfine graduations (.001" or .01mm) on a satin chrome finish permit easy reading.
- Accuracy to .0002" (.005mm).
- Ratchet stop thimble assures exact and repetitive readings.
- Easy zero adjustment on the sleeve.
- Meets or exceeds Federal accuracy specs.
- Includes a setting ring.
- Includes a spanner wrench and a case.



No. 52-275-005

Part Number	Range	Graduation	Accuracy
Inch			
52-275-001-1	.2-1.2"	.001"	.0002"
52-275-002-1	1-2"	.001"	.0002"
52-275-005	.2-2.2"	.001"	.0002"
Metric			
52-275-025-1	5-25mm	.01mm	.005mm
52-275-050-1	25-50mm	.01mm	.005mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Inside Micrometers



No. 52-243-012-1

Series No. 52-243 are extension rod type inside micrometers and have the shortest measuring length of their kind. The detachable handle offers the operator convenience and ease when using these small inside micrometers.

Lightweight, rigid and well balanced. To achieve optimal accuracy, each set includes a micrometer head and two extensions, detachable handle, wrench and a deluxe fitted case. Fowler recommends that the inside micrometer with a rod be calibrated by a micrometer or ring gage.

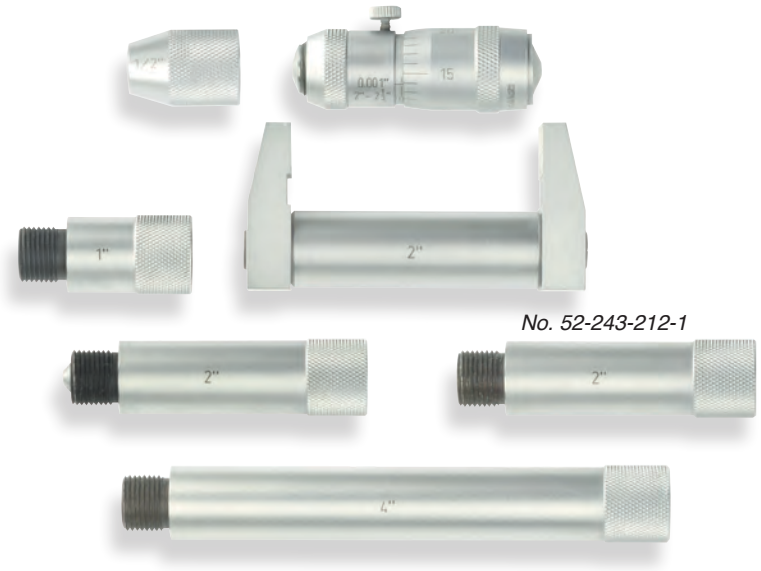
Features:
- The anvil and spindle are hardened and precision ground.
- Spindle threads are hardened and ground.
- Microfine graduations: .001" on a satin chrome finish permit easy reading.
- Quick easy zero adjustment on the sleeve.
- Accuracy = .0003"+(.00005" x L"/2)
- Meets or exceeds Federal accuracy specs.
- Includes case.

Part Number	Range	Graduation
52-243-012-1	1-2"	.001"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Inside Micrometers



No. 52-243-212-1

Fowler extension rod type Inside Micrometers have a wide measuring range—any one single micrometer can replace many bar type inside micrometers.

Features:

- Each set consists of an inside micrometer head and a series of fully hardened and lapped extension rods of different lengths all with carbide measuring faces
- Anvil and spindle are hardened and precision ground with microlap finish on ends.
- Spindle thread hardened, ground & lapped.
- Microfine graduations on satin chrome.
- Positive locking nut on spindle.
- It is recommended that the inside micrometer with a rod be calibrated by a micrometer or ring gage.
- Coiled spring pressure contact type rods are each marked with appropriate length.
- Quick, easy zero adjustment on the sleeve.
- Accuracy = .00005" x (3 + L"/2)
- Meets or exceeds Federal accuracy specs.
- Reference standard included with set.
- Includes a wrench and a case.

Part Number	Measuring Range	Graduation
Inch		
52-243-026-1	2-6"	.001"
52-243-212-1	2-12"	.001"
52-243-220-1	2-20"	.001"
52-243-240-1	2-40"	.001"
52-243-260-1	2-60"	.001"
52-243-480-1	4-80"	.001"
52-243-512-1	4-120"	.001"
Metric		
52-243-705-1	50-300mm	.01mm
52-243-710-1	50-500mm	.01mm
52-243-715-1	50-1000mm	.01mm
52-243-720-1	50-1500mm	.01mm

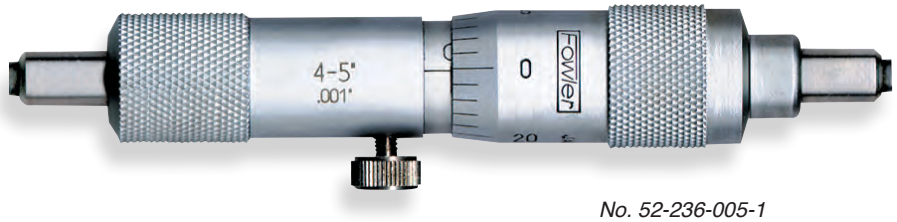
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Inside Tubular Micrometers



No. 52-236-003-1



No. 52-236-005-1

Fowler's 0—1" travel Tubular Inside Micrometers—with ranges from 2" through 12"—measure inside dimensions precisely and accurately.

Features:

- Carbide faced measuring tips are spherical to make positive point contact against the inside wall surface.
- Anvil and spindle are hardened and precision ground with microlap finish on ends.
- Spindle thread hardened, ground & lapped.
- Microfine graduations (.001") on a satin chrome finish permit easy reading.
- Positive locking nut on all models except #52-236-003.
- Each micrometer can also be used as an adjustable linear standard bar within each range.
- 0—1" travel on all models.
- Quick, easy zero adjustment on the sleeve.
- Meets or exceeds Federal accuracy specs.
- Price includes a wrench and a case.
- It is recommended for optimal accuracy that the inside micrometer be calibrated by a gage blocks or ring gage.

Part Number	Range	Graduation	Accuracy
Inch			
52-236-003-1	2-3"	.001"	.0002"
52-236-004-1	3-4"	.001"	.0002"
52-236-005-1	4-5"	.001"	.00024"
52-236-006-1	5-6"	.001"	.00024"
52-236-007-1	6-7"	.001"	.00028"
52-236-008-1	7-8"	.001"	.00028"
52-236-009-1	8-9"	.001"	.00032"
52-236-010-1	9-10"	.001"	.00032"
52-236-011-1	10-11"	.001"	.00036"
52-236-012-1	11-12"	.001"	.00036"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Give your standard micrometer the ability to handle multiple special applications

Anvil Kit and Ball Attachment



Micrometer Anvil Kit, No. 52-249-007
(Micrometer not included)

No. 52-249-007 Features:
- Fowler's Multi-Mike Micrometer Anvil Kit contains six anvils and a ball attachment
- Popular accessories used with outside micrometers.
- Fits micrometers with spindle diameters of .235", .250", .256" and .270".
- Each anvil is .500" long and is held on with its own reinforced neoprene boot.
- Anvils are hardened and ground alloy steel with a lapped measuring surface.
- Made in the U.S.A. to exacting standards.



Ball Attachment, No. 52-285-000
(Micrometer not included)

No. 52-285-000 Features:
- Ball Attachment used on spindles or anvils. Allows for single point inside contact and measurements of cylindrical wall thicknesses.
- Fits micrometers with spindle diameters of .235", .250", .256" and .270".
- Reinforced rubber boot provides extra holding power.
- Used with outside micrometers.
- Hardened chrome alloy steel.
- Ball: diameter .200"; accuracy 0.000025"
- Includes 2 balls, 1 boot and case.

Part Number	Description
Multi-Mike Micrometer Anvil Kit	
52-249-007	Kit includes six anvils and one ball attachment
Individual Micrometer Anvils	
52-249-001	Spline: .100" dia.
52-249-002	Knife: .188" x .031" tip, 30° taper
52-249-003	Super Spline: .050" dia.
52-249-004	Blade: .188" x .031"
52-249-005	Point: .020" tip, 30° taper
52-249-006	Disc: .500" dia.
Ball Attachment	
52-285-000	.200" dia. Ball Attachment with Spare Ball

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

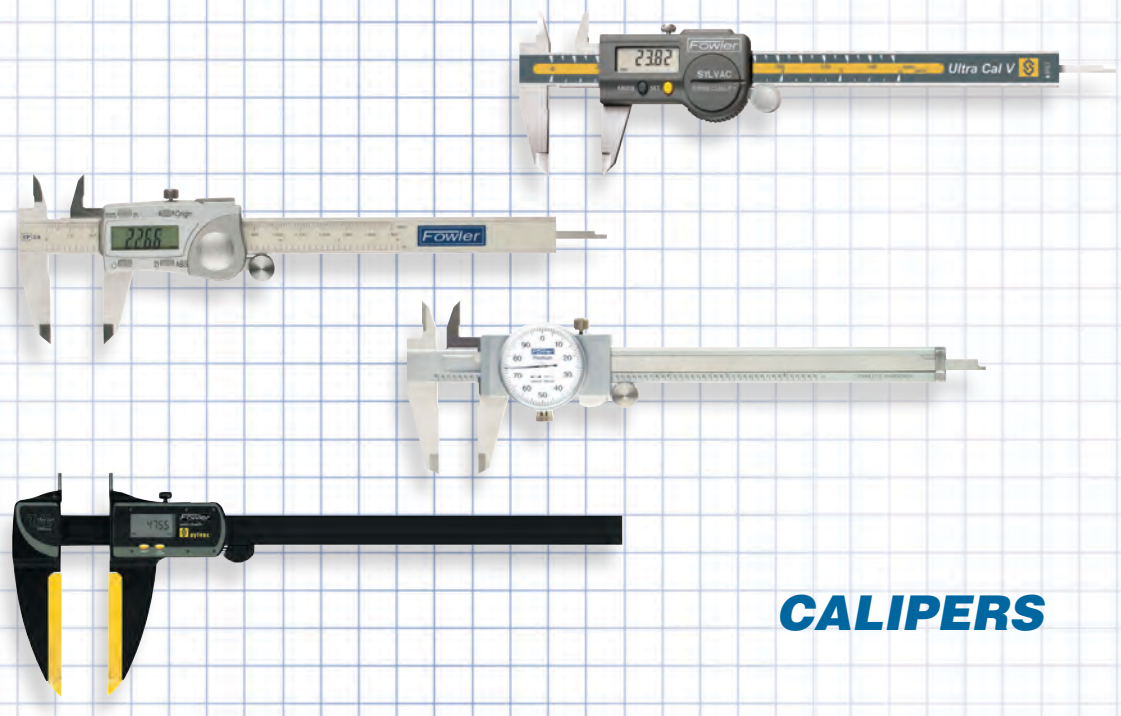
Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

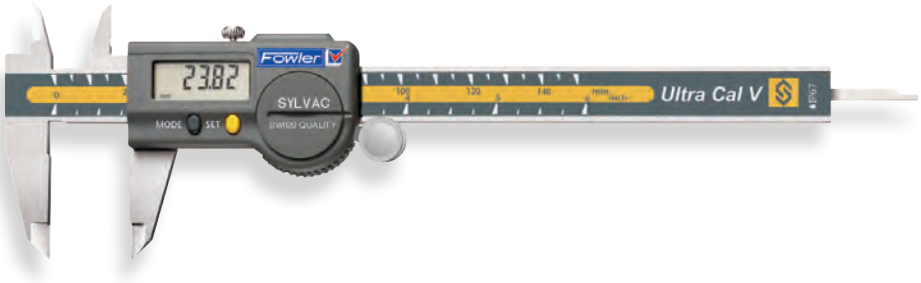


CALIPERS

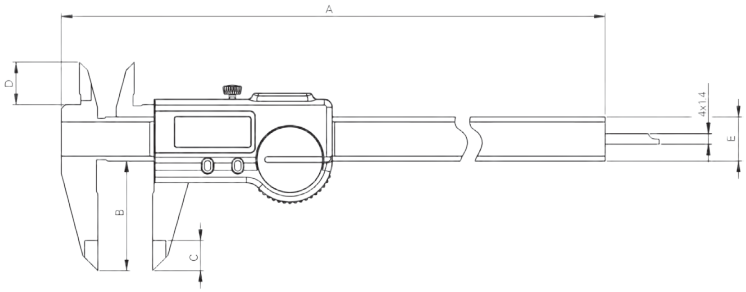
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Ultra-Cal V Electronic Caliper



Features:
- Maximum Error: .001"/.02mm
- 4-way measurement, inside, outside, depth and step.
- Resolution: .0005"/.01mm
- Repeatability: .0005"/.01mm
- Direct inch/metric conversion.
- Temperature range 5 to 40C˚ working; -20 to 60C˚ in storage.
- Hardened stainless steel construction.
- Direct RS-232 output
- Features Absolute/Relative Measuring Modes.
- Hold function
- Thumbroll (6" model only)
- Includes case.



Technical Specifications:

	54-100-067-1	*54-100-068-1*	*54-100-069-1*
Measuring range	6"/150mm	8"/200mm	12"/300mm
Accuracy	0.0012"/30µm	0.0012"/30µm	0.0012"/30µm
Resolution	0.0005"/.01mm	0.0005"/.01mm	0.0005"/.01mm
Max Error G (µm)	30	30	30
A (mm)	233	290	387
B (mm)	40	50	64
C (mm)	11	14	14
D (mm)	16	19	19
E (mm)	16 x 3.5	16 x 3.5	16 x 4
Depth rod (mm)	4 x 1.4	4 x 1.4	N/A
Protection Rating IEC 60529	IP67	IP67	IP67
Zero Setting	✔	✔	✔
REL and ABS functions	✔	✔	✔

Part Number	Range	Accuracy	Resolution
54-100-067-1	6"/150mm	0.0012"/30µm	0.0005"/.01mm
54-100-068-1	8"/200mm	0.0012"/30µm	0.0005"/.01mm
54-100-069-1	12"/300mm	0.0012"/30µm	0.0005"/.01mm
Accessories			
54-115-527	Proximity RS-232 Cable		
54-115-526	Proximity USB Cable		
54-100-350	Replacement Battery		

LIFETIME WARRANTY

Top-of-the-line Caliper!

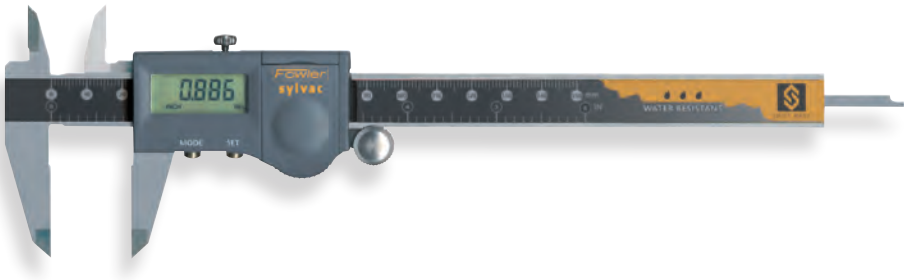
IP67

Fowler PROXIMITY INTERFACE

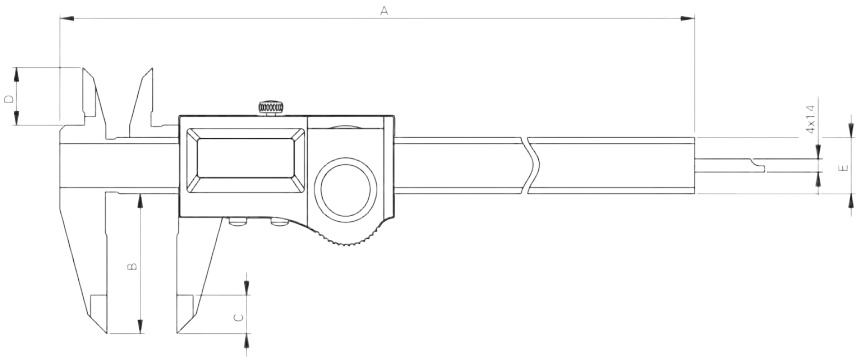
Swiss Quality!

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Ultra-Cal IV Electronic Caliper



Features:
- Water resistant
- 4-way measuring
- Resolution: .0005"/.01mm
- Repeatability: .0005"/.01mm
- Direct Inch/Metric conversion.
- Large easy-to-read LCD display.
- Direct RS232C output
- Features Absolute/Relative Measuring Modes.
- Hold function
- Thumbroll (6" model only)
- Includes case.



Technical Specifications:

	54-100-444	***54-100-448***	***54-100-412***
Measuring range	6"/150mm	8"/200mm	12"/300mm
Accuracy	0.0012"/30µm	0.0012"/30µm	0.0012"/30µm
Resolution	0.0005"/.01mm	0.0005"/.01mm	0.0005"/.01mm
Max Error G (µm)	30	30	30
A (mm)	233	290	385
B (mm)	40	50	64
C (mm)	11	14	14
D (mm)	16	20	20
E (mm)	16 x 3	16 x 3	16 x 4
Depth rod (mm)	4 x 1.4	4 x 14	N/A
Protection Rating IEC 60529	IP54	IP54	IP54
Zero Setting	✔	✔	✔
REL and ABS functions	✔	✔	✔

Part Number	**Range**	**Accuracy**	**Resolution**
54-100-444	6"/150mm	.0008"/20µm	.0005"/.01mm
54-100-448	8"/200mm	.0012"/30µm	.0005"/.01mm
54-100-412	12"/300mm	.0012"/30µm	.0005"/.01mm
Accessories			
54-115-333	Opto - Serial Cable		
54-115-525	Opto - USB Cable		
54-100-350	Replacement Battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Water Resistant IP54 Electronic Calipers



Features:
- Water resistant to IP54 specifications.
- Absolute scale ensures caliper will never lose its reference point
- Absolute/Incremental Measurement
- Stainless steel frame
- Direct Inch/Metric conversion.
- Accuracy: .001"/.02mm
- Resolution: .0005"/.01mm
- Absolute referencing
- Large easy-to-read LCD display.
- 4-way measurement
- Includes case.

Jaw Specifications		
Caliper Size	**6"**	**12"**
External Jaw Length:	1.56"	2.40"
Internal Jaw Length:	.635"	.930"
Jaw Thickness:	.117"	.125"

Part Number	Range	Accuracy	Resolution
54-100-777-2	6"/150mm	0.001"/.02mm	0.0005"/.01mm
54-100-712-2	12"/300mm	0.0015"/.03mm	0.0005"/.01mm
Accessories			
54-520-399	Data Cable		
54-100-350	CR2032 Battery		

Quality caliper

Absolute ceramic scale ensures the caliper will never lose its reference point - Never zero your caliper again!

IP54

M

EURO-CAL IV Electronic Calipers



54-100-330-1

Features:
- Reads in inch, metric & fractions.
- Direct inch/metric/fraction conversion.
- Absolute/Incremental Measurement
- Water resistant to IP54 standards.
- Resolution: .0005"/.01mm
  (Fractions in 1/64" increments).
- Stainless steel frame
- 4-way measuring.
- Includes case.

Jaw Specifications			
Caliper Size	**6"**	**8"**	**12"**
External Jaw Length:	1.56"	1.955"	2.35"
Internal Jaw Length:	.600"	.750"	.865"
Jaw Thickness:	.137"	.137"	.157"

Part Number	Range	Accuracy	Resolution
54-100-330-1	6"/150mm	±0.001"/.02mm	0.0005"/.01mm
54-100-331	8"/200mm	±0.001"/.02mm	0.0005"/.01mm
54-100-332	12"/300mm	±0.0015"/.03mm	0.0005"/.01mm
Accessories			
54-100-350	CR2032 Battery		

Features fast inch, metric and fractional conversion.

IP54

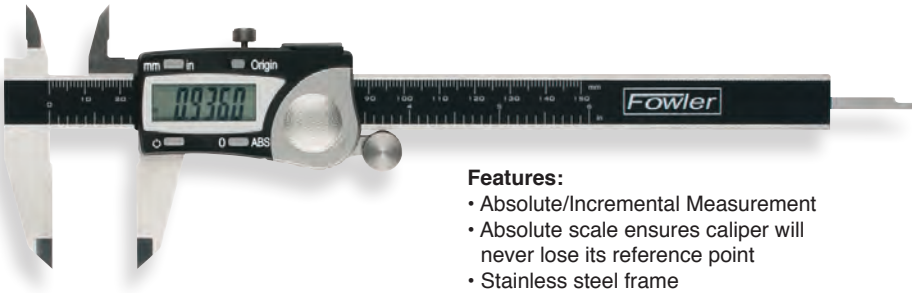
INCH • METRIC • FRACTION™

M

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Absolute ceramic scale ensures the caliper will never lose its reference point - Never zero your caliper again!

Economy Digital Calipers



Features:
- Absolute/Incremental Measurement
- Absolute scale ensures caliper will never lose its reference point
- Stainless steel frame
- Direct Inch/Metric conversion.
- Resolution: .0005"/.01mm.
- Large easy-to-read LCD display.
- Absolute referencing
- Includes case.

Jaw Specifications				
Caliper Size	**4"**	**6"**	**8"**	**12"**
External Jaw Length:	1.56"	1.56"	1.955"	2.40"
Internal Jaw Length:	.635"	.635"	.700"	.930"
Jaw Thickness:	.117"	.117"	.125"	.125"

Part Number	Range	Accuracy	Resolution
54-100-004-2	4"/100mm	0.001"/.02mm	0.0005"/.01mm
54-100-000-2	6"/150mm	0.001"/.02mm	0.0005"/.01mm
54-100-008-2	8"/200mm	0.0015"/.03mm	0.0005"/.01mm
54-100-112-2	12"/300mm	0.0015"/.03mm	0.0005"/.01mm
Accessories			
54-520-399	Data Cable		
54-100-350	CR2032 Battery		

Super-large display makes readings easy and fast.

X-SERIES

XTRA-VALUE CAL Electronic Calipers



- Accuracy: .001"/.02mm
- Stainless steel frame
- Large easy-to-read display.
- Resolution: .0005"/.01mm
- Direct inch/metric conversion.
- Absolute/Incremental Measurement
- 4-way measuring.
- Includes case.

Also available with a Super Large Display with Hold Feature!

Part Number	Range	Display Type
54-101-150-2	6"/150mm	Regular Display
54-101-600-1	6"/150mm	Super Large Display with Hold Feature
54-101-200-1	8"/200mm	Regular Display
54-101-800-1	8"/200mm	Super Large Display with Hold Feature
54-101-300-1	12"/300mm	Regular Display
54-101-900-1	12"/300mm	Super Large Display with Hold Feature
Accessories		
54-100-350	CR2032 Battery	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

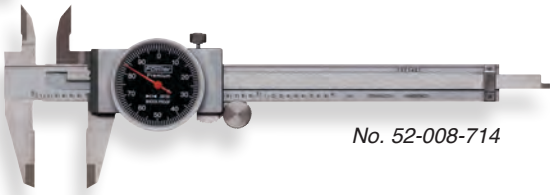
Machinist Grade Dial Calipers



No. 52-008-706



No. 52-008-707



No. 52-008-714

Features:

- Four-way jaw for outside, inside, depth and step measurements.
- Solid stainless steel construction.
- Silky smooth movement throughout.
- Dial hand completes one revolution per each .100".
- .001" reading dial face.
- Shockproof design prevents dial backlash.
- Thumbroll for rapid setting.
- Knurled lock assures precise settings.
- Includes case.

Part Number	Range	Dial Face Color	Graduation
52-008-704	0-4"	White	.001"
52-008-714	0-4"	Black	.001"
52-008-706	0-6"	White	.001"
52-008-707	0-6"	Black	.001"
52-008-708	0-8"	White	.001"
52-008-712	0-12"	White	.001"
Metric			
52-008-709	0-150mm	Yellow	.02mm

Silky smooth movement for consistent readings.

Inch/Metric Reading Dial Caliper



No. 52-030-006

Caliper Face

With a dual reading face showing inch readings in black and metric readings in red, Fowler's Inch/Metric reading dial caliper is like having two dial calipers in one.

Features:

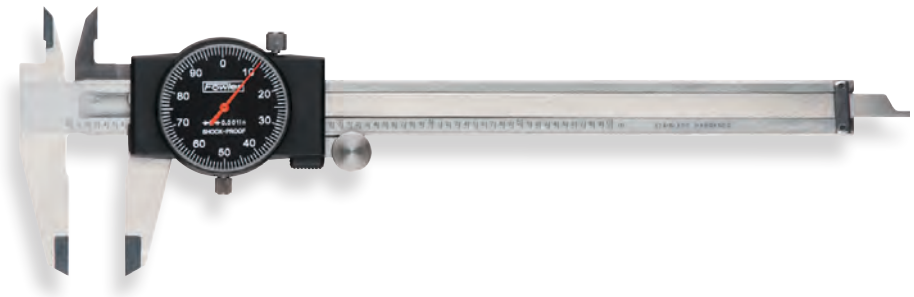
- Dial face reads in both inch (black) and metric (red).
- Hardened stainless steel throughout.
- Inside, outside, step and depth measurement.
- Raised sliding surface prevents wear and defacement of graduations.
- Covered, stainless steel rack.
- Includes case.

Part Number	Range	Graduation
52-030-006	6"/150mm	.001"/.02mm
52-030-008	8"/200mm	.001"/.02mm
52-030-012	12"/300mm	.001"/.02mm

2 in 1 reading dial reads in both inch and metric simultaneously.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

One-Rev Dial Caliper



Dial faces on Fowler's One-Rev Dial Calipers combine widely spaced microfine graduations, the protection of a covered rack and the accuracy of a hardened stainless steel rack.

- Dial hand completes one revolution per each .100".
- Self-contained movement eliminates gear misalignment.
- Exclusive dual pinion drive mechanism reduces wear on rack and pinion.
- Beam graduated in .10" increments.
- Thumbroll for rapid setting.
- Hardened stainless steel throughout with measuring faces precision ground and microlapped for exceptional accuracy.
- Knurled lock assures precise settings.
- Accuracy: .001" per 6".
- Adjustable dial reads directly to .001".
- Scale surface is satin chrome finished to prevent glare.
- Four-way jaw for outside, inside, depth and step measurements.
- Includes case.

Part Number	Range	Graduation	Jaw Depth
52-008-004	6"	.001"	1.6"
52-008-009	8"	.001"	2"
52-008-013	12"	.001"	2.437"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Dial Calipers



No. 52-008-005



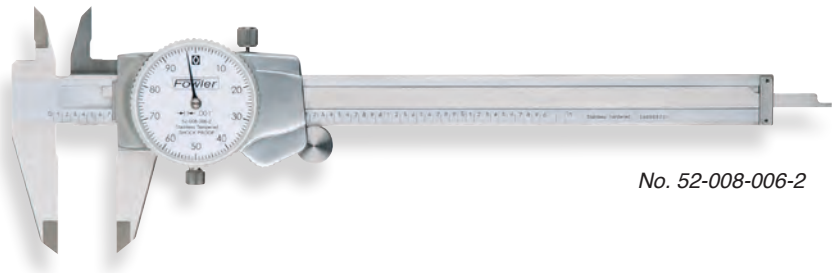
No. 52-008-007

Fowler Calipers combine microfine graduations, the protection of a covered rack and the accuracy of a hardened stainless steel rack.

Features:
- Thumbroll for rapid setting.
- Beam graduations: .100"
- Four-way jaw for outside, inside, depth and step measurements.
- Hardened stainless steel throughout with measuring faces precision ground and microlapped for exceptional accuracy.
- Knurled lock assures precise settings.
- Adjustable dial.
- Scale surface is satin chrome finished to prevent glare, reduces operator fatigue; microfine graduations read in inches.
- Includes case.

Part Number	Range	Graduation	Dial Face Color	Range/Revolution
52-008-005	0-6"	.001"	Black	.100"
52-008-007	0-6"	.001"	White	.100"
52-008-008	0-8"	.001"	White	.100"
52-008-012	0-12"	.001"	White	.100"

Premium Dial Calipers



No. 52-008-006-2

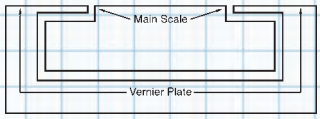
- Four-way jaw for outside, inside, depth and step measurements.
- Solid stainless steel construction.
- Silky smooth movement throughout.
- Dial hand completes one revolution per each .100".
- Thumbroll for rapid setting.
- Knurled lock assures precise settings.
- Includes case.

Part Number	Range	Graduation	Dial Face Color
52-008-006-2	0-6"	.001"	White

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

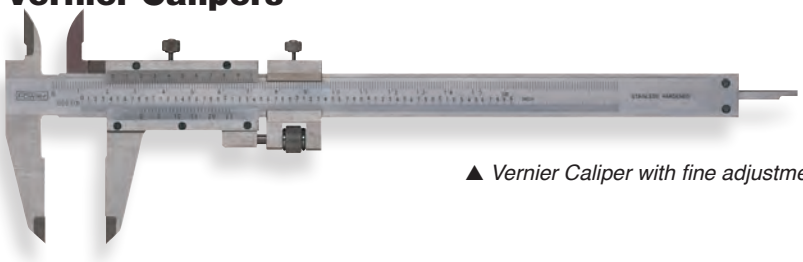
4-way measurement.

Parallax Free

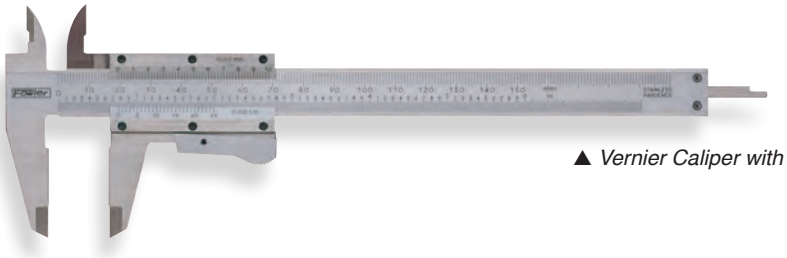


▲ *Vernier plates fitting flush to main scale reduce optical reading errors.*

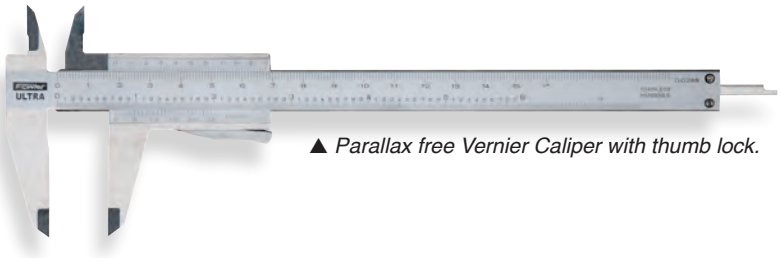
Vernier Calipers



▲ *Vernier Caliper with fine adjustment.*



▲ *Vernier Caliper with thumb lock.*



▲ *Parallax free Vernier Caliper with thumb lock.*

Fowler's line of fine quality vernier calipers measure accurately in inch or metric with vernier scales of .001" and .02mm.

Features:

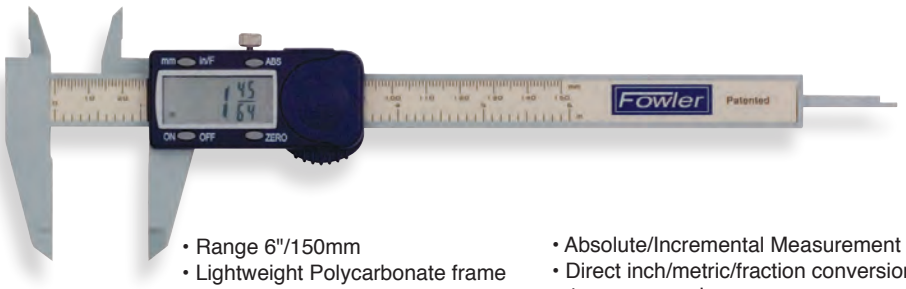
- Made of fully hardened stainless steel; microfine black graduations on a satin chrome finish for easy, precise reading.
- All models offer a depth rod which can be read directly from verniers.
- Measuring faces are ground and lapped for extreme accuracy.
- 4-way jaws for outside, inside, depth and step measurements.
- Extra-long vernier ensures accuracy.
- All sliding surfaces are raised to prevent defacement and wear of graduations.
- All models meet or exceed U.S. Federal specifications for accuracy.
- Includes case.
- Parallax free version features beam & scales on same plane.

Part Number	Range	Graduations	Depth of Jaws
Vernier Caliper with Fine Adjustment			
52-058-016	0-6"/0-150mm	.001" and .02mm	1.6"
52-058-008	0-8"/0-200mm	.001" and .02mm	1.9"
52-058-012	0-12"/0-300mm	.001" and .02mm	2.5"
Vernier Caliper with Thumb Lock			
52-059-016	0-6"/0-150mm	.001" and .02mm	1.6"
Vernier Caliper - Parallax Free with Thumb Lock			
52-060-016	0-6"/0-150mm	.001" and .02mm	1.6"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

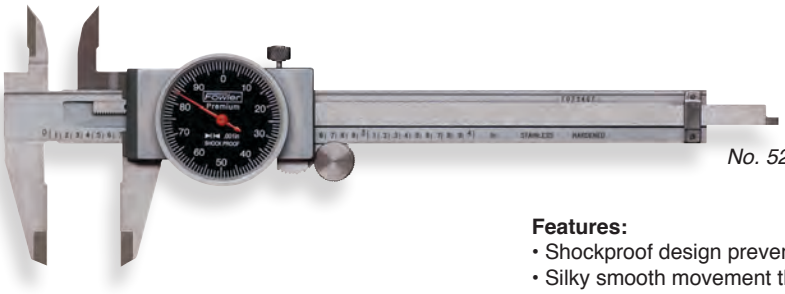
Poly-Cal ® Electronic Caliper



- Range 6"/150mm
- Lightweight Polycarbonate frame
- Large easy-to-read display
- Resolution .0005"/.01mm
  (Fractions by 1/64" increments)
- Absolute/Incremental Measurement
- Direct inch/metric/fraction conversion
- 4-way measuring
- Accuracy +/-.008"
- Supplied with clip-on vinyl pouch

Part Number	Description
54-101-175	6" Poly-Cal Electronic Caliper
54-100-350	CR2032 Battery

4" Machinist Grade Dial Pocket Calipers



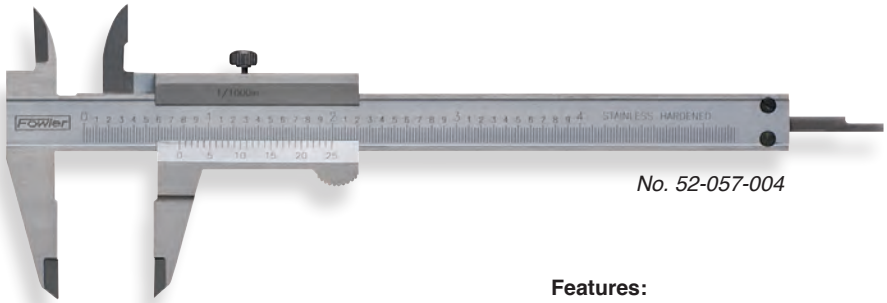
No. 52-008-714

Fowler's 4" compact-sized Machinist Grade Dial Calipers feature exceptional accuracy. Solid stainless steel construction for a long life of reliable service.

Features:
- Shockproof design prevents backlash.
- Silky smooth movement throughout.
- .100" range per revolution.
- Each dial graduation = .001".
- Knurled lock assures precise settings; knurled thumb wheel for rapid travel.
- Four-way jaw for outside, inside, depth and step measurements.
- Includes case.

Part Number	Description	Graduation
52-008-704	4" Shockproof Dial Caliper with white face	.001"
52-008-714	4" Shockproof Dial Caliper with black face	.001"

4" Vernier Pocket Caliper



No. 52-057-004

Fowler's 4" Mini Vernier Caliper #52-057-004 features 4-way measurement (inside, outside, depth and step).

Features:
- Satin chrome finish.
- Stainless steel construction.
- .001" reading
- Includes case.

Part Number	Description	Graduation
52-057-004	4" Mini vernier Caliper	.001"

INCH • METRIC • FRACTION™

7" overall
1.175 Jaw Depth
.625" Internal Jaw

6.2" overall
1.175 Jaw Depth
.53" Internal Jaw

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Extremely lightweight and easy-to-use.

Fowler OPTO INTERFACE

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

Swiss Quality!

Ultra-Lite Mark III Electronic Calipers



Fowler's Ultra-Lite Mark III Electronic Calipers offer many advantages over conventional calipers. Featuring a low weight that improves measuring results. Measuring pressure control for improved repeatability. For increased wear resistance, jaw faces are titanium-coated on hardened steel.

Features:

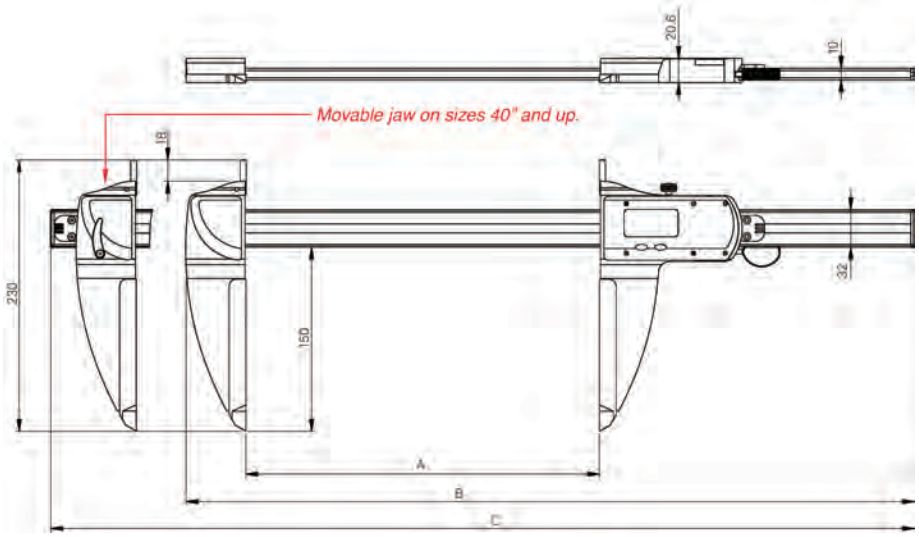
- Internal and external measurements with two presets.
- Min/Max functions.
- Hold feature freezes display for later viewing.
- Menu customizable with free software
- Incremental floating zero.
- Measuring Speed = 60"/1.5m per second.
- Large, high-contrast LCD display indicates in/mm, hold and zero functions.
- New low drain, high efficiency lithium wafer battery—4500 hrs. of continuous on-time.
- Direct inch/metric conversion.
- Direct RS232C output connects tool to any computer or printer without an interface.
- Special application accessories available.
- Includes case *(excluding 80", 100" & 120" models)*.

Part Number	Range	Accuracy	Repeatability	Weight
54-110-312	0-12"/300mm	.0012"(30µm)	.0008"(20µm)	2.4lb(1.1kg)
54-110-324	0-24"/600mm	.0016"(40µm)	.0008"(20µm)	2.9lb(1.3kg)
54-110-340	0-40"/1000mm	.0024"(60µm)	.0008"(20µm)	3.5lb(1.6kg)
54-110-360	0-60"/1500mm	.0048"(120µm)	.0008"(20µm)	4.4lb(2kg)
54-110-380	0-80"/2000mm	.0060"(150µm)	.0012"(30µm)	5lb(2.3kg)
54-110-100	0-100"/2500mm	.0080"(200µm)	.0012"(30µm)	5.67lb(2.6kg)
54-110-120	0-120"/3000mm	.010"(250µm)	.0012"(30µm)	6.54lb(3kg)
Cables:				
54-115-525	Opto USB Cable			
54-115-333	Opto Serial Cable			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

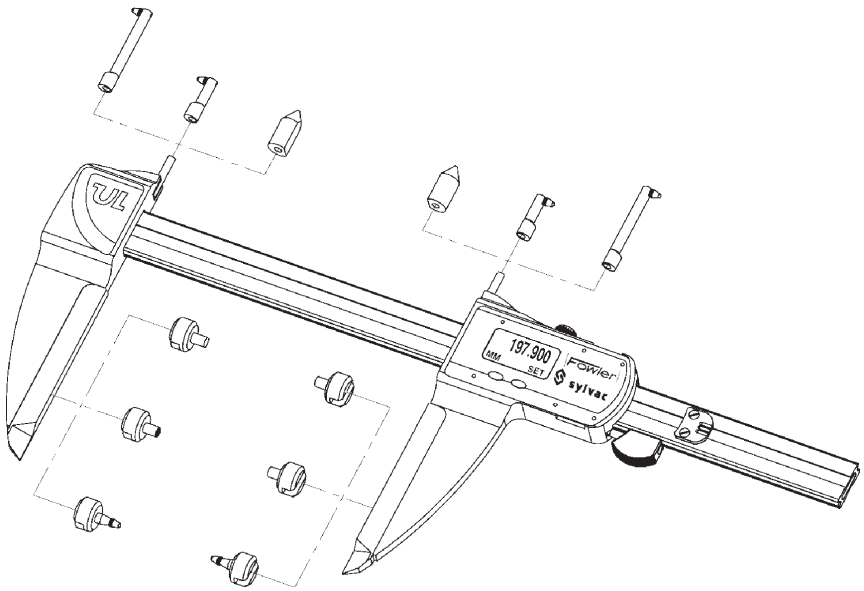
Fowler

Ultra-Light Mark III Calipers *(continued)*



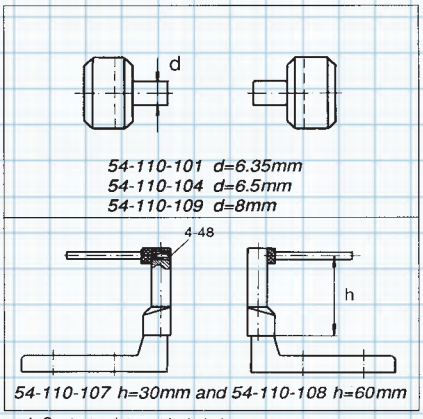
Specifications:

- External Jaws: Length = 6"(150mm); thickness = .4" (10mm); material: titanium coated stainless steel.
- Internal Pins: Length = .71" (18mm) diameter of nibs = .2" (5mm); material = tungsten carbide.

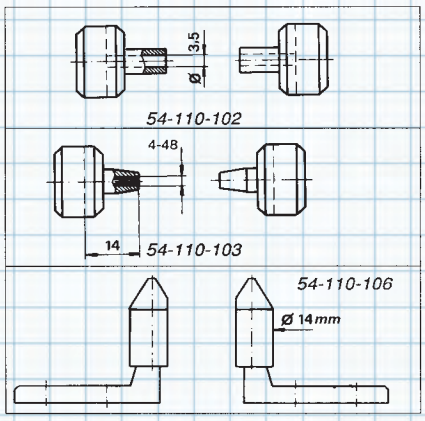


Part Number	Description
Accessories	
54-110-101	Thread wire holder, diameter 6.35mm (pair)
54-110-102	Thread insert holder, diameter 3.5mm (pair)
54-110-103	Contact Point holder, 4-48 thread (pair)
54-110-104	Thread wire holder, diameter 6.5mm (pair)
54-110-106	Centerline cones 14mm (pair)
54-110-107	Groove attachment, 30mm (pair)
54-110-108	Groove attachment, 60mm (pair)
54-110-109	Thread wire holder, diameter 8mm (pair)

2 moveable jaws allow you to center the gage when making measurements.



▲ Contact points not included.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

German engineering and quality.

INTERFACE RS-232 DIRECT

X-SERIES

2-YEAR WARRANTY

I.D.	Nib Size
12"	.500"
24"	.800"
40"	.800"

Ultra-Cal III Heavy Duty Electronic Caliper



No. 54-100-012

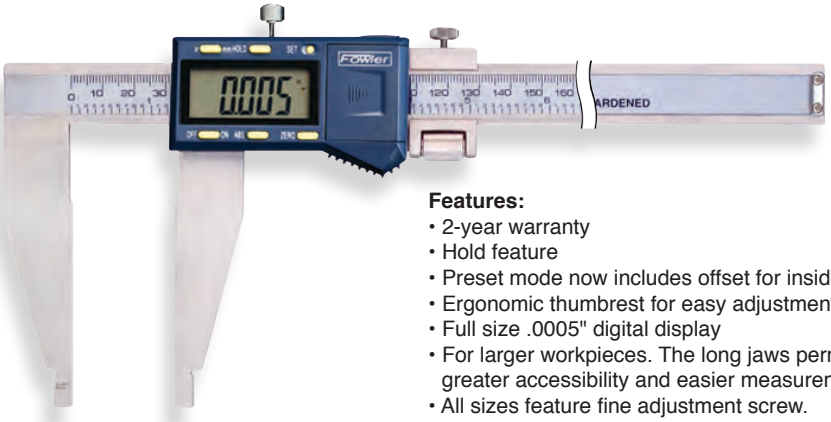
Heavy Duty Ultra-Cal III, made in Germany, combines the Swiss-patented Sylvac non-contact capacitive measuring system with output capabilities.

Electronic Specifications:
- Resolution: .0005"/.01mm
- Repeatability: .0005"/.01mm ±2s
- Incremental floating zero
- Direct inch/metric conversion
- Fast tracking speed of approximately 60"/second.
- Combination zero/data/hold button
- Hold feature freezes display for later viewing.
- Direct RS-232C output

Features:
- Inside, outside measurements only.
- Caliper No. 54-100-212 with cross top jaws for direct inside measurement.
- Fine adjustment
- Frame and jaws are precision ground of hardened stainless steel.
- Price includes fitted case and battery.

Part Number	Range	Overall Accuracy	Length of Bottom Jaws	Length of Top Jaws
Knife Jaws				
54-100-012	0-12"/0-300mm	.0015"/.04mm	3.2"	1.5"
54-100-020	0-20"/0-500mm	.002"/.05mm	5.9"	2.25"
54-100-040	0-40"/0-1000mm	.003"/.07mm	5.9"	2.25"
54-100-080	0-80"/0-2000mm	.005"/.12mm	5.9"	2.25"
Cross Jaws				
54-100-212	0-12"/0-300mm	.0015"/.04mm	3.2"	1.3"
Accessories				
54-100-350	Replacement Battery type CR2032			
54-115-333	Simplex Computer Connection Kit			
54-115-525	Opto USB Cable			

XTRA-RANGE Electronic Caliper



No. 54-100-312

Features:
- 2-year warranty
- Hold feature
- Preset mode now includes offset for inside jaws.
- Ergonomic thumbrest for easy adjustment
- Full size .0005" digital display
- For larger workpieces. The long jaws permit greater accessibility and easier measurements.
- All sizes feature fine adjustment screw.
- Resolution: .0005"/.01mm.
- Inch/metric conversion.

Part Number	Range	Jaw Depth
54-100-312	0-12"/300mm	3.5"
54-100-024-1	0-24"/600mm	4"
54-100-042-1	0-42"/1000mm	4.9"
Accessories		
54-100-350	CR2032 Replacement Battery	

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Long Range Dial Calipers



No. 52-008-018

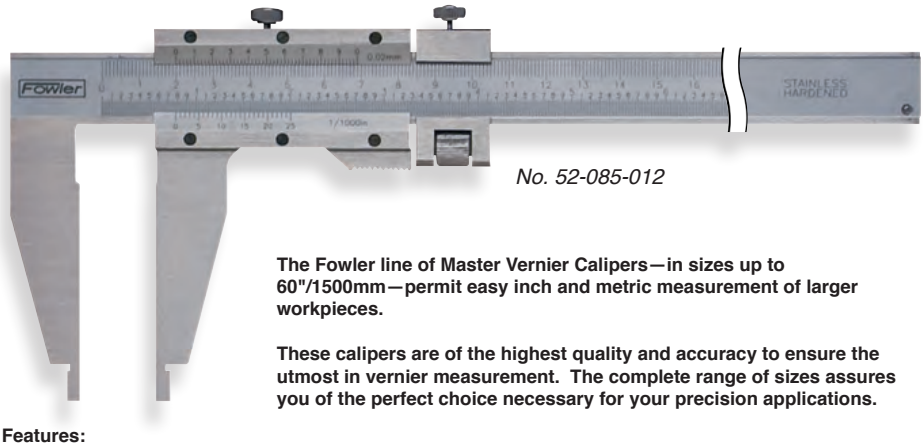
Fowler's Long Range Dial Calipers—combines microfine graduations, the protection of a covered rack and the accuracy of a hardened stainless steel rack.

Features:
- Dial hand completes one revolution per each .100", large dial—easy to read graduations.
- Inverted covered rack prevents dirt accumulation in rack gear teeth. Self-contained movement eliminates gear misalignment.
- Exclusive dual pinion drive mechanism reduces wear on rack and pinion.
- Beam graduated in .100" increments.
- Thumbroll for rapid setting.
- Hardened stainless steel throughout with measuring faces precision ground and microlapped for exceptional accuracy.
- Depth rod on both models.
- Knurled lock assures precise settings.
- Accuracy = .001" per 6".
- Adjustable dial reads directly to .001".

Part Number	Range	Graduation	Jaw Depth
52-008-018	0-18"	.001"	3.125"
52-008-024	0-24"	.001"	3.125"

Internal jaw width: 0.5"

Master Vernier Caliper



No. 52-085-012

The Fowler line of Master Vernier Calipers—in sizes up to 60"/1500mm—permit easy inch and metric measurement of larger workpieces.

These calipers are of the highest quality and accuracy to ensure the utmost in vernier measurement. The complete range of sizes assures you of the perfect choice necessary for your precision applications.

Features:
- Satin chrome finish on all models.
- Hardened stainless steel throughout; ground and lapped for accuracy.
- Extra long vernier scales have wide spaced microfine graduations on satin chrome finish to ensure easy reading.
- Machine divided and engraved from master for exceptional accuracy.
- A raised sliding surface prevents wear and defacement of microfine graduations.
- Verniers are adjustable for wear.
- Open face design permits both vernier scales to be located on one side of the gage for both inside and outside measurements.
- All sizes permit inside and outside measurements.
- For larger workpieces, the long jaws permit greater accessibility and easier measurements.
- All sizes meet or exceed U.S. Federal specifications for accuracy.
- Includes case.

Part Number	Range	Graduation	Jaw Depth
52-085-012	12"/300mm	.001"/.02mm	3"
52-085-024	24"/600mm	.001"/.02mm	4"
52-085-040	40"/1000mm	.001"/.02mm	5-1/2"
52-085-060	60"/1500mm	.001"/.02mm	7-1/2"

Larger sizes available upon request

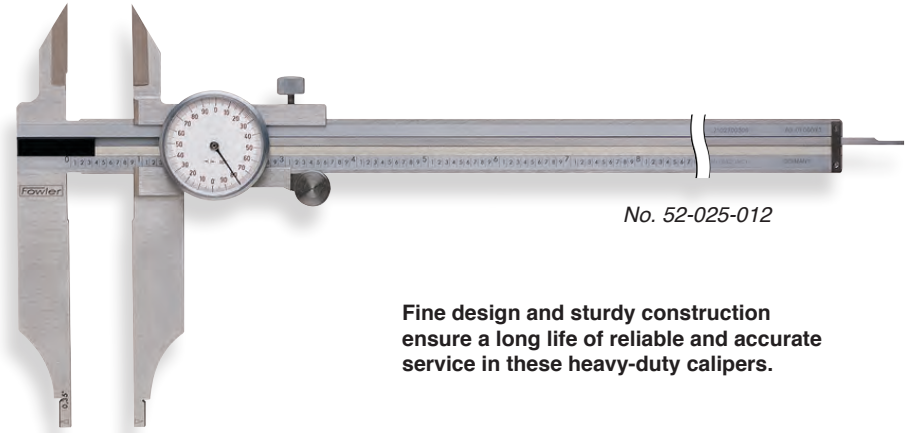
Internal jaw width: 0.5"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

German engineering and quality.

Internal jaw width: 0.35"

Heavy Duty Dial Caliper



No. 52-025-012

Fine design and sturdy construction ensure a long life of reliable and accurate service in these heavy-duty calipers.

Features:
- Oversized dial with microfine graduations for easy reading.
- Inside, outside and depth measurement; "knife edge" top jaws for measuring threads, slots, recesses and similar work. Inside measurements are obtained by use of the nibs on the bottom jaws.
- Beam is satin chrome finished.
- Extra long jaws.
- Hardened stainless steel throughout; measuring faces are ground and microlapped for exceptional accuracy.
- Knurled lock assures precise settings.
- Adjustable dial reads to .001" in inch series or .05mm in metric series.
- Raised sliding surface prevents wear and defacement of graduations.
- Available in inch or metric models.
- Beam features large, clear graduations.
- Accuracy: .001" per 6 inches (inch series) or .05mm per 150mm (metric series).
- All sizes feature thumbroll adjustment.
- Includes case.

Part Number	Range	Dial Graduations	Jaw Depth
52-025-012	0-12"	.001"	3-1/2"
52-025-013	300mm	.05mm	90mm

Heavy Duty Dial Caliper



No. 52-025-108

Features:
- Cross jaws for direct internal measurements.
- Large, One-Rev dial
- .100" range per revolution
- Graduation: .001"
- 4-way measurement
- Longer jaws permit greater accessibility.
- Thumbroll for precise control.
- Includes case.

Part Number	Range	Dial Graduations	Jaw Depth
52-025-108	8"	.001"	2.5"
52-025-112	12"	.001"	2.875"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

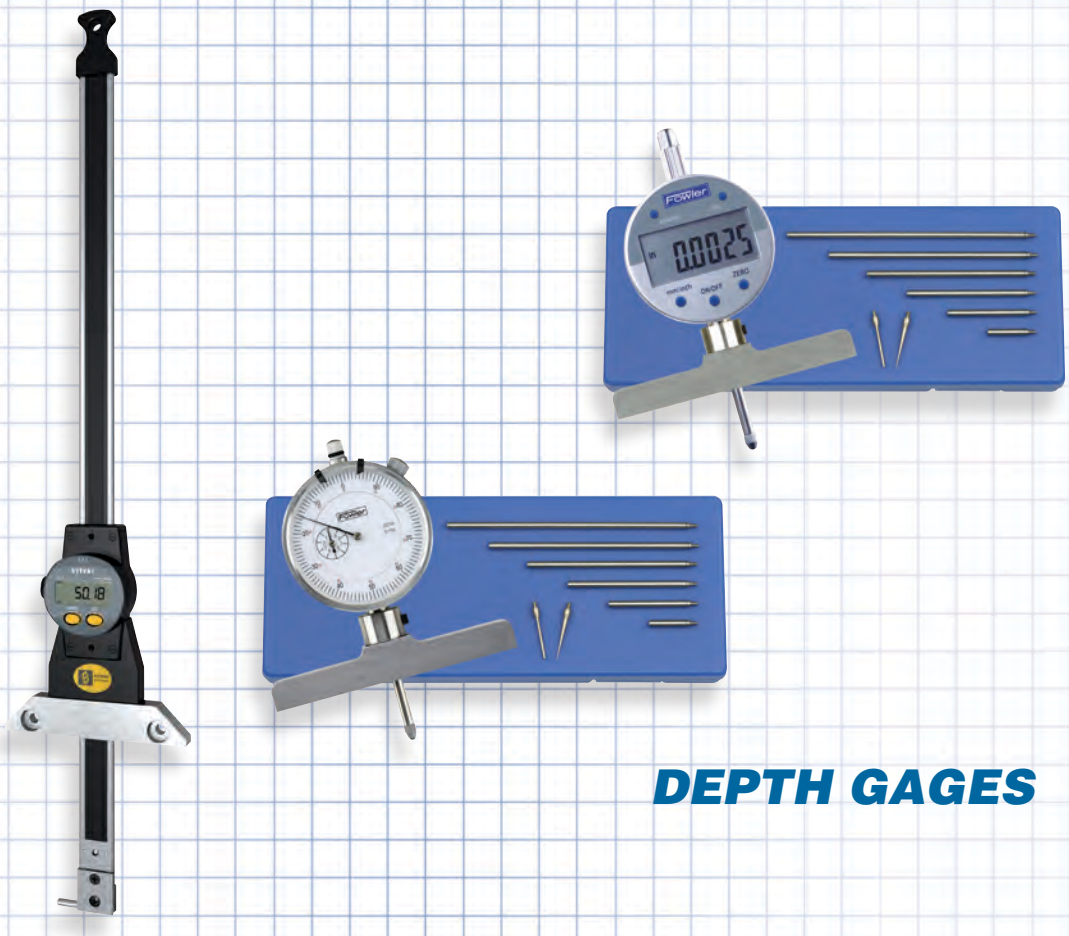
Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



DEPTH GAGES

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

S_Depth PRO Depth Gage

Special Features:
- PRESET function.
- Switchable measuring direction
- Battery life: 5,000 hours of operation.
- Internal/External measurement.
- Interchangeable bases.



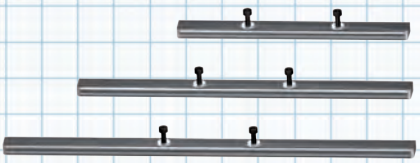
Part Number	Description
54-139-012	12"/300mm S_Depth PRO
54-139-024	24"/300mm S_Depth PRO
Accessories	
54-139-186	Additional Base - 180mm
54-139-260	Additional Base - 260mm
54-139-320	Additional Base - 320mm
54-139-101	Vertical Contact Point
54-139-102	Even Top/Bottom Measuring Faces
54-139-103	Horizontal Pin
54-115-444	Computer Connect Kit RS-232
54-115-528	Computer Connect Kit USB

Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Fowler POWER INTERFACE

Compatible Accessories



Additional Bases



Vertical Contact Point-comes standard



Even Top/Bottom Measuring Faces

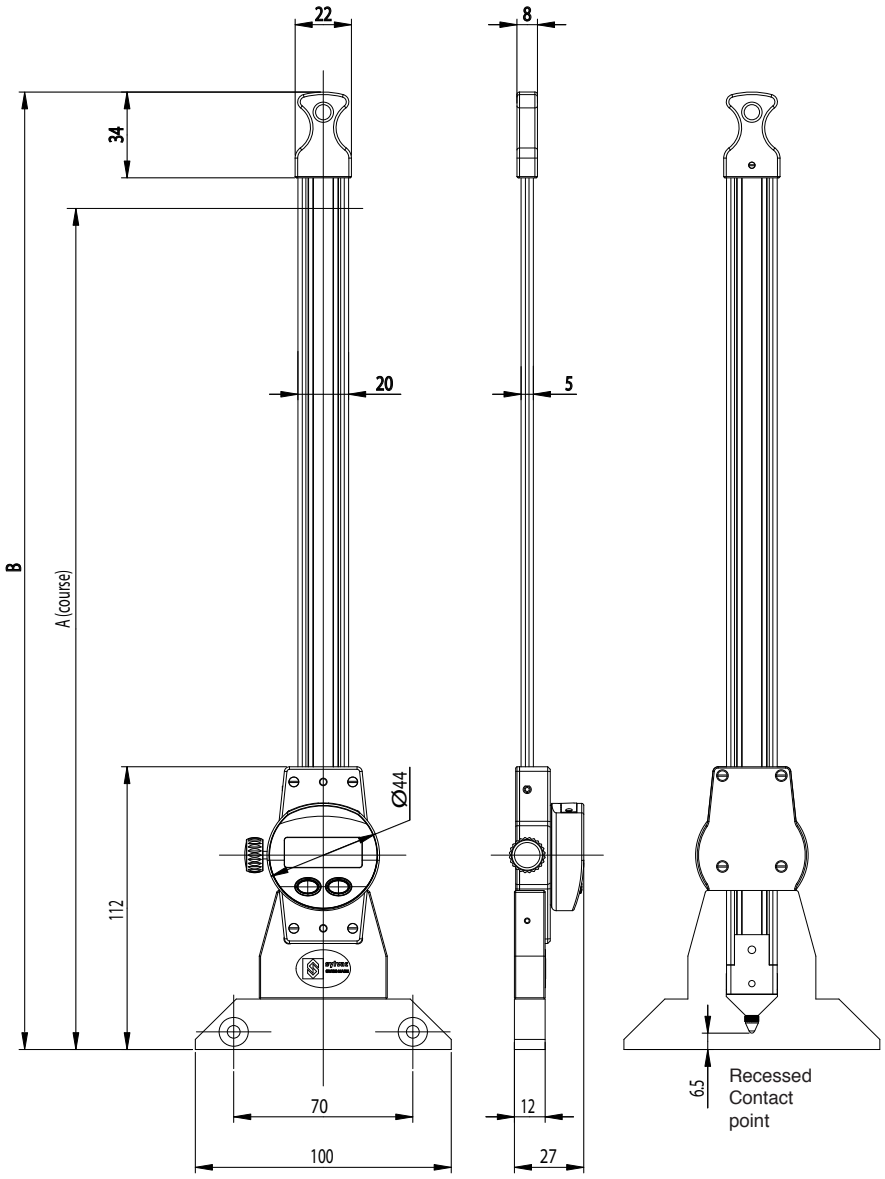


Horizontal Pin

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Great for top- bottom, face and recess measure- mentc

S_Depth PRO Depth Gage *(continued)*



Technical Specifications:		
	No. 54-139-012	***No. 54-139-024***
Measuring range	12"/300mm	24"/600mm
Max Error	0.0012"/30µm	0.0016"/40µm
Repeatability	0.0004"/10mm	0.0004"/10mm
A	13.19"/335mm	21.46"/545mm
B	19.02"/483mm	27.28"/693mm
S_Connet: Power	USB/RS232/Digimatic/Wireless	
2 References	✔	
PRESET function	✔	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Ultra-Cal III Electronic Depth Gages



No. 54-130-012



No. 54-135-012

Improved electronics—now with Direct RS232 Output. Available in two styles, these computerized measuring tools combine the advantages of Fowler's "Ultra-Cal III" Swiss patented measuring system with the rugged design of a full 12" capacity depth gage. Together they replace conventional vernier and dial depth gages and depth micrometers.

Identical except for the end style, both tools feature an LCD display to .0005" (.01mm) resolution, direct inch/metric conversion, incremental floating zero, and the Sylvac non-contact capacitive measuring system (no glass scales, racks, etc.).

Model No. 54-130-012:
Features a "hook" style end. Ideal for thru-holes, shoulders, recesses, measuring of wall thickness, etc. Length of leg: .584".

Model No. 54-135-012:
Features a standard style end. For small hole entry, general gaging, blind holes, etc.

Specifications of Both Models:
- Base length: 6"; base width: .300"; beam width: .637"; beam thickness: .120".
- Low drain, high efficiency lithium wafer battery (environmentally safe for disposal) offers 4500 hours of continuous on-time. Life extended 2—3 years with use of on/off switch.
- Price includes battery & deluxe wood case.

Fowler OPTO INTERFACE

Made in GERMANY

Part Number	Description	Range	Resolution
54-130-012	Depth Gage with Hook	0-12"/300mm	.0005"/.01mm
54-135-012	Depth Gage with (standard)	0-12"/300mm	.0005"/.01mm
Accessories			
54-115-525	Opto - USB Cable		
54-100-350	Replacement Battery type CR2032		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

A long-range electronic depth gage.

X-SERIES™

Fred V. Fowler Co., Inc.

X-DEPTH 22 0—22" Electronic Depth Gage



No. 54-125-777

Fowler's Electronic Depth Gage comes with six interchangeable rods with a 0—22" capacity, carbide contact point and 2 extra points for small applications. Provides rapid electronic display measurement of hole depths.

Features:
- Rod extensions of 1", 2", 3", 4", 5" and 6" are included. Rods can be connected together for a full 0—22" capacity.
- Includes 2 extra points for small hole applications; one 0.078" dia. x 1" long and one needle point x 1" long.
- Base is hardened steel, ground and microlapped for accuracy.
- Standard 4-48 thread removeable carbide ball contact point.
- Includes shop hardened case.

Indicator Features:
- 0-1" travel electronic indicator with 3/8" stem.
- Resolution: .0005"/.01mm
- Direct inch/metric conversion
- Zero reset at any position
- On/off button
- Hold feature
- Relative/absolute measuring

Part Number	Range	Resolution	Base Size
54-125-777	0-22"/550mm	.0005"	4" x .630"
Accessories			
54-100-350	CR2032 Lithium Battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Electronic IP54 Depth Micrometer



No. 54-225-456

This gage features a resolution of .00005".

IP54

Features:
- Range: 0—6"/150mm
- Resolution: .00005"/.001mm
- Accuracy: .00016"/.004mm
- 4" Base: Hardened tool steel, precision ground & microlapped.
- Water Resistant to IP54 specifications.
- True inch/metric conversion
- Friction thimble
- Rod diameter: 0.176"
- Large easy-to-read LCD display
- Easy, snap-fit rod insertion
- Supplied in fitted case.

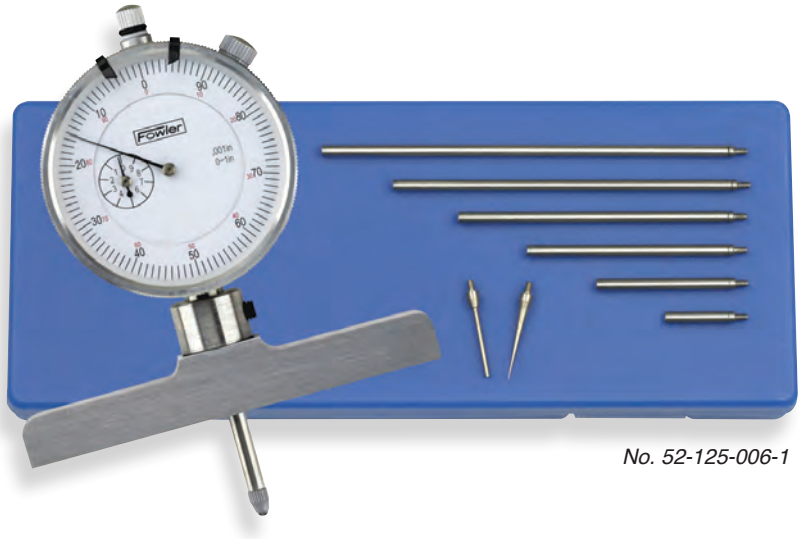
Part Number	Range	Resolution	Base Size
54-225-456	0-6"/1500mm	.00005"/.001mm	4"
Accessories			
54-902-110	Type 357 Replacement Battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

X-DEPTH 22® Dial Depth Gage

Long range depth gage.



No. 52-125-006-1

Fowler's X-Depth 22 Dial Depth Gage comes with six interchangeable rods with a 0—22" capacity, carbide contact point and 2 extra points for small applications. Provides rapid measurement of hole depths.

Special Features:

- Measurements automatically registered directly on dial face in .001" graduations. The dial indicator can be easily adjusted for zero setting.
- Knurled bezel is easily adjusted with a clamping screw for positive settings.
- 0-1" travel indicator with 3/8" stem.
- The dial indicator has a precision ground hard chrome plated stem.
- Accuracy of the dial indicator meets Federal specifications.
- Rod extensions of 1", 2", 3", 4", 5" and 6" are included. Rods can be connected together for a full 0—22" capacity.
- Includes 2 extra points for small hole applications; one 0.078" dia. x 1" long and one needle point x 1" long.
- Base is hardened steel, ground and microlapped for accuracy. Other portions of the tool are satin chrome finished.
- Standard 4-48 thread removeable carbide ball contact point.
- Rack spindle and pinions are hardened stainless steel to ensure long wear and continuing accuracy.
- Includes shop hardened case.

Part Number	Range	Graduations	Base Size
52-125-006-1	0-22"	.001"	4" x .630"

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Economy Depth Micrometer



No. 52-225-116

Special Features:
- 4" base
- Satin chrome finish
- Base surface hardened and ground.
- Ratchet thimble
- Locking clamp
- .001" Graduation
- Accuracy: .00016"
- Rod diameter: .176"
- Includes case.

Part Number	Range	Graduation	Base Size
52-225-110	0-4"	.001"	2.5"
52-225-112	0-6"	.001"	2.5"
52-225-114	0-4"	.001"	4"
52-225-116	0-6"	.001"	4"

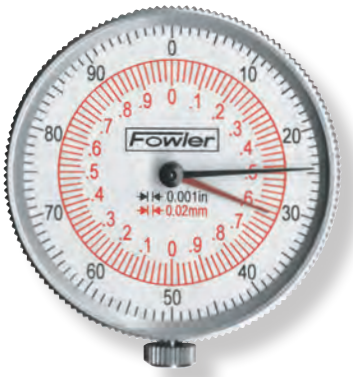
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Two gages in one - reads both inch and metric simultaneously.

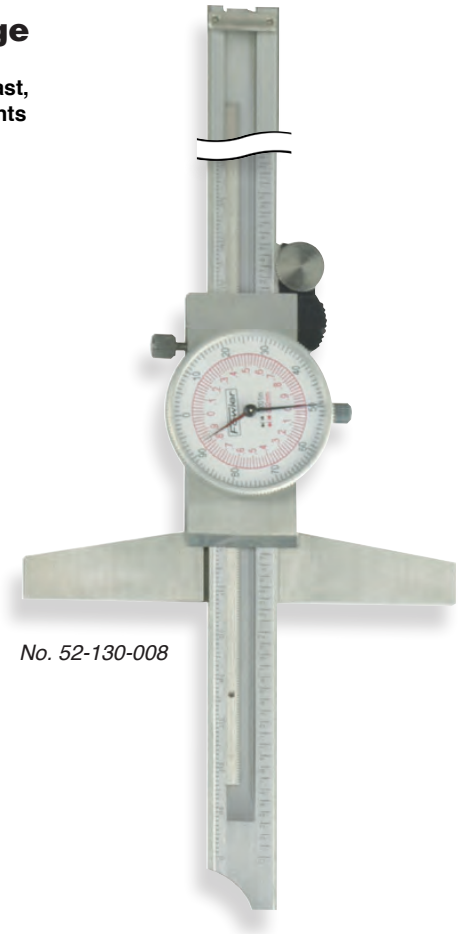
Inch/Metric Dial Depth Gage

Fowler's Inch/Metric Dial Depth Gage gives fast, accurate and easy to read depth measurements with inch graduations in black and metric graduations in red.

Features:
- Graduations .001"/.02mm.
- Hardened stainless steel throughout.
- Positive locking screw.
- Thumbroll for rapid setting.
- Beam .630" wide and .128" thick.
- 4"/100mm Length Base
- Raised sliding surface prevents wear and defacement of graduations.
- Includes fitted case.



Close up of dial face



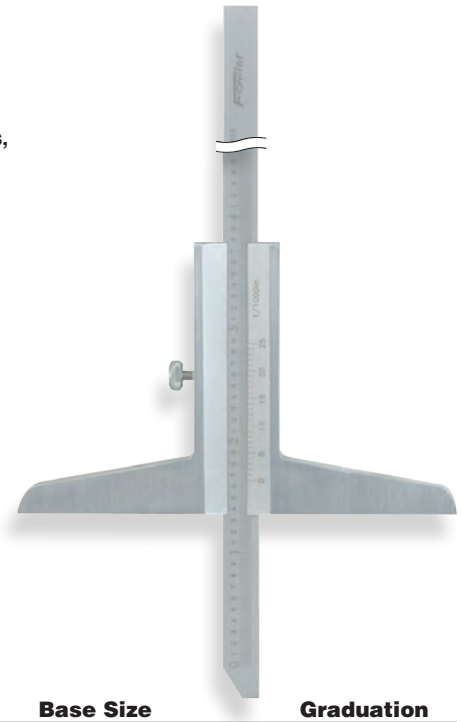
No. 52-130-008

Part Number	Description
52-130-008	8"/200mm Inch/Metric Dial Depth Gage
52-130-012	0-12"/300mm Inch/Metric Dial Depth Gage

Vernier Depth Gages

Fowler's Vernier Depth Gage is an extremely useful tool for measuring the depths of holes, slots and recesses. It features an extra wide base for proper contact.

Special Features:
- Highly accurate for use in tool rooms and inspection departments, on jigs, die works or fixtures.
- Designed for measuring depth of holes, slots and recesses.
- Made of hardened stainless steel.
- Microfine black graduations on satin chrome finish for easy readability.
- Overall accuracy within: .001"
- The base is hardened, ground and microlapped.
- Positive locking set screw
- Width of beam: .330".
- Thickness of beam: .165".
- Includes fitted case.



Part Number	Range	Base Size	Graduation
52-140-008-1	8"	.325" x 4"	.001"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com





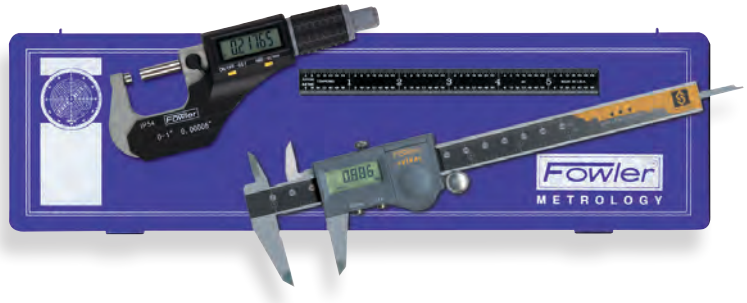




TOOL SETS

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Water Resistant Electronic Measuring Set



- Caliper protected to IP65 and Micrometer is protected to IP54 standards.
- 0-6" /150mm Ultra-Cal IV IP65 Electronic Caliper 54-100-444.
- 0-1" IP54 Electronic Micrometer 54-860-001-1
- 5R grad. EZ-Read steel rule 52-347-006.
- Complete with shop-hardened case.
- For output cables see micrometer and caliper sections under individual instruments.

Part Number	Description
54-004-854	Water Resistant Electronic Tool Kit

X-PROOF® IP-54 Electronic Measuring Set

- Caliper and Micrometer are protected to IP54 standards.
- All contained in a fitted, shop-hardened case.

6"/150mm *Euro-Cal IV* 54-100-330-1
- Reads in Inch, Metric and Fractions.
- Resolution: .0005"/.01mm (fractions in 1/64th increments)

XTRA-VALUE Electronic Micrometer 54-815-001-2
- Range: 0-1"/0-25mm
- Resolution: .00005"/.001mm



Part Number	Description
54-004-875	X-Proof IP-54 Electronic Measuring Set
54-100-350	CR2032 Replacement Battery

Electronic Caliper & Micrometer Measuring Set



- 6" Electronic Caliper 54-100-000-2: .0005"/.01mm resolution
- 0-1"/25mm Electronic Micrometer 54-870-001 .00005"/.001mm resolution, direct inch/metric conversion.
- Complete in shop-hardened case.

Part Number	Description
54-004-850	Electronic Caliper & Micrometer Measuring Kit

Fowler RS-232 DIRECT

Great value electronic kits!

INCH • METRIC • FRACTION™

X-SERIES™

IP54

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

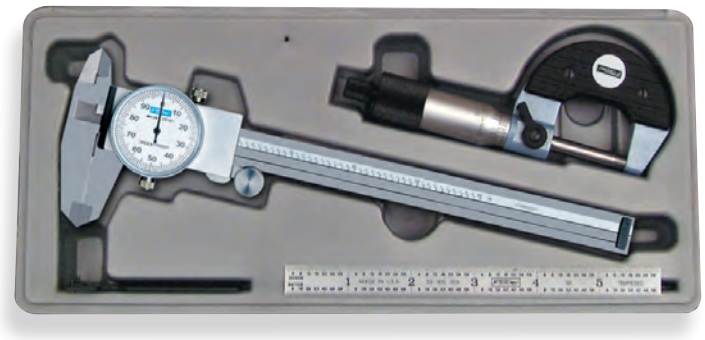
Blackface Measuring Sets



- 0-6" Machinist Grade Caliper 52-008-707: .001" Graduations, .100" range/rev., Thumbroll, 4-way measuring.
- 0-1" Outside Micrometer 52-229-201: .0001" Graduations, Carbide tipped measuring faces, Insulated frame
- Test Indicator:52-562-778: .030" range, .0005" graduations, 2 dovetail stems and 3 contact points; .040", .080" & .120"
- Complete in shop-hardened case

Part Number	Description
52-229-710	Set with Caliper & Micrometer
52-229-770	Set with Caliper, Micrometer & Test Indicator

Premium Measuring Set



- 0-6" Shockproof Caliper 52-008-706, .100" range per revolution with .001" reading dial face.
- 0—1" Micrometer with .0001" graduations and ratchet thimble.
- 5R Steel rule

Part Number	Description
52-004-239	Premium Measuring Set

Universal Measuring Set



- 6" Dial Caliper 52-008-007 - .001" graduations
- Micrometer 52-229-201 - .0001" graduations, Range: 0-1"
- 6" Flexible rule with 32nds, 64ths, 10ths & 100ths graduations.
- All contained in a fitted, shop-hardened case.

Part Number	Description
52-095-007	Toolmaker's Universal Measuring Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTRA-VALUE Depth Gage and Euro-Cal IV® Set



Euro-Cal IV - 54-100-330-1:
- Range: 6"/150mm
- Water resistant to IP54 standards.
- Resolution .0005"/.01mm,fractions by 1/64 increments.

Xtra-Value Depth Gage - 54-225-555:
- Spring-loaded with a hold measurement button for ease-of-use.
- Super-large display
- Travel: 0-1"/25mm
- Application range: 0-16"/400mm
- Resolution: .0005"/.01mm *(Fractions in 1/64" increments).*
- Supplied in shop-hardened case.

Part Number	Description
54-004-330	Xtra-Value Depth Gage and Euro-Cal IV Set
54-100-350	CR2032 Replacement Battery

XTRA-VALUE Depth Gage and Poly-Cal® Kit



Poly-Cal - 54-101-175:
- Range 6"/150mm
- Polycarbonate Frame.
- Resolution .0005"/.01mm, fractions by 1/64 increments.

Xtra-Value Depth Gage:
- Spring-loaded with a hold measurement button for ease-of-use.
- Super-large display
- Travel: 0-1"/25mm
- Application range: 0-22"/400mm
- Resolution: .0005"/.01mm *(Fractions in 1/64" increments).*
- Supplied in shop-hardened case.

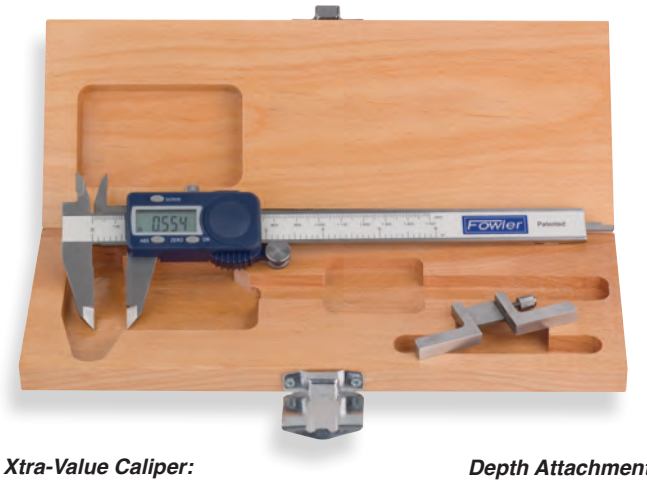
Part Number	Description
54-004-255	Xtra-Value Depth Gage and Poly-Cal Set

INCH • METRIC • FRACTION™
X-SERIES™

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTRA-VALUE CAL Electronic Caliper & Depth Attachment Combo



X-SERIES

Xtra-Value Caliper:
- Accuracy: .001"/.02mm
- Range: 6"/150mm
- Large easy-to-read display
- Resolution: .0005"/.01mm
- Direct inch/metric conversion
- Absolute/Incremental Measurement
- 4-way measuring

Depth Attachment:
- Attaches quickly
- Positive locking screw
- Precision-ground contact surface.

Packed in a custom-fit wooden case.

Part Number	Description
54-008-715	Xtra-Value Caliper & Depth Attachment Combo
52-100-002	Wooden Case Only



Easy depth measurement!

Shockproof Dial Caliper & Depth Attachment Combo





Available with White or Black Face.

Premium Dial Caliper:
- Positive stop carriage
- 4-way measuring
- Solid stainless steel construction
- Silky-smooth movement throughout.
- .100" range per revolution
- .001" reading dial face

Depth Attachment:
- Attaches quickly
- Positive locking screw
- Precision-ground contact surface.

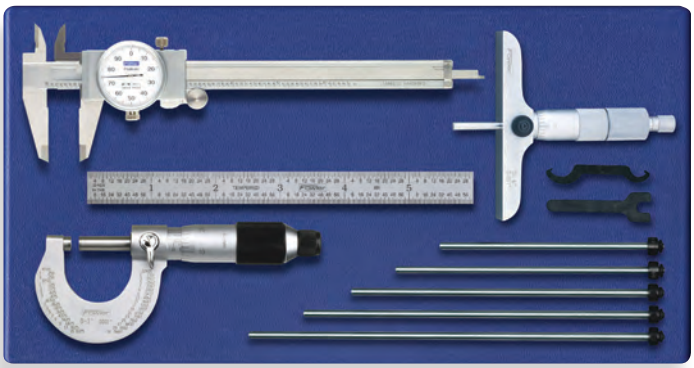
Packed in a custom-fit wooden case.

Part Number	Description
52-008-700	Combo with 6" Whiteface Premium Dial Caliper
52-008-710	Combo with 6" Blackface Premium Dial Caliper
52-100-002	Wooden Case Only

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Four Piece Measuring Set



- 6" Shockproof Dial Caliper 52-008-706: 0.001" graduations
- 0-1" Micrometer 52-235-001-1: 0.0001" graduations
- 6" Depth Micrometer 52-225-116: 0.001" graduations
- 6" Flexible rule 52-295-006: 4R Reading - 8ths, 16ths, 32nds & 64ths graduations.
- All contained in a fitted, shop-hardened case.

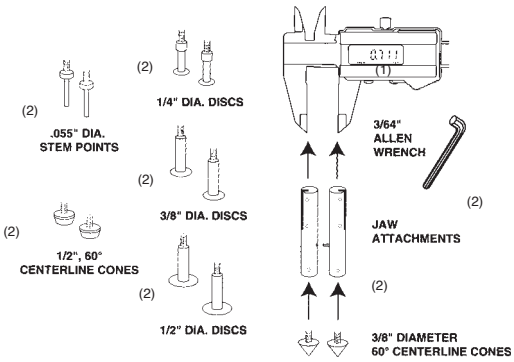
Part Number	Description
52-095-025	Four Piece Measuring Set

XTRA-VALUE CAL Centerline Accessory Set



Xtra-Value Electronic Caliper:
- Range: 6"/150mm
- Resolution: .0005"/.01mm.
- Accuracy: .001"/.02mm
- Absolute/incremental measurement
- True Inch/Metric conversion.
- 4-way measuring

Accessory Set
- 6 sets of interchangeable anvils.
- Allows measurement of hard to reach places including undercuts, grooves, webs and shoulders.
- Corrosion resistant black oxide plating.
- Includes fitted wooden case.



Part Number	Description
52-010-025	Centerline Accessory Set

X-SERIES™
Fred V. Fowler Co., Inc.

Multi-Application Kit

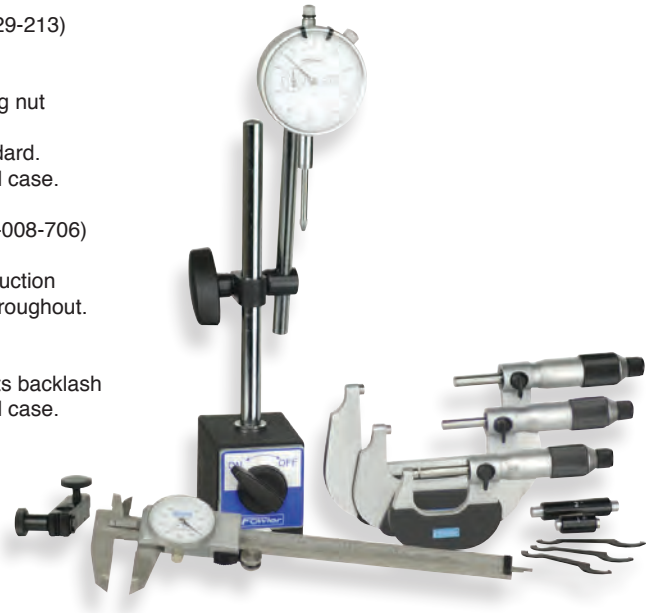
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Indicator, Mag Base, Dial Caliper & Mic Set Combo

0—3" Micrometer Set (52-229-213)
- .0001" reading
- Carbide measuring faces
- Ratchet thimble and locking nut
- Microfine graduations
- Sizes over 1" include standard.
- Supplied in shop-hardened case.

Shockproof Dial Caliper (52-008-706)
- 4-way measuring
- Solid stainless steel construction
- Silky smooth movement throughout.
- .100" range per revolution.
- .001" reading dial face
- Shockproof design prevents backlash
- Supplied in shop-hardened case.



Great kit for the work bench.

AGD Indicator (52-520-110)
- 1" travel
- Continuous reading: 0-100
- AGD group 2 , 2-1/4" dial diameter
- Revolution counter
- Tolerance markers
- Lug back mount

Magnetic Base (52-585-010)
- 85 lb. pull
- Fine adjustment
- V-bottom base

Part Number	Description
52-229-780	Indicator, Mag Base, Dial Caliper & Mic Set Combo

XTRA-SURF

Surface gage with a built-in Switchable Magnetic Base





- Set includes 3-1/8" x 2-1/16" permanent magnetic base with on/off switch, fine adjustment on base and a 5/16" x 9" upright.
- .0005" test indicator No. 52-562-778 (see page 97) with .040", .080" & .120" contact points.
- Swivel clamp to mount indicator.
- Two dovetail stems: 5/32" & 3/8"
- A 4" hardened scriber.
- Includes case

Part Number	Description
52-155-747	Xtra-Surf Set with Test indicator
52-155-743	Xtra-Surf without indicator

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTRA MAG® and Indicator Sets

X-Test & Xtra-Mag Set

X-Test Features: *(52-562-001)*
- Range: .060"; Graduation: .0005"
- Dial reading: 0—15—0; 1-1/2" Dial Diameter
- Jeweled movement
- Revolution counter
- Automatic reversal
- 210° Swivel arc
- Tungsten carbide point: .080"

XTEST

XTRA MAG

Mag Base:
- 2 universal ball sockets
- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting
- Chuck adaptor



All complete in a shop-hardened case!

Part Number	Description
52-562-105	X-Test & Xtra-Mag Combo

Test Indicator & Xtra-Mag Set

XTRA MAG

Mag Base:
- 2 universal ball sockets
- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting

Test Indicator: *(52-562-778)*
- Range: .030"
- Reading: 0-15-0
- Jeweled movement
- Graduation: .0005"
- Auto-reversing
- .080" diameter point



All complete in a shop-hardened case!

Part Number	Description
52-585-100	Xtra-Mag with Test Indicator Combo
52-585-105	Xtra-Mag Only

X-SERIES™
Fred V. Fowler Co., Inc.



Virtually unlimited positioning as a Universal Base!

2 Xtra™ Contact Points .040" & .120" w/ purchase

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

X-SERIES™
Fred V. Fowler Co., Inc.

CHROME FLEX MAG SET

With INDI-X blue Electronic Indicator or AGD Black Face Indicator

Flex Arm Mag Base features:
- Corrosion resistant chrome plated flex arm
- 85 lb. pull magnet
- Holds rigidly in almost any position.
- V-base for mounting on rounded surfaces.

Magnetic Indicator Back features:
- Use for positioning the indicator on most metal surfaces.
- Protective coating

Indi-X Blue Indicator features:
- Direct Inch/Metric Conversion
- 1"/25mm travel
- Auto Off feature
- 2-1/4" dial face
- Lugback and 3/8" stem mountings
- Resolution .0005"/.01mm
- Tolerance indicators
- Absolute/incremental reading
- Floating zero
- Carbide tipped point w/4/48 thread



Magnetic Back and Flex Arm!



Included Magnetic Indicator Back for mounting to most metal surfaces!

AGD Indicator features:
- AGD Group 2
- Dial diameter: 2-1/4"
- Travel: 1"
- Reading: .001"
- Continuous reading: .100"
- Carbide tipped point



All in a shop-hardened case.

Part Number	Description
54-585-100	Chrome Flex Mag and Indi-X Blue Electronic Indicator Set
52-585-500	Chrome Flex Mag and AGD Black Face Indicator Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fine Adjust Mag Base Sets

With INDI-X blue Electronic Indicator or AGD White Face Indicator

Magnetic Base features:
- 85 lb. pull
- Fine adjustment.
- V-bottom base.

Magnetic Indicator Back features:
- Use for positioning the indicator on most metal surfaces.
- Protective coating

Indi-X Blue Indicator features:
- Direct Inch/Metric Conversion
- 1"/25mm travel
- Auto Off feature
- 2-1/4" dial face
- Lugback and 3/8" stem mountings
- Resolution .0005"/.01mm
- Tolerance indicators
- Absolute/incremental reading
- Floating zero
- Carbide tipped point w/4/48 thread





Included Magnetic Indicator Back for mounting to most metal surfaces!



All in a shop-hardened case.

AGD Indicator features:
- AGD Group 2
- Dial diameter: 2-1/4"
- Travel: 1"
- Reading: .001"
- Continuous reading: .100"
- Carbide tipped point

Part Number	Description
54-585-075	Fine Adjust Mag Base with Indi-X Blue Electronic Indicator Set
52-585-125	Fine Adjust Mag Base with AGD Black Face Indicator Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Long Range Indicator Test Set

- For direct measurements.
- Rotates for setting at any point.
- Includes mag base with post and dual diameter rod.
- Includes indicator which features 1" range; .001" graduations; reading: 0-100; 2-1/4" dial diameter and includes rod connector and holding clamp.
- Carbide contact point.
- Includes shop-hardened case.



Part Number	Description
52-520-707	Long Range Indicator Test Set

Magnetic Base & Dial Indicator Combo



- Includes 1" indicator and mag base, plus rods, swivel clamp and case.
- The 2-1/4" diameter .001" indicator features: satin chrome finish, tolerance hands, lug back and revolution counter.
- The 6" high mag base features a 1.5" x 1.5" x 1.75" 50 lb. pull base and a 4.5" long sidearm. All exposed metal is finished in anodized black for corrosion resistance.
- Includes shop-hardened case.

Part Number	Description
52-522-101	Magnetic Base & Dial Indicator Combo

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Back Plunger Indicator Sets



▲ *Universal Test Set No. 52-570-010*



Universal Test Set
(Economy Model) No. 52-570-000

Back Plunger Dial Indicators

Special Features—No. 52-570-010
- Universal Test Set is simple, reliable, easy to use and eliminates checking problems
- Set includes G clamp, tool post base and vertical rod, swinging arm, ball anvil, 1⁄2" anvil, thumb clamp and 11⁄32" standard anvil. Back plunger indicator is fully jeweled.

Special Features—No. 52-570-000
- Economy Test Set is dependable, easy to use & overcomes problems in the workshop.
- Set includes G clamp, tool post base, vertical rod, extension rod, 3⁄16" standard anvil, 5⁄16" anvil, thumb clamp and swing arm attachment. Back Plunger indicator is brass bearing.

Part Number	Dial Dia.	Grad.	Dial Reading	Range
Complete Set (Deluxe):				
52-570-010	1-1⁄2"	.001"	0—100	.100"
Indicator only (Deluxe):				
52-570-011	1-1⁄2"	.001"	0—100	.100"
Complete Set (Economy):				
52-570-000	1-1⁄2"	.001"	0—100	.200"
Indicator only (Economy):				
52-570-001	1-1⁄2"	.001"	0—100	.200"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



INDICATORS

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

QuadraTest™ *Multimode Electronic Test Indicator*

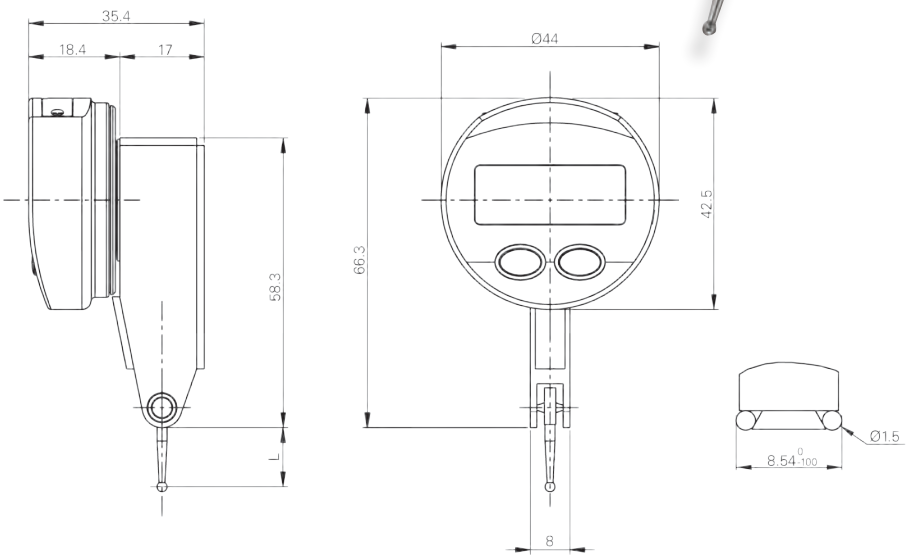
- ***4 Measuring Modes! (Min, Max, TIR and Direct)***
- ***4 Measuring Resolutions!***

Fowler's QuadraTest multimode electronic test indicator offers unrivaled measuring versatility in an electronic test indicator!

Available with a 1/2" or 1-7/16" contact point. The QuadraTest is the perfect solution to test indicating applications.

The QuadraTest features four measuring modes (Min, Max, TIR and direct), with an RS-232 interface that is water, oil and coolant resistant to IP65 compliancy WITH or WITHOUT the interface cable installed! The QuadraTest also features true inch/metric conversion, a 1-1/2" diameter dial face that rotates a FULL 360° with both analog bar graph and numeric digital display. It also meets or exceeds DIN/ISO standards (maximum error on .00005" scale at full range: .0004").





- 4 measuring modes: Min, Max, TIR and Direct
- 4 measuring resolutions.
- True Inch/Metric conversion.
- Water, oil and coolant resistant to IP65!
- 1-1/2" diameter dial face rotates a full 360°
- Bar graph and numeric digital display.
- Meets or exceeds DIN/ISO Standards.
  (Maximum error on .00005" scale at full range: .0004")
- Available with 1/2" or extra-long 1-7/16" contact point.

Part Number	Contact Point Length	Range	Resolution
54-562-777	1/2"	.040"/1mm	.00005"/.001mm
54-562-888	1-7/16"	.020"/.5mm	.00005"/.001mm
Accessories			
54-115-528	Output Cable USB		
54-100-350	Replacement Battery type CR2032		

1. 4 measuring resolutions
2. Direct reading
3. Analog graduations

4 Measuring Resolutions!

Resolution	Smallest Division
0—40—0	.0005"
0—40—0	.00005"
0—1—0	0.01mm
0—1—0	0.001mm



IP65

Swiss Quality!

Fowler RS-232 DIRECT

Fowler POWER INTERFACE

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Girod "Vertical" Test Indicators



Fowler-Girod Test Indicators have long been regarded internationally as "the best", incorporating Swiss quality and workmanship.

- Rugged one-piece housing, corrosion resistant with satin chrome finish.
- For high accuracy and repeatability, six bearings are jeweled. Reinforced flanges.
- Adjustable ball bearings guarantee perfect point movement under all conditions.
- Contact point can be displaced 210°. Automatic reversing contact point.
- Supplied with .040", .080" and .120" carbide contact points on all indicators except No. 52-562-474 and No. 52-563-474 which are supplied with only one point.
- Shockproof and nonmagnetic.
- Microfine graduations.
- Three dovetails; top, back and bottom for easy mounting and positioning.
- Measuring pressure—7 grams.
- Movement not influenced by any outside pressures, and measuring value transmitted by means of rack and pinion.
- Face Dia. 1" and 1-1⁄2" for easy reading.
- Adjustable bezel and dial are easily set and reset to zero.
- Inch series supplied with two dovetail clamping stems: 7⁄32" No. 52-565-091 and 1⁄4" No. 52-565-092. Metric series supplied with dovetail clamping stems: 5⁄32" (4mm) No. 52-565-090 & 5⁄16" (8mm) No. 52-565-093.
- Includes fitted case.

Part Number	Dial Reading	Grad.	Range	Dial Dia.	Point Length
Inch Series:					
52-562-272	0-15-0	.0005"	.030"	1"	.500"
52-562-273	0-4-0	.0001"	.008"	1"	.500"
52-562-474	0-10-0	.0005"	.020"	1-1⁄2"	1.500"
52-562-473	0-4-0	.0001"	.008"	1-1⁄2"	.500"
Metric Series:					
52-563-272	0-40-0	.01mm	.8mm	28mm	12.5mm
52-563-273	0-100-0	.002mm	.2mm	28mm	12.5mm
52-563-474	0-25-0	.01mm	.5mm	38mm	36mm
52-563-473	0-100-0	.002mm	.2mm	38mm	12.5mm

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Girod "Horizontal" Test Indicators



No. 52-562-453

The ultimate in Swiss workmanship, Fowler-Girod Indicators are internationally respected as "The Best."

All Fowler-Girod Indicators meet or exceed Federal Specifications for accuracy. Their exceptional design and quality assures you a lifetime of accuracy and total reliability.

Features:

- Monobloc body design has 7 fine jeweled bearings isolated in a shock-proof assembly separate from the outer body and cannot be influenced by external pressures.
- Independent, interchangeable movement transmits measuring value via rack & pinion.
- Rugged anti-magnetic one-piece housing is satin-chrome plated to resist corrosion.
- Auto-reverse mechanism with adjustable ball bearings, provides ultra-smooth action.
- Carbide contact points (1⁄2" length) can swivel over 210° to reach any location.
- Universal mounting: dovetails supplied at top, front and back for proper set-up.
- Adjustable bezel and dial easily set and reset to zero. Microfine graduations on dials. Your choice of dial diameters.
- Replacement points: .040" No. 52-567-101; .080" No. 52-567-102 and .120" No. 52-567-103.
- Replacement dovetail clamping stems: 7⁄32" diameter No. 52-565-091 and 1⁄4" diameter No. 52-565-092.
- Price includes indicator, fitted case, carbide contact points (see chart), and two dovetail clamping stems: 7⁄32" and 1⁄4" diameter.

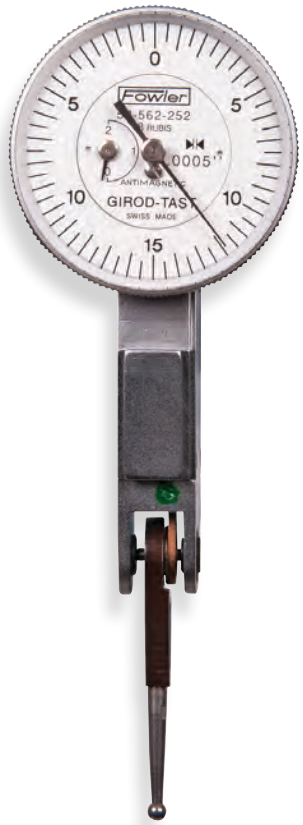
Part Number	Dial Reading	Dial Divisions	Total Range	A.Dial Dia.	Dia. Points Included	Point Length
Inch Series:						
52-562-253	0-4-0	.0001"	.008"	1"	.040,.080 and .120"	.500"
52-562-453	0-4-0	.0001"	.008"	1-1⁄2"	.040,.080 and .120"	.500"
Metric Series:						
52-563-252	0-40-0	.01mm	.8mm	28mm	1, 2 & 3 mm	12.5mm
52-563-253	0-100-0	.002mm	.2mm	28mm	1, 2 & 3 mm	12.5mm
52-563-452	0-40-0	.01mm	.8mm	38mm	1, 2 & 3 mm	12.5mm
52-563-453	0-100-0	.002mm	.2mm	38mm	1, 2 & 3 mm	12.5mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Double range and Girod quality.

Swiss Quality!

Girod Double Range Test Indicators



No. 52-562-252



No. 52-562-452

Fowler-Girod Test Indicators have long been regarded internationally as "the best." While retaining the Swiss quality and workmanship for which Girod has become famous, these indicators now offer a "double range" of .060". The new design also features a revolution counter hand to indicate the total number of revolutions of the main hand for fool-proof readings every time.

All Fowler-Girod Indicators meet or exceed Federal specifications for accuracy. Their exceptional design and quality assure you a lifetime of accuracy and total reliability.

Features:

- Total measuring range: .060".
- Since indicator point now travels twice as much as previous models, the convenient revolution counter indicates the total number of revolutions for error-free readings.
- Mono-bloc body design has seven fine jeweled bearings isolated in a shock-proof assembly separate from the outer body and cannot be influenced by external pressures.

Part Number	Dial Reading	Dial Divisions	Total Range	Dial Dia.	Dia. Points Included	Point Length
52-562-252	0-15-0	.0005"	.060"	1"	.040,.080 and .120"	.800"
52-562-452	0-15-0	.0005"	.060"	1½"	.040,.080 and .120"	.800"

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTEST Test Indicators - *TWICE the range of most indicators!*



Features:
- Range: .060"
- 1" or 1-1/2" Dial Diameter
- Jewelled movement
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- 210° Swivel arc
- Tungsten carbide points: .040", .080" and .120" diameter
- 5/32" stem

Part Number	Graduations	Dial Diameter	Dial Reading
Inch:			
52-562-001	.0005"	1-1/2"	0-15-0
52-562-002	.0005"	1"	0-15-0
52-562-003	.001"	1"	0-15-0
Metric:			
52-562-007	.01mm	25mm	0-40-0
52-562-008	.01mm	38mm	0-40-0

X-SERIES™
Fred V. Fowler Co., Inc.

TWICE the range of most indicators!

ALL X-Test Indicators include 5/32" and 3/8" dovetail clamps

2 Xtra™ Contact Points .040" & .120" w/ purchase

Vertical X-Test Indicator

TWICE the range of most indicators!

- Range: .060"
- Dial reading: 0—15—0
- Jeweled movement
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- 210° Swivel arc
- 5/32" stem
- Tungsten carbide point: .080"



Part Number	Graduations	Dial Diameter	Dial Reading
Vertical X-Test Indicators:			
52-562-004	.0005"	1-1/2"	0-15-0
52-562-005	.0005"	1"	0-15-0
52-562-006	.001"	1"	0-15-0

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTEST Indicator and Accessory Combo Kit

X-Test Indicator:
- Jeweled movement
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- 210° Swivel arc
- 5/32" stem
- Tungsten carbide point: .080"
- Range: .060" inch model
- Range: 1.6mm metric model



Each Combo Kit Includes:
- X-Test Dial Test Indicator
- Axial support
- Height gage bar with clamp
- Adaptor sleeve: 5/32" to 3/8"
- Contact point case
- Contact point wrench
- Complete in "Shop Hardened" case.

Part Number	Description	Graduations
52-562-100	52-562-001 with accessories	.0005"
52-562-110	52-562-002 with accessories	.0005"
52-562-120	52-562-003 with accessories	.001"

X-Test & X-Tra Mag Combo

X-Test & Xtra-Mag Combo

X-Test Features: *(52-562-001)*
- Range: .060"; Graduation: .0005"
- Dial reading: 0—15—0; 1-1/2" Dial Diameter
- Jeweled movement
- Revolution counter
- Automatic reversal
- 210° Swivel arc
- Tungsten carbide point: .080"

XTRA MAG

Mag Base:
- 2 universal ball sockets
- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting
- Chuck adaptor



All complete in a shop-hardened case!

Part Number	Description
52-562-105	X-Test & Xtra-Mag Combo

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

UltraTast Test Indicators

UltraTast Horizontal Test Indicators *(stylus moves at right angle to dial)*



No. 52-568-005

- Box-type housing opens on one side only. Bottom and side walls are one piece construction which encloses and protects the movement from shocks and damage.
- Self-contained movement easily removed and replaced for maintenance and repair.
- Jewelled movement bearings, precision gears and pinions for maximum sensitivity and accuracy.
- Satin-chrome finish is corrosion proof.
- Stylus: ball diameter .080"(2mm).
- Swivel range 220° on all models.
- Color-coded dials: inch-white; metric-yellow.
- Include 1/4" & 5/16" Dovetail clamps.

Part Number	Readings	Measuring Range	Dial Diameter	Stylus Length	Measuring Force
Inch:					
52-568-005	.0005"	±.015"	1.083"	.453"	0.15N
52-568-010	.0005"	±.015"	1.50"	.453"	0.15N
52-568-015	.0001"	±.004"	1.50"	.453"	0.15N
52-568-022	.0005"	±.015"	1.083"	1.417"	0.07N
Metric:					
52-568-011	.01mm	±0.4mm	38mm	11.5mm	0.15N

Great value and German Quality

Made in GERMANY

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizontal Test Indicators

All Fowler Test Indicators include bidirectional constant clockwise rotation, automatic reversal, three dovetail mountings, jeweled movement, two dovetail clamps and a molded case.


52-562-775


52-562-778


52-563-772


52-563-777


52-562-784


52-560-060


52-563-677

Part Number	Face Color	Total Range	Dial Reading	Graduation	Dial Diameter	Point Length
.030" Range:						
52-562-774	white	.030"	0-15-0	.001"	1"	1/2"
52-562-778	black	.030"	0-15-0	.0005"	1"	1/2"
52-562-775	white	.030"	0-15-0	.0005"	1"	1/2"
52-562-776	white	.030"	0-15-0	.0005"	1-1/2"	1/2"
52-562-780	black	.030"	0-15-0	.0005"	1-1/2"	1/2"
.008" Range:						
52-563-770	white	.008"	0-4-0	.0001"	1"	1/2"
52-563-771	black	.008"	0-4-0	.0001"	1"	1/2"
52-563-777	white	.008"	0-4-0	.0001"	1-1/2"	1/2"
52-563-772	black	.008"	0-4-0	.0001"	1-1/2"	1/2"
.020" Range:						
52-562-781	white	.020"	0-10-0	.0005"	1"	1-7/16"
52-562-782	black	.020"	0-10-0	.0005"	1"	1-7/16"
52-562-783	white	.020"	0-10-0	.0005"	1-1/2"	1-7/16"
52-562-784	black	.020"	0-10-0	.0005"	1-1/2"	1-7/16"
.8mm Range:						
52-563-677	white	.8mm	0-40-0	.01mm	1-1/4"	1/2"
Inch/metric:						
52-560-060	white/red	.020"/.5mm	0-10-0/0-.25-0	.0005"/.01mm	1-1/2"	1/2"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Test Indicator Kit with Certificate of Calibration



Test Indicator:
- Auto-reverse.
- Jeweled movement.
- Range: .030"
- Graduation: .0005"
- Dial Reading: 0-15-0
- Dial Diameter: 1.125"
- Point length: .400"
- Carbide contact points

Set Also Includes:
- .080" & .040" contact points
- Universal clamp
- Height gage attachment
- 3/8" & 1/4" dovetail clamps
- Manufacturer's test certificate
- All in a fitted molded case.

Part Number	Total Range	Dial Reading	Graduation	Dial Diameter	Point Length
52-562-999	.030"	0—15—0	.0005"	1.125"	.400"

Test Indicator & Xtra-Mag Combo

XTRA MAG

Mag Base:
- 2 universal ball sockets
- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting

Test Indicator: *(52-562-778)*
- Range: .030"
- Reading: 0-15-0
- Jeweled movement
- Graduation: .0005"
- Auto-reversing
- .080" diameter point

Extra Points



X-SERIES™

Fred V. Fowler Co., Inc.



All complete in a shop-hardened case!

Part Number	Description
52-585-100	Xtra-Mag with Test Indicator Combo
52-585-105	Xtra-Mag Only



Virtually unlimited positioning as a Universal Base!

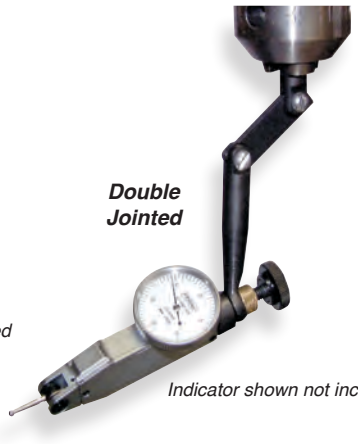
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Test Indicator Accessories



Single Jointed

Indicator shown not included



Double Jointed

Indicator shown not included



Double jointed holders
No. 52-565-007

No. 52-565-006 and 007 Features:
- Single and double jointed holders fit all dovetail equipped indicators. Mount on either front or rear of instrument.
- Indicators may be swiveled to any angular position. Because the extended reach allows large diameter centering, jointed holders are an ideal attachment for jig boring.



Single jointed holders
No. 52-565-006



▲ *Indi-All Test Holder No. 52-566-853*

No. 52-566-853 Fowler's Indi-all indicator holder finds the center position without removing the tool from the machine. It mounts with a single set screw directly on the machine quill, bypassing the working tool. Use for milling machines, jigborers and Bridgeport mills (J-head).

- Accepts all indicators with 5⁄32" shank or dovetail. Reach from 0-12" diameter.
- Provides readings accurately and quickly without disturbing the work-piece.
- Arm length from clamp 4-1⁄2".

Part Number	Description
52-565-006	Single Jointed Holder, shank diameter 1⁄4"
52-565-007	Double Jointed Holder, shank diameter 3⁄8"
52-566-853	Indi-All Test Holder; clamping diameter 1-7⁄8"; 3 point adjustment

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Test Indicator Accessories



▲ No. 52-565-010



▲ No. 52-565-012



▲ No. 52-565-015



▲ No. 52-565-030



▲ No. 52-565-025



▲ No. 52-565-060.



▲ No. 52-565-040



▲ No. 52-565-064



▲ No. 52-565-062



▲ No. 52-565-082



▲ No. 52-565-000



▲ No. 52-565-083

Part Number	Description	Shank Size
52-565-010	1⁄4" x 1⁄2" Holding bar with 1⁄4" pin	
52-565-012	Axial Support	3/8" x 5-1/4" long
52-565-015	3⁄16" x 5⁄16" Holding bar with 1⁄4" rod	
52-565-025	Dovetail clamp, bore diameter 1⁄4" and 3⁄8"	
52-565-030	1⁄4" x 7⁄16" Holding bar with 1⁄4" rod	
52-565-040	7.2mm x 10mm Holding bar with 1⁄4" rod	
52-565-060	Universal clamp, bore diameter 1⁄4"	
52-565-062	Short arm .600" with dovetail & fine adjustment	.315"
52-565-064	Long arm 4.765" with dovetail & fine adjustment	.315"
52-174-250	Rectangular holder with clamp for height gages	3⁄8"
52-565-082	Rectangular holder with clamp for 54-105 series	
52-565-083	Rectangular holder with clamp 1/4" x 1/2"	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Test Indicator Accessories



▲ *No. 52-565-085*



▲ *No. 52-565-086*



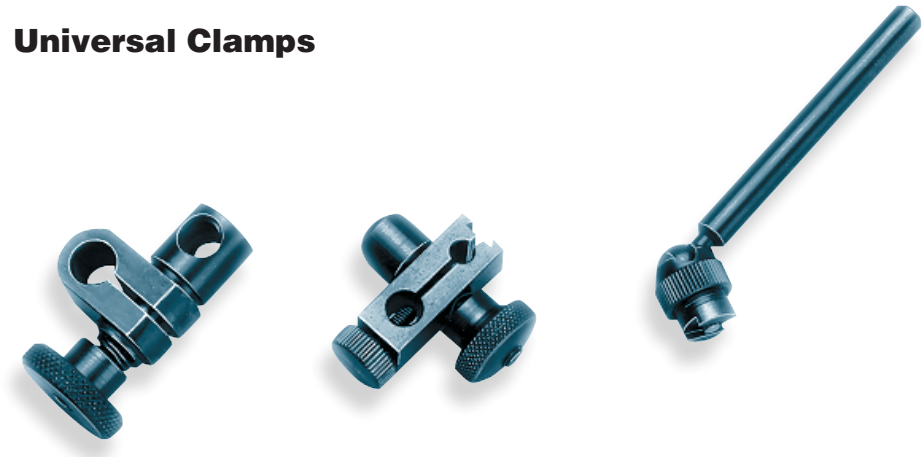
▲ *Left to right: No.'s 52-565-093, 52-565-092 and 52-565-090*

Part Number	Description	Shank Size
52-565-085	Half round holder	1⁄4"
52-565-086	All purpose holder supplied with 1⁄4" x 1⁄2" height gage bar; provision for 1⁄4" & 5⁄32" stem indicators by using bushing	4-step 3⁄16", 1⁄4", 5⁄16" and 3⁄8"
52-565-090	5⁄32" dia. dovetail clamp	
52-565-091	7⁄32" dia. dovetail clamp	
52-565-092	1⁄4" dia. dovetail clamp	
52-565-093	5⁄16" dia. dovetail clamp	
52-565-094	3/8" dia. dovetail clamp	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Universal Clamps



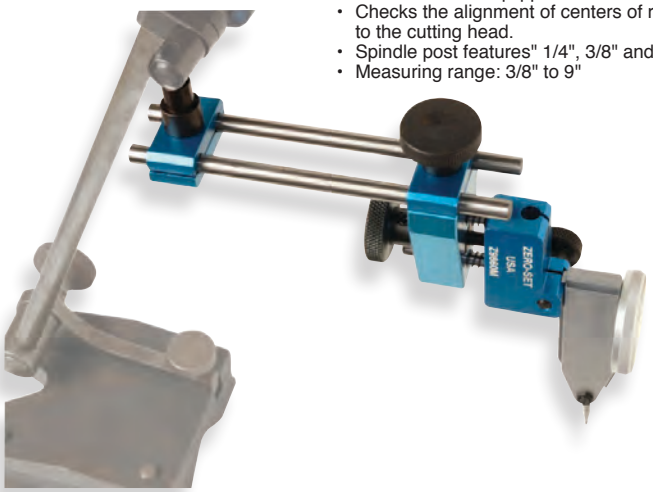
▲ *Left to right: Swivel Joint Universal Clamp (No. 52-565-111 thru 118); Universal Dovetail Clamp (No. 52-565-150); and Universal Indicator Holder with swivel (No. 52-565-200).*

These high-quality Universal Clamps have a black finish and are ideal for use with indicators, magnetic bases and dial gages.

Part Number	Specifications
Swivel Joints (1-3/4" Length x 1/2" Diameter):	
52-565-111	Clamping Diameter: 5/16" x 1/4"
52-565-112	Clamping Diameter: 1/4" x 1/4"
52-565-113	Clamping Diameter: 5/16" x 5/32"
52-565-114	Clamping Diameter: 3/8" x 1/4"
52-565-115	Clamping Diameter: 5/16" x 5/16"
52-565-116	Clamping Diameter: 3/8" x 5/16"
52-565-117	Clamping Diameter: 3/8" x 3/8"
Swivel Joint (2-1/16" Length x 5/8" Diameter):	
52-565-118	Clamping Diameter: 1/2" x 3/8"
Universal Dovetail Clamp:	
52-565-150	Dovetail Clamps for 1/8" x 1/4" Shanks
Universal Indicator Holder with Swivel:	
52-565-200	1/4" Shank

Zero-Set Indicator Holding Tool

- Used for checking set-ups
- Speeds up set up operations
- Fits all dovetail-equipped indicators
- Checks the alignment of centers of round materials in relation to the cutting head.
- Spindle post features" 1/4", 3/8" and 1/2" diameters
- Measuring range: 3/8" to 9"



Part Number	Description
52-565-800	Zero-Set Indicator Holding Tool

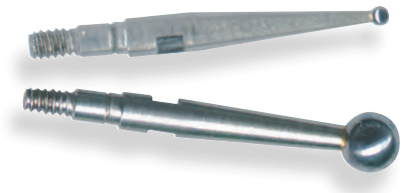
MADE IN THE USA

MADE IN THE USA

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

MADE IN THE USA

Replacement Points for Test Indicators



M2 Thread Type	
Contact Points	
Part Number	Tip Dia.
52-567-040	.040"
52-562-779	.080"
52-567-120	.120"
For Indicators	
Part Number	
52-562-774	
52-562-775	
52-562-776	
52-562-778	
52-562-780	

M1.6 Thread Type	
Contact Points	
Part Number	Tip Dia.
52-567-781	.040"
52-567-782	.080"
52-567-783	.120"
For Indicators	
Part Number	
52-562-781	
52-562-782	
52-562-783	
52-562-784	

M1.4 Thread Type	
Contact Points	
Part Number	Tip Dia.
52-563-780	.040"
52-563-778	.080"
52-563-779	.120"
For Indicators	
Part Number	
52-563-770	
52-563-771	
52-563-772	
52-563-777	
52-563-677	
52-560-060	

X-Test	
Contact Points	
Part Number	Tip Dia.
52-562-801	.040"
52-562-800	.080"
52-562-802	.120"
For Indicators	
Part Number	
52-562-001	
52-562-002	
52-562-003	
52-562-004	
52-562-005	
52-562-006	
52-562-007	
52-562-008	
52-562-100	
52-562-105	
52-562-110	
52-562-120	

Swiss Long	
Contact Points	
Part Number	Tip Dia.
52-567-104	.040"
52-567-105	.080"
52-567-106	.120"
For Indicators - Sylvac/Girod	
Part Number	
54-562-888	
52-563-474	
52-562-474	

Swiss Short	
Contact Points	
Part Number	Tip Dia.
52-567-101	.040"
52-567-102	.080"
52-567-103	.120"
For Indicators - Sylvac/Girod	
Part Number	
54-562-777	
52-563-252	
52-563-253	
52-563-452	
52-563-453	
52-563-272	
52-563-273	
52-563-473	
52-562-253	
52-562-453	
52-562-272	
52-562-273	
52-562-473	

UltraTast Short	
Contact Points	
Part Number	Tip Dia.
52-567-090	.040"
52-567-091	.080"
52-567-092	.120"
For Indicators - UltraTast	
Part Number	
52-568-005	
52-568-010	
52-568-011	
52-568-015	

Test Kit	
Contact Points	
Part Number	Tip Dia.
52-567-998	.080"
52-567-999	.040"
For Indicator	
Part Number	
52-562-999	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

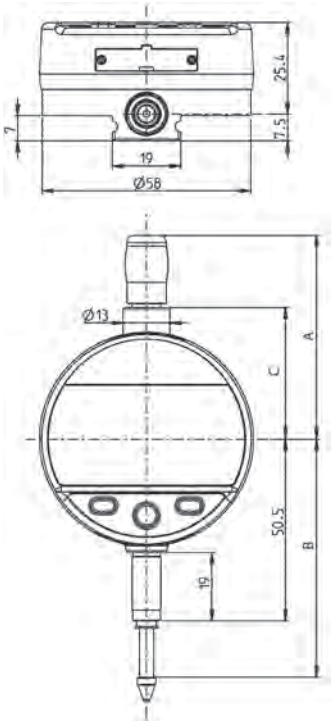
Mark VI Electronic Indicators

Features:

- Robust construction
- Water and coolant resistant
- Protection class IP-67
- Repeatability: 2µm
- Output: Proximity/Power - USB/RS232/digimatic/Wireless
- Battery life: 10,000 hours of operation
- Menu customizable with free software.
- Wide range of functions (MIN/MAX/DELTA, TOL, Factor, Preset. Auto Off, etc)
- Aluminum housing
- Bezel rotates 270°
- Large display with LED tolerance indicators.
- Includes lug back.



This Button is programmable for common functions



Part Number	Range	Maximum Error	Resolution
54-530-125	0-.500"/12.5mm	0.0004"/.01mm	.0005"/.01mm
54-530-135	0-.500"/12.5mm	0.00012"/.003mm	.00005"/.001mm
54-530-145	0-1"/25mm	0.0004"/.01mm	.0005"/.01mm
54-530-155	0-1"/25mm	0.00016"/.004mm	.00005"/.001mm
54-530-175	0-2"/50mm	0.00019"/.005mm	.00005"/.001mm
54-530-195	0-4"/100mm	0.0002"/.006mm	.00005"/.001mm
54-530-215	0-6"/150mm	0.0004"/.01mm	.00005"/.001mm
8mm Stem Models:			
54-530-136	0-.500"/12.5mm	0.00012"/.003mm	.00005"/.001mm
54-530-156	0-1"/25mm	0.00016"/.004mm	.00005"/.001mm
IP67 Models with Rubber Boot:			
54-530-137	0-.500"/12.5mm	0.00012"/.003mm	.00005"/.001mm
54-530-157	0-1"/25mm	0.00016"/.004mm	.00005"/.001mm
Mark VI Accessories:			
54-530-211	Standard Lug Back		
54-530-212	90° Lug Back		
54-115-526	Proximity USB Cable		
54-115-528	Power USB Cable		

LIFETIME WARRANTY

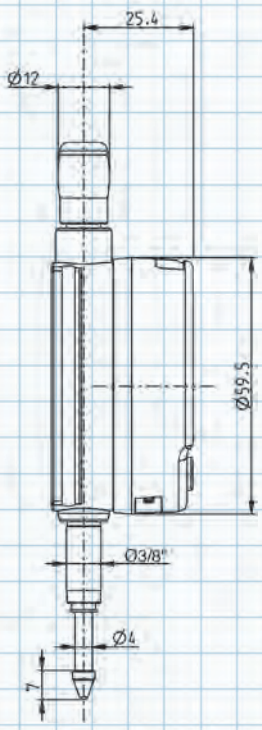
IP67

Swiss Quality!

Fowler POWER INTERFACE

Fowler SPC RS232 DIRECT

Fowler PROXIMITY INTERFACE



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Integrated Bluetooth Technology offers output without the hassle of cables or antennas hanging from the indicator. Your USB port is all you need.

Mark VI Electronic Indicators
With Integrated Bluetooth Technology



Features:
- Robust construction
- Water and coolant resistant
- Protection class IP-67
- Repeatability: 2µm
- Battery life: 10,000 hours of operation
- Menu customizable with free software.
- Wide range of functions (MIN/MAX/DELTA, TOL, Factor, Preset. Auto Off, etc)
- Aluminum housing
- Bezel rotates 270°
- Large display with LED tolerance indicators.
- Includes lug back.

LIFETIME WARRANTY

Part Number	Range	Maximum Error	Resolution
54-530-335	0-.500"/12.5mm	0.00012"/.003mm	.00005"/.001mm
54-530-355	0-1.000"/25mm	0.00016"/.004mm	.00005"/.001mm

The analog display allows you to quicky view reversal points

Fowler PROXIMITY INTERFACE

Fowler POWER INTERFACE

Mark VI Electronic Indicators
With Analog Display



Features:
- Robust construction
- Water and coolant resistant
- Protection class IP-67
- Repeatability: 2µm
- Output: Proximity/Power - USB/RS232/digimatic/Wireless
- Battery life: 10,000 hours of operation
- Menu customizable with free software.
- Wide range of functions (MIN/MAX/DELTA, TOL, Factor, Preset. Auto Off, etc)
- Aluminum housing
- Bezel rotates 270°
- Large display with LED tolerance indicators.
- Includes lug back.

LIFETIME WARRANTY

Part Number	Range	Maximum Error	Resolution
54-530-535	0-.500"/12.5mm	0.00012"/.003mm	.00005"/.001mm
54-530-555	0-1.000"/25mm	0.00016"/.004mm	.00005"/.001mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

S_Dial One Electronic Indicators



54-530-134



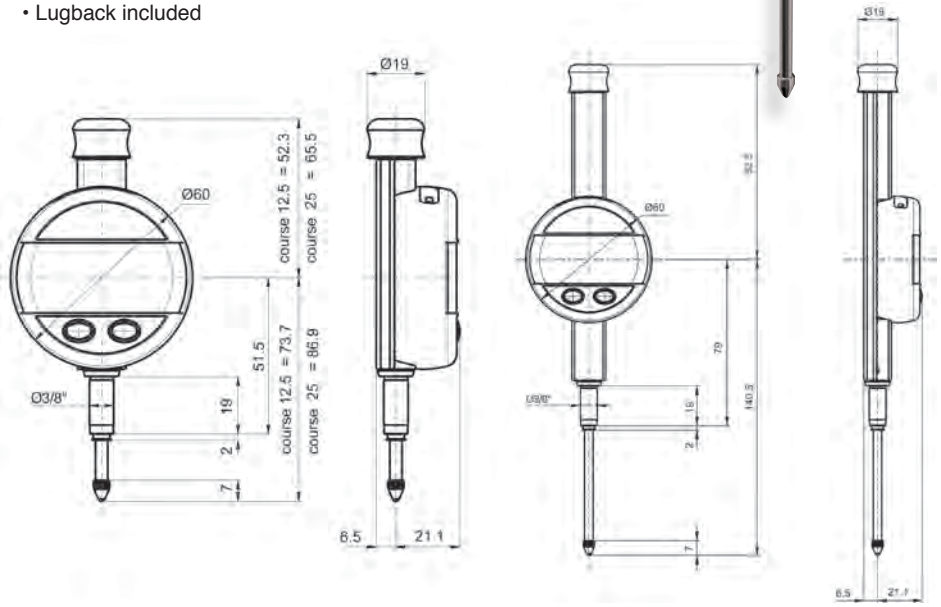
54-530-154



54-530-174

Made for the Machine Shop

- IP67 protection even with the cable
- Robust Construction
- Removable lifting lever included on all models.
- Menu customizable with free software
- Direct inch/metric conversion
- High contrast LCD display
- Lugback included



Part Number	Range	Maximum Error	Resolution
54-530-124	0-.500"/12.5mm	.0004"	.0005"/.01mm
54-530-134	0-.500"/12.5mm	.0002"	.00005"/.001mm
54-530-144	0-1"/25mm	.0004"	.0005"/.01mm
54-530-154	0-1"/25mm	.00024"	.00005"/.001mm
54-530-164	0-2"/50mm	.0008"	.0005"/.01mm
54-530-174	0-2"/50mm	.00032"	.00005"/.001mm
Accessories:			
54-115-444	RS Power Data Cable Serial		
54-115-528	RS Power Data Cable USB		

Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

IP67

Fowler PROXIMITY INTERFACE

Fowler POWER INTERFACE

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

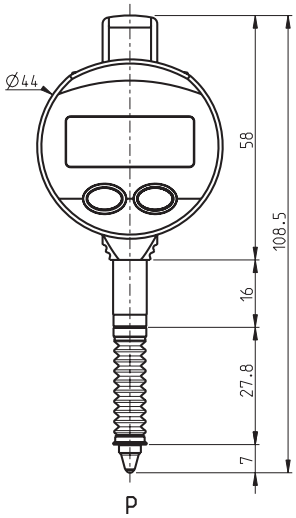
IP65 Mini-Resistant Electronic Indicator

- ***Coolant, water & oil resistant to IP65 specifications!***
- ***Non-contact measuring system!***
- ***Tough carbide contact point!***

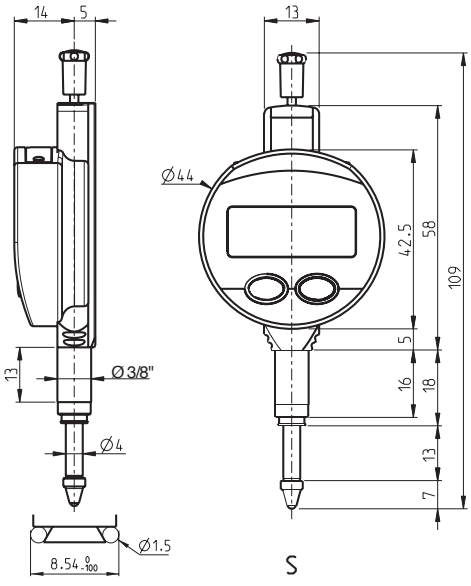
- Range: 0—.5”/12.5mm
- High contrast LCD display
- Floating zero
- Preset & Hold features
- Menu customizable with free software
- Dual measuring references
- Dovetail back with lug
- 1.575” diameter bezel



IP65 protection
Direct reading with an analog display.



P



S

IP65 Specifications	
Dust (6)	Water (5)
Dust-tight	Protected against water projected in jets from any direction

Part Number	Range	Maximum Error	Resolution
54-520-680-2	0-.5"/12.5mm	.0004"/.01mm	.0005"/.01mm
54-520-680-3	0-.5"/12.5mm	.0002"/.005mm	.00005"/.001mm
Accessories:			
54-115-444	Output Cable RS-232		
54-115-528	USB		

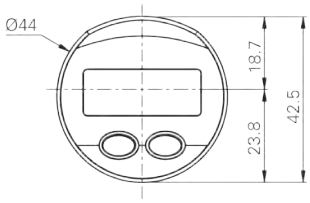
Specifications subject to change without notice.

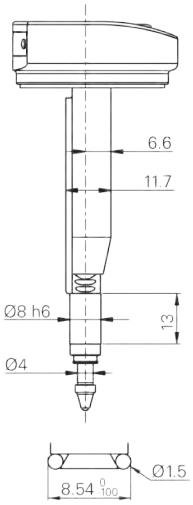
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

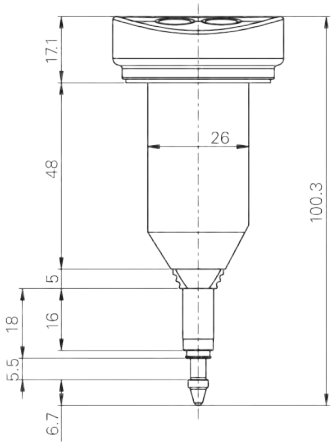
Vertical IP65 Mini-Resistant Electronic Indicator

- Data output RS-232 combined with power supply
- Clamping: Stem 8mm and dovetail
- Menu customizable with free software
- Water and coolant resistant according to IP65
- Error Max: 5µm









Swiss Quality!

IP65

Part Number	Range	Maximum Error	Resolution
54-520-414	.200"/5mm	.0004"	.0005"
54-520-454	.200"/5mm	.0002"	.00005"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Direct reading and an analog display

X-SERIES

2 Xtra Contact Points w/ purchase

INDI-X® Electronic Indicator

- Direct Inch/Metric Conversion
- 2-3/8" dial face
- 1"/25mm travel
- Lug Back and 3/8" stem mounting
- Resolution .0005"/.01mm
- Tolerance indicators
- Min/Max measurement
- Floating zero
- Carbide-tipped point
- Includes 2 extra points for small hole applications: one .078" dia. x 1" long and one needle point x 1" long.



Part Number	Description
54-520-025-1	Indi-X Electronic Indicator

X-SERIES

Low Cost, High Quality, Multi-Function Indicators

INDI-X blue Electronic Indicators

Now available in .5"/12.5mm & 1"/25mm ranges!

- Direct Inch/Metric or Inch/ Metric/Fraction Conversion
- Auto Off feature
- 2-1/4" dial face
- Lugback and 3/8" stem mountings
- Resolution .0005"/.01mm
- Tolerance indicators
- Absolute/incremental reading
- Floating zero
- Carbide tipped point





INCH • METRIC • FRACTION™

Part Number	Description
54-520-250	1"/25mm Indi-X Blue Electronic Indicator
54-520-260	1"/25mm/64ths Indi-X Blue Inch-Metric-Fraction Electronic Indicator
54-520-255	.5"/12.5mm Indi-X Blue Electronic Indicator

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

INDI-MAX™ Electronic Indicators

Features:
- Direct Inch/Metric Conversion
- IP54 Coolant & fluid resistant
- Auto Off feature
- 2-1/4" dial face
- 3/8" stem - 4-48 thread
- Resolution .00005"/.001mm
- Accuracy: .00016"/.004mm (to 1")
- Tolerance indicators
- Absolute/incremental reading
- Lugback on 1/2" model.
- Floating zero
- Carbide tipped point



▲ *No. 54-520-305*



▲ *No. 54-520-310*





▲ *No. 54-520-320*

Part Number	Description
54-520-305	.5"/12.5mm Indi-Max Electronic Indicator
54-520-310	1"/25mm Indi-Max Electronic Indicator
54-520-320	2"/50mm Indi-X Blue Electronic Indicator
54-100-350	CR2032 Battery
54-520-399	Absolute data cable*

**works with 06ADV380C MIT cable*

X-SERIES™

INCH • METRIC • FRACTION™

IP54

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Designed for use in harsh environments.

X-SERIES™
Fred V. Fowler Co., Inc.

IP54

X-PROOF® Dial Indicators

Features:
- Coolant, oil and water proof
- Shock proof
- Rubber bellows on stem
- O-Ring seal on safety cap
- Redesigned bezel with double o-ring protection for bezel and rotating dial.
- Form-fitted back plate
- Corrosion resistant
- Lugback
- All feature 8mm stems

Made in GERMANY



No. 52-520-020

Part Number	Graduation	Range	AGD Group	Reading	Contact Point
52-520-020-1	.0005"	.125"	1	0—20—0	M2.5

X-PROOF® Dial Indicator

Protection Includes:
- Rubber bellows on stem.
- O-ring seal on safety cap.
- O-ring protection for bezel and rotating dial
- Sealed back plate

Specifications:
- Robust, shockproof design
- Travel: 1"
- Reading: .001"
- Continuous reading: 0-100
- Tolerance markers
- AGD Group 2, 2-1/4" dia.
- Lugback and carbide point



No. 52-520-250-1



No. 52-520-450



No. 52-520-444-1

Part Number	Graduation	Range	AGD Group	Reading	Contact Point
52-520-450	.001"	1"	2	0—100	4-48
52-520-250-1	.0005"	.40"	2	0—50—0	M2.5
52-520-444-1	.001"	.40"	2	0—100	M2.5

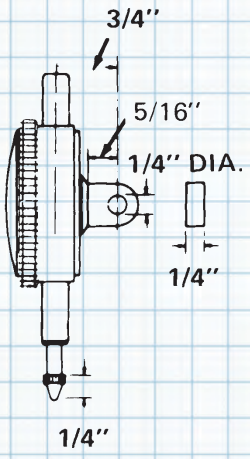
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

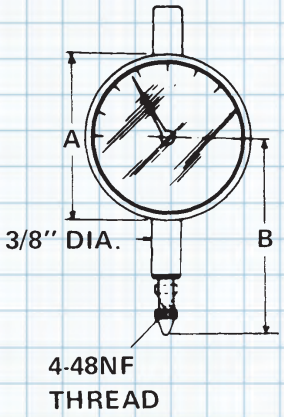
Dial Indicators

Special Features:

- Revolution counter hand. Supplied with lug backs positioned through 90° increments.
- Spindle rack & contact points of hardened stainless steel for long wear; cases forged brass, satin-chromed; gear wheels hard brass.
- Pinions of silver steel, hardened tempered and burnished on pivots; lapped on teeth.
- Microfine graduations in black for continuous readings and red for balanced readings.
- Available in metric graduations.
- Movement mounted independently from case on rigid supporting plate, ensuring perfect and permanent alignment.
- Extra long springs for uniform pressure through entire travel of spindle.
- Bezel knurled; easily adjusted thru 360°.
- Meets AGD specifications. Group II & III gages—measuring pressure approximately 2 oz. except .0001" (.002mm) which is 5 oz.
- Includes adjustable tolerance limit markers.
- Price includes fitted carton box.







Part Number	Grad.	Range	Continuous Reading	Balanced Reading	Dim. A	Dim. B
AGD Group 1:						
Inch:						
52-520-005	.001"	.250"	0—100	—	1-5⁄8"	2-1⁄8"
52-520-010	.001"	.250"	—	0—50—0	1-5⁄8"	2-1⁄8"
AGD Group 2						
Inch:						
52-520-100	.001"	.250"	0—100	0—50—0	2-1⁄4"	2-7⁄32"
52-520-102	.001"	.250"	—	0—50—0	2-1⁄4"	2-7⁄32"
52-520-105	.001"	.500"	0—100	0—50—0	2-1⁄4"	2-1⁄2"
52-520-106	.0005"	.500"	0—50	0—25—0	2-1⁄4"	2-7⁄8"
52-520-107	.001"	.500"	—	0—50—0	2-1⁄4"	2-1⁄2"
52-520-109	.001"	1.00"	0—100	0—50—0	2-1⁄4"	3-3⁄8"
52-520-110	.001"	1.00"	0—100	—	2-1⁄4"	3"
52-520-115	.001"	1.00"	—	0—50—0	2-1⁄4"	3"
52-520-120	.001"	2.00"	0—100	0—50—0	2-1⁄4"	5-1⁄2"
52-520-125	.0005"	.250"	0—50	0—25—0	2-1⁄4"	2-7⁄32"
52-520-127	.0005"	.250"	—	0—25—0	2-1⁄4"	2-7⁄32"
52-520-128	.0005"	1.00"	0—50	—	2-1⁄4"	3"
52-520-129	.0005"	1.00"	0—50	0—25—0	2-1⁄4"	3-3⁄8"
52-520-135	.0001"	.05"	0—10	0—5—0	2-1⁄4"	2-1⁄32"
52-520-137	.0001"	.05"	—	0—5—0	2-1⁄4"	2-1⁄32"
52-520-140	.0001"	.500"	0—10	—	2-1⁄4"	2-1⁄2"
Metric:						
52-520-300	.01mm	10mm	0—100	0—50—0	2-1⁄4"	2-1⁄2"
52-520-400	.002mm	5mm	—	0—10—0	2-1⁄4"	2-7⁄32"
52-520-500	.01mm	25mm	0—100	0—50—0	2-1⁄4"	3"
AGD Group 3						
Inch:						
52-520-200	.001"	.500"	0—100	0—50—0	3-1⁄4"	2-1⁄2"
52-520-205	.0005"	1.00"	0—50	0—25—0	3-1⁄4"	3"
52-520-210	.001"	2.00"	0—100	0—50—0	3-1⁄4"	5-1⁄32"
52-520-215	.0005"	.125"	0—50	0—25—0	3-1⁄4"	2-7⁄32"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Premium Dial Indicators with Certificate of Calibration



No. 52-520-110-2

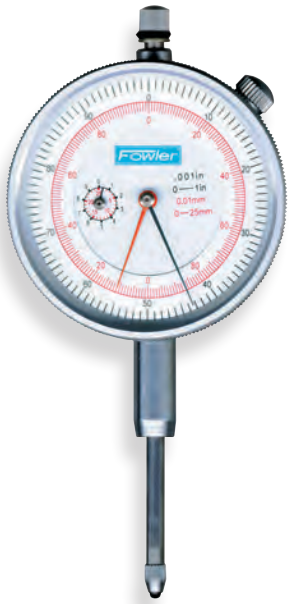
No. 52-520-110-1

Features:
- Popular AGD 2 series
- Graduation: .0005"
- Jet console-black dial face with orange hand.
- 1" total travel (range)
- 0—.100 continuous reading
- Solid brass housing
- Carbide contact point
- Includes manufacturer's certificate of calibration.

Part Number	Dial Face Color	Graduations	Range	AGD Group	Reading
52-520-110-1	Black	.001"	1"	2	0-100
52-520-110-2	White	.001"	1"	2	0-100

Two gages in one! This indicator simultaneously reads in both inch and metric.

Inch/Metric Reading Dial Indicator



Special Features:
- AGD 2 series
- Dial face reads in inch (black) or metric (red).
- Range: 1"/25mm
- Graduation: .001"/.01mm
- Reading: 0—100/0—100—0
- Separated dial for Inch & Metric
- Rotating bezel with clamp
- Lugback included

Part Number	Graduations	Range	AGD Group	Reading
52-530-110	.001"/.01mm	1"/25mm	2	0-100/0-100-0

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Dial Indicator Accessories

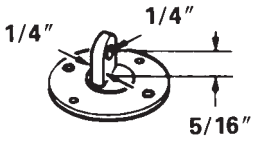
Back Type	A	B	C	D	E
Diameter	1.93"	2.0"	2.32"	1.93"	1.97"
Centerline	1.4"	1.8"	2.04"	1.67"	1.83"
# of Holes	3	4	4	4	4
Country	India	China	Switzerland	England	USA
Type	Dial	Dial	Ultradigit IV, V	Dial &	Dial

Note: Dimensions are approximate.



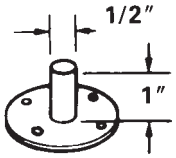
▲ *Center Lug Back*





▲ *Offset Lug Back*



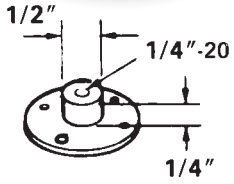


Post Back



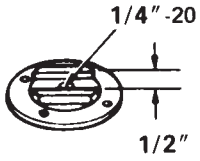
▲ *Flat Back*





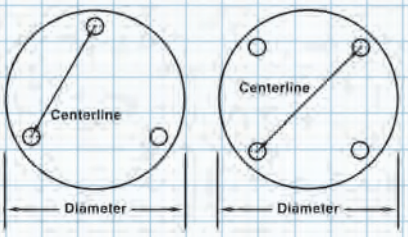
▲ *Internally Threaded back*





▲ *Bracket Back*

Part No.	Description	Part No.	Description
Dial Indicator Backs:			
52-525-005	Center Lug Back	**52-525-615**	Flat Back
52-525-010	Offset Lug Back	**52-525-620**	Post Lug Plain
52-525-015	Flat Back	**52-525-625**	Post Back Internally Threaded
52-525-405	Center Lug Back	**52-525-630**	Adjustable Bracket
52-525-410	Offset Lug Back	**52-525-805**	Center Lug Back
52-525-415	Flat Back	**52-525-810**	Offset Lug Back
52-525-420	Post Lug Plain	**52-525-815**	Flat Back
52-525-425	Post Back Internally Threaded	**52-525-820**	Post Lug Plain
52-525-430	Adjustable Bracket	**52-525-825**	Post Back Internally Threaded
52-525-605	Center Lug Back	**52-525-830**	Adjustable Bracket
52-525-610	Offset Lug Back		



A: 52-525-4XX
B: 52-525-6XX
C: 54-520-XXX

D: 52-525-0XX
E: 52-525-8XX

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Dial Indicator Accessories



▲ *52-525 Series Contact points*

Special Features-Ruby Ball Contact Points:
- Hardness, resistance to wear.
- Chemical and thermal stability, extremely low friction coefficient, negligible thermal expansion.

Special Features-No. 52-525-075:
- The Rubber Boot is a protective cover for contact pointsof dial indicators. Fits all indicators in the No. 52-520 series.

Part Number	Description	Tip Length	Ball Size	Thread
52-525-250	Ruby Ball Contact Point	1⁄4"	3mm	4-48
52-525-260	Ruby Ball Contact Point	1⁄4"	3mm	M2.5
52-525-500	Ruby Ball Contact Point	1⁄2"	3mm	4-48
52-525-750	Ruby Ball Contact Point	3⁄4"	3mm	4-48
52-525-255	Ruby Ball Contact Point	1⁄4"	4mm	4-48
52-525-265	Ruby Ball Contact Point	1⁄4"	4mm	M2.5
52-525-505	Ruby Ball Contact Point	1⁄2"	4mm	4-48
52-525-755	Ruby Ball Contact Point	3⁄4"	4mm	4-48

Dial Indicator Accessories

A: 52-525-060
B: 52-525-050
C: 52-525-055
D: 52-525-045
E: 52-525-040
F: 52-525-035



left to right: A, B, C, D, E & F

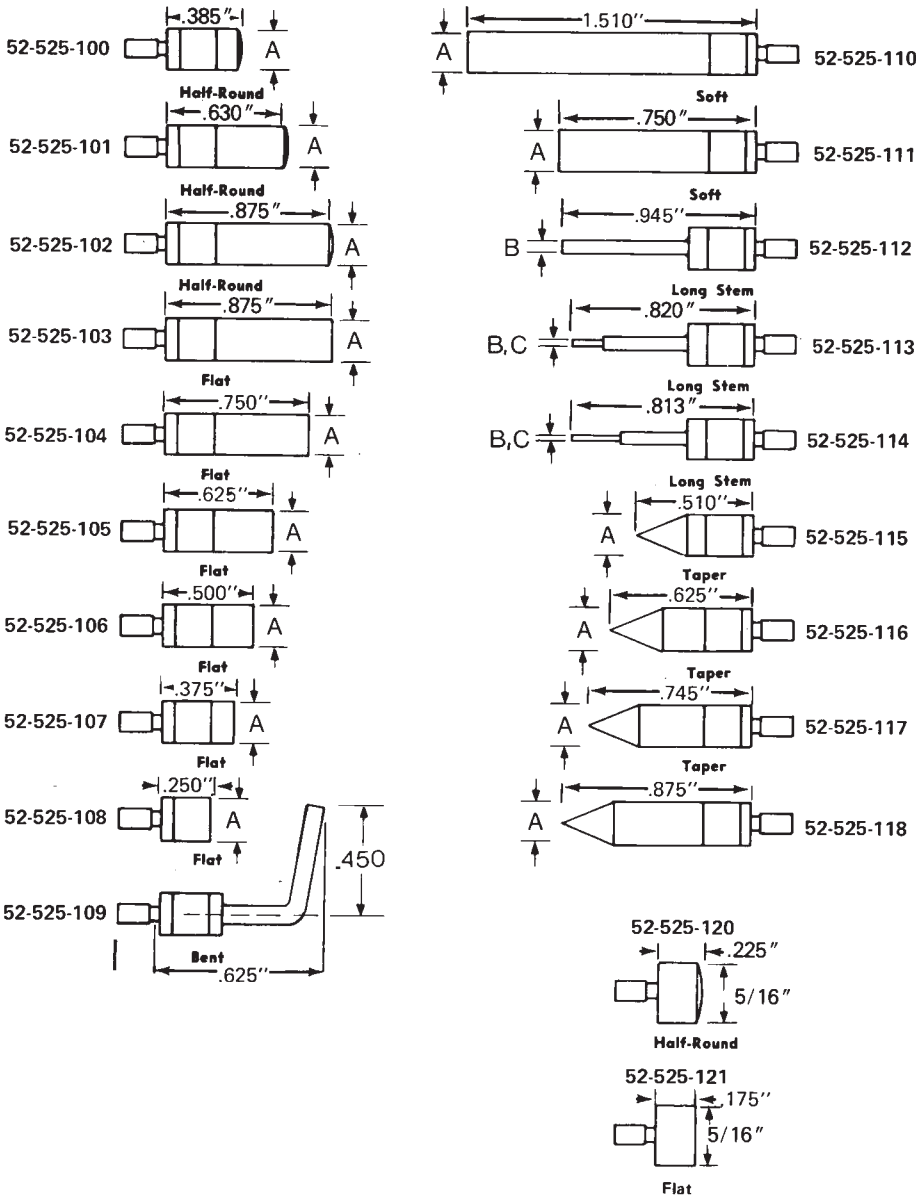
▲ *No. 52-525-065 Complete set of six points in threaded base.*

■ Contact points for dial indicators use American Standard Thread 4—48NF

Part Number	Description
52-525-060	A. Convex Diameter .394"
52-525-050	B. Flat Diameter .323"
52-525-055	C. Flat Diameter .394"
52-525-045	D. Length .984"
52-525-040	E. Convex Diameter .220"
52-525-035	F. Flat Length .220"
52-525-065	Complete Set of 6 Points in threaded base

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Dial Indicator Accessories



Special Features:

- AGD contact points for standard type dial indicators: 4—48 thread.
- Thread fits all AGD gages, Groups 1, 2, 3 or 4.
- Point dimensions: A = 7⁄32", B = 1⁄16" & C = 1⁄32".
- Available in complete sets or individual contact points.

Part Number	Description
52-525-222	Contact Points—Complete Set (Includes all points shown.)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Dial Indicator Accessories


52-525-155


52-525-140


52-525-145


52-525-150

▲ Special Contacts

- Popular contacts for dial indicators. 4-48 threads fit all AGD Groups 1, 2, 3 and 4 indicators.



▲ Button Contacts

- Hardened steel with black oxide plating. AGD 4-48 threads



▲ Flat Contacts

- Hardened steel with black oxide plating. AGD 4-48 threads

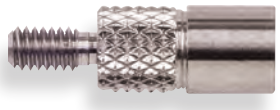
Part Number	Description
Special Contacts:	
52-525-140	Roller ball contact point 4-48
52-525-145	Chisel type contact point 4-48
52-525-150	Knife contact point 4-48
52-525-155	1/8" Carbide ball contact pt. 4-48
Button Contact Points:	
52-525-160	3/8" Button contact point 4-48
52-525-165	1/2" Button contact point 4-48
52-525-170	3/4" Button contact point 4-48
Flat Contact Points:	
52-525-175	3/8" Flat contact point 4-48
52-525-180	1/2" Flat contact point 4-48
52-525-185	5/8" Flat contact point 4-48
52-525-190	3/4" Flat contact point 4-48
52-525-195	1" Flat contact point 4-48
52-525-200	1-1/2" Flat contact point 4-48

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Indicator Point Adaptors



▲ *No. 52-526-333 Kit which includes 1", 2" and 3" extension points.*



No. 54-618-470 Conversion point adaptor (metric to inch).



No. 52-125-002 & 004 Depth Bases

Special Features No. 554-618-470:
- The Metric to Inch Conversion Point allows metric threaded indicators and probes to use standard AGD 4-48 points.
- The internal thread accepts 4-48 standard points and extensions.
- External thread is a metric M2.5.
- Manufactured from cold rolled steel, black oxide plated.

Special Features No. 52-526 Series:
- Kit No. 52-526-333 contains our most popular extension point sizes—1", 2" and 3".
- Extension points available individually in sizes 1", 1-1⁄2", 2", 2-1⁄2", 3", 4" and 6".
- All extension points have 4-48 external and internal threads.
- Manufactured from cold rolled steel with a black oxide plating.

Part Number	Description
Metric to Inch Conversion Point	
54-618-470	1⁄2" Long Metric to Inch Conversion Point Adaptor
Extension Points	
52-526-333	Extension Kit (Includes 1", 2" and 3" Extension Points)
52-526-001	1" Extension Point
52-526-002	1-1⁄2" Extension Point
52-526-003	2" Extension Point
52-526-004	2-1⁄2" Extension Point
52-526-005	3" Extension Point
52-526-006	4" Extension Point
52-526-007	6" Extension Point
Depth Bases	
52-125-002	Dial Indicator Depth Base—Length 2-1⁄2"
52-125-004	Dial Indicator Depth Base—Length 4"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



DISPLAYS AND PROBES

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Sylvac Probes



Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Micron accuracy without sacrificing range!

- Probes are made of stainless steel, heavily chrome-plated and supplied with 5' cable and standard carbide contact point .078"/2mm ball diameter. The friction bearing design provides smooth measuring for exceptional accuracy. Probes are shock-proof and unaffected by magnetism or humidity.
- Accessories include boots, points, lifting levers, foot pedal lifters, stands, stages and extra-length cable. Water-resistant probes, special cables up to 75' (20m) for all Sylvac probes, and a variety of measuring forces are available. Contact our Technical Staff for quotations.

- Coefficient of thermal expansion: 0.01µm/°C
- Temperature Range: 0-50°C
- Cable Length: 5'/1.5m
- Contact Point Thread: M2.5
- Probes used with any Fowler/Sylvac Display or Multiplexer.

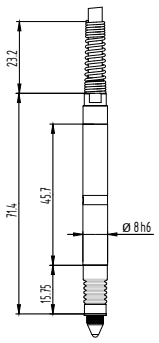
Part Number	Meas. Range	Meas. Force	Repeatability	Maximum Error	Cable Angle	Vacuum	Boot
54-618-345	2mm	.6-.75N	.00001"/.2µm	.00003"/.8µm	straight	no	yes
54-618-346	2mm	.6-.75N	.00001"/.2µm	.00003"/.8µm	right	no	yes
54-618-350	5mm	.6-1.2N	.00001"/.2µm	.00004"/1µm	straight	no	yes
54-618-355	5mm	.6-1.2N	.00001"/.2µm	.00004"/1µm	straight	yes	yes
54-618-360	5mm	.6-1.2N	.00001"/.2µm	.00004"/1µm	right	no	yes
54-618-365	5mm	.6-1.2N	.00001"/.2µm	.00004"/1µm	right	yes	yes
54-618-400	10mm	.6-.8N	.00001"/.2µm	.00004"/1µm	straight	no	no
54-618-444	10mm	.6-.8N	.00001"/.2µm	.00004"/1µm	right	no	no
54-618-500	25mm	.6-1N	.00001"/.2µm	.00005"/1.2µm	straight	no	no
54-618-700	50mm	.5-1.1N	.00002"/.4µm	.0001"/2.5µm	straight	no	no

M L

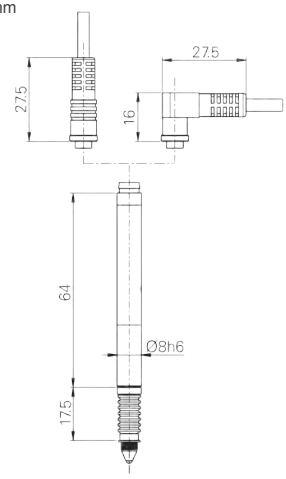
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Probes

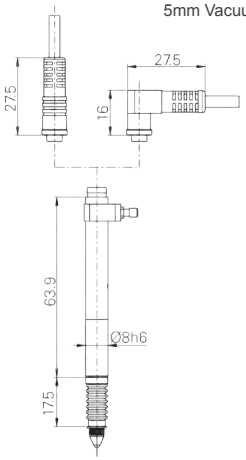
2mm



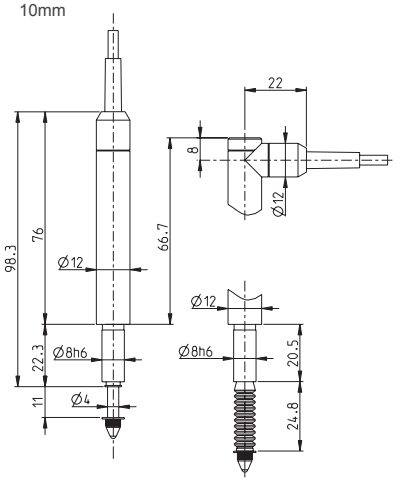
5mm



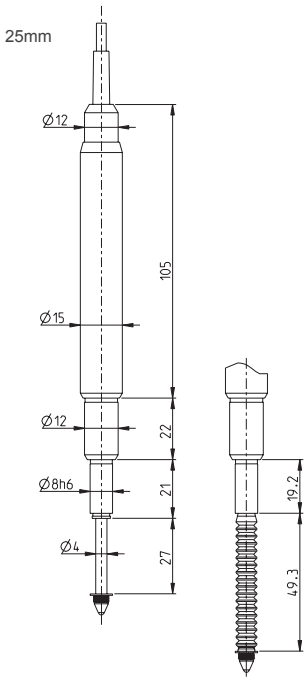
5mm Vacuum



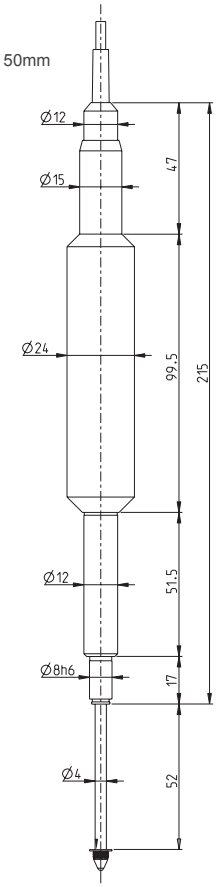
10mm



25mm



50mm



Part Number	Description
Accessories:	
54-618-510	Hand lifting attachment for No. 54-618-400, 444 & 500.
54-618-520	Photo-cable type lifter attachment for No. 54-618-400 & 444.
54-618-530	Photo-cable type lifter attachment for No. 54-618-400, 444 & 500.
54-618-535	Photo-cable type lifter attachment for No. 54-618-700.
54-618-540	Standard contact point (included with No. 54-618-400, 444, 500 and 700). M2.5 thread; .080" ball.
54-618-544	Rubber boot for No. 54-618-400 & 444.
54-618-545	Rubber boot for No. 54-618-500.
54-618-550	9' (2.75m) extension cable (for No. 54-618-400, 444, 500 & 700).
54-618-601	Pneumatic lifter (for use with No. 54-618-700).
54-618-460	3/8" to 8mm bushing.
54-618-470	M2.5/4-48 adapter.
cables:	
54-618-351	Replacement Cable for No. 54-618-350/355
54-618-361	Replacement Cable for No. 54-618-360/365
54-618-401	Replacement Cable for No. 54-618-400
54-618-445	Replacement Cable for No. 54-618-444
54-618-501	Replacement Cable for No. 54-618-500
54-618-701	Replacement Cable for No. 54-618-700
54-618-446	Heavy Duty 1.5m Replacement Cable for No. 54-618-400
54-618-447	Heavy Duty 5m Replacement Cable for No. 54-618-400
54-618-502	Heavy Duty 1.5m Replacement Cable for No. 54-618-500
54-618-504	Heavy Duty 5m Replacement Cable for No. 54-618-500

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

D300S Digital Display



Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Specifications:	
Sizes (mm)	330 x 175 x 77
Weight (kg)	3.3
Case	Steel/Plastic
Protection rating IEC 60529	IP40
S_Connect	RS232 / USB
Setting by PC	yes

- Digital display with 8.5" LCD color touchscreen
- 2 Sylvac probe inputs
- Automatic gage recognition (true plug and play!)
- Channels easily programed as functions of gage data
- Accepts up to 64 Sylvac measuring instruments
- Water-resistant 8.5” touchscreen and buttons
- 6 USB inputs for Sylvac instruments
- Outputs for PLC, computer, and printer
- Ethernet RJ45 connection
- Manage up to 64 instruments with multiplexors simultaneously by software.
- Individual preset or by group
- Compatible with Sylvac Bluetooth tools.

Also available with 4 probe ports.

Applications



Multiple Connection hand instruments with display of tolerances.



Multi-channel displays simultaneously through the multiplexer to measure multi-D200S ratings.



Measurement bench with PS17. Automatic scanning and detection of instruments connect measurement to display the appropriate channel.

Part Number	Description
54-618-300	D300S Digital Display

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality

Fowler 5 FIVE YEAR WARRANTY

These Displays are to be used with Sylvac Probes no hand tool input. See Sylvac Probes page 118 for Specifications.

Sylvac Digital Indication Units

for Sylvac Probes

D-50S Pro



- Digital display with 2 probe inputs
- Data output RS232C
- Power supply by AC adapter
- Light and compact
- Extreme ease of use
- Linear error correction

Part Number	Description
54-618-142	Digital Indication Unit (D-50S Pro)
54-618-166	Data Cable RS232C 9m/9m 9 Pin 2m

D-50S



- Relative and Absolute measurement
- Digital Resolution:
  Inch: .0001" Metric: .001mm
  Inch: .00001" Metric: .0001mm
- 2 probe inputs
- Reversible measuring direction
- Direct inch/metric conversion
- RS232 duplex with command structure
- Programmable preset
- Lockable function keys
- Foot pedal connection
- Built-in calibration sequence

D-50S Pro has all the features of the D-50S and also includes linear error correction.

Part Number	Description
54-618-148	Digital Indication Unit (D-50S), Includes foot pedal
54-618-166	Data Cable RS232C 9m/9m 9 Pin 2m

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

D200S High Speed Probe Measurement System



Front View



Back View



Multiplexer D200S:
- Direct connection of 8 Sylvac probes (max. 24)
- Speeds up to 200 measures/sec
- RS-232/USB output via included softwareor 3rd party RS-232 programs.

Software (included):
- Display up to 24 channels simultaneously
- Digital or bar graph
- Reading speed up to 200 reading/sec
- Features: Min, Max, Delta, Tolerances, Preset, etc.
- Data transfer to Excel or saving as text file.
- Spare Channels may be configured as functions of other channels.

Specifications:

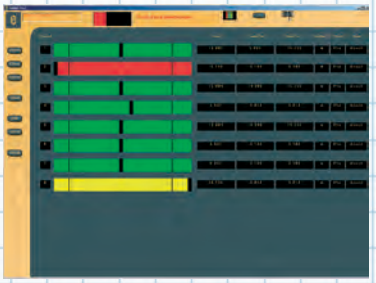
Frequency of measurement	200 values / sec
Size (mm)	304 x 171 x 61
Weight (kg)	1.2
Case	Aluminium profile, Terblend Plastic®, ABS and aluminium vanished
Protection rating IEC 60529	IP50
Setting by PC	yes

Part Number	Description
54-618-159	D200S High Speed Probe Measurement System ***(Requires computer and Sylvac probes)***
54-618-163	Vacuum Unit for probes 54-618-355 & 365.
54-618-164	Vacuum Extension Unit for probes 54-618-355 & 365.

Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Bar Graph Display



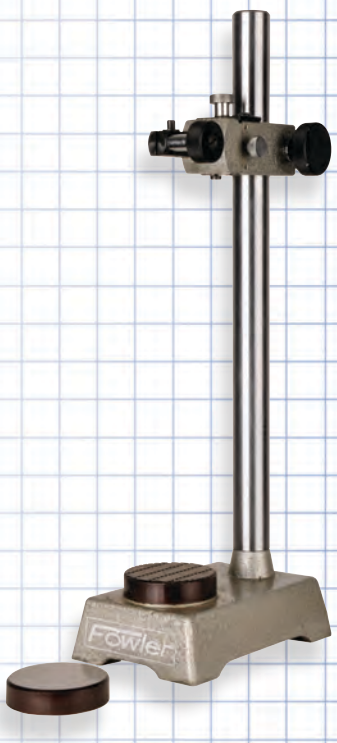
Can be used vertically or horizontally as required, for space saving applications.





Also works as a multiplexer for the D300S Display

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com







BASES AND STANDS

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Magnetic Back



▲ *No. 52-585-495*
Indicator not included.



No. 52-520-485 Indicator and Magnetic Back

Special Features:
- 1" travel
- AGD group 2
- 2-1/4" dial diameter
- Reading: .001"
- Continuous reading: 0-100

Part Number	Description
52-585-495	Magnetic Back
52-520-485	Magnetic Back with AGD group 2 Indicator

Magnetic Bases

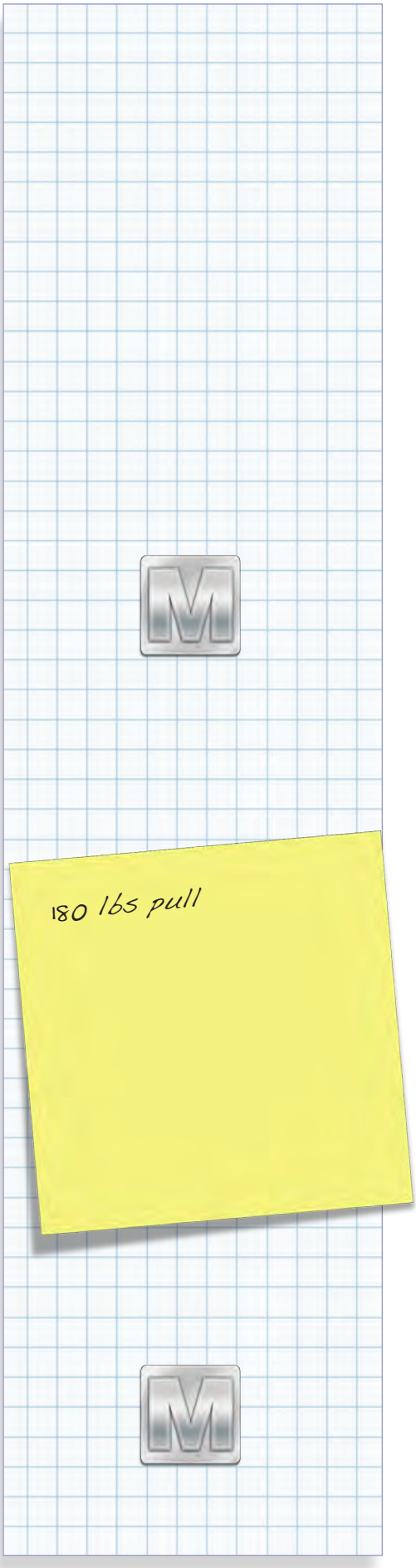


No. 52-585-095

No. 52-585-099

Magnetic Base Features:
- All purpose magnetic base with 180 lbs. of pulling power.
- Blue anodized coated post and arm
- Fine adjustment clamping rod
- Base can be mounted vertically as well as horizontally,
- V-bottom base allows mounting on cylindrical surfaces.

Part Number	Description
52-585-095	Hydraulic Arm Magnetic Base
52-585-099	Dial gage holder (for special applications)



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Magnetic Base Indicator Holder

Fowler's indicator holder is a unique three-dimensional system with fine adjustment at the base, allowing fast zeroing.

- Overall length is approximately 4-3⁄4".
- The central locking mechanism allows for easy set up of gages.
- Accepts all AGD dial indicators and test indicators.
- The powerful magnetic base adheres to flat as well as curved surfaces and is extremely stable.



Model No. 52-588-000

Indicator shown is not included

Fowler's measuring articulated magnetic bases with central clamping system, on/off switch and fine adjustment



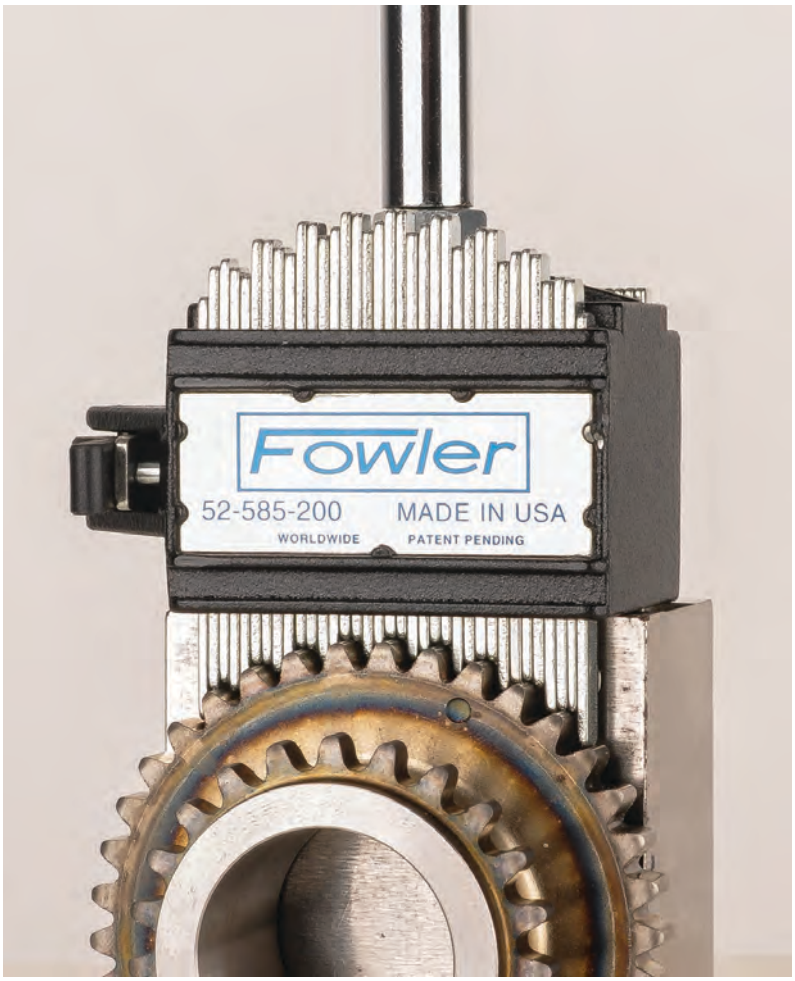
Model No. 52-588-010

Specifications:			
Order No.	**Base Size W x L x H**	**Magnetic Pull**	**On/Off**
52-588-000	5⁄8 x 2-3⁄8 x 11⁄4"	62 lbs.	No
52-588-010	1-3⁄16 x 1-3⁄16 x 13⁄16"	37 lbs.	Yes

Part Number	Description
52-588-000	Magnetic base with indicator holder
52-588-010	Magnetic base with on/off switch and indicator holder

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

AnyForm Magnetic Base



70 steel segments work like a contour gage to fit mag base securely to any shape or form



Adapts to even intricate surfaces to make this an extremely versatile Magnetic Base

Features:

- Versatile—70 steel segments work like a contour gage to fit mag base securely to any shape or form.
- Unlock the cam mechanism and magnetic segments will conform to any odd shape.
- Rigid one-piece construction with permanent powerful magnet holds securely.
- There's no longer any need to make extra fixtures to set indicators.
- Unlimited versatility—used with coolant systems, lamps, etc.
- Side arm clamp holds all AGD dial indicators and all test indicators with a 1⁄4" dia. stem.

Part Number	Base Width	Base Height	Base Depth	Lbs. Pull
52-585-200	2-1⁄4"	2-1⁄8"	1-3⁄4"	40

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Magnetic Bases



▲ *Magnetic base with fine adjust*
No. 52-585-005



▲ *Magnetic base with fine adjust*
No. 52-585-020

Features:
- Use with milling machines, lathes, etc.
- No. 52-585-010 & 020 supplied with fine adjustment clamp for indicators, electronic probes, etc.
- Base dimensions of 005 are 2" x 2-11⁄32" x 1-13⁄16"(50mm x 58.7mm x 46mm)
- Base dimensions of 020 are 2-1⁄2" x 2-1⁄8" x 2"(63.5mm x 54mm x 50mm)
- Accepts all AGD dial indicators.
- V-base for placing on round surfaces.
- On/off lever releases magnet.
- No risk of marring polished surfaces.
- Mounts test indicators with 1⁄4" post mount
- On/off switch conveniently located.

Part Number	Description	Height
52-585-005	Magnetic base, 85 lb. pull.	9.5"
52-585-020	Magnetic base, 176 lb. pull w/fine adjustment	9.5"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Universal Magnetic Base



Features:
- Locking screw and 2 universal ball sockets for setting at any angle or position.
- Microfine adjustment screw.
- Removable extension arm 3-9⁄16".
- Use with or without arm.
- Dovetail form holder with locking control to hold dovetail test indicators.
- Accepts .250" diameter test indicator stems.
- Base finished in wrinkled enamel.

Part Number	Base Width	Base Height	O/A Height	Lbs. Pull
52-585-000	1-1⁄2"	1"	4-7⁄8"	25

Flex Arm Magnetic Base



No. 52-585-015

Features:
- All purpose magnetic base with 180 lbs. of pulling power.
- Fine adjustment clamping rod
- Base can be mounted vertically as well as horizontally,
- V-bottom base allows mounting on cylindrical surfaces.

Part Number	Description
52-585-015	Flex Arm Magnetic Base

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Micro-Accurate Ceramic Dial Gage Stands

Highly durable ceramic base for greater accuracy over the life of the stand.

Flatness
Perpendicularity



(Indicator not included with stand.)

Fowler's ceramic and steel stands with rack and pinion design affords maximum accuracy when using high resolution electronic gages and probes…a must when highly critical measurements are required.

Special Features:
- State of the art ceramics provide durability and micro flatness.
- Serrated working surface provides a stable and accurate reference base.
- Working area:
  54-618-576 3-1/4" x 3-1/4" (85mm x 85mm).
  54-618-578 4" x 4" (100mm x 100mm).
- Polished chrome column with rack and pinion adjustment for fine measurements.
- Accepts all electronic and standard dial gage and electronic probes 3⁄8" or 8mm mounting.

Part Number	Base Height	Base Width	Base Length	Overall Height	Measuring Range
54-618-576	2-1/4"	4.5"	7"	9.5"	4-1⁄2"/116mm
54-618-578	2-1/4"	4.5"	7"	13"	8"/200mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Granite Dial Gage Stand

Fowler's Workshop Black Granite Stand is ideal for shop-floor use!

Features:
- Sturdy and compact with extreme stability.
- 6" x 6" x 2" granite base
- Positive lock screw
- Fine adjustment knob for zero setting
- Column height is 8"
- Accepts all lug-back indicators
- This stand is maintenance free
- Microscrew fingertip control



(Indicator not included with stand.)

Part Number	Description
52-580-030	Granite Dial Gage Stand

High Precision Dial Gage Stand

Fowler's High Precision Dial Gage Stand is 10" in overall height with a precision serrated anvil.

Features:
- Quick positioning and adjustment
- Zero settings with knob for fine adjustment
- Fine adjustment of 5⁄32"
- Total height of column 8"
- Dial gage stand holds indicators with stems of 3⁄8" and 8mm.
- Round working surface of 2" serrated anvil
- Diameter of column .980"
- 2" Serrated anvil



No. 52-580-011

Part Number	Description
52-580-011	High Precision Dial Gage Stand

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deluxe Dial Gage Stands

Fowler's deluxe Dial Gage Stands hold indicators and probes for thickness and comparative measurements.

Features No. 52-580-015:
- Quick positioning and adjustment
- Zero settings with knob for fine adjustment
- Fine adjustment of 5⁄32"
- Holds indicators with stems of 3⁄8" and 8mm
- Diameter of column is 1"
- Working surface of 3-1⁄2" x 3-1⁄2"



No. 52-580-015

Features No. 52-580-010:
- Quick positioning and adjustment
- Zero settings with knob for fine adjustment
- Fine adjustment of 5⁄32"
- Can hold indicators with stems of 3⁄8" and 8mm
- Round working surface of 2-1⁄4"
- Diameter of column is 1"



No. 52-580-010

Part Number	Base Height	Base Width	Base Length	Overall Height	Measuring Range
52-580-015	1.5"	4"	6"	8.5"	5"/125mm
52-580-010	2"	4"	6"	10"	6"/150mm

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Economy Dial Gage Stands

This Fowler Economy Dial Gage Stand No. 52-580-020 is budget priced, but has the essential features for proper work inspection.

Features:
- Accepts all lug-back indicators.
- Positive lock screw
- Column is 5⁄8" from back edge of working surface.
- Column diameter: 1"
- Fine adjustment: 3⁄8"
- Capacity of 6-1⁄2" from working surface.
- Bracket with 1⁄4" bolt for dial indicator is 2-1⁄4" from center of column.
- Fine adjustment knob for zero setting.
- Rapid preliminary positioning adjustment is featured.
- Ground steel post mounted at right angles to the base.
- Ground working surface 5-1⁄2" x 4-1⁄4"



No. 52-580-020

Economy Dial Gage Stand No. 52-580-016 with microfine adjustment knob for zero setting.

Features:
- Accepts all dial indicators with 3⁄8" stems.
- Column 5⁄8" from back edge of working surface.
- Column diameter: 1"
- Fine adjustment: 3⁄8".
- Positive lock screw
- Capacity of 6-1⁄2" from working surface
- Bracket with 1⁄4" bolt for dial indicator is 2-1⁄4" from center of column
- Microfine adjustment knob for zero setting
- Microscrew fingertip control
- Ground steel post mounted at right angles to the base
- Ground working surface 5-1⁄2" x 4-1⁄4"



No. 52-580-016

Part Number	Description
52-580-016	Economy Dial Gage Stand for 3⁄8" indicators.
52-580-020	Economy Dial Gage Stand for lug back indicators.
54-618-460	3/8" to 8mm Bushing

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

High Precision Dial Gage Stand

Fowler's High Precision Dial Gage Stand No. 52-580-014 is 14" in overall height and is supplied with 2 anvils; flat and serrated.

- Quick positioning and adjustment
- Zero settings with knob for fine adjustment
- Fine adjustment of 5⁄32"
- Total height of column 14"
- Can hold indicators with stems of 3⁄8" and 8mm
- Diameter of column .980"
- Supplied with two 2-3⁄8" diameter anvils, flat and serrated



No. 52-580-014

Part Number	Description
52-580-014	High Precision Dial Gage Stand w/2 anvils

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Workshop Transfer Stands

No. 52-620-019—Fowler's specially designed transfer stand is moderately priced and used with electronic gage heads and test indicators. A fine adjustment knob located on the base for microfine adjustments. It allows the operator to obtain precise readings.

- Overall Height 19.5"
- Sturdy construction gives complete rigidity when measuring. Chrome-plated tubular post.
- Base is hardened and lapped.
- Can be used with dial test indicators.
- Quick adjustment on main column with large locking knob.
- Weight 6 lbs (2.7 kg)



Workshop Transfer Stand No. 52-620-019



Workshop Transfer Stand No. 52-620-717 (indicator not included)

No. 52-620-717—Fowler's economical transfer stand is compact in size and lightweight. Perfect for applications where the stand is moved and/or needs to be transported from location to location.

- Overall height 12"
- Revolutionary design
- Large range fine adjustment
- Holds test indicators or dial gages with dovetail holders & special adaptors
- Large capacity positioning range
- Can be locked in any position
- Base 3" wide x 3.54" long
- Large handwheel provides fine adjustment
- Stainless steel construction
- Packed in a high quality aluminum case
- Weight 4.8 lbs. (2.2 kg)

Part Number	Description
52-620-019	18" Workshop Transfer Stand.
52-620-717	12" Workshop Transfer Stand



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Surface Gages

No. 52-155 Series Surface Gage a popular tool for layout, transfer and measurement work. The base of Fowler's Surface Gage is hardened throughout and features a V-groove for use on round shafts or flat surfaces.



Surface Gage No. 52-155-010

- Fine adjustments may be obtained for quick and accurate settings with the knurled thumb screw.
- Spindles are available in 4", 7", 9" and 12" lengths.
- Retractable pins in base for work on flat surfaces.
- A V-groove is incorporated in the ground steel base for mounting on round work.
- Fine adjustment of the spindle may be made to any angle above or below the base.
- The scriber head also features a spring control.
- Double-ended scriber included.
- Base is fully hardened throughout.
- Available in standard size and mini-model version.
- Clamp can also hold test indicator stems.

Part Number	Description	Base Dimensions Height	Width	Length
52-155-007	Surface gage with 4" & 7" spindles	.700"	1.500"	2.20"
52-155-010	Surface gage with 9" spindle	1.100"	2.50"	3.80"
52-155-013	12" Spindle for 52-155-010 only			

XTRA-SURF Surface gage with a built-in Switchable Magnetic Base

- Set includes 3-1/8" x 2-1/16" permanent magnetic base with on/off switch, fine adjustment on base and a 5/16" x 9" upright
- Swivel clamp to mount indicator
- Two dovetail stems: 5/32" & 3/8"
- A 4" hardened scriber
- Form fitted shop-hardened case for easy accessibility and storage



Indicator not included.

Part Number	Description
52-155-743	Xtra-Surf



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Height Transfer & Squareness Gage



(Indicator and standard shown not included.)

Unique design

- Used for a variety of surface plate applications.
- Large fine adjustment knob for precise control.
- Swivel clamp anchors swivel and indicator for added accuracy.
- Rear surface of the gage has a reference surface to square against a master for checking squareness.
- Includes a 7.5" post, indicator rod and clamp.

Part Number	Description
53-620-010	Height Transfer & Squareness Gage

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



INSIDE AND OUTSIDE MEASUREMENT

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Deluxe Digital Caliper Gages



No. 54-554-013-2



No. 54-554-010-2

- Perfect for measuring bores, thickness, o-ring and snap-ring grooves.
- Fast and accurate measuring results
- Absolute and relative measurements
- Operates on a 3V lithium battery
- Inch/metric conversion
- Large LCD display
- Peak measuring modes
- Suitable for workshop use
- Data transfer via RS 232
- Includes test certificate, operating instructions, battery, and hexagon socket screw key

External Measurement	key	54-554-012-2	54-554-013-2
Measuring span (mm)		10	20
Measuring range (mm)		0 - 10	0 - 20
Max. Error Bandwidth (mm)		0.015	0.03
Repeatability (mm)		0.005	0.01
Measuring force min. (Newtons)		0.8	1.1
Measuring force max. (Newtons)		1.2	1.6
Measuring Contact Ball Ø (mm)		1.5	1.5
Groove Depth Movable Side (mm)	A	18.6	24.6
Groove Depth Fixed Side (mm)	B	19.1	24.7
Groove Width (mm)		4	4
Measuring depth max. (mm)	L	35	85
Weight		240 g	280 g
Reference temperature		20 °C	20 °C
Operating temperature		10 - 30 °C	10 - 30 °C
Storage temperature		-10 - 50 °C	-10 - 50 °C
Protection class		IP67	IP67
Interface USB		54-554-107-1	54-554-107-1

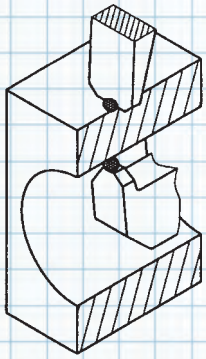
Made in GERMANY

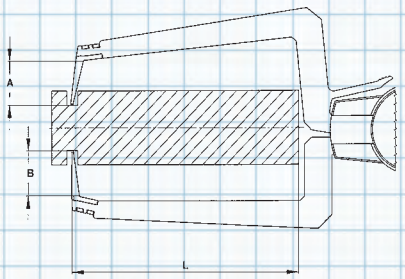
IP67

Fowler USB CONNECT KIT

Fowler RS-232 DIRECT

External Calipers

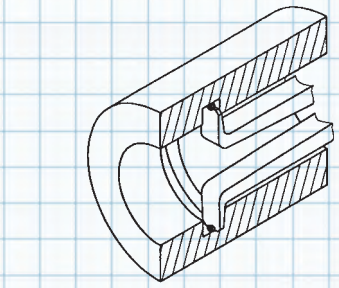


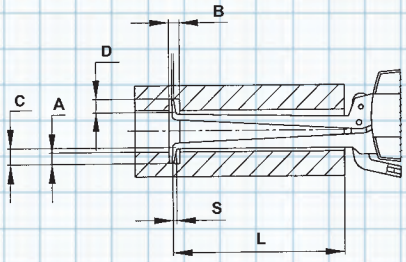


Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deluxe Digital Caliper Gages

Internal Calipers





Internal Measurement	key	54-554-005-2	54-554-010-2	54-554-030-2
Measuring span (mm)		10	20	20
Measuring range (mm)		5 - 15	10 - 30	30 - 50
Max. Error Bandwidth (mm)		0.015	0.03	0.03
Repeatability (mm)		0.005	0.01	0.01
Measuring force min. (Newtons)		0.8	1.1	1.1
Measuring force max. (Newtons)		1.2	1.6	1.6
Measuring Contact Ball Ø (mm)	S	0.6	1	1
Groove Depth (mm)	D	2.3	5.2	7
Groove Width (mm)	B	0.8	1.2	1.2
Measuring depth max. (mm)	L	35	85	85
Weight		230 g	250 g	255 g
Reference temperature		20 °C	20 °C	20 °C
Operating temperature		10 - 30 °C	10 - 30 °C	10 - 30 °C
Storage temperature		-10 - 50 °C	-10 - 50 °C	-10 - 50 °C
Protection class		IP67	IP67	IP67
Interface USB		54-554-107-1	54-554-107-1	54-554-107-1

Internal Measurement	key	54-554-050-2	54-554-070-2
Measuring span (mm)		20	20
Measuring range (mm)		50 - 70	70-90
Max. Error Bandwidth (mm)		0.03	0.03
Repeatability (mm)		0.01	0.01
Measuring force min. (Newtons)		1.1	1.1
Measuring force max. (Newtons)		1.6	1.6
Measuring Contact Ball Ø (mm)	S	1	1
Groove Depth (mm)	D	8.5	8.5
Groove Width (mm)	B	2.6	2.6
Measuring depth max. (mm)	L	85	85
Weight		265 g	270 g
Reference temperature		20 °C	20 °C
Operating temperature		10 - 30 °C	10 - 30 °C
Storage temperature		-10 - 50 °C	-10 - 50 °C
Protection class		IP67	IP67
Interface USB		54-554-107-1	54-554-107-1

Part Number	Description	Range
54-554-005-2	Internal Electronic Caliper	5—15mm
54-554-010-2	Internal Electronic Caliper	10—30mm
54-554-030-2	Internal Electronic Caliper	30—50mm
54-554-050-2	Internal Electronic Caliper	50—70mm
54-554-070-2	Internal Electronic Caliper	70—90mm
54-554-012-2	External Electronic Caliper	0—10mm
54-554-013-2	External Electronic Caliper	0—20mm
Accessories		
54-554-100	Replacement 3V Lithium DL123AB Battery	
54-554-107-1	USB Cable	

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Internal & External Caliper Gages



▲ *54-554-611*



▲ *54-554-711*

Direct reading electronic calipers for quick, accurate measurements of internal/external dimensions.

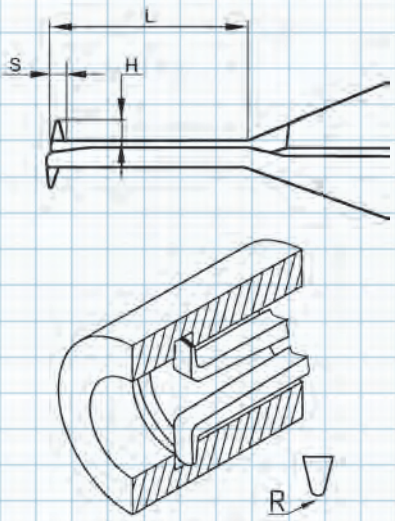
Features:

- Easy to hold.
- RS232 output.
- Rugged housing.
- Large, LCD display.
- Resolution: .0005"/.01mm.
- Accuracy: ±.0008"/±.02mm.
- Preset capability.
- Direct inch/metric conversion.
- Absolute/incremental measurements
- Includes case.

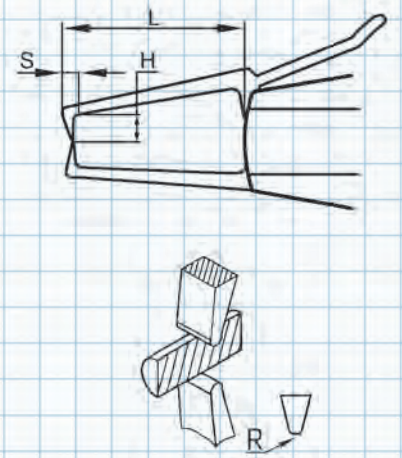
Range		L	S	H	R
Metric	Inch				
Internal Jaw Dimensions					
5-15mm	0.2-0.6"	20mm	1.0mm	1.5mm	0.3mm
5-25mm	0.2-1.0"	35mm	1mm	1.5mm	0.3mm
10-30mm	0.4-1.2"	55mm	2mm	3.5mm	0.5mm
20-40mm	0.8-1.6"	80mm	3mm	6.5mm	0.5mm
30-50mm	1.2-2.0"	80mm	3mm	8.5mm	0.5mm
External Jaw Dimensions					
0-10mm	0-0.4"	40mm	3.0mm	8mm	0.5mm
0-20mm	0-0.8"	80mm	6.5mm	25mm	0.75mm
10-30mm	0.4-1.2"	80mm	6.5mm	25mm	0.75mm
20-40mm	0.8-1.6"	80mm	6.5mm	25mm	0.75mm
30-50mm	1.2-2.0"	80mm	6.5mm	25mm	0.75mm

Part Number	Range (inch)	Range (mm)
Internal Caliper Gages		
54-554-611	.200"—.590"	5-15mm
54-554-622	.200"—1"	5—25mm
54-554-623	.400"—1.2"	10—30mm
54-554-624	.790"—1.6"	20—40mm
54-554-625	1.2"—2"	30—50mm
External Caliper Gages		
54-554-711	0—.400"	0—10mm
54-554-722	0—.790"	0—20mm
54-554-723	.4"—1.2"	10—30mm
54-554-724	.790"—1.6"	20—40mm
54-554-725	1.2"—2"	30—50mm
Accessories		
54-100-350	CR2032 replacement battery	

Internal Jaw Dimensions



External Jaw Dimensions



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XTRA-VALUE Internal & External Electronic Caliper Gages



- Robust housing
- Large LCD display
- Reading: .01"/.1mm/1/64ths
- Accuracy: .01"/.3mm/1/64ths
- Battery: CR2032
- Spring loaded with locking nut

Part Number	Description	Range	Reach
54-554-630	Outside Caliper Gage	0-6"/150mm	4.5"
54-554-730	Inside Caliper Gage	.5-6"/150mm	4"

XTRA-VALUE Digital Thickness Gage



- Range: 0-1"/25mm
- Robust housing
- Large LCD display
- Reading: .001"/.01mm/1/64ths
- Accuracy: .004"
- Includes: 1/8" ball contact, cone point and a 1mm spline point
- Battery: CR2032
- Three interchangeable points.
- Battery life: approximately 1 year
- M2.5 contact point thread

Part Number	Description	Range
54-554-830	Xtra-Value Digital Thickness Gage	0-1"/25mm
54-100-350	CR2032 Replacement Battery	

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

8"/200mm Electronic Dividers



- Range: 0-8"/200mm
- Robust housing
- Large LCD display
- Reading: .01"/.1mm/1/64ths
- Accuracy: .001"
- Satin chrome finish
- Alloy jaws
- Includes metal scribe and graphite attachments.

Part Number	Description	Range
54-554-930	8" Electronic Dividers	0-8"/200mm
54-100-350	CR2032 Replacement Battery	

INCH • METRIC • FRACTION™

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Long Range External Dial Caliper Gages



▲ *External Dial Calipers No. 52-554-800 series allow clearance over such obstructions as flanges, pipes, etc.*

Fowler External Dial Calipers are direct reading instruments for fast checking of casting dimensions prior to machining. Alternately, when the External Dial Caliper Gage is set to a standard, it may be used as a comparator for checking large parts. Its versatility makes it a must for all shops.

Features:
- Available with throat depths with a capacity of 5-1/4"—9-1/4" .
- Large clear graduations.
- Easy one hand operation.
- Furnished in 2 graduations: .01" or .001"
- Revolution counter provided on dial gage.
- Bezel rotates 360° for easy zero setting.
- Carbide tipped anvils

Part Number	Throat Depth	Throat Clearance	Range	Grad.	Accuracy	Anvil Type
External Calipers						
52-554-800	5-1/4"	2.5"	0—2"	.01"	±.01"	Pin
52-554-801	5-1/4"	2.5"	0—2"	.001"	±.005"	Pin
52-554-802	9-1/4"	2.5"	0—2"	.01"	±.01"	Pin
52-554-803	9-1/4"	2.5"	0—2"	.001"	±.005"	Pin

Specifications subject to change without notice.

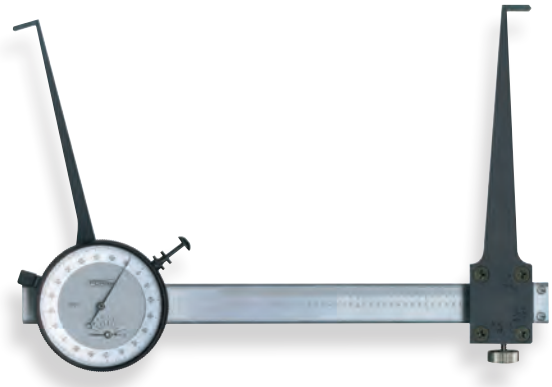
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Long Range External Dial Caliper Gages



▲ *No. 52-552-001 supplied with five interchangeable anvils.*



▲ *No. 52-552-201 & 203: measuring range determined by adjustable arm.*

Fowler offers its customers a unique gage—Internal Calipers with a wide range of sizes, extending to a full 12".

Features—No. 52-552 Series:
- Designed to measure bores, grooves and recesses.
- Bezel rotates for zero setting.
- Easily set with micrometer or caliper.
- Jewelled movements for accuracy.
- Dial face diameter: 2"
- Overall Accuracy: ±.0005"
- Includes fitted case.

Features—No. 52-552-201 and 203:
- Features an adjustable arm for rapid setting of measurements.
- Contact width and thickness: 3⁄32"
- Carbide radius contact points for long life and durability.

Features—No. 52-552-001, 002:
- Supplied with a set of interchangeable anvils covering complete measuring range.
- Simplifies difficult internal measurements such as bores, grooves and recesses.
- Contact diameter: .045"
- Contact width and thickness: 3⁄32"



▲ *No. 52-552-002 supplied with ten interchangeable anvils.*

Made in JAPAN

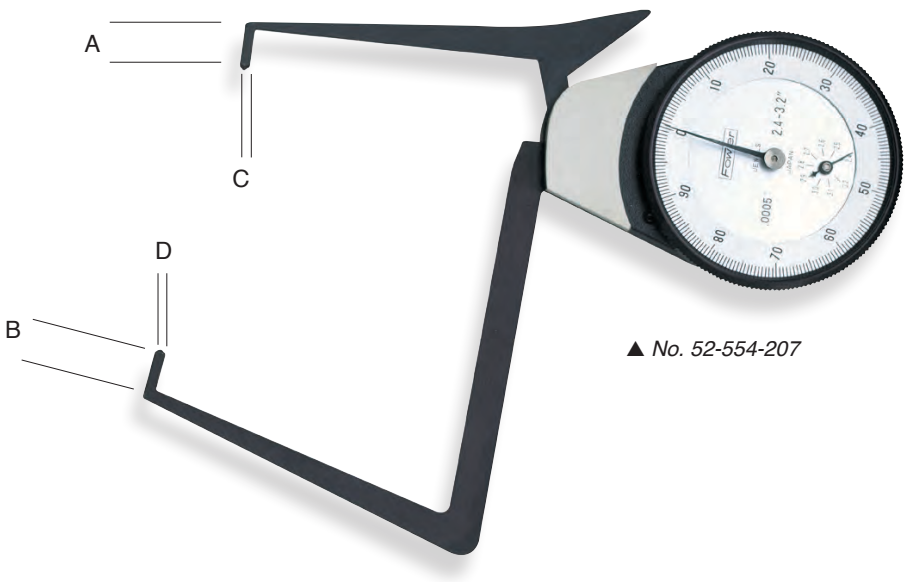
Part Number	No. of Anvils	Arm Lgth.	Range	Graduation
52-552-001	5	2.5"	.800—4.000"	.0005"
52-552-002	10	2.5"	4.000—8.000"	.0005"
52-552-201	-	3"	2.300—6.000"	.001"
52-552-203	-	3"	2.300—12.000"	.001"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in JAPAN

Nice quality!

Deluxe External Dial Caliper Gages



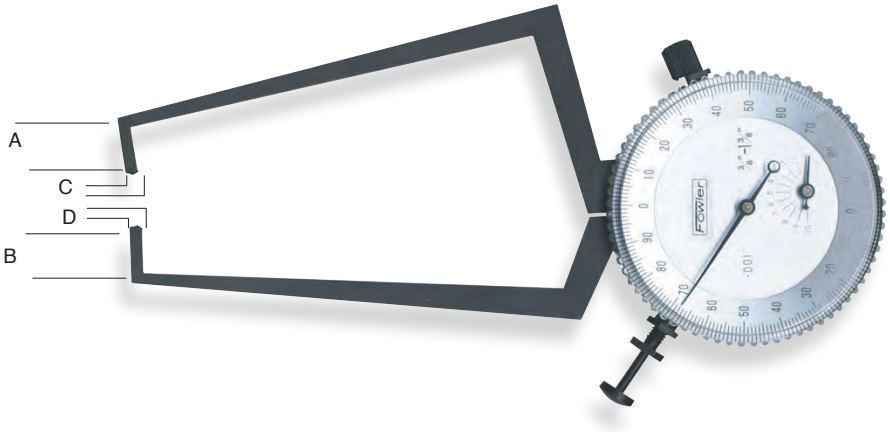
▲ *No. 52-554-207*

Features:
- Checks thickness, external grooves, etc.
- Movement of .800"(20mm)
- Dial face diameter: 2"(50mm)
- Bezel rotates for zero setting.
- Carbide radius contact.
- Can be set with gage blocks or micrometer standards.
- C: 3⁄32" and D: 3⁄32"
- Arm Thickness 3⁄32"
- Length: 3-1⁄4"
- Includes case.

Part Number	Range	Graduation	Dim.A	Dim.B
Inch Series:				
52-554-201	0—0.8"	.0005"	13⁄32"	13⁄32"
52-554-202	.4—1.2"	.0005"	13⁄32"	13⁄16"
52-554-203	.8—1.6"	.0005"	13⁄32"	13⁄32"
52-554-204	1.2—2.0"	.0005"	13⁄32"	13⁄16"
52-554-205	1.6—2.4"	.0005"	13⁄32"	13⁄32"
52-554-206	2.0—2.8"	.0005"	13⁄32"	13⁄16"
52-554-207	2.4—3.2"	.0005"	13⁄32"	13⁄32"
52-554-208	2.8—3.6"	.0005"	13⁄32"	1-7⁄32"
52-554-209	3.2—4.0"	.0005"	13⁄32"	13⁄16"
52-554-210	3.6—4.4"	.0005"	13⁄32"	13⁄32"
Metric Series:				
52-554-301	0—20mm	.01mm	10.3mm	10.3mm
52-554-302	10—30mm	.01mm	10.3mm	21.0mm
52-554-303	20—40mm	.01mm	10.3mm	10.3mm
52-554-304	30—50mm	.01mm	10.3mm	21.0mm
52-554-305	40—60mm	.01mm	10.3mm	10.3mm
52-554-306	50—70mm	.01mm	10.3mm	21.0mm
52-554-307	60—80mm	.01mm	10.3mm	10.3mm
52-554-308	70—90mm	.01mm	10.3mm	31.0mm
52-554-309	80—100mm	.01mm	10.3mm	21.0mm
52-554-310	90—110mm	.01mm	10.3mm	10.3mm
52-553-099	Replacement case for #52-554 series			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deluxe External Dial Caliper Gages



Made in JAPAN

Features:
- Checks thickness, grooves, etc. and has a movement of 1"(25mm).
- Dial face diameter: 2"(50mm)
- C: 3⁄32"; D: 3⁄32"
- Arm length: 3-1⁄2"
- Thickness: 3⁄32"
- Bezel rotates for zero setting; bezel lock screw; carbide ball measuring points.
- Set with gage blocks or micrometer standards.
- Carbide radius contact
- Includes case.

Part Number	Range	Graduation	Dim.A	Dim.B
Inch Series:				
52-553-201	0—1.000"	.001"	13⁄32"	13⁄32"
52-553-202	.375—1.375"	.001"	13⁄32"	13⁄32"
52-553-203	.750-1.750"	.001"	13⁄32"	13⁄32"
52-553-204	1.125—2.125"	.001"	13⁄32"	13⁄32"
52-553-205	1.500—2.500"	.001"	13⁄32"	13⁄32"
52-553-206	1.875—2.875"	.001"	7⁄8"	13⁄32"
52-553-207	2.250—3.250"	.001"	15⁄32"	13⁄32"
52-553-208	2.875—3.875"	.001"	1-1⁄4"	13⁄32"
52-553-209	3.250—4.250"	.001"	7⁄8"	13⁄32"
52-553-210	3.625—4.625"	.001"	15⁄32"	13⁄32"
Metric Series:				
52-553-301	0—25mm	.025mm	10.3mm	10.3mm
52-553-302	10—35mm	.025mm	10.3mm	10.3mm
52-553-303	20—45mm	.025mm	10.3mm	10.3mm
52-553-304	30—55mm	.025mm	10.3mm	10.3mm
52-553-305	40—65mm	.025mm	10.3mm	10.3mm
52-553-306	50—75mm	.025mm	22.2mm	10.3mm
52-553-307	60—85mm	.025mm	11.9mm	10.3mm
52-553-308	70—95mm	.025mm	31.75mm	10.3mm
52-553-309	80—105mm	.025mm	22.2mm	10.3mm
52-553-310	90—115mm	.025mm	11.9mm	10.3mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in JAPAN

Deluxe Internal Dial Caliper Gages



Features:
- For checking internal bores, recessed diameters, and more.
- Jeweled movements.
- Each instrument moves .800"(20mm).
- Set with a micrometer or ring gage.
- Carbide radius contact
- C: 3⁄32" & D: 3⁄32".
- Bezel rotates for zero setting.
- Length of arm: 3-1⁄4"
- Thickness: 3⁄32".
- Dial face diameter: 2"(50mm).
- Includes case.

Part Number	Range	Graduation	Dim.A	Dim.B
Inch Series:				
52-554-001	.4—1.2"	.0005"	13/64"	13/64"
52-554-002	.8—1.6"	.0005"	7/16"	5/16"
52-554-003	1.2—2.0"	.0005"	7/16"	11/16"
52-554-004	1.6—2.4"	.0005"	7/16"	1-7/64"
52-554-005	2.0—2.8"	.0005"	7/16"	37/64"
52-554-006	2.4—3.2"	.0005"	7/16"	31/32"
52-554-007	2.8—3.6"	.0005"	7/16"	1-3/8"
52-554-008	3.2—4.0"	.0005"	7/16"	1/2"
52-554-009	3.6—4.4"	.0005"	7/16"	29/32"
52-554-010	4.0—4.8"	.0005"	7/16"	1-11/32"
Metric Series:				
52-554-101	10—30mm	.01mm	5.0mm	5.0mm
52-554-102	20—40mm	.01mm	11.0mm	8.0mm
52-554-103	30—50mm	.01mm	11.0mm	18.0mm
52-554-104	40—60mm	.01mm	11.0mm	28.0mm
52-554-105	50—70mm	.01mm	11.0mm	15.0mm
52-554-106	60—80mm	.01mm	11.0mm	24.5mm
52-554-107	70—90mm	.01mm	11.0mm	35.0mm
52-554-108	80—100mm	.01mm	11.0mm	13.0mm
52-554-109	90—110mm	.01mm	9.50mm	23.0mm
52-554-110	100—120mm	.01mm	11.0mm	34.0mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Internal Dial Caliper Gages



▲ *No. 52-553-001*

Made in JAPAN

Features:
- Checks recessed diameters, internal bores, etc.
- Each instrument moves 1" (25mm)
- Set with a micrometer or a ring gage.
- Dial face diameter: 2" (50mm)
- C: 3⁄32" and D: 3⁄32"
- Bezel rotates for zero setting; button for closing arms; carbide radius contact
- Includes bezel lock screw.
- Arm length: 3-1⁄4", thickness: 3⁄32".
- Includes case.

Part Number	Range	Graduation	Dim.A	Dim.B
Inch Series:				
52-553-001	.375—1.375"	.001"	5⁄32"	5⁄32"
52-553-002	.750—1.750"	.001"	9⁄32"	1⁄4"
52-553-003	1.125—2.125"	.001"	1⁄2"	1⁄4"
52-553-004	1.500—2.500"	.001"	25⁄32"	1⁄4"
52-553-005	1.875—2.875"	.001"	1-1⁄4"	13⁄32"
52-553-006	2.250—3.250"	.001"	3⁄4"	3⁄8"
52-553-007	2.875—3.875"	.001"	1-3⁄16"	3⁄8"
52-553-008	3.250—4.250"	.001"	1-9⁄16"	3⁄8"
52-553-009	3.625—4.625"	.001"	1-3⁄8"	3⁄8"
52-553-010	4.000—5.000"	.001"	1-11⁄16"	3⁄8"
Metric Series:				
52-553-101	10—35mm	.025mm	4.0mm	4.0mm
52-553-102	20—45mm	.025mm	7.2mm	6.4mm
52-553-103	30—55mm	.025mm	12.8mm	6.4mm
52-553-104	40—65mm	.025mm	20.0mm	6.4mm
52-553-105	50—75mm	.025mm	31.8mm	10.5mm
52-553-106	60—85mm	.025mm	19.0mm	9.5mm
52-553-107	70—95mm	.025mm	30.2mm	9.5mm
52-553-108	80—105mm	.025mm	39.9mm	9.5mm
52-553-109	90—115mm	.025mm	39.9mm	9.5mm
52-553-110	100—125mm	.025mm	42.9mm	9.5mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

INCH • METRIC • FRACTION™



Directy reading in both inch and metric

Snap-Cal



Fowler's Inch, Metric & Fraction reading Snap Caliper is ideal for measuring a wide range of materials from metal, plastics and glass to small wires, fibers and paper.

- Range: 0—1.25"/31.5mm
- Resolution: .0005"/.01mm *(Fractions in 1/64th increments).*
- Spring-loaded travel.
- Wide faced flat jaw for easy positioning.
- Dimensions of fixed jaw: .470" x .900"
- Accuracy: ±.001"/.02mm
- Hardened stainless steel construction.
- Direct inch/metric/fraction conversion.
- Measuring speed of 60"/second.
- Large, high contrast LCD display
- Hanging loop included for attachment to belt or chain.

Part Number	Description
54-550-000-1	Snap Cal

Thickness Gages

Digital Thickness Gage No. 54-550-500:
- Convenient “push-down” spindle style.
- Direct inch/metric conversion
- Throat depth: .500"
- .350"/9mm anvil dialmeter
- Resolution .0005"(.01mm)
- Accuracy .001"(.02mm)
- Repeatability .0005"(.01mm)
- On/off switch
- Battery 1.5V type 357
- Includes case.



Part Number	Range	Resolution	Throat Depth
54-550-500	0—.600"(15mm)	.0005"/.01mm	.500"
Accessiries:			
54-902-110	Replacement battery		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Thickness Gages

Handy thickness gages by Fowler measure the thickness of paper, leather, sheet metal, rubber and more.



▲ *Thickness Gage*
No. 52-546-000
Made in Germany

Dial Thickness Gage No. 52-546-000
This gage's proven design offers a number of remarkable advantages. Serrated lifting wheel opens the jaws for insertion of component to be measured, and its size is easily read on the dial.
The measuring gear train is completely separate from lifting mechanism so that the lifting of anvils cannot affect measurement. Robust design with metal housing, lapped spindle and corrosion resistant. Glass face is unbreakable. The gage is easily zeroed by using the knurled adjusting bezel. Light and handy. Gage fits comfortably in your pocket.

- Plastic heat insulating plates
- Contact is flat with a .255"/6.5mm diameter
- Measuring pressure is 1N (100 grams)



▲ *Dial Thickness Gage*
No. 52-545-777

Lightweight Dial Thickness Gage: Plunger Style
No. 52-545-777 & 778
- Use for measuring the thickness of metal, paper, film, cardboard and more.
- Large easy to read dial.
- Easy to use press plunger. Spindle moves downward to measure thickness of material.
- Contact is flat with a .300"/7.5mm diameter
- Small, fits in shirt pocket.
- Includes case.



▲ *Pocket Thickness Gage*
No. 52-545-000

Pocket Thickness Gages w/thumb slide for tight spaces
No. 52-545-000 & 001
- Can easily be adjusted to zero by turning the dial bezel.
- Frame of light, rust resistant aluminum. Measuring faces hardened, ground, lapped for accuracy. Spindle: hardened stainless steel.
- Length 2.5"; height 1.9"; thickness .535".
- Contact is flat with a .230"/6mm diameter
- Under two ounces and fits in a shirt pocket.
- Fraction to metric conversion chart on rear of unit.
- Includes case.

Part Number	Range	Dial Reading	Throat Depth	Graduation
Dial:				
52-546-000	.400"	0—100	.700"	.001"
52-545-777	.500"	0—50	.500"	.005"
52-545-778	10mm	0—10mm	12.5mm	.1mm
Pocket:				
52-545-000	.500"	0—100	.500"	.001"
52-545-001	12.5mm	0—1mm	12.5mm	.01mm



No. 52-546-000
Made in Germany







Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Heavy-Duty Thickness Gages



▲ *No. 54-550-006*

Fowler's Electronic Thickness Gages offers a variety of gages for your special gaging needs. All represent the state-of-the-art in performance and design and include the same features as the Ultra-Logic series.

Compact and portable, the Electronic Thickness Gages are designed specifically for hand use. Ideal for conveniently measuring the thickness of a wide range of materials and small parts. Easy to hold in one hand. To operate simply press down the lifting lever. This raises the spindle, permitting easy insertion of work between the anvil and contact point. Releasing the lifting lever causes the spindle to contact the work being measured.



▲ *No. 52-550-005*

Fowler's Dial Thickness Gages are light in weight, easy to handle and carry. These specially built gages are mounted in a hand contoured frame with a thumb release mechanism; has fast direct reading to .001". Used to measure thickness of paper, cellophane, plastic film and metal plates. These are high quality precision instruments.

- Case finished in dull plated chrome.
- Measuring faces constructed in high grade tool steel; hardened, ground and lapped.
- Direct reading 0-100 (with revolution counter) on easy-to-read dial.
- Frame is hammertone baked enamel.
- Microfine graduations for .001" or .01mm minimum reading.
- Spindle of hardened stainless steel.
- Features a thumb release mechanism.
- Includes case.



▲ *No. 52-550-010*

Part Number	Range	Throat Depth	Graduation	Anvil Dia.
Electronic:				
54-550-002	.5"	2"	.0001"/.001mm	1"
54-550-006	1"	6"	.0001"/.001mm	1"
54-522-010	Replacement battery for No. 54-550-006 and 54-550-002			
Dial:				
52-550-005	.500"	1"	.001"	1⁄4"
52-550-010	1"	4-3⁄4"	.001"	3⁄8"
52-550-020	10mm	25mm	.01mm	10mm

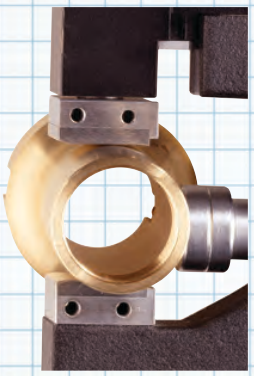
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

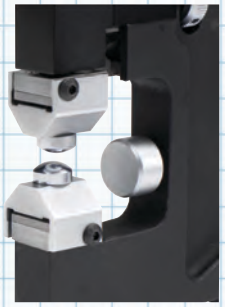
Snapmatic



The Bowers SNAPMATIC snap gage has been designed specifically for quick, reliable and accurate measurement of external cylindrical diameters. Particularly suitable for use in series production, the instrument is tough and solid enough to use on the machine in the workshop and flexible enough to be used in the measuring room for sample measurements (bench-stand available). The measuring surfaces are of top-quality tungsten carbide mounted on a non-maintenance apring-operated mechanism. Special anvils (e.g for grooves etc.) can be fitted to the standard gauge by means of the mounting holes in the anvil.







Above: Special anvils are available upon request. Contact our Technical Department for more information.

Features:

- Product ranges: 0-25mm (0-1"), 25-50mm (1-2"), 50-75mm (2-3"), 75-100mm (3-4"), 100-125mm)4-5"), 125-150mm (5-6")
- Gauging travel: 0.5mm
- Constant measuring pressure
- Adjustable depth-stop
- 8mm diameter indicator locking bush as standard (3/8" on request)
- Can be used with dial gauges, digital indicators or measuring probes
- 16mm wide tungsten carbide measuring surfaces for positive-feel measurement (see table for flatness and parallelism)
- Measuring force: 13N ± 3N
- Indicator protection
- Indicator can be swivelled through 360°
- Bench stand available
- Heat-resistant polymer grip
- Mounting holes for fitting special contacts e.g. for groove measurement

***Snap Gages** (sold without indicator)*

Part Number	Range	Flatness	Parallelism
53-666-500	0—1"	0.000012"	0.00008"
53-666-501	1—2"	0.000012"	0.00008"
53-666-502	2—3"	0.000012"	0.00008"
53-666-503	3—4"	0.000012"	0.00008"
53-666-504	4—5"	0.000012"	0.00008"
53-666-505	5—6"	0.000012"	0.00008"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com







BORE GAGES

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Ultima Bore Gaging System

Featuring Bowers' historic quality and high-accuracy the Ultima Bore Gaging System is the next generation of Bower's famous Super-Bore line of bore gages and accessories.



Special features:
- ***Greater accuracy***
- ***Utilizes Bowers' "FASTFIT" measuring heads***
- ***Setting rings manufactured to DIN Standard 2250 part 2.***
- ***Extended head ranges (above 14mm) for greater flexibility and cost-effective measurement.***
- ***All 2-6mm sets supplied as standard with depth-stop.***

Features:
- Measuring range:.078"-12.3"/2-310mm
- Resolution: .00001"/.0001mm
- Constant spring pressure ensures top repeatability.
- Positive feel when heads self-centre in the bore.
- Fastfit measuring heads for rapid replacement.
- UKAS certificates standard for all measuring heads.
- UKAS certificates standard for all setting rings.
- Ceramic anvils on heads above .472"/12mm
- Blind-bore measurement standard above .472"/12mm
- Possible to connect several probe holders to one single readout to measure different bore sizes at one measuring station.
- The complete range of Bowers special heads are available for the Ultima (grooves, threads, splines, deep-bores etc.).
- Depth stops available for all heads.
- Extensions available for deep bore measurement.

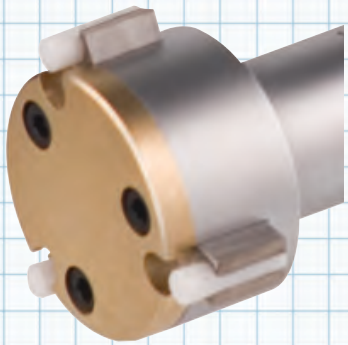


Contact the Fowler Technical Department for special head applications.

Made in ENGLAND

Fowler RS-232 DIRECT

Fowler 5 FIVE YEAR WARRANTY



Ceramic anvils for extended life!

Ultima Gaging System shown with Sylvac digital display. See the Display section on page 124 for information.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Heads have "Fastfit" threads

Kits to cover more range

Ultima Bore Gaging System

Ultima Bore Gaging System- Individual Heads

Part Number	Range	Accuracy	Measuring Depth
54-565-201	.078"-.098"/2.0-2.5mm	.00004"/.0010mm	.35"/9mm
54-565-202	.098"-.118"/2.5-3.0mm	.00004"/.0010mm	.35"/9mm
54-565-203	.118"-.157"/3-4mm	.00004"/.0010mm	.47"/12mm
54-565-204	.157"-.197"/4-5mm	.00004"/.0010mm	.71"/18mm
54-565-205	.197"-.236"/5-6mm	.00004"/.0010mm	.71"/18mm
54-565-206	.236"-.315"/6-8mm	.00004"/.0010mm	2.36"/60mm
54-565-207	.315"-.393"/8-10mm	.00004"/.0010mm	2.36"/60mm
54-565-208	.393"-.472"/10-12mm	.00004"/.0010mm	2.4"/61mm
54-565-209	.472"-.550"/12-14mm	.00004"/.0010mm	2.4"/61mm
54-565-210	.550"-.670"/14-17mm	.00004"/.0010mm	2.4"/61mm
54-565-211	.670"-.787"/17-20mm	.00004"/.0010mm	2.4"/61mm
54-565-212	.787"-.945"/20-24mm	.00004"/.0010mm	2.72"/69mm
54-565-213	.945"-1.1"/24-28mm	.00004"/.0010mm	2.72"/69mm
54-565-214	1.1"-1.26"/28-32mm	.00004"/.0010mm	2.72"/69mm
54-565-215	1.26"-1.5"/32-38mm	.00004"/.0010mm	2.83"/72mm
54-565-216	1.5"-1.73"/38-44mm	.00004"/.0010mm	2.83"/72mm
54-565-217	1.73"-1.97"/44-50mm	.00004"/.0010mm	2.83"/72mm
54-565-218	1.97"-2.36"/50-60mm	.00006"/.0015mm	3.15"/80mm
54-565-219	2.36"-2.756"/60-70mm	.00006"/.0015mm	3.15"/80mm
54-565-220	2.756"-3.15"/70-80mm	.00006"/.0015mm	3.15"/80mm
54-565-221	3.15"-3.543"/80-90mm	.00006"/.0015mm	3.15"/80mm
54-565-222	3.543"-3.94"/90-100mm	.00006"/.0015mm	3.15"/80mm
54-565-223	3.94"-4.33"/100-110mm	.00006"/.0015mm	3.15"/80mm
54-565-224	4.33"-4.725"/110-120mm	.00006"/.0015mm	3.15"/80mm
54-565-225	4.725"-5.12"/120-130mm	.00006"/.0015mm	3.15"/80mm
54-565-226	5.12"-5.51"/130-140mm	.00006"/.0015mm	3.15"/80mm
54-565-227	5.51"-5.9"/140-150mm	.00006"/.0015mm	3.15"/80mm
54-565-228	5.9"-6.3"/150-160mm	.00006"/.0015mm	3.15"/80mm
54-565-229	6.3"-6.69"/160-170mm	.00006"/.0015mm	3.15"/80mm
54-565-230	6.69"-7.09"/170-180mm	.00006"/.0015mm	3.15"/80mm
54-565-231	7.09"-7.48"/180-190mm	.00006"/.0015mm	3.15"/80mm
54-565-232	7.48"-7.875"/190-200mm	.00006"/.0015mm	3.15"/80mm
54-565-233	7.875"-8.27"/200-210mm	.00006"/.0015mm	3.15"/80mm
54-565-234	8.27"-8.661"/210-220mm	.00008"/.0020mm	3.15"/80mm
54-565-235	8.661"-9.055"/220-230mm	.00008"/.0020mm	3.15"/80mm
54-565-236	9.055"-9.449"/230-240mm	.00008"/.0020mm	3.15"/80mm
54-565-237	9.449"-9.842"/240-250mm	.00008"/.0020mm	3.15"/80mm
54-565-238	9.842"-10.236"/250-260mm	.00008"/.0020mm	3.15"/80mm
54-565-239	10.236"-10.63"/260-270mm	.00008"/.0020mm	3.15"/80mm
54-565-240	10.63"-11.024"/270-280mm	.00008"/.0020mm	3.15"/80mm
54-565-241	11.024"-11.417"/280-290mm	.00008"/.0020mm	3.15"/80mm
54-565-242	11.417"-11.811"/290-300mm	.00008"/.0020mm	3.15"/80mm
54-565-243	11.811"-12.2"/300-310mm	.00008"/.0020mm	3.15"/80mm

Ultima Bore Gaging System - Kits

Part Number	Description
54-565-020	.390" - .790"/10-20mm Includes: handles, rings & heads. Does not include readout
54-565-070	.240" - .790"/6-20mm Includes: handles, rings & heads. Does not include readout
54-565-080	.790" - 1.97"/20-50mm Includes: handles, rings & heads. Does not include readout
54-565-090	1.97" - 3.94"/50-100mm Includes: handles, rings & heads. Does not include readout
54-565-100	.790" - 3.94"/20-100mm Includes: handles, rings & heads. Does not include readout

Contact the Fowler Technical Department for special head applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Ultima Bore Gaging System



Made in ENGLAND

Fowler 5 FIVE YEAR WARRANTY

Ultima Bore Gaging System- Rings: XX Class

Order No.	Size	Order No	Size
54-565-401	.098"/2.5mm	54-565-412	3.94"/100mm
54-565-402	.157"/4mm	54-565-413	4.725"/120mm
54-565-403	.197"/5mm	54-565-414	5.51"/140mm
54-565-404	.315"/8mm	54-565-415	6.3"/160mm
54-565-405	.472"/12mm	54-565-416	7.09"/180mm
54-565-406	.670"/17mm	54-565-417	7.875"/200mm
54-565-407	.945"/24mm	54-565-418	8.661"/220mm
54-565-408	1.26"/32mm	54-565-419	9.449"/240mm
54-565-409	1.73"/44mm	54-565-420	10.236"/260mm
54-565-410	2.36"/60mm	54-565-421	11.024"/280mm
54-565-411	3.15"/80mm	54-565-422	11.811"/300mm

Transducer Handle

Order No.	Description	Range
54-565-525	PH2 holder	.078"-.236"/2-6mm
54-565-526	PH3 holder	.236"-.787"/6-20mm
54-565-527	PH4 holder	.787"-3.94"/20-100mm
54-565-528	PH5 holder	3.94"-12.2"/100-310mm

Ultima Standard Extensions

Order No.	Length	Range
54-565-601	2.48"/63mm	.236"-.393"/6-10mm
54-565-602	2.952"/75mm	.393"-.472"/10-12mm
54-565-603	3.937"/100mm	.472"-.787"/12-20mm
54-565-604	5.905"/150mm	.787"-1.97"/20-50mm
54-565-605	5.905"/150mm	1.97"/50mm and up

Ultima Short Extensions

Order No.	Length	Range
54-565-606	1.97"/50mm	.787"-1.97"/20-50mm
54-565-607	1.97"/50mm	1.97"/50mm and up

Available Readouts

Order No.	Description
54-618-300	Sylvac D-300S Digital Display
54-618-148	Sylvac D-50S Digital Display
54-618-148-1	Sylvac D-50S Pro Digital Display

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in ENGLAND

Fowler 5 FIVE YEAR WARRANTY

XT Bore Gaging System



The XT Series Bore Gages from Bowers, the world's leading bore gage manufacturer, combines high accuracy and ease of use. With the Pistol Grip's constant measuring pressure and the Holemike's ratchet thimble, anyone can achieve consistent measurements by eliminating operator feel.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XTH Holematic Pistol Grip



Fowler/Bowers XT Holematic Pistol Grip range of bore gages offer extended travel with fixed anvils. The pistol grip handle incorporates a constant measuring pressure to eliminate operator "feel."



- Large easy-to-read swivel display
- Self centering heads
- RS-232C output and USB connectivity.
- Three preset memories
- Fixed anvils
- Resolution: .00005" /.001mm
- Range .080"—12" (2—300mm)
- Tungsten carbide measuring faces on all 3-point heads from .5" (12.5mm) and up.
- Heads with special anvils available for threads, splines, slots, etc.
- Sizes over .500" (12.5mm) feature blind bore capability
- Setting rings included in all sets
- Includes UKAS certificates for all pistol grip, heads and rings.
- Special anvils available

Fowler 5 Five Year Warranty

Fowler USB Connectivity

Fowler Power Interface

Fowler RS-232 Bi-Direct

Made in England

IP65

Range:
0.080" to 12" Standard

Fastest measuring system

Erganomnic design

Amazing repeatability

Electronic Holematic Pistol Grip XTH - Individual sizes (includes pistol grip, head and ring)

Part Number	Range	Accuracy	Depth
	2-Point Heads		
54-566-701	.080"—.100" (2—2.5mm)	.00015" (0.004mm)	.350" (9mm)
54-566-702	.100"—.120" (2.5—3mm)	.00015" (0.004mm)	.350" (9mm)
54-566-703	.120"—.160" (3—4mm)	.00015" (0.004mm)	.470" (12mm)
54-566-704	.160"—.200" (4—5mm)	.00015" (0.004mm)	.700" (18mm)
54-566-705	.200"—.250" (5—6mm)	.00015" (0.004mm)	.700" (18mm)
	3-Point Heads		
54-566-706	.250"—.312" (6—8mm)	.00015" (0.004mm)	2.28" (58mm)
54-566-708	.312"—.375" (8—10mm)	.00015" (0.004mm)	2.28" (58mm)
54-566-710	.375"—.500" (10—12.5mm)	.00015" (0.004mm)	2.28" (58mm)
54-566-712	.500"—.625" (12.5—16mm)	.00015" (0.004mm)	2.44" (62mm)
54-566-716	.625"—.750" (16—20mm)	.00015" (0.004mm)	2.44" (62mm)
54-566-720	.750"—1" (20—25mm)	.00015" (0.004mm)	2.62" (66mm)
54-566-725	1—1.375" (25—35mm)	.00015" (0.004mm)	2.62" (66mm)
54-566-735	1.375"—2" (35—50mm)	.00015" (0.004mm)	3.15" (80mm)
54-566-740	2—2.625" (50—65mm)	.00020" (0.005mm)	3.15" (80mm)
54-566-745	2.625"—3.250" (65—80mm)	.00020" (0.005mm)	3.15" (80mm)
54-566-750	3.250"—4" (80—100mm)	.00020" (0.005mm)	3.35" (85mm)
54-566-800	4—5" (100—125mm)	.00025" (0.006mm)	3.94" (100mm)
54-566-825	5—6" (125—150mm)	.00025" (0.006mm)	3.94" (100mm)
54-566-850	6—7" (150—175mm)	.00030" (0.007mm)	3.94" (100mm)
54-566-875	7—8" (175—200mm)	.00030" (0.007mm)	3.94" (100mm)
54-566-876	8—9" (200—225mm)	.00030" (0.008mm)	3.94" (100mm)
54-566-877	9—10" (225—250mm)	.00030" (0.008mm)	4.05" (103mm)
54-566-878	10—11" (250—275mm)	.00035" (0.009mm)	4.05" (103mm)
54-566-879	11—12" (275—300mm)	.00035" (0.009mm)	4.05" (103mm)

Contact the Fowler Technical Department for special anvil applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XTH Holematic Pistol Grip Sets



Complete Range Sets

Part Number	Range	Includes
54-566-009	.080"—.250" (2—6mm)	5 heads, 1 handle, 3 rings
54-566-010	.250"—.375" (6—10mm)	2 heads, 1 handle, 1 ring
54-566-020	.375"—.750" (10—20mm)	3 heads, 1 handle, 2 rings
54-566-050	.750"—2" (20—50mm)	3 heads, 1 handle, 2 rings
54-566-100	2—4" (50—100mm)	3 heads, 1 handle, 2 rings
54-566-105	4—6" (100—150mm)	2 heads, 1 handle, 1 ring
54-566-110	6—8" (150—200mm)	2 heads, 1 handle, 1 ring
54-566-200	4—8" (100—200mm)	4 heads, 1 handle, 2 rings
54-566-210	.750"—4" (20—100mm)	6 heads, 1 handle, 4 rings
54-566-620	.250"—.750" (6-20mm)	5 heads, 1 handle, 3 rings

Connectivity Kits

Part Number	Description
54-115-444	RS232 Power Computer Connect Kit
54-115-528	USB Power Computer Connect Kit
54-100-350	CR2032 Battery

Pistol Grips



Holematic XTH Pistol Grip Only

Part Number	Range
54-556-350	.080"—1/4"/ 2—6mm
54-556-375	1/4"—3/4"/ 6—20mm
54-556-400	3/4"—4"/ 20—100mm
54-556-480	4"—12"/ 100—300mm

Connectivity Kits

Part Number	Description
54-115-444	RS232 Power Computer Connect Kit
54-115-528	USB Power Computer Connect Kit
54-100-350	CR2032 Battery

Contact the Fowler Technical Department for special anvil applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XTD Electronic Holemikes



The Fowler/Bowers XT Digital Internal Micrometers have been designed to further simplify the accurate measurement of bores. All XT instruments offer fixed anvils. Sizes above 1"/25mm offer extended travel. They are available as individual instruments or in complete sets.

- Large easy-to-read display
- Direct inch/metric conversion
- 3 Preset memories
- Ratchet stop for consistent measurement.
- Resolution: .00005"/.001mm
- RS-232C output and USB connectivity.
- Heads with special anvils available for threads, splines, slots, etc.
- Setting rings included in all sets
- Includes UKAS certificates for micrometer, heads and setting rings.
- Special anvils available.

Electronic Holemike XTD - Individual Sizes (Includes head, handle and ring)

Part Number	Range	Accuracy	Depth
	2-Point Heads		
54-366-003	.080"—.100" (2—2.5mm)	0.00015" (0.004mm)	.350" (9mm)
54-366-004	.100"—.120" (2.5—3mm)	0.00015" (0.004mm)	.350" (9mm)
54-366-005	.120"—.160" (3—4mm)	0.00015" (0.004mm)	.470" (12mm)
54-366-006	.160"—.200" (4—5mm)	0.00015" (0.004mm)	.700" (18mm)
54-366-007	.200"—.250" (5—6mm)	0.00015" (0.004mm)	.700" (18mm)
	3-Point Heads		
54-366-008	.250"—.312" (6—8mm)	0.00015" (0.004mm)	2.28" (58mm)
54-366-010	.312"—.375" (8—10mm)	0.00015" (0.004mm)	2.28" (58mm)
54-366-012	.375"—.500" (10—12.5mm)	0.00015" (0.004mm)	2.28" (58mm)
54-366-014	.500"—.625" (12.5—16mm)	0.00015" (0.004mm)	2.44" (62mm)
54-366-016	.625"—.750" (16—20mm)	0.00015" (0.004mm)	2.44" (62mm)
54-366-018	.750" —1" (20—25mm)	0.00015" (0.004mm)	2.62" (66mm)
54-366-020	1—1.375" (25—35mm)	0.00015" (0.004mm)	2.62" (66mm)
54-366-022	1.375"—2" (35—50mm)	0.00015" (0.004mm)	3.15" (80mm)
54-366-024	2—2.625" (50—65mm)	0.00020" (0.005mm)	3.15" (80mm)
54-366-026	2.625"—3.250" (65—80mm)	0.00020" (0.005mm)	3.15" (80mm)
54-366-028	3.250"—4" (80—100mm)	0.00020" (0.005mm)	3.94" (100mm)
54-366-030	4—5" (100—125mm)	0.00025" (0.006mm)	4.53" (115mm)
54-366-032	5—6" (125—150mm)	0.00025" (0.006mm)	4.53" (115mm)
54-366-034	6—7" (150—175mm)	0.00030" (0.007mm)	4.53" (115mm)
54-366-036	7—8" (175—200mm)	0.00030" (0.007mm)	4.53" (115mm)
54-366-037	8—9" (200—225mm)	0.00030" (0.008mm)	4.65" (118mm)
54-366-038	9—10" (225—250mm)	0.00030" (0.008mm)	4.65" (118mm)
54-366-039	10—11" (250—275mm)	0.00035" (0.009mm)	4.65" (118mm)
54-366-040	11—12" (275—300mm)	0.00035" (0.009mm)	4.65" (118mm)

Contact the Fowler Technical Department for special anvil applications.

Fowler POWER INTERFACE

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

Fowler USB CONNECTIVITY

IP65

Made in ENGLAND

Sizes over .500"/12.5mm feature tungsten carbide anvils and blind bore measurement.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler POWER INTERFACE

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

Fowler USB CONNECTIVITY

Made in ENGLAND

IP65

XTD Electronic Holemike Sets



Electronic Holemike XTD Complete Range Sets

Part Number	Range	Set Includes
54-364-000	.080"—.250" (2—6mm)	5 heads, 1 handle, 3 rings
54-364-010	.250"—.375" (6—10mm)	2 heads, 1 handle, 1 ring
54-364-020	.375"—.750" (10—20mm)	3 heads, 1 handle, 2 rings
54-364-050	.750"—2" (20—50mm)	3 heads, 1 handle, 2 rings
54-364-100	2"—4" (50—100mm)	3 heads, 1 handle, 2 rings
54-364-105	4"—6" (100—150mm)	2 heads, 1 handle, 1 ring
54-364-110	6"—8" (150—200mm)	2 heads, 1 handle, 1 ring
54-364-200	4"—8" (100—200mm)	4 heads, 1 handle, 2 rings

Holematic XTD Holemike Handle Only

Part Number	Range
54-364-556	.080"—1/4"/2-6mm
54-364-550	.1/4"—3/8"/6-10mm
54-364-551	3/8"—3/4"/10-20mm
54-364-552	3/4"—2"/20-50mm
54-364-553	2"—4"/50-100mm
54-364-554	4"—8"/100-200mm
54-364-557	8"—12"/200-300mm

Connectivity Kits

Part Number	Description
54-115-444	RS232 Power Computer Connect Kit
54-115-528	USB Power Computer Connect Kit
54-100-350	CR2032 Battery

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XTA Holemikes



Made in ENGLAND

Extended range capacity without changing anvils!

Basic function, same accuracy as the electronic.

The Fowler/Bowers range of mechanical two and three point bore micrometers are now available as XTA extended travel versions between .080"/2mm and 12"/300mm. This allows wide measurement range without the need to interchange anvils.

Features:
- Graduations 0.00025" (0.005mm)
- 3-pt contact with tungsten carbide measuring anvils above .5" (12.5mm)
- Blind bore measuring above .5" (12.5mm)
- Ratchet stop for consistent measuring
- Extensions available for deep measuring
- Setting rings included in all sets
- Includes UKAS certificates.
- Every gage is individually serialized.
- Each range includes handle, head and ring.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTA Analog Holemikes

Holemike XTA inch series - Includes handle, head & ring

Part Number	Measuring Range	Grads.	Accuracy	Depth	Ring Included
		2-Point Heads			
52-255-305	.080"—.100"	.0005"	.00015"	.350"	.100"
52-255-306	.100"—.120"	.0005"	.00015"	.350"	.100"
52-255-307	.120"—.160"	.0005"	.00015"	.470"	.160"
52-255-308	.160"—.200"	.0005"	.00015"	.700"	.160"
52-255-309	.200"—.250"	.0005"	.00015"	.700"	.200"
		3-Point Heads			
52-255-310	.250"—.312"	.00025"	.00015"	2.28"	.312"
52-255-311	.312"—.375"	.00025"	.00015"	2.28"	.312"
52-255-312	.375"—.500"	.00025"	.00015"	2.28"	.5"
52-255-313	.500"—.625"	.00025"	.00015"	2.44"	.5"
52-255-314	.625"—.750"	.00025"	.00015"	2.44"	.75"
52-255-315	.750"—1"	.00025"	.00015"	2.60"	.75"
52-255-316	1—1.375"	.00025"	.00015"	2.60"	1.375"
52-255-317	1.375"—2"	.00025"	.00015"	3.15"	1.375"
52-255-318	2—2.625"	.00025"	.00020"	3.15"	2.625"
52-255-319	2.625"—3.250"	.00025"	.00020"	3.15"	2.625"
52-255-320	3.250"—4"	.00025"	.00020"	3.94"	3.25"
52-255-321	4—5"	.00025"	.00025"	4.53"	5.0"
52-255-322	5—6"	.00025"	.00025"	4.53"	5.0"
52-255-323	6—7"	.00025"	.00030"	4.53"	7.0"
52-255-324	7—8"	.00025"	.00030"	4.53"	7.0"
52-255-325	8—9"	.00025"	.00030"	4.65"	9.0"
52-255-326	9—10"	.00025"	.00030"	4.65"	9.0"
52-255-327	10—11"	.00025"	.00035"	4.65"	11.0"
52-255-328	11—12"	.00025"	.00035"	4.65"	11.0"

Holemike XTA metric series - Includes handle, head & ring

Part Number	Range	Grads.	Accuracy	Measuring Depth	Ring Included
		2-Point Heads			
52-255-405	2—2.5mm	.001mm	.004mm	9mm	2.5mm
52-255-406	2.5—3mm	.001mm	.004mm	9mm	2.5mm
52-255-407	3—4mm	.001mm	.004mm	12mm	4mm
52-255-408	4—5mm	.001mm	.004mm	18mm	4mm
52-255-409	5—6mm	.001mm	.004mm	18mm	5mm
		3-Point Heads			
52-255-410	6—8mm	.005mm	.004mm	58mm	8mm
52-255-411	8—10mm	.005mm	.004mm	58mm	8mm
52-255-412	10—12.5mm	.005mm	.004mm	58mm	12.5mm
52-255-413	12.5—16mm	.005mm	.004mm	62mm	12.5mm
52-255-414	16—20mm	.005mm	.004mm	62mm	20mm
52-255-415	20—25mm	.005mm	.004mm	66mm	20mm
52-255-416	25—35mm	.005mm	.004mm	66mm	35mm
52-255-417	35—50mm	.005mm	.004mm	80mm	35mm
52-255-418	50—65mm	.005mm	.005mm	80mm	65mm
52-255-419	65—80mm	.005mm	.005mm	80mm	65mm
52-255-420	80—100mm	.005mm	.005mm	100mm	80mm
52-255-421	100—125mm	.005mm	.006mm	115mm	125mm
52-255-422	125—150mm	.005mm	.006mm	115mm	125mm
52-255-423	150—175mm	.005mm	.007mm	115mm	175mm
52-255-424	175—200mm	.005mm	.007mm	115mm	175mm
52-255-425	200—225mm	.005mm	.008mm	118mm	225mm
52-255-426	225—250mm	.005mm	.009mm	118mm	225mm
52-255-427	250—275mm	.005mm	.009mm	118mm	275mm
52-255-428	275—300mm	.005mm	.009mm	118mm	275mm

Same accuracy, more economical.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XT Holemike Sets

The Fowler-Bowers XT Analog Bore Gages offer an economical solution to accurate shop floor bore measurement. Fast, accurate and easy-to-use, the wide application range of the XT Analog Bore Gage line may be purchased individually or in sets.



Made in ENGLAND

Kits available for popular ranges

Holemike XT Large Complete Range Inch Sets

Part Number	Range	Includes
52-255-365	.080"—.120"	2 heads, 2 handles, 1 ring
52-255-465	.120"—.250"	3 heads, 3 handles, 2 rings
52-255-565	.250"—.375"	2 heads, 2 handles, 1 ring
52-255-665	.375"—.750"	3 heads, 3 handles, 2 rings
52-255-775	.750"—2"	3 heads, 3 handles, 2 rings
52-255-885	2—4"	3 heads, 3 handles, 2 rings
52-255-890	4—6"	2 heads, 2 handles, 1 ring
52-255-900	6—8"	2 heads, 2 handles, 1 ring

Holemike XT Complete Range Metric Sets

Part Number	Range	Includes
52-255-368	2—3mm	2 heads, 2 handles, 1 ring
52-255-468	3—6mm	3 heads, 3 handles, 2 rings
52-255-568	6—10mm	2 heads, 2 handles, 1 ring
52-255-668	10—20mm	3 heads, 3 handles, 2 rings
52-255-768	20—50mm	3 heads, 3 handles, 2 rings
52-255-868	50—100mm	3 heads, 3 handles, 2 rings
52-255-898	100—150mm	3 heads, 3 handles, 1 ring
52-255-968	150—200mm	2 heads, 2 handles, 1 ring

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XT Series Components and Accessories

XT Setting Rings: X Class

Part Number	Size
54-332-004	.100"
54-332-005	.160"
54-332-006	.200"
54-332-007	.312"
54-332-008	.500"
54-332-009	.750"
54-332-010	1.375"
54-332-012	2.625"
54-332-013	3.250"
54-332-014	5"
54-332-015	7"
54-332-016	9"
54-332-017	11"

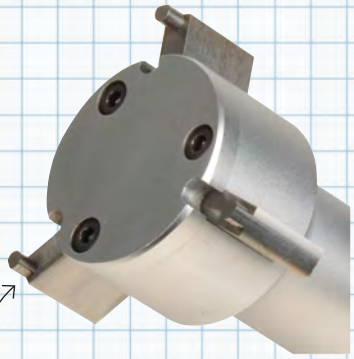


Extensions for deep bore applications



XT Extensions

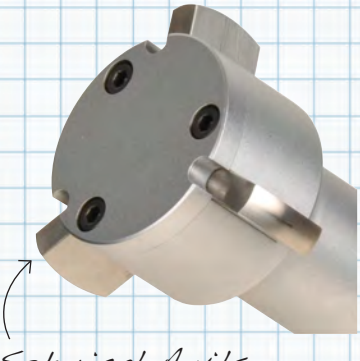
Part Number	Length	Diameter	Fits Heads
54-336-301	2.5" (63mm)	.23"	.250"—.375" (6—10mm)
54-336-302	3" (76mm)	.366"	.375"—.500" (10—12.5mm)
54-336-303	4" (100mm)	.479"	.500"—.750" (12.5—20mm)
54-336-304	6" (150mm)	.740"	.750"—2" (20—50mm)
54-336-305	6" (150mm)	.924"	2" and up (50mm and up)
54-336-306	20" (500mm)	.757"	.750" and higher
54-336-307	40" (1000mm)	1.365"	1.375" and higher



Standard Anvils

Replacement Heads with Standard Anvils

Part No.	Size
54-342-006	.080"—.100" (2-2.5mm)
54-342-007	.100"—.120" (2.5-3mm)
54-342-008	.120"—.160" (3-4mm)
54-342-009	.160"—.200" (4-5mm)
54-342-010	.200"—.250" (5-6mm)
54-342-011	1/4—5/16" (6-8mm)
54-342-012	5/16—3/8" (8-10mm)
54-342-013	3/8—1/2" (10-12.5mm)
54-342-014	1/2—5/8" (12.5-16mm)
54-342-015	5/8—3/4" (16-20mm)
54-342-016	3/4—1" (20-25mm)
54-342-017	1—1-3/8" (25-35mm)
54-342-018	1-3/8—2" (35-50mm)
54-342-019	2—2-5/8" (50-65mm)
54-342-020	2-5/8—3-1/4" (65-80mm)
54-342-021	3-1/4—4" (80-100mm)
54-342-022	4—5" (100-125mm)
54-342-023	5—6" (125-150mm)
54-342-024	6—7" (150-175mm)
54-342-025	7—8" (175-200mm)
54-342-026	8—9" (200-225mm)
54-342-027	9—10" (225-250mm)
54-342-028	10—11" (250-275mm)
54-342-029	11—12" (275-300mm



Spherical Anvils

Replacement Heads with Spherical Anvils

Part No.	Size
54-343-006	.080"—.100" (2-2.5mm)
54-343-007	.100"—.120" (2.5-3mm)
54-343-008	.120"—.160" (3-4mm)
54-343-009	.160"—.200" (4-5mm)
54-343-010	.200"—.250" (5-6mm)
54-343-011	1/4—5/16" (6-8mm)
54-343-012	5/16—3/8" (8-10mm)
54-343-013	3/8—1/2" (10-12.5mm)
54-343-014	1/2—5/8" (12.5-16mm)
54-343-015	5/8—3/4" (16-20mm)
54-343-016	3/4—1" (20-25mm)
54-343-017	1—1-3/8" (25-35mm)
54-343-018	1-3/8—2" (35-50mm)
54-343-019	2—2-5/8" (50-65mm)
54-343-020	2-5/8—3-1/4" (65-80mm)
54-343-021	3-1/4—4" (80-100mm)
54-343-022	4—5" (100-125mm)
54-343-023	5—6" (125-150mm)
54-343-024	6—7" (150-175mm)
54-343-025	7—8" (175-200mm)
54-343-026	8—9" (200-225mm)
54-343-027	9—10" (225-250mm)
54-343-028	10—11" (250-275mm)
54-343-029	11—12" (275-300mm

Contact the Fowler Technical Department for special anvil applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XTL Lever Bore Gage System

The Fowler-Bowers XTL Lever Bore Gage Handle features a fast action and comfortable grip for applications where a vertical grip is necessary.



(Head shown is not included)

Made in ENGLAND

Fowler POWER INTERFACE

Fowler 5 FIVE YEAR WARRANTY

Fowler PROXIMITY INTERFACE

Fowler RS-232 DIRECT

Fowler USB CONNECTIVITY

Special Features:

- For use with XT heads.
- Measuring range: 6-100mm (diameters above 100 on request.)
- Excellent for vertical bore measurement
- Simple 2-button operation
- 3 preset memories
- RS-232 output and USB connectivity
- Constant measuring pressure
- Fast, accurate measurement
- Resolution: 0.001mm (0.00005")
- Extensions available for deep hole measurement

Bowers XTL Lever Bore Gage - Handles with Indicator

Part Number	Range	Resolution
54-466-350	.250"-.375"/6-10mm	.00005"/.001mm
54-466-375	.375"-.750"/10-20mm	.00005"/.001mm
54-466-400	.750"-4"/20-100mm	.00005"/.001mm

Heads for XTL Lever Handle

Part Number	Size
54-342-011	1/4—5/16" (6-8mm)
54-342-012	5/16—3/8" (8-10mm)
54-342-013	3/8—1/2" (10-12.5mm)
54-342-014	1/2—5/8" (12.5-16mm)
54-342-015	5/8—3/4" (16-20mm)
54-342-016	3/4—1" (20-25mm)
54-342-017	1—1-3/8" (25-35mm)
54-342-018	1-3/8—2" (35-50mm)
54-342-019	2—2-5/8" (50-65mm)
54-342-020	2-5/8—3-1/4" (65-80mm)
54-342-021	3-1/4—4" (80-100mm)

Electronic Holemike XT Setting Rings

Part Number	Size
54-332-007	.312"
54-332-008	.500"
54-332-009	.750"
54-332-010	1.375"
54-332-012	2.625"
54-332-013	3.250"

Contact the Fowler Technical Department for special anvil applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in ENGLAND

Fowler USB CONNECTIVITY

Fowler 5 FIVE YEAR WARRANTY

Fowler POWER INTERFACE

Fowler RS-232 DIRECT

300mm - 500mm" Range

Large diameter measurement with 3-point contact

XT-500 Large Diameter Bore Gage



The Bowers XT500 large diameter 3-point bore gage has been designed specifically for the measurement of internal diameters between 300mm (11.811") and 500mm (19.685"). The newly designed constant-force digital readout ensures that the measuring pressure remains constant throughout the measurement while radiussed measuring anvils provide optimum centralization in the part. Anvil sets are supplied in 25mm" steps and each set has been manufactured to the exact toleranced size. The 300mm"-500mm" anvils are the master reference set and are used for setting the gage in the setting ring. The other anvil sets are then fitted as required without further re-setting. This means that only one 300mm setting ring is required to set the gage for all diameters in the full 300mm to 500mm range of the instrument.

Features:
- Measuring range: 300mm/11.811" to 500mm/19.685"
- New constant-force digital readout
- Single 300mm setting ring covers full range
- Radiussed anvils of tool-steel for optimum centering
- Accuracy: ±15µm
- Repeatability: 3µm
- IP65 electronics
- RS-232 output and USB connectivity
- Resolution: .0005"/.00005" (0.01/0.001mm). Metric/Inch switchable
- Fast accurate measurement
- Extensions available for deeper bores (max depth 2.5m)
- UKAS certificate with setting ring
- Certificate of conformity with bore gage
- Supplied in fitted case

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

XT-500 Large Diameter Bore Gage *cont.*

XT500 Gage- Individual Instruments

(Supplied with digital display handle, measuring head with anvils and setting ring with UKAS certificate.)

Part No.	Range	Accuracy	Measuring Depth	Ring Included
54-370-101	11.811"- 12.795"/300-325mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-102	12.795"-13.770"/325-350mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-103	13.799"-14.764"/350-375mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-104	14.764"-15.748"/375-400mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-105	15.748"-16.732"/400-425mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-106	16.732"-17.716"/425-450mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-107	17.716"-18.701"/450-475mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-108	18.701"-19.685"/475-500mm	.0006"/15µm	4.724"/120mm	11.811"/300mm

XT500 Gage- Sets

(Supplied with digital display handle, measuring head with exchangeable anvils and setting ring with UKAS certificate).

Part No.	Range	Accuracy	Measuring Depth	Ring Included
54-370-201	11.811"-15.748"/300-400mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-202	15.748"-19.685"/400-500mm	.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-203	11.811"-19.685"/300-500mm	.0006"/15µm	4.724"/120mm	11.811"/300mm

XT500 Gage- head only

Part No.	Range	Accuracy	Measuring Depth
54-370-301	11.811"- 12.795"/300-325mm	.0006"/15µm	4.724"/120mm
54-370-302	12.795"-13.770"/325-350mm	.0006"/15µm	4.724"/120mm
54-370-303	13.799"-14.764"/350-375mm	.0006"/15µm	4.724"/120mm
54-370-304	14.764"-15.748"/375-400mm	.0006"/15µm	4.724"/120mm
54-370-305	15.748"-16.732"/400-425mm	.0006"/15µm	4.724"/120mm
54-370-306	16.732"-17.716"/425-450mm	.0006"/15µm	4.724"/120mm
54-370-307	17.716"-18.701"/450-475mm	.0006"/15µm	4.724"/120mm
54-370-308	18.701"-19.685"/475-500mm	.0006"/15µm	4.724"/120mm

XT500 Gage- Setting Ring: X Class

Part No.	Range
54-370-401	11.811"/300



XT500 Gage-Handle

Part No.	Description
54-370-501	XTDU500M XTD 500 Controller



XT500 Gage- Extensions

Part No.	Range
54-336-305	6"/150mm
54-336-306	20"/500mm
54-336-307	40"/1000mm

Connectivity Kits

Part No.	Description
54-115-444	RS232 Power Computer Connect Kit
54-115-528	USB Power Computer Connect Kit

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler RS-232 DIRECT

Fowler PROXIMITY INTERFACE

Made in ENGLAND

Fowler 5 FIVE YEAR WARRANTY

For small diameter measurement from .037" to .250" (1.0 to 6mm) with direct reading

MicroGage with Depth Stop



MicroGage *2-Point bore gaging system for 1-6mm*



The new Fowler-Bowers MicroGage 2-point bore gaging system has been designed specifically for the measurement of small bores between 1.0 - 6.0 mm. The measuring heads are equipped with spherical, split-ball, hard-chromed contact points and are set in appropriate setting rings. The MicroGage system is available as individual instruments or as full sets. All setting rings are supplied as standard with UKAS certification.

Features:

- System range : .040"-.250"/1 – 6mm
- New slimline digital display
- Switchable resolution 0.01/0.001/0.0005mm
- Simple 2-button operation
- Data output : RS232 / USB proximity sensor
- Linearity : Diameter 1.0 - 1.5 max 2% of measuring travel, min 0.001 mm. Diameter 1.5 - 6 max 1% of measuring travel, min 0.001mm
- Repeatability : 0.001mm
- Available as individual instruments or sets.
- UKAS-certificates as standard with all setting rings
- Hard-chromed ball-contacts

Part Number	Range	Depth Stop Part Number
54-551-001	.037" - .061"/0.95 - 1.55mm	54-551-501
54-551-002	.060" - .096"/1.50 - 2.45mm	54-551-502
54-551-003	.089" - .167"/2.25 - 4.25mm	54-551-503
54-551-004	.144" - .250"/3.65 - 6.35mm	54-551-504
Sets:		
54-551-010	.037" - .096"/0.95 - 2.45mm	
54-551-011	.060" - .096"/1.50 - 4.25mm	
54-551-012	.089" - .250"/2.25 - 6.35mm	

Rings: Grade N (nominal)

Part Number	Size	Part Number	Size
54-551-400	1.00mm	**54-551-410**	3.00mm
54-551-401	1.10mm	**54-551-411**	3.25mm
54-551-402	1.20mm	**54-551-412**	3.50mm
54-551-403	1.30mm	**54-551-413**	3.75mm
54-551-404	1.40mm	**54-551-414**	4.00mm
54-551-405	1.75mm	**54-551-415**	4.50mm
54-551-406	2.00mm	**54-551-416**	5.00mm
54-551-407	2.25mm	**54-551-417**	5.50mm
54-551-408	2.50mm	**54-551-418**	6.00mm
54-551-409	2.75mm		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Pneumatic Deep-Hole Bore Gaging System



Made in ENGLAND

Accurate deep bore measurements - both vertical and horizontal

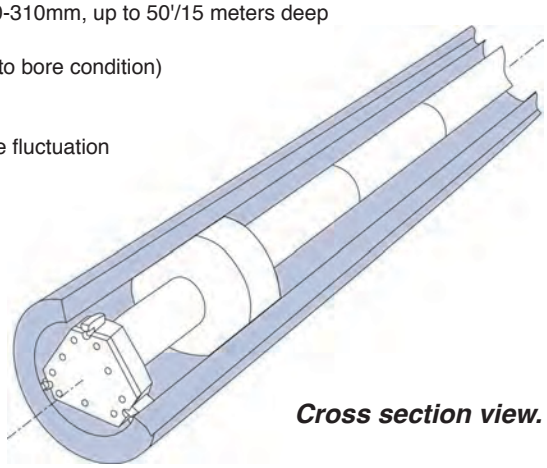
Designed specifically for the measurement of bore diameters from 2" to 12"/50mm-310mm up to 50'/15 meters deep, the Bowers Pneumatic Deep-Hole Bore Gaging System provides an accurate, robust and easy-to-use solution to what would otherwise be a complex measuring task. The equipment consists of a 3-point bore gaging head with spherical anvils made of tungsten carbide and a variable number of 1m extensions screwed together to achieve the required depth. The spherical contact anvil helps alignment in the bore while the carbide material promotes extremely long service life. Just behind the measuring anvils, an acetyl guide sleeve is fitted to the head to enable it to be pushed smoothly down to measurement depth without damaging either the anvils or the bore itself. The measuring head is operated by a pneumatic actuator powered by a 6 bar compressed air supply - either from a compressor or a workshop air-line. The measurement data is collected by a capacitive probe fitted just behind, and in constant contact with the measuring head. This direct contact ensures high-quality transducer-type accuracy, even at great depths. Measurements are taken by pressing a footswitch connected to the airline. The measurement is then shown on the digital readout at the operator end.

Various readouts are available, all have an RS232 output for data-transmission to a PC.

Applications range from oil industry, extrusion machines to military cannon, to name a few. Ideal for deep bore applications in general.

Features:

- Measures diameters from 2" to 12"/50-310mm, up to 50'/15 meters deep
- 2 point and 3 point heads available
- Accuracy: ±.0002"/±.005mm (subject to bore condition)
- Quick set-up time
- Easy to use
- Not adversely affected by temperature fluctuation
- Robust design



Cross section view.

Contact the Fowler Technical Department for more information.

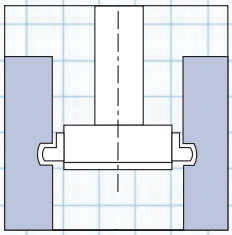
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bowers Special Applications

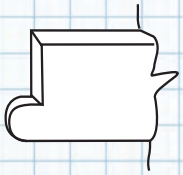
Heads available in all XT Styles and Ultima System

2 Point Special Measuring Heads

Plan View



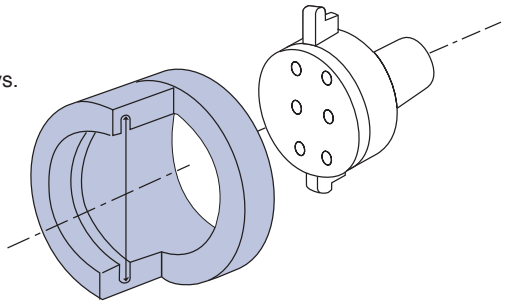
Sample Profile



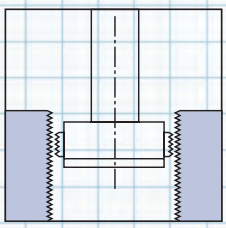
Groove Measuring Heads

- Available as 2 point head.
- Various anvil forms available.
- Diameters from 1/4-12"/6-300mm.
- XT extended range for tight entry size vs. groove size.

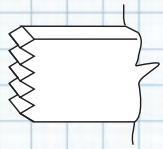
Application View



Plan View



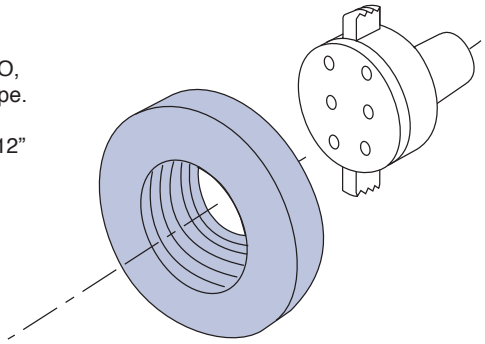
Sample Profile



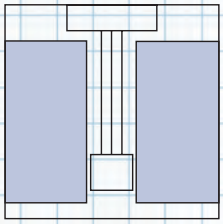
Thread Measuring Heads

- Available as 2 or 3 point head.
- Any thread form can be made: Ansi, ISO, Whitworth, ACME, JIS, Buttress and Pipe.
- Various anvil forms available.
- Diameters from M4-300mm and 8 UN-12" diameter.

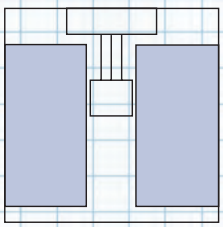
Application View



Plan View



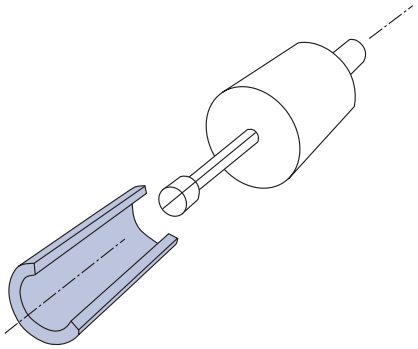
Shallow Bore



Special Length - Small Diameter

- Can be supplied in diameters from 2 – 6mm.
- Not available in 3 point.
- Depth dependent on diameter.
- Split cylinder or split ball form.
- Spherical contacts available.
- Excellent for small - deep bore applications.

Application View



Contact the Fowler Technical Department for special head applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

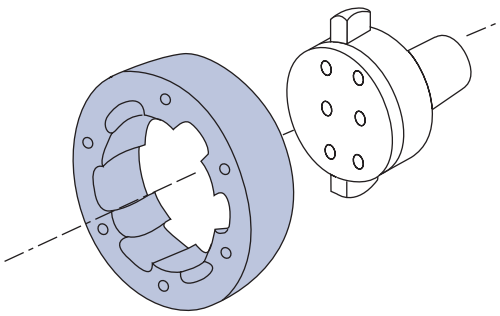
Bowers Special Applications

2 and 3 Point Special Measuring Heads

Spherical Radius

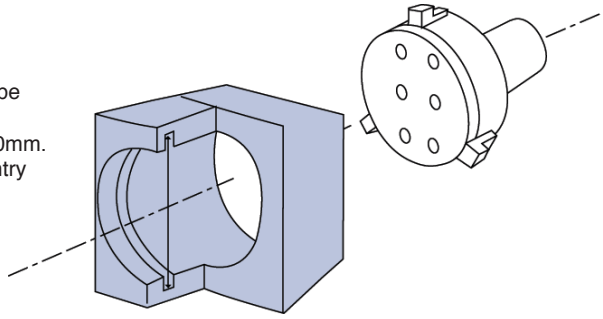
- Can be supplied as a 2 point for ovality or 3 point contact.
- Available from 1/4-12"/6-300mm.
- Spherical anvil radius provides repetitive measurements in deep bore and large bore measuring.
- No need to rock the anvils for TDC size or measuring within 12 degrees off center.

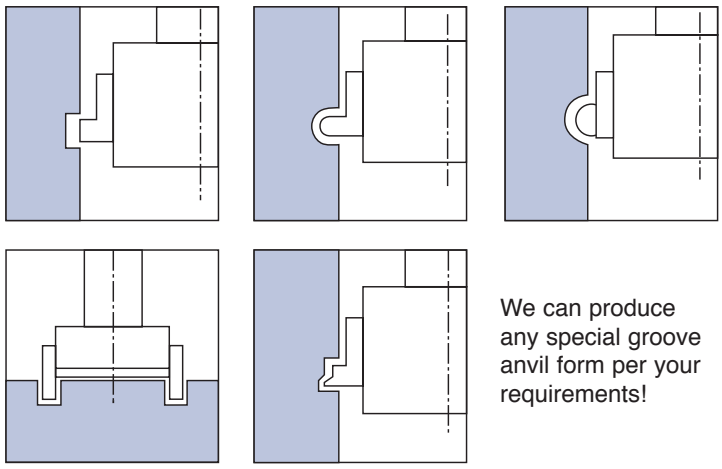
Application View



Groove measuring heads

- Available as 2 or 3 point head.
- Various anvil forms available.
- Nearly any shape or size can be accommodated
- Diameters from .080-12"/2-300mm.
- XT extended range for tight entry size vs groove size.

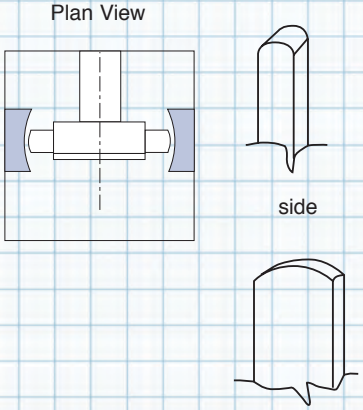


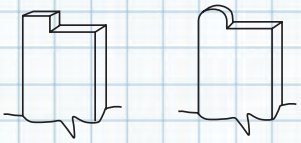


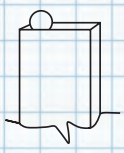
We can produce any special groove anvil form per your requirements!

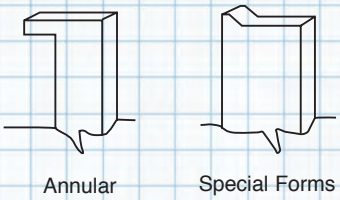
Contact the Fowler Technical Department for special head applications.

Sample Profile

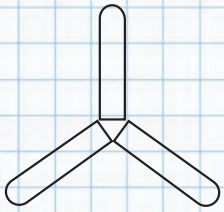








Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



3 Point anvil position



2 Point anvil position

Bowers Special Applications

Splines (odd and even number of teeth)

2 and 3 point Internal Spline heads

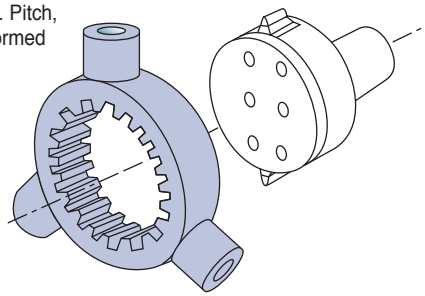
2 and 3 point heads machined to suit particular spline. Pitch, Major and Minor diameter heads fitted with 1 piece formed anvils.

Sizes available from 5/16-12"/8-300mm diameter.

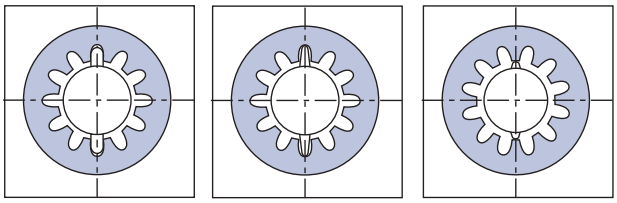
Particularly suited for measuring all types of internal splines. We can supply odd or even tooth, raked, offset, angled and vertical splines. We can supply heads in 2 and 3 point configuration, with ball style or pin style anvils. Specialty tapered spline heads, used in the automotive and aircraft industries can also be supplied.

API gaging and other oil industry specific gages can also be supplied upon request.

Application View



Plan View



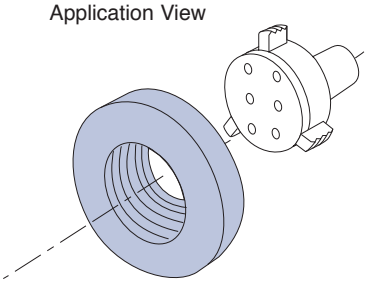
Pitch Diameter | Major Diameter | Minor Diameter

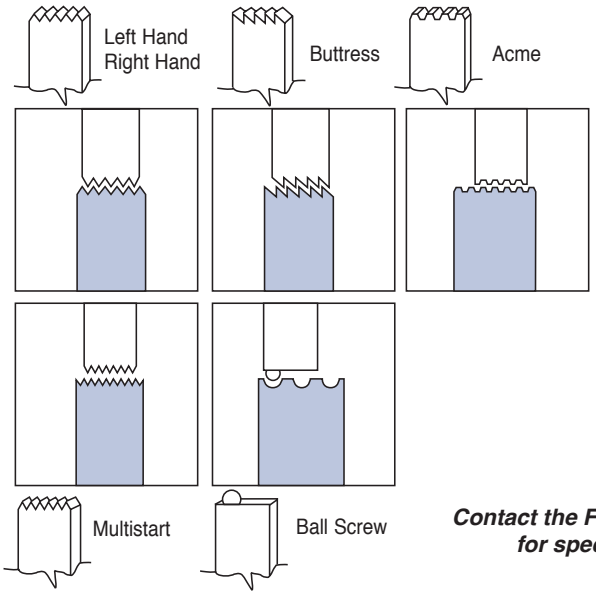
Screw Thread Measuring Heads

Internal Thread

- To measure effective (functional) diameter, pitch diameter, major diameter, between M4-300mm and 8 UN-12" diameter.
- Available for the following types of thread form: UN (UNF, UNC, UNJ, UNS) Metric, Acme, Whitworth, Buttress, BSP, BA, BSF, PG, Standard Pitches, LH.
- Other forms and sizes also available upon request.

Application View





Contact the Fowler Technical Department for special head applications.

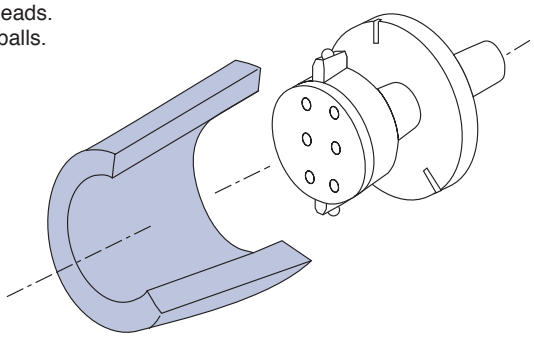
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bowers Special Applications

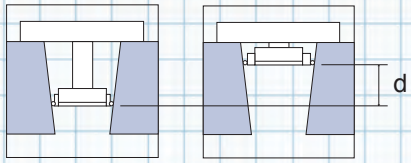
Taper

- Set using distance ‘d’ between two heads.
- Point contact on bore using carbide balls.
- 3 point also available.

Application View



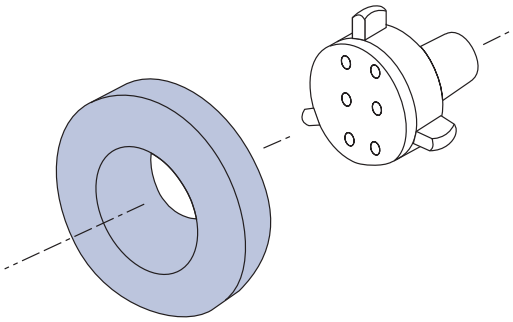
Plan View



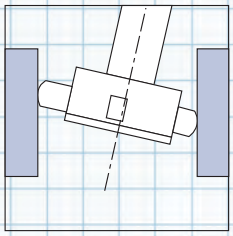
3 Point Spherical

- Gives good repeatability even when out of line with bore center. Available from .250-12"/6-300mm diameter on digital systems.
- The spherical anvil gives the gage operator chance to be off axial center by up to 15 degrees, and still have a correct reading on the display
- Normally used with a stop collar or depth stop device, the spherical anvils also allow minimum contact between the gage and workpiece.

Application View



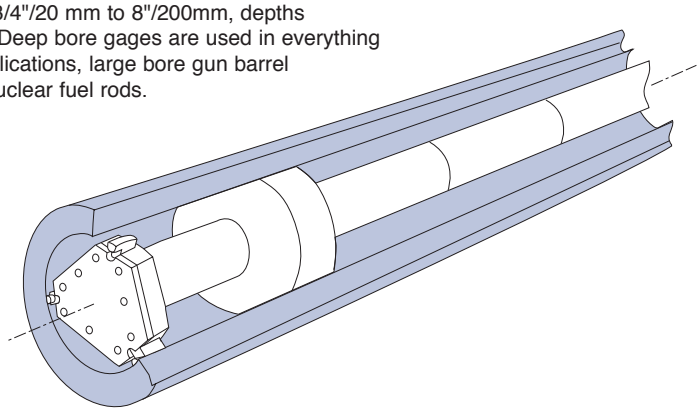
Plan View



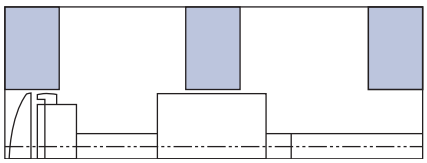
Deep Hole Gaging

Application View

For diameters from 3/4"/20 mm to 8"/200mm, depths 20"/500mm to 15m. Deep bore gages are used in everything from oil well drill applications, large bore gun barrel measurement and nuclear fuel rods.



Can be fitted with spacers to allow segments to be measured throughout the depth of the bore.



Contact the Fowler Technical Department for special head applications.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Smart Plug System



Smart Plugs offer a fast, robust, and easy-to-use measurement option, offering superb accuracy and repeatability to less than 0.00005". The reliable 2-point measuring system is designed to withstand harsh manufacturing floor environments. Smart plugs are manufactured to specific diameters and offer short measurement ranges (around 0.007"). This dedicated design is a great fit for high-volume manufacturing and quality control.

Special Features:
- Tough, robust construction
- Easy-to-use
- Long life
- High accuracy
- Flexible, modular
- Hand-held measurement.
- Cost-effective
- High visibility displays
- Protective indicator shroud (with some indicators)
- All setting rings supplied as standard with UKAS calibration certificates.
- Coverplates as standard on all Smart Plugs, for protection of gage head.

Smart Plugs are dedicated to one specific size. Range descriptions below are for pricing information only.

Consistent, accurate and robust gages that are ideal for high production applications

Smart Plugs

Part Number	Description	Thread
Chrome Plugs with Carbide Contact Points (2 pt.)		
***SPECIFY EXACT SIZE & TOLERANCE AT ORDERING TIME.**		
54-556-010	0.236-0.787" (6-20mm)	M6x0.75
54-556-012	0.590-0.984" (15-25mm)	M10x1
54-556-014	0.984-1.378" (25-35mm)	M10x1
54-556-016	1.378-1.772" (35-45mm)	M10x1
54-556-018	1.772-2.362" (45-60mm)	M10x1
54-556-020	2.362-3.150" (60-80mm)	M10x1
54-556-022	3.150-3.937" (80-100mm)	M10x1
54-556-024	3.937-4.921" (100-125mm)	M10x1
54-556-026	4.921-5.906" (125-150mm)	M10x1
54-556-028	5.906-6.890" (150-175mm)	M10x1
54-556-030	6.890-7.874" (175-200mm)	M10x1
54-556-032	7.874-8.858" (200-225mm)	M10x1
54-556-034	8.858-9.843" (225-250mm)	M10x1
54-556-036	9.843-11.025" (250-280mm)	M10x1

Rings

Part Number	Size
54-556-801	1.5—2mm
54-556-802	2—3mm
54-556-803	3—4mm
54-556-804	4—5mm
54-556-805	5—6mm
54-556-806	6—10mm
54-556-807	10—20mm
54-556-808	20—25mm
54-556-809	25—30mm
54-556-810	30—40mm
54-556-811	40—50mm
54-556-812	50—60mm
54-556-813	60—70mm
54-556-814	70—80mm

Rings

Part Number	Size
54-556-815	80—90mm
54-556-816	90—100mm
54-556-817	100—115mm
54-556-818	115—130mm
54-556-819	130—145mm
54-556-820	145—160mm
54-556-821	160—170mm
54-556-822	170—180mm
54-556-823	180—190mm
54-556-824	190—200mm
54-556-825	200—210mm
54-556-826	210—220mm
54-556-827	220—230mm
54-556-828	230—240mm

Rings

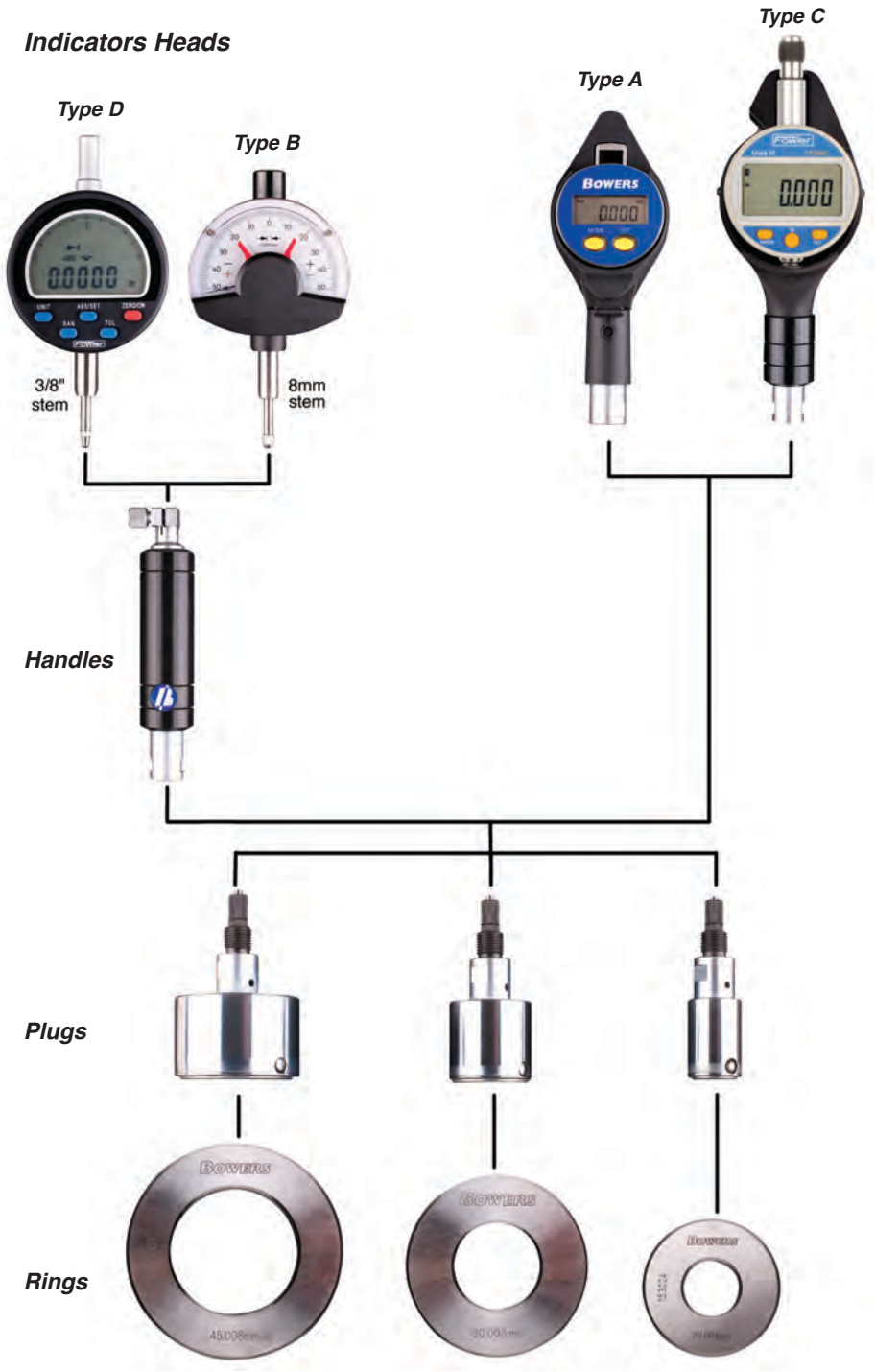
Part Number	Size
54-556-829	240—250mm
54-556-830	250—260mm
54-556-831	260—270mm
54-556-832	270—280mm
54-556-833	280—290mm
54-556-834	290—300mm

***SPECIFY EXACT SIZE RING**



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Indicators Heads



Indicator Heads

Part No.	Description	Thread
Heads (require handle)		
54-556-108	Handle for 8mm stem	M6
54-556-138	Handle for 3/8" stem	M6
54-556-117	Handle for 8mm stem	M10
54-556-118	Handle for 3/8" stem	M10
54-556-622	Type B mechanical dial gage 0.000050" (0.001mm) resolution	
54-556-625	Type D Digital indicator	

Part No.	Description	Thread
Heads (with built-in handle)		
54-556-608	Type A mini-indicator with shroud	M6
54-556-708	Type C indicator with shroud	M6
54-556-617	Type A mini-indicator with shroud	M10
54-556-719	Type C indicator with shroud	M10
Extensions		
54-556-104	100mm extension	M6
54-556-110	100mm extension	M10

Contact the Fowler Technical Department for more application concepts and accessories.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in ENGLAND

Carbon Fiber Beam Gage

for large diameter applications



(Indicator shown not included.)

This light-weight gage allows one person to measure large diameter I.D. and O.D. measurements up to 80"(standard)

The Carbon Fiber Beam Gage is a reliable way to measure large dimensions accurately and easily. Due to the material of carbon fiber an 80" diameter is a one-man operation.

Set the gage to a master and then transport the lightweight gage to the part for easy measurement of large turning applications. Special tooling for setting on Fowler/Trimos horizontal gages is available.

250mm, 500mm and 1000mm extensions available. Custom lengths and depths available.

Bowers design and quality gives you the assurance of accuracy and repeatability on every application.

Features:
- ID/OD measurement
- 0-1925mm external range
- 257-2155mm internal range
- Carbon fiber material for easy and accurate measurements.
- Tooling ball anvils available for ball race measurement.

Part Number	Description
54-466-660	Carbon fiber beam gage
54-466-661	1 meter extension
54-466-662	Threaded anvils
54-466-663	Presetter
54-466-664	Gage ball anvils

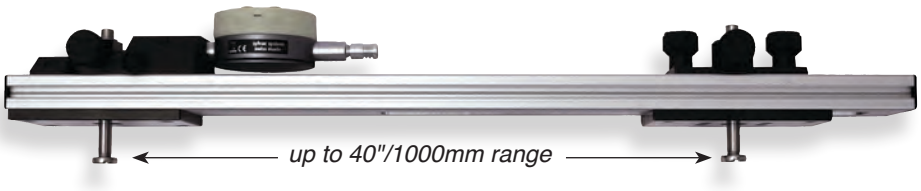
Contact the Fowler Technical Department for more information.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

INTEX Comparator Beam Gage

Developed to measure both internal and external diameters and lengths, the Intex gage's aluminium extrusion beam gives it a rigid yet lightweight quality, making it ideal for shop-floor environments. The simple release of a locking thumbscrew enables the gages measuring direction to be changed quickly and easily.





Made in ENGLAND

Fowler 5 FIVE YEAR WARRANTY

Great for extended range internal and external shallow diameters.

Features:
- Lightweight and rigid
- Sizes over 40"/1000mm available on request
- Internal and external measurement
- .080"/2mm travel on moving contacts
- Adjustable fixed contacts with up to 10"/250mm adjustment range
- Digital or analog indicator available
- Hardened steel wear pads locate gage onto component aiding repeatability and prolonging service life.
- Setting master required to set the instrument.
- Shown with electronic indicator may also be used with mechanical indicators.

Intex Gauge

Part Number	Description	Range
54-466-001	INTEX Beam Gage *(without indicator)*	7.824"-15.748"/200-400mm
54-466-002	INTEX Beam Gage *(without indicator)*	15.748"-23.622"/400-600mm
54-466-003	INTEX Beam Gage *(without indicator)*	23.622"-31.496"/600-800mm
54-466-004	INTEX Beam Gage *(without indicator)*	31.496"-39.370"/800-1000mm
54-466-101	10mm Spherical Disc Probes	

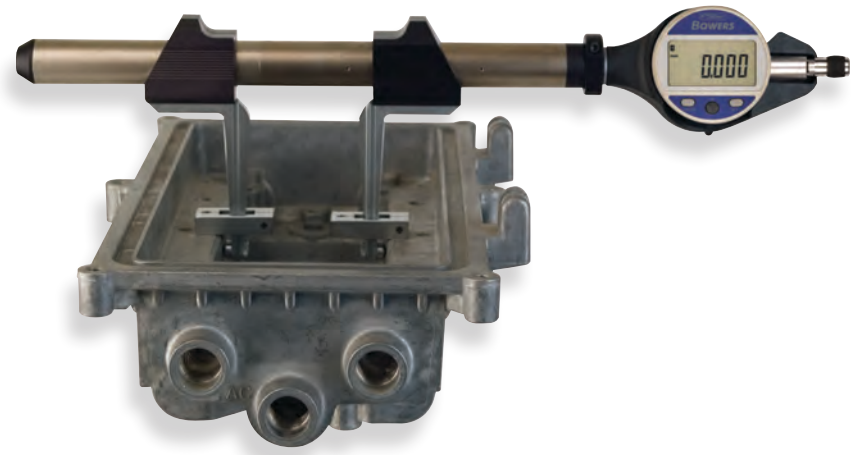
Compatible Indicators

Part Number	Description	Range
54-530-135	Sylvac Mark VI Ultra Digit Indicator	0-.500"/0-12.5mm
52-540-000	Dial Indicator .0001" Resolution, 0-50-0 Reading	.200"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in ENGLAND

Basic Universal Gage

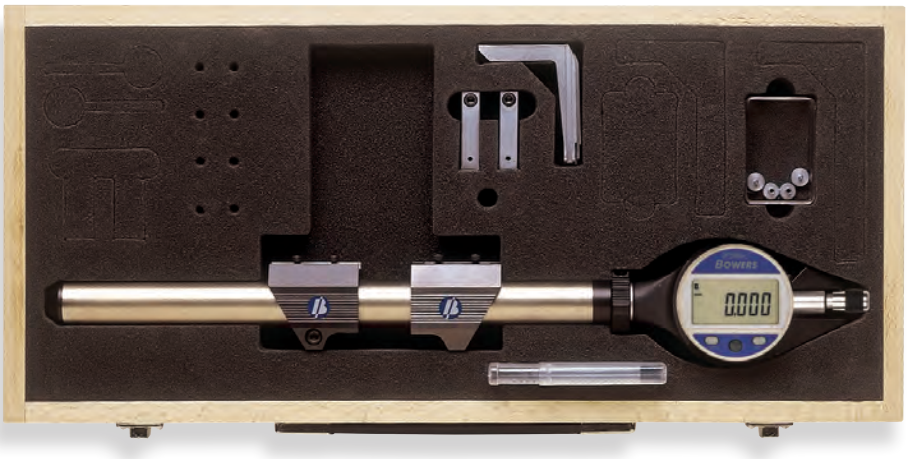


The Fowler/Bowers Universal Measuring Gage is ideal for the measurement of inside and outside diameters, threads, slots, recesses, grooves, tapers, etc. The large variety of accessories are easily and quickly interchanged, allowing measurements of virtually any type of workpiece.

Features:
- Internal and external measurement.
- Extremely large measuring range: 0-118"/0-3000mm
- Constant measuring pressure.
- Digital readout.
- Large range of accessories.*
- Anvil travel of .590" (15mm).

Sylvac Electronic Features:
- Min/Max/TIR modes
- .0005"/.00005" (.01/.001mm) resolution
- Direct RS232 output
- Tolerance indication
- Rotating display
- Two presets

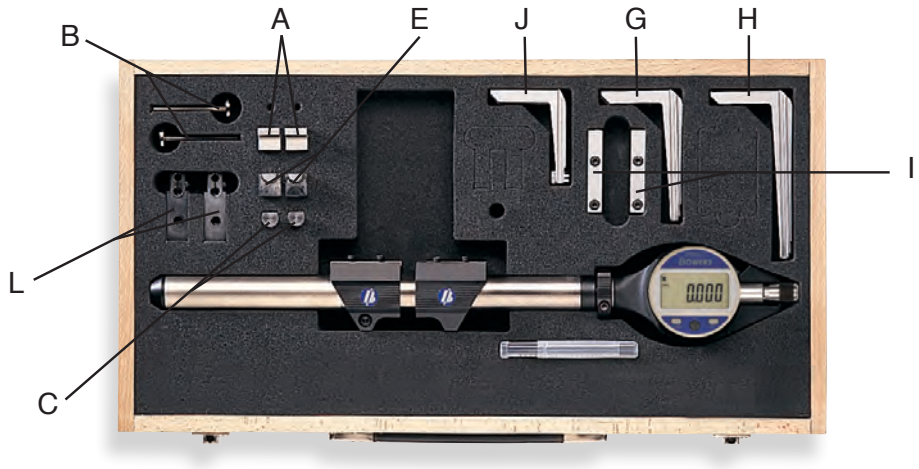
part number 54-265-700



Part Number	Description
54-265-700	Universal Gage with Digital Readout. Internal range: 1.18—10" (30—250mm) External range: 0—8.4" (0—215mm) Includes: pair of 2" arms pair of depth stops pair of clamping adaptors and contact points

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deluxe Universal Gage



part number 54-265-777

Kit constructed to meet most internal and external applications

		Accessories
A.	**54-265-045**	Pair of Flat Shoulder Anvils
B.	**54-265-048**	Pair of Internal Disc Anvils (large)
C.	**54-265-049**	Pair of Internal/External Disc Anvils (small)
D.	**54-265-055**	Pair of Clamping adaptors
E.	**54-265-047**	Pair of Cylindrical Shoulder Anvils
F.	**54-265-015**	Pair of Spherical Tip Contact Points
G.	**54-265-030**	Pair of Measuring Arms 3"(75mm) long
H.	**54-265-040**	Pair of Measuring Arms 4"(100mm) long
I.	**54-265-043**	Pair of Depth Stops
J.	**54-265-020**	Pair of Measuring Arms 2"(50mm) long
K.	**54-265-010**	Pair of Flat Contact Points
L.	**54-265-041**	Pair of Mounting attachments

Part Number	Description
54-265-777	Universal Gage with Digital Readout. Complete Set. Internal range: 1.18—10" (30—250mm) External range: 0—8.4" (0—215mm) Includes all accessories shown above.
Other Accessories:	
54-265-000	Universal Gage Only with Indicator
54-265-200	Universal Gage Only (no indicator)
54-265-090	6" Extension: Increases range of Universal Gage by 6" (150mm)
54-265-100	20" Extension: Increases range of Universal Gage by 20" (500mm)
54-265-023	Bench Stand
54-265-002	Cowl
54-265-119	13mm Cone Anvil
54-265-120	25mm Cone Anvil
54-265-121	50mm Cone Anvil

Available on special order
Pair of ball inserts for gear/spline measurements. Thread inserts for internal/external threads. Special anvils such as cones, balls, pins, etc. Contact our Technical Department for price quotes.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in ENGLAND

Fowler 5 FIVE YEAR WARRANTY

Fowler RS-232 BI-DIRECT

Fowler OPTO INTERFACE

See page 180 for contact points and other attachments

UniCal *Ultra light internal/external sliding gage*





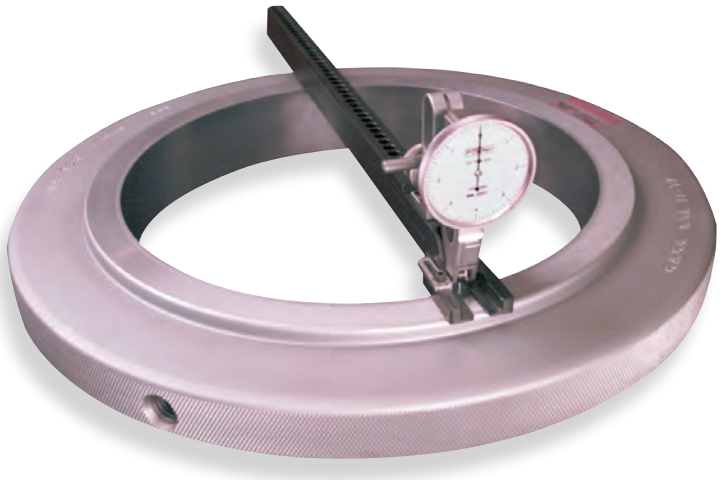
Features:

- Ranges: 0-300mm. 0-600mm, 0-1000mm
- Preset for internal/external measurement
- Constant measuring force
- Hold feature for post-measurement viewing
- Incremental floating zero
- Inch/metric function
- Resolution: .0005"/.01mm
- Min/Max function
- Tolerance indicators
- 5mm Ø mounting bores on the top and underneath the gage.
- Adapters available for Bowers Universal Gage accessories.
- Wide range of measuring contacts
- Large, easy-to-read LCD display
- RS232 output
- Water resistant

Part Number	Range	Maximum Error	Repeatability
54-112-300	0-12"/0-300mm	.0012"/30*µm*	.0008"/20*µm*
54-112-600	0-24"/0-600mm	.0016"/40*µm*	.0008"/20*µm*
54-112-100	0-40"/0-1000mm	.0024"/60*µm*	.0008"/20*µm*
Accessories:			
54-112-041	Mounting Adapters		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Shallow Bore Gage



▲ *Indicator and ring shown here with Shallow Bore Gage are not included in price.*

Accepts indicators with standard dovetail mounts

See the indicator section starting on page 87

The Shallow Bore Gage with its large measurement range is perfect for measuring shallow bores and shoulder diameters.

- Made of hardened tool steel, satin-chrome finish
- Works with most brands of horizontal or vertical test indicators
- Fine adjustment .400"
- Depth capacity .05—.400" *
- Includes two hex keys
- Contact pin hole distance .250"

** Based on using test indicator with 1⁄2" long contact point.*



Side view.

Part Number	Description	Internal Range	External Range
52-547-000	Shallow Bore Gage 7" with disc anvil	.55—7.2"	.24—6.92"
52-547-001	Shallow Bore Gage 5" with disc anvil	.55—5.2"	.24—4.92"
52-547-002	Shallow Bore Gage 12" with disc anvil	2—12.1"	1.95—12.05"
52-547-003	10" Extension for 52-547-002		
52-547-004	20" Extension for 52-547-002		
52-547-006	Carbide ball pin anvil (for 5" & 7" Gages)		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Digital Cylinder Bore Gages



Fowler/Bowers Digital Cylinder Bore Gages are a new innovation in bore diameter measurement. One gage covers four different mechanical dial gage options: .00005"/.001mm, .0005"/.01mm.

The display can be set to function on either inch or metric with switchable resolution, depending on the workpiece tolerance. With programmable preset on "min value", once the gage has been set with a single button press after a sweep of the gage, the component bore size can be read from the display.

- Displays actual bore diameter or comparative results (Min memory Hold)
- Inch/metric conversion
- Switchable resolution .00005"/.001mm, .0005"/.01mm
- Direct RS232 output
- Fast simple checking for bores—size, ovality, taper, etc.
- Lightweight ABS gage shroud for extra strength and protection
- Tungsten carbide contact points
- Thermally insulated for extra stability
- Robust construction for shop floor use
- 2-point measuring with 3-point centering.

Indicator automatically captures and holds minimum diameter.

Longer or shorter lengths are available. Prices quoted upon request. Contact Fowler Technical Department.

Part Number	Range	Bore Depth
54-549-002	.500"—.875" (12.5—22mm)	6" (150mm)
54-549-004	.875"—2" (22—50mm)	6" (150mm)
54-549-006	2—6" (50—150mm)	10" (250mm)
54-549-008	6—12" (150—300mm)	15" (380mm)
54-549-010	6—24" (150—600mm)	15" (380mm)
54-115-526	USB computer connect kit	
54-115-527	RS-232 computer connect kit	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Mechanical Cylinder Bore Gages

Fowler/Bowers Cylinder Bore Gages have been built on the Bowers' reputation for quality…a fast, accurate method for checking bores. Originally designed for engine rebore use, these bore gages have since been developed into a universal, wide range, two point internal measuring system suitable for many applications.



An improved mechanical system increases its strength and wear resistance. All contact points are tungsten carbide. Robust, easy to use and suitable for most environments and applications.

Set the gage with a setting ring or gage blocks by rotating the dial face to zero. During measurement, the gage is inserted into the bore at an angle and then rocked slowly to enable a reading to be taken. A spring loaded centralizing foot ensures that the gage remains on center during measuring operation when the minimum reading gives the bore size.

Features:
- Available in inch and metric, ranging from ½"—24" /12.5mm—600mm.
- Choice of .0001", .0005", .002mm or .01mm graduations.
- Fast, simple checking of bores for size, ovality, taper, etc.
- Lightweight housing for extra strength and protection.
- Thermally insulated for extra stability.
- Tungsten carbide contact points.
- Specials available for measurement of deep bores.
- Extensions up to 2 meters available on some models.

Made in ENGLAND

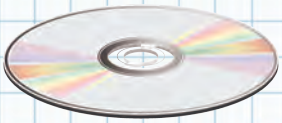
Conventional 2 pt. measurement with Bowers quality.

Part Number	Range	Dial Reading	Grad.	Bore Depth
Inch Series:				
52-548-002	.500"—.875"	.0005"	0—25—0	6"
52-548-012	.500"—.875"	.0001"	0—50—0	6"
52-548-004	.875"—2"	.0005"	0—25—0	6"
52-548-014	.875"—2"	.0001"	0—50—0	6"
52-548-006	2—6"	.0005"	0—25—0	10"
52-548-016	2—6"	.0001"	0—50—0	10"
52-548-008	6—12"	.0005"	0—25—0	15"
52-548-018	6—12"	.0001"	0—50—0	15"
52-548-010	6—24"	.0005"	0—25—0	15"
52-548-020	6—24"	.0001"	0—50—0	15"
Metric Series:				
52-548-003	12.5—22mm	.01mm	0—50—0	150mm
52-548-013	12.5—22mm	.002mm	0—10—0	150mm
52-548-005	22—50mm	.01mm	0—50—0	150mm
52-548-015	22—50mm	.002mm	0—10—0	150mm
52-548-007	50—150mm	.01mm	0—50—0	250mm
52-548-017	50—150mm	.002mm	0—10—0	250mm
52-548-009	150—300mm	.01mm	0—50—0	380mm
52-548-019	150—300mm	.002mm	0—50—0	380mm
52-548-011	150—600mm	.01mm	0—50—0	380mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

X-SERIES

Includes FREE Instructional CD!



Industry's two most popular bore gage ranges combined in one easy-to-use ELECTRONIC set!

YouTube

Instructional video available at: youtube.com/FowlerVid

XTENDER-E Electronic 1.4" to 6" Dial Bore Gage Set



All the same benefits included in the X-Tender Dial Bore Gage are now available with an electronic indicator providing inch/metric reading capability. Preset size of master for absolute reading and minimum hold feature to lock on the bore size as the gage is rocked in the part to be measured.

Bore Gage Features:
- Range: 1.4"-6"/35mm-150mm
- Carbide anvils
- Easily adjustable
- Self-centering
- Includes 2" contact extension
- Shop hardened case

Indicator Features:
- Dual reading inch/metric electronic indicator.
- Bar graph and numeric digital display
- Resolution: .00005"/.001mm
- Preset with recall
- ABS/INC measurement
- Min/Max/TIR



Part Number	Description
54-646-401	XTender-E Bore Gage Set
54-100-350	CR2032 Battery

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

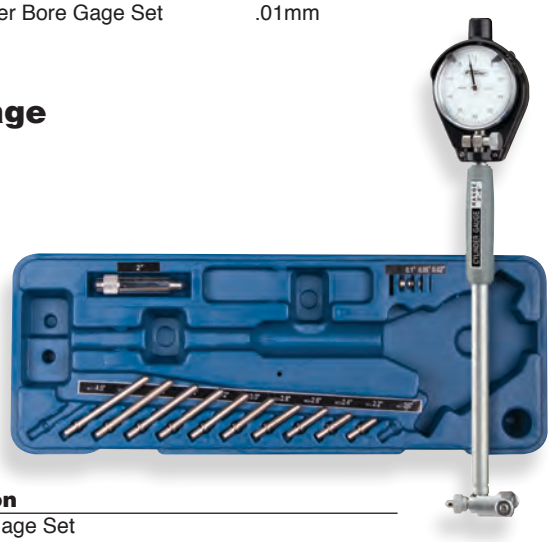
XTENDER 1.4" to 6" or 35 to 160mm Dial Bore Gage Set



- Carbide Anvils
- Easy-to-read
- Economical
- Graduation: .0005" or .01mm
- Insulated grip
- 1.4" to 6" range or 35 to 160mm
- 9.5" Depth
- Chrome plated handle.
- Includes 2" contact extension and fitted case.

Part Number	Description	Graduation
52-646-400	Inch X-Tender Bore Gage Set	.0005"
52-646-500	Inch X-Tender Bore Gage Set	.0001"
52-646-220	Metric X-Tender Bore Gage Set	.01mm

2" to 6" Dial Bore Gage



Features No. 52-646-300:
- Range: 2"-6"
- Carbide anvils
- Graduation: .0005"
- 9.5" Depth
- Easily adjustable
- Self-centering
- Insulated grip
- Chrome plated handle.
- Includes 2" contact extension fitted case.

Part Number	Description
52-646-300	2"-6" Bore Gage Set

.7" to 1.5" Dial Bore Gage



Features No. 52-646-100:
- Range: .7"-1.5"
- Carbide anvils
- Graduation: .0005"
- 9.5" Depth
- Easily adjustable
- Self-centering
- Insulated grip
- Chrome plated handle.
- Includes fitted case.

Part Number	Description
52-646-100	0.7"-1.5" Bore Gage Set

X-SERIES

Industry's two most popular bore gage ranges combined in one easy-to-use set!

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

2" to 6" Right Angle Dial Bore Gage

For measuring difficult-to-reach bores in tight or inconveniently located spaces on machine applications.



- Carbide anvils
- Easy-to-read
- Economical
- Range: 2" to 6"
- Graduation: .0005"
- Chrome plated handle
- Insulated grip
- Includes 2" contact extension

Part Number	Description
52-646-250	2—6" Dial Bore Gage Set

XTRA-RANGE® 4" to 12" Bore Gage



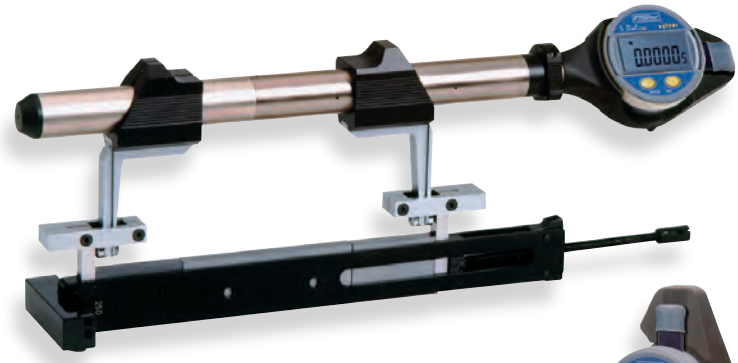
- Carbide Anvils
- 4" to 12" range
- 10" measuring depth
- Easy-to-read
- Economical
- Graduation: .0005"
- Insulated grip
- Chrome plated handle.
- Includes 2 extensions

Part Number	Description
52-646-600	Xtra-Range Bore Gage

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Setting Master Holders

for Cylinder Bore Gages & Universal Bore Gages



No. 54-265-900 Shown with ***No. 54-265-000*** Universal Gage (not included)

No. 54-265-900/902:
- Specially adapted gage block holder and arms for quick setting of most brands of Bowers Universal Gages
- Use with standard Rectangular Gage Blocks

No. 54-549-900/902:
- Specially adapted Gage Block Holder and arms for quick setting of most brands of Cylinder Bore Gages
- Use with standard rectangular Gage Blocks
- Requires at least one pair of Setting Blocks



No. 54-549-900 shown with ***No. 54-549-906*** and Digital Cylinder Bore Gage (not included)

Fowler 5 FIVE YEAR WARRANTY

Made in ENGLAND

NEW LOW-COST METHODS FOR SETTING GAGES!

Custom sizes available. Contact Fowler Technical Department.

Part Number	Description
For Universal Gage	
54-265-900	0—9" Setting Master Holder Kit
54-265-902	0—15" Setting Master Holder Kit
For Cylindrical Bore Gages	
54-549-900	1/2—6" Setting Master Holder
54-549-902	1/2—12" Setting Master Holder
54-549-904	1/2—7/8" Pair of Centralizer Setting Blocks
54-549-906	7/8—6" Pair of Centralizer Setting Blocks
54-549-908	6—12" Pair of Centralizer Setting Blocks

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bore Gage Setting Master Kit - Inch & Metric

Fowler's new Bore Gage Setting Master Kit is used for accurately setting any bore gage up to 6"/150mm in diameter to an accuracy of .0001"/.003mm



(Bore gage shown not included.)

Instructional video available at youtube.com/FowlerVid

Each Set includes:

Setting Device
- Base anvil: 2.750" x .80"
- Adjustable anvil 2.375" x .375" (two each)
- Internal capacity: 6"/150mm
- Depth capacity: 1"/25mm
- Centralizer capacity width: 2.625"/66.7mm
- Quick-release holder for fast adjustment.

Economy Gage Block Sets

Inch model:
- 36 piece
- Tolerances to .00005"
- Certificate of Calibration to N.I.S.T.

Metric model:
- 33 piece
- AS-2 grade
- Certificate of Calibration to N.I.S.T.

High Quality Aluminum Case!

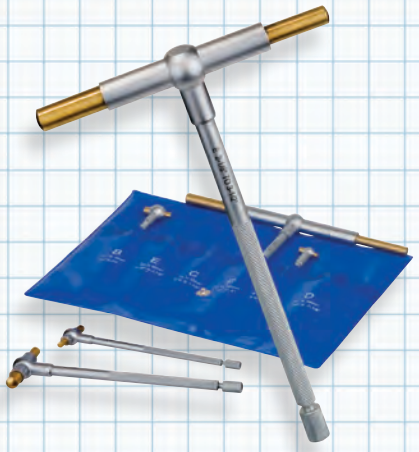


Part Number	Description
53-646-000	Inch Bore Gage Setting Master Kit
53-646-010	Metric Bore Gage Setting Master Kit

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Telescoping Gages





52-470-000:
Titanium Coated Set

Another Fowler tool for easy and accurate measurements. Under spring tension, the plungers of the gage expand from the center to the size of the hole being measured and are then locked in place by a knurled knob. Final hole size is obtained by measuring over the contacts with a micrometer or vernier caliper.

Special Features:
- Double action rigid handle with self centering feature for quick checking of inside measurements.
- Constant spring tension for uniform feel.
- Contact point ends are hardened tool steel and precision ground on a radius of the smallest hole the gage will enter.
- Covers a measuring range of 5⁄16" to 6" with measurable depths of 4" to 5".
- Includes fitted vinyl case.

Part Number	Range	Letter Code	Overall Length	Depth
52-471-000	5⁄16"—1⁄2"	A	4-3⁄8"	4"
52-471-001	1⁄2"—3⁄4"	B	4-3⁄8"	4"
52-471-002	3⁄4"—1-1⁄4"	C	4-3⁄8"	4"
52-471-003	1-1⁄4"—2-1⁄8"	D	5-7⁄8"	5"
52-471-004	2-1⁄8"—3-1⁄2"	E	5-7⁄8"	5"
52-471-005	3-1⁄2"—6"	F	5-7⁄8"	5"
Complete Sets:				
52-470-004	5⁄16"—2-1⁄8"	A thru D	Set: 4 gages	4—5"
52-470-005	1⁄2"—6"	B thru F	Set: 5 gages	4—5"
52-470-006	5⁄16"—6"	A thru F	Set: 6 gages	4—5"
Titanium Coated Set:				
52-470-000	5⁄16"—6"		Set: 6 gages	4—5"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Small Hole Gages



Fowler's Small Hole Gages offer those in the metalworking industry a tool for gaging deep and shallow holes, slots, etc. that are difficult to measure.

Special Features:

- Knurled knob at the end of handle is used for size adjustment.
- Hole size is obtained by measuring over the contact points with a micrometer.
- The gaging surface is a full-round with a flat bottom. This permits use in the smallest of shallow holes, slots and grooves, etc.
- Gaging surface is fully hardened to ensure long tool life.
- Extra long for gaging deep and shallow holes, slots and similar work.
- The complete set of four gages covers a range of .125"—.500".
- Includes fitted vinyl case.

Part Number	Range	Overall Length	Probe Depth
52-472-001	.125"-.200"	3-5⁄8"	.880"
52-472-002	.200"-.300"	3-7⁄8"	1.200"
52-472-003	.300"-.400"	4"	1.600"
52-472-004	.400"-.500"	4-1⁄4"	1.600"
Complete Set:			
52-472-104	.125"-.500"	Set of 4 Gages	
52-472-101	Replacement vinyl case for No. 52-472-104		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



HEIGHT GAGES

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Mestra-Touch

The Fowler/Trimos Mestra-Touch 1-D/2-D height gage includes all the upgraded design features of the Vectra-Touch with a higher resolution, repeatability and accuracy.

- Manual or motorized carriage movement.
- Self triggering probe.
- Swiss engineering and construction.
- Surface/Diameter/Centerline measurement
- Min/Max/Delta value
- 9 references
- Squareness measurement *(requires optional probe)*
- Angle measurement
- Calculation mode
- Tolerances
- 2D measuring mode
- Programmable measurement sequences
- Statistical analysis
- Temperature measurement/compensation *(requires optional probe)*
- Built-in pump provides air cushion to reduce wear and fatigue.
- USB/RS-232/Wireless communication
- Touch screen
- Takes 8mm probes



Swiss Quality!

Fowler USB CONNECT KIT

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

High Accuracy

2D Mode

Programmable

5 yr. Warranty

Specifications:

Mestra - Touch models		300	600	1000
Measuring range	in	12"/305mm	24"/610mm	40"/1016mm
Application range	in	22"/567mm	34"/872mm	50"/1278mm
Resolution	in		0.00001"/0.0001mm	
Max. permissible errors	µm		1.2 + L(mm)/1000	
Repeatability	in		.00002"/.00004"	
Manual carriage displacement speed	mm/s.		1000	
Motorized carriage displacement speed	mm/s		150	
Measuring force, adjustable	N		0.5-1.8	
Squareness deviation	in	.00016"	.000024"	.00039"
Power supply			rechargeable battery pack	
Battery life	h		8	
Available interface connections			2x RS232C, 2x USB (A and B)	
Operational temperature			50 to 104° F/°C+10 to 40	
Total Height	in	25.4"/645mm	37.4"/950mm	53.4"/1357mm
Weight	lbs	35.2lbs/16kg	41.8lbs/19kg	50.6kg/23kg

The values of max. permissible error and repeatablity are valid only when using the standard probe (measuring insert with tungsten carbide ball, 4mm L=90 mm), at temperature of 20±1 °C and relative humidity of 50± 5%.

Part Number	Description
54-194-301	12"/300mm Mestra Electronic Height Gage
54-194-601	24"/600mm Mestra Electronic Height Gage
54-194-901	40"/1000mm Mestra Electronic Height Gage
54-194-311	12"/300mm with Manual Carriage Movement
54-194-611	24"/600mm with Manual Carriage Movement
54-194-902	40"/1000mm with Manual Carriage Movement

See pgs 211-213 for probes

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

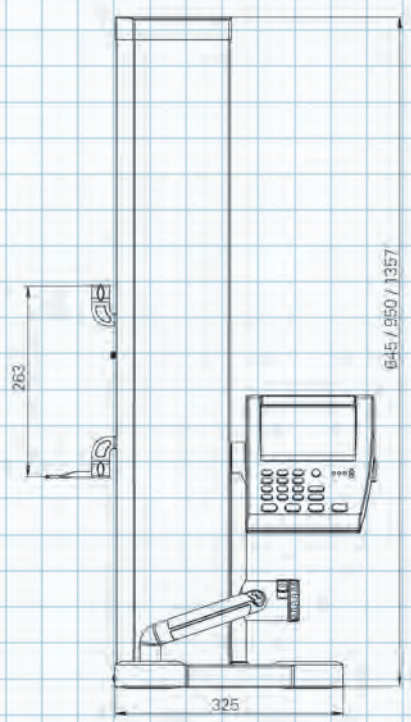
Swiss Quality!

Fowler USB CONNECT KIT

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

Mestra and Vectra-Touch Dimensions



2-D Measurements

Motorized

5 yr Warranty

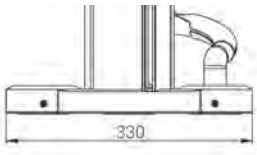
Vectra-Touch

The Fowler/Trimos Vectra-Touch 1-D/2-D height gage with the latest in upgraded technology is now available with the following features:

- Manual or motorized carriage movement
- Self triggering probe
- Swiss engineering and construction
- Surface/Diameter/Centerline measurement
- Min/Max/Delta value
- 9 references
- Squareness measurement *(requires optional probe)*
- Angle measurement
- Calculation mode
- Tolerances
- 2D measuring mode
- Programmable measurement sequences
- Statistical analysis
- Temperature measurement/compensation *(requires optional probe)*
- Built-in pump provides air cushion to reduce wear and fatigue.
- Online help
- USB/RS-232/Wireless communication
- Up to 2000mm measuring range available
- Takes 8mm probes



Side view



Specifications:

Vectra - Touch models		300	600	1000
Measuring range	in	12"/305mm	24"/610mm	40"/1016mm
Application range	in	22"/567mm	34"/872mm	50"/1278mm
Resolution	in		0.00001"/0.0001mm	
Max. permissible errors	µm		2+ L(mm)/400	
Repeatability	in		.00004"/.00008"	
Manual carriage displacement speed	mm/s.		1000	
Motorized carriage displacement speed	mm/s		150	
Measuring force, adjustable	N		0.5-1.8	
Squareness deviation	in	.00016"	.00024"	.00039"
Power supply			rechargeable battery pack	
Battery life	h		8	
Available interface connections			2x RS232C, 2x USB (A and B)	
Operational temperature			50 to 104° F/°C+10 to 40	
Total Height	mm	25.4"645mm	37.4"/950mm	53.4"/1357mm
Weight	kg	35.2lbs/16kg	41.8lbs/19kg	50.6kg/23kg

The values of max. permissible error and repeatability are valid only when using the standard probe (measuring insert with tungsten carbide ball, 4mm L=90 mm), at temperature of 20±1 °C and relative humidity of 50± 5%.

Part Number	Description
54-193-300	12"/300mm Vectra Electronic Height Gage
54-193-600	24"/600mm Vectra Electronic Height Gage
54-193-900	40"/1000mm Vectra Electronic Height Gage
54-193-060	60"/1500mm Vectra Electronic Height Gage
54-193-301	12"/300mm with Manual Carriage Movement
54-193-601	24"/600mm with Manual Carriage Movement
54-193-901	40"/1000mm with Manual Carriage Movement
1D Only Models	
54-193-101	24"/600mm 1D Vectra Electronic Height Gage with Motorized Movement
54-193-100	24"/600mm 1D Vectra Electronic Height Gage with Manual Carriage Movement

60"/1500mm and 80"/2000mm available. Contact Fowler for pricing info.

See pgs 211-213 for probes

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

V Plus Series Height Gages

The ideal shop or lab gage. Very accurate and very easy to use for all of your everyday manufacturing applications.



Three Models:
12"/300mm with 21"/535mm application range
24"/600mm with 32.8"/835mm application range
40"/1000mm with 48.6"/1235mm application range

Resolution:
.00005"/.0005"(.001/.01mm)

Repeatability:
.00008"/.002mm (±2s)

Accuracy:
2.5 + L(mm)/300

Squareness:
.0002"/.005mm over 12"/300mm
.00032"/.008mm over 24"/600mm
.00047"/.012mm over 40"/1000mm

Probes:
8mm probe shank

Swiss Quality!

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

A very accurate, robust shop gage that features high accuracy, fine adjustment and an air cusioned base

- Measures height, inside and outside diameters and centerline locations without changing probes.
- Simple to operate with handwheel and self triggering probe.
- Swiss engineering and construction.
- Min/Max/Delta value
- Direct RS-232 output for SPC.
- Built-in pump provides air cushion to reduce wear and fatigue.
- Full numeric keypad and large display.
- Built-in rechargeable battery.
- Optional printer and probes.
- Handwheel w/fine adjustment.
- Includes 4mm Ø ruby probe, probe calibration gage, charger, dust cover and certificate of accuracy.

Part Number	Description
54-199-300	21"/535mm V Plus Series Electronic Height Gage
54-199-024	32.8"/835mm V Plus Series Electronic Height Gage
54-199-040	48.6"/1235mm V Plus Series Electronic Height Gage
54-199-076	12"/300mm Master Setting Gage

See pgs 211-213 for probes

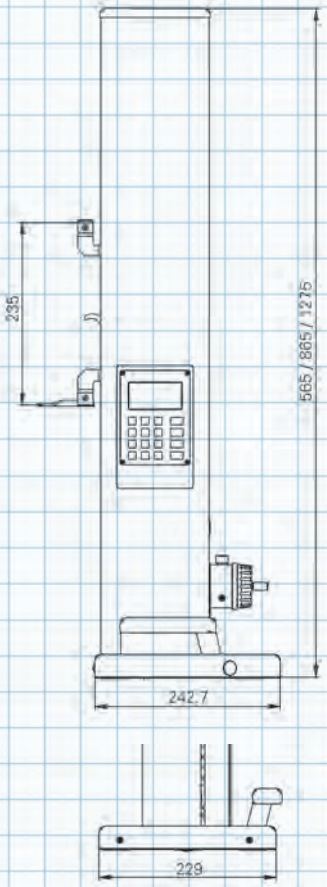
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

V Plus and V Series Dimensions



Side View

Fowler

V Series Height Gage

Combining a sleek ultra-modern design, robust construction, a user-friendly interface, a 5-year warranty and exceptional value the Fowler/Trimos V Series Height Gage is the ideal electronic multifunction height gage for your quality control or workshop environment.



Unlike some of our competitors' height gages that require expensive accessories, the V comes fully equipped to handle diameter, center line and center to center line measurements.



- Measures height, inside and outside diameters and centerline locations without changing probes.
- Simple to operate with handwheel and adjustable self triggering probe
- Swiss engineering and construction
- Min/Max/Delta value
- Direct RS-232 output
- Full numeric keypad and large display
- Built-in rechargeable battery
- Includes 4mm Ø carbide probe, setting gage, charger and certificate of accuracy.
- Optional printer and probes
- 8mm probe shank

	54-191-014-1	54-191-024-1
• Measuring range:	12"/300mm	24"/620mm
• Application range:	21"/450mm	32"/700mm
• Accuracy:	.00032"/8µm	.0004"/10 µm
• Squareness deviation (in measuring direction):	.00059"/15µm	.0008"/20 µm
• Max. resolution:	.00005"/.001mm	
• Repeatability (2s):	.0002"/4 µm	
• Max. displacement speed:	1.5 m/s	
• Measuring force:	1 N	
• Data output:	RS-232	

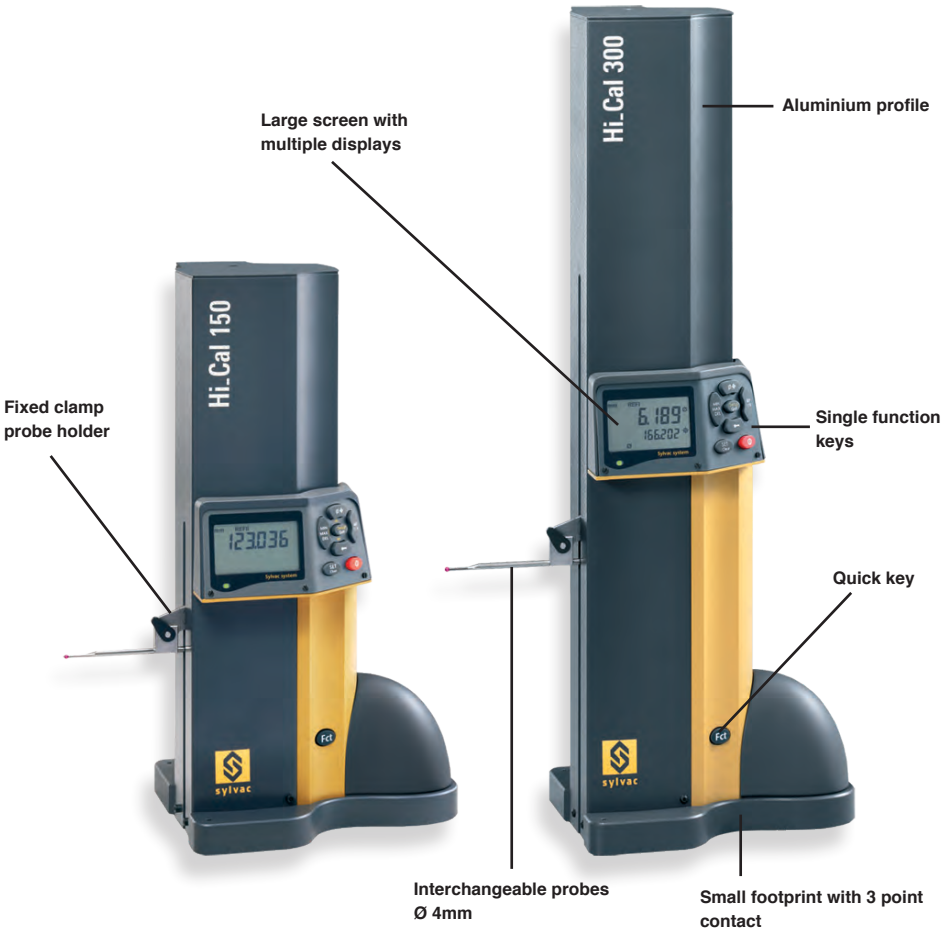
Part Number	Description
54-191-014-1	0-12"/300mm V Electronic Height Gage
54-191-024-1	0-24"/620mm V Electronic Height Gage

See pgs 211-213 for probes

Height Gages

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Hi_CAL Electronic Height Gage



- Measuring ranges: 6"/150mm and 12"/300mm
- Error Max µm: 2.5 + L / 175mm
- Extra low measuring force, from 0.2 N
- Measurement of internal and external diameters, centerlines, heights, widths, depths, surfaces.
- MIN, MAX, TIR capability
- Excellent repeatability thanks to the motorized carriage.
- Intuitive functions/minimizes key strokes
- Customizable with free software
- Great mobility
- High reliability
- Data output USB and RS232
- Battery life: 40 hours rechargeable during operation.
- Touch sensitive probe speed for easy operation.
- Base with small footprint.
- 4mm probe shank

Instrument Includes Protective Cover, Charging Set, Ruby Ball Probe Ø3mm, Setting gage and Calibration Certificate!

Part Number	Description	Range
54-931-150	Hi-Cal Height Gage	6"/150mm
54-931-300	Hi-Cal Height Gage	12"/300mm

See pgs 213-215 for probes

Swiss Quality!

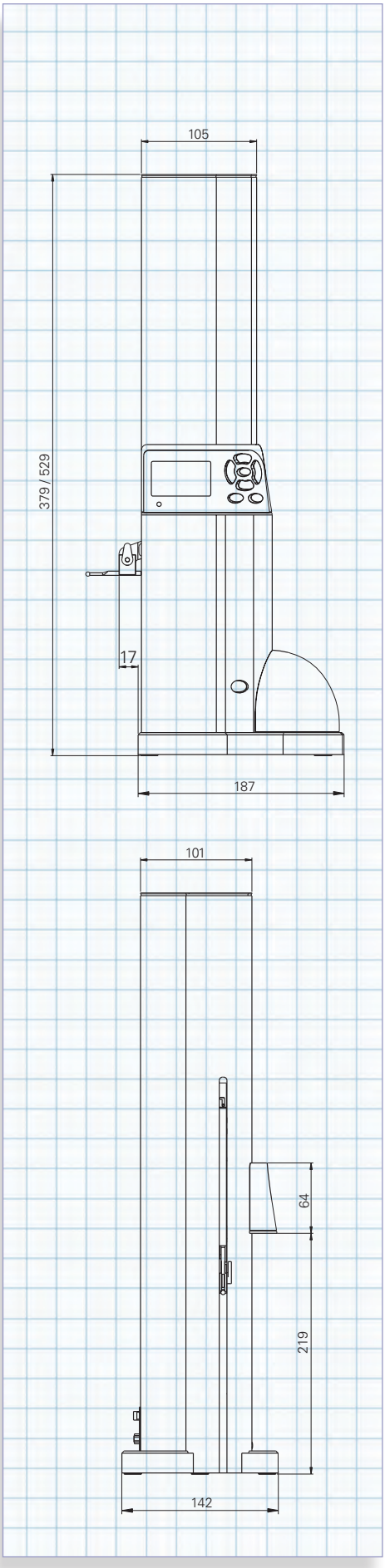
Fowler 5 FIVE YEAR WARRANTY

Fowler USB CONNECTIVITY

Fowler RS-232 DIRECT

Motorized movement!

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



Hi_CAL Electronic Height Gage



Innovative Intuitive Keypad

1. Inch/Metric and datum reference display
2. Display of measuring value
3. Active measuring mode diameter/surface
4. Centerline display
5. Min/Max/Tir mode
6. Diameter/surface selection
7. Access to setup menu
8. Selection of Datum reference Ref I / Ref II
9. On/Off Switch
10. Ball probe constant
11. Zero set and preset
12. Probe contact indication lamp

Specifications:

	No. 54-931-150		*No. 54-931-300*
Measuring range	6"/150mm		12"/300mm
Application range	6.1"/0-155mm		12.6"/0-320mm
Max Error µm		2.5 + L/175	
Repeatability		2µm	
Resolution	0.00005"/0.001mm		0.00005"/0.001mm
Velocity (mm/sec.)		50/100	
Measuring Force		0.2-0.3 Newtons	
Self-contained use		Approx. 40 Hours	
Overall Height	14.92"/379mm		20.83"/529mm
Weight	8.6 lb/3.9kg		10.14 lb/4.6 kg
S_Connect		USB/mini USB/ RS232	
Programmable by PC		✔	
Zero setting		✔	
Min/max/delta		✔	
PRESET function		✔	
2 references		✔	
Height measurement, Ø and centerlines		✔	
2 types of progressive speed		✔	

See pgs 213-215 for probes

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

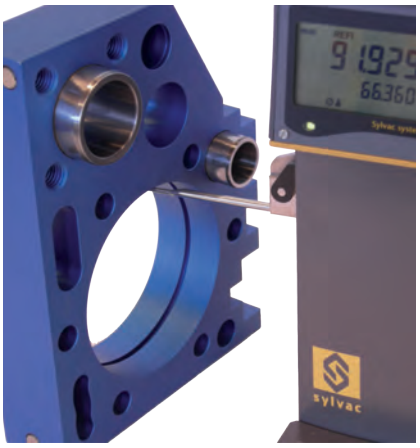
Height Gage Applications



Depth measurements with accessories 54-199-508 and 54-199-510



Depth measurements with accessory 54-199-508



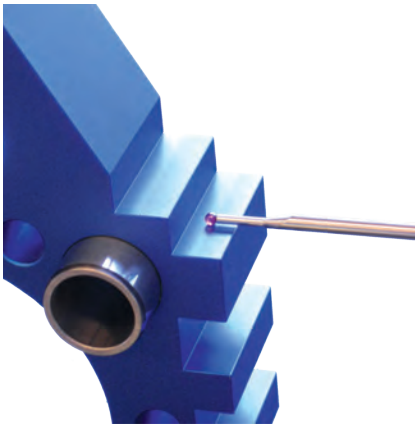
Internal measurements with ruby ball probe Ø3mm, 54-930-211



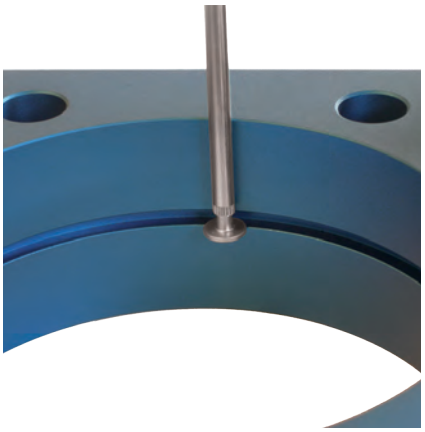
Internal groove measurements with accessories 54-199-508, 54-199-506 and 54-199-501



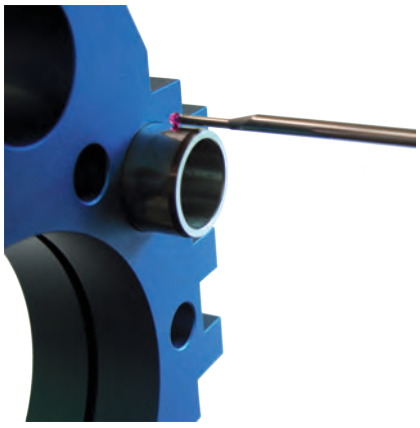
Taking the probe constant value with the setting gage 54-930-202



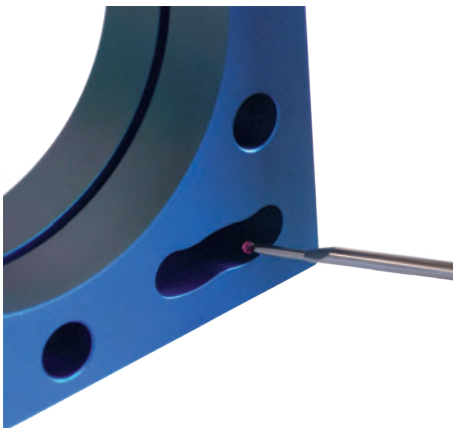
Heights and thicknesses measurements.



Internal groove measurements with accessories 54-199-508, 54-199-506 and 54-199-502



External diameter measurements with the standard probe 54-930-211



Min/Max/Delta measurements

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Z-600 1D Motorized Height Gage

Instructional video available at: youtube.com/FowlerVid

- Motorized movement
- Easy to use icon driven display
- Ergonomic design.
- Built-in pump provides air cushion to reduce wear and fatigue.
- Multiple reference points
- Zero setting at any point
- USB output.

Measurement Features:
- Heights, depths
- ID/OD Measurements.
- Centerline measurements
- Groove & Ledge measurement
- Squareness measurement capability**
- Parallelism measurement
- Preset at any point
- 1D Measurement
- inch/metric conversion
- 8mm probe shank can be mounted horizontally or vertically.



Specifications:	inch	mm
Measuring range	24"	600mm
Expandable range	36"	915mm
Resolution	.00005"	.001mm/.0005mm
Repeatability	on plane ≤ 0.0001" on bore ≤ 0.0002"	0.003mm 0.005 mm
Max Measurement speed	24"/sec	600mm/sec
Measuring Force	.27lbf ± 0.04	1.2 N ± 0.2
Max. Permissible error* (μm)	3+L(mm)/250	
Max Error (full range of gage)*	.0002"	5μm
Squareness **	0.0004"	10 μm
Air Cushion	Standard	
Operation time (battery)	16 hrs	
Operation temperature	50°F to 104°F	10°C to 40°C
Weight	53 lb	24 kg
Standard probe	Carbide ball dia Ø0.236 x 2"	Ø6 X 50mm

* values valid with standard ball probe at temperature 20°C ± 0.5°C
** With electronic probe Magnascan50

Part Number	Description
54-180-600	Z-600 1D Motorized Height Gage

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

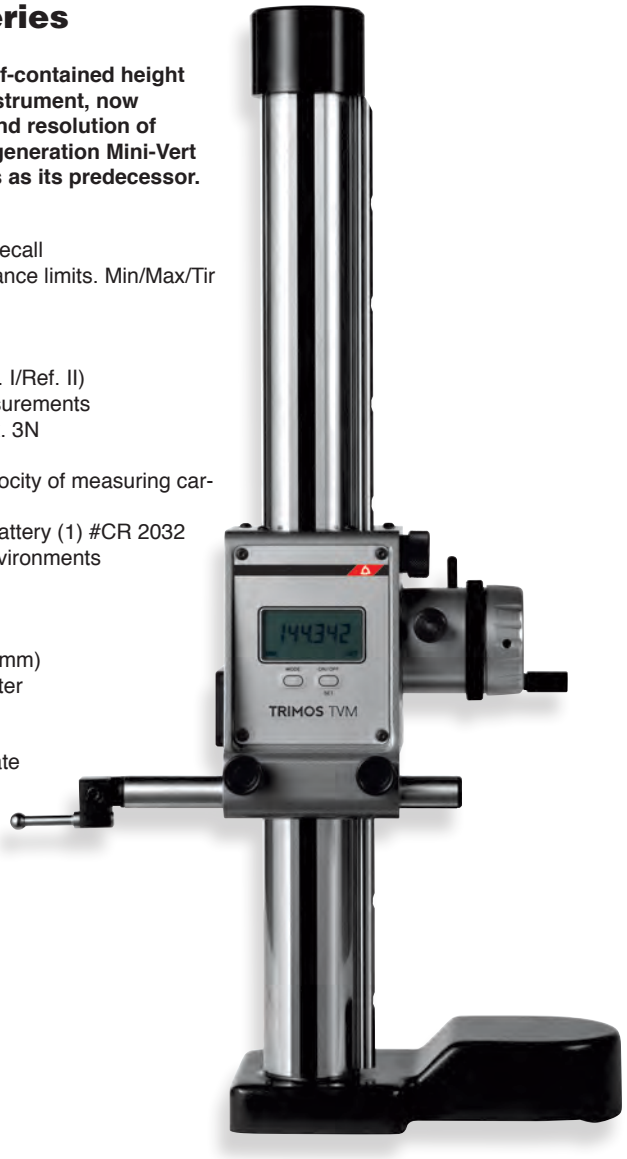
Mini-Vertical Series

Mini-Vertical Series II, a self-contained height measuring and scribing instrument, now with direct RS232 output and resolution of .00005"/.001mm. The new generation Mini-Vert uses the same accessories as its predecessor.

- Zero setting at any position
- Input of preset values and recall
- Setting and display of tolerance limits. Min/Max/Tir modes
- Hold display function
- Inch/Metric selection
- Two reference datums (Ref. I/Ref. II)
- Accurate and positive measurements
- Measuring pressure approx. 3N
- Bidirectional data output
- Maximum displacement velocity of measuring carriage 40"/sec. (1m/sec.)
- Power supply: 3 V lithium battery (1) #CR 2032
- Robust design for harsh environments

Standard Equipment

Each unit includes:
- Main probe holder 5.9"(150mm)
- One ball probe 8mm diameter
- Protection cover
- Instruction manual
- Test and guarantee certificate



Swiss Quality!

Fowler OPTO INTERFACE

Fowler RS-232 BI-DIRECT

Fowler 5 FIVE YEAR WARRANTY

Ideal for measuring and scribing

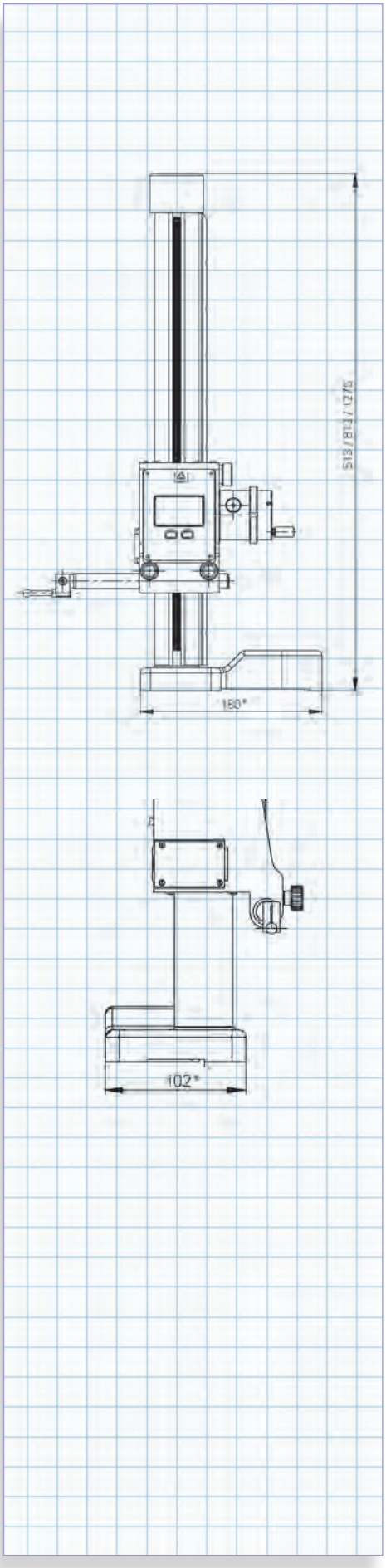
Specifications

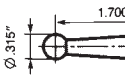
Model:	54-180-212 & 215	54-180-224 & 226	54-180-101
Measuring range:	12.6" (320mm)	24.4" (620mm)	40"(1020)
Accuracy over full range: (maximum error)	.0008" (.02mm)	.0012" (.03mm)	.0016"(.04mm)
Weight with cast iron base:	13.7 lbs.	23.2 lbs.	45 lbs.
Weight with granite base:	30.9 lbs.	40.4 lbs.	-

Part Number	Description
54-180-212	12.6"(320mm) Mini-Vertical with cast iron base
54-180-215	12.6"(320mm) Mini-Vertical with granite base
54-180-224	24.4"(620mm) Mini-Vertical with cast iron base
54-180-226	24.4"(620mm) Mini-Vertical with granite base

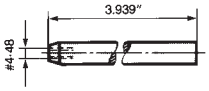
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Mini-Vertical Series

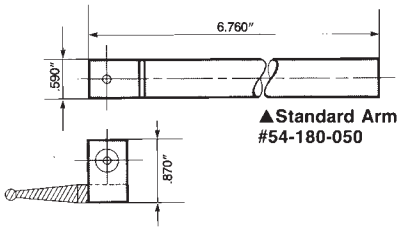




▲Standard Ball Probe.
#54-180-060

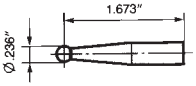


▲#4–48 probe shaft for Indicator Points.
#54-180-031

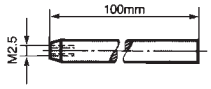


▲Standard Arm
#54-180-050

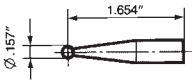
▲Standard Intermediate Connector.
(Used with Standard Arm).
#54-180-055



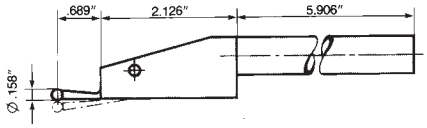
▲.236" Diameter Ball Probe.
#54-180-236



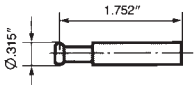
▲Metric probe shaft for Indicator Points.
#54-180-030



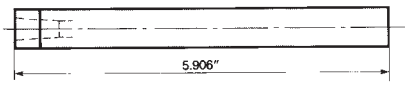
▲.157" Diameter Ball Probe.
#54-180-157



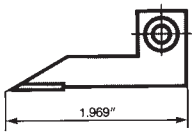
▲Bi-directional Probe.
#54-180-040



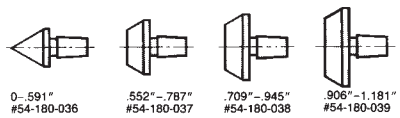
▲Disc shape Probe.
#54-180-315



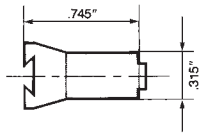
▲Centering Cone Holder.
#54-180-035



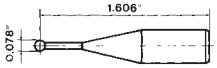
▲Scriber attachment.
#54-180-025



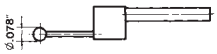
▲Centering Cones.
Available individually or in sets.



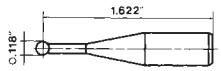
▲Dovetail Clamp for Indicators.
#52-565-093



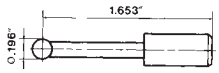
▲ .078" Dia.Ball Probe #54-180-152.



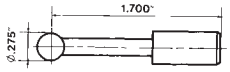
▲ .078" Dia. contact point for Bi-directional Probe #54-180-042.



▲ .118" Dia. Ball Probe #54-180-153.



▲ .196" Dia. Ball Probe #54-180-155.



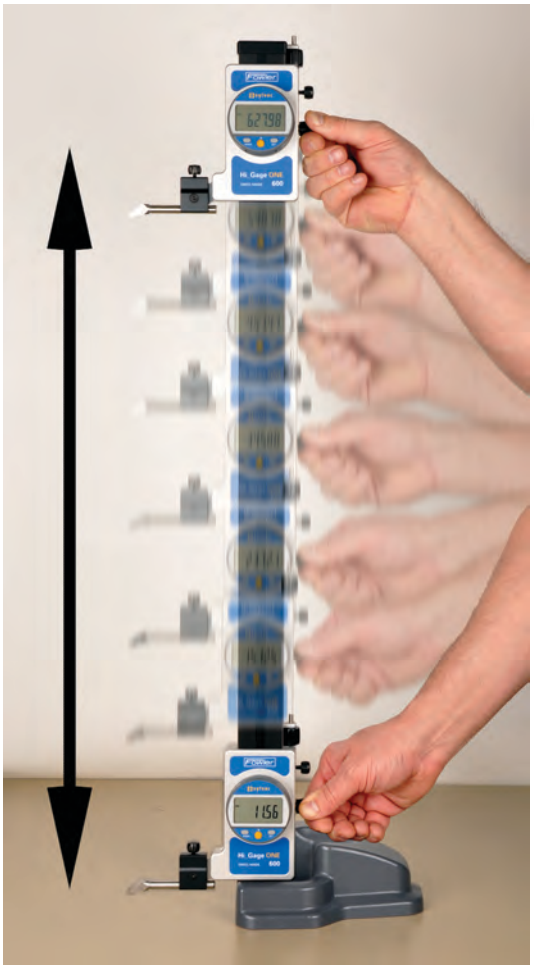
▲ .275" Dia. Ball Probe #54-180-156.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Hi_Gage One Electronic Height Gage

Fowler-Sylvac's new Hi_Gage One Electronic Height Gage features a proven electronic scale that is not affected by oil, dust, chips or shock.

- Scale not affected by oil, dust, chips, magnetism, shock, etc.
- Direct RS-232 output
- The Sylvac measuring system is exceptionally fast (60"per second traverse) and is the most reliable and maintenance free system ever created for measurement.
- Customizable with free software
- True inch/metric conversion
- Accuracy: .002"/50µm
- Resolution: .0005"/.01mm
- Repeatability: .0004"/10µm
- Base Size: 5.6" wide X 6.8" length
- 8mm probe shank
- Probe size memory and directional sensing allow diameter and slot width measurement.



Exceptionally fast (60"per second traverse)!



Smooth, quick lock-release carriage movement

Part Number	Range/Description
54-212-016-1	0—16"/400mm Hi_Gage One
54-212-024-1	0—24"/600mm Hi_Gage One
Accessories	
54-212-001-0	Indicator post attachment
54-100-350	CR2032 Batter

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Digital Ultra-Height Gages

Fowler's "Ultra-Height" has evolved to bring you the finest digital height gage of its kind in the industry.



Design Features:

- Resolution: .0005" (.01mm).
- Lock screw: for scribing, transferring, etc.
- Microfine adjustment screw. Lock screw locks unit before using fine adjustment screw.
- Sturdy single column beam: hardened, ground and stress relieved. Sealed-in Sylvac electronic scale is unbreakable and not affected by oil, dust, chips, magnetism, shock, etc.
- Robust base is fully hardened, ground and microlapped to ensure accuracy. Stress-relieved base. The base/scriber design allows direct zero reading from the base over the full range. Base size: length 6", width 3-1⁄2", height 2-1⁄2".
- Carbide-tipped scriber

Electronic Specifications:

- Completely re-engineered measuring sensor, a marked improvement of the already proven Sylvac capacitive measuring system.
- Incremental floating zero. Deviations are read out directly with no math.
- Direct inch/metric conversion
- 2 presetable references
- Increased measuring, tracking speed of approximately 60"/second.
- Zero button may be reconfigured as a hold button. If tool is used for SPC, it'll automatically be configured as a data output switch.
- Large, high contrast LCD display indicates in/mm, hold, and zero functions.
- Hold feature freezes display for later viewing. Ideal for hard to reach places.
- Low drain, high efficiency lithium wafer battery 4500 hrs. of continuous on time.
- Direct RS-232C output.
- Direct connection to any PC computer or printer without an interface.

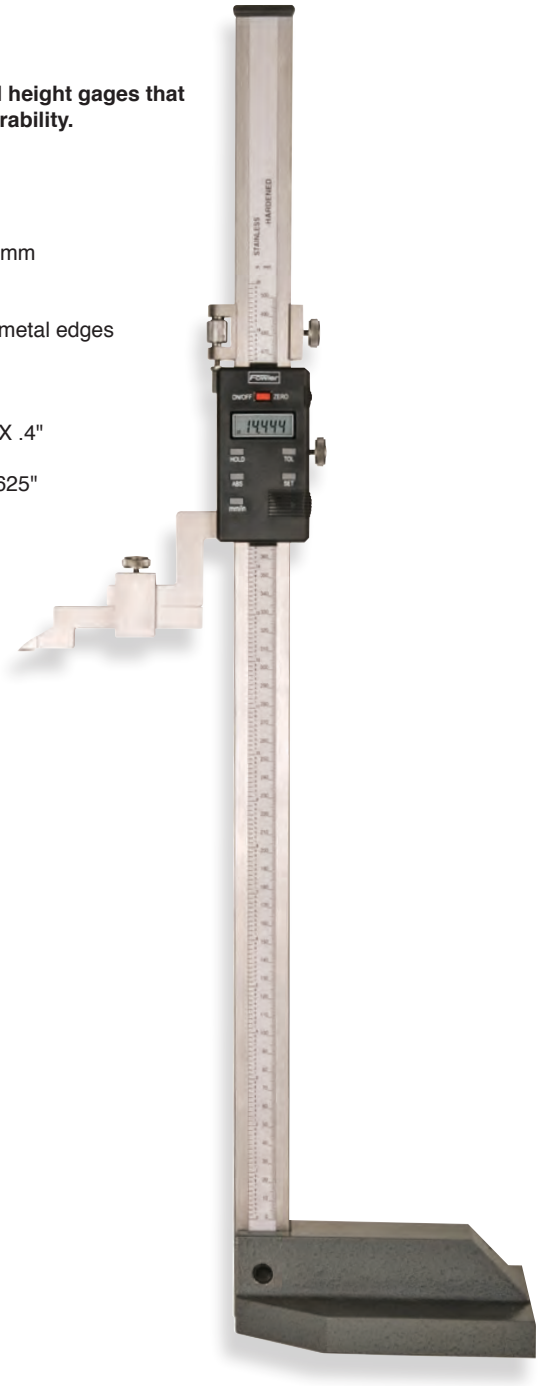
Part No.	Description	Overall Accuracy	Overall Height	Weight
54-105-012	0-12"/0-305mm	±.0015"/±.035mm	18-3/4"/475mm	8 lbs/3.6 kgs
54-105-024	0-24"/0-600mm	±.002"/±.05mm	30"/750mm	11.5 lbs/5.2 kgs
54-105-040	0-40"/0-1000mm	±.003"/±.07mm	46"/1170mm	47.5 lbs/21.6 kgs
Accessories:				
54-115-525	Opto USB Cable			
54-115-333	Opto Serial Cable			
54-100-350	Replacement battery (one required).			
52-565-050	Indicator holding bar with dovetail clamp.			
52-177-024	Replacement case for No. 54-105-024.			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Electronic Height Gage

No. 54-106-020 & 040 an economical height gages that offers high quality, accuracy and durability.

- Large base for easy movement
- True inch/metric conversion
- Range: 0—20"/500mm or 0-40"/1000mm
- Resolution: .0005"/.01mm
- Repeatability: .0005"/.01mm (±2s)
- Deluxe wooden case with reinforced metal edges
- Large easy to read LCD
- Non-glare chrome reading surface
- Overall height of 54-106-020: 28"
- Beam thickness of 54-106-020: 1.25 X .4"
- Overall height of 54-106-040: 50"
- Beam thickness of 54-106-040: 2 X .625"
- Presetable display



▲ *No. 54-106-020*

Part Number	Range	Accuracy
54-106-020	0—20"/500mm	±.0025
54-106-040	0—40"/1000mm	±.0035
54-902-110	Battery E-357	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Z-HEIGHT Electronic Height Gage

- Direct Inch/Metric Conversion
- Accuracy:
  - 0-12" model: ±.0015"
  - 0-18" model: ± .002"
  - 0-24" model: ± .003"
- Resolution .0005" (.01mm)
- Large, high contrast LCD display
- Hold feature
- ABS/INC Measurement
- Floating zero
- Positive lock
- Carbide scriber



Part Number	Range	Accuracy
54-175-012	0-12"/0-300mm	±0.0015"
54-175-018	0-18"/0-450mm	±0.002"
54-175-024	0-24"/0-600mm	±0.003"
54-100-350	Replacement Battery	

Z-HEIGHT-Jr. 6" Electronic Height Gage

- Direct Inch/Metric Conversion
- Range: 6"/150mm
- Accuracy: .001"
- Resolution .0005" (.01mm)
- Large, high contrast LCD display
- Hold feature
- ABS/INC Measurement
- Floating zero
- Positive lock
- Carbide scriber



Part Number	Range	Accuracy
54-175-006	0-6"/0-150mm	0.001"
54-100-350	Replacement Battery	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

TWINZ-HEIGHT

Twin Beam Electronic Height Gage

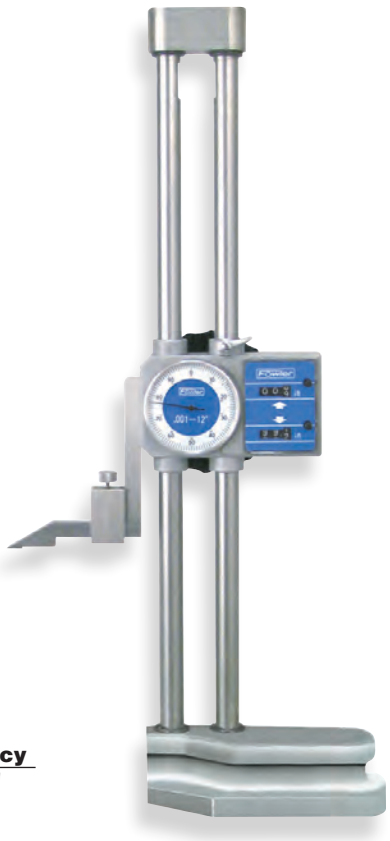
- Large LCD display
- Direct inch/metric conversion.
- Resolution: .001"/.01mm
- Hold function
- ABS/INC function allows measurements of the true size or comparison measurements of parts to master.
- Dual chrome plated beams.
- Carbide tipped scriber.
- Base is hardened, ground & lapped for maximum flatness.
- Patented measuring system.
- Includes indicator holding bar.
- Includes molded case.



Part Number	Range	Accuracy
54-174-212-1	12"/300mm	.002"
54-174-224-1	24"/600mm	.003"

Twin Beam Dial Height Gage

- Separate digit counters register both upward & downward travel.
- Zero setting can be obtained throughout the gage's range.
- Coarse readings in .100" graduations: fine readings taken on indicator are .001"
- Dual chrome plated beams.
- Carbide-tipped scriber.
- Base is hardened, ground & lapped for maximum flatness.



Part Number	Range	Accuracy
52-174-212	12"	±0.0015"
52-174-224	24"	±0.002"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Dial Height Gage



Fowler's Dial Height Gage features a large easy-to-read "one-rev" dial and a fine-adjust for precise control. It is an excellent choice when a high quality, economical height gage is needed.

Special Features:
- Stainless steel construction with satin chrome finish.
- Indicator holder included.
- Easy-to-read large 1 rev. dial.
- Graduations: 0.001"
- Carbide-tipped scriber
- Ergonomically shaped base for ease of handling.
- Fine-adjust for precise control.

Part Number	Range
52-170-012	0—12"

Vernier Height Gage

First choice for an all-around Height Gage design, this series offers every feature to help make your work very fast, easy and extremely accurate.

Features:
- The adjustable main scale has a full 3⁄4" adjustment range. You can quickly "reset" zero or any reference figure at any point for easy reading without special calculations.
- Swing-away magnifier plus extra long vernier scales with wide separations in inch and metric for exact and precise reading.
- Ultra-smooth fine adjustment mechanism.
- Carbide tipped scriber is offset for direct reading over the full range of travel.
- Satin-chrome finish on all scales and plates for glare free reading. Raised lands on main scale surfaces prevent friction wear.
- Beam & slide of hardened stainless steel. Base and measuring surfaces all hardened tool steel, carefully ground and microlapped.
- Price includes height gage, carbide tipped scriber, and magnifier



Adjustable main scale control.

	Capacity		Graduations	
Part Number	Inch	Metric	Inch	Metric
52-174-012	12"	300mm	.001"	.02mm
52-174-018	18"	450mm	.001"	.02mm
52-174-024	24"	600mm	.001"	.02mm
52-174-040	40"	1000mm	.001"	.02mm
52-174-250	Holding bar for test indicators .350" x .350" (includes clamp)			

▲ *Vernier Height Gage No. 52-174-012.*

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Hi_Cal XZ



Specialty gage that checks both heights and diameters.

Eliminates swing gages.





The Hi_Cal XZ is a highly accurate 2-axis electronic height gage that was developed by Fowler and Sylvac for aircraft engine manufacturers. The Hi_Cal XZ eliminates the need for multiple diameter gages at multiple depths.

- Innovative method to measure your large ID and OD
- Gage point measurement on angled surfaces.
- Z range 300mm/12", 150mm/6"
- X range 80mm/3"
- Portable

For more information on the Hi_Cal XZ
Contact the Fowler Technical Department.

Part Number	Description
54-930-000	Hi_Cal XZ

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

4mm Height Gage Probes

Description	Part No.
Ruby ball probe Ø 3mm	54-930-211
Ruby ball probe Ø 2mm	54-199-509
Tungsten carbide ball probe Ø 1mm	54-199-512
Knife-edged measuring probe TC Ø 3mm	54-199-510
Cylindrical measuring probe TC Ø3mm	54-199-511
Probe holder 90° M2.5	54-199-507
Probe holder 90° Ø 4mm	54-199-508
Knife-edge insert	**54-190-043**
Pin shaped insert	**54-190-046**
Ball insert	**54-190-044**
Disc shaped insert	**54-190-047**
Hi-Cal Setting gage	54-930-202
Charging set 120V US for Hi-Cal and V-Series	54-199-018

Description	Part No.
Swiveling tungsten carbide ball probe (M134)	54-930-212
Extension 124mm M2.5	54-199-505
Extension 80mm M2.5	54-199-506
Probe holder and ruby ball probe Ø3mm, M2.5	54-199-501
Disk shaped anvils Ø7.7mm and Ø11.5mm, M2.5	54-199-502
Ball point Ø 2mm/M2,5	**54-199-504**
Corner insert 1mm/M2,5	**54-199-503**
Full accessories set in wooden box. Content: 54-199-509, 54-199-512, 54-199-510, 54-199-511, 54-199-507, 54-199-508, 54-199-502, 54-199-506, 54-618-540, 54-199-501	54-930-215
Basic accessories set in wooden box. Content: 54-199-509, 54-199-512, 54-199-510, 54-199-511	54-930-217
External contact (foot-pedal) for Hi-Cal and V-Series	54-618-165

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

8mm Height Gage Probes

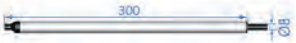
Insert holder (metrique) M2.5 L=95 mm

Insert holder (inch) 4-48 L=95 mm
54-194-930, 54-194-931



Insert holder (metrique) M2.5 L=300 mm

Insert holder(inch)4-48 L=300 mm
54-194-607, 54-194-608



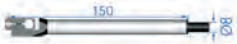
Holder with reduction 8 mm/4 mm
For use with Sylvac Probes ***54-194-934***



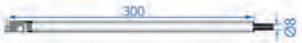
Swivel holder
Ø 8 mm, Ø 4 mm
54-194-935



Swivel holder
Ø 8 mm, Ø 4 mm L=150 mm
54-194-936



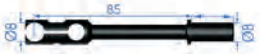
Swivel holder
Ø 8 mm, Ø 4 mm L=300 mm
54-194-610



Insert holder 90° Ø 4 mm L=65 mm
54-194-938



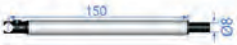
Insert holder 90° Ø 8 mm L=85 mm
54-194-939



Insert holder 90° Ø 4 mm L=150 mm
54-194-940



Insert holder 90° Ø 8 mm L=150 mm
54-194-917



Insert holder 90° Ø 4 mm L=300 mm
54-194-941



Measuring insert holder Ø 2 mm
54-194-942



Measuring insert holder Ø 2 mm

Measuring insert holder Ø 2 mm
54-194-943



Measuring insert holder for
M2.5, M1.6, M1.4

Measuring insert holder for
4-48, M1.6, M1.4 for Mestra/Vectra
54-194-948, 54-194-949



Electronic probe
run 12 mm, accuracy ± 1 µm
54-194-605





Setting gauge 25 mm
for Mestra/Vectra and V Series
Setting gauge 1"
54-194-070, 54-194-075



Ball probe tungsten carbide Ø 1mm
54-194-905



Ball probe tungsten carbide Ø 2mm
54-194-906



Ball probe tungsten carbide Ø 2mm
54-194-907



Ball probe ruby Ø 2mm
54-194-908



Ball probe tungsten carbide Ø 4mm
54-194-909



Ball probe tungsten carbide Ø 4mm
54-194-910



Ball probe ruby Ø 4mm
54-194-911



Probe with pin tungsten carbide Ø 1.5mm
54-194-912



Measuring insert with parallel faces
54-194-913



Barrel-shaped
insert for M3-M16
54-194-914



Barrel-shaped
insert for M6-M48
54-194-915



Barrel-shaped
insert for M12-M150
54-194-916



Other Height Gage Accessories (not shown)

54-199-000	Printer including: Printer & AC adaptor (without cable & bracket)
54-199-005	Complete Printer kit (Includes printer, AC adaptor, cable and bracket)
54-199-004	Printer bracket with mounting hardware
54-199-002	RS232 printer cable
54-618-166	RS232 PC cable
54-199-010	Thermal printer paper (5 rolls)
54-199-018	110V AC adaptor for V Series
54-199-580	V-Series setting gage
54-199-560	Wooden accessory support block

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Order Number	Description
54-194-016	**4mm Probe Set** **Includes:** Case Hemispheric probe Probe with pin (plus 4 additional pins) 54-199-502 Disc-shaped insert Ø 7.7mm Disc-shaped insert Ø 11.5mm 54-199-503 Corner insert 1mm Test indicator tip Ø 1mm Test indicator tip Ø 2mm Test indicator tip Ø 3mm 54-194-948 Measuring insert holder for: M2.5, M1.6, M1.4 54-199-507 Insert holder L=80mm M2.5 54-197-508 Insert holder 90° L=80mm Ø 4mm 54-199-512 Measuring insert holder Ø 1mm 54-199-509 Ruby Ball Probe Ø 2mm Ball Probe Ø 1mm 54-199-510 Knife-edged measuring probe L=88mm 54-199-019 Holder with reduction 8mm/4mm 54-194-935 Swivel holder Ø4/Ø8mm Key for ball insert Hex wrench 1.5mm Hex wrench 2.5mm



Order Number	Description
54-194-017	**8mm Probe Set** **Includes:** Case 54-194-910 Carbide Ball Probe Ø 4mm L 140mm 54-194-906 Carbide Ball Probe Ø 2mm 54-194-912 Carbide Probe with pin Ø 1.5mm 54-194-938 Swivel holder 90° Ø 4mm 54-194-942 Measuring insert holder Ø 2mm 54-194-930,931 Insert holder (metric) M2.5 54-199-505 Insert holder L=124mm M2.5 Insert holder L=200mm M2.5 Hemispheric probe tip Disc-shaped insert Ø 18mm Test indicator tip Ø 1mm Test indicator tip Ø 2mm Test indicator tip Ø 3mm Key for ball tip Hex wrench 2.5mm



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?



There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?



Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?



Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



HORIZONTAL MEASUREMENT

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept Nano Calibration System

The Labconcept Nano is a new reference in the field of dimensional metrology. It integrates almost 40 years of knowledge and continuous improvement. It is a remarkable instrument for all measuring tasks that require extremely high accuracy.



Swiss Quality!

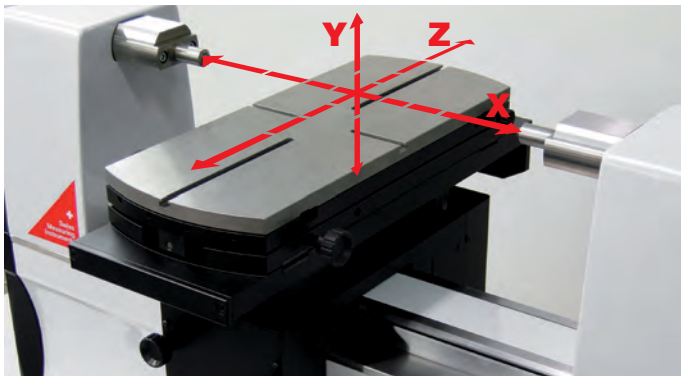
Fowler 5 FIVE YEAR WARRANTY

Unique 3 axis motorized calibration.

Fast internal thread ring measurement.

The uncompromising design of the Labconcept Nano offers an ideal and performing platform for checking and calibration of all kinds of gages and measuring instruments. Checking of internal and external dimensions will be done as a fully automatic procedure by the three motorized axis XYZ and the legendary simplicity of use of the Trimos® WinDHI software.

The Labconcept Nano is completely designed and manufactured in Switzerland according to the highest quality standards.



- Unequalled high level of accuracy
- Exceptional repeatability
- Test Equipment Management System QMSOFT allows the inspection and management of gage data included standard.
- Trimos® WinDHI Software allows the user to perform all measuring functions through a user-friendly interface included standard.
- Motorized measuring carriage, X axis, selection of speed by software included standard.
- Motorized universal measuring table, CNC Y and Z axis with integrated measuring system.
- Measuring force (0-12N) and locking of measuring anvil performed by software.
- Integrated temperature compensation system included standard.
- Absolute measuring range on all models 350 mm.
- Application ranges of 350, 600 and 1100 mm.
- Measuring of parts up to 60 kg in weight.
- Bench with computer and two touch screens included standard.
- Optional pneumatic vibration bench.

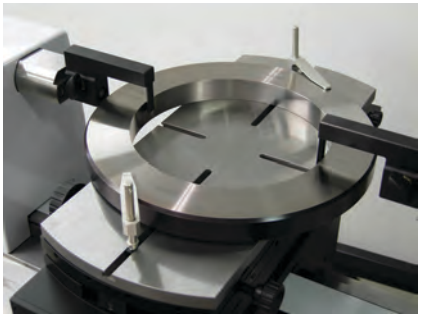
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept Nano Applications

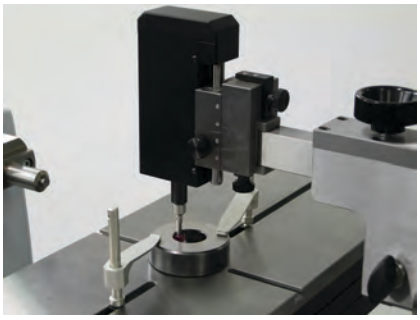
APPLICATION VERSATILITY

It is possible to check all kinds of gages such as plain ring gages, plain plug gages, pins, threaded ring and plug gages, conical thread ring and plug gages, gage blocks, snap gages, gage bars etc.

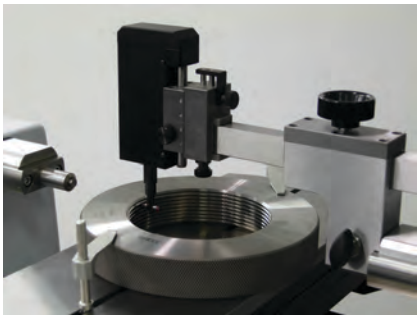
A large range of accessories is available as standard. Accessories to suit special application can be supplied.



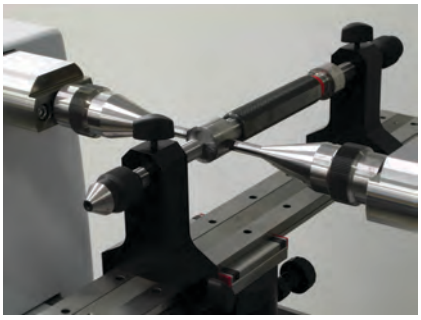
Checking of large plain ring gages



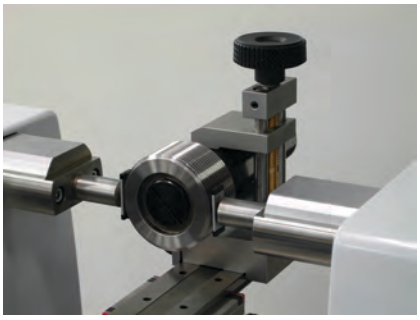
Checking of small plain ring gages from Ø 2 mm as standard



Checking of thread ring gages from M3 as standard



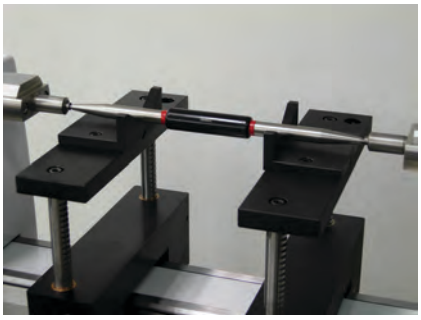
Checking of plain plug gages



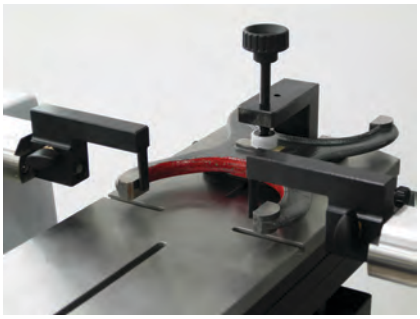
Checking of thread plug gages



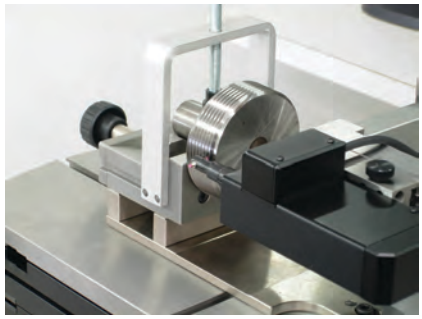
Checking of master gage blocks



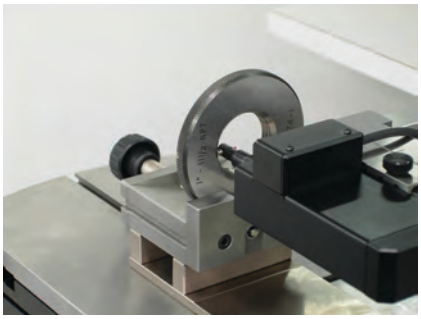
Checking of gage bars



Checking of snap gages



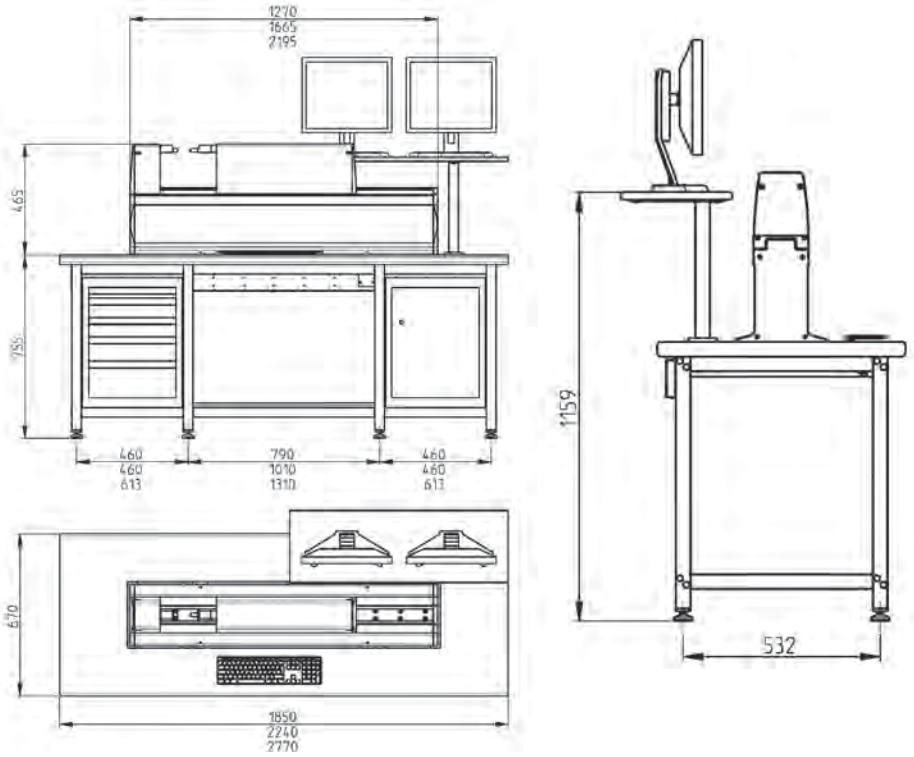
Checking of taper thread plug gages



Checking of taper thread ring gages

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept Nano Calibration System



Labconcept Nano		350	600	1100
Absolute measuring range [1]	in (mm)	14" (350)	14" (350)	14" (350)
Application range	in (mm)	0-14" (350)	0-24" (600)	0-44" (1100)
Max permissible errors [2]	µm	0.07+L(mm)/2000		
Max resolution	in (mm)	0.0000001 (0.000001)		
Repeatability (2s) [2]	µm	0.03		
Measuring force (adjustable by software)	N	0-12		
Operational temperature	°C	+15° to 35° C		
Stocking temperature	°C	-10° to 50° C		
Relative humidity	%	20 .. 80		
Weight	kg/lbs.	350/770	420/924	500/1100

1) May vary according to accessory used.

2) Values valid at a temperature of 20 ± 0.2°C and relative humidity of 50 ± 5%

Measuring Table with Motorized Y and Z Axis		
Z axis, displacement range [3]	mm	100
Y axis, displacement range [3]	mm	50
X axis floating movement	mm	± 10
Angle of rotation φ Y	°	± 1.5
Angle of inclination φ Z	°	± 4
Max. weight of parts	kg	60

3) Both axes have an integrated measuring system.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Labconcept Premium

Universal Length Measuring Instrument



Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Fowler RS-232 DIRECT

Premium features:
0-300mm
0-500mm
0-1000mm

Maintain accuracy over range without mastering.

The Fowler/Trimos LABCONCEPT Premium Universal Length Measurement System combines the ultimate in accuracy, performance, range and simplicity in an easy to use, robust instrument.

It can calibrate all types of standards including plug gages, ring gages, thread plug gages, thread ring gages, snap gages, depth gages, dial indicators and more.

A large variety of accessory supports and probes allow unmatched versatility in checking both internal and external dimensions.

- Measuring range 0—12" (0—300mm)
- Developed for ISO 9000/2000 standards
- Switchable Resolution; .0001", .00001", .000001", or .001mm, .0001", .00001mm
- Wide range of easily interchangeable accessories
- Adjustable measuring force 0—12N
- Displacement speed of measuring carriage = 60"/sec(1.5m/sec)
- Fine adjustment range = .394"/10mm
- Operational temperature limit 10˚-40˚C
- Operational humidity limit 30 - 80%

QMSOFT software *(page 390)* **is the perfect calibration and data management tool for use with this product!**

Specifications	
Measuring range	0-12"(300mm)
Accuracy	0.1μm+(L(mm)/2000)μm
Repeatability (±2S)	.000002"/.04μm
Display	Computer added screen display: PC w/flat screen monitor, DDE server and Trimos WIN DHI software for display of functions and measuring results
Resolution, switchable	.0001", .00001", .000001" or .001mm, .0001mm, .00001mm

Part Number	Description
54-197-300	0-12"(300mm) LABCONCEPT Premium*

Also available in 0-20"(500mm) and 0-40"(1000mm).
Contact the Fowler Technical Department for more info.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept

Universal Length Measuring Instrument



Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Fowler RS-232 DIRECT

The Fowler/Trimos LABCONCEPT Universal Length Measurement System combines the ultimate in accuracy, performance, range and simplicity in an easy to use, robust instrument.

It can calibrate all types of standards including plug gages, ring gages, thread plug gages, thread ring gages, snap gages, depth gages, dial indicators and more.

A large variety of accessory supports and probes allow unmatched versatility in checking both internal and external dimensions.

- Large measuring range 0—20" (0—500mm) and 0—39.4" (0—1000mm)
- Developed for ISO 9000/2000 standards
- Switchable Resolution; .0001", .00001", .000001", or .001mm, .0001", .00001mm
- Wide range of easily interchangeable accessories
- Adjustable measuring force 0—12N
- Displacement speed of measuring carriage = 60"/sec(1.5m/sec)
- Fine adjustment range = .394"/10mm
- Operational temperature limit 10˚-40˚C
- Operational humidity limit 30 - 80%

QMSOFT software *(page 390)* **is the perfect calibration and data management tool for use with this product!**

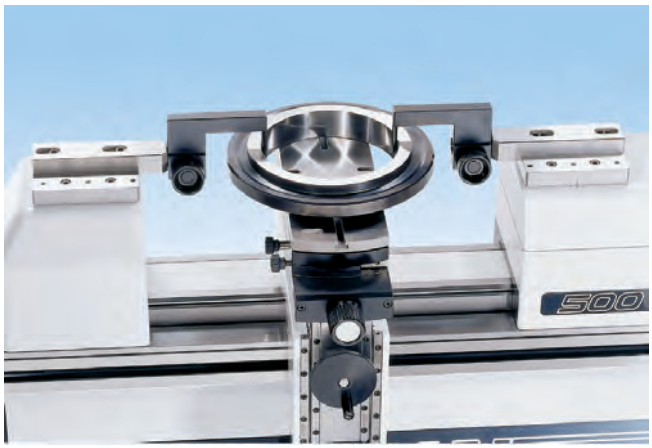
Specifications		
Model	**54-197-777**	**54-197-877**
Measuring range	0—20"(500mm)	0—40"(1000mm)
Accuracy	<0.3µm+(L(mm)/1500)µm	<0.3µm+(L(mm)/1500)µm
Repeatability (±2S)	.000004"/.0001mm	.000004"/.0001mm
Display	Computer added screen display: PC w/flat screen monitor, DDE server and Trimos WIN DHI software for display of functions and measuring results	
Resolution, switchable	.0001", .00001", .000001" or .001mm, .0001mm, .00001mm	
Weight	176 lbs (80kg)	264 lbs (120kg)

Order Number	Description
54-197-777	0—20"(500mm) LABCONCEPT Length Measuring System
54-197-877	0—40"(1000mm) LABCONCEPT Length Measuring System

60"/1500mm and 80"/2000mm lengths available. Contact the Fowler Tech Department for pricing info.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

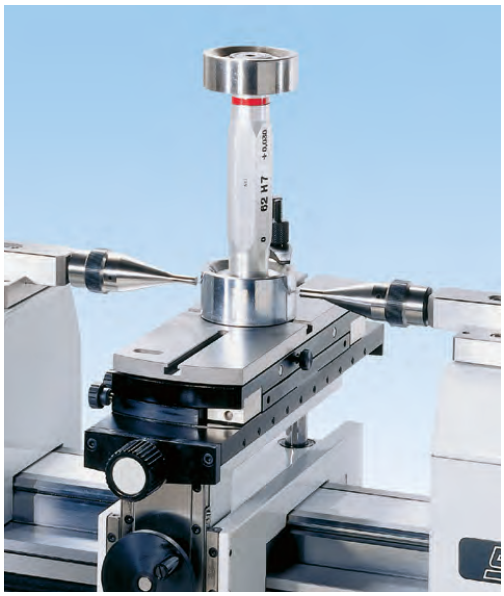
Labconcept Applications



▲ Checking of ring gages from dia. .473"(12mm) to 10"(250mm) using table (54-197-011), clamps (54-197-142) & L-probes (54-197-162)



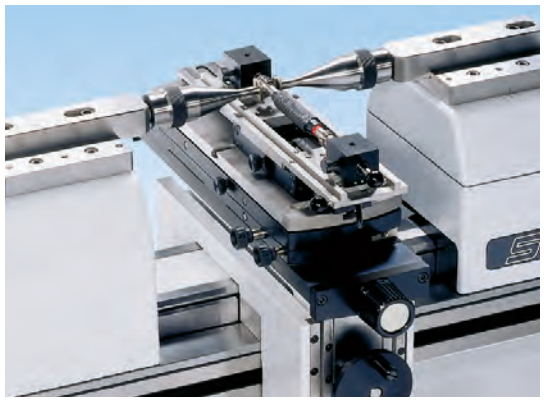
▲ Checking of threaded ring gages from pitch 0.7 to 6mm/48 to 4 threads per inch (max. internal dia. 7.08"/180mm) using table (54-197-011), clamps (54-197-142), Internal measuring device (54-197-074) & T-Ball probes (54-197-075)

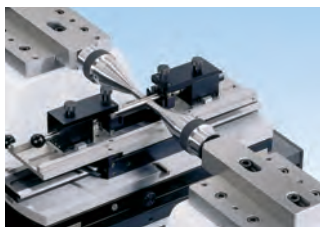


▲ Checking of plug gages and threaded plug gages from dia. 1.18" to 10"/30 to 250mm using table (54-197-011), clamps (54-197-142), small Ø anvils (54-190-806) & thread wires (54-197-007)



▲ Checking of dial indicators and dial comparators up to 2"/50mm range using dial indicator holder (54-197-015)

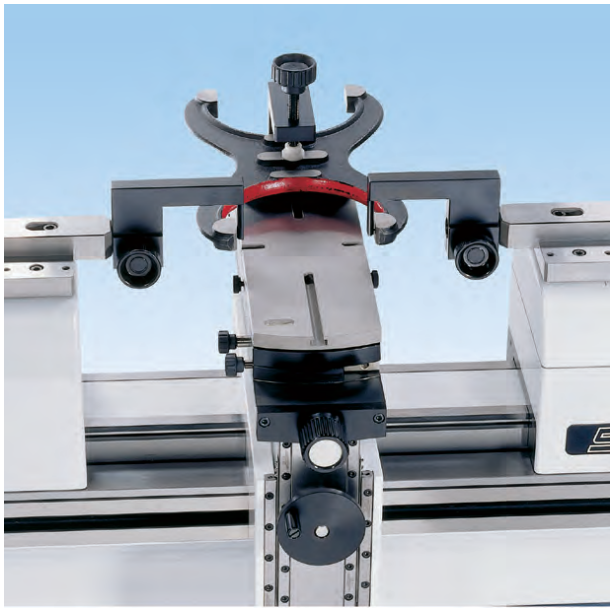




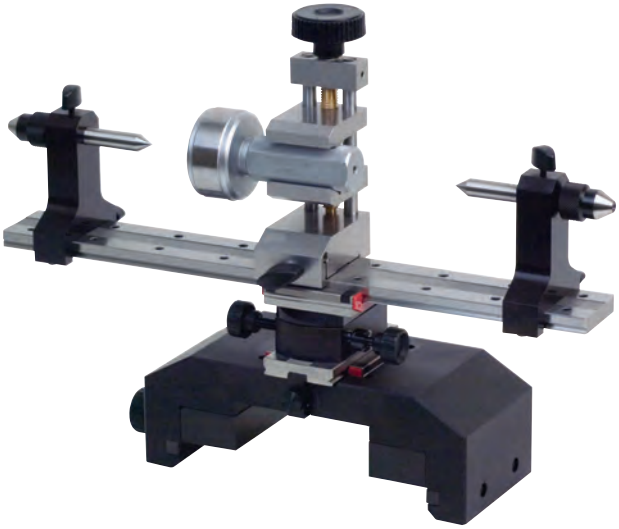
Checking of plug gages and threaded plug gages between centers up to max. dia. 1.18"/30mm, max. length 6"/150mm using table (54-197-011), small Ø anvils (54-197-806) & thread wires (54-197-007)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept Applications



▲ Checking of snap gages with range from .473 to 6"/12 to 150mm using table (54-197-011), snap gage holder (54-197-014) & L-probes (54-197-162)



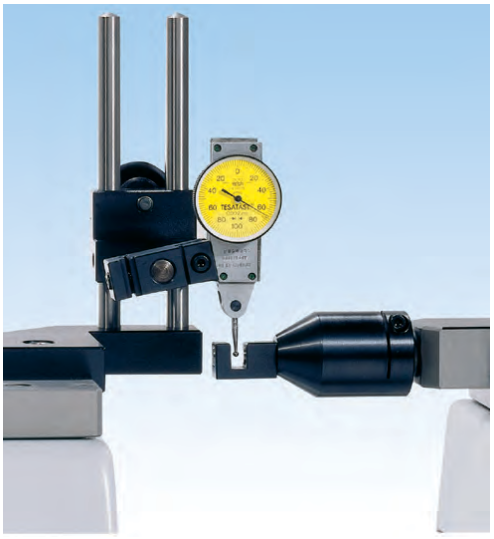
▲ Checking of plugs 4" diameter (100mm), 11" length (280mm) part number 54-197-107



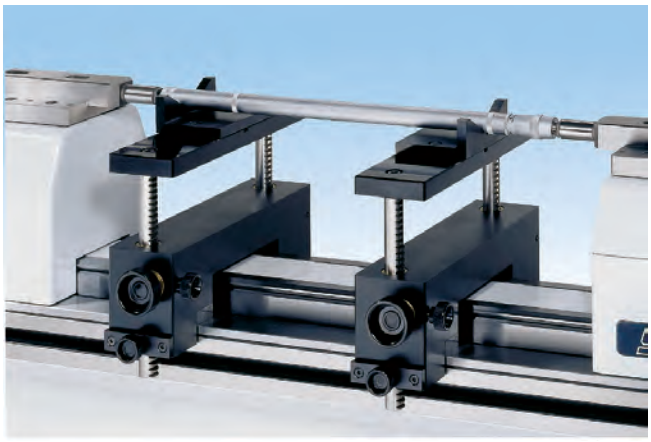
▲ Trimos temperature compensation package 54-197-001



▲ Trimos Heavy Duty Table 54-197-019



▲ Checking of lever (test) dial indicators using 54-197-115



▲ Checking and setting of internal micrometers using vertical supports (54-196-107) & V-attachments (54-196-021)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept Software and Specifications

Order No.	Description
54-197-300	0—12"(300mm) LABCONCEPT Premium Length Measuring System
54-197-777	0—20"(500mm) LABCONCEPT Length Measuring System
54-197-877	0—39.4"(1000mm) LABCONCEPT Length Measuring System
54-197-001	Premium temperature compensation package for Lab Concept
54-197-003	Standard temperature compensation package for Lab Concept
Measuring tables and supports	
54-197-011	Universal measuring table
54-197-019	Heavy duty universal measuring table
54-197-132	Holding device for indicator, fits on 54-197-011 for displacement
54-520-792	2"(50mm) digital indicator for use with 54-197-132
54-196-107	Set of vertically adjustable supports
54-196-108	Vertically adjustable support (one only)
54-196-022	Set of L-shaped supports, fits on 54-196-107
54-196-021	Set of V-shaped supports, fits on 54-196-107
Accessories for setting and checking of comparative measuring instruments and indicators	
54-190-805	Set of carbide Gage blocks attachments 1"(2" total)
54-196-006	Set of carbide Gage blocks attachments min. .8"
54-190-823	Dial indicator holder (for 3/8" and 8mm stems minimum)
54-197-015	Dial indicator holder for max range of 2"/50mm (for 3/8" and 8mm stems)
54-197-115	Adjustable holding device for lever dial indicator
54-190-825	Set of V-shaped blocks for checking external micrometers over 2.36"/60mm fits on No. 54-190-805
54-197-114	Holding device for checking external micrometers from .48"—4"/12—100mm fits on No. 54-197-011
Accessories for external measurements	
54-190-806	Set of anvils with tungsten carbide tipped measuring surface diameter 0.256"/6.50mm
54-197-806	Set of anvils with tungsten carbide tipped measuring surface diameter 0.315"/8mm
54-190-865	Set of knife shaped anvils with tungsten carbide measuring surfaces
54-190-807	Set of anvils with tungsten carbide balls for flat measuring surfaces
54-197-007	Set of wires on holders for checking pitch diameters of external threads, pitch of 72-5 threads per inch/0.25-5mm - requires 54-190-806
54-197-107	High accuracy plug measuring fixture for plugs up to 4" diameter, 11" length
Accessories for internal measurements	
54-197-162	Set of L-shaped probes (minimum internal measurement: .475"/12mm) for height of 1.57"/40mm
54-197-142	Set of clamping attachments for height of 2.36"/60mm
54-197-143	Set of quick clamping attachments
54-197-074	Measuring device for checking of internal diameters from .04"/1mm upwards and pitch diameters of internal threads from M4/32UNC-NC upwards for
54-197-075	Set of T-shaped measuring inserts with ruby balls for pitch from 56 threads per inch/0.7mm upwards - requires No. 54-197-074
54-197-913	T-shaped measuring insert with ruby balls, dia. 0.01319"/.335mm requires No. 54-197-074
54-197-076	Set of ruby ball measuring inserts for checking internal diameters from .04"/1mm upwards - requires No. 54-197-074

QMSOFT software *(page 390)* **is the perfect calibration and data management tool for use with this product!**

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizon Premium

Length Measuring & Setting Instrument



Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Set gages in a fraction of the traditional time needed.

The Trimos Horizon Premium Length Measuring and Setting Instrument fulfills today's requirements of high accuracy quality control equipment. New superior engineering ensures the best measuring results by easy manipulation. The new Horizon Measuring System offers a wide range of accessories to meet numerous measuring and setting applications. Ideal for setting large ID/OD gages, bar gages and swing gages, etc.

Features:

- Meets all ISO 9000/2000 standards
- A dimensionally stable instrument base, well designed mechanics and the use of a high precision measuring system guarantee optimal results.
- Precision guide ways control the sliding, play-free movement of the measuring carriage using the handwheel.
- The locking and fine adjustment device of the measuring carriage allows a quick setting and checking of comparative measuring equipment.
- Adjustable measuring force, 2.7 lbs force with digital indication of force in Newtons facilitates the checking of thread gages.

System Specifications *(all models)*	
Resolution (analog)	0.001", 0.0001", 0.00001" (0.01, 0.001, 0.0001mm)
Resolution (digital)	0.00005", 0.00002", 0.00001", 0.000005" (0.01, 0.001, 0.0001mm)
Repeatability (± 2s)	0.000008"/0.0002mm
Maximum Error	0.7+L(mm)/1000
Measuring Force	0—43 ounces/12N (adjustable) - Constant measuring force of the floating probe movement with digital indication
Displacement speed	60"/sec. - 1.5 m/sec.
Fine adjustment range	0.394"/10mm
Operational temperature limit	10˚—40˚C
Operational humidity limit	30—80%

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizon Premium with Analog Measuring System





Heidenhain ND287

Analog system supplied with:

- Basic instrument, includes two location supports with adjustable bolt pads and location plates for instrument leveling
- Two standard anvils #54-196-321 with tungsten carbide tipped measuring surfaces
- Protective cover
- Instruction manual
- Test certificate and certificate of guarantee
- Direct display of all length measurement values
- Display of minimum and maximum hold values
- Direct inch/metric conversion
- Input and recall of preset values
- Measuring using two references
- Direct RS232 output
- Connector for data transfer using a foot pedal

Display unit and accessories

1 Heidenhain ND287 display unit with non-linear error correction.
1 Location plate and adjustable support
1 Computer connect cable (9p)
1 External switch box and data transfer foot pedal
1 Display unit connection cable• The display unit is positioned on an adjustable support and fixed to the base of the instrument.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizon Premium with Digital Measuring System



0-120" standard

Digital Horizon with computer assisted screen display and Trimos software:

- Dell computer.
- The screen is positioned on an adjustable support and fixed to the base of the instrument.
- DDE server (for Excel, Word, etc.)
- Multi-windows mode on screen.
- Linear type analog display or with pointer, selectable scale resolution.
- Digital display of the selected measuring force in N.
- Direct display of all length measurement values and minimum/maximum hold values.
- Direct inch/metric conversion.
- Selectable resolution: .001", .0001", .00001" or .01mm, .001mm, .0001mm
- Measuring using two references.
- Input of 9 preset values.
- Inversion of measuring direction sign (+/-).
- Data transfer using foot pedal.

Digital system supplied with:

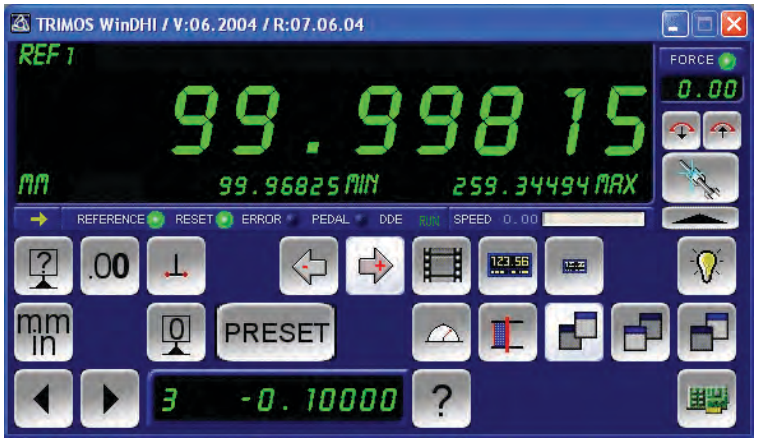
- Basic instrument, includes two location supports with adjustable bolt pads and location plates for instrument leveling
- Two standard anvils #54-196-321 with tungsten carbide tipped measuring surfaces
- Interface and CD-ROM (or floppy disk) with TRIMOS Win DHI installation program, PDF help file and Acrobat Reader.
- Protective cover
- Instruction manual
- Test certificate and certificate of guarantee

Display unit and accessories

1 Flat screen and adjustable support.
1 Industrial computer.
1 Keyboard.
1 Foot pedal for data transfer.
1 Opto connection cable (used for display of measuring force)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

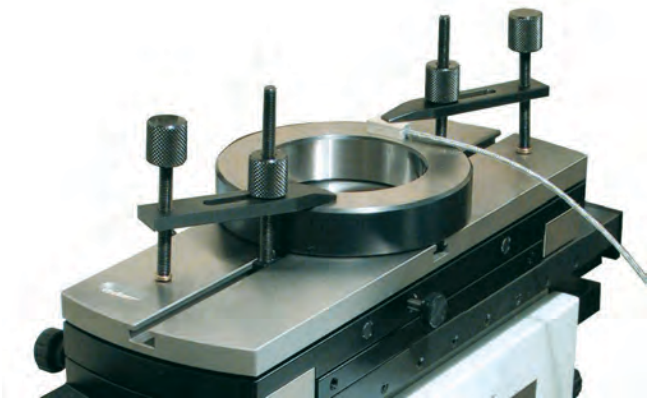
Horizon Premium Displays and Applications



▲ Computer assisted display using Trimos Win DHI XP software (Digital Display)



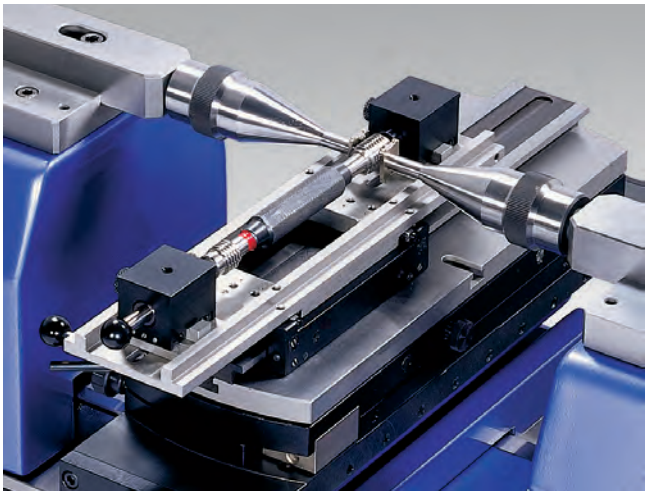
▲ Internal thread measuring display
(Digital Display)



▲ Trimos temperature compensation package 54-197-001



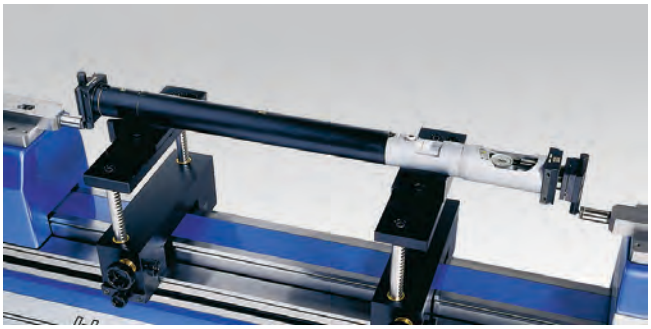
▲ Setting of threaded plug gages from diameter 1.18" to 9.84" (30 to 250mm) using table (54-196-160), small Ø anvils (54-190-806) and thread wires (54-197-007)



▲ Setting of threaded plug gages between centers up to maximum diameter of 1"(26mm), maximum length 6"(150mm) using table (54-196-160), small Ø anvils (54-190-806), thread wires (54-197-007) and plug holder (54-197-006)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizon Premium Applications



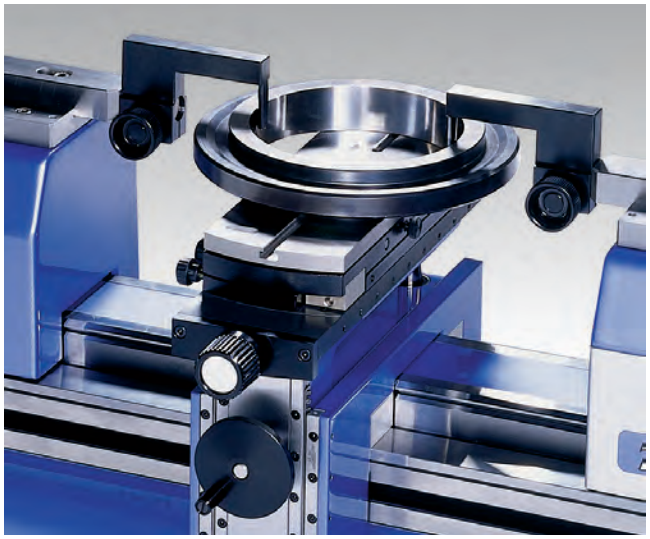
▲ Setting of 2-point bore gages using vertical supports (54-196-107) and A-attachments (54-196-021)



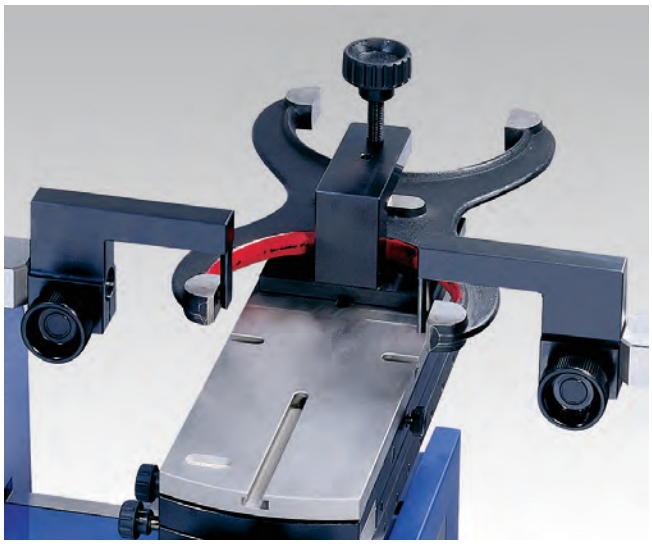
▲ Setting of 2-point bore gages using gage block anvils (54-190-805), bore gage centering supports (54-190-829) and secondary contact support (54-196-040)



▲ Trimos Heavy Duty Table 54-197-019



▲ Checking of ring gages from .473 to 10" (12 to 250mm) using table (54-196-160), L-probes (54-197-162) and clamps (54-197-142)



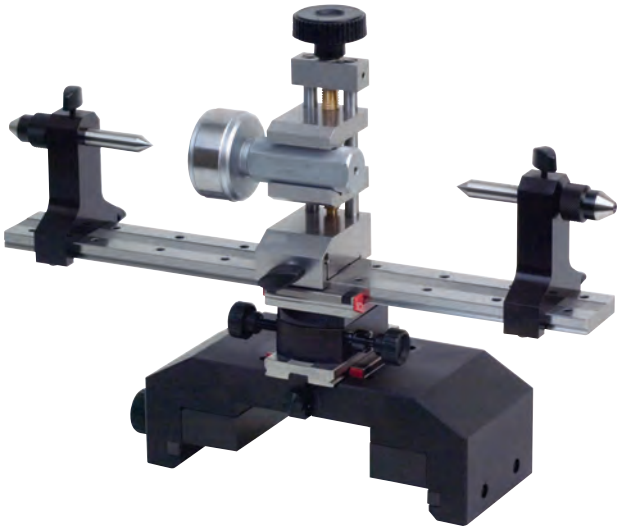
▲ Checking of snap gages from .473 to 6" (12 to 150mm) using table (54-196-160), snap gage holder (54-190-815) and L-probes (54-197-162)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

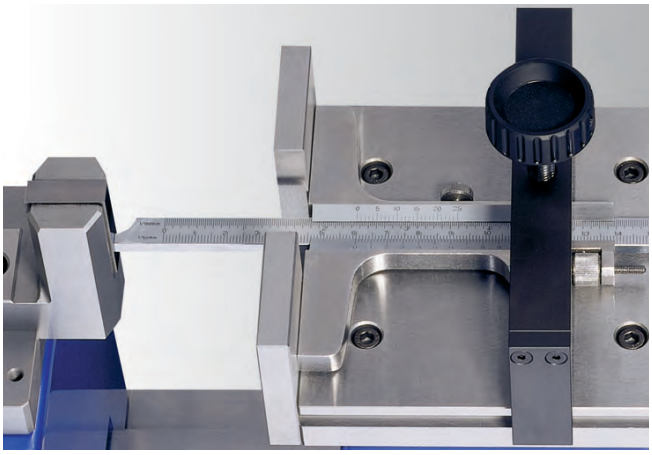
Horizon Premium Applications



▲ Checking and setting of external micrometers from 3" to 120"(75 to 3050mm) using gage block anvils (54-190-805) & micrometer V-supports (54-190-825)



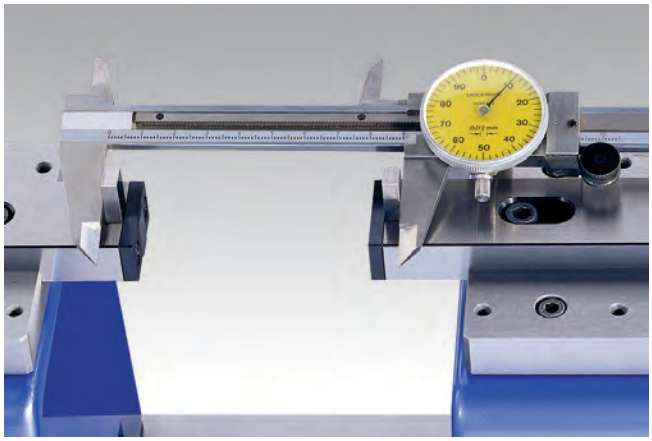
▲ Checking of plugs 4" diameter (100mm), 11" length (280mm) part number 54-197-107



▲ Checking of depth calipers using gage block anvils (54-190-805) & depth gage attachment (54-190-827)



▲ Checking of 8mm dial indicators above range of 50mm using holder 54-190-824 Checking of 3/8" dial indicators up to 2" range using 54-190-823

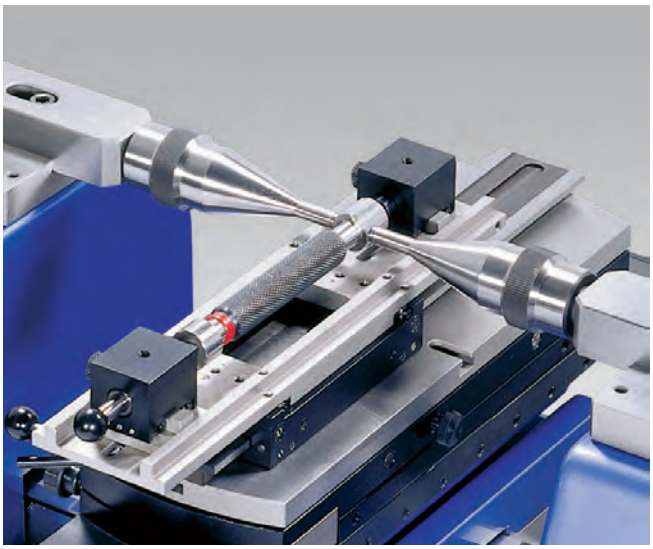


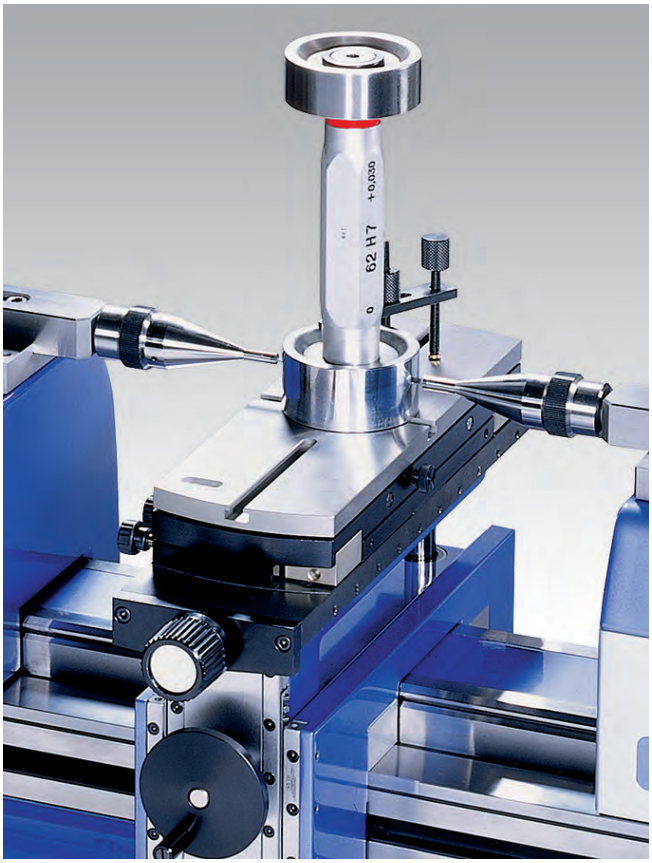
▲ Checking of calipers using 54-196-006

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizon Premium Applications

▼ Setting of plug gages between centers up to maximum diameter of 1.18"(30mm), maximum length 6"(150mm) using table (54-196-160), small Ø anivls (54-190-806) and 54-197-106



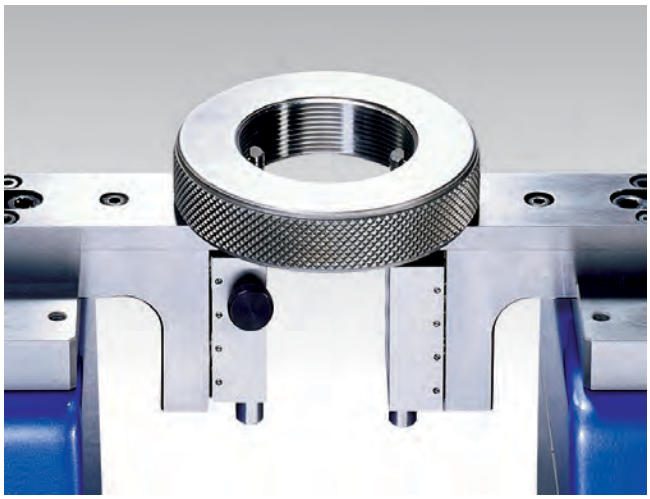


▲ Setting of plug gages from diameter of 1.18" to 10"(30 to 250mm) using table (54-196-160), clamps (54-197-142) and small Ø probes (54-190-806)

▼ Checking of threaded ring gages from pitch 48 to 4 threads per inch/0.7 to 6mm (maximum internal diameter of 7.08"/180mm) using table (54-196-160), clamps (54-197-142), T-probes (54-197-075) and internal measuring device (54-197-074)

Checking of ring gages from diameter of .04 to 4"(1 to 100mm) using single ball probes (54-197-076)





▲ Checking of threaded ring gages (low cost method) from minimum internal diameter of .70"(18mm), pitch from 0.25 to 5mm (4-80) thread per inch using floating cone holders (54-190-818), setting ring (54-190-804) and contact point cones (54-190-826)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Horizon Premium

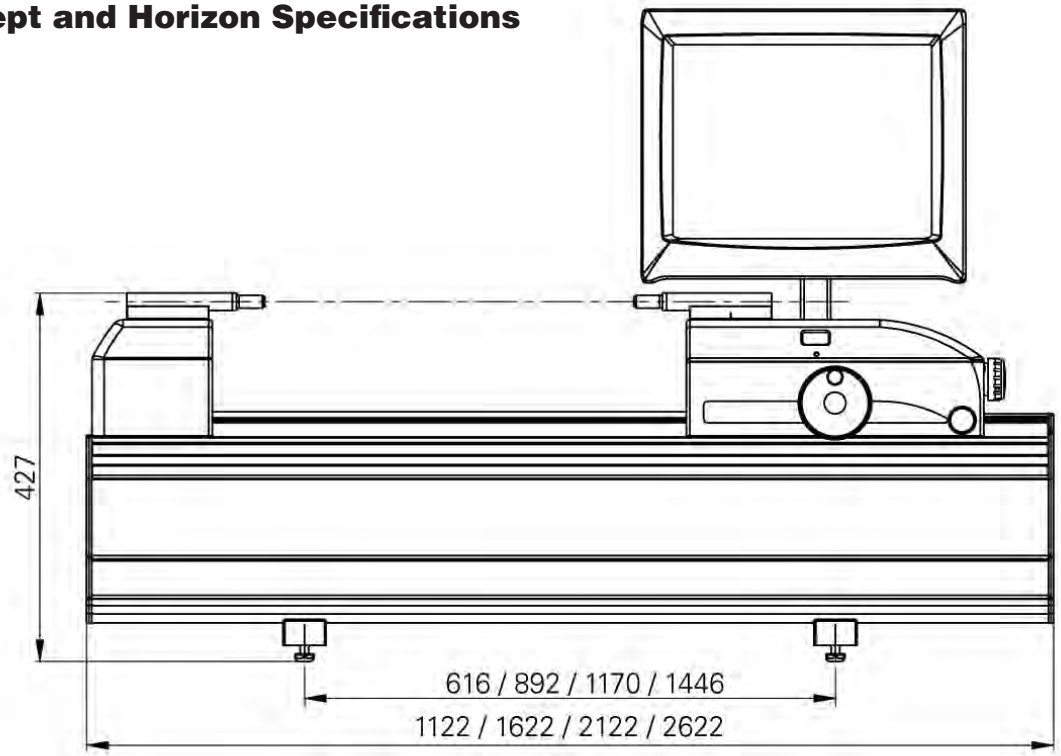
Part Number	Description	Weight
	ANALOG	
54-196-050	0—21.5" (550mm) Horizon Premium	176 lbs (80 kg.)
54-196-110	0—41" (1050mm) Horizon Premium	264 lbs (120 kg.)
54-196-260	0—61" (1550mm) Horizon Premium	352 lbs (160 kg.)
54-196-280	0—80.5" (2050mm) Horizon Premium	440 lbs (200 kg.)
54-196-320	0—120" (3050mm) Horizon Premium	616 lbs (279 kg.)
	DIGITAL	
54-196-750	0—21.5" (550mm) Horizon Premium	176 lbs (80 kg.)
54-196-800	0—41" (1050mm) Horizon Premium	264 lbs (120 kg.)
54-196-815	0—61" (1550mm) Horizon Premium	352 lbs (160 kg.)
54-196-820	0—80.5" (2050mm) Horizon Premium	440 lbs (200 kg.)
54-196-850	0—120" (3050mm) Horizon Premium	616 lbs (279 kg.)

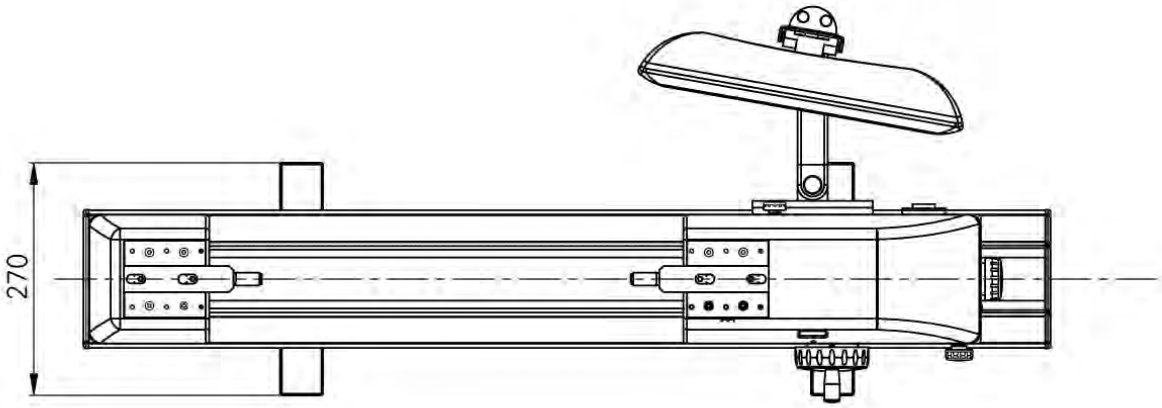
Accessories

Part Number	Description
Measuring tables and supports	
54-196-160	Universal measuring table
54-197-132	Holding device for indicator, fits on 54-196-160 table for displacement
54-196-107	Set of vertically adjustable supports
54-196-108	Adjustable support (one only)
54-196-022	Set of L-shaped supports to fit No. 54-196-107/108
54-196-021	Set of V-shaped supports to fit No. 54-196-107/108
54-197-001	Premium temperature compensation package for digital Horizon
54-197-003	Standard temperature compensation package for digital Horizon
54-197-019	Heavy duty universal measuring table
Accessories for setting and checking of comparative measuring instruments and indicators	
54-190-805	Set of carbide gage block attachments 1" (2" total)
54-196-006	Set of carbide gage block attachments for checking calipers
54-190-823	Dial indicator holder (for 3/8" and 8mm stems)
54-197-015	Dial indicator holder for max range of 2"/50mm (for 3/8" and 8mm stems)
54-197-115	Adjustable holding device for lever dial indicator
54-190-825	Set of V-shaped blocks for checking external micrometers over 2.36"/60mm requires 54-190-805
54-197-114	Holding device for external micrometers from .48"—4"/12—100mm requires 54-196-160
54-190-820	Holding device for setting of 2 point bore gages (fits on standard probes)
54-190-817	Set of supporting plates for setting of 2 point bore gages total length of 13"/330mm
54-190-829	Set of supporting plates for setting of 2 point bore gages total length of 7.08"/180mm
54-196-040	Adjustable support for setting of the reversal point requires 54-190-817 or 54-190-829
54-190-807	Set of anvils with Tungsten carbide balls for flat measuring surfaces
Accessories for external measurements	
54-190-806	Set of anvils with tungsten carbide tipped measuring surface diameter 0.256"/6.50mm
54-197-806	Set of anvils with tungsten carbide tipped measuring surface diameter 0.315"/8mm
54-190-865	Set of knife shaped anvils with tungsten carbide measuring surfaces
54-190-807	Set of anvils with tungsten carbide balls for flat measuring surfaces
54-197-007	Set of wires on holders for checking pitch diameters of external threads, pitch of 72-5 threads per inch/0.25-5mm
54-197-107	High accuracy plug measuring fixture for plugs up to 4" diameter, 11" length
Accessories for internal measurements	
54-197-162	Set of L-shaped probes (minimum internal measurement: .475"/12mm) for height of 1.57"/40mm
54-190-815	Clamping device for snap gages from .475" to 6"(12 to 150mm)
54-197-143	Set of quick clamping attachments
54-197-142	Set of clamping attachments for height of 2.36"/60mm - use with 54-196-160
54-190-818	Set of measuring devices for checking of pitch diameters of internal threads (minimum internal diameter of .475"/12mm) requires No. 54-190-826
54-190-826	Set of cones, 60˚, for pitch of 64-5 threads per inch/ 0.4 to 5mm. Use ring No. 54-190-804
54-190-804	Setting ring, 60˚ for use with 54-190-826
54-197-070	Measuring device for checking of internal diameters from .04"/1mm upwards and pitch diameters of internal threads from M4/32UNC-NC upwards for analog system - requires 54-197-073
54-197-073	Analog display for measuring device for No. 54-197-070
54-197-074	Measuring device for checking of internal diameters from .04"/1mm upwards and pitch diameters of internal threads from M4/32UNC-NC upwards for digital system
54-197-075	Set of T-shaped measuring inserts with ruby balls for pitch from 56 threads per inch/0.7mm upwards for use with 54-197-070 & 074
54-197-913	T-shaped measuring insert with ruby balls, dia. 0.01319"/.335mm for use with 54-197-070 & 074
54-197-076	Set of ruby ball measuring inserts for checking internal diameters from .04"/1mm upwards for use with 54-197-070 & 074
Reference gages	
54-197-050	Master plug gage, dia 1.9685"/50mm includes calibration certificate
54-197-040	Master ring gage, dia. 1.5748"/40mm includes calibration certificate

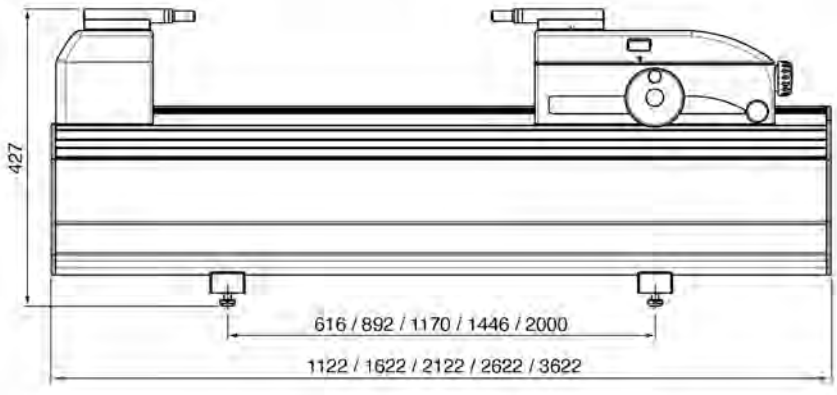
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Labconcept and Horizon Specifications





Horizon Premium Specifications



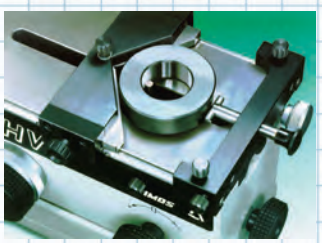
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com











Use with a laptop for a portable calibration system.

THV Horizontal Measuring System



The Fowler/Trimos innovative horizontal instrument that fulfills current quality requirements for many applications.

Multiple accessories ensure versatile applications for checking all types of gages such as plug gages, ring gages, thread plug gages, lever dial indicators, etc. as well as precision manufactured parts. Measuring range 2" and Application range 4".

High accuracy is guaranteed by perfect instrument construction and the Heidenhain measuring system. The simplicity of the instrument and its ease of use allows precise and quick performance of all measurements.

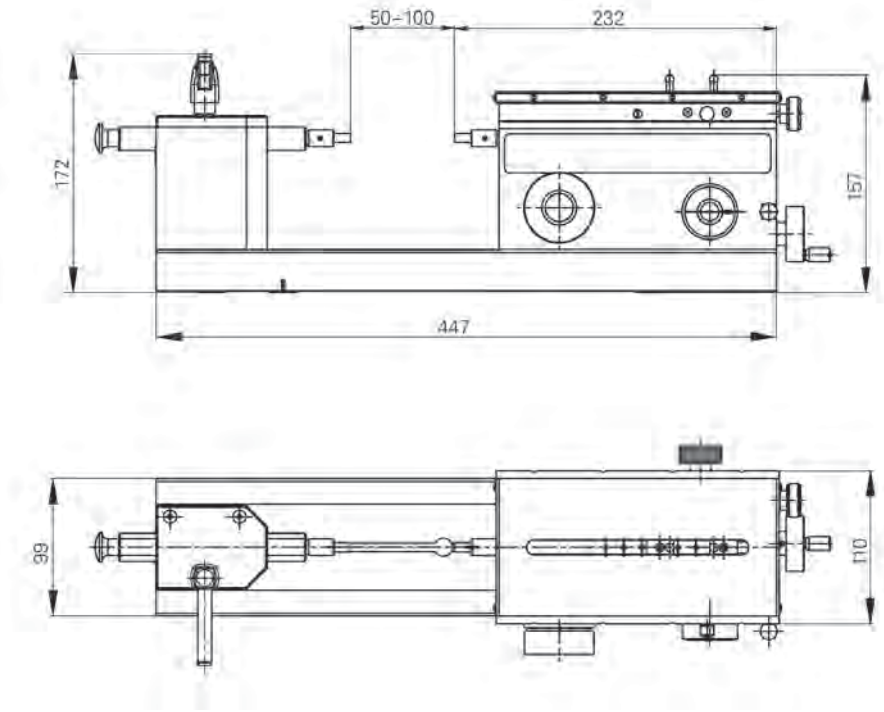
Specifications	
Overall application range	Using standard probes
External measurements	0—4" (0—100mm)
Internal measurements	.4—4" (10—100mm)
Scale range (travel)	Absolute display over 2" (50mm)
Max. measuring band error	.000016" (.4μm) reference
temperature 20°C	
Resolution on Heidenhain ND 287	.00001", .000001"
	.001, .0001 or .00002mm
Repeatability	.000005" ±2s (.1μm)
Adjustable measuring force	0 to 4N

QMSOFT software *(page 390)* **is the perfect calibration and data management tool for use with this product!**

Part Number	Description
54-198-505	THV with standard table and readout
54-198-555	THV with floating table and readout
54-198-565	THV with standard table and PC
54-198-570	THV with floating table and PC

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

THV Horizontal/Vertical

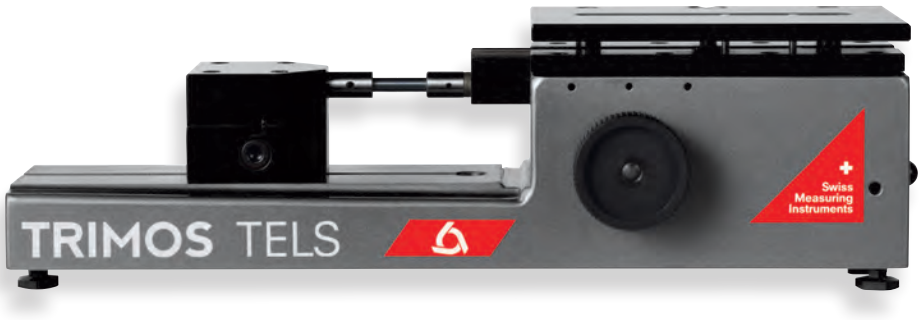


0-2" travel
4" application range

Part Number	Description
54-198-001	Standard table (included with 54-198-500 and 54-198-505)
54-198-010	Set of internal probes from .4"/10mm up for standard table (included with 54-198-500 and 54-198-505)
54-198-012	Set of 6mm Ø x 34mm internal ball probes from .51"/13mm up for standard table
54-198-020	Set of internal probes from .4"/10mm up for floating table (included w/54-198-550 & 555)
54-198-022	Set of 6mm Ø x 41mm internal ball probes from .51"/13mm up for floating table
54-198-100	Block support for 54-198-101 and 54-198-150
54-198-101	H-plate with clearance
54-198-150	Test indicator holding device
54-198-160	Block support for 54-197-106
54-198-170	Support device with V for external diameters
54-198-180	Micrometer spindle for testing dial and test indicators
54-198-181	8mm clamp for holding dial indicators
54-198-182	3/8" clamp for holding dial indicators
54-198-250	ID floating table (included with 54-198-550 and 54-198-555)
54-198-260	Reverse attachment—European
54-198-261	Reverse attachment—American
54-198-300	Pneumatic thread device, Allows up to 40 ounces of pressure.
53-190-019	Standard .256"/6.5mm diameter external probes included with all units
53-190-032	External probe with M2.5 x .45 thread
53-190-033	.315"/8mm diameter external probes
53-190-034	External probes with 4.48 thread
53-190-037	.078"/2mm diameter external probes
54-197-007	Thread wires and holders
54-197-503	Support for display (included with No. 54-198-505 and 54-198-555)
54-198-175	Support pin .12"/3mm diameter for No. 54-198-170
54-198-176	Support pin .24"/6mm diameter for No. 54-198-170
54-198-015	Inserts for internal measuring from .197"/5mm up for table No. 54-198-001
54-198-025	Inserts for internal measuring from .197"/5mm up for table No. 54-198-250

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Mini-Horizontal System



The Fowler/Trimos Mini-Horizontal is a complete system for accurately measuring small internal and external sizes with a single gage.

Sylvac's electronic measuring system is recommended for use with the Mini-Horizontal because of its proven operational reliability. The display unit is the positive answer to a variety of measuring problems. In order to satisfy the demand of quality in production, a direct two-way RS232C data output allows connection to a printer or computer.

Mini-Horizontal Construction

- Monoblock construction with probe guide track.
- Adjustable end-stop with anvil location.
- Control knob for the displacement of the guide track of the monoblock (probe release).
- Adjustable measuring pressure device.
- Location for different measuring features, i.e. electronic probes or indicators, 8mm diameter.
- Interchangeable measuring anvils for external measurements (53-190-019 anvils—6.5mm diameter with tungsten carbide tipped measuring surface are supplied as standard).
- Interchangeable measuring inserts for internal measurements (53-190-020 Inserts—4.5mm diameter, rounded, are supplied as standard).
- Vertically adjustable table for internal measurement, hard chromed and ground surface, supplied as standard.

Used with Sylvac 1" probe and readout. A accurate to 0.00006"

Internal measurements: .24"—4" (6—100mm) depending on accessories used.

External measurements: 0—4" (0—100mm). The effective measurement allows a range of 1" (25mm) which corresponds to the range of Sylvac probe No. 54-618-500.

External measuring range is increased by displacing the end stock (direct zero setting or setting of a preselected value).

Internal measuring range is increased by displacing the measuring inserts (setting of a preselected value according to a ring gage).

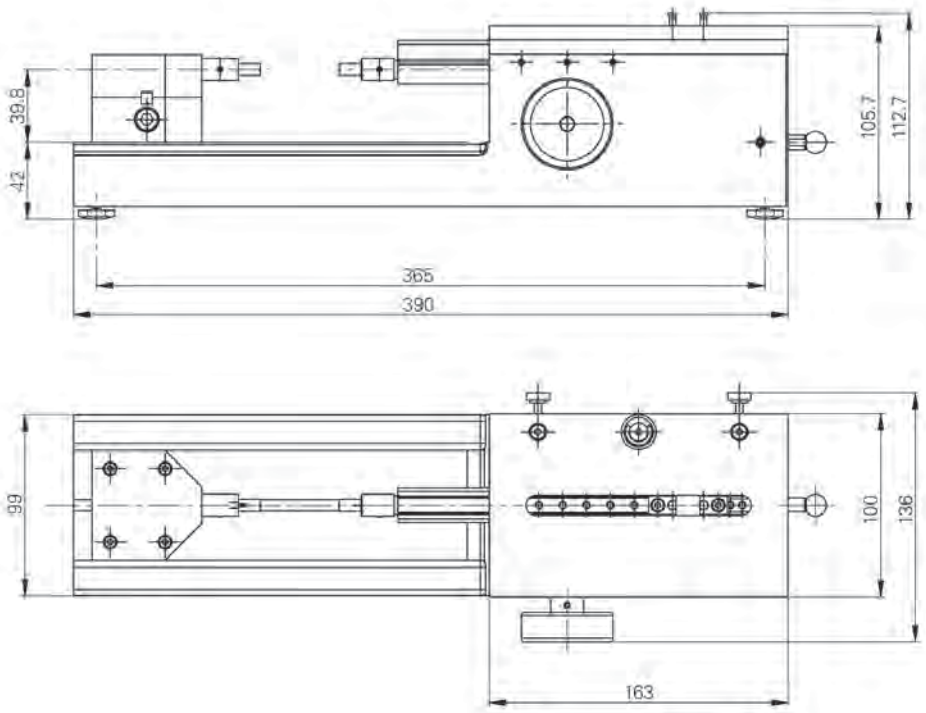
Accuracy: Within .00006" (1.5μ) — corresponds to accuracy of Sylvac probe No. 54-618-500.

Resolution: Using Display Unit D50S No. 54-618-148, the resolution is .0001" or .00001" (.001 or .0001mm).

Part Number	Description
53-190-012	Mini-Horizontal with internal support plates, standard internal & external probes.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Mini-Horizontal System



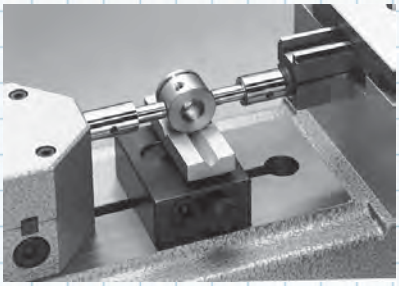
Order Number	Description
Mini-Horizontal:	
53-190-012	Mini-Horizontal with internal support plates, standard internal & external probes.
Accessories:	
53-190-020	Std. replacement internal probe set. (2 pc.) Included w/unit.
53-190-029	Internal ball probe set. (2 pc.)
53-190-030	Internal groove probe set. (2 pc.)
53-190-031	Internal ball /flat probe set. (2 pc.)
53-190-036	Large ball probe. (2 pc.)
53-190-019	.256" std. replacement external probe set. (2 pc.) Included w/unit.
53-190-033	.315" large diameter external probe set. (2 pc.)
53-190-034	#4-48 thread external contact point holder (each)
53-190-032	M2.5 x .45 thread ext. contact point holder (each)
53-190-037	.080" flat carbide probe (each)
53-190-025	Adjustable H support with clearance
53-190-026	Adjustable support with crossed V-grooves
53-190-027	Adjustable support plate, plane
53-190-028	Locking adjustable base w/vertical adjustment for above supports
54-197-106	Floating measuring table
Bushings/Extensions:	
53-190-017	Bushing for AGD indicators to Mini-horizontal - with 3/8" bushing
53-190-018	Rack/extension for AGD indicators to 53-190-012 - with 4-48 thread.

See the section for probes and displays *(page 121)*, and indicators *(page 106)*.

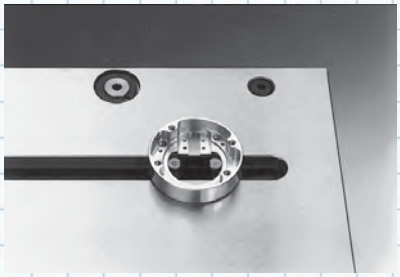
Swiss Quality!

Fowler 5 FIVE YEAR WARRANTY

Fowler RS-232 DIRECT



Measurement of lengths and external diameters.

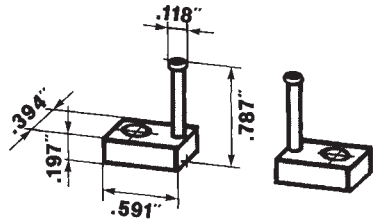


Measurement of internal diameters, grooves and distances.

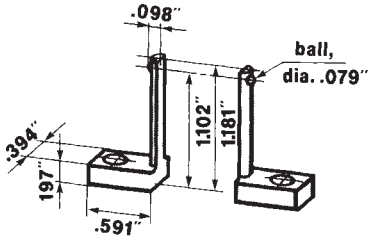
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

TELS Mini-Horizontal Accessories

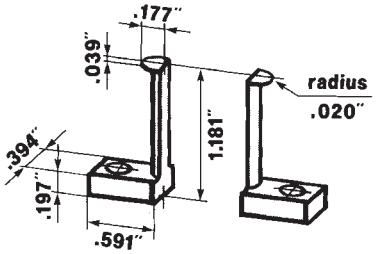
Internal Probes.



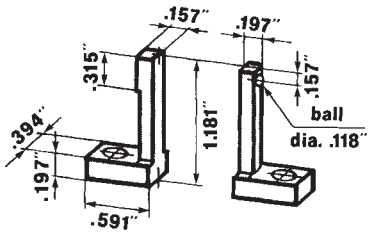
▲53-190-020
Internal Probe Set (2 pc.) Standard, general purpose probes, included w/system.



▲53-190-029
Internal Ball style Probe Set (2 pc.). Features .079" diam. ball on each probe.

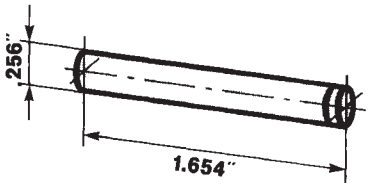


▲53-190-030
Internal Groove style Probe Set. (2 pc.). Features thin, half-round discs on ea. end.

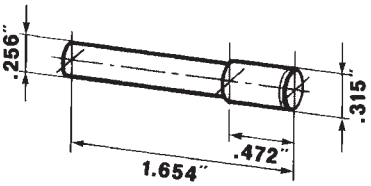


▲53-190-031
Internal combination Ball & Flat Probe Set (2 pc.). Has one side ball, one side flat.

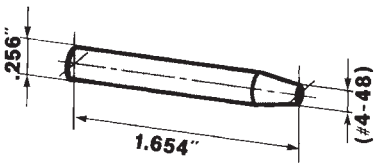
External Probes.



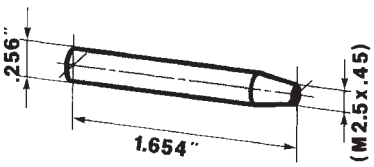
▲53-190-019
.256" diam. External Probe Set (2 pc.). Included with system. Carbide Tipped.



▲53-190-033
.315" Large Diameter External Probe Set. (2 pc.). Large surface, Carbide Tip.

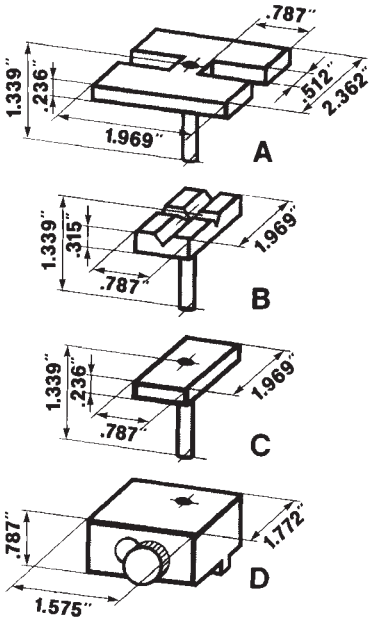


▲53-190-034
#4-48 threaded external contact point holder (Ea.). Accepts any shape point.



▲53-190-032
M2.5 x .45 thread external contact point holder (Ea.). Accepts any shape point.

Supports & Tables.



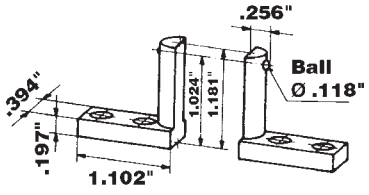
▲External Support System:

A. #53-190-025 Adjustable Support with clearance.

B. #53-190-026. Adjustable Support with crossed vee-grooves at 90° angles.

C. #53-190-027. Adjustable Support Plate, plain.

D. #53-190-028. Locking base w/vert. adjustment for #A, B & C. (Required in order to use #A, B & C).



▲ No. 53-190-036 Large ball probe. One set of reinforced measuring inserts with ball contact for internal measure-ments.

Special anvils are available, contact our technical department.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

High Precision Bench Stands

For Critical Measurement of Small Parts



▲ Horizontal unit (No. 54-618-215) shown with probe (not included)

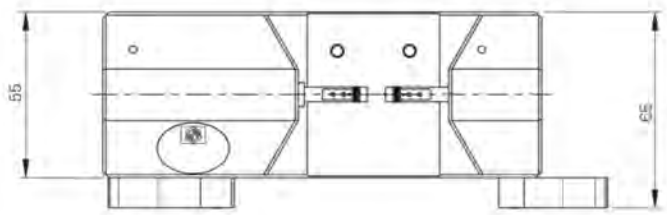
Swiss Quality!

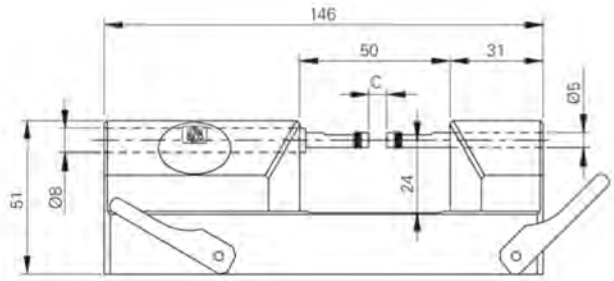
Measures miniscule parts very accurately.

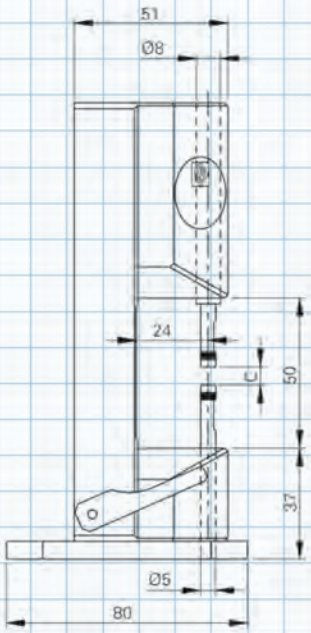
Requires 10mm probe and display. (page 117)

Specifications:

Overall range	.787" (20mm)
Measuring range	.393" (10mm)
Accuracy .00004"	(1µm) with probe #54-618-444 and D300 display #54-618-300
.0002"	5µm with dial gage
Measuring force	0.3—1N + force of the probe
Lifting lever	Left or right
Operating	Horizontal or vertical position
Output	RS232/USB
Dimensions	6 x 2.75 x 2" (150 x 70 x 55mm)
Clamping diameter	8mm
Weight	1.9kg







Vertical

Part Number	Description
54-618-215	Horizontal Measuring Stand
54-618-216	Vertical Measuring Stand
Accessories	
54-618-170	Supporting Table—adjustable X,Y,Z
54-618-171	Table for vertical position
54-618-172	Turn table with 25 holes from 0.2—5mm
54-618-173	Lifting device with pedal

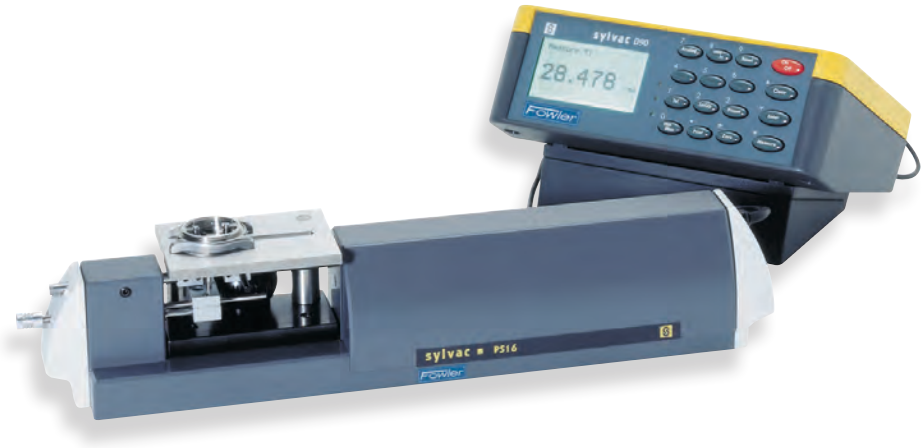
Anvils available for almost any application. Please contact our Technical Department for quote: x351, x334 or email tech@fvfowler.com

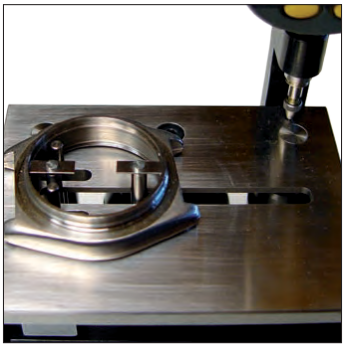
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

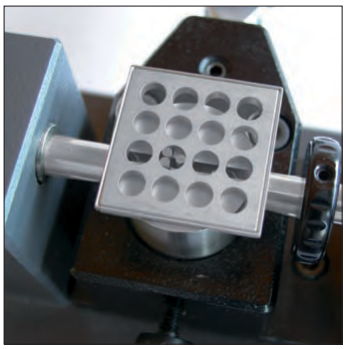
Fowler

Horizontal Bench Table





Internal measurement in 2 – points with auto-centering of the part on LVS 50



3 – points internal measurement

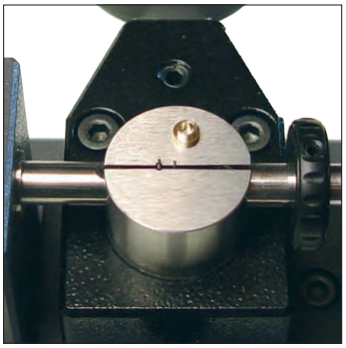


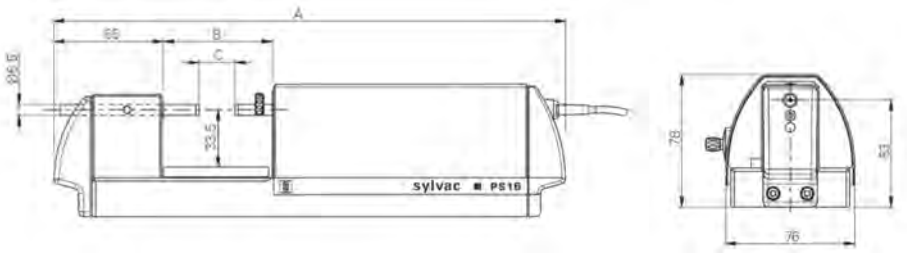
Table and anvils for internal measurement in 3 - points 1.3 - 2.5 mm

Spawned from the Swiss watch making industry the latest internal horizontal measuring bench table from Fowler/Sylvac is perfect for highly accurate, repeatable small part measuring.

Adjustable measuring force makes the gage ideal for both flexible and rigid parts.

The extremely rugged design of the gage is ideal for production environments, while being refined enough for lab or inspection applications.

Specifications:	
Max. Error	1.5µm
Repeatability	0.3µm
Resolution	0.1µm
Measuring Force(Adjustable)	0.2 -1.0[1]
Weight	5kg
Anvils Clamping Dimension	Ø1.5mm
A	301
B	65
C	25



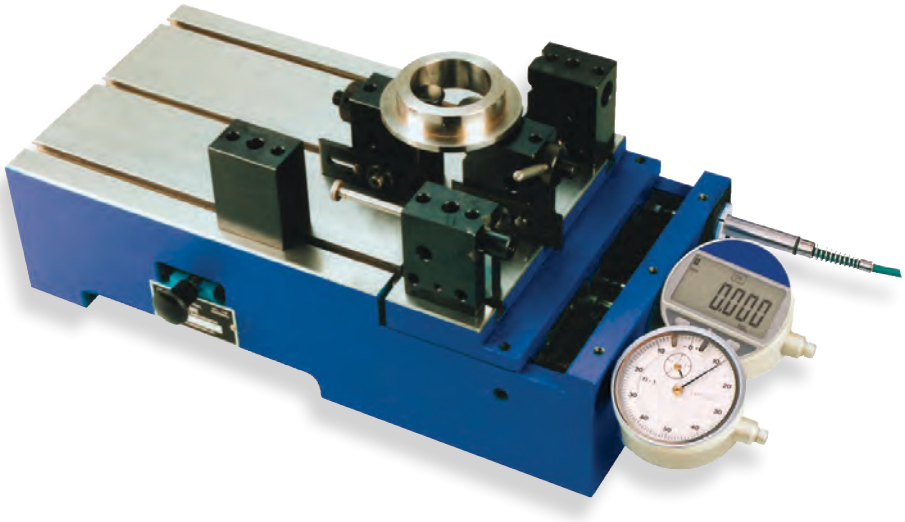
Part Number	**Range**
54-618-231	25mm Meas. Range, 38mm Meas Capacity
54-618-235	0.8-1.3mm 3-point Internal Measurement
54-618-236	1.3-2.5mm 3-point Internal Measurement
54-618-237	2.5-4mm 3-point Internal Measurement
54-618-238	4-8mm 3-point Internal Measurement
54-618-239	8-12.5mm 3-point Internal Measurement

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Checkmaster

Internal and External Measuring Comparator Gage



Made in ENGLAND

Fowler RS-232 DIRECT

Fowler 5 FIVE YEAR WARRANTY

Great gage for production and measurement of special features.

Available in two sizes, Checkmaster is the flexible gaging solution for floor inspection production runs. Simply set up your Universal Tooling accessories to suit your application, fit your preferred indicator or probe and zero against a master for fast accurate and incredibly repeatable results. Measuring force can be adjusted for softer materials and biased for either internal or external dimensions. This enables easy, multi-dimension setups.

Features:

- Unique 3 gage station and readout capability
- Remarkable versatility and repeatability
- Accepts most dial indicators, digital indicators (12.7mm travel) and gaging probes
- Excellent gage repeatability and reproducibility (G.R. & R.) capability
- Exceptionally tough for shopfloor on-line inspection
- Adjustable measuring force
- Multi functional
- Ideal for SPC and 100% inspection
- Left or right hand operation



The Universal Tooling Set 54-105-200 includes 2 universal tooling blocks, combination blade/radius anvil, mushroom anvils, and mounting bars to allow a variety of internal and external features to be measured.

Part Number	Description
53-105-000	Checkmaster 1060
53-105-001	Checkmaster 1050
54-105-200	Universal Tooling Set
54-105-250	Tooling adaptors (pair)

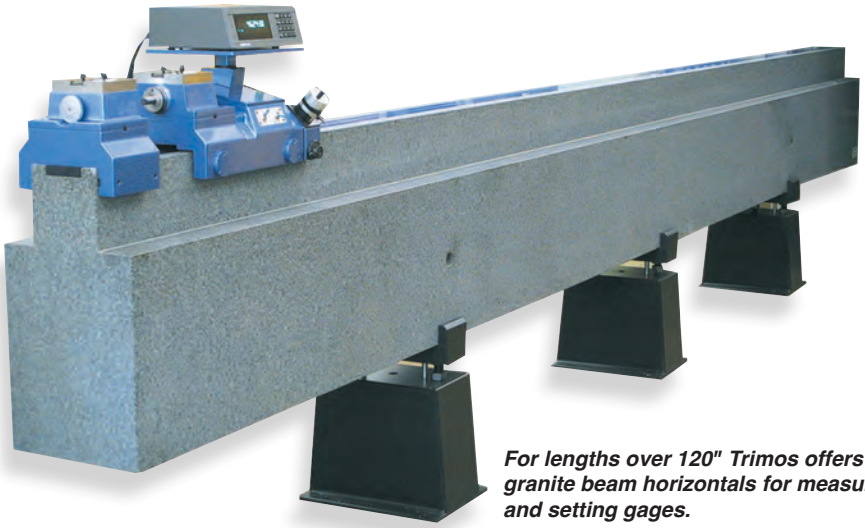
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Granite Horizontals

Granite Horizontals

Available in 3, 4, 5, 6 and 8 meter lengths.

Accuracy comparable to standard Horizon.



For lengths over 120" Trimos offers granite beam horizontals for measuring and setting gages.

Twinner Universal Measuring Center

For Lathe Works

Fast, accurate, spindle and shaft measurements.

Measure lengths, diameter and runout.



The Trimos Twinner is a multifunctional, flexible measuring center. Almost all parts that are manufactured with a lathe can be checked and documented. Precise measuring results of rotational symmetrical parts will be obtained in a short period of measuring time and without adaptation requirements.

Designed for use in the manufacturing area.

The Twinner has been developed as a workshop measuring system and is designed for use in manufacturing areas next to machining centers. The simple, logical instrument structure enables easy control of the measuring instrument itself. Any skilled worker may be able to perform all required measuring tasks in a short period of time without previously acquired special knowledge.

Please contact our Technical Department for application and price information: x351, x334 or email tech@fvfowler.com

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

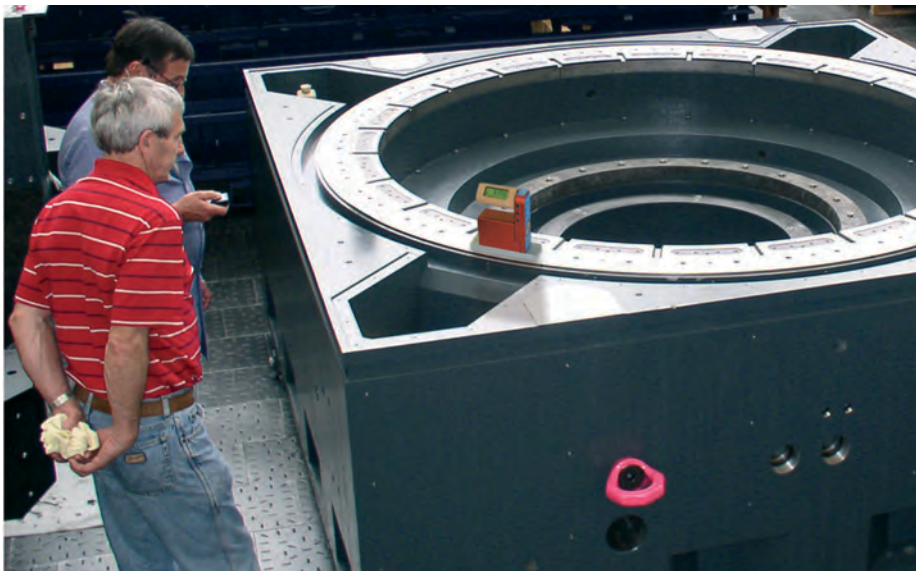


LEVELS AND PROTRACTORS

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

BlueSYSTEM



Swiss Quality!

Bluetooth communication technology

The BlueSYSTEM from WYLER AG of Switzerland is a further enhancement of the well known and established NT line of levels for machine tool inspection and surface measurement.

The system combines the latest sensor & pendulum technology with optional wireless data transmission over the international Bluetooth standards.

Features:

- Compact and ergonomic design which is functionally optimized for precision measurement
- Optional wireless data transmission based on the internationally approved Bluetooth™-standard
- Rotating, easy to read, LCD display (not included on the BlueSYSTEM Basic).
- Each instrument is assigned its own specific address allowing the use of several independent systems in the same area without interfering with each other.
- Since each BlueLEVEL has a built in, optional IR receiver, the measurement can be initiated at any instrument
- Linearity according to DIN 2276
- All instruments are equipped with RS 232 / RS 485 interfaces
- Powered by standard 1.5 V batteries type “C”
- In compliance with CE regulations and all applicable EMC regulations

Wireless BlueSYSTEM Specifications			
Sensitivity	1µm/m 0.2 Arcsec.	5µm/m 1 Arcsec	10µm/m 2Arcsec
Display Range Display Range (Basic)	± 20mm/m ± 10mm/m	± 100mm/m ± 50mm/m	± 200mm/m ± 100mm/m
Limits of error up to 0.5 fullscale (DIN 2276)	Maximum 1% of measured value		
Limits of error from 0.5 to fullscale (DIN 2276)	Maximum 1% of (2* measured value - 0.5* fullscale)		
Temperature error	Maximum 0.1% Full-scale		
Settling time	within 3 seconds		
Digital output	RS-232/RS-422/RS-485, 7 DataBits, 2StopBits, no parity, 9600 bps		
External power supply	*BlueLEVEL:* +5V DC, max. 450 mW *BlueMETER + blueTC:* +5 V DC, max. 450 mW or/oder 8...28 V DC		
Temperature range	Operating 0 to 40°C; storage -20 to +70°C		
Net weight (including batteries)	*BlueLEVEL:* 1200g *BlueMETER:* 775g		

Levels & Protractors

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!



BlueSYSTEM kits are supplied in a deluxe case

BlueSYSTEM
with wireless option



Part Number	Description	Sensitivity
6" Base with Mounting Holes		
54-893-150-0	BlueLEVEL without radio	0.2 arc seconds
54-893-150-1	BlueLEVEL with radio	0.2 arc seconds
6" angular base with V groove		
54-894-150-0	BlueLEVEL without radio	0.2 arc seconds
54-894-150-1	BlueLEVEL with radio	0.2 arc seconds
54-845-300	BlueMETER Sigma	

Other sensitivities and specifications available, contact technical department for details.

Kit:

54-895-150 2 BlueLEVEL Levels (one with a right angle base), BlueMETER, Cables and IR Zapper with case.

BlueSYSTEM Basic
with wireless option

The BlueSYSTEM Basic is a less expensive version of the BlueSYSTEM.



Part Number	Description	Sensitivity
6" Horizontal Base with Mounting Holes		
54-893-155-0	BlueLEVEL Basic without radio	0.2 arc seconds
54-893-155-1	BlueLEVEL Basic with radio	0.2 arc seconds
6" angular base with V groove		
54-894-155-0	BlueLEVEL Basic without radio	0.2 arc seconds
54-894-155-1	BlueLEVEL Basic with radio	0.2 arc seconds
54-845-200-0	BlueMETER Basic without radio	
54-845-200-1	BlueMETER Basic with radio	

Other sensitivities and specifications available, contact technical department for details.

Kits:

54-895-155-0 2 BlueLEVEL Basic Levels (one with right angle base), BlueMETER Basic kit without radio

54-895-155-1 2 BlueLEVEL Basic Levels, BlueMETER kit with radio

Accessories (for BlueSYSTEM and BlueSYSTEM Basic)

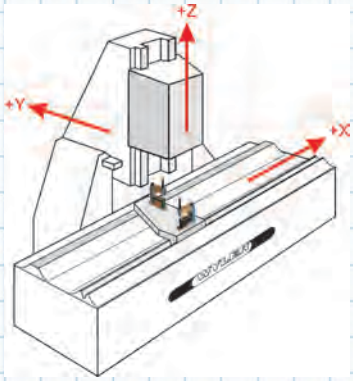
Part Number	Description
54-896-100	Cable for software interface
54-845-205	2.5m cable BlueLEVEL to BlueMETER (included with kit)
54-845-210	5m cable BlueLEVEL to BlueMETER
54-845-999	IR Zapper (not included with kit)

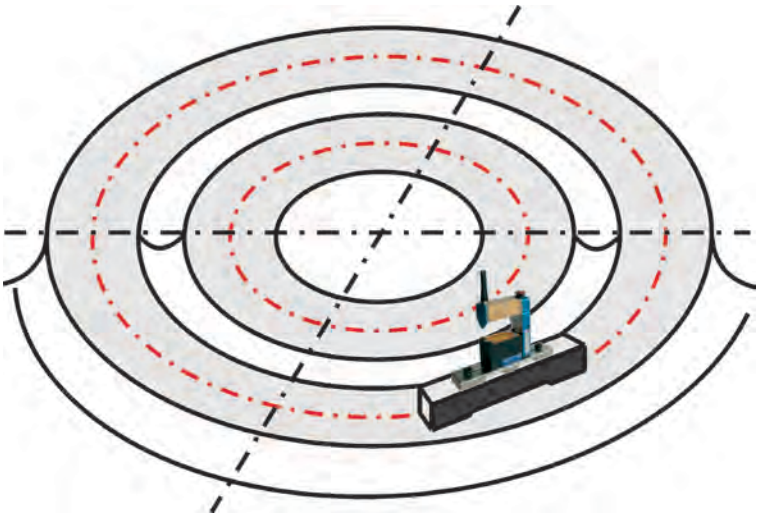
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

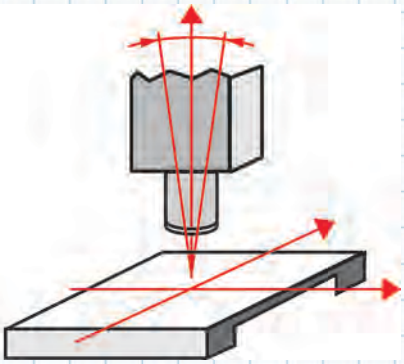
MT-Soft Machine Tool Software

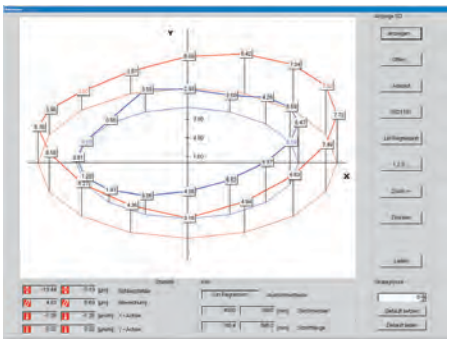
Today's machining demands are getting more complex and the quality requirements increase constantly. This situation has called for larger and more complex machine tools with a related requirement for higher accuracy of machined parts. Checking and ensuring the geometry of these machines is an important pre-condition for the high standards of quality required. This pushes current instrumentation and software beyond its limits.

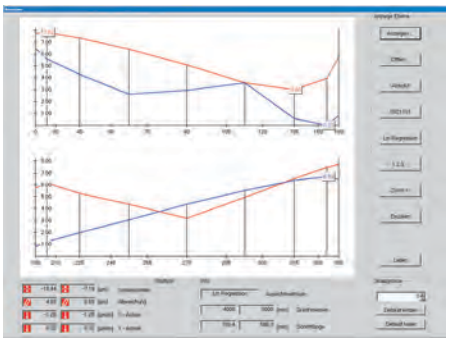
The major goal for developing MT-Soft was to fill exactly this gap and to supply the engineer with a tool with which they can take the necessary measurements and actions, not only in the early stage of the manufacturing process of a new machine tool, but also during the final assembly and in the maintenance and repair phase.









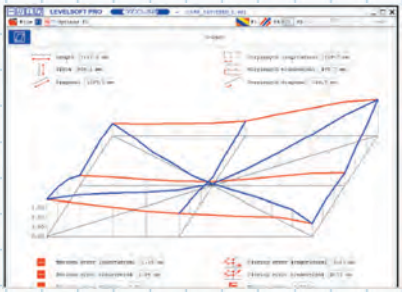


Part Number	Description
54-820-790	Basic package including database and guideway, rotating axis modules
54-820-791	Full license including all modules and Levelsoft Pro and future updates
Individual Modules	
54-820-792	Comparison of elements
54-820-793	Circles
54-820-794	Partial surfaces
54-820-795	Rotation of machine tool elements
54-820-796	Levelsoft Pro
Upgrades	
54-820-797	Upgrade to MT-Soft from an existing Levelsoft Pro license

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

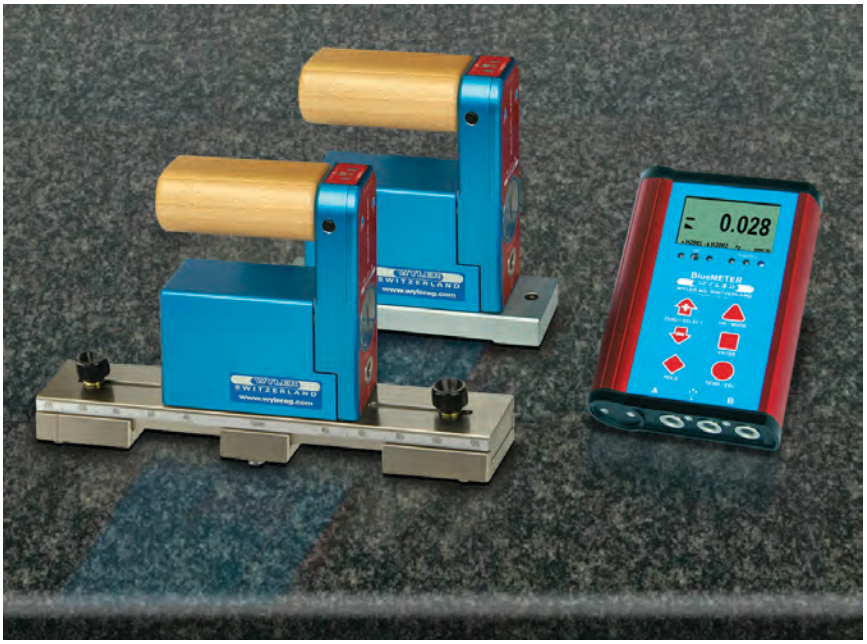
Swiss Quality!

Everything you need to calibrate your surface plates.



BlueSYSTEM Surface Plate Kit

The Fowler/WYLER Surface Plate Kit is a full-featured and economical kit designed specifically for testing surface plate flatness quickly and accurately.



Shown: 54-895-250 - Surface Plate Kit with BlueMeter Basic

Surface Plate Kit Features:

- Includes 2 Wyler levels
- Wyler Bluemeter Basic
- Wyler Levelsoft software
- Meter to level cables
- USB computer cable

Accessories

Wyler Infra-Red Zapper allows for remote measurement taking to avoid inaccuracies caused by vibration and other contact-induced abberations.

120 Volt Power Supply for convenient non-battery power.

Levelsoft PRO Software is a well known, user-friendly measuring and calibration software for checking flatness geometry measurement (Measuring - and setting plates, geometry of machine tools etc.). It is available for use with the MINILEVEL NT, LEVELTRONIC NT, NivelSWISS and BlueSYSTEM series of WYLER instruments.

By using Levelsoft PRO the instruments may be used in a number of combinations and configurations (e.g. differential measurement with two instruments), for measurement of straightness of lines, the measurement of guide ways with twist or the flatness of large and small surfaces.

Part Number	Description
54-895-250	Wyler Surface Plate Kit with BlueMeter Basic and Software
54-845-010	120 Volt Power Supply
54-845-999	Infra-Red Zapper
54-820-779-1	Levelsoft PRO Software

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

BlueCLINO High Precision



Swiss Quality!

A highly accurate free standing vertical & horizontal leveling system

Features:

- Large, easy to read color display:
  - *Various color profiles can be chosen*
  - *Various display methods like bar graphs or spirit levels can be chosen*
  - *All current units can be indicated*
- High Precision over the whole measuring range of ±1° with integrated temperature compensation
- The internal software, together with a reversal measurement allows, a simple zero setting
- Rugged housing, rust protected and hand-scraped prismatic bases made out of cast iron
- Built-in cross vial for easy alignment of the vertical axis in order to avoid “twist errors”
- The instrument is compatible with the whole range of digital sensors of WYLER
- Powered with common 1.5V Batteries, rechargeable batteries or with mains adapter
- Fulfils the strict CE requirements (immunity against electromagnetic smog)
- The instrument can be adjusted to the local gravitation
- Limits of error:
  - Under 0.5° = 1% of measured value
  - Over 0.5° = 0.1 x ((2 x measured value) -0.5°)

SPECIFICATIONS

Measuring Range:	± 1 degree
Setting Time:	Value available after / <5 sec
Resolution:	1 Arcsec (approx. 0.005 mm/m)
Limits of error within 6 months / Gain (TA = 20ºC):	up to 0.5°: 1% R.O. >0.5°:0.1 x (2 x R.O. - 0.5°) at least 1 Arcsec, or 0.005 mm/m R.O. = Read-out
Limits of error at - 45°, 0°, + 45° right: after quick calibration, using the calibration aids / gain:	Limits of error as above in the range of ± 45°, but <30 Arcsec
Data connection:	RS232 / RS485, asynchr., 7 DataBits, 2 StopBits, no parity, 9600 bps
Wireless option:	Bluetooth® ISM Band / 2,4000 – 2,4835 GHz
Batteries (lifetime):	2 x size C, total Voltage 3 V maximum; primary types, NiMH, NiCd, NiZn (ca. 20 hrs)
External power supply:	+24 V DC
Dimension housing + net weight:	Cast iron, rust-protected: 150 x 150 x 40 mm / 3.450 kg
Temperature range:	0 °C to + 40 °C
CE conformity:	Fulfills emission and immunity requirements

Part Number	Description	Range	Resolution
54-825-400	BlueCLINO High Precision	± 1°	1 arc second/.005mm/m
54-896-200	USB Cable		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Lots of range with 5 arc sec resolution

Light-weight aluminum version available

BlueCLINO

WYLER's BlueCLINO is based on the proven Clino 2000 design. The new Blue Clino features a large, full-color display and a number of new innovations.



Features:

- Large and very well readable color display:
  - *Various color profiles can be chosen*
  - *Various display methods like bar graphs or spirit levels can be chosen*
  - *All current units can be indicated*
- High Precision over the whole measuring range of ±60° with integrated temperature compensation
- Resolution: 5 arc sec/0.025mm/m
- The internal software, together with a reversal measurement allows, a simple zero setting
- The instrument can be recalibrated with the help of optional calibration tools. This process is supported by the internal software
- Rugged housing, rust protected, with prismatic bases made out of either aluminum hard anodized or cast iron
- Built-in cross vial for easy alignment of the vertical axis in order to avoid “twist errors”
- The instrument is compatible with the whole range of digital sensors of WYLER
- Powered with common 1.5V Batteries, rechargeable batteries or with mains adapter
- Fulfils the strict CE requirements (immunity against electromagnetic smog)
- The instrument can be adjusted to the local gravitation

SPECIFICATIONS

Measuring Range:	± 60 degrees STANDARD
Setting Time:	Value available after / <5 sec
Resolution:	Depends on units set / 5 Arcsec (approx. 0.025 mm/m)
Limits of error within 6 months / Gain (TA = 20°C):	<12 Arcsec + 0.027 % R.O. R.O. = Read-out
Limits of error at - 45°, 0°, + 45° right: after quick calibration, using the calibration aids / gain:	Limits of error as above in the range of ± 45°, but <30 Arcsec
Data connection:	RS232 / RS485, asynchr., 7 DataBits, 2 StopBits, no parity, 9600 bps
Wireless option:	Bluetooth® ISM Band / 2,4000 – 2,4835 GHz
Batteries (lifetime):	2 x size C, total Voltage 3 V maximum; primary types, NiMH, NiCd, NiZn (ca. 20 hrs)
External power supply:	+24 V DC
Dimension housing + net weight:	Cast iron, rust-protected: 150 x 150 x 40 mm / 3.450 kg Aluminium, black hard anodized: 150 x 150 x 40 mm / 1.500 kg
Temperature range:	0 °C to + 40 °C
CE conformity:	Fulfills emission and immunity requirements

Part Number	Description	Resolution
54-825-300	BlueCLINO with aluminum frame	5 arc sec/0.025 mm/m
54-825-350	BlueCLINO with cast iron frame	5 arc sec/0.025 mm/m
54-825-301	BlueCLINO with aluminum frame and calibration aids	5 arc sec/0.025 mm/m
54-825-351	BlueCLINO with cast alloy frame and calibration aids	5 arc sec/0.025 mm/m
54-896-200	USB Cable	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Clino 2000 Precision Inclinometer



Fowler/WYLER's digital inclination measuring instrument……the Clino 2000… combines precision and quality for a great variety of measuring tasks that will fulfill all your requirements.

- Highest possible precision over large measuring range of ±45° with integrated temperature compensation.
- Effortless zero adjustment by using the integrated software and a reversal measurement.
- Easy to calibrate due to implemented software guidance and the calibration aids included.
- State of the art digital technology.
- Built-in possibility to connect an additional instrument for differential measurement or Zerotronic sensors by using the serial I/O port.
- Large digital display for setting all commonly used measuring units.
- The instrument is fully compatible with the whole range of digital sensors from WYLER.
- Powered by common 1.5 V batteries, rechargeable batteries or with mains adaptor.
- Fulfills the strict European CE requirements (immunity against electro-magnetic smog).
- Rugged stainless steel housing with ground prismatic bases allows use on flat or cylindrical surfaces.
- Fitted Case.

Swiss Quality!

Magnetic inserts or threaded holes are available upon request for any WYLER level. Contact our Technical Dept. for prices & availability.

Specifications

Measuring range	±45 arc°. Optional: ±10 arc° / ±30 arc° / ±60 arc°
Calibration	Quick calibration using built-in software and calibration aids
Settling time	<5 sec. Value available after setting
Resolution	5 Sec. of arc (≈0.025mm/m), depending on units set
Limits of error	<12 Sec. of arc + 0.027% readout or <30 Sec. of arc. After using quick calibration aids.
Data output	RS232/RS-485, asynchr., 7 Bit, 2 Stopbits, no parity, 9600 Baud
Power supply	Standard—Batteries: 2 x Size AA 1.5V Alkaline (40—60 hours) or Optional—Batteries: 2 x Size AF 1.2 V NiMH rechargeable (30—50 hours) or with mains adaptor
External power supply	(Optional) +12…+48 V DC/200—500 mW
Temperature range	Operating: 0° to 40°C. Storage: -20° to 70°C.
Housing, stainless steel	Dimensions: 6 x 6 x 1.375"(150 x 150 x 35mm.)
Weight	6.6 lb. (3kg)

Part Number	Description
54-825-200	Clino 2000—Precision Inclinometer
54-845-025	RS232 cable
54-896-200	USB Cable

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Fowler RS-232 DIRECT

4-Surface 360° Capacity

Magnetic inserts and threaded mounting holes available. Contact the Fowler Technical Department!

Clinotronic Plus



The Fowler/WYLER Clinotronic Plus is an electronic level with unsurpassed versatility. It is economically priced, uses a specially designed microprocessor and the well-proven WYLER inclination sensor.

Features:
- Range of ±45°, capacity of 0-360°.
- Resolution of 0.01° (selectable).
- Adjustable base length.
- Built-in calibration program.
- Uses standard 1.5v AA batteries.
- Desired units to be selected by push button.
- Automatic setting of zero by push button command.
- Display: use any units common to inclination measurements.
- Absolute or relative measuring mode selectable by push button.
- Seal-tec technology for excellent performance even in difficult environmental conditions.
- Interface connection RS232 is integrated. Special purpose cables available.
- Low battery indication.
- No loss of calibration data by power failure.
- Price includes fitted case.

The following measuring ranges are available:

Measuring range ± 10 degrees
Measuring range ± 30 degrees
Measuring range ± 45 degrees (Standard)
Measuring range ± 60 degrees

The following measuring units may be selected:

Deg/Arcmin	00° 00‘
Arcmin / Arcsec	00‘ 00“
GON / Neugrad (2 Dec)	00.00 gon
GON / Neugrad (4 Dec)	.0000 gon
mm / rel.Basis (2 Dec)	00.00 mm/m
mm / rel.Basis (4 Dec)	.0000 mm/m
Inch / rel.Basis (4 Dec)	.0000“/10“
artillery per mille A‰	0000
mm / m (2 Dec)	00.00 mm/m
Inch / 10 Inches	.0000“/10“
Inch / 12 Inches	.0000“/12“
Milliradian	00.00 mrad (2Dec)
Milliradian	0000 mrad
Deg (2 Dec)	00.00 °
Deg (4 Dec)	.0000°

Technical Specifications:
- Measuring range/capacity: ± 45°/0-360°
- Response time: value available within 5 seconds.
- Repeatability: <.01°
- Linearity: within 3 min. of arc
- Temp. coefficient: less than 0.01°/°C.
- Data output: Serial
- Battery: Standard AA 1.5V alkaline/130hrs or AA 3.0V Mn02-Lithium (for longer operation 300/hrs)
- Housing: aluminum hard anodized.
- Dimensions: 4 x 3 x 1"(100 x 75 x 30mm)
- Weight: 13 oz.(380 grams)
- Temp. range: operational 0 to 40°C.

Part Number	Description
54-635-601	Clinotronic Plus
54-635-432	RS232 cable and adaptor
54-635-525	USB connect cable

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

nivelSWISS-D *(formerly Niveltronic)*



Swiss Quality!

The nivelSWISS is a battery powered electronic inclinometer with a digital display on a built-in galvanometer. The remarkable stability of the zero-point makes this instrument particularly suitable for long lasting measuring tasks and for adjustment or alignment works on large guideways.

The nivelSWISS is mounted in a solid body of carefully treated cast iron and is equipped with two prismatic measuring bases in rectangular position to each other for measuring flat surfaces and shafts (diameters Ø 20 ... 120 mm) horizontally or vertically.

The measuring faces are carefully hand scraped to obtain an extraordinary precision. This makes the instrument perfect for adjustments or checks on rectangular geometrical elements of machine tools and structures.

	Sensitivity	*Range*	*Analogue Output*
Measuring Range II	10µm/m*	±0.150mm/m	±0,24V
Measuring Range I	50µm/m*	±0.750mm/m	±0,24V

**Traveling distance between two lines*

Part Number	**Description**
54-800-000-1	nivelSWISS-D Digital Inclinometer

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

BlueMETER Sigma



BlueMETER Sigma is a further enhancement of the well known BlueMETER and has been developed as an intelligent display unit for the electronic inclination measuring instruments uncluding: BlueLEVEL, BlueCLINO, BlueCLINO High Precision, MINILEVEL NT, LEVELTRONIC NT (by means of cables only), Clinotronic Plus, ZERO-MATIC and ZEROTRONIC-sensors.

Besides the excellent measuring accuracy, the measuring instruments BlueLEVEL, BlueCLINO, Clinotronic Plus and ZEROTRONIC-sensors supply a fully digital signal for transmitting these values over long distances without any loss of quality.

BlueMETER Sigma is a display unit and an interface between instruments and a PC/laptop.

Features:

- Large, easy-to-read color display
- Various color profiles available
- Various display methods are available
- Measured values of up to 4 instruments can be displayed simultaneously.
- Display of the difference of 2 instruments (A-B)
- Display of the difference of 4 instruments (A-B and C-D). The values can then be displayed as a 2D-graphic: A-B in X-direction and C-D in Y-direction.
- The connectors for the cables are now on the right side of the instrument, allowing adjusting the instrument to the optimal reading angle with a built-in bracket on the back of the BlueMETER Sigma.

Part Number	Description
54-845-300	BlueMETER Sigma

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Zerotronic Sensor System

WYLER AG's Zerotronic, digitized inclination sensor, fulfills the highest requirements concerning accuracy, ranges, sensitivity and temperature stability. Digital technology allows the transmitting of signals over long distances without loss of accuracy.



Small angles with a high resolution as well as large angles are measured with this sensor technology.
A temperature sensor mathematically compensates for changing environmental conditions, improving measuring results.

- ***All weather operations.***
- ***Wireless applications.***
- ***RS-485 output or RS-232 with readout or transceiver converter.***
- ***Labview drivers.***

Use Dynam software for sensors and instruments of the Zerotronic family. Dynam software was developed for calculating and displaying static and dynamic inclinations and profiles under Microsoft Windows. The data generated by measuring can be displayed in numerical or graphical form on the computer monitor, sent to a connected printer, saved in files on hard disc or floppy discs or sent to a serial output port.

The integrated software modules allow the performing of a number of measuring tasks without knowledge of software programming.



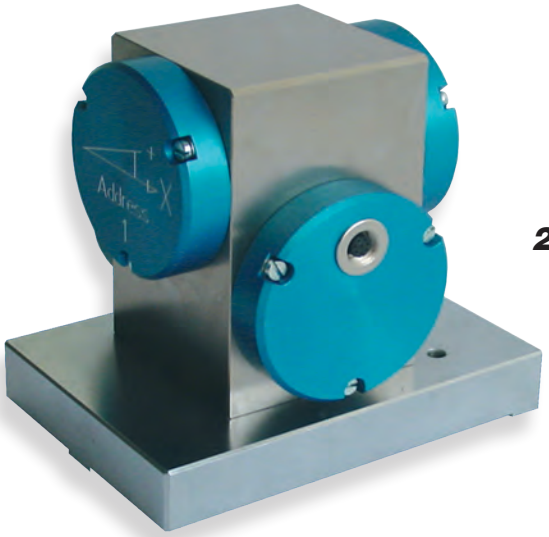
Swiss Quality!

For more information and prices on the Zerotronic, call Fowler's Tech. Dept.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Special applications are available. Please contact our Technical Department for more information.



2-D Sensor



Zeromatic

WYLER Digital Level Cables



Part Number: 54-845-025

- Levelmeter Light
- Transceiver/Converter T/C
- Levelmeter 2000
- Clino 2000

RS232 | 9 pin female | Length 2.5 m | 8 pin male | **RS232**



Part Number: 54-896-100

- BlueMETER/SIGMA
- BlueMETER Basic
- BlueMETER Light
- *(BlueLEVEL/Basic)*
- BlueLevel 2D
- BlueTC
- BlueCLINO/HP
- nivelSWISS-D
- MultiTC

RS232 | 9 pin female | Length 2.5 m | 8 pin male | **RS232**

Part Number: 54-820-779-1 Includes cable and LevelSoft Pro Software



300mA/5V MAX.

RS232 | USB | Length 2.5 m | 9 pin male | **RS485**

- Levelmeter 2000
- Levelmeter Light
- Transceiver T/C
- BlueMETER/SIGMA
- BlueMETER Basic
- BlueTC
- Clino 2000
- MultiTC
- Remote Display

RS485

Part Number: 54-845-205 2.5 meter
Part Number: 54-845-210 5 meter



- Zerotronic
- BlueLevel/Basic
- BlueLevel 2-D
- NivelSWISS-D
- Clinotronic Plus
- Clino 2000
- Transceiver T/C
- BlueCLINO/HP
- Zeromatic

8 pin male | 8 pin male | **RS485**



Part Number: 54-896-200

300mA/5V MAX.

- BlueMETER/SIGMA
- BlueMETER Light
- BlueMETER
- BlueLevel 2D
- BlueTC
- BlueCLINO/HP
- nivelSWISS-D
- MultiTC

RS485 | USB | Length 2.5 m | 9 pin male | **RS485**



Part Number: 54-635-525

- Clinotronic Plus
- Zeromatic

RS485 | USB | Length 1.8 m | 8 pin male | **RS485**

WYLER Digital Level Accessories

Part Number	Description
54-845-010	WYLER 24 V Powler Supply
54-845-999	WYLER Infra-Red Remote for BlueSYSTEM

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Clinometer

Other styles, sizes, sensitivities and magnetic inserts are available. Quoted upon request.



Use to set and check angles through 360°. Used in industries such as machine tools, general engineering, shipbuilding, textile machinery, structural bridges, mining & aeronautical, etc.

Simple to operate. For the initial setting, i.e., to the nearest degree, depress the spring loaded micrometer drum to disengage the drive to the main scale. Coarse setting is then made by rotating the spirit level by hand. Re-engage drive and rotate micrometer drum to obtain one final setting.

- Although smaller and more compact than most Clinometers, it still provides the same accuracy.
- Overall height 4.562"; base length 6"; base width 1.375". Weight is 3 lbs. 9 oz.
- Main circle: 1 division = 1 degree. Micrometer: 1 division = 1 minute. Accuracy: 1-1⁄2 minutes.
- Base hardened, ground flat with a longitudinal prismatic vee which allows it to be easily placed on flat & cylindrical surfaces.
- Circular scale, observed through viewing window, is marked 0-180-0 at one degree intervals and figured every 10 degrees.
- A spirit level vial, is attached to the adjusting collar.
- Scale is subdivided by means of an external micrometer graduated in minutes with a sensitivity of 1 division = 1 min. , 0.003"/10" (.3mm/m). Easy estimation to 30 seconds can be achieved. Drum graduated in minutes; figured every 5 minutes.
- Includes fitted wood case.

Part Number	Description	Sensitivity of Level
53-635-500	Clinometer	1 minute, .003"/10" (.3mm/m)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Magnetic Precision Spirit Levels

WYLER Universal Spirit Levels feature an insulated handle. Main vial unit observed from above and from either side. The vial unit is set into a steel tube in a stress free location, and can be adjusted in the body of the Spirit Level by a fine thread and screw system. Hand scraped by Swiss craftsmen. Includes fitted case.



WYLER Magnetic Precision Spirit Level checks and levels cylinders, horizontal and vertical surfaces. Constructed with two prismatic measuring surfaces. Sensitivity .0002" per 10". Magnets to ensure complete adherence to vertical surfaces of parts and vertical arbors or shafts. Operators on milling and boring units, inspectors and fitters work with free hands.

Part Number	Inch	Metric	Sensitivity Angular	Overall Dimensions
53-422-048	.0002"/10"	.02mm/m	4 sec.	6" x 1-9/16"x 6" (150mm x 40mm x 150mm)

Swiss Quality!

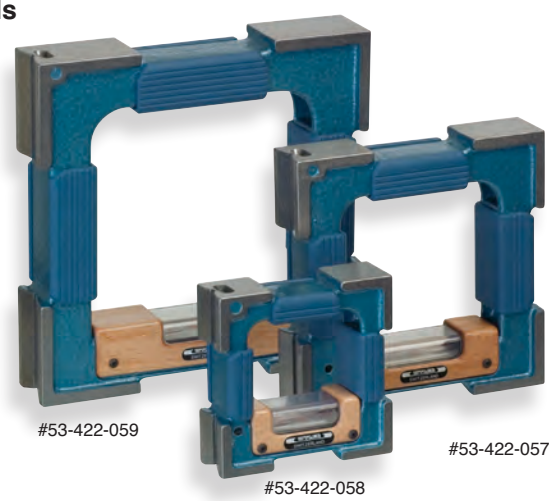
Overall Dimensions
6" x 1-9/16 x 6"
(150mm x 40mm x 150mm)

Magnetic inserts available for most spirit levels on request. Contact our Technical Dept. for price & availability.

Spirit Levels

Precision Frame Spirit Levels

Levels are used for adjusting and checking horizontal and vertical surfaces and shafts. Sensitivity .0005" per 10". The level features two prismatic sides and also comes equipped with insulating handles.



#53-422-059 #53-422-057 #53-422-058

- Ultra high quality
- Hand scraped by Swiss craftsmen.
- A clear view of the main vial can be observed not only from above, but also from both sides. This full view allows position of the bubble to be read easily.
- Includes fitted case.

Part Number	Inch	Metric	Sensitivity Angular	Overall Dimensions
53-422-057	.0005"/10"	.05mm/m	10 sec.	6" x 1-3/8" x 6" (150mm x 35mm x 150mm)
53-422-058	.0005"/10"	.05mm/m	10 sec.	4" x 1-3/8" x 4" (100mm x 35mm x 100mm)
53-422-059	.0005"/10"	.05mm/m	10 sec.	7-7/8"x 1-9/16"x 7-7/8" (200mm x 40mm x 200mm)

Other styles, sizes and sensitivities are available upon request.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Accomodates diameters from .750" to 5.300"

Precision Spirit Levels



No. 53-422-525

The Fowler-Wyler Horizontal Spirit Level is used for inspecting and levelling horizontal surfaces and cylinders. Sensitivity of .0005" per 10" length. This model features prismatic bearing surface, longitudinal and cross levels. Levels feature numerous advantages and ensure easy, accurate measurements.

Features:
- Protective wooden handle with large plastic window prevents damage to the vial from dirt and rough handling.
- Fully in compliance with DIN standards
- **Magnetic inserts available upon request.**
- To ensure constant high precision, the main vial is mounted under stress free conditions within a steel tube.
- In addition to the normal viewing from above, the large window enables the vial to be observed from both sides. This advantage is obvious when the operator is working in confined, close, remote areas and unable to move about during his inspections.
- Stability of twist to ±5˚.
- Simple adjustment system.
- Includes wooden case.

Part No.	Level Sensitivity	Dimensions
53-422-525	.0005"/10" (.05mm/m), 10 sec.	7-7⁄8" x 1-11⁄16" x 1-5⁄8" (200mm x 43mm x 41mm)
53-422-555	.0005"/10" (.05mm/m), 10 sec.	11-13⁄16" x 2" x 2" (300mm x 51mm x 51mm)
Other sizes and sensitivities available.		*Prices quoted upon request.*

Cross Spirit Levels



Features—No. 52-422-078
- The Cross Spirit Level is used for leveling machines & other apparatus.
- Overall length: 3.15" (80mm); width: 2.64" (67mm); thickness: .667" (17.2mm).
- Center to center distance of holes is 1.378" (35mm).
- Sensitivity is .001"/10", 20 seconds (.1mm/m).
- Level is screw-on type.

Features—No. 52-422-079
- The Cross Spirit Level is used for leveling machines & other apparatus.
- Overall length: 6" (150mm); width: 6" (150mm); thickness: 1.18" (30mm).
- Center to center distance of holes is 2.36" (60mm).
- Sensitivity is .0002"/10", 4 seconds (.02mm/m).
- Level is screw-on type.

Part Number	Description
52-422-078	Cross Spirit Level—3" (80mm)
52-422-079	Cross Spirit Level—6" (150mm)

Other styles, sizes and sensitivities are available upon request.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Precision Spirit Levels



▲ *Left to right: No. 53-422-063, No. 53-422-061 and No. 53-422-068*

Swiss Quality!

Many other spirit levels are available in different styles and sensitivities.

Features—No. 53-422-063:
- Shaft Spirit Level constructed with side viewing slots and a prismatic base.
- Base length is 7-7⁄8" x 1-3⁄16" x 1-3⁄8" (200mm x 30mm x 35mm).
- Includes wooden case.

Features—No. 53-422-061:
- The Inspection Spirit Level features a prismatic base.
- Length of base is 7-7⁄8"x 1-13⁄16" x 1-3⁄8" (200mm x 46mm x 35mm).
- Includes wooden case.

Features—No. 53-422-068:
- The Adjustable Micrometer Spirit Level is used to measure flatness of surfaces, inclination, tapers or concentricities.
- Prismatic measuring base is hardened and ground and the level includes an insulated handle.
- Base measures 5-7⁄8" x 1-3⁄4" x 3-1⁄6" (150mm x 44.5mm x 80mm).
- Micrometer has a hundred division lines with engraving of figures from 0-100.
- By depressing center knob, the micrometer can be turned easily and positioned to zero.
- Angle of level is fine adjusted using the micrometer knob.
- Includes wooden case.

Part Number	Description	Level Sensitivity
53-422-061	Inspection Spirit Level	.0005" per 10"
53-422-063	Shaft Spirit Level	.001" per 10" (.1mm per m), 20 seconds.
53-422-068	Adjustable Micrometer Spirit Level	.00025" per 12"

Many other spirit levels are available in different styles and sensitivities.
Please contact Fowler's Technical Department for details.

Other styles, sizes and sensitivities are available upon request.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Quality!

Wyler Spirit Levels



▲ *Circular Spirit Levels: left to right—No. 52-422-072, 073 & 074*

Features—No. 52-422-072, 073 & 074
- Circular Spirit Levels are used for leveling machines and other types of apparatus.
- Mounting diameter of No. 52-422-074 is .984" (25mm). The screw hole diameter on this model is .098" (2.5mm).
- Mounting diameter on No. 52-422-072 is 1.968" (50mm). The screw hole diameter is .135" (3.5mm).



▲ *Screw-on Spirit Level No. 52-422-066*

Features—No. 52-422-066
- Screw-on Spirit Levels are used for leveling machines, apparatus and other technical purposes.
- Overall length: 2.36" (60mm)
- Thickness: .55" (14mm)
- Width: .47" (12mm)
- Hole diameter: .135" (3.5mm)
- Center to center distance: 1.97" (50mm)

Part Number	Base Size	Sensitivity of Level
Circular Spirit Levels:		
52-422-072	2.360" (60mm)	20-30 minute of arc.
52-422-073	.787" (20mm)	20-30 minute of arc.
52-422-074	1.181" (30mm)	20-30 minute of arc.
Screw-on Spirit Level:		
52-422-066	2.360" (60mm)	.003"/10", 60 seconds (.3mm/m)

Other styles, sizes and sensitivities are available upon request.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

XTRA-VALUE Digi-Level

The Xtra-Value Digi-Level provides instant 360° digital inclination display of any angle. Features aluminum housing, with large LCD, reading hold, absolute 0° at sea level.



- Measuring Range: 360° (4 x 90°)
- Resolution: .05°
- Accuracy: ± .2° maximum error
- Repeatability: ±.05°
- Dimension: 4" L x 1" W x 3" H
- Voltage: Standard 9V Battery
- Battery Life: up to 250 hrs.
- Operating Temp: -5°C to 50°C (23°F to 122°F)
- Storage Temp: -20°C to 65°C (-4°F to 176°F)
- Weight: 1.1 lbs.

Part Number	Description
54-422-444	Xtra-Value Digi-Level

mini-MAG Protractor™



The mini-MAG Protractor provides instant 360° digital inclination display of any angle with the additional unique feature of embedded magnets on both sides and the bottom which make it ideal for a variety of measurements.

- Embedded magnets with 3.5lb. pull.
- Uses standard 9V battery (250 hrs.)
- Measuring range: 360° (4 x 90°)
- Display inverts.
- Resolution: .05°
- Accuracy: ±.2°
- Repeatability: .05°
- Hold feature

Part Number	Description
54-422-450-1	Mini-Mag Protractor

X-SERIES™



Display inverts for easy reading!

Dimensions: L: 2.375" x W: 1.375" x H: 2.375"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deluxe Electronic Protractor



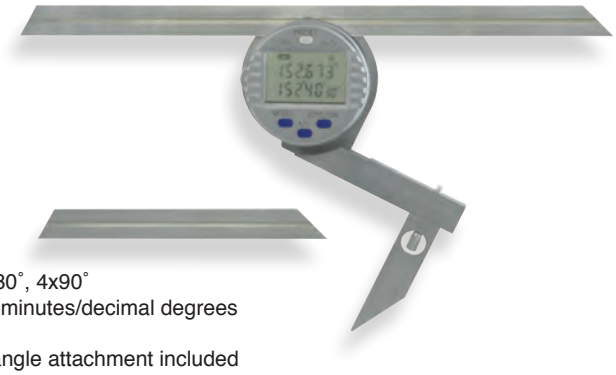
Fowler-Sylvac's Deluxe Electronic Protractor, featuring the patented Sylvac measuring system, provides an LCD readout in 1 minute of arc or 0.01 degrees of arc. A push-button selects the range according to application (1 x 360°, 2 x 180° or 4 x 90°) and changes the reading from arc minutes to decimal degrees. Additional push-buttons provide "reset" and "print" functions.

Features:

- Includes 8" blade, V-base support stand, and fitted case
- Accuracy: ±2 minutes
- Direct RS232 output
- Microfine adjustment for superior accuracy
- Completely portable; battery-operation provides approximately two years of life
- Hardened stainless steel blades
- Storage temperature: -20° to +70°C.
- Operational temperature: 41-104˚F/5-40°C
- Optional 6", 12" and 20" blades
- Optional acute angle attachment

Part Number	Description
54-440-977	Deluxe Protractor Set (with 8" blade, "V" base & case)
54-440-910	Acute angle attachment
54-440-925	8"/200mm blade (included with Protractor)
54-440-930	12"/300mm blade
54-440-940	20"/500mm blade
54-440-905	V-Base
54-115-525	Opto-USB Cable

Electronic Universal Protractor

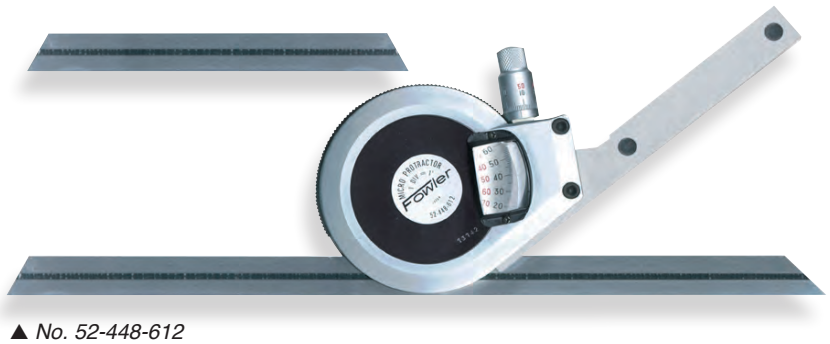


- Hardened stainless steel
- Range selection: 1x360˚, 2x180˚, 4x90˚
- Dual reading LCD display arc minutes/decimal degrees
- Preset function
- 6" and 12" blades and acute angle attachment included
- Fine adjustment
- Measuring range: 0-360˚
- Resolution: 30 seconds
- Accuracy: ±5 minutes

Part Number	Description
54-440-750	Electronic Universal Protractor
54-100-350	CR2032 Battery

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Universal Protractor



▲ *No. 52-448-612*

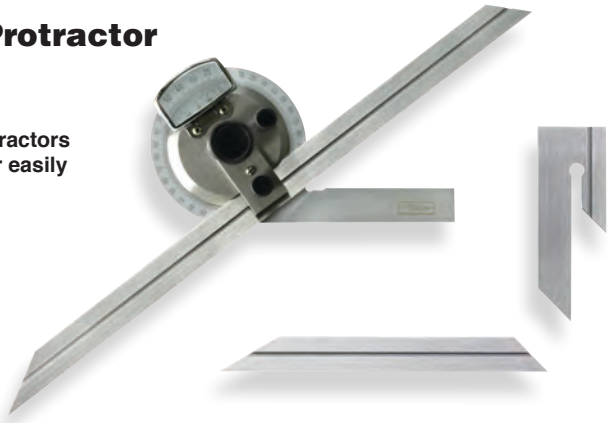
No. 52-448-612 Fowler's Universal Protractor is a high precision angle gage with accurate worm gears. Eliminates intricate handling formerly needed with conventional vernier protractors. Recommended for use in gaging machines, metal patterns, layout work and installations.

- Minimum reading: 1 minute.
- Micrometer graduation: 1 minute per graduation (1 degree per revolution).
- Includes 12" and 6" blades and a steel square for checking accuracy
- Measures a full 360° angle range.
- Round design for easy handling. Gage automatically locks when not in use.
- Hardened stainless steel construction prevents rust which ensures long life.
- Speedy set ups save time and money
- Blades beveled 45 and 60°.
- Built-in powerful magnifier make microfine graduations easy to read.
- Accuracy: ± 2 minutes.

Part Number	Description
52-448-612	Universal Protractor.

Universal Bevel Protractor

Fowler's Universal Bevel Protractors feature a magnifying glass for easily reading verniers and dial.

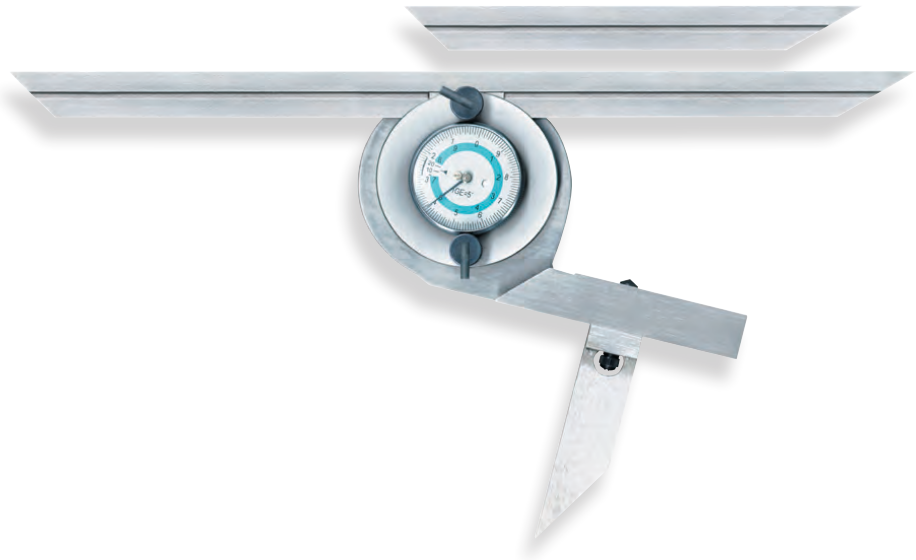


- Finished in satin chrome for easy reading.
- Accepts 6" and 12" blades. Blade slides full length, fastened by a knurled thumb lock which can be set at any point. Blades beveled 45° on one side; 60° on other.
- Also available is an angle attachment for acute angle measuring.
- Protractor dial graduated over 360° in 0 to 90° sectors and rotates around the full circle. Readings to 5 min. of arc with vernier.
- Features a fine adjustment for exact settings.
- Price includes fitted case.

Part Number	Description	Grad.
52-440-612	Bevel protractor w/magnifier lens, 6" & 12" blade.	5 min.
Accessories		
52-445-005	6" blade for No. 52-440-series	
52-445-010	12" blade for No. 52-440-series	
52-445-020	Acute angle attachment for No. 52-440-series	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Economy Universal Dial Protractor



Get accurate, dependable angular information with Fowler's Economy Universal Dial Protractor.

Features:
- Easy to read, each dial revolution equals 10˚
- Wide spaced graduations.
- Hardened stainless steel construction throughout with a satin chrome finish.
- Includes acute angle attachment.
- Blades are beveled 45˚ on one side and 60˚ on other side.
- Includes both 6" and 12" blades.
- Each angle and degree is subdivided into 12 divisions so that each division measures on an interval of 5 minutes.
- Positive locking lever.
- Supplied in fitted case.

Part Number	Description
52-440-777	Universal Dial Protractor
Accessories	
52-445-005	6" blade for No. 52-440-series
52-445-010	12" blade for No. 52-440-series
52-445-020	Acute angle attachment for No. 52-440-series

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Protractors



▲ *Semi-circular head type No. 52-450-005*



▲ *Rectangular head type No. 52-450-010*

Fowler's Protractors are invaluable tools for machinists, toolmakers, draftsmen and mechanics.

Special Features—No. 52-450-005:
- Measures angles from 0—180 degrees.
- Used for drawing radial lines at any angle.
- Measures 3-5⁄16" in diameter and features a lock nut and 6" arm with knurled thumb lock nut.

Special Features—No. 52-450-010:
- Measures angles from 0-180 degrees.
- Used to transfer angles and to set bevels.
- 6" arm with knurled thumb lock nut.
- Made of chrome steel with satin finish.
- Measures 3-5⁄16" x 2". Rectangular head provides four working edges. Blade secured firmly at any angle by a lock joint and knurled nut.

Part Number	Description
52-450-005	Protractor with semi-circular head
52-450-010	Protractor with rectangular head

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com











MATERIALS TESTING

Fowler

X-PRO™

Portable Roughness Tester

The X-Pro Portable Roughness Tester can be used for many applications by selecting from a variety of accessories, including:

- **Stand with swivel**
- **A variety of probes.**
- **RS232 output available.**
- **Printer for hard copy output.**



- Small, compact size
- 2 selectable parameters: Ra and Rz
- Large LCD display
- Meets ISO and DIN standards.
- N.I.S.T. traceable specimen included.
- Uses 9 volt battery (aprox. 3000 measurements).
- Ra 1μin to 250μin
- Includes fitted case.

Order Number	Description
54-410-500	Portable Surface Roughness Tester with .0004" probe
54-410-600	Portable Surface Roughness Tester with .0002" probe
Accessories:	
54-400-896	Stand with Swivel Attatchment
54-420-120	AC Adapter Kit
54-400-300	Cable
54-400-350	Printer
54-400-351	Printer and Cable

X-Pro Portable Roughness Tester Probes

Part Number	Description	Probe Radius
54-400-319	General Purpose Probe	.0004"
54-400-326	General Purpose Probe	.0002"
54-420-321	Small Bore Probe	.0004"
54-420-327	Small Bore Probe	.0002"
54-420-301	Traverse Chisel Probe	.0004"
54-420-302	Parallel Chisel Probe	.0004"
54-420-328	Groove Bottom Probe	.0004"



X-Pro shown with optional stand with swivel.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Premium Twin Scale Rockwell Type Hardness Tester



Features:

- Measures all Standard & Superficial Rockwell hardness values
- Simultaneous conversion to HV, HB and other HR scales
- Rugged fine casted frame allowing large dimension work pieces
- ASTM, ISO, JIS compliant
- ESELOAD™ unique motorised load application system, auto selection of main loads depending on HR scale (676 & 677 only)
- Superior depth measuring system through Heidenhain (Germany) transducer
- ESETOUCH™ advanced LCD touch screen & operator panel with user friendly menu operation in multiple languages
- High speed preload, loading and unloading procedure for ultra high efficiency
- ESELIFT™ (677 only) motorised elevating screw simplifies and speeds up test operation
- Automatic measurement procedure, load / dwell / unload (677 only)
- ESEMATIC™ fully automatic positioning and measuring procedure (positioning, preload, load, dwell, unload (676 and 677 models))
- Storage of 50 test programs and tester settings, allowing you to set up your tester in just seconds
- Alpha numerical data entry
- Continuous automatic "online" statistics, incl. average of readings etc.
- Storage of 99 single hardness values
- Go / No Go mode
- Convex and concave measuring mode
- Calibration date expired (reminder)
- Service mode including electronic linearity calibration, tests counter, maintenance system
- Prints statistics to built-in printer or external printer
- Built-in high speed printer and USB2 data output with network capability

Technical Specifications

Rockwell scales:	Standard	A,B,C,D,E,F,G,K,L,M,P,R,V
	Superficial	15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 15Y, 30Y, 45Y
Conversion to:	HV, HB, other HR scales	
Hardness resolution:	0.01 of a Rockwell unit	
Pre-load:	3kgf / 10kgf	
Main loads:	15, 30, 45, 60, 100, 150kg	
Pre-load:	application Manual (automatic for 677 ESEMATIC™)	
Test load:	application Fully automatic	
Data output:	Built-in high speed printer & USB2	
LCD Display:	Hardness value, conversion value, test force indicator, dwell time, memory contents, all machine settings, go / no go, all statistics	
Specimen accommodation:	Vertical space 275mm Horizontal space (from centre of elevator shaft) 190mm	
Power supply:	110-240V, 50-60Hz	
Machine dimensions:	Approx. 940mm x 390mm x 670mm (HxWxD)	
Net weight:	Approx. 140 kg	

Part Number	Description
54-770-420	Premium Twin Scale Rockwell Type Hardness Tester

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Digital Rockwell Hardness Tester



This unit features motorized push-button operation!

A high quality precision instrument that uses the Rockwell A, B and C scales for measuring hardness. Featuring ease of operation, automatic loading and unloading, automatic holding of test force and an easy-to-read LCD.

Features:
- Large backlit display with load progress bar.
- Standards: EN-ISO 6508 and ASTM-E18
- Resolution: .5 of a Rockwell unit.
- Test loads: 10 kgf preload/60, 100, 150 kgf load
- Rockwell scales: A, B, C, D, E, F, G, H, K, L, M, P, R, S, V (Direct display of HRC, B, A, F)
- Testing space: Vertical = 6.7"/170mm, Horizontal = 6.5"/165mm (from centerline)

Accessories included:
- Diamond Rockwell indentor
- Rockwell ball indentor 1/16"
- ±60HRC Hardness test block
- ±25HRC Hardness test block
- ±85HRB Hardness test block
- Flat anvil 60mm ø
- Large flat anvil 150mm ø
- V-anvil 40mm ø
- Adjustable feet
- Protective spindle cover

Part Number	Description
54-770-650	Electronic Rockwell Hardness Tester

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Analog Rockwell Hardness Tester



A high quality precision instrument that uses the Rockwell A, B, C and F scales for measuring hardness. A reasonably priced solution for those requiring precision and durability.

Features:
- Rugged construction, will stand up to the harshest environments
- Direct reading of Rockwell scales HRC, B, A, F or Superficial: HRT, HRN
- Accuracy conforms to EN-ISO 6508 and ASTM E-18
- Resolution 1 of a Rockwell unit.
- Easy load force selection by robust dial knob
- Oil brake with variable damping by adjustable knob
- Large capacity to accommodate large test specimen
- Standard delivery including accessories ready for testing all scales
- Testing space: Vertical = 6.7"/170mm, Horizontal = 6.5"/165mm (from centerline)
- Machine dimensions: W=150mm x D=485 x H=700mm

Accessories included:
- Diamond Rockwell indentor
- Rockwell ball indentor 1/16"
- Hardness test blocks: ±60HRC, ±25HRC, ±85HRB
- Flat anvil 60mm ø
- Large flat anvil 150mm ø
- V-anvil 40mm ø
- Adjustable feet
- Protective spindle cover

Part Number	Description
53-770-600	Analog Rockwell Hardness Tester

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Rangemaster Portable Hardness Tester



A great portable tester converts to a number of different scales.

Rangemaster has the advantage of redesigned mechanics and improved microprocessor control technology for high accuracy and repeatability. One instrument includes British, American and German standards with hardness values in Vickers, Brinell, Rockwells B and C, and tensile strength. Based on principles of portable testers, a mechanical load of 15kg is applied in 2 stages to a diamond indentor through special preloaded springs. Indentor penetrates test surface to a maximum depth of only .005", reducing damage to an absolute minimum yet giving consistently accurate results.

Large digital readout. Hardness values displayed in all major international scales. RS-232C output for connection to SPC equipment or serial printer for data collection and treatment of results either as an ongoing process or at the end of a batch of readings. Storage capacity for over 400 readings. Download to serial printer for comprehensive test reports. Value above or below tolerance indicators. Last reading recall facility. Battery or mains power.

Price includes calibrated test block, indentor key, wood case and instruction book.

The Rangemaster includes five international hardness scales as standard.

Hardness Scales	Testing Range	Resolution
Vickers Pyramid#	35 -1000	1
Brinell	100 - 500	1
Rockwell B	30 - 100	0.1
Rockwell C	20 - 70	0.1
Tensile Strength	255 - 1999N/mm2	1

Part Number	Description
54-760-000	RangeMaster with Rockwell B, C; Vickers, Brinell and tensile strength
53-760-020	Optional Bench Stand.
53-760-025	Optional Magnetic Holder.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Made in ENGLAND

This tester is excellent for identifying the minimum hardness of raw stock.



Fowler

Portable Hardness Tester



The simplicity of the Fowler Tester enables it to be used in almost any direction, preferably vertically, without affecting accuracy. Grips depressed by using palms of hands. Hardness value read off scale directly. No need for microscopic measurement of the indentation or reference to conversion tables. Operators cannot overload instrument or influence reading by varying applied hand pressure. Reading obtained is completely dependent on the specially designed preloaded springs in the tester. Repeatability is excellent; calibration can be checked against reference test block supplied with instrument. If necessary, the indentor adjusting bush can easily reset to give the exact test block reading.

Features:

- Suitable for use on ferrous and nonferrous metals from small diameter rods to large surfaces.
- Special bases available for use on small diameters or large radii.
- Stand accepts tester in a firm clamp, and table in stand is raised vertically to meet diamond indentor by means of pressure on a simple lever device.
- Special "V" base on each stand checks the hardness of round parts.
- Overall dimensions of 3" x 6" (75mm x 150mm).
- Mechanical tester uses special preloaded springs, providing a load of about 14.3 lbs.(6.5 kg) for the 53-760-001, 002 and 005 to the diamond.
- For 53-760-006 the load is 8.8 lbs. (4 kg). For 53-760-007, load is 35.2 lbs. (16 kg).
- When taking hardness reading, springs operating against diamond assembly are balanced against hardness of specimen, i.e., the harder the part being tested, the more movement is affected between diamond point and datum face of unit.
- Movement is transmitted through a direct mechanical linkage to the gage head where a movement of .0001" (.0025mm) at the diamond is amplified to approximately .250" (6.35mm) of rotary movement at the tip of the pointer. Maximum penetration of diamond into specimen is .005" (.125mm).
- Price includes operating instructions, a test block, adjusting wrenches and hardwood case.

Part Number	Description	Scales
53-760-002	Portable Hardness Tester. American SAE 1949 w/Rockwell C Test Block	Rockwell C 20-70, Rockwell A 40-85 Rockwell B 50-100
53-760-005	Portable Hardness Tester. Low range Steel w/Vickers Pyramid Test Block	Vickers Pyramid 40-300 Brinell 40-300
53-760-006	Portable Hardness Tester. Low range Non-ferrous w/Vickers Pyramid Test Block	Brinell 40-300 Vickers Pyramid 40-300
Accessories:		
53-760-020	Portable Bench Stand (not for use with 53-760-007)	
53-760-025	Magnetic Holder	
53-760-035	Replacement Diamond Indentor for 53-760-001, 002, 005 & 006	
53-760-040	Replacement Indentor Bushing for 53-760-001, 002, 005 & 006	
53-760-045	Replacement Diamond Indentor for 53-760-007 only	
53-760-050	Replacement Indentor Bushing for 53-760-007 only	
53-760-060	Test Block for Steel-High Range. (Included with 53-760-001 and 002 for Rockwell C)	
53-760-065	Test Block for Steel-High Range. (Included with 53-760-005 for Vickers or Brinell)	
53-760-070	Test Block for Non-ferrous. (Included with 53-760-006 for Vickers or Brinell)	
53-760-075	Test Block for Cast Iron. (Included with 53-760-007 for Brinell)	
53-760-080	Replacement base for all models	
53-760-085	160 degree base for internal radii over 6"	
53-760-090	Double "V" base for diameters larger than .08"	

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Portable Magnetic Rockwell Tester - W-INMR/01



Magnetic base hardness tester designed according to the principle of Rockwell hardness testing.

Features:
The test head can be fixed to the surface of iron and steel components by magnetic force.
Support to the test piece is not required as the 350kg+ magnetic base will hold the unit firmly in position
The testing accuracy complies to ISO6508 or ASTM E18 and is comparable to a Rockwell bench hardness tester
Testing can be done regardless of the shape of the component as long as there is a flat surface for positioning of the magnetic base
Able to test large-size workpieces which are assembled, unable to cut or inconvenient to move such as large-size moulds, steel plates, steel tubes, steel structures, pressure vessels, metallic pipe lines or the slide ways of machine tools

Standard Delivery:
Instrument with magnetic base
Rockwell diamond indenter
Rockwell ball indenter
Adjuster key
Packed in solid alu-case
INNOVATEST® certificate
Manual

Optional Accessories:
Rockwell indenters
Rockwell balls

Please contact the Fowler Technical Department for information and quotes.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Portable Durometers *(conform to Shore scale)*



No. 54-762 series



No. 53-762 series



53-762-010 Bench Stand

Fowler's Portable Durometers conform to Shore scale and are just right for testing the hardness of flexible materials such as rubber and plastics.

- Manufactured in accordance with DIN, ASTM, ISO and JIS specifications, two styles are available in both analog and digital readout.

- Price includes reference test block, operating instructions and wooden box.

Applications: 35° blunt taper Durometers are suitable for testing soft and natural rubber products, neoprene, polyesters, soft P.V.C., leather, thiokol, nitril rubbers, wax, felt and more. Sharp 30° point Durometers are ideal for testing hard rubber, hard synthetic materials, e.g. acrylics, glass, polystyrol, thermo-plastics, printing rolls, vinyl sheets, cellulose acetates, densified wood, etc.

Durometer Bench Stand #53-762-010—intended for use with 1 kg loading for Shore "A" scales and 5KG loading for Shore "D" scales. This concept of a low physical force lifting a fixed mass is ideal for both laboratory and production applications. Maximum height of piece to be tested 5.12"/130MM.

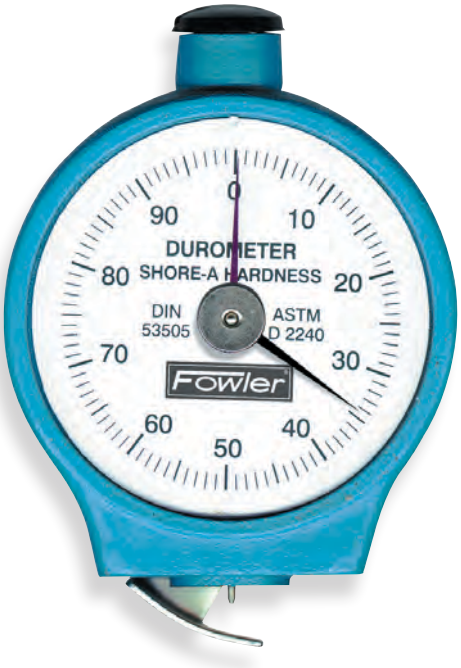
Specifications

Part Number	Type	Location Area	Height	Weight
53-762-001	Shore A	.629" (16mm) ø	3.425" (87mm)	(350 g)
53-762-002	Shore D	.629" (16mm) ø	3.425" (87mm)	(350 g)
54-762-001	Shore A	.59 x 1.89" (15 x 48mm)	5.315" (135mm)	(450 g)
54-762-002	Shore D	.59 x 1.89" (15 x 48mm)	5.315" (135mm)	(450 g)

Part Number	Description	Penetrator	Shore Scale	Grads.
53-762-001	Portable Shore Durometer	Blunt taper 35°	A	1 Shore
53-762-002	Portable Shore Durometer	Sharp 30° point	D	1 Shore
54-762-001	Digital Shore Durometer	Blunt taper 35°	A	.5 Shore
54-762-002	Digital Shore Durometer	Sharp 30° point	D	.5 Shore
Accessories				
53-762-010	Durometer Bench Stand			
53-762-015	V-anvil for Durometer Bench Stand.			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Portable Durometers



Fowler's Portable Durometers are just right for testing the hardness of flexible materials such as rubber and plastics. These gages conform to shore scales.

- Manufactured in accordance with DIN, ASTM, ISO and JIS specifications
- Includes reference test block, operating instructions and fitted case

Applications:
35° blunt taper Durometers are suitable for testing soft and natural rubber products, neoprene, polyesters, soft PVC, leather, thiokol, nitril rubbers, wax, felt and more.

Sharp 30° point Durometers are ideal for testing hard rubber, hard synthetic materials, e.g. acrylics, glass, polystyrol, thermoplastics, printing rolls, vinyl sheets, cellulose acetates, densified wood, etc.

Part Number	Penetrator	Shore Scale	Graduations
53-762-101	Blunt taper 35°	A	1 Shore
53-762-102	Sharp 30°	D	1 Shore

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Hardness Tester File Set



Fowler's Hardness Tester File Set is an inexpensive, easy-to-use method for determining material hardness by sliding the file across the object's surface. Six color coded files indicate hardness from 40 to 65 HRC. Conveniently packaged in a leather-like case with a velcro lined flap, the files are approximately .157" in diameter and 7" in length (4.3Ø x 175mm).

Testing Procedure:

- Run the Black file (65 HRC) over test material. If it marks the material, the material is less than 65 HRC.
- Try the Blue file (60 HRC). If it does not mark the material, it indicates that the file is softer than the material and is between 60 and 65 HRC.
- If the Blue file (60 HRC) marked the material, continue testing with the Green (55 HRC), Light-Green (50 HRC), etc. until the material is not marked. The approximate hardness of the material is between the file that marks the material and the file that slides over the material.
- Included chart also shows the appropriate Vickers Hardness (HV).

Color	Indication	File Hardness	
Red	40 HRC	40-42 HRC	392-412 HV
Yellow	45 HRC	45-47 HRC	446-471 HV
Light Green	50 HRC	50-52 HRC	513-544 HV
Green	55 HRC	55-57 HRC	595-633 HV
Blue	60 HRC	60-62 HRC	697-746 HV
Black	65 HRC	64-66 HRC	800-865 HV

Part Number	Description
52-760-000	Hardness Tester File Set—a six color-coded system

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



OPTICAL MEASUREMENT

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Magellan Vision System



A quality and versatile 3-axis vision system at a very competitive price!

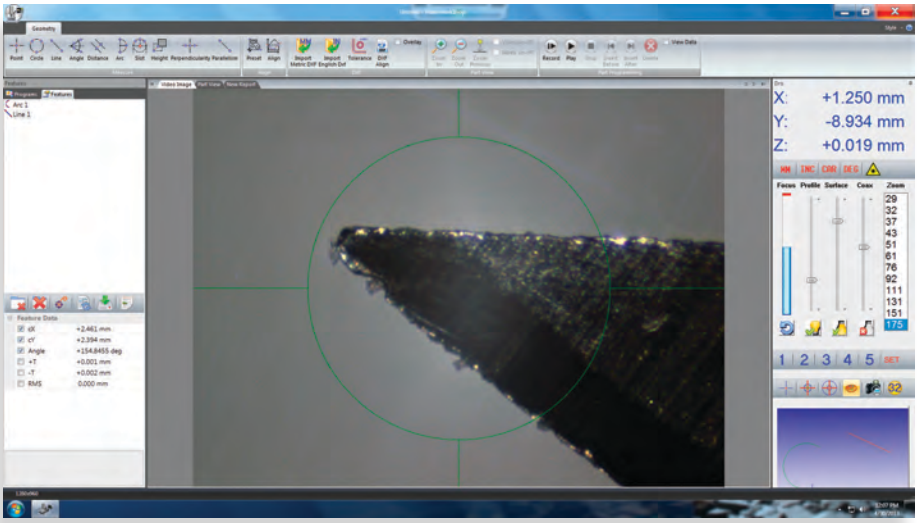
MADE IN THE USA

Made in the USA and offering both live-graphical-part and live-image views, Fowler's Magellan Vision System is available in two measuring ranges featuring Multi-Point Video Edge Detection for fast and accurate non-contact measurements.

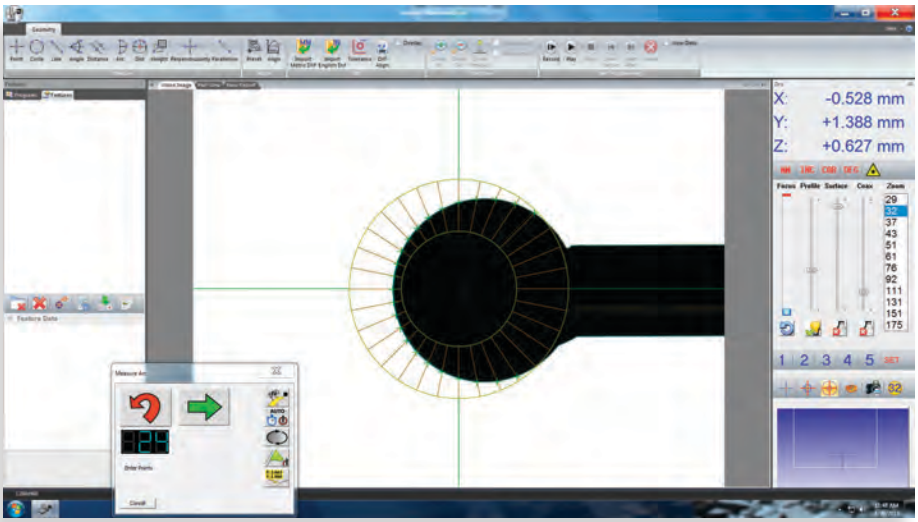
Magellan Vision System features:
- Bench Top Granite Machine Base
- Precision Mono-Rail Bearing Measuring Stage
- Quick Release X and Y Axis Controls
- Programmable 6.5 to 1 Motorized Zoom
- Thru-Lens Laser Spot Part Finder
- 1.2 Megapixel Digital Camera
- Programmable LED Illumination
- Multi-Touch Win7 Panel PC

Technical Specifications:
- 28x to 280x Par central motorized zoom lens
- Resolution: .001mm
- XY Accuracy: E2= (3+L /100)um
- Max stage load: 40lbs
- Illumination: Profile LED Telecentric; Surface LED 48 Ring Light
- Objective: 6.5 to 1 Motorized Zoom
- Weight: 150 lb
- Power: 110-240 VAC, 50-60Hz 70w

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



Utility razor blade shown at 175X magnification



Detection of an arc

VideoWorkShop Measuring Software (above)

- Multi-Touch User interface
- Multi-Point Video Edge Detection
- Video Edge Focus Meter
- Part Programming
- DXF import with Video Overlay
- Feature Data Export, Excel/SPC
- Live Image Capture
- Live Graphical Part View
- Lamp and Zoom Controls
- User Programmable Memories

Part Number	Description	Measuring Range
54-900-200	Magellan Vision System V200	8" x 6" x 6"
54-900-300	Magellan Vision System V300	12" x 8" x 6"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Gage Master Profile Projector



Made in ENGLAND

This unit features high quality construction and is a proven performer!

The Fowler bench mount profile projector with its 340mm screen combines high accuracy non-contact measurement and inspection with a large 175mm x 100mm measuring range.

Choice of digital readouts and optional automatic profile edge detection. The horizontal light path configuration is ideally suited to machined parts that can be secured to the workstage using a range of optional accessories. The compact and robust lightweight chassis makes the profile projector ideal for workshop environments.

Measuring options
GXL: Incorporates geometric functions for skew alignment, angle radii measurement, pitch circle diameter and construction of intersect points etc
GXL-E: As GXL with screen mounted automatic profile edge sensor. As an option the sensor can be fitted internally.

Features
- 340mm (14") screen with 90°crosslines and chart clips
- Profile illumination with halogen lamp and green filter
- Lens magnification choice: x10, x20,x25, x50 and x100
- Surface illumination (fibre optic)
- Helix adjustment of light source ± 7° for accurate thread form projection
- Workstage with machined slot for holding accessories
- Workstage measuring range of 175mm (7") x 100mm (4")
- Digital angle measurement to 1 minute

Optional features
- Internally fitted automatic edge sensor (illustrated)
- Swing over lamphouse to allow clear access to the workstage
- Various electronic measuring systems to suit individual requirements
- Cabinet stand ensures a solid base and provides storage
- Other options include foot switch control and printer

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

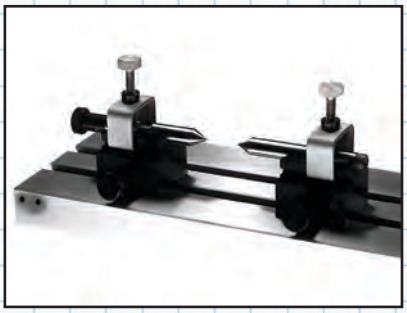
Gage Master Profile Projector *(cont.)*



53-900-825



53-900-824



53-910-475

Basic Machine
Type: Bench standing with horizontal light path
Screen: Rotating 340mm diameter, inclined 75° to horizontal, with hood
Image: Inverted and reversed
Power supply: 220 / 240 volt 50Hz or 110 volt 60Hz
Weight: 60kg (132lb)

The basic model consists of:
- 340mm diameter translucent screen with chart clips
- Digital angle measurement, with 1 minute of arc resolution
- Profile illumination with fan cooled lamphouse
- Surface illumination
- Focussing single lens mount
- x10 magnification lens
- Collimation lens
- Helix adjustment
- Machine slotted, chrome plated, cast iron workstage
- Green filter

Workstage

Measuring range:	• Horizontal (X) axis travel 175mm (7") • Vertical (Y) axis travel 100mm (4")
Surface area:	325mm (12.8") x 100 (4") with slot for mounting accessories
Scale resolution:	0.0005mm
Movement:	Manual with fine screw adjustment, quick release on X axis

Optical System

Lens mount:	Single, screw clamping
Lens magnification:	x10, x20, x25, x50, x100,
Focussing:	By hand wheel
Magnification accuracy:	Profile 0.05%. Surface 0.1%
Helix adjustment:	± 7° by light source alignment
Light source:	• Profile illumination 12v 100w lamp (tungsten halogen) • Surface illumination 12v 100w lamp (tungsten halogen)
Option:	Internally mounted edge sensor

R14 Lens Working Capacity in / (mm)

Magnification	x10	x20	x25	x50	x100
Field of view	1.4 (34)	0.7 (17)	0.53 (13.5)	0.27 (6.8)	0.13 (3.4)
Working Distance	3.2 (80.5)	1.5 (38.5)	1.1 (28)	0.64 (15.5)	1.2 (30)
Max Work Diameter (Full field)	4.7 (119)	4.3 (108)	2.2 (56)	1.2 (31)	3.0 (77)
Max Work Diameter (Half field)	3.9 (100)	3.9 (100)	3.1 (79)	1.7 (44)	3.7 (96)
Maximum work piece height			100mm		

Order Number	Description
53-900-800	Comparator with GXL Readout
53-900-801	Comparator with GXL-E Readout with edge sensor
Accessories:	
53-900-828	Comparator stand
53-900-824	Dual axis vee block and clamp to ø 30mm
53-900-825	Vice stage with stage
53-910-475	Vee blocks and spring-loaded centers
53-900-860	X10 lens
53-900-861	X20 lens
53-900-862	X25 lens
53-900-863	X50 lens
53-900-864	X100 lens

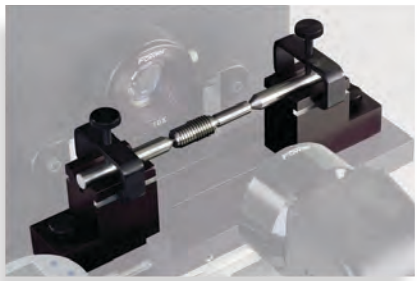
Other accessories available on request. Contact the Fowler technical department for more information.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

12" Basic Bench Top Optical Comparator

Standard with Profile & Surface illumination





Optical Comparator Set
No. 53-900-100 with
T-Slot V-Blocks & T-Slot Centers

Special Features:

- Featuring the basics for comparative/absolute measurements.
- 1 quadrant protractor screen graduated to 10X, 20X & 40X.
- 2 each, AGD Group 2, 0—1"/25mm electronic digital indicators with .0005"/.01mm resolution.
- 10X lens is included with the unit and other lenses are available.
- T-slot stage with a travel of 6" horizontally and 2-1/2" vertically make the unit universal for many different types of set-ups.

Part Number	Description
53-900-000	12" Basic Bench Top Optical Compartor
53-900-020	20X Lens
53-900-040	40X Lens
53-900-100	Comparator Package with T-Slot V-Blocks and T-Slot Centers
Accessories	
53-900-400	V-Block set
53-900-090	Overlay clips (set of 4)
53-900-060	Surface bulb (inside)
53-900-080	Profile bulb (lens)
53-900-425	T-slot centers

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Great values on stereo zoom microscopes!

Stereo Zoom Microscopes



No. 53-640-777
"Deluxe"



No. 53-640-877
"Tri-occular"
(with camera adaptor feature. Camera not included)



No. 53-640-734
"Standard"

Fowler offers a variety of Stereo Zoom Microscopes. While the microscope is in focus, the magnification may be changed to suite the specimen. The zoom objectives of the instrument change the magnification continuously, covering a range of 7X—45X or 7.5X—34X (with standard 10X eyepieces).

Stereo Zoom Microscopes are used in the electronics and precision machine industries for assembling and inspection of products. They are suitable for micrography and observation of fine structure of irregular bodies because of their high resolution and clear imaging within a broad field of view. They are also suitable for educational purposes in schools and hospitals and in agriculture, forestry, medical service, geology, archeology and biology fields.

No. 53-640-734—Binocular head is stationary and positioned toward front of tool. Transmitted light is adjustable, surface light is not.

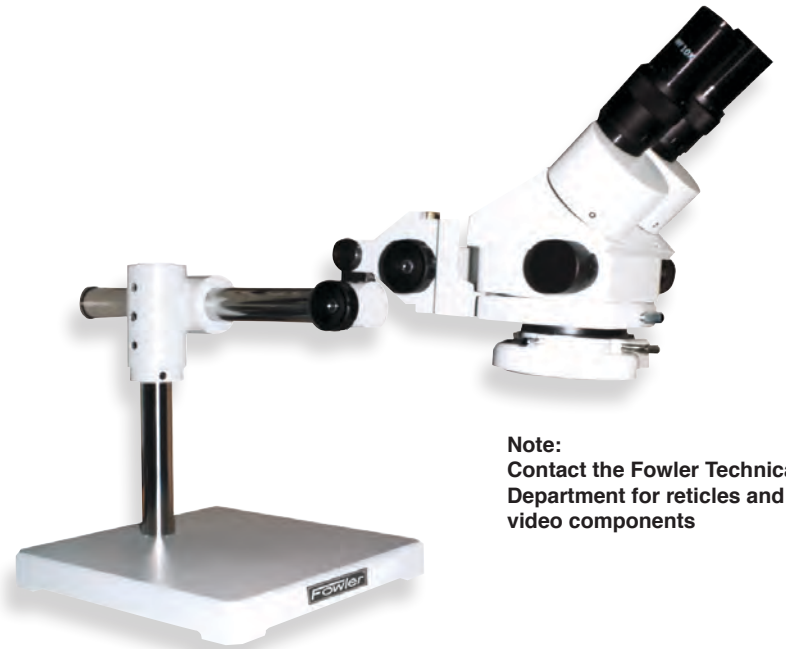
No. 53-640-777—Binocular head can be rotated a full 360° and locked in any position desired. Transmitted and surface lights (brightness can be adjusted separately).

No. 53-640-877—Like our 53-640-777, but with an adaptor to connect 35mm cameras that feature a standard "T" lens mount and an additional 2.5x eyepiece for photographic purposes

- Crisp and erect images with high resolution provide an excellent stereoscopic effect. Two zoom control knobs on each side of the head and their horizontal axis make operation easy.
- Includes 10X eyepiece with wide field of view (linear field of eyepiece is 23mmØ).
- The binocular observation tube inclines 45°.
- Interpupillary distance can be adjusted over a wide range of 55—77mm and the diopter adjustment range from less than -5 to more than +5 for easy viewing.
- Stereo Zoom Microscopes include 10X eyepieces and both transmitted and surface illumination.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Stereo Zoom Microscopes



No. 53-640-740 with 53-640-778 (not included)

Note:
Contact the Fowler Technical Department for reticles and video components

Specifications:

Model Number	Zoom Objective Magnification	10X Eyepiece Magnification	15X Eyepiece Magnification	20X Eyepiece Magnification
53-640-734	.75—3.4X	7.5—34X	11.25—51X	15—68X
53-640-777 *without Doubler*	.7—4.5X	7—45X	10.5—67.5X	14—90X
with 2X Doubler	1.4—9X	14—90X	21—135X	28—180X
Model Number	**Working Distance**	**Field of View**	**Field of View**	**Field of View**
53-640-734	93mm (3.66")	31—21mm	21—4.5mm	15.5—3.4mm
53-640-777 *without Doubler*	93mm (3.66")	33—5mm	22—4mm	16—3mm
with 2X Doubler	34mm (1.34")	16—3mm	11—2mm	8—1mm

Part Number	Description
53-640-734	Stereo Zoom Microscope 7.5—34X includes 10X eyepieces and eyecups
53-640-777	Deluxe Stereo Zoom Microscope 7—45X includes 10X eyepieces and eyecups
53-640-877	Deluxe Stereo Zoom Microscope 7—45X includes 10X eyepieces and eyecups with 35mm camera adaptor
Accessories	
53-640-778	Deluxe Zoom Head with 10X eyepieces only (for use with 53-640-740)
53-640-702	2X Doubler Lens for No. 53-640-777 and 877
53-640-710	10X Eyepieces included with No. 53-640-734, 777 and 877
53-640-715	15X Eyepieces, optional for No. 53-640-734, 777 and 877
53-640-720	20X Eyepieces, optional for No. 53-640-734, 777 and 877
53-640-740	Universal Zoom Stand with top light for No. 53-640-777 or 778
53-640-746	Replacement bulb for No. 53-640-740
53-640-781	6V/12W Halogen Transmitted Lamp for No. 53-640-777 and 877
53-640-000	6V/15W Halogen Surface Lamp for No. 53-640-734, 777 and 877
53-640-001	Twin florescent transmitted tube lamp for No. 53-640-734



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deluxe Stereo Microscopes



Fowler's Deluxe Stereo Microscope is an excellent, high quality optical system in a small body with both top and bottom illumination.

Used on a daily basis as an inspection tool, the Deluxe Stereo Microscope is applicable in diverse fields ranging from electronic, food, inspection, chemical, metallographic, metallurgical, ceramic, textile and to the fields of medicine and biology, geology, mineralogy, paleontology, archeology and more.

Standard equipment includes 2X and 4X objectives, 10X eyepiece and two 12 volt illuminators (one surface or top illuminator and one transmitted or bottom illuminator with on/off switch).

- Wide field eyepieces are mounted in 45° inclined eye tube with interpupillary distance adjustable from 2 to 3" (50 to 75mm).
- Sharp image definition.
- Two sets of paired objectives. 2X and 4X mounted in 180° revolving turret with positive click stop — parfocal and parcentered.
- Optional eyepieces available to increase magnification to 80X.
- Two 3.5"(95mm) stage plates provided. (Reversible white/black and clear.)
- Rack and pinion focusing.
- Dust cover included.
- Pair of rubber eye cups included.

Eyepiece	Objective	Magnification	Working Distance	Field of View
10X	2X	20X	3.15" (80mm)	.40" (10mm)
10X	4X	40X	2.24" (57mm)	.20" (5mm)
15X	2X	30X	3.15" (80mm)	.30" (7.5mm)
15X	4X	60X	2.24" (57mm)	.15" (3.75mm)
20X	2X	40X	3.15" (80mm)	.20" (5mm)
20X	4X	80X	2.24" (57mm)	10" (2.5mm)

Part Number	Description
53-640-902	Deluxe 20/40x Stereo Microscope includes 2X and 4X objectives, 10X eyepiece, eye cups and dust cover.
Accessories	
53-640-910	Pair of 10X eyepieces — standard
53-640-915	Pair of 15X eyepieces — optional
53-640-920	Pair of 20X eyepieces — optional
53-640-925	12V Replacement bulb for surface & transmitted illuminators

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Stereo Microscopes



Fowler's Stereo Microscope is a high quality Optical Instrument in a compact, simply constructed body. Used exclusively for surface inspection.

The Stereo Microscope is also used in diverse fields ranging from electronic, food, precision, chemical, metallographic, metallurgical, ceramic, textile and to the fields of medicine and biology, geology, mineralogy, paleontology, archeology and more.

Standard equipment includes 1X and 3X objectives, 10X eyepiece and 12 volt incident (top) illuminator with an off/on switch.

- Wide field eyepieces are mounted in 45° inclined eyetube with interpupillary distance adjustable from 2 to 3" (50 to 75mm).
- Objectives are mounted in 180° revolving turret with positive click stop — parfocal and parcentered.
- Optional eyepieces available to increase magnification to 60X.
- 2.5"(60mm) reversible white/black stage plate provided.
- Pair of rubber eye cups included.

Eyepiece	Objective	Magnification	Working Distance	Field of View
10X	1X	10X	2.0" (50mm)	.80" (20mm)
10X	3X	30X	2.40" (61mm)	.30" (7.5mm)
15X	1X	15X	2.0" (50mm)	.60" (15mm)
15X	3X	45X	2.40" (61mm)	.20" (5mm)
20X	1X	20X	2.0" (50mm)	.40" (10mm)
20X	3X	60X	2.40" (61mm)	.13" (3.3mm)

Part Number	Description
53-640-320	10/30x Stereo Microscope. Includes 1X and 3X objectives, 10X eyepiece and eye cups.
Accessories	
53-640-910	Pair of 10X eyepieces — standard
53-640-915	Pair of 15X eyepieces — optional
53-640-920	Pair of 20X eyepieces — optional
53-640-925	12V Replacement bulb for surface illumination



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

20x Extended Range Microscope



XTRA-RANGE®

Fowler's new Extended Range Microscope is ideal for viewing the surface of items that will not fit into conventional microscope plates.

Features:

- 10X eyepieces with adjustable centers and rubber eye-cups.
- 2X objective lense
- Top swiveling light source - 12 volt lamp, 110V supply.
- Positive rack and pinion focusing.
- Articulated 12" long extension arm.
- Heavy base plate insures stability and houses transformer which measures 5" x 8" x 2.5"
- Overall base and column height of 12"

Part Number	Description
53-640-280	20X Microscope with Universal Stand
53-640-281-1	Replacement Bulb

Specifications subject to change without notice.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Measuring Microscopes



Units can be special ordered with metric scale reticles. Contact our Technical Department for more information.

Features:
- Focus of the eyepiece is highly corrected for chromatic aberration.
- All microscopes are mounted on a self-contained stand.
- All microscopes include a pen light powered by AA dry cell batteries and a bracket.
- Reticle supplied as standard equipment has fine 90 degree crosshairs.
- Reticle can be rotated within the axis of the instrument and focused for individual eyesight.
- Microscope tubes supplied with a screw type adjustment for 2-1/2" vertical movement.
- All units include a built-in height/depth scale with .1mm graduations.

Part Number	Description	Working Distance	Field of View
53-646-087	Microscope 20X with 90° crosshair reticle, 2X objective & 10X eyepiece	1.417"(36mm)	.283"(7.2mm)ø
53-646-089	Microscope 40X with 90° crosshair reticle, 4X objective & 10X eyepiece	.736"(18.7mm)	.142"(3.6mm)ø
53-646-091	Microscope 60X with 90° crosshair reticle, 6X objective & 10X eyepiece	.406"(10.3mm)	.094"(2.4mm)ø
53-646-096	Microscope 100X with 90° crosshair reticle, 10X objective & 10X eyepiece	.224"(5.7mm)	.057"(1.45mm)ø
53-646-098	Microscope 150X with 90° crosshair reticle, 15X objective & 10X eyepiece	.362"(9.2mm)	.038"(.96mm)ø
53-646-100	Microscope 200X with 90° crosshair reticle, 20X objective & 10X eyepiece	.264"(6.7mm)	.028"(.72mm)ø

Accessories:

53-646-028	4X achromatic objective for No. 53-646-089 only
53-646-029	6X achromatic objective for and included with No. 53-646-091 only
53-646-030	10X achromatic objective for and included with No. 53-646-096 only
53-646-060	.005" scale reticle only for 20X No. 53-646-087
53-646-062	.001" scale reticle only for 60X No. 53-646-091
53-646-065	90 degree crosshair reticle only. Included with above microscopes
53-646-067	.0002" scale reticle only for 150X No. 53-646-098
53-646-068	.0001" scale reticle only for 200X No. 53-646-100
53-646-081	Pen light with bracket. Included with above microscopes

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

10x Pocket Optical Comparators



52-664-009 Optical Comparitor
Set with 9 reticles



52-664-609 Optical Comparitor
Set with 9 reticles and Illuminator
Attachment

Fowler's 10X Pocket Optical Comparator magnifies images which are sharp, undistorted and free of aberrations. Convenient for checking angles, thread measurements, hole sizes and more. This 10X comparator is widely used by machinists, toolmakers and inspectors in the industry.

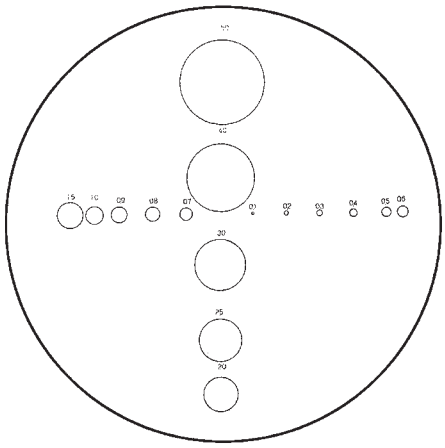
Features:

- Scales are photo-etched into a glass reticle which is placed in actual contact with the measured object, obtaining simultaneous enlarged images of the scale.
- Reticles (protected in individual plastic cases) are easily interchanged by a screw-in mount. Measures radii, diameters, angles, hole sizes, pitch and thicknesses.
- With the illuminator attachment, the comparator converts into a self-contained illuminated measuring magnifier.

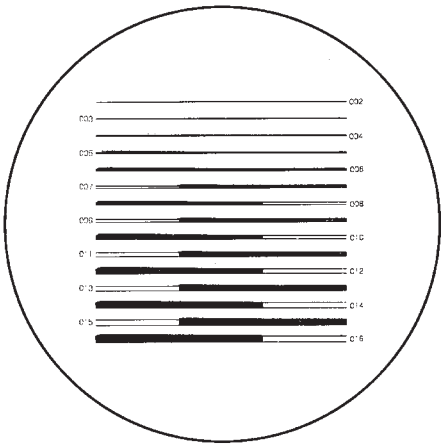
Part Number	Description
52-664-001	10X Comparator with No. 52-661-009 reticle
52-664-009	10X Comparator with 9 reticles
52-664-609	10x Pocket Optical Comparator Set with 9 reticles and Illuminator Attachment
52-665-006	Illuminator attachment only (requires 2 "C" size batteries)
52-661-001 to 009	9 reticles individually priced (shown on next page)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

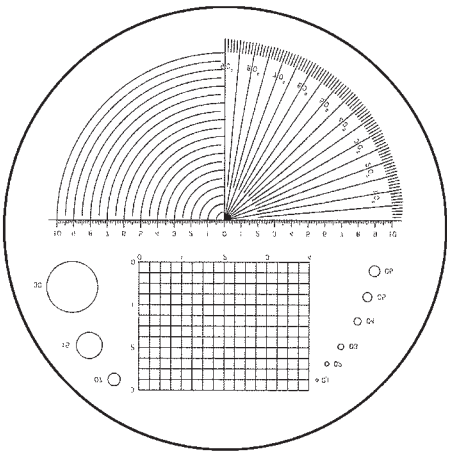
10x Pocket Optical Comparator Reticles



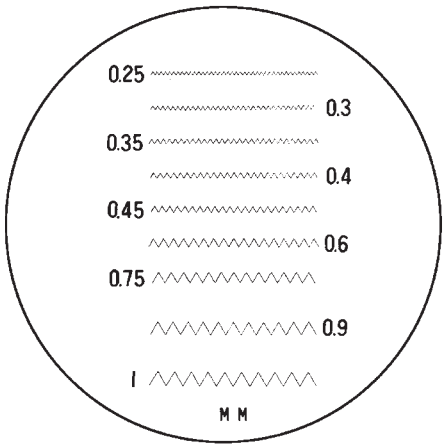
▲ *52-661-001 - Diameter*



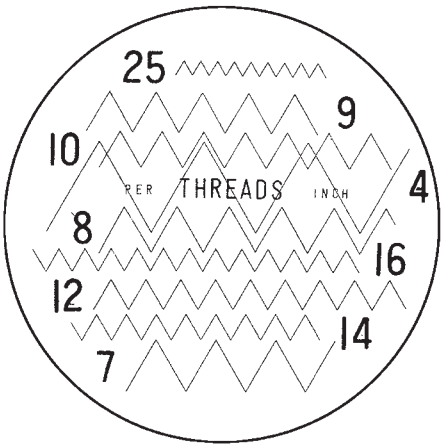
▲ *52-661-002 - Line Thickness*



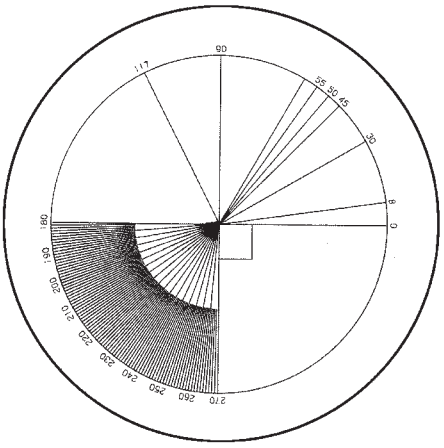
▲ *52-661-003 - Combo*



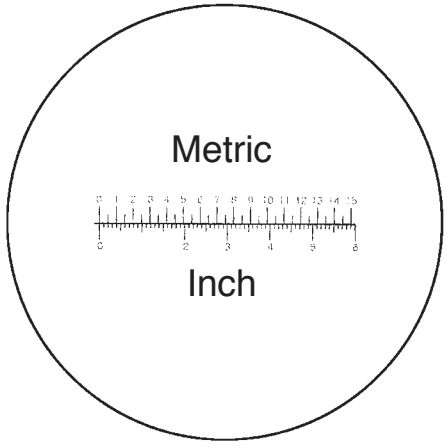
▲ *52-661-004 - Metric Thread Pitch*



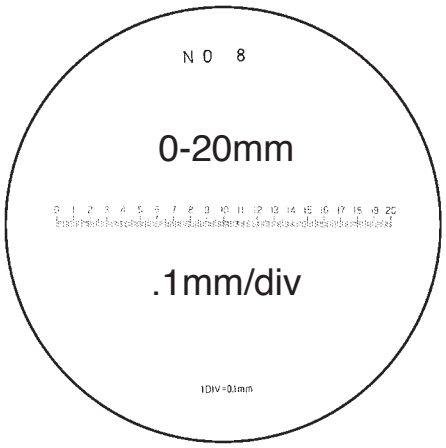
▲ *52-661-005 - Inch Thread Pitch*



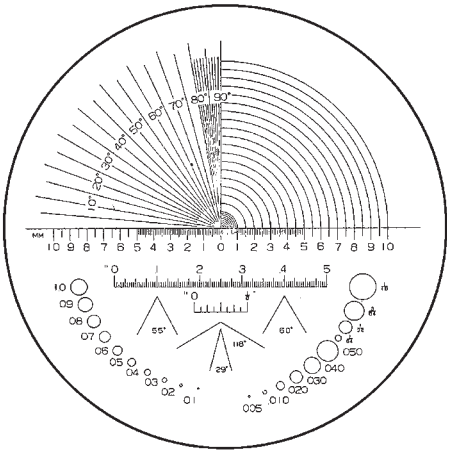
▲ *52-661-006 - Angle*



▲ *52-661-007 - Length*



▲ *52-661-008 - Length*



▲ *52-661-009- Combo*

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

7x Pocket Optical Comparators



Pocket Comparator No. 52-665-005 with five reticles



Illuminator Attachment No. 52-665-006 shown with No. 52-665-005

Fowler's Pocket Optical Comparator magnifies images which are sharp, undistorted and free of aberrations. Convenient for checking angles, thread measurements, hole sizes and more. This 7X comparator is widely used by machinists, toolmakers and inspectors in the industry.

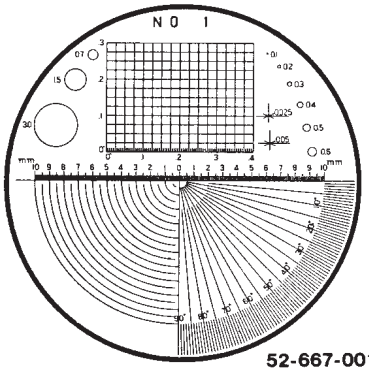
Features:

- Scales are photo-etched into a glass reticle which is placed in actual contact with the measured object, obtaining simultaneous enlarged images of the scale.
- Reticles (protected in a plastic case) are easily interchanged by a screw-in mount. Measures radii, diameters, angles, hole sizes, pitch and thicknesses.
- With the illuminator attachment, the comparator converts into a self-contained illuminated measuring magnifier.

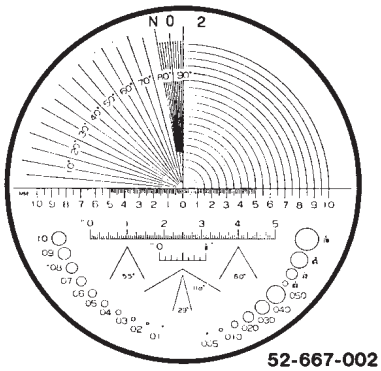
Part Number	Description
52-665-001	"Peak" 7X Comparator with #5 reticle.
52-665-005	"Peak" 7X Comparator with 5 reticles (#1,5,7,8 & 13).
52-665-006	Illuminator attachment only (requires 2 "C" size batteries).
52-667-001 to 013	13 reticles individually priced.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

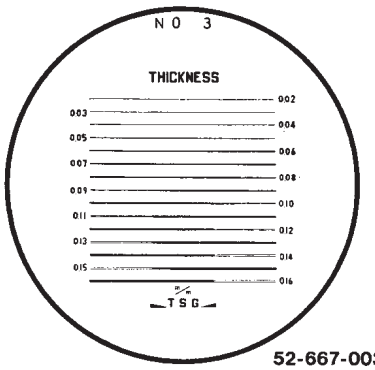
7x Pocket Optical Comparator Reticles



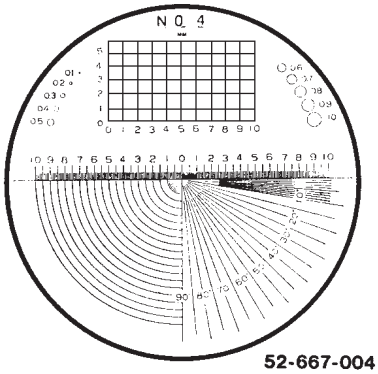
52-667-001



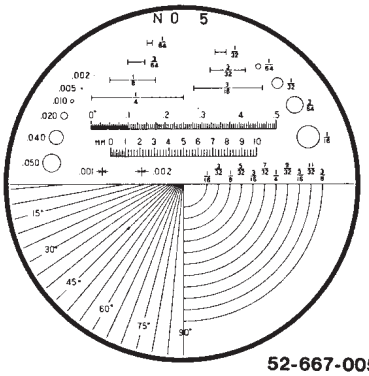
52-667-002



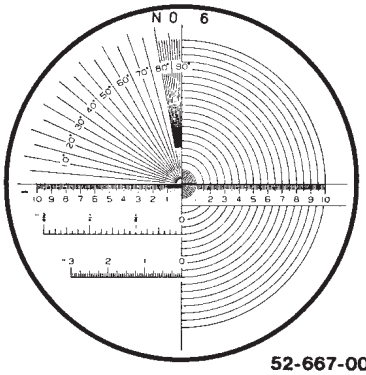
52-667-003



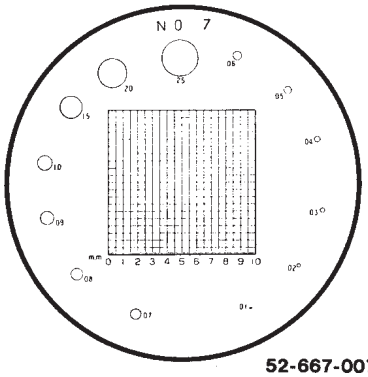
52-667-004



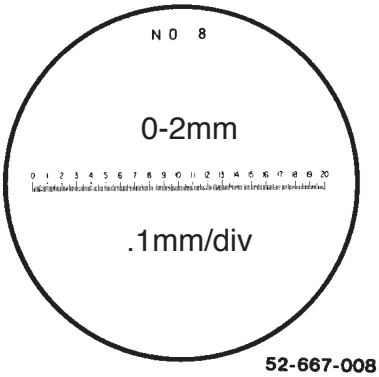
52-667-005



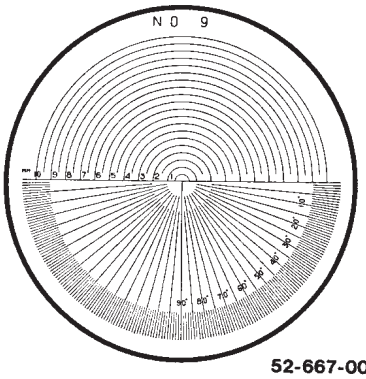
52-667-006



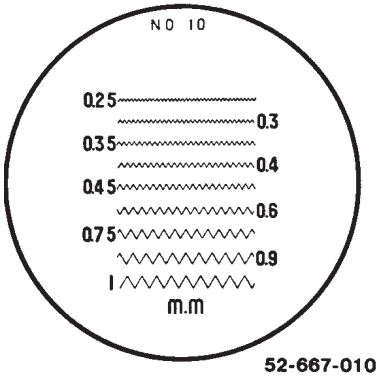
52-667-007



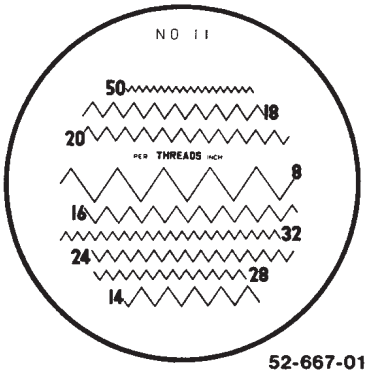
52-667-008



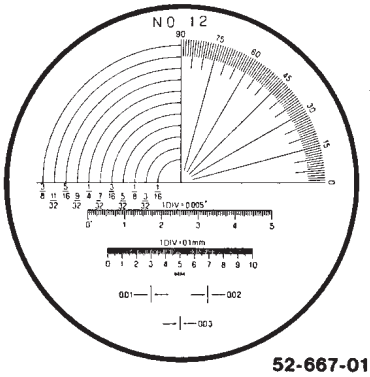
52-667-009



52-667-010



52-667-011



52-667-012

• Reticle 52-667-008 is metric; Reticle 52-667-013 (not shown) is similar to 52-667-008 but is in inches. With 0-.8", .0025", .005" graduations.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Optical & Illuminated Magnifiers

Fowler Optical Magnifiers and Illuminated Magnifiers are of the highest optical quality and offer fine resolution. Ideal for machinists, toolmakers, philatelists, lithographers, coin collectors, etc.

Illuminated Magnifier No. 52-660-050 takes two "C" size batteries (not included), includes a rust proof brass battery case and offers excellent illumination.



▲ *No. 52-660-001*



▲ *No. 52-660-007*



▲ *No. 52-660-005*



▲ *No. 52-660-020*



▲ *No. 52-660-010*



▲ *No. 52-660-050*



▲ *No. 52-660-015*

Part Number	Description
Optical Magnifiers:	
52-660-001	5X Loupe (plastic); focal distance 2". High quality, precise.
52-660-005	Swivel base with 15X magnification.
52-660-007	An optimum quality triple element lens of 7X magnification in a focusing mount.
52-660-010	Double element magnifier, excellent optical quality; 10X magnification.
52-660-015	Combination of three lenses in two groups making an excellent achromatic magnifier of 15X.
3-Piece Loupe Set:	
52-660-020	Includes a 2X, 5X and 10X loupes.
Illuminated Magnifier:	
52-660-050	Magnifier 10X. Batteries not included. Requires 2 "C" size batteries.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Pocket Scope & Micro-Lite



▲ *Pocket-Scope shown with Micro-Lite.*

Fowler's Pocket-Scope is available in 20X and 40X magnification with professional quality optics. It is specially designed to give an undistorted flat field of view larger and brighter than similar magnifiers with its type of power. Also available is the Micro-lite which is the perfect companion for the Pocket-Scope. Ideal for toolmakers, inspectors, machinists, field service personnel, designers, artists, printers, jewelers, electricians and photographers.

Features—No. 52-662-020, 040:
- Because it has no moving parts, the Pocket-Scope never loses focus.
- Compound lens system of four parts gives accurate readings without adjusting.
- Reticles graduated in .002" or .001".
- Furnished with lifetime guaranty.
- Compact in size—under 5" in length.
- Provides on the job viewing not possible with other microscopes of this type.
- The special beveled opening gathers and focuses light on the workpiece.
- Aluminum alloy shell protects lens system from breakage and comes with a handy clip.
- Price includes case.

Features—No. 52-662-045:
- The Micro-lite is easily added to the Pocket-Scope by a spring clamp and offers greater illumination.
- Invaluable for inspection and measurement of hard to see and hard to reach places.
- One size fits all Pocket-Scopes.
- Price includes storage case.

Part Number	Description	Field of View	Scale Range
52-662-020	20X Pocket-Scope with .002" reticle.	.190"	0-.18"
52-662-040	40X Pocket-Scope with .001" reticle.	.082"	0-.07"
52-662-045	Micro-lite (uses AAA battery, not included)		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

BoreView Inspection Set

Each Kit Includes:

- **Battery-holding handle**
- **Batteries**
- **Illuminated probe (3" long x .120" dia.)**
- **3X magnifier(3/4" dia.)**
- **Mirror (3/8" dia.)**
- **Spare bulb**
- **Shop-hardened case.**

An essential internal inspection tool for any industry!



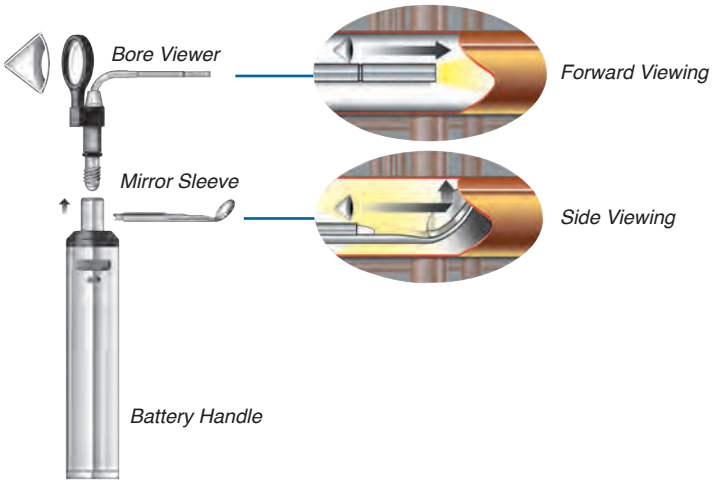
Clear, illuminated views of bores, cavities and other restricted areas.



Now internal inspection in any industry can be made quickly and easily with Fowler's new bore viewer.

Its compact size and built-in illumination make our bore viewer fully portable. Combine that with stainless steel construction, a magnifying glass and inspection mirror, and you get a top quality internal inspection viewer that can be used anywhere in a wide variety of applications!

- Use for inspecting bores, cavities, threads, undercuts, raceways, surface finish, tools and intricate assemblies.
- Views bores from 1/8" in diameter and up.
- Stainless steel construction.
- Mold makers-perfect for inspecting passages and cavities.
- Maintenance-inspect many industrial problems on-site and avoid disassembly.



Part Number	Description
52-660-777	BoreView Inspection Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Deep Hole Light



Features:

- Deep Hole Light permits viewing in deep holes, around corners, under grooves, etc.
- Includes battery case for 2 penlight batteries and a battery case for one battery for use where space is limited; batteries not included.
- Features a positive switch. Curved and straight light conveying devices place intense illumination at their ends directly on the bottom of the hole being viewed. A small mirror permits viewing in a manner similar to a dentist examining teeth.
- Includes plastic case.

Part Number	Description
52-270-000	Deep Hole Light and accessories

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Triplets & Folding Pocket Magnifiers



▲ *52-660-003*



▲ *52-660-006*



▲ *52-660-004*



▲ *52-660-008*



▲ *52-660-002*

Triplet Lens Magnifiers:
No. 52-660-002, 003 and 004

- High quality distortion free magnifiers
- 3 lens triplet construction
- Polished chrome bodies
- Lenses are recessed to protect them from damage
- Optics pivot into body for added protection
- Includes fitted leather case

Folding Pocket Magnifiers:
No. 52-660-006 and 008

- Suitable for visual inspection of circuit boards, prints and surface scratching etc
- Folds flat for convenient carrying and storing
- Magnification approximately 2.5X
- Easy to read 1mm graduated grid on base
- Includes fitted plastic case

Part Number	Description
52-660-002	Triplet lens magnifier - 10X and 15X magnifiers
52-660-003	Triplet lens magnifier - 10X, 15X and 20X magnifiers
52-660-004	Triplet lens magnifier - 10X magnifier
52-660-006	Folding 2.5X magnifier with 20mm grid, black anodized
52-660-008	Folding 2.5X magnifier with 15mm grid, chrome plated

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Articulated Arm Magnifying Lamps



▲ *No. 52-630-133*

Fowler's magnifing lamps are designed for demanding jobs in laboratory, quality control, inspection and assembly functions.

Only the finest clear crown optical glass lenses are used for less distortion and true color rendition. Illuminated magnifiers provide hands-free viewing for greater detail and reduced eye strain. No exposed springs means less parts to wear out and replace.

Both models are U.L. listed, have 3-conductor cords, come standard with 4.5" diameter 3-diopter lens and 22 watt circline bulb.

- 3-Diopter lens = 1-3/4 X
- Offers three different mounting methods:
  - Screw tightening
  - Angle support plate
  - C clamp
- Base made of engineering plastic, are absolutely insulated, giving maximum safety without electric leakage interferring machine control circuits.

Part Number	Description
52-630-133	30" Magnifying Lamp
52-630-101	Optional 5 Diopter lens 2-1/4
52-630-102	Replacement C Clamp
52-630-105	Replacement 22 watt bulb
52-630-322	Angle support plate

Magnetic Lamp



▲ *No. 52-585-043*
(Bulb not included.)

Features:
- Magnetic Lamp height is 12".
- 85 lb. pull magnet holds lamp firmly in place at all times.
- Flexible arm allows illumination in any direction.
- On/off switch for easy positioning and removal.
- V-way on base affixes firmly to any round surfaces.

Part Number	Description
52-585-043	Magnetic Lamp

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Large Diameter Magnetic Base with Articulating Arm

and LED Flashlight





- 14 LED Ultra-bright flashlight.
- Powerful, low-profile magnetic base.
- Positive-locking 6" articulating arm allows for easy and accurate positioning.
- Quick release mounting bracket clamp.
- Batteries included.

Part Number	Description
52-630-460	Articulating Arm Magnetic Base with light

Large Diameter Magnetic Mini Flex Bar

with LED Flashlight



- 14 LED Ultra-bright flashlight.
- Large, 2" diameter chrome mag base.
- Slim, articulating flex bar allows easy and accurate positioning.
- Quick release mounting bracket clamp.
- Batteries included.

Part Number	Description
52-630-455	Large Diameter Magnetic Mini Flex Bar with light

These sets are ideal for focused applications in Industrial and Automotive!

Universal Magnetic Mini Flex Bar

with Zoom Flashlight



- Zoom 150 lumens Ultra-bright flashlight with 3 modes; bright, dim and flashing
- Powerful, low-profile magnetic base
- Slim, articulating flex bar allows easy and accurate positioning.
- Quick releasemounting bracket clamp
- Batteries included

Part Number	Description
52-630-451-1	Universal Magnetic Mini Flex Bar with light

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?

There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?

Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?

Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com







REFERENCE MASTERS

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Square Ceramic Gage Block Sets

Fowler's Square Ceramic Gage Block Sets are manufactured to the same high precision as our rectangular sets. Zirconia Ceramic Gage Blocks are available in 36 piece sets and in two grades. Square in shape, they are constructed of high grade zirconia ceramic, lapped for high accuracy… and very competitively priced with steel gage blocks.



Lower coefficient of thermal expansion

More resistant to wear and corrosion

Square Gage Blocks maintain stability both longitudinally and laterally.

Block sizes included in each set:

36 pcs. in wood case. Consists of:

9	Blocks .1001" thru .1009" step of .0001"
9	Blocks .101" thru .109" step of .001"
9	Blocks .110" thru .190" step of .01"
5	Blocks .100" thru .500" step of .1"
3	Blocks 1", 2", 4"
1	Block .050"

- Ceramic Gage Blocks resist corrosion and defacement and require no protective coating.
- Blocks feature a coefficient of expansion only 2 x 10^{-6}/C° different than steel blocks. They are carefully inspected for accurate size, tolerance, length and flatness.
- Sizes are clearly etched on each block.
- Each set includes Certificate of Inspection traceable to the National Institute of Standards and Technology and a deluxe case.
- Calibrated to Fowler specifications which meet or exceed ASME B89.1.9-2002.

Part Number	Description	Grade
53-684-362	36 Pc. Set	Ø
53-684-363	36 Pc. Set	AS1

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Zirconia Ceramic Rectangular Gage Blocks



Light weight

Corrosion resistant

Slow ambient temperature change

Block sizes included in each set:

36 pcs. in wood case. Consists of:

9	Blocks .1001" thru .1009" step of .0001"
9	Blocks .101" thru .109" step of .001"
9	Blocks .110" thru .190" step of .01"
5	Blocks .100" thru .500" step of .1"
3	Blocks 1", 2", 4"
1	Block .050"

81 pcs. in wood case. Consists of:

9	Blocks .1001" thru .1009" step of .0001"
49	Blocks .101" thru .149" step of .001"
19	Blocks .050" thru .950" step of .050"
4	Blocks 1.000" thru 4.000" step of 1.000"

Zirconia Ceramic Gage Blocks, introduced by Fowler, are available in 36 and 81 piece sets and in three grades. Rectangular in shape, they are constructed of high grade zirconia ceramic, lapped for high accuracy… and very competitively priced with steel gage blocks.

- Ceramic Gage Blocks resist corrosion and defacement and require no protective coating.
- Blocks feature a coefficient of expansion only 2 x 10^{-6}/C° different than steel blocks. They are carefully inspected for accurate size, tolerance, length and flatness.
- Sizes are clearly etched on each block.
- Calibrated to Fowler specifications which meet or exceed ASME B89.1.9-2002.
- Each set includes Certificate of Inspection traceable to the National Institute of Standards and Technology and a deluxe case.

Part Number	Description	Grade
53-684-030	36 pc. Ceramic Gage Block Set	AS2
53-684-036	36 pc. Ceramic Gage Block Set	Ø
53-684-038	36 pc. Ceramic Gage Block Set	AS1
53-684-080	81 pc. Ceramic Gage Block Set	Ø
53-684-081	81 pc. Ceramic Gage Block Set	AS1
53-684-082	81 pc. Ceramic Gage Block Set	AS2

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Square Gage Block Sets



▲ *No. 53-672-030*

Grade AS1 for general shop inspection.

Grade Ø for QC and Lab inspections.

Fowler Square Steel Gage Block Sets are manufactured to the same high precision and from the same special steel used in our rectangular sets and conform to ASME B89.1.9-2002

Features:

- Sets supplied with certificate of inspection showing deviation for each block.
- All Gage Block Sets include certifications of calibration traceable to the National Institute of Standards and Technology.
- Gage Block Sets are made to special standards to resist corrosion & defacement and are coated when calibrated at the time of final inspection for protection from moisture and foreign matter.
- Surface finish .4 millionths.
- Includes fitted case.

Part Number	Grade	Blocks per Set	Blocks included in Each Set
53-672-028	Ø	81	9 Blocks .1001" thru .1009" step of .0001"
53-672-030	AS1	81	49 Blocks .101" thru .149" step of .001" 19 Blocks .050" thru .950" step of .050" 4 Blocks 1.000" thru 4.000" step of 1.000"
53-672-024	Ø	36	1 Block .050"
53-672-026	AS1	36	9 Blocks .1001" thru .1009" step of .0001" 9 Blocks .101" thru .109" step of .001" 9 Blocks .110" thru .190" step of .01" 5 Blocks .100", .200", .300", .400" and .500" 3 Blocks 1.000", 2.000" and 4.000"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Rectangular Gage Block Sets



Grade AS1 for general shop inspection.

Grade Ø for QC and Lab inspections.

Features—No. 53-671 Series:
- Constructed of a special steel of high carbon & chrome content, hardened to 65RC, ensures hard wear resistance and stability.
- Manufactured under carefully controlled conditions to ensure maximum accuracy, parallelism and flatness.
- Calibrated to Fowler specifications which meet or exceed ASME B89.1.9-2002.
- Sets include certification traceable to the National Institute of Standards & Technology.
- Surface finish: .4 millionths (.01 microns).
- Price includes fitted wood case.

Features—No. 53-670 Series:
- Each block is rectangular steel and hardened to 65RC, stress relieved, lapped to accurate size, parallelism and flatness, then carefully inspected and marked for size; designed to meet close tolerances.
- Each set includes standard sizes found in more expensive sets. Each block individually serialized; conforms to rigid standards of the National Institute of Standards & Technology.
- Price includes fitted wood case.

Blocks/Set	Blocks Included in Each Set
36	9 Blocks .1001" thru .1009" steps of .0001" 9 Blocks .101" thru .109" steps of .001" 9 Blocks .110" thru .190" steps of .010" 5 Blocks .100" thru .500" steps of .100" 3 Blocks 1", 2", 4" 1 Block .050"
47	19 Blocks 1.01 thru 1.19mm steps of .01mm 8 Blocks 1.2 thru 1.9mm steps of .1mm 10 Blocks 1 thru 10mm steps of 1mm 9 Blocks 20 thru 100mm steps of 10mm 1 Block 1.005mm
81	9 Blocks .1001" thru .1009" steps of .0001" 49 Blocks .101" thru .149" steps of .001" 19 Blocks .050" thru .950" steps of .05" 4 Blocks 1.000" thru 4.000" steps of 1.000"
87	2 Blocks .0.5mm to 1.00mm 9 Blocks 1.001mm thru 1.009mm in steps of .001mm 50 Blocks 1.01mm thru 1.50mm in steps of .01mm 17 Blocks 2mm thru 10mm in steps of .5mm 9 Blocks 20mm thru 100mm in steps of 10mm
103	49 Blocks 1.01mm thru 1.49mm steps of .01mm 49 Blocks 0.5mm thru 24.5mm steps of 0.5mm 4 Blocks 25mm thru 100mm steps of 25mm 1 Block 1.005mm

Part Number	Blocks per Set	Grade
Deluxe Sets—Inch Series:		
53-670-036	36	AS1
53-670-038	36	Ø
53-670-080	81	Ø
53-670-081	81	AS1
Deluxe Sets—Metric Series:		
53-671-050	103	AS2
53-671-053	87	Ø
53-671-055	47	Ø

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Carbide Rectangular Gage Block Sets



▲ *No. 53-685-082*

Carbide Blocke feature High durability and rust resistant.

Carbide Rectangular Gage Block Sets are traceable to the National Institute of Standards and Technology.

Features:

- Fowler Tungsten Carbide Rectangular and Square Gage Block Sets are selected for stability, durability and fine grain structure with a hardness of 70 RC. With this metal, a surface finish of less than .2 millionths (.005 microns) is ensured and gives maximum wringability which is appreciated by users of steel and chromium carbide gages.
- The surface finish process removes all peaks, leaving a 100% surface resistant to wear, ensuring long life within the original accuracy tolerance and retained wringability.
- Edges of gaging faces are reinforced for a smooth radius.
- Certificates of accuracy are furnished as standard with sets to the following grade: ASME B89.1.9-2002
- Tungsten carbide resists high corrosion, making it ideal for continuous handling. It is also slow to react to "hot hands" with a low coefficient of expansion.
- Inch surface finish .2 millionths; metric surface finish is .005 microns.
- Includes fitted case.

Part Number	Class	Blocks per Set	Blocks Included in Each Set
Rectangular—Inch Series:			
53-685-082	AS1	82	9 Blocks .1001" thru .1009" step of .0001" 49 Blocks .101" thru .149" step of .001" 19 Blocks .050" thru .950" step of .050" 4 Blocks 1.000" thru 4.000" step of 1.000" 1 Block .10005"
53-685-036	AS1	36	1 Block .1005" 9 Blocks .1001" thru .1009" step of .0001" 9 Blocks .101" thru .109" step of .001" 9 Blocks .110" thru .190" step of .01" 4 Blocks .100", .200", .300" and .500" 3 Blocks 1.000", 2.000", 4.000" 1 Block .10005"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Perfect for most workshop applications!

Economy Rectangular Gage Block Sets



No. 53-672-081

An economy version of our deluxe Fowler Gage Block Sets, featuring ±.000050" (fifty millionths) accuracy and a very significant price savings.

Fowler "Economy/Workshop" grade Gage Block Sets are identical to our standard sets in all respects, except for the wider range of tolerance which is more than adequate for a majority of shop needs. Blocks are rectangular, constructed of the finest grade of high carbon/chrome steel, fully stress relieved, hardened to 65 RC, lapped and mirror polished to a very low micro-surface finish. Blocks feature a low coefficient of thermal expansion, and they are carefully inspected for accurate size, parallelism and flatness.

Features:

- ±.000050" accuracy for a lower price, each department can now have their own set.
- Standard industrial sizes ensure complete interchangeability with all accessories.
- Each set complete with deluxe fitted case and Certificate of Inspection traceable to the National Institute of Standards & Technology.

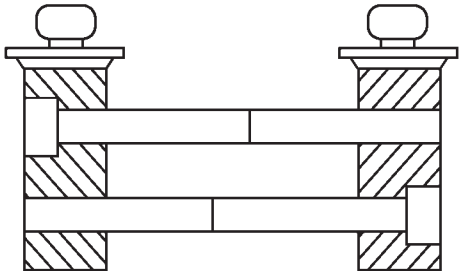
Part Number	Blocks per Set	Grade	Size of Blocks included in Set
53-672-036	36	Economy	36 pcs. in wood case. Consists of: 9 Blocks .1001" thru .1009" step of .0001" 9 Blocks .101" thru .109" step of .001" 9 Blocks .110" thru .190" step of .01" 5 Blocks .100" thru .500" step of .1" 3 Blocks 1", 2", 4" 1 Block .050"
53-672-081	81	Economy	81 pcs. in wood case. Consists of: 9 Blocks .1001" thru .1009" step of .0001" 49 Blocks .101" thru .149" step of .001" 19 Blocks .050" thru .950" step of .050" 4 Blocks 1.000" thru 4.000" step of 1.000"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Long Gage Blocks-Individuals & Sets



No. 53-670-008



▲ *53-670-777 holding clamp set used for holding two large blocks together*

Fowler's long gage blocks are rectangular in shape, Grade Ø and supplied with NIST certificate

Part Number	Description
53-675-216	5" Gage block
53-675-218	6" Gage block
53-675-220	7" Gage block
53-675-222	8" Gage block
53-675-224	10" Gage block
53-675-226	12" Gage block
53-675-228	16" Gage block
53-675-230	20" Gage block
53-670-008	8 piece Gage block set
53-670-777	Holding clamp for two large blocks



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Individual Square Steel Gage Blocks

All Fowler Individual Square Steel Gage Blocks are Grade Ø and traceable to the National Institute of Standards and Technology.



Includes NIST certificate.

Part Number	Block Size	Part Number	Block Size	Part Number	Block Size
53-676-000	.10005"	53-676-100	.117"	53-676-156	.145"
53-676-001	.050"	53-676-102	.118"	53-676-158	.146"
53-676-048	.100"	53-676-104	.119"	53-676-160	.147"
53-676-050	.1001"	53-676-106	.120"	53-676-162	.148"
53-676-052	.1002"	53-676-108	.121"	53-676-164	.149"
53-676-054	.1003"	53-676-110	.122"	53-676-166	.150"
53-676-056	.1004"	53-676-112	.123"	53-676-176	.200"
53-676-058	.1005"	53-676-114	.124"	53-676-178	.250"
53-676-060	.1006"	53-676-116	.125"	53-676-180	.300"
53-676-062	.1007"	53-676-118	.126"	53-676-182	.350"
53-676-064	.1008"	53-676-120	.127"	53-676-184	.400"
53-676-066	.1009"	53-676-122	.128"	53-676-186	.450"
53-676-068	.101"	53-676-124	.129"	53-676-188	.500"
53-676-070	.102"	53-676-126	.130"	53-676-190	.550"
53-676-072	.103"	53-676-128	.131"	53-676-192	.600"
53-676-074	.104"	53-676-130	.132"	53-676-194	.650"
53-676-076	.105"	53-676-132	.133"	53-676-196	.700"
53-676-078	.106"	53-676-134	.134"	53-676-198	.750"
53-676-080	.107"	53-676-136	.135"	53-676-200	.800"
53-676-082	.108"	53-676-138	.136"	53-676-202	.850"
53-676-084	.109"	53-676-140	.137"	53-676-204	.900"
53-676-086	.110"	53-676-142	.138"	53-676-206	.950"
53-676-088	.111"	53-676-144	.139"	53-676-208	1.000"
53-676-090	.112"	53-676-146	.140"	53-676-210	2.000"
53-676-092	.113"	53-676-148	.141"	53-676-212	3.000"
53-676-094	.114"	53-676-150	.142"	53-676-214	4.000"
53-676-096	.115"	53-676-152	.143"		
53-676-098	.116"	53-676-154	.144"		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Individual Rectangular Steel Gage Blocks



Individual Steel Gage Blocks are rectangular in shape, Grade Ø and traceable to the National Institute of Standards and Technology.

Includes NIST Certificate.

Part Number	Block Size	Part Number	Block Size	Part Number	Block Size
53-675-001	.050"	53-675-102	.118"	53-675-160	.147"
53-675-040	.060"	53-675-104	.119"	53-675-162	.148"
53-675-048	.100"	53-675-106	.120"	53-675-164	.149"
53-675-050	.1001"	53-675-108	.121"	53-675-166	.150"
53-675-052	.1002"	53-675-110	.122"	53-675-168	.160"
53-675-054	.1003"	53-675-112	.123"	53-675-170	.170"
53-675-056	.1004"	53-675-114	.124"	53-675-172	.180"
53-675-058	.1005"	53-675-116	.125"	53-675-174	.190"
53-675-060	.1006"	53-675-118	.126"	53-675-176	.200"
53-675-062	.1007"	53-675-120	.127"	53-675-178	.250"
53-675-064	.1008"	53-675-122	.128"	53-675-180	.300"
53-675-066	.1009"	53-675-124	.129"	53-675-182	.350"
53-675-068	.101"	53-675-126	.130"	53-675-184	.400"
53-675-070	.102"	53-675-128	.131"	53-675-186	.450"
53-675-072	.103"	53-675-130	.132"	53-675-188	.500"
53-675-074	.104"	53-675-132	.133"	53-675-190	.550"
53-675-076	.105"	53-675-134	.134"	53-675-192	.600"
53-675-078	.106"	53-675-136	.135"	53-675-194	.650"
53-675-080	.107"	53-675-138	.136"	53-675-196	.700"
53-675-082	.108"	53-675-140	.137"	53-675-198	.750"
53-675-084	.109"	53-675-142	.138"	53-675-200	.800"
53-675-086	.110"	53-675-144	.139"	53-675-202	.850"
53-675-088	.111"	53-675-146	.140"	53-675-204	.900"
53-675-090	.112"	53-675-148	.141"	53-675-206	.950"
53-675-092	.113"	53-675-150	.142"	53-675-208	1.000"
53-675-094	.114"	53-675-152	.143"	53-675-210	2.000"
53-675-096	.115"	53-675-154	.144"	53-675-212	3.000"
53-675-098	.116"	53-675-156	.145"	53-675-214	4.000"
53-675-100	.117"	53-675-158	.146"		



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

ASME B89.1.9-2002

TABLE 4b MAXIMUM PERMITTED DEVIATIONS OF THE LENGTH AT ANY POINT AND TOLERANCE ON VARIATION IN LENGTH FOR INCH GAGE BLOCKS

Nominal Length Range	Calibration Grade K		Grade 00		Grade 0		Grade AS-1		Grade AS-2	
	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length	Limit Deviations of Length at any Point From Nominal Llength	Tolerance for the Variation in Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length
l_n in inches	$\pm t_e$ µin.	t_v µin.	$\pm t_e$ µin.	t_v µin.	$\pm t_e$ µin.	t_v µin.	$\pm t_e$ µin.	t_v µin.	$\pm t_e$ µin.	t_v µin.
$l_n \le 0.05$	12	2	4	2	6	4	12	6	24	12
$0.05 < l_n \le 0.4$	10	2	3	2	5	4	8	6	18	12
$0.45 < l_n \le 1$	12	2	3	2	6	4	12	6	24	12
$1 < l_n \le 2$	16	2	4	2	8	4	16	6	32	12
$2 < l_n \le 3$	20	2	5	3	10	4	20	6	40	14
$3 < l_n \le 4$	24	3	6	3	12	5	24	8	48	14
$4 < l_n \le 5$	32	3	8	3	16	5	32	8	64	16
$5 < l_n \le 6$	32	3	8	3	16	5	32	8	64	16
$6 < l_n \le 7$	40	4	10	4	20	6	40	10	80	16
$7 < l_n \le 8$	40	4	10	4	20	6	40	10	80	16
$8 < l_n \le 10$	48	4	12	4	24	6	48	10	104	18
$10 < l_n \le 12$	56	4	14	4	28	7	56	10	112	20
$12 < l_n \le 16$	72	5	18	5	36	8	72	12	144	20
$16 < l_n \le 20$	88	6	20	6	44	10	88	14	176	24
$20 < l_n \le 24$	104	6	25	6	52	10	104	16	200	28
$24 < l_n \le 28$	120	7	30	7	60	12	120	18	240	28
$28 < l_n \le 32$	136	8	34	8	68	12	136	20	260	32
$32 < l_n \le 36$	152	8	38	8	76	14	152	20	300	36
$36 < l_n \le 40$	160	10	40	10	80	16	168	24	320	40

TABLE 4a MAXIMUM PERMITTED DEVIATIONS OF THE LENGTH AT ANY POINT AND TOLERANCE ON VARIATION IN LENGTH FOR METRIC GAGE BLOCKS

Nominal Length Range	Calibration Grade K		Grade 00		Grade 0		Grade AS-1		Grade AS-2	
	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation In Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation In Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length	Limit Deviations of Length at any Point From Nominal Length	Tolerance for the Variation in Length
l_n in mm	$\pm t_e$ µm	t_v µm	$\pm t_e$ µm	t_v µm	$\pm t_e$ µm	t_v µm	$\pm t_e$ µm	t_v µm	$\pm t_e$ µm	t_v µm
$l_n \le 0.5$	0.30	0.05	0.10	0.05	0.14	0.10	0.30	0.16	0.60	0.30
$0.5 < l_n \le 10$	0.20	0.05	0.07	0.05	0.12	0.10	0.20	0.16	0.45	0.30
$10 < l_n \le 25$	0.30	0.05	0.07	0.05	0.14	0.10	0.30	0.16	0.60	0.30
$25 < l_n \le 50$	0.40	0.06	0.10	0.06	0.20	0.10	0.40	0.18	0.80	0.30
$50 < l_n \le 75$	0.50	0.06	0.12	0.07	0.25	0.12	0.50	0.18	1.00	0.35
$75 < l_n \le 100$	0.60	0.07	0.15	0.07	0.30	0.12	0.60	0.20	1.20	0.35
$100 < l_n \le 150$	0.80	0.08	0.20	0.08	0.40	0.14	0.80	0.20	1.60	0.40
$150 < l_n \le 200$	1.00	0.09	0.25	0.09	0.50	0.16	1.00	0.25	2.00	0.40
$200 < l_n \le 250$	1.20	0.10	0.30	0.10	0.60	0.16	1.20	0.25	2.40	0.45
$250 < l_n \le 300$	1.40	0.10	0.35	0.10	0.70	0.18	1.40	0.25	2.80	0.50
$300 < l_n \le 400$	1.80	0.12	0.45	0.12	0.90	0.20	1.80	0.30	3.60	0.50
$400 < l_n \le 500$	2.20	0.14	0.50	0.14	1.10	0.25	2.20	0.35	4.40	0.60
$500 < l_n \le 600$	2.60	0.16	0.65	0.16	1.30	0.25	2.60	0.40	5.00	0.70
$600 < l_n \le 700$	3.00	0.18	0.75	0.18	1.50	0.30	3.00	0.45	6.00	0.70
$700 < l_n \le 800$	3.40	0.20	0.85	0.20	1.70	0.30	3.40	0.50	6.50	0.80
$800 < l_n \le 900$	3.80	0.20	0.95	0.20	1.90	0.35	3.80	0.50	7.50	0.90
$900 < l_n \le 1000$	4.20	0.25	1.00	0.25	2.00	0.40	4.20	0.60	8.00	1.00

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Previous Gage Block Standards

Cross reference for grade changes

Suggested Replacement Grades	
Former Federal Grade (Reference GGG-G-15C)	**Grades** (This Standard)
1	**ØØ**
2	**Ø**
3	**AS-1**
...	**AS-2**

Tolerance on Length - Inch ***(error in .000001")***

Gageblock Numerical Size	Grade 2 (old grade A+)	Grade 3 (falls between older grades A & B)	Grade B	Grade Economy
1" or less	+4 -2	+8 -4	+10 -6	+50 -50
2"	+8 -4	+16 -8	+20 -12	+50 -50
3"	+10 -5	+20 -10	+30 -18	+50 -50
4"	+12 -6	+24 -12	+40 -24	+50 -50

Tolerance on Length - Metric ***(error in .001mm)***

Gage block Numerical Size	Grade 2 (Metric)
10mm or less	+.1 +.05
Over 10mm thru 25mm	+.15 -.08
Over 25mm thru 50mm	+.2 -.12
Over 50mm thru 5mm	+.25 -.15
Over 75mm thru 100mm	+.3 .15

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Fowler 5 FIVE YEAR WARRANTY

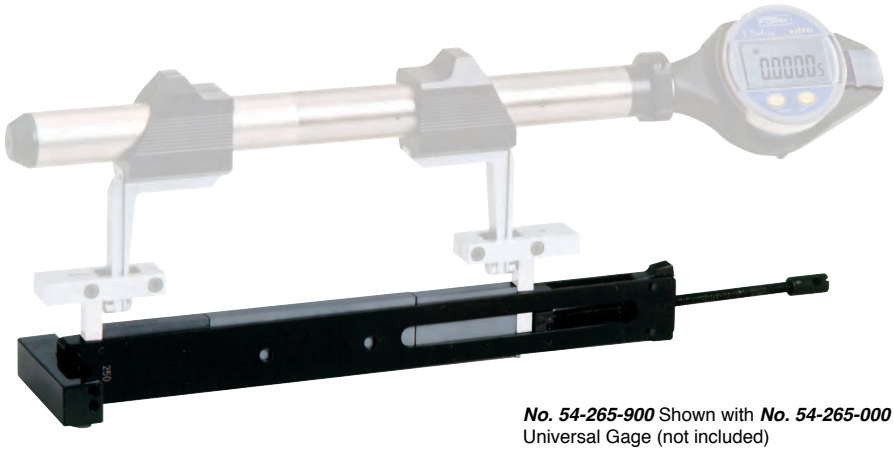
Made in ENGLAND

Setting Masters

For use with rectangular gage blocks.

New low-cost methods for setting gages!

Use gage blocks to adjust lengths up to 15"



No. 54-265-900 Shown with ***No. 54-265-000*** Universal Gage (not included)

No. 54-265-900/902:
- Specially adapted gage block holder and arms for quick setting of Bowers Universal Gages
- Use with standard Rectangular Gage Blocks



No. 54-549-900 shown with ***No. 54-549-906*** and Digital Cylinder Bore Gage (not included)

No. 54-549-900/902:
- Specially adapted Gage Block Holder and arms for quick setting of most brands of Cylindrical Bore Gages
- Use with standard rectangular Gage Blocks
- Requires at least one pair of Setting Blocks

Part Number	Description
For ID/OD Gages	
54-265-900	0—9" Setting Master Holder Kit
54-265-902	0—15" Setting Master Holder Kit
For Cylindrical Bore Gages	
54-549-900	1/2—6" Setting Master Holder
54-549-902	1/2—12" Setting Master Holder
54-549-904	1/2—7/8" Pair of Centralizer Setting Blocks
54-549-906	7/8—6" Pair of Centralizer Setting Blocks
54-549-908	6—12" Pair of Centralizer Setting Blocks

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bore Gage Setting Master Kit - Inch & Metric

Fowler's new Bore Gage Setting Master Kit is used for accurately setting any bore gage up to 6"/150mm in diameter to an accuracy of .0001"/.003mm



(Bore gage shown not included.)

Complete Set gage blocks, stand and fitted case.

Each Set includes:

Setting Device
- Base anvil: 2.750" x .80"
- Adjustable anvil 2.375" x .375" (two each)
- Internal capacity: 6"/150mm
- Depth capacity: 1"/25mm
- Centralizer capacity width: 2.625"/66.7mm
- Quick-release holder for fast adjustment.

Economy Gage Block Sets

Inch model:
- 36 piece
- Tolerances to .00005"
- Certificate of Calibration to N.I.S.T.

Metric model:
- 33 piece
- AS-2 grade
- Certificate of Calibration to N.I.S.T.

High Quality Aluminum Case!



Instructional video available at youtube.com/FowlerVid

Part Number	Description
53-646-000	Inch Bore Gage Setting Master Kit
53-646-010	Metric Bore Gage Setting Master Kit

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

MADE IN THE USA

Pin Gage Sets



▲ *Sets No. 53-880-250 & No. 53-880-060*

See next page for available sets, size info and specifications.

High precision Pin Gage (Plug Gage) sets at very economical prices. Offered in two grades of tolerance: Plus (+.0002") & Minus (-.0002").

Fowler Pin Gage Sets come in a range of sizes. These accurate and well made precision tools are ideal for checking hole size, location, gage slots, distance between holes, go & no-go gaging, setting other gages and micrometers. Optional handle #53-885-100 available.

- Each set furnished with case and every size gage hole clearly marked for size.
- Fully hardened to 60-62 RC, centerless lapped to 10 millionths AA micro-finish or better; sizes etched on ranges over .061".
- Each gage checked against master gages traceable to the National Institute of Standards and Technology.
- Gages are cylindrical, 2" in length and have no sharp corners.
- Accurate to .0002".
- Gage increments are in .001" steps.



▲ *Set No. 53-880-500*

Reference Masters

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Pin Gage Sets (cont.)



▲ *Handle No. 53-885-100*

Part Number	Range	Accuracy	No. of Gages per Set
Inch			
53-880-995	.006" to .060"	+.0002"-.0000"	55
53-880-996	.006" to .060"	+.0000"-.0002"	55
53-880-060	.011" to .060"	+.0002"-.0000"	50
53-880-070	.011" to .060"	+.0000"-.0002"	50
53-880-000	.011" to .250"	+.0000"-.0002"	240
53-880-005	.011" to .250"	+.0002"-.0000"	240
53-880-250	.061" to .250"	+.0002"-.0000"	190
53-880-260	.061" to .250"	+.0000"-.0002"	190
53-880-500	.251" to .500"	+.0002"-.0000"	250
53-880-510	.251" to .500"	+.0000"-.0002"	250
53-880-620	.501" to .625"	+.0002"-.0000"	125
53-880-630	.501" to .625"	+.0000"-.0002"	125
53-880-750	.626" to .750"	+.0002"-.0000"	125
53-880-760	.626" to .750"	+.0000"-.0002"	125
53-880-830	.751" to .832"	+.0002"-.0000"	82
53-880-840	.751" to .832"	+.0000"-.0002"	82
53-880-920	.833" to .916"	+.0002"-.0000"	84
53-880-930	.833" to .916"	+.0000"-.0002"	84
53-880-980	.917" to 1.000"	+.0002"-.0000"	84
53-880-990	.917" to 1.000"	+.0000"-.0002"	84
Metric			
53-881-000	5mm to 9.98mm	+.005mm-0	250
53-881-005	5mm to 9.98mm	+0-.005mm	250
53-881-250	10mm to 13.98mm	+.005mm-0	200
53-881-260	10mm to 13.98mm	+0-.005mm	200
53-881-500	14mm to 16.48mm	+.005mm-0	125
53-881-510	14mm to 16.48mm	+0-.005mm	125
53-881-620	16.50mm to 18.98mm	+.005mm-0	125
53-881-630	16.50mm to 18.98mm	+0-.005mm	125
53-881-750	19mm to 20.98mm	+.005mm-0	100
53-881-760	19mm to 20.98mm	+0-.005mm	100
53-881-830	21mm to 22.48mm	+.005mm-0	75
53-881-840	21mm to 22.48mm	+0-.005mm	75
53-881-920	22.50mm to 23.98mm	+.005mm-0	75
53-881-930	22.50mm to 23.98mm	+0-.005mm	75
53-881-980	24mm to 25.48mm	+.005mm-0	75
53-881-990	24mm to 25.48mm	+0-.005mm	75
53-881-995	.20mm to 1.28mm	+.005mm-0	55
53-881-996	.20mm to 1.28mm	+0-.005mm	55
53-881-997	1.30mm to 4.98mm	+.005mm-0	185
53-881-998	1.30mm to 4.98mm	+0-.005mm	185
Pin Handle			
53-885-100	Pin Gage Handle: Capacity is 1⁄32" to 1⁄2" Dia. Pins.		



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Custom Size Master Setting Rings



NIST Calibration is available at an additional cost.

- X Class
- Used for accurate setting of internal measuring instruments.
- Made from oil-hardened, non-shrinking gage steel, hardened and tempered to Rockwell 62C
- Subzero treated at minus 80˚C for dimensional stability.
- Actual size etched on each master ring.
- Calibrated at 20˚C in laboratory conditions.
- Furnished with a manufacturer's certificate of calibration.
- Metric rings available on special order.
- Each ring is furnished in a fitted wood case.

- ***When ordering please specify the exact diameter of the ring desired.***

Order Number	Size Nominal Diameter Range - Inch From - Up to & Including	Geometric Form Tolerance Ovality/Taper Inch	Size Tolerance Inch
53-686-010	0.060" — 0.100"	0.000012"	0.000039"
53-686-196	0.101" — 0.118""	0.000012"	0.000039"
53-686-196	0.119" — 0.393"	0.000016"	0.000049"
53-686-196	0.394" — 0.708"	0.000020"	0.000059"
53-686-196	0.709" — 1.181"	0.000024"	0.000079"
53-686-196	1.182" — 1.968"	0.000028"	0.000079"
53-686-196	1.969" — 2.360"	0.000031"	0.000098"
53-686-315	2.361" — 3.150"	0.000031"	0.000098"
53-686-394	3.151" — 3.940"	0.000039"	0.000118"
53-686-472	3.941" — 4.720"	0.000039"	0.000118"
53-686-551	4.721" — 5.510"	0.000047"	0.000157"
53-686-590	5.511" — 5.900"	0.000047"	0.000157"
53-686-630	5.901" — 6.300"	0.000047"	0.000157"
53-686-670	6.301" — 6.700"	0.000047"	0.000157"
53-686-709	6.701" — 7.090"	0.000047"	0.000157"
53-686-748	7.091" — 7.480"	0.000055"	0.000197"
53-686-787	7.481" — 7.870"	0.000055"	0.000197"
53-686-835	7.871" — 8.350"	0.000055"	0.000197"

XX Class Rings available. Please contact our Technical Department for more information: x351, x334 or email tech@fvfowler.com

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bowers Rings

Ultima Bore Gaging System- Rings: XX Class

Part Number	Size	Part Number	Size
54-565-401	.098"/2.5mm	54-565-412	3.94"/100mm
54-565-402	.157"/4mm	54-565-413	4.725"/120mm
54-565-403	.197"/5mm	54-565-414	5.51"/140mm
54-565-404	.315"/8mm	54-565-415	6.3"/160mm
54-565-405	.472"/12mm	54-565-416	7.09"/180mm
54-565-406	.670"/17mm	54-565-417	7.875"/200mm
54-565-407	.945"/24mm	54-565-418	8.661"/220mm
54-565-408	1.26"/32mm	54-565-419	9.449"/240mm
54-565-409	1.73"/44mm	54-565-420	10.236"/260mm
54-565-410	2.36"/60mm	54-565-421	11.024"/280mm
54-565-411	3.15"/80mm	54-565-422	11.811"/300mm

Electronic Holemike XT Setting Rings: X Class

Part Number	Size
54-332-004	.100"
54-332-005	.160"
54-332-006	.200"
54-332-007	.312"
54-332-008	.500"
54-332-009	.750"
54-332-010	1.375"
54-332-012	2.625"
54-332-013	3.250"
54-332-014	5"
54-332-015	7"
54-332-016	9"
54-332-017	11"



XT500 Gage- Setting Ring: XClass

Part No.	Range
54-370-401	11.811"/300mm

Microgage Rings: Grade N (nominal)

Part Number	Size	Part Number	Size
54-551-400	1.00mm	54-551-410	3.00mm
54-551-401	1.10mm	54-551-411	3.25mm
54-551-402	1.20mm	54-551-412	3.50mm
54-551-403	1.30mm	54-551-413	3.75mm
54-551-404	1.40mm	54-551-414	4.00mm
54-551-405	1.75mm	54-551-415	4.50mm
54-551-406	2.00mm	54-551-416	5.00mm
54-551-407	2.25mm	54-551-417	5.50mm
54-551-408	2.50mm	54-551-418	6.00mm
54-551-409	2.75mm		



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Micrometer Calibration Set



No. 53-670-002

Keep your Mics in spec with these N.I.S.T traceable sets.

Features:
- 11 Pc. 9 rectangular gage blocks and two optical flats.
- Includes NIST Certificate.
- Assists in meeting both Federal specification GGG-C-105c and ISO 9000 requirements.
- Contains one block of each of the following sizes: .0625, .100, .125, .200, .250, .300, .500, 1.000 & 2.000"
- TWO OPTICAL FLATS that vary in size by .0125" which allows checking anvil faces at half revolutions of spindle for measuring flatness.
- Supplied with fitted wooden case.

Part Number	Description	Grade
53-670-002	Calibration Set with Steel Blocks and Optical Flats	Ø

Caliper, Micrometer & Snap Gage Checking Set



Fowler's setting master is quick, easy and extremely accurate. It comes with a certificate of calibration and a fitted aluminum case. Save time and money by calibrating your own measuring tools quickly and easily.

Set Includes:
- Stand height: 12.5"
- 9 pc. Grade AS-0 gage block set (sizes: .625", .100", .125", .200", .250", .300", .500", 1.000" & 2.000"
- Certificate of calibration is traceable to N.I.S.T. standard & provides the individual deviation of each block
- Optical flat (flatness: .000004" ; Parallelism: .00002")
- 4.0mm ball end T-handle hex wrench



Part Number	Description
53-813-001-1	Complete Caliper, Micrometer and Snap Gage Checking Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

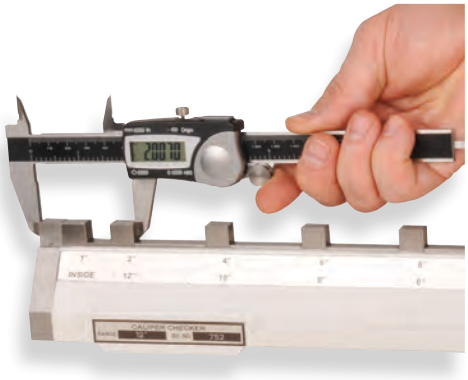
Setting Masters

Fowler's setting masters are quick, easy and extremely accurate. Each comes with a certificate of calibration and a wood case. Save time and money by calibrating your own measuring tools.

No. 53-813-005 Depth Micrometer Checker:
- Ideal for quick, easy calibration and zero setting of depth micrometers.
- Range 0—6"
- Graduation: 1"
- Accuracy: ±.000120"
- Reference block: 1" ±.000020"



No. 53-813-005 Depth Micrometer checker



No. 53-813-010



No. 53-813-010 Caliper/Height Gage Checker:
- Horizontal and vertical use
- Used for the calibration of height gages and calipers
- Scale on one side reads: 0.5", 2", 4", 6", 8", 10" and 12" for inside caliper measurements, 1", 2", 4", 6", 8", 10" and 12" for outside caliper measurements
- Scale on other side reads: 1", 2", 4", 6", 8", 10" and 12" for height gage checking
- Accuracy: ±.0002"

Part Number	Description
53-813-005	6" Depth Micrometer Checker
53-813-010	12" Caliper/Height Gage Checker

note: Larger size and metric versions available on special order

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Gage Ball Sets



Features:
- Ball gages are ground and lapped chrome steel
- Hardened to 63RC.
- Grade 24 accuracy - AFBMA certificate
- Within .0001" of actual size.
- Sphericity within .000025".
- Surface finish to 1.5 micro inches.
- 52-438-766 Set includes 26 pairs
- Pair sizes in inches: 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8, 13/32, 7/16, 15/32, 1/2, 17/32, 9/16, 19/32, 5/8, 21/32, 11/16, 23/32, 3/4, 13/16, 7/8, 15/16 and 1"
- 52-438-777 Set includes 25 pairs
- Pair sizes in mm: 1mm through 25mm

Part Number	Description
52-438-766	52 Pc. Gage Ball Set
52-438-777	50 Pc. Metric Gage Ball Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

What is the right grade of tool for your job?

At Fowler, we strive to offer our customers more options and the ability to select the right tool for the job when balancing accuracy, durability and price.

Look for our Grade Logos throughout the catalog to help you with your decision making.

What is Shop Grade?



There are varying grades used to describe metrology equipment such as: AA, A, B and Workshop Grade. Workshop Grade is the least accurate and least durable grade however many times workshop grade gages are the right balance of price, accuracy and durability for the job.

When might you consider Shop Grade?

Shop Grade may be the right grade tool when you are measuring less often, when less accuracy is required and when price is an important consideration.



What is Machinist Grade?



Machinist Grade tools high accuracy, robust tools designed for everyday use by Machinists, Machine Tool Operators and Quality Control Engineers working in production environments.

When should you consider Machinist Grade?

Machinist Grade is the right grade tool when you are measuring every day, working in a production environment and when accuracy and durability are critical.



What is Lab Grade?



Lab Grade tools and equipment have the highest accuracy. Lab grade tools and equipment are made from the finest most robust and stabile materials available.

When should you consider Lab Grade?

Lab Grade is the right grade tool when you are performing high accuracy final inspections or calibration in a high accuracy or calibration lab environment.



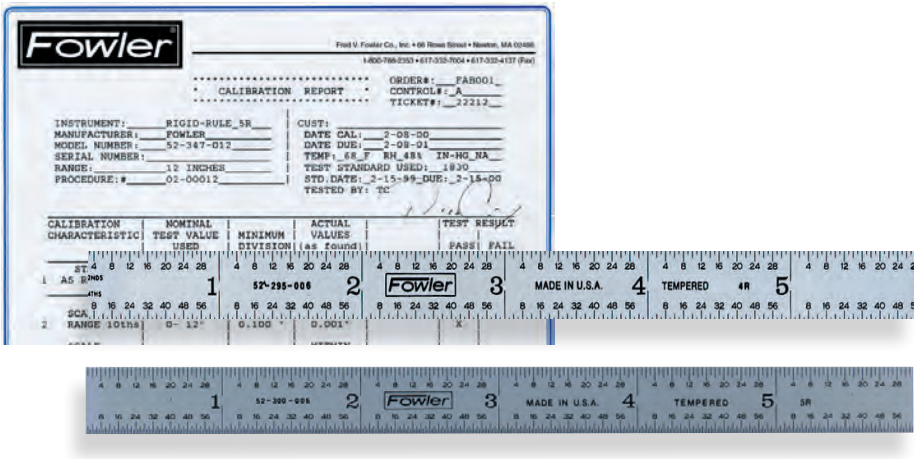
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



SHOP TOOLS

Fowler

Certified Rules



MADE IN THE USA

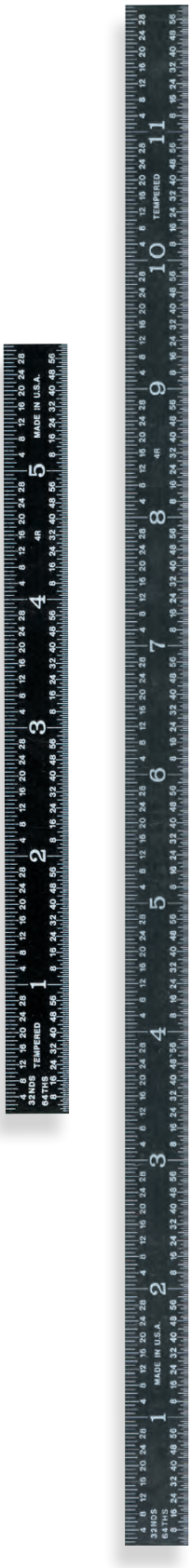
Part Number	Style	Size	Graduation
Inch/Metric Series:			
52-264-006	Flexible	6"/150mm	32nds, 64ths, 1mm, .5mm
52-264-012	Flexible	12"/300mm	32nds, 64ths, 1mm, .5mm
52-264-018	Flexible	18"/450mm	32nds, 64ths, 1mm, .5mm
52-264-024	Flexible	24"/600mm	32nds, 64ths, 1mm, .5mm
52-264-036	Flexible	36"/900mm	32nds, 64ths, 1mm, .5mm
52-264-048	Flexible	48"/1200mm	32nds, 64ths, 1mm, .5mm
52-265-006	Rigid	6"/150mm	32nds, 64ths, 1mm, .5mm
52-265-012	Rigid	12"/300mm	32nds, 64ths, 1mm, .5mm
52-265-018	Rigid	18"/450mm	32nds, 64ths, 1mm, .5mm
52-265-024	Rigid	24"/600mm	32nds, 64ths, 1mm, .5mm
52-265-036	Rigid	36"/900mm	32nds, 64ths, 1mm, .5mm
52-265-048	Rigid	48"/1200mm	32nds, 64ths, 1mm, .5mm
Inch Series:			
52-411-006	Flexible	6"	8ths, 16ths, 32nds & 64ths
52-411-012	Flexible	12"	8ths, 16ths, 32nds & 64ths
52-411-018	Flexible	18"	8ths, 16ths, 32nds & 64ths
52-411-024	Flexible	24"	8ths, 16ths, 32nds & 64ths
52-411-036	Flexible	36"	8ths, 16ths, 32nds & 64ths
52-411-048	Flexible	48"	8ths, 16ths, 32nds & 64ths
52-413-006	Rigid	6"	8ths, 16ths, 32nds & 64ths
52-413-012	Rigid	12"	8ths, 16ths, 32nds & 64ths
52-413-018	Rigid	18"	8ths, 16ths, 32nds & 64ths
52-413-024	Rigid	24"	8ths, 16ths, 32nds & 64ths
52-413-036	Rigid	36"	8ths, 16ths, 32nds & 64ths
52-413-048	Rigid	48"	8ths, 16ths, 32nds & 64ths
52-511-006	Flexible	6"	32nds, 64ths, 10ths & 100ths
52-511-012	Flexible	12"	32nds, 64ths, 10ths & 100ths
52-511-018	Flexible	18"	32nds, 64ths, 10ths & 100ths
52-511-024	Flexible	24"	32nds, 64ths, 10ths & 100ths
52-511-036	Flexible	36"	32nds, 64ths, 10ths & 100ths
52-511-048	Flexible	48"	32nds, 64ths, 10ths & 100ths
52-513-006	Rigid	6"	32nds, 64ths, 10ths & 100ths
52-513-012	Rigid	12"	32nds, 64ths, 10ths & 100ths
52-513-018	Rigid	18"	32nds, 64ths, 10ths & 100ths
52-513-024	Rigid	24"	32nds, 64ths, 10ths & 100ths
52-513-036	Rigid	36"	32nds, 64ths, 10ths & 100ths
52-513-048	Rigid	48"	32nds, 64ths, 10ths & 100ths

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

MADE IN THE USA

Fowler Rules are made made in the USA to the highest standards. These are the best you can buy anywhere.

EZ Read Rules



Features:
- EZ Read Rules are constructed of hardened stainless steel.
- Etched, white numerals and graduations are easy to read against the non-glare, black finish.
- 3R inch graduations are in 32nds, 64ths, 10ths and 50ths.
- 4R inch graduations are in 8ths and 16ths on one side; reverse side of the rule is in 32ths and 64ths.
- 5R inch graduations are in 32nds and 64ths on one side; reverse side of the rule is in 10ths and 100ths.
- 16R inch graduations are in 32nds, 64ths, 50ths and 100ths.
- E/M graduations are .5mm, 1mm, 32nds, 64ths.
- Flexible rules are .020" thick.
- Rigid rules are .035" thick.

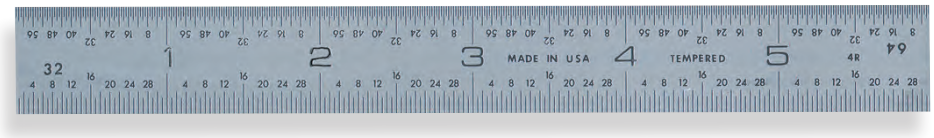
GRADUATIONS:
4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths
E/M: .5mm, 1mm, 32nds, 64ths

Part Number	Size	Width	Grad.	Style
52-297-006	6"	1/2"	4R	Flexible
52-297-012	12"	1/2"	4R	Flexible
52-297-018	18"	3/4"	4R	Flexible
52-297-024	24"	3/4"	4R	Flexible
52-298-006	6"	1/2"	3R	Flexible
52-298-012	12"	1/2"	3R	Flexible
52-307-006	6"	1/2"	5R	Flexible
52-307-012	12"	1/2"	5R	Flexible
52-307-018	18"	.76"	5R	Flexible
52-307-024	24"	.76"	5R	Flexible
52-308-006	6"	1/2"	16R	Flexible
52-308-012	12"	1/2"	16R	Flexible
52-308-018	18"	.76"	16R	Flexible
52-308-024	24"	.76"	16R	Flexible
52-379-006	6"(150mm)	1/2"(12.5mm)	E/M	Flexible
52-379-012	12"(300mm)	1/2"(12.5mm)	E/M	Flexible
52-336-006	6"	3/4"	3R	Rigid
52-336-012	12"	1.03"	3R	Rigid
52-337-006	6"	3/4"	4R	Rigid
52-337-012	12"	1.03"	4R	Rigid
52-337-018	18"	1.2"	4R	Rigid
52-337-024	24"	1.2"	4R	Rigid
52-338-006	6"	3/4"	16R	Rigid
52-338-012	12"	1.03"	16R	Rigid
52-338-018	18"	1.2"	16R	Rigid
52-338-024	24"	1.2"	16R	Rigid
52-347-006	6"	3/4"	5R	Rigid
52-347-012	12"	1.03"	5R	Rigid
52-347-018	18"	1.2"	5R	Rigid
52-347-024	24"	1.2"	5R	Rigid
52-382-006	6"(150mm)	3/4"(19mm)	E/M	Rigid
52-382-012	12"(300mm)	1.03"	E/M	Rigid

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Rigid Steel Rules: Inch



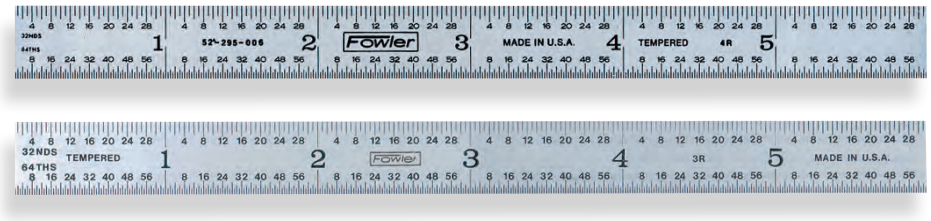
▲ *52-330-006 Rigid steel rule with satin-chrome finish.*

Part Number	Size	Graduation	Width	Thickness
52-330-006	6"	4R	3⁄4"	.04"
52-330-012	12"	4R	1"	.04"
52-330-018	18"	4R	1-1⁄8"	.04"
52-330-024	24"	4R	1-1⁄8"	.04"
52-330-036	36"	4R	1-1⁄4"	.04"
52-340-006	6"	5R	3⁄4"	.04"
52-340-012	12"	5R	1"	.04"
52-340-018	18"	5R	1-1⁄8"	.04"
52-340-024	24"	5R	1-1⁄8"	.04"
52-340-036	36"	5R	1-1⁄4"	.04"
52-350-006	6"	16R	3⁄4"	.04"
52-350-012	12"	16R	1"	.04"
52-350-018	18"	16R	1-1⁄8"	.04"
52-350-024	24"	16R	1-1⁄8"	.04"
52-350-036	36"	16R	1-1⁄4"	.04"
52-360-006	6"	3R	3⁄4"	.04"
52-360-012	12"	3R	1"	.04"
52-360-018	18"	3R	1-1⁄8"	.04"

MADE IN THE USA

GRADUATIONS:
4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths

Flexible Steel Rules: Inch



▲ *52-295-006 (top), 52-320-006 (bottom) in satin-chrome finish.*

Part Number	Size	Graduation	Width	Thickness
52-295-006	6"	4R	1⁄2"	.015"
52-295-012	12"	4R	1⁄2"	.015"
52-295-018	18"	4R	3⁄4"	.020"
52-295-024	24"	4R	3⁄4"	.020"
52-295-036	36"	4R	3⁄4"	.020"
52-300-006	6"	5R	1⁄2"	.015"
52-300-012	12"	5R	1⁄2"	.015"
52-300-018	18"	5R	3⁄4"	.020"
52-300-024	24"	5R	3⁄4"	.020"
52-300-036	36"	5R	3⁄4"	.020"
52-310-006	6"	16R	1⁄2"	.015"
52-310-012	12"	16R	1⁄2"	.015"
52-310-018	18"	16R	3⁄4"	.020"
52-310-024	24"	16R	3⁄4"	.020"
52-310-036	36"	16R	3⁄4"	.020"
52-320-006	6"	3R	1⁄2"	.015"
52-320-012	12"	3R	1⁄2"	.015"
52-320-018	18"	3R	3⁄4"	.020"
52-320-024	24"	3R	3⁄4"	.020"

MADE IN THE USA

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

MADE IN THE USA

Satin Chrome Steel Rules



Steel Rules feature easy-to-read graduations on a non-glare satin-chrome finish. Useful for measuring depths and widths of grooves and recesses.

Features:

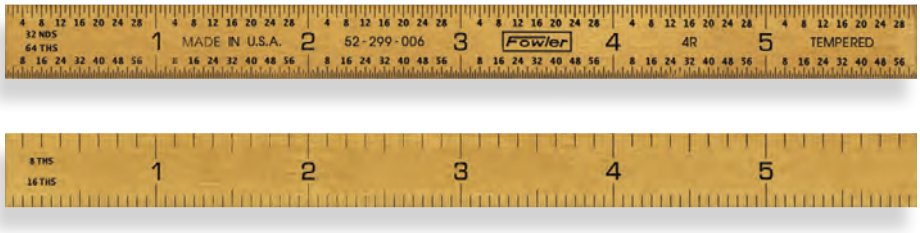
- Made of hardened and tempered steel.
- Rust and wear resistant for durability.
- Micro-fine graduations for easy reading.
- Meets Federal accuracy specifications.

Part Number	Style	Overall Size	Graduation
Metric Series:			
52-380-005	Rigid	150mm x 18mm x 0.75mm	1mm, 0.5mm
52-380-010	Rigid	300mm x 25mm x 1mm	1mm, 0.5mm
52-380-015	Rigid	450mm x 28mm x 1mm	1mm, 0.5mm
52-380-017	Rigid	600mm x 28mm x 1mm	1mm, 0.5mm
52-380-025	Flexible	150mm x 13mm x 0.4mm	1mm, 0.5mm
52-380-030	Flexible	300mm x 13mm x 0.4mm	1mm, 0.5mm
52-380-035	Flexible	450mm x 20mm x 0.4mm	1mm, 0.5mm
52-380-040	Flexible	600mm x 20mm x 0.4mm	1mm, 0.5mm
Inch & Metric Series:			
52-380-006	Flexible	150 x 13 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-380-020	Flexible	150 x 13 x 0.4mm	1mm & 0.5mm/10ths & 100ths
52-381-005	Flexible	150 x 13 x 0.4mm	1mm & 0.5mm/10ths & 50ths
52-380-012	Flexible	300 x 13 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-381-010	Flexible	300 x 13 x 0.4mm	1mm & 0.5mm/10ths & 50ths
52-380-018	Flexible	450 x 20 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-380-024	Flexible	600 x 20 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-361-000	Rigid	150 x 18 x 0.75mm	1mm & 0.5mm/10ths & 100ths
52-361-006	Rigid	150 x 20 x 0.75mm	1mm & 0.5mm/32nds & 64ths
52-361-012	Rigid	300 x 25 x 1mm	1mm & 0.5mm/32nds & 64ths
52-361-018	Rigid	450 x 28 x 1mm	1mm & 0.5mm/32nds & 64ths
52-361-024	Rigid	600 x 28 x 1mm	1mm & 0.5mm/32nds & 64ths

GRADUATIONS:
4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
E/M: .5mm, 1mm, 32nds, 64ths

Golden Rules

Titanium coated for exceptional wear and visibility!

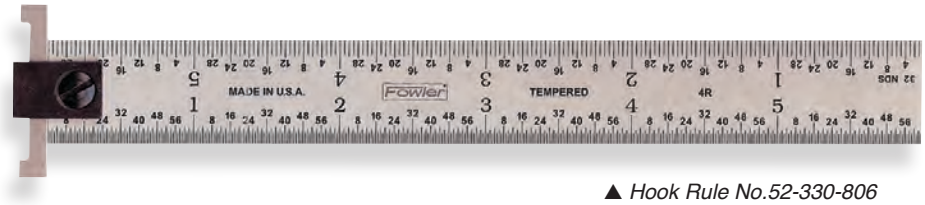


- Long-lasting, hard wearing, non-glare finish = RC80 hardness!
- Scratch resistant, microfine graduations with excellent clarity and contrast.
- 30% harder than standard chrome rulers.

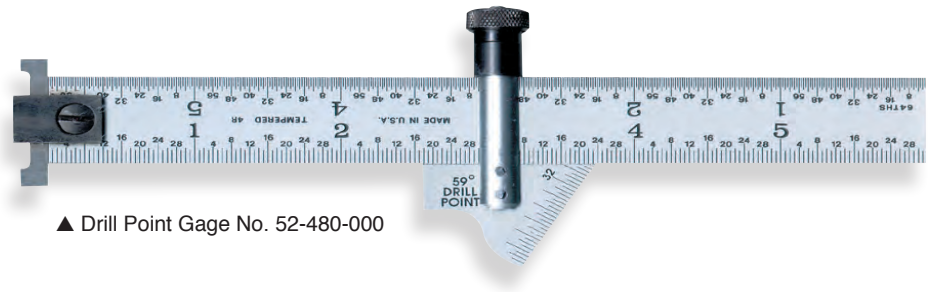
Part Number	Size	Type	Graduation
52-299-006	6”	Flexible	4R
52-299-012	12”	Flexible	4R
52-309-006	6”	Flexible	5R
52-309-012	12”	Flexible	5R
52-339-006	6”	Rigid	4R
52-339-012	12”	Rigid	4R
52-349-006	6”	Rigid	5R
52-349-012	12”	Rigid	5R
52-389-006	6”/150mm	Flexible	in/mm
52-389-012	12”/300mm	Flexible	in/mm
52-399-006	6”/150mm	Rigid	in/mm
52-399-012	12”/300mm	Rigid	in/mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Rigid Hook Rules/Drill Point Gage



▲ *Hook Rule No.52-330-806*



▲ Drill Point Gage No. 52-480-000

MADE IN THE USA

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths

Rigid Hook Rules Features:
- Made of tempered, hardened steel.
- Finished in non-glare satin chrome.
- Rule Thickness: .040"
- All Hook Rules are rigid.
- Sharp black graduations
- Adjustable, removable hooks
- Fitted in clear plastic case.

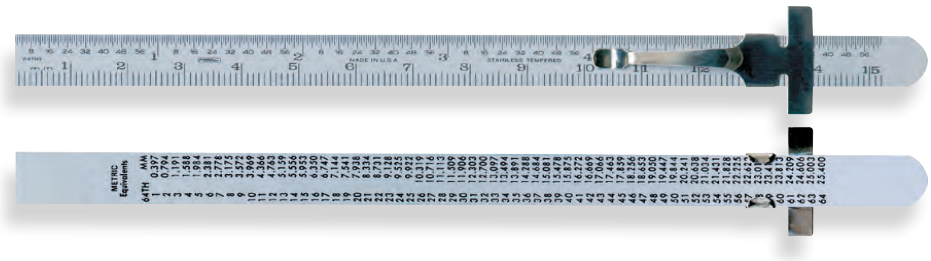
Fowler's Drill Point Gage can be used as a rule, hook rule, depth rule or caliper as well as for layout purposes.

Drill Point Gage Features:
- For measuring properly ground 59° drill tips.
- Rule and slide made of steel.
- Satin chrome finish
- Slide graduated in 32nds.
- Adjustable, removable hook
- Furnished in plastic case.

Part Number	Size	Grad.	Width
Standard Rules:			
52-330-806	6"	4R	3⁄4"
52-330-812	12"	4R	1"
52-330-818	18"	4R	1-1⁄8"
52-330-824	24"	4R	1-1⁄8"
52-350-806	6"	16R	3⁄4"
52-350-812	12"	16R	1"
52-350-818	18"	16R	1-1⁄8"
52-350-824	24"	16R	1-1⁄8"
52-360-806	6"	3R	3⁄4"
52-360-812	12"	3R	1"
Narrow Rules:			
52-335-806	6"	32⁄64"	7⁄32"
52-335-812	12"	32⁄64"	7⁄32"
Drill Point Gage:			
52-480-000	Drill Point Gage. Graduations 8ths, 16ths, 32nds and 64ths		

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Pocket Steel Rules



▲ *No. 52-380-100: Top—front view (1mm, 64ths.) Bottom—reverse side shows conversion table.*

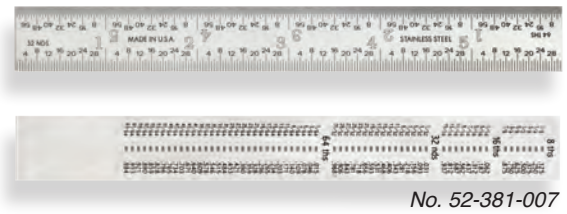
Fowler's 6"(150mm) Pocket Steel Rule with convenient clip is constructed of tempered stainless steel with a satin-chrome finish for easy, glare-free reading.

- One end of the rule is rounded to prevent damage to the pocket.
- Inch graduations are in 64ths.
- Metric scale is in 1mm increments.
- Rule width: .470".
- Rule thickness: .021".

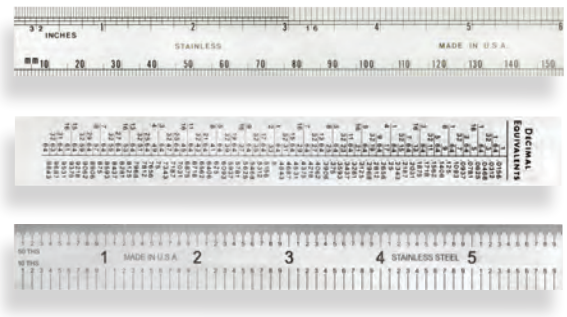
Part Number	Description	Graduation
52-380-100	6"(150mm) Rule	1⁄64" & 1mm

Economy Rules

These stainless steel rules are standard rigid rules with 3/4" width and .040" thickness. The 52-381-007 rule is etched with fractional equivalent scale on reverse side. The 52-381-008 and 52-381-009 rules are etched with decimal equivalents.



No. 52-381-007



No. 52-381-008 & 009

Part Number	Width	Description	Graduations
52-381-007	3/4"	6" Rule	1/32", 1/64"
52-381-008	3/4"	6"/150mm Rule	1/32", 1/16", 1mm*
52-381-009	3/4"	6" Rule	10ths, 50ths

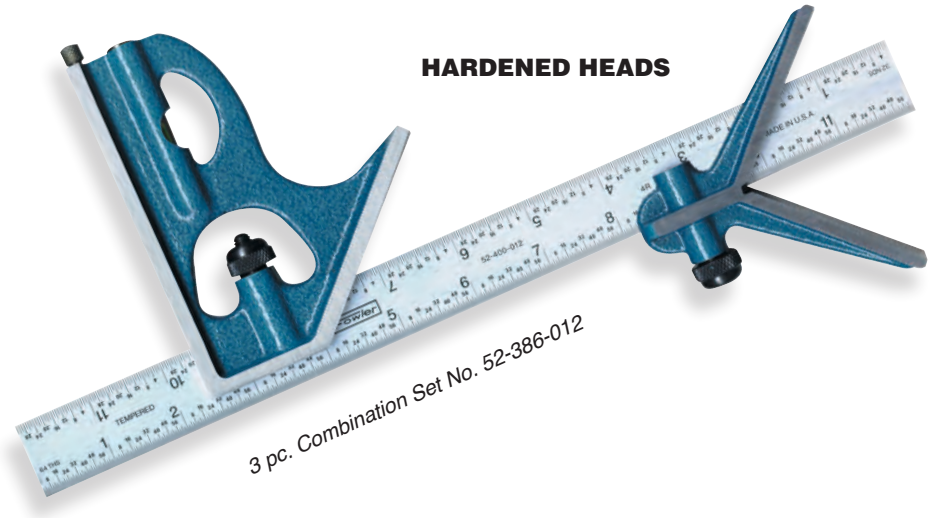
* English dimension edge marked in 1/32" and 1/16" increments, Metric edge in 1mm increments

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Combination Squares

MADE IN THE USA



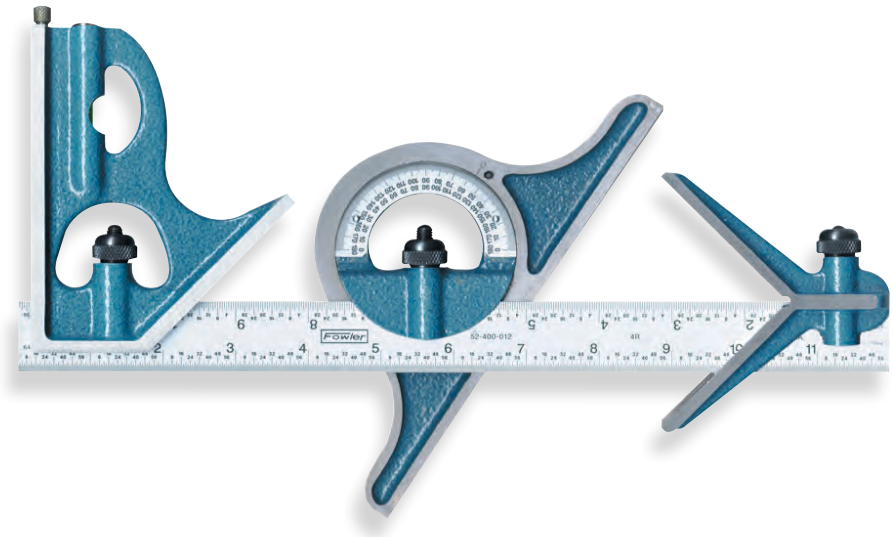
3 pc. Combination Set No. 52-386-012

GRADUATIONS:
4R: 8ths, 16ths, 32nds & 64ths
16R: 32nds, 64ths, 50ths & 100ths

Part Number	Blade Size	Graduation
3-Pc. Combo Square Sets—Hardened Heads:		
Inch Series:		
52-386-006	6"	4R
52-391-006	6"	16R
52-386-012	12"	4R
52-391-012	12"	16R
52-386-018	18"	4R
52-391-018	18"	16R
52-386-024	24"	4R
52-391-024	24"	16R
Metric Series:		
52-372-014	300mm	1mm-0.5mm
2-Pc. Combo Square Sets—Hardened Heads:		
Inch Series:		
52-388-006	6"	4R
52-392-006	6"	16R
52-388-012	12"	4R
52-392-012	12"	16R
52-388-018	18"	4R
52-392-018	18"	16R
52-388-024	24"	4R
52-392-024	24"	16R
Metric Series:		
52-373-014	300mm	1mm-0.5mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Combination Square Set



▲ *Combination Square Set No. 52-370-012* ***(CAST HEADS)***

GRADUATIONS:
4R: 8ths, 16ths, 32nds & 64ths
16R: 32nds, 64ths, 50ths & 100ths

Fowler's four piece Combination Sets are useful for all mechanical jobs and are used as squares, height gages, depth gages, levels, marking gages, scribers, center gages, bevel protractors, steel rules and plumbs.

Features:
- Blades fully hardened and tempered.
- Protractor head has level.
- Blades are available in 4R (graduated in 8ths, 16ths, 32nds and 64ths) or 16R (graduated in 32nds, 64ths, 50ths and 100ths.)
- Finished in baked blue enamel.
- Available in metric—.1mm and .5mm graduations on one side, mm graduations on reverse side.
- Combination sets include square head, center head and protractor head with 12", 18" or 24" blades.
- Square head has level and scriber point.
- Squares and combination sets meet Federal Specifications Type VI, Class A.
- Easy-to-read satin chrome finish blades.
- Microfine graduations.
- Double-indexed protractor is graduated 180 degrees in both directions.
- Includes case.

Part Number	Blade Size	Graduation
Inch Series:		
52-370-012	12"	4R
52-375-012	12"	16R
52-370-018	18"	4R
52-375-018	18"	16R
52-370-024	24"	4R
52-375-024	24"	16R
Metric Series:		
52-375-013	300mm	1mm-.5mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

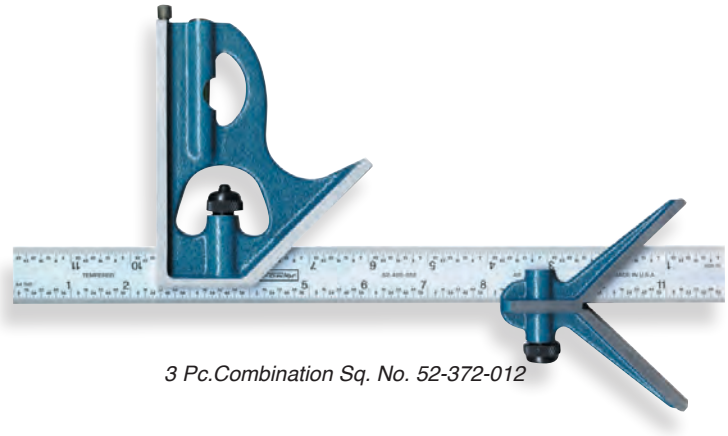
Combination Squares

MADE IN THE USA



2 Pc.Combination Sq. No. 52-378-006

CAST HEADS



3 Pc.Combination Sq. No. 52-372-012

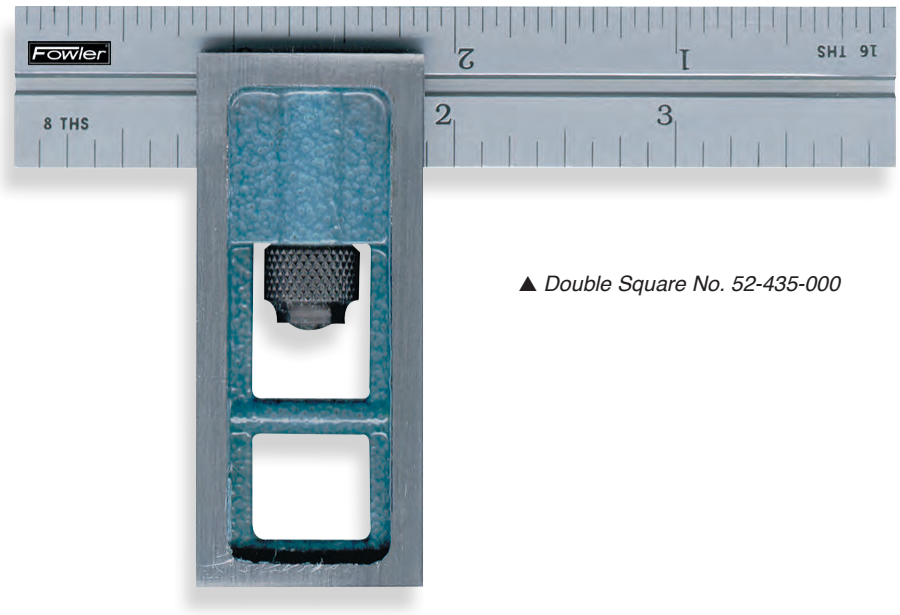
Part Number	Blade Size	Graduation
3-Piece Combination Squares — Cast Heads:		
Inch Series:		
52-370-006	6"	4R
52-375-006	6"	16R
52-372-012	12"	4R
52-377-012	12"	16R
52-372-018	18"	4R
52-372-024	24"	4R
Metric Series:		
52-372-005	150mm	1mm-0.5mm
52-372-013	300mm	1mm-0.5mm
2-Piece Combination Squares — Cast Heads:		
Inch Series:		
52-373-006	6"	4R
52-378-006	6"	16R
52-373-012	12"	4R
52-378-012	12"	16R
52-373-018	18"	4R
52-373-024	24"	4R
Metric Series:		
52-373-013	300mm	1mm-0.5mm
Inch & Metric:		
52-375-007	6"(150mm)	32nds & 64ths/1mm & 0.5mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

MADE IN THE USA

Fowler

Double Squares



▲ *Double Square No. 52-435-000*

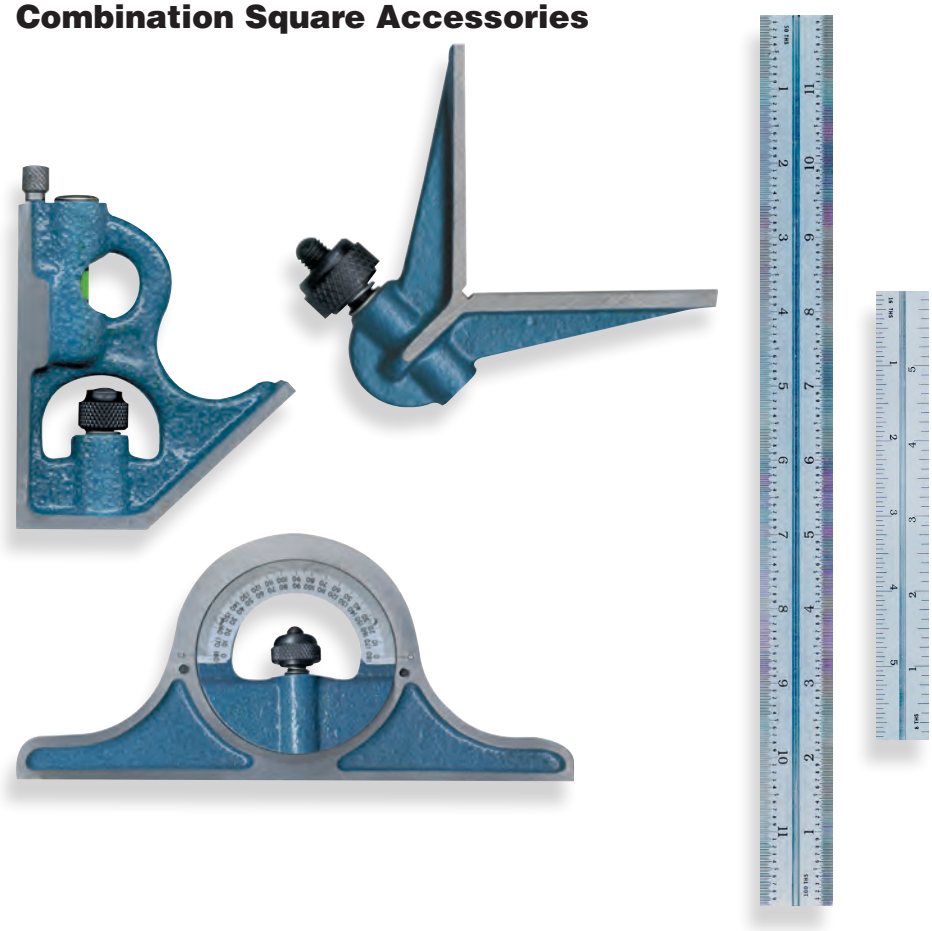
Features:
- The precision ground satin chrome blades are hardened and tempered.
- Double Squares can also be used as parallels.
- Cast heads are available with both 4"and 6" blades.
- Blades supplied in 4R graduations.
- Supplied in a carton box.

Part Number	Description
52-435-000	Double Square, Cast Head with 4" Blade
52-435-006	Double Square, Cast Head with 6" Blade

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Combination Square Accessories



MADE IN THE USA

Blades

Part Number	Blade Size	Graduation
Blades—Inch Series:		
52-400-006	6"	4R
52-405-006	6"	16R
52-400-012	12"	4R
52-405-012	12"	16R
52-400-018	18"	4R
52-405-018	18"	16R
52-400-024	24"	4R
52-405-024	24"	16R
Blades—Metric Series:		
52-400-007	150mm	1mm-0.5mm
52-400-013	300mm	1mm-0.5mm
52-400-015	300mm	1mm & 0.5mm/32nds & 64ths
52-400-020	600mm	1mm & 0.5mm/32nds & 64ths

Heads

Part Number	Description	Accepts Blade Size
52-410-005	Cast Square Head	6"
52-410-010	Cast Square Head	12", 18" and 24"
52-415-005	Cast Center Head	6"
52-415-010	Cast Center Head	12", 18" and 24"
52-420-000	Cast Protractor Head, Non-reversible	12", 18" and 24"
52-421-000	Cast Reversible Protractor Head	12", 18" and 24"
52-412-005	Hardened Square Head	6"
52-412-010	Hardened Square Head	12", 18" and 24"
52-417-005	Hardened Center Head	6"
52-417-010	Hardened Center Head	12", 18" and 24"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bevel Edge Squares



▲ *Bevel Edge Square No. 52-426-002*

No. 52-426 Series—(Super Precision):
- Squares have accurate right angles both inside and outside.
- Made from a single piece of fully seasoned tool steel.
- Matte finish
- Beams and blades are ground and lapped for straightness and parallelism. Blades beveled both edges of each side.
- Squares fully hardened to Rockwell 55C.
- Packed in individual carton.
- Designed for layout & measurement work.
- Accuracy = .00008" + $\frac{\text{Length (blade)}}{100{,}000}$

Part Number	Blade Length	Beam Length
Bevel Edge Squares:		
52-426-002	2-3⁄8"	1-3⁄8"
52-426-003	3-1⁄8"	2"
52-426-004	4"	3"
52-426-005	5"	3"
52-426-006	6-3⁄4"	4"
52-426-008	8-1⁄2"	5-1⁄8"
52-426-010	10-1⁄2"	6-3⁄8"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Steel Squares & Square Sets

Features:
- Made of hardened steel, these economy squares have true right angles both inside and outside.
- Beams and blades ground and lapped for straightness and parallelism.
- Length of hardened blade is measured from inner edge of beam to end of blades.
- Designed for schools, apprenticeships and training programs.
- Beam grooved at inner corner for clearance of burrs and dirt.
- Squareness of the blade edge to the working face of the stock is .0006"



▲ *Steel Square Set No. 52-432-246*

Part Number	Description
Steel Squares	
52-432-004	4" Steel Square
52-432-006	6" Steel Square
52-432-009	9" Steel Square
52-432-012	12" Steel Square
Steel Square Sets	
52-432-444	2", 4" and 6" Hardened Steel Square Set
52-432-246	2",3", 4" and 6" Hardened Steel Square Set
52-432-469	4", 6", 9" and 12" Hardened Steel Square Set

Straight Edge Squares



▲ *Straight Edge Square No. 52-431-003*

Features:
- Length of the blade is measured from the inner edge of beam to end of blades.
- Squares fully hardened to Rockwell 55C.
- Beams and blades are ground and lapped for straightness and parallelism.
- Both the inside and outside of the squares have accurate right angles.
- Packed in individual cartons.
- Designed for precision layout and measurement work which requires high accuracy.
- Accuracy = .0002" + $\frac{\text{Length (blade)}}{50{,}000}$

Part Number	Blade Length	Beam Length
52-431-002	2-3⁄8"	1-3⁄8"
52-431-003	3-1⁄8"	2"
52-431-004	4"	3"
52-431-005	5"	3"
52-431-006	6-3⁄4"	4"
52-431-008	8-1⁄2"	5-1⁄8"
52-431-010	10-1⁄2"	6-3⁄8"

Blade Size	Beam Size
2"	1-1/2"
3"	2-1/2"
4"	3"
6"	4"
9"	6"
12"	8"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

1-2-3/2-4-6 Blocks



Zirconia Ceramic 1-2-3 Blocks, No. 53-439-101

Special Features:
- Constructed of Zirconia Ceramic.
- Blocks feature a coefficient of expansion only 2 x 10^{-6}/C° different than steel blocks.
- Dimensions: 1" x 2" x 3"
- Flatness within .00004"
- Size accuracy within .0002"



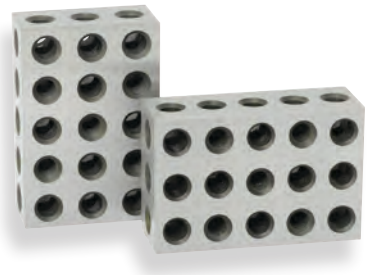
Premium Brand 1-2-3 Block, No. 52-439-032

Features:
- Hardened (HRC 55—60)
- 23 holes for easy clamping, 5 tapped, 18 untapped thru holes.
- Complete in a shop-hardened case.
- Surface finish: 6-16μ"
- Includes hex wrench and 5 mounting bolts (3/8"-16).



Steel 1-2-3 Blocks, No. 52-439-001 to 031

Features:
- 1-2-3 Blocks—tolerances guaranteed to .0001" for squareness per inch.
- Available in two styles—with one or thirty-one holes. Blocks are matched in pairs and measure 1" x 2" x 3".
- Very useful in mounting work for precision grinding, layout work, etc.
- Blocks hardened to 58-60 Rockwell C.
- Ground to surface finish 6-10 microinches.
- Matched accuracy within ± .0002".
- Price per pair.



Steel 2-4-6 Blocks, No. 52-439-246

Features:
- 2-4-6 Blocks.
- Parallelism within .0003".
- Squareness within .0003" per inch.
- Block hardened to 56—60 RC.
- Flatness within .0002" per inch.
- Matched pairs measure 2"x4"x6".
- Price per pair.

Part Number	Description	Parallel Accuracy
1-2-3 Blocks		
52-439-001	Set of 2 Blocks with 1 hole.	.0002"
52-439-011	Set of 2 Blocks with 1 hole.	.0003"
52-439-031	Set of 2 Blocks with 31 holes.	.0002"
52-439-032	Premium Brand 1-2-3 Block Set	.0001"
53-439-101	Set of 2 Zirconia Ceramic blocks with 1 hole	.0002"
2-4-6 Blocks		
52-439-246	Set of Blocks with 31 holes.	.001"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Premium Parallel Sets



1/32" Parallel Set, No. 52-437-031

Special Features:
- Made from high-grade alloy steel, hardened and ground from 1/32" stock with 2 holes in each parallel.
- 10 pairs, 6" length, 1/32" width.
- 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2" & 1-5/8"
- Height specifications relate to consistency within each pair. Absolute heights are nominal.
- Parallelism: ±.0001"
- Paired in height: ±.0001"
- Hardness: 50 HRC



1/8" Parallel Set, No. 52-437-125

Special Features:
- Made from high-grade alloy steel, hardened and ground from 1/8" stock with 2 holes in each parallel.
- 10 pairs, 6" length, 1/8" width.
- 1/2", 5/8", 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2" & 1-5/8"
- Height specifications relate to consistency within each pair. Absolute heights are nominal.
- Parallelism: ±.0002"
- Paired in height: ±.00015"
- Hardness 58-63 HRC



1/4" Parallel Set, No. 52-437-250

Special Features:
- Made from high-grade alloy steel, hardened and ground from 1/4" stock with 2 holes in each parallel.
- 9 pairs, 6" length, 1/4" width.
- 3/4", 7/8", 1", 1-1/8", 1-1/4", 1-3/8", 1-1/2", 1-5/8" & 1-3/4"
- Height specifications relate to consistency within each pair. Absolute heights are nominal.
- Parallelism: ±.0002"
- Paired in height: ±.0002"
- Hardness 52-58 HRC

Part Number	Description
52-437-031	1/32" Parallel Set
52-437-125	1/8" Parallel Set
52-437-250	1/4" Parallel Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Parallels & Sets



1/8" Parallel Set, No. 52-437-000

Made in the U.S.A., Fowler introduces its hardened steel Parallel Sets.

Features No. 52-437-000:
- Ten pairs which are 6" in length and 1/8" thick
- Heights 1/2", 5/8", 3/4", 7/8", 1", 1-1/8" and 1-1/4"—1-3/8", 1-1/2" and 1-5/8".
- Parallel within ± .0002" each pair.
- Heights matched within ±0.001" each pair.
- Includes fitted case.

Part Number	Description
52-437-000	Parallel Set



1/2" Parallel Set No. 52-437-001

Features No. 52-437-001:
- Set of four pairs of parallels are hardened and ground. A must for every shop.
- Sizes: 1", 1-1/4", 1-1/2" and 1-3/4" in height x 6" long with 5/16" holes.
- 1-1/2" and 1-3/4" parallels are 1/2" thick.
- 1" and 1-1/4" parallels are 3/16" thick.
- Width & height variations: maximum .0004"
- Includes fitted case.

Part Number	Description
52-437-001	Set of Four Pairs of Parallels



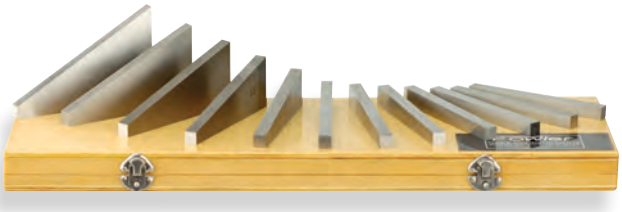
▲ *Parallel Set No. 52-437-006*

Adjustable Parallels, No. 52-437-007 and 006 Special Features:
- Each parallel has two dovetailed pieces that slide on each other and lock in position with set screws. Easily adjusted and set up to size with a micrometer. They can be quickly inserted in slots and expanded to size.
- Height size ranges from 3/8" to 2-1/4".
- Slot size determined by measuring the parallels externally with a micrometer.
- Includes fitted case.

Part Number	Description
Adjustable Parallel Sets	
52-437-007	Set of 4 Adjustable Parallels. Sizes: 3/8"—1/2", 1/2"—11/16", 11/16"—15/16" and 15/16"—15/16".
52-437-006	Set of 6 Adjustable Parallels. Sizes: 3/8"—1/2", 1/2"—11/16", 11/16"—1-5/16", 15/16"—15/16", 15/16"—1-3/4" and 1-3/4"—2-1/4".

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Angle Gages & Solid Angle Plates



No. 53-666 series—Fowler's high precision Angle Blocks are made of solid, hardened steel with specific angles. Includes 1/4 and 1/2 degree sizes to handle most angle requirements. Blocks available in sets or individually.

- Each 12 block set includes 1 thru 5° blocks in 1° increments and 5° through 30° blocks in 5° increments as well as 1/4° & 1/2° blocks.
- Accuracy ±30 seconds.
- Use of the Solid Angle Block simplifies the setting and checking of angles during tooling, production or inspection. This fast, accurate method eliminates time consuming calculations, sine bar and any setup errors.
- All blocks precision ground.
- All blocks are 3" long and 1/4" thick.

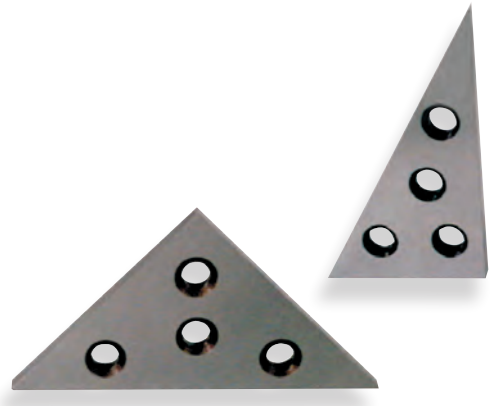
Part Number	Description
53-666-000	Set of 12 Angle Blocks
53-666-001	Individual 1 degree block
53-666-002	Individual 2 degree block
53-666-003	Individual 3 degree block
53-666-004	Individual 4 degree block
53-666-005	Individual 5 degree block
53-666-006	Individual 10 degree block
53-666-007	Individual 15 degree block
53-666-008	Individual 20 degree block
53-666-009	Individual 25 degree block
53-666-010	Individual 30 degree block
53-666-011	Individual 1/4 degree block
53-666-012	Individual 1/2 degree block

12 Piece Angle Block Set—No. 52-666-777
Special Features:
- Precision ground hardened steel.
- Blocks: 1/4˚, 1/2˚, 1˚, 2˚, 3˚, 4˚, 5˚, 10˚, 15˚, 20˚, 25˚ and 30˚
- Angular accuracy : ± 30 arc seconds
- Set up angles quickly and easily.
- All blocks 3" long x .25" thick.
- Complete in "Shop Hardened" case.



Part Number	Description
52-666-777	12 Pc Angle Block Set

Angle Plates
Special Features—No. 52-456-000:
- Each block is 9/32" thick.
- One Solid Angle Plate is 4" x 3-15/32" x 2". The other is 3" x 3" x 4-3/8".
- Angles: the first block is 30 x 60 x 90 degrees; the second block is 45 x 45 x 90 degrees.
- Hardened and ground steel.
- Precisely ground angles for convenient set-ups in tooling, production and inspection.
- Four 11/32" holes for easy mounting.
- Accuracy of angles within ± 30 seconds.
- Flatness within .0004".
- Includes fitted case.



▲ *Solid Angle Plates No. 52-456-000*

Part Number	Description
52-456-000	Solid Angle Plates

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Straight Edges



- Made of selected steels.
- Hardened for superior wear resistance.
- Matched to precision masters to ensure precision.
- Width and thickness have been carefully determined to provide optimum rigidity-to-weight ratios.

Part Number	Length	Width	Straightness	Thick
52-480-050	18"	1.32"	.0003"	.150"
52-480-055	24"	1.61"	.0003"	.150"
52-480-060	36"	2.73"	.0004"	.220"

Planer & Shaper Gage



▲ *No. 52-460-005*

Features:
- Base and slide are beveled to provide accurate alignment and parallelism.
- Base and slide are hardened.
- Supplied with 1" and 3" extension posts, maximum height 6-1⁄4".
- Precision level ensures accuracy.
- Platform has extra tapped holes to accommodate post for dial indicators and other accessories.
- Fitted wood case.

Part Number	Range	Base Size	Extensions
52-460-005	1⁄4" to 6-1⁄4"	3⁄4" x 5"	1" and 3"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Precision V-Blocks



▲ *90 Degree V-Block No. 57-475-222*

Sets matched to .0001"

Fowler precision V-Blocks offer a quick, accurate and positive means of holding workpieces for layout, machining, grinding or inspection.

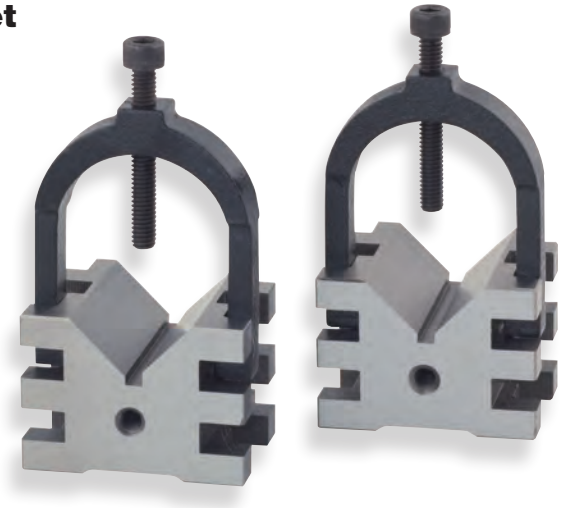
Features:
- One reversible swing-away clamp is included with each V-Block.
- The unique offset hole pattern in the top of the V-Block offers a wide variety of clamping possibilities.
- Side slots allow easy clamping to almost any work surface.
- V-Blocks come in 60 & 90 degree models.
- Ground square, parallel and central within .0002".
- Sizes other than those listed can be manufactured on special order.

Part Number	Dimensions	Capacity
Individual 90 degree Single V-Blocks:		
57-475-222	2-1/2"x 2-1/2" x 2"	1-3/8"
57-475-334*	3" x 4" x 3"	2-1/4"
57-475-466*	6" x 6" x 4"	4-3/8"
Sets: 90 degree V-Blocks (2 matched pieces per set, matched accuracy .0001"):		
57-475-444	2-1/2" x 2-1/2" x 2"	1-3/8"
57-475-668*	3" x 4" x 3"	2-1/4"
57-475-932*	6" x 6" x 4"	4-3/8"
Individual 60 degree Single V-Blocks:		
57-475-602	2-1/2" x 2-1/2" x 2"	1-3/8"
57-475-604*	3" x 4" x 3"	2-1/4"
Sets: 60 degree V-Blocks (2 matched pieces per set, matched accuracy .0001"):		
57-475-622	2-1/2" x 2-1/2" x 2"	1-3/8"
57-475-644*	3" x 4" x 3"	2-1/4"

*Units shown with asterisks have bolt-on facility for sine plates.
Contact the Fowler Technical Department for more details.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

V-Block Set



The Fowler Universal-type V-Block is a precise tool used for layout work in the toolroom and has the capability of holding square or round workpieces with greater accuracy

Features:
- Two clamps, with screw hole at 90 degrees for positive clamping of work, are included.
- Clamping capacity=2"(50mm.)
- V-Blocks are constructed with stepped grooves which allow the clamps to be inserted without protrusion, thus allowing V-Blocks to be used on base, ends or sides.
- Hardened steel. All sides of V-Blocks precision ground parallel and square within .0004".
- Matched pair of V-Blocks are perfectly aligned with 90 degree V-grooves ground central and parallel to the sides and base.

Part Number	Description	Height	Length	Width
52-475-555	V-Block Set	2"	2-3⁄4"	2"

V-Block Set

Features:
- Parallel and square within .0003".
- Dimensions: 1-3/8" x 1-3/8" x 1-3/16"
- Reversible swing-away clamps
- Ø capacity: .030" to 1.285"
- Vesatile clamp plus unique offset hole pattern in top of blocks, offers a large variety of clamping possibilities.



Part Number	Description
52-475-001-1	V-Block Set

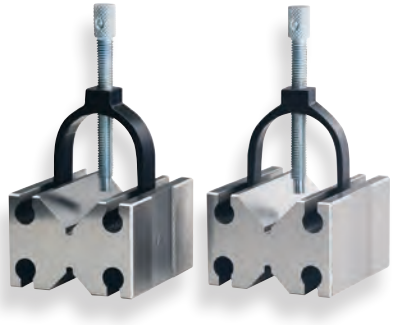
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

SHOP-BLOX® V-Block Sets



External clamping type

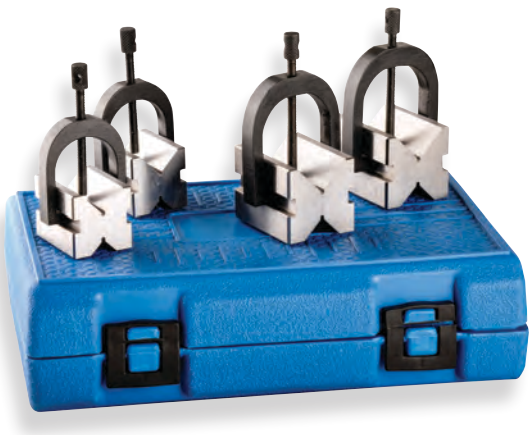


Internal clamping type

- Accuracy: .001"
- Parallelism tolerance: ±.0005"
- Perpendicularity tolerance: ±.0005"
- All sides are ground square and parallel to each other.
- V-slots and centered, parallel and square to each other in pairs.
- Constructed of heat-treated and hardened tool steel.
- Ideal for setup, milling, grinding and drilling applications.

Part Number	Dimensions	Clamping Type	Capacity
52-475-005-1	1-5/8" x 1-1/4" x 1-1/4"	External	1"
52-475-010-1	2" x 1-1/2" x 1-1/2"	External	1-1/2"
52-475-015-1	2-3/4" x 2-1/2" x 1-3/4"	Internal	1-1/2"
52-475-020-1	4-7/8" x 3-1/2" x 2-3/4"	Internal	2-1/8"
Extra Clamps for V-Blocks			
52-476-005	2 clamps for 52-475-005		
52-476-010	2 clamps for 52-475-010		
52-476-015	2 clamps for 52-475-015		

X-BLOX®



Features:
- Use this universal holding tool for small, miniature or intricate parts.
- Ideal for holding, grinding/indexing punches and pins, drilling, milling, EDM, inspection on optical comparators.

2 each:
- Dimensions: 1-1/2" L x 1-1/4" W x 1-1/4" H.
- Work capacity: Approximately 1"
- 2 clamps

2 each:
- Dimensions: 2" L x 1-1/2" W x 1-1/2" H.
- Work capacity: 1-1/2"
- 2 clamps

All feature:
- Surfaces are square and parallel within .0005".
- V-grooves are square and parallel with all surfaces within .0005".
- Corresponding dimensions for each pair are alike within .0005".
- All in a shop-hardened case.

Part Number	Description
52-475-500	X-Blox Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Excellent for holding small parts for a wide range of applications including optical comparators.

Mini-Vee Combo Set



Special Features:

- Use this universal holding tool for small, miniature or intricate parts.
- Ideal for holding, grinding/indexing punches and pins, drilling, milling, EDM, inspection on optical comparators.
- Capable of holding parts as small as a paper clip.
- Capacity: .030" to 9/32"
- Furnished with bridges to straddle long workpieces, allowing top hold-down screw of V-Block clamp to be utilized.
- Hardened and high precision ground . Squareness and parallelism within .0002".
- Set contains 2 Mini-Vee Blocks, size A .030" - 5/32" cap. and size B .050" - 9/32 cap., Bridge A and B plus 5 upper prisms, 1/8", 5/32" and 3/16" cap.
- All in a shop hardened case.

Part Number	Description
52-475-110	Mini-Vee Combo Set

All-Angle V-Block



- For grinding, milling or drilling.
- Made of hardened and precision ground tool steel.
- Sides are parallel and vee is central and ground.
- Central hole is provided for drilling or removing pins.
- V-Block has four 3/8"—16 tapped holes, two in the bottom and one on each side for angle non-clamping.
- Dimensions: 3-5/8" long x 1-7/8" wide x 1-7/8" high (including clamp).
- Holding capacity: 1-5/16"

Part Number	Description
52-475-050	All-Angle V-Block and Clamp

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Adjustable V-Block



No. 52-585-090

A precision ground angle block that is ideal for drilling, milling, grinding and set-up tasks.

Features:
- Hardened and precision ground.
- 3.75" L x 1.75" W x 2" H and offers approximately 1.75" work space.
- Angle accuracy: ±10 sec.
- Squareness within .0002"
- Comes complete in deluxe fitted wooden case.
- Hardened to 50-55 HRC

Part Number	Description
52-585-090	Adjustable V-Block

Magnetic V-Block

Fowler Magnetic V-Blocks feature contact faces that are precision ground. The V-holder will hold itself to work on any flat ferrous surface. Holds varied shaped workpieces so that light machining operations such as grinding, boring and tapping can be carried out with considerable savings in set-up time.

- Permanent, powerful magnet.
- Faces and V accurately ground.
- The holder exerts a magnetic force on the upper, lower and V-channel surfaces. Magnetic force is simply switched off by means of a lever.
- On-off switch for positioning and removal.
- Includes fitted carton box.

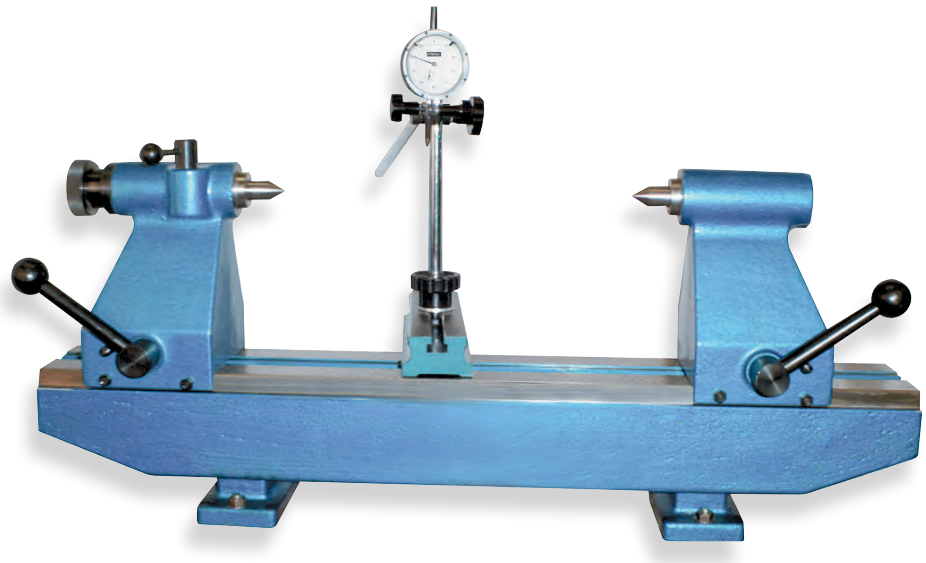


▲ *Magnetic V-Block No. 52-585-075.*

Order No.	Description	Overall Dimensions
52-585-070	V-Block with on-off switch.	2-3⁄8" wide x 4-7⁄8" long x 2-7⁄8" high
52-585-075	V-Block with on-off switch.	2-3⁄8" wide x 4" long x 3-7⁄8" high

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Bench Test Centers



▲ *Test Center No. 57-230-000 shown with Base Holder no. 57-240-000 for test and drop indicators. Indicator not included in price.*

Fowler's High precision heavy-duty Universal Test Center checks eccentricity and facing of shafts, spurs, bevel gears, etc. Dial Indicator Base available for general use as shown with Test Center.

Features—No. 57-230-000/57-230-005:
Centers:
- Carbide tipped spring loaded centers.
- MT2

Specifications:		
	57-230-000	**57-230-005**
Flatness & parallelism of table and spindle center	.0002"(.005mm)	.0003"(.008mm)
Overall length	29-12"	47-1/4"
Max. Length of workpiece	15.75"	31-1/2"
Max. Diameter of workpiece	12"	18-34"

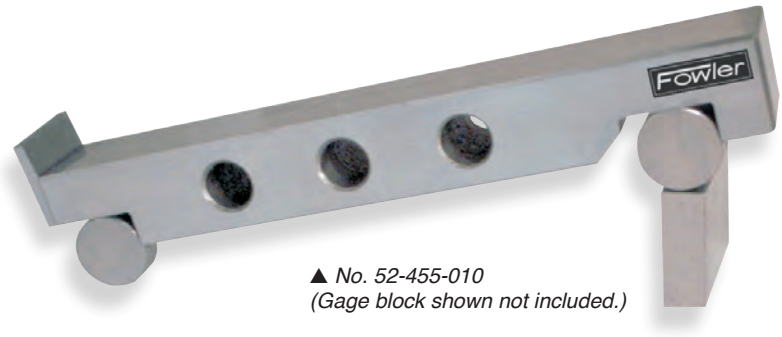
Features—No. 57-240-000:
- Base Holder for indicators—use with center No. 57-230-000 or 005 supplied with arm and universal clamp. Features universal adjustments. Base: 8-1⁄2" long x 1-1⁄4" high; post is 7-1⁄2" and gage rod 9-1⁄2".

Part Number	**Description**
57-230-000	Universal Test Center
57-230-005	Large Universal Test Center
57-240-000	Base holder for indicator. (Used with No. 57-230-000 or 005).

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Sine Bars & Sine Plates



▲ *No. 52-455-010*
(Gage block shown not included.)



▲ *No. 52-455-015*
(Gage block shown not included.)

Fowler Sine Bar equipment used with gage blocks is highly recommended for securing a high degree of accuracy in measuring angles for grinder and milling machine set ups. Both sine and rolls hardened and ground for extreme accuracy.

Features:
- Top surface is accurate to .00003" per inch of length. Parallelism: .0004".
- Flange on end of Bars and Plates for resting work.
- Both Sine Bars and 5" Sine Plates have holes for mounting/clamping.
- Includes fitted case.

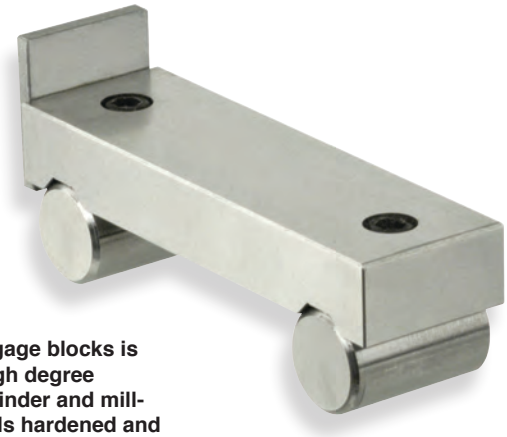


▲ *No. 52-455-020*

Part Number	Description	Width	Distance between Center of Rolls
Inch Series:			
52-455-010	5" Sine Bar	15⁄16"	5" ± .0004"
52-455-015	10" Sine Bar	1"	10" ± .0004"
52-455-020	5" Sine Plate	2"	5" ± .0002"
Metric Series:			
52-455-025	100mm Sine Bar	25mm	100mm ± .0002"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Economy Sine Bars



▲ *No.52-455-030*

Fowler Sine Bar equipment used with gage blocks is highly recommended for securing a high degree of accuracy in measuring angles for grinder and milling machine set ups. Both sine and rolls hardened and ground for extreme accuracy.

No. 52-455-030 & 035—Features:
- Flange on end for resting work.
- Parallelism +/- .0004" on both the top and bottom.
- Supplied in fitted carton box.

Part Number	Description	Width	Distance between Center of Rolls
52-455-030	Economy 2-1/2" Sine Bar	1"	2-1/2" ± .0004"
52-455-035	Economy 5" Sine Bar	1"	5" ± .0004"

EZ-Sine Bar Set

Simplify sine bar angle set up.



Features:
- Eliminate constant tables for calculation.
- Select a riser to obtain the desired angle and you are finished!

Sine Bar:
- 5" hardened and precision ground.
- 1" body size, top parallel to bottom within .0002".

Risers:
- 18 risers of the following angles: 1/2˚, 1˚ thru 15˚ in 1˚ increments, 1/4˚ and 1/2˚ to measure taper per foot.
- Exact constant within .001".

Part Number	Description
52-455-050	EZ-Sine Bar Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Sine Plates



▲ *Sine Plate No. 57-374-003.*



▲ *Sine Plate No. 57-374-002.*

Built to precise specifications, the sine plate is ideal for angular comparison. The plate is used to cancel out the angle being measured.

The sine plate is precise enough to be used for inspection purposes, yet rugged enough for machining, drilling and grinding.

Large diameter hinge and gage block rolls add stability and sturdiness for machining. Two self-storing, hardened and ground side rails and a locking strap always remain below the top surface.

Features:
- Built-in .200" minute step for ease in setting small angles.
- Can be used with #57-470-series Angle Plates.
- Constructed of carburized steel, hardened to RC58-62.
- Ground square and parallel within .0002"-.0005" (depending on size.)
- Tapped holes in top plates of models 6" x 6" or smaller are 1/4-20. Remaining models have 3/8-16 tapped holes.
- Roll accuracy within .0002".

Part Number	Sine Plate Dimensions	Center Distance of Rolls
57-374-001	6" x 3" x 2"	5"
57-374-002	6" x 6" x 2"	5"
57-374-003	6" x 12" x 2-5/8"	5"
57-374-004	12" x 6" x 2-5/8"	10"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Compound Sine Plates



▲ *Compound Sine Plate No. 57-375-002*



▲ *Compound Sine Plate No. 57-375-001*

Fowler compound sine plates are designed to accommodate a wide variety of inspection, grinding and machining jobs. The bi-directional plates allow angles to be set front to back or side to side for simple angles or a combination of the two for true compound angles. The top plates have adjustable height and self-storing rails along with two locking straps that always remain below the surface.

Features:

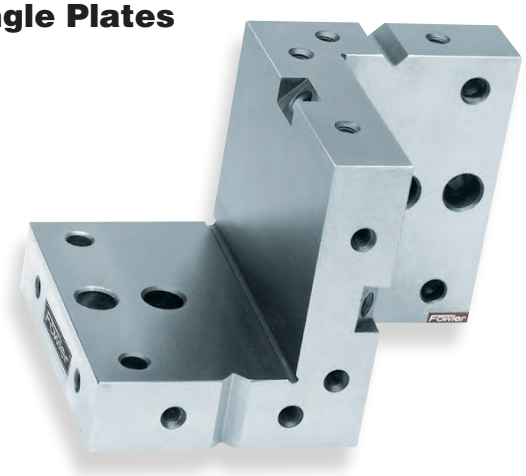
- Built-in .200" minute step in front gage block roll.
- Constructed of steel, hardened to RC58-62.
- Precision ground square and parallel within .0002"-.0003" depending on the size.
- Can be used with the #57-470-series Angle Plates.
- Roll accuracy within .0002".
- Models 6" x 6" or smaller have 1⁄4-20 tapped holes in top plate. Larger models have 3⁄8-16 tapped holes.

Part Number	Sine Plate Dimensions	Center Distance of Rolls
57-375-001	6" x 6" x 3-1⁄8"	5"
57-375-002	6" x 12" x 4-3⁄16"	5" and 10"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Angle Plates

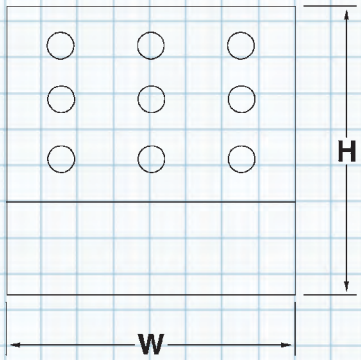


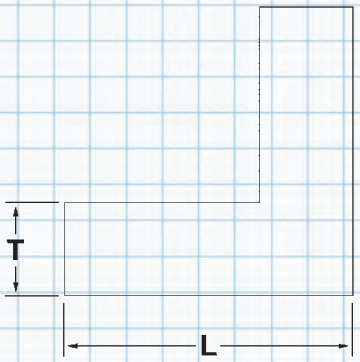
▲ *Compound Angle Plate No. 57-470-800*



▲ *90° Single Angle Plate No. 57-470-664.*

Perfect for use with the sine and compound sine plates listed in the features and shown on pages 352 and 353





Fowler's precision Angle Plates are of a solid one-piece construction. They are made of steel, carburized and hardened to RC58-62, ground flat, square and parallel within .0002". They are perfect for use with the sine and compound sine plates listed below.

No. 57-470-800 compound Angle Plate is a multi-use angle plate and is especially useful for squaring operations. Several small ground vees allow the holding of small round parts. One clamp is included.

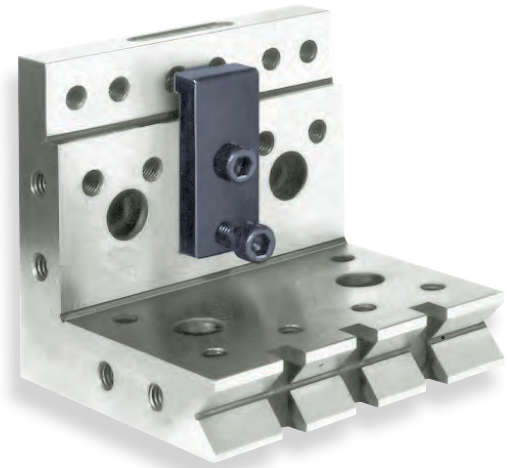
Features:

- Tapped holes are 1/4" or 3/8" to allow the use of standard, readily available clamping accessories.
- No. 57-470-664 includes two side rails, four hold-down bolts, and a matching T-wrench.
- No. 57-470-664 is a 90 degree conversion plate which can be bolted directly to No. 57-374-002 and No. 57-375-001, giving true 90 degree convertibility.
- No. 57-470-444 can be bolted to No. 57-374-002 and No. 57-375-001.
- No. 57-470-546 can be bolted to No. 57-374-003, 57-374-004 and 57-375-002.

Part Number	Overall Dimensions	Type
Angle Plates:	**H x W x L x T**	
57-470-334	4" x 3" x 3" x 1"	Single angle
57-470-444	4" x 4" x 4" x 1-1/4"	Single angle
57-470-546	6" x 4" x 4" x 1-1/4"	Single angle
57-470-664	4" x 6" x 6" x 1-1/4"	Single angle
57-470-800	6" x 4" x 4" x 1"	Compound angle

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Versatile Angle Plates



▲ *No. 57-470-445 with face clamp*



▲ *No. 57-470-445 with yoke & side clamp*

This Angle Plate with a step on one inside face and a vee on one end is ideal for both inspection and precision die making. The vee has three slots milled at right angles to it. The vee shape will accept cylindrical bodies such as diamonds for dressing grinding wheels on surface grinders. A square bodied part can be inserted on the angle's slot. By using the optional side clamp, the machining of two faces is completely accessible without moving or relocating the part.

Twenty-five 5⁄16-18 tapped holes allow three optional clamping accessories to be bolted on in various configurations. Four 3⁄8" counterbore holes allow this angle plate to be bolted to a machine or machining accessories such as sine plates.

Features:
- Accessories available: Flat offset steel clamp, adjustable yoke (holds cylindrical bodies) and adjustable side clamp (holds small components for end grinding.)
- Steel hardened to RC58-62.
- Sides are precision ground flat, parallel and square.
- Accuracy within .0002".

Part Number	Description
57-470-445	Angle Plate: 4" x 4" x 4-1⁄2"
Accessories:	
57-470-446	Adjustable yoke. Range: 1⁄4"—7⁄8" diameter.
57-470-447	Flat offset clamp (steel): 1" wide.
57-470-448	Adjustable side clamp. Range: 1⁄2" to 1-1⁄2" wide.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Precision Sine Vises



▲ *Precision Sine Vise No. 57-235-337*

Fowler Sine Vises are precision toolmaker vises mounted to a precision hinged bottom plate. This provides a quick and accurate means of holding a workpiece at an angle for machining, drilling or grinding.

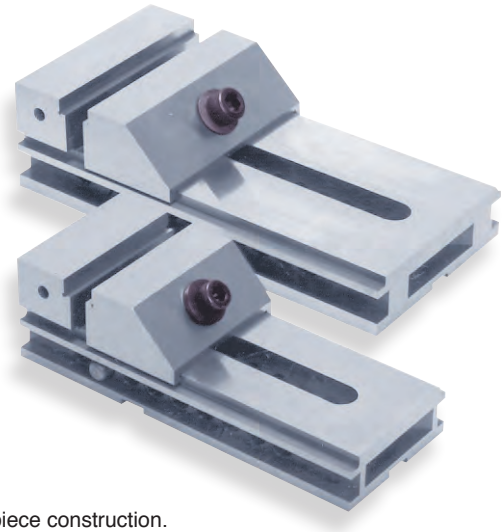
Features:
- Center distance of rolls is within .0002".
- Stepped gage block roll allows small angles to be set with ease and accuracy using standard gage block sets.
- Center channel angle increases capacity.
- Tapped holes in side of fixed jaws for mounting stops or other accessories.
- One locking strap is included with each sine vise.
- Sine Vise No. 57-235-411 can be bolted to No. 57-374-003 and No. 57-374-004 Sine Plates and No. 57-375-002 Compound Sine Plate.
- No. 57-235-411 can be bolted to Angle Plate No. 57-470-546.

Part Number	Dimensions	Capacity	Center Distance	Jaw Height
57-235-337	7-1/2"x 3" x 3-5/8"	4-3/4"	5"	1-5/16"
57-235-411	11" x 4" x 4-5/8"	7"	10"	1-7/16"

Precision N/C & Machining Vises

Fowler precision N/C vises have bi-directional 11/16" keyways ground in the bottom to allow rapid installation and automatic alignment. These precision vises will bolt easily onto N/C, milling, EDM or other machines. All four sides are slotted to provide a multitude of clamping possibilities.

Both the fixed and moveable jaws are stepped to permit the effortless holding of pieces as small as 1/2" x 1/2" or as large as 7-1/2" x 8-1/2", depending on the model. This offers more capacity than comparable vises on the market today due to a new angled channel. All jaw opening changes can be accomplished without unbolting the vise from the work surface.

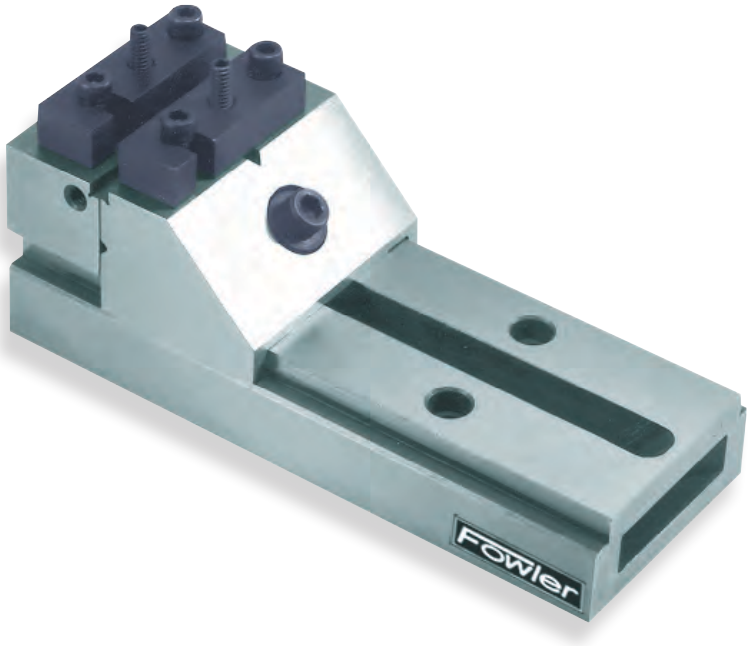


Features:
- Bodies and moveable jaws are solid one piece construction.
- Can be purchased in pairs with matched accuracy to .0001" or .0002".
- Hardened to: RC58-62.
- Flat, square and parallel to .0003".

Part Number	Dimensions	Capacity	Jaw Height
57-226-411	11" x 4" x 3"	7-1/2"	1-7/16"
57-226-612	12" x 6" x 3-7/16"	8-1/2"	1-11/16"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Toolmaker Vises



Fowler high-precision Toolmaker Vises have solid bodies of one-piece steel construction. Bodies and jaws carburized & hardened to RC58-62. All vises are ground flat, square and parallel within .0002" to .0003".

Due to the precise design of our vises, the jaw is pulled into the base at approximately 45 to 60 degrees. This ensures maximum holding power with superior hold-down force on the jaw to eliminate tilting and lifting.

The angled center channel allows a greater jaw capacity than competitive brands. The jaw opening can be changed without removing the vise from the work surface. Toolmaker vises bolt directly to sine plates and compound sine plates of the same series without clamps and with little or no indicating. End pockets on all models easily clamp to machine table or fixture.

Features—No. 57-228-237:
- Ground vertical and horizontal vees inside face of jaws hold round workpieces.
- Ground vees in top of jaws and steps on inside faces of jaw easily hold round or small parts. Two hold-down clamps included with this model for use in conjunction w/top vees.
- Can be bolted to No. 57-470-444 angle plate.
- Can be bolted to No. 57-374-002 and No. 57-375-001 sine plates.

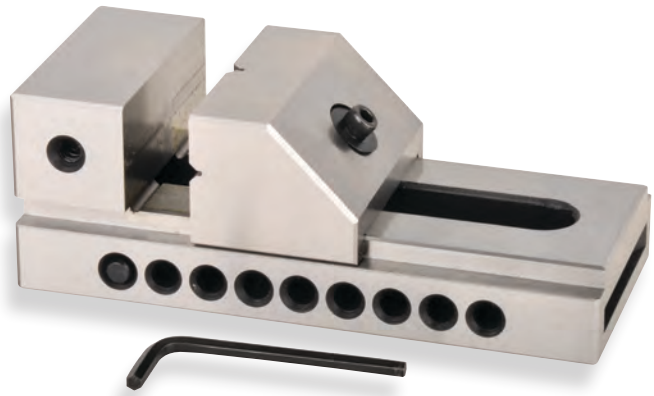
Features—No. 57-228-411:
- Additional side slots for further mounting possibilities.
- Can be bolted to No. 57-374-003, 004 and No. 57-375-002 sine plates.
- Can be bolted to No. 57-470-546 angle plate.

Part Number	Dimensions	Capacity	Jaw Height
57-228-237	7-1⁄2" x 3" x 2-5⁄8"	5"	1-5⁄16"
57-228-411	11" x 4" x 3"	7"	1-7⁄16"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

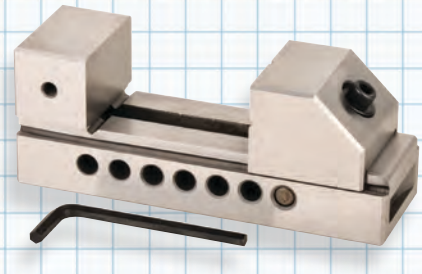
Toolmaker Vises



▲ *Toolmaker Vise No. 52-466-222.*



▲ *Toolmaker Vise No. 52-466-000.*



▲ *Toolmaker Vise No. 52-466-333*

Fowler's high accuracy Toolmaker Vises make precision holding possible for inspection, precision jig boring, milling and grinding.

Features—No. 52-466-222:
- All surfaces hardened and precision ground square and parallel to an accuracy of .0004".
- Has ground V-grooves in sliding jaw.
- Clamping holes are provided.
- Moveable jaw lock includes insertable pin.
- Base and front jaw are one piece all steel construction and case hardened.
- Holes and locking set screw provide adjustable positions.
- Includes Allen locking wrench.

Features—No. 52-466-333:
- All surfaces hardened and precision ground square and parallel within .0005".
- Has ground "V" way in sliding jaw.
- Clamping slots are provided.
- Holes and locking set screw for adjustable positions.
- Base and front jaw are one piece all steel construction and case hardened.

Features—No. 52-466-000:
- Economy style toolmaker vise.
- Features solid base and front jaw construction.
- Accuracy to .0006".
- Jaws are not removable.
- Clamping slots on the bottom of the base easily affix to angle plates, etc

Part Number	Jaw Size	Maximum Opening	Dimensions
52-466-000	2-3⁄8"	2-3⁄16"	1-3⁄4" x 2-3⁄8" x 4-3⁄8"
52-466-222	1-7⁄8"	2-7⁄8"	1-7⁄8" x 1-7⁄8" x 6"
52-466-333	3"	3-3⁄4"	2-1⁄2" x 3" x 7"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Pin Vise Set



Pin Vise Set—No. 52-491-000
- Fowler's Pin Vise Set includes 4 vises for holding pin gages and wires.
- Housing of black nitrate anodized, corrosion resistant finish with knurled bands.
- Capacity: 0—.159"
- Includes convenient plastic case.

Capacity
A: .10—.159"
B: .04—.102"
C: .01—.057"
D: 0—.042"

Part Number	Description
52-491-000	Pine Vise Set. 4 pieces. Capacity 0—.159"

Parallel Clamps

Parallel Clamps—No. 52-465 Series:
- Fowler's Parallel Clamps are designed for maximum strength and rigidity.
- Useful for holding work together in tapping and drilling and on various machine set-ups.
- Clamps are equipped with spring clip and retaining ring.
- Ends of jaws are chamfered.
- Case hardened steel finish.
- Screw heads are drilled, allowing use of pin for tightening.



▲ *Parallel Clamps No. 52-465 series*

Part Number	Description	Jaw Opening	Jaw Length
52-465-005	Parallel Clamp	1-1/4"	2"
52-465-010	Parallel Clamp	2-1/4"	3"
52-465-015	Parallel Clamp	3"	4"
52-465-020	Parallel Clamp	4"	5"
52-465-025	Parallel Clamp	4-3/4"	6"
52-465-030	Parallel Clamp	6"	8"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

MAX-JACK® Heavy-Duty Screw Jack

- Simplify set-up applications on all machine and inspection operations.
- Adjustable from 4.5" to 8"
- Quick-acting height adjustment.
- Fine adjust ring for easy leveling.
- Height locking ring
- Lifting capacity 2000 lbs. (approx.)

X-SERIES





Part Number	Description
52-104-050	Max-Jack screw jack
52-104-055	Pair of Max-Jack screw jacks (2 each)



52-104-050 and 055
Adjustable from
4.5" to 8"

Screw Jack Set

Features:
- Up to 1000 lbs.
- Range: 2.25" to 3.375"
- Jack base diameter: 1.25"
- 1" and 2" extension bases.
- Extensions may be combined.
- Includes shop-hardened case.



Part Number	Description
52-104-000	Jack Stand Set

Machinist Screw Jack Set

Features:
- Set consists of 2 machinists jacks supplied in a shop-hardened case.
- Individual jacks consist of a heavy, steel cast base with adjustable steel screw and tilting swivel head, with a lock nut for permanent positioning.
- 1-1/2" jack base for added stability.
- Range: Min: 3"; Max: 4"
- Lifting capacity: 1000 lbs.



Part Number	Description
52-104-025	Machinist Screw Jack Set

Shop Tools

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Machinist Set Up Kit



This kit includes everything you need for part set up.

1-2-3 Block Set:
- Tolerance: .0001" (squareness per inch).
- Dimensions: 1" x 2" x 3"
- Hardened to 58-60 Rockwell C
- Matched accuracy within .0002" per inch.

Jack Stand Set:
- Up to 1000 lbs.
- Range: 2.25" to 3.375"
- Jack base diameter: 1.25"
- 1" and 2" extension bases.
- Extensions may be combined.

Space Blocks:
- 3/4" diameter, 1/4"—28 ID thread
- Ground hardened and tapped.
- 4 connection screws included.
- Accuracy: ±.0001"

Angle Block Set:
- Precision ground.
- Accuracy: ±30 seconds.
- All blocks 3" long and .250" thick.
- Each set includes 1° thru 5° blocks in 1° increments and 5° thru 30° blocks in 5° increments as well as 1/4" and 1/2" blocks.

All sets come supplied with individual cases.

Part Number	Description
53-666-100	Machinist Set Up Kit

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Universal 3D Sensors



No. 53-710-175



No. 54-710-000

Made in GERMANY

German Engineered Quality!

Fowler's Universal 3D Sensors, made in Germany, are very accurate and versatile and available in both mechanical and digital models.

No. 54-710-000 3D Electronic Sensor
The digital version is a versatile and precise measuring instrument for milling and spark erosion machines (EDM). You may approach it in any direction (X-, Y- or Z-axis). Large digital display is easily read even from long distances. It includes a 3⁄4"clamping shaft with a resolution of .00005"/.001mm and accuracy of .0002"/.005mm using short sensor. True inch/metric conversion.

3D Mechanical Sensors
The 3D sensors are easily clamped into the milling spindle for exact positioning of the spindle axis on the edges of the workpiece or jig.

Specifications No. 53-710-175
- Clamping shank diameter: 3⁄4"
- Accuracy: .0004" (with short sensor)
- Length without clamping shank:4-1⁄2"
- Short sensor insert diameter: 0.2"
- Long sensor insert diameter: 0.4"

Specifications No. 53-710-176
- Clamping shank diameter: 20mm
- Accuracy: .01mm (with short sensor)
- Length without clamping shank:115mm
- Short sensor insert diameter: 4mm
- Long sensor insert diameter: 8mm

Part Number	Description
Mechanical:	
53-710-175	3D Mechanical Sensor with 3⁄4" dia. shank & .2" dia. sensor
53-710-176	3D Mechanical Sensor with 20mm dia. shank & 4mm dia. sensor
53-710-180	Replacement Short stylus, insert dia. 0.2", for No. 53-710-175
53-710-181	Replacement Short stylus, insert dia. 4mm, for No. 53-710-176
53-710-190	Long stylus, insert dia. 0.4", for No. 53-710-175
53-710-191	Long stylus, insert dia. 8mm, for No. 53-710-176
Electronic:	
54-710-000	3D Electronic Sensor with 3⁄4" dia. shaft. Includes .2" diameter sensor insert.
54-710-004	Replacement Short stylus, insert dia. .2", for No. 54-710-000
54-710-008	Long stylus, insert dia. .4", for No. 54-710-000

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

COAX-2D 2 Dimensional Coaxial Indicator Sets



Use the 2D Coaxial Set for accurate component centering and positioning in most machining applications. The 2D Coaxial indicator can be used at any angle and the dial remains stationary during the rotation of the machine spindle.

Features:
- Indicator assembly with 1.6" (42.5mm) diameter dial.
- Graduations and revolution counter .0005" (.01mm)
- 3 Internal and 3 External feelers
- Center point feeler
- Restraining arm
- Complete in a fitted case.

Specifications:
- Length: 6-7/8" (175mm)
- Shank: 3/8" dia. x 7/8" (10mm x 20mm) long
- Feeler ball: 1/8" (3mm) dia.
- Dial readings: 0-50
- Measuring range: .250" (6mm) axis offset
- Speed—recommended not to exceed approx. 800 RPM
- Locating accuracy to within .0002" (.005mm) of true center
- Capacity depends on feelers installed, but overall range is 5/32-12" (4-300mm) internal diameter; 0-12" (0-300mm) external diameter.

Part Number	Description
52-710-025	2D Coaxial Set-Inch
52-710-030	2D Coaxial Set-Metric

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Electronic Edge Finders



No. 54-575-600



No. 54-575-625



No. 54-575-650

Along with light indication, model #54-575-650 emits an audible "beep" at time of contact with electrically conductive metal.

Features:
- Edge finder lights instantly when stylus touches work edge.
- Six equally spaced light ports provide visibility at any angle.
- Made in the USA
- Read off any electrically conductive metal.
- Repeatability: .0002"

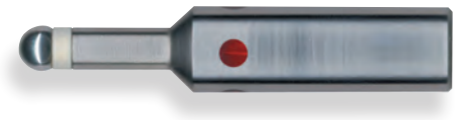
Part Number	Stylus	Shank	Audible	Battery
54-575-600	.200"	1/2"	NO	12 volt
54-575-625	.200"	1/2"	NO	12 volt
54-575-650	.400"	3/4"	YES	12 volt
54-575-601	Replacement 12V battery			

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Electronic Locating Gages

Electronic Edge Finder, Offset and Centering Gages feature three LED indicators which provide 360° visibility. The 3-D Electronic Sensor has four LED indicators. High sensitivity sensors for fast and accurate positioning in manufacturing applications including milling and turning. Indicators light up at the slightest touch to their sensors. All gages are made of hardened and ground chrome steel and include batteries.

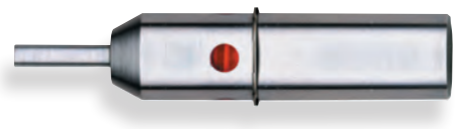
Electronic Edge Finder No. 54-575-000:
- High sensitivity probe for accurate positioning relative to workpiece.
- Very safe against overruns.
- Ball diameter: .400"
- Shank diameter: 3/4"
- Shank length: 1-3/4"
- Overall length: 3-1/2"



Electronic Offset Gage No. 54-575-200:
- High sensitivity gage for height offset presetting.
- Overall diameter: 1"
- Overall length: 2"
- Sensor diameter: 5/16"



3-D Electronic Sensor No. 54-575-300:
- Zero finding fast and extremely accurate on all axes X, Y and Z.
- Operates in horizontal or vertical position.
- Can be used for X and Z location for CNC turning, X, Y and Z for machining centers and for centering and measuring round holes.
- Probe diameter: .200"
- Shank diameter: .750"
- Z-axis to reference surface: 2"



Part Number	Description
54-575-000	Electronic Edge Finder with 4 batteries.
54-575-200	Electronic Offset Gage with 3 batteries.
54-575-300	3-D Electronic Sensor with 4 batteries.
54-575-400	Replacement A76 type Battery for 54-575-000, 200 and 300 (4 included).
54-575-500	Replacement V13HM type Battery for 54-575-100 (2 included).

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Edge & Center Finders

Audible/Conventional Edge Finder Set



Features—No. 52-575-100:
- Contains: 3/8 x .200" combo edge & center finder
  1/2 x .200" combo edge & center finder
  3/8 x .200" audible edge finder
  1/2 x .500" audible edge finder
- Complete in fitted case.

Part Number	Description
52-575-100	Audible/Conventional Edge Finder Set

Edge Finder Set



Features—No. 52-575-125:
Contains:
- 3/8" x .200" Edge Finder
- 1/2" x .200" Edge Finder
- 1/2" x .200" Combo Edge Finder
- 1/2" x .500" Edge Finder
- Complete in fitted case.

Part Number	Description
52-575-125	Edge Finder Set

Edge and Center Finders



▲ *Edge & Center Finders No. 52-575-series: Left to right: A, B, C, D, E & F (corresponds to letters in chart below).*

Features—No. 52-575-010 to 035:
- Edge and Center Finders are hardened and ground all over.
- Accurately locates the starting point for all types of machine work and jig boring.
- Accuracy = .0002".
- Includes fitted vinyl case.

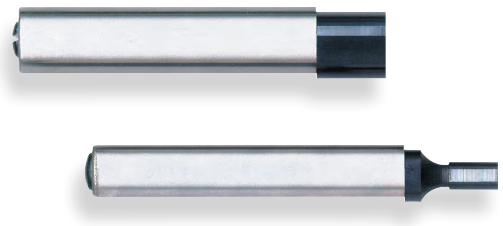
Part Number	Description/Size
Edge & Center Finders—Inch Series:	
52-575-010	A. Edge Finder 3/8" x .200"
52-575-015	B. Edge Finder 1/2" x .200"
52-575-020	C. Combo Edge and Center Finder 3/8" x .200"
52-575-025	D. Combo Edge and Center Finder 1/2" x .200"
Edge & Center Finders—Metric Series:	
52-575-030	E. Edge Finder 3/8" x 10mm
52-575-035	F. Edge Finder 10mm x 10mm

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Audible Edge Finders

Features—No. 52-575-040 to 060:
Audible edge finders assist in assuring accuracy by releasing an audible click when the tip jumps. This allows the operator to listen as well as watch the tool.

- Available in three sizes: 1/2", 3/8" and 10mm.
- Hardened and ground on all working surfaces.



Part Number	Description
52-575-040	3/8" x .200"
52-575-045	1/2" x .200"
52-575-050	10mm/.375" x 10mm
52-575-055	10mm x 10mm
52-575-060	1/2" x .500"

Fowler Tool Set *patent pending*

The Fowler Tool Set is an easy and affordable way to set Z depths quickly and accurately!



Slowly lower cutting tool toward Tool Set...



...indicator will light up upon contact!

- Can be operated directly off table or from machine vise.
- Aluminum contact face eliminates carbide chipping on cutting tools.
- Repeatability: .0002"
- Block dimensions: 1" x 2" x 3" (nominal)
- Batteries included (two LR44)

Part Number	Description
54-575-750	Fowler Tool Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Spring Calipers & Dividers (Quick-Nut)

Fowler's Spring Calipers and Dividers are fully hardened with tempered joints, springs and washers.

Styles feature either a solid nut or quick nut.

Features:
- Ends fully rounded on Outside/Inside Spring Calipers and Spring Hermaphrodite Calipers.
- Outside Spring Calipers meet Federal Specification Type II, Class I. Inside Spring Calipers meet Federal Specification Type I, Class I.
- Quick, positive adjustment.
- Spring Dividers meet Federal Specification Type A, Class 2 and supplied with a plastic point protector. Points fully hardened/tempered. High carbon steel legs heat treated.
- Adjustment screw centrally located; legs are well balanced with uniform tension.
- Polished natural steel finish.



Part Number	Description
52-105-004	4" Outside Spring Caliper
52-105-006	6" Outside Spring Caliper
52-105-008	8" Outside Spring Caliper
52-105-010	10" Outside Spring Caliper
52-106-004	4" Outside Spring Caliper with quick nut
52-106-006	6" Outside Spring Caliper with quick nut
52-106-008	8" Outside Spring Caliper with quick nut
52-106-010	10" Outside Spring Caliper with quick nut

Part Number	Description
52-107-004	4" Inside Spring Caliper
52-107-006	6" Inside Spring Caliper
52-107-008	8" Inside Spring Caliper
52-107-010	10" Inside Spring Caliper
52-108-004	4" Inside Spring Caliper with quick nut
52-108-006	6" Inside Spring Caliper with quick nut
52-108-008	8" Inside Spring Caliper with quick nut
52-108-010	10" Inside Spring Caliper with quick nut





Part Number	Description
52-110-004	4" Spring Hermaphrodite Caliper
52-110-006	6" Spring Hermaphrodite Caliper

Part Number	Description
52-115-004	4" Spring Divider
52-115-006	6" Spring Divider
52-115-008	8" Spring Divider
52-115-010	10" Spring Divider
52-116-004	4" Spring Divider with quick nut
52-116-006	6" Spring Divider with quick nut
52-116-008	8" Spring Divider with quick nut
52-116-010	10" Spring Divider with quick nut



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Carbide "Super Scriber"



The Fowler carbide "Super Scriber" is another example of high quality Swiss workmanship—long lasting, durable, reliable, and lightweight and rugged.

Features:

- The slightly tapered shape and small diameter of the carbide metal scriber tip 1⁄16"(1.5mm) make it easy to use the "Super Scriber" in hard-to-get-at places.
- When in its retracted position, the scriber tip is protected.
- A handy clip provided for easy portability.
- The end piece is hardened and tempered, and the carbide point is easily replaced.
- Knurled handle for a firm grip.
- Overall length 6-1⁄2".
- Replaceable carbide refills are available.
- A plastic protective package is supplied.

Part Number	Description
52-500-050	Carbide “Super Scriber”.
52-500-055	Replaceable Carbide Refill

Pocket Carbide Scriber



- Lightweight
- Retractable carbide tip
- Fluted grip
- Blue anodized aluminum body
- Pocket clip

Part Number	Description	Overall Length
52-500-000	Pocket Carbide Scriber	6.0"
52-515-046	Carbide Refill	

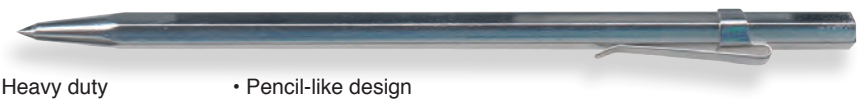
Retractable Tip Carbide Scriber w/Magnetic End Cap



- Heavy duty
- Replaceable carbide tip
- Knurled grip
- Pocket clip
- Magnetic end cap

Part Number	Description	Overall Length
52-500-080	Replaceable Tip Carbide w/magnetic end cap	5.75"
52-500-085	Carbide Refill	

Fixed Tip Scriber



- Heavy duty
- Fixed carbide tip
- Pencil-like design
- Pocket clip

Part Number	Description	Overall Length
52-500-090	Fixed Tip Scriber	6.0"

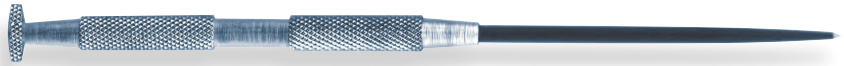
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Scribers



▲ *No. 52-515-005 Pocket Scriber*



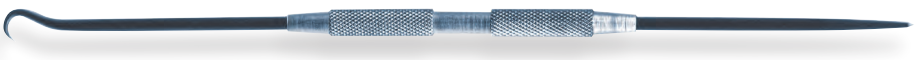
▲ *No. 52-515-015 Single Point Scriber*



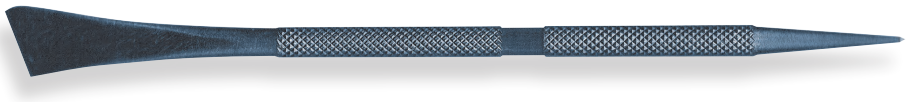
▲ *No. 52-515-025 Replaceable Point Scriber*



▲ *No. 52-515-030 Right Angle Scriber*



▲ *No. 52-515-035 Hook Scriber*



▲ *No. 52-515-040 Cutter Scriber*

Features:

- **Pocket Scriber No. 52-515-005** with aluminum knurled steel tubing body. Chuck holds hardened tempered scriber point which is removable and replaceable.
- **Single Point Scriber No. 52-515-015** has a fine quality steel blade with fully hardened point. Chrome finished with knurled handle.
- **Replaceable Point Scriber No. 52-515-025** also has a fine quality steel blade with fully hardened points. Hook point on opposite end. Chrome finished with knurled handle. Replaceable points.
- **Right Angle Scriber No. 52-515-030** has fine quality steel hardened points. Right angle scriber with black oxidized finish.
- **Hook Scriber No. 52-515-035** features a fine quality steel blade with fully hardened points. The hook point is on the opposite end. It is also chrome finished with a knurled handle.
- **Cutter Scriber No. 52-515-040** consists of a fine quality knurled steel handle with fully hardened point and blade.

Part Number	Description	Overall Length
52-515-005	Pocket Scriber	5-7⁄8"
52-515-015	Single Point Scriber	5"
52-515-025	Replaceable Point Scriber	8-1⁄2"
52-515-030	Right Angle Scriber	6-3⁄4"
52-515-035	Hook Scriber	8"
52-515-040	Cutter Scriber	6-1⁄2"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com





Fowler On-Mark Optical Center Punch



Place the acrylic lens in the holder to easily and accurately site in the area on the workpiece to be punched. Replace the lens with the center punch and quickly and accurately mark the workpiece.

- Efficient and precision punching of hole centers
- Magnified center dot and circle for accurate punching.
- Used for marking, punching, stoking and riveting.
- 9x acrylic lens.

Part Number	Description
52-500-075	Optical Center Punch

Optical Center Punch



Features:
- Optical Center Punch is made of special steel, hardened and black anodized.
- Center punch accurate locations quickly.
- Features displaceable 1⁄2" dia. magnifier.
- Length is 4"; magnification 3X

Part Number	Description
52-500-012	Optical Center Punch

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

28 Piece Transfer Punch Set



Features:
- 28 Piece Transfer Punch Set supplied with index stand
- Punches are made of hardened and tempered tool steel, black oxide finished.
- All sizes are marked and diameters are slightly undersized for easy handling.
- Sizes range from 3⁄32" to 1⁄2" by 64ths and 17⁄32"

Part Number	Description
52-482-028	28 Piece Transfer Punch Set

Center Punch Set



Features:
- Housing finished in black nitrate.
- Chrome alloy steel; hardened both ends.
- Knurled finger grip for easy handling.
- All sizes marked for fast and easy use.
- Point sizes 3⁄64", 5⁄64", 7⁄64", 9⁄64" and 11⁄64"
- Includes fitted case.

Part Number	Description
52-500-015	5 Center Punch Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Extra Long Drive Pin Punches



- Black nitrate finished housing. Made of chrome alloy steel. Hardened on both ends.
- Knurled finger grip. Length is 8".
- Point sizes: 1⁄8", 3⁄16", 1⁄4", 5⁄16" and 3⁄8"
- Includes fitted case.

Part Number	Description
52-500-300	5 Extra Long Drive Pin Punch Set

Drive Pin Punches



- Housing finished in black nitrate. Made of chrome alloy steel. Hardened on both ends.
- Knurled finger grip for easy handling.
- Length is 4".
- Includes fitted case.

Part Number	Description
52-500-100	4 Drive Pin Punch Set Point sizes: 1⁄16", 3⁄32", 1⁄8" and 5⁄32"
52-500-200	4 Drive Pin Punch Set Point sizes: 3⁄16", 7⁄32", 1⁄4" and 5⁄16"
52-500-255	8 Drive Pin Punch Set Point sizes: 1⁄16", 3⁄32", 1⁄8", 5⁄32", 3⁄16", 7⁄32", 1⁄4" and 5⁄16"

Perfect for use in spark-free environments

Brass Drive Pin Punch Set



- Made of brass.
- Punch section centerless ground.
- Length is 4".
- Hexagonal body style.
- Used in spark-free environments.
- Point sizes 1⁄16", 3⁄32", 1⁄8", 5⁄32", 3⁄16", 7⁄32", 1⁄4" and 5⁄16"
- Includes fitted case.

Part Number	Description
52-500-068	8 Drive Pin Punch Set (Brass)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Heavy Duty Automatic Center Punches



▲ *No. 52-500-275*



▲ *No. 52-500-290*



▲ *No. 52-500-295*

Features: No. 52-500-275, 290 & 295:
- Handle constructed in steel. Four knurled bands provide a sturdy grip.
- Moveable components are made from tool steel and hardened. The point is easily removed for sharpening.
- The pressure of marking is controlled by rotating the knurled cap. Screw the cap down for heavy indentations and screw the cap upward for lighter markings.

Part Number	Description
52-500-275	Automatic Heavy Duty Center Punch; length 5"; 1⁄2" diameter.
52-500-290	Super Heavy Duty Automatic Center Punch; length 6"; 5⁄8" diameter.
52-500-295	Automatic Heavy Duty Center Punch with carbide tip; length 6"; 5⁄8" diameter.

Automatic Center Punch



- Comes with a convenient clip.
- Overall length is 5-6".
- Tools protected by a blue anodized housing. Textured handles for non-slip gripping.
- Adjustable compression allows for different types of material.

Part Number	Description
52-500-010	Automatic Center Punch.
52-515-047	Replacement Point for No. 52-500-010 Center Punch

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

MADE IN THE USA

Drill & Wire Gages



▲ *Left to right: Drill Gages No. 52-480-005, 020, 015 and 008*



▲ *American Std. Wire Gage No. 52-480-040*



▲ *U.S. Standard Gage No. 52-480-030*

Part Number	Description
Drill Gages—Hardened & Ground:	
52-480-005	1⁄16"—1⁄2" Jobber Drill; 29 holes
52-480-006	1mm—5.9mm Jobber Drill; 57 holes
52-480-008	1.5mm—12.5mm Drill Gage; 30 holes
52-480-010	#1—#60 Number Drill; 60 holes
52-480-015	#61—#80 Number Drill; 20 holes
52-480-020	A—Z Letter Drill; 26 holes
Wire Gages—Hardened & Ground:	
52-480-030	U.S. Standard Gage: Measuring range: Gage No. 0 to 36
52-480-040	Am. Standard Wire Gage: Measuring range: Gage No. 0 to 36

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Radius Gages

Features:
- Check radius, concave and convex work.
- Non-rust steel, precision ground.
- Used for inspection, layout, pattern making and other machining jobs.
- Holders accommodate gages at 30° & 45°.



▲ *No. 52-470-062 (L.)15 piece set with holder. (R.) No. 52-470-010 26 piece set with holder.*

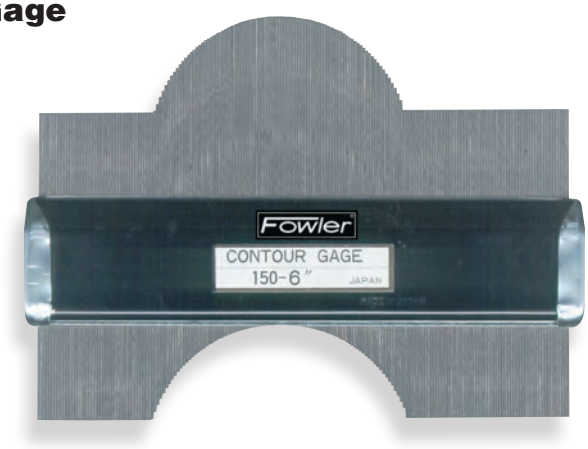
Part Number	Description
Individual Radius Gages	
Inch Series:	
52-470-011	1/64"
52-470-012	1/32"
52-470-013	3/64"
52-470-014	1/16"
52-470-015	5/64"
52-470-016	3/32"
52-470-017	7/64"
52-470-018	1/8"
52-470-019	9/64"
52-470-020	5/32"
52-470-021	11/64"
52-470-022	3/16"
52-470-023	13/64"

Part Number	Description
Individual Radius Gages	
Inch Series:	
52-470-024	7/32"
52-470-025	15/64"
52-470-026	1/4"
52-470-027	17/64"
52-470-028	9/32"
52-470-029	5/16"
52-470-030	11/32"
52-470-031	3/8"
52-470-032	13/32"
52-470-033	7/16"
52-470-034	15/32"
52-470-035	1/2"
52-470-036	Handle only

Radius Gage Sets — Inch Series:	
52-470-010	26 Piece set with holder. Ranges: 1/64" to 17/64" by 64ths and 9/32" to 1/2" by 32nds in vinyl case.
52-470-040	8 piece set without holder. 9/16" to 1" by 16ths in vinyl case.
52-470-045	8 piece set without holder. 1-1/16" to 1-1/2" by 16ths.
52-470-050	8 piece set without holder. Ranges: 1-9/16" to 2" by 16ths.
52-470-090	17 sizes, 10 pieces (170) of each size in each section of carton box. Range: 1/64" to 17/64" by 64ths.
52-470-095	8 sizes, 10 pieces (80) of each size in each section of carton box. Range: 9/32" to 1/2" by 32nds.
Radius Gage Sets — Decimal Series:	
52-470-060	26 pc. set with holder. Ranges: .010, .015, .020, .025, .030, .040, .050, .060, .070, .080, .090, .100, .120, .140, .160, .180, .200, .220, .240, .280, .300, .350, .400, .450, .500 in vinyl case.
52-470-062	15 piece set with holder. Ranges: .120, .140, .160, .180, .200, .220, .240, .260, .280 & .300 by .020"; .350, .400, .450 & .500 by .050"
52-470-065	10 piece set without holder. Ranges: .550, .600, .650, .700 .750, .800, .850, .900, .950 and 1" in vinyl case.
Radius Gage Sets — Metric Series:	
52-470-038	27 pc. set w/holder; vinyl case. Range .5mm to 13mm by .5mm
52-470-037	Replacement vinyl case for No. 52-470-010, 038 & 060

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Contour Gage

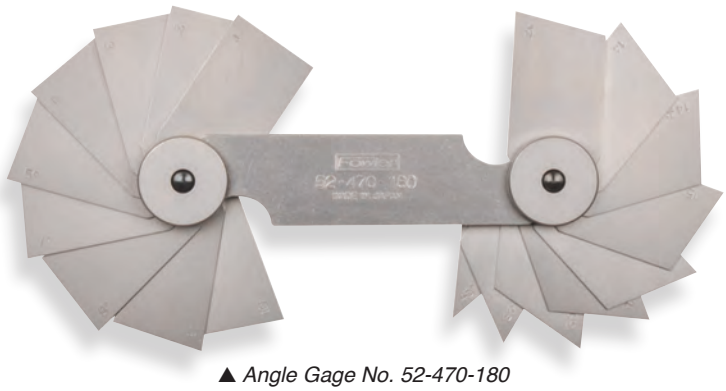


▲ *Contour Gage No. 52-470-200*

Features—No. 52-470-200:
- Checks convex, concave and radius quickly and easily.
- Ideal for checking molds or dies.
- Max. depth of gaging area: 1-15⁄16"
- Max. width of gaging area: 5-13⁄16"
- Diameter of each pin: .031"

Part Number	Description
52-470-200	Contour Gage

Angle Gages



▲ *Angle Gage No. 52-470-180*

Features:
- The Angle Gage is an innovative tool which saves time in checking angles.
- Widely used by inspectors, toolmakers and diemakers.
- It is often used in place of a protractor.
- Gage has 18 leaves, each with a different angle, including 14-1⁄2" degrees or 1⁄2" the Acme Standard (29 degrees). Includes: 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 14, 14-1⁄2, 15, 20, 25, 30, 35 and 45 degree angles.
- Range 1—45 degrees
- Leaves made of spring tempered steel.
- Angle edge as well as the two sides are precision ground.
- Gages are approximately 9⁄32" thick, 11⁄16" wide and 4-3⁄16" long.

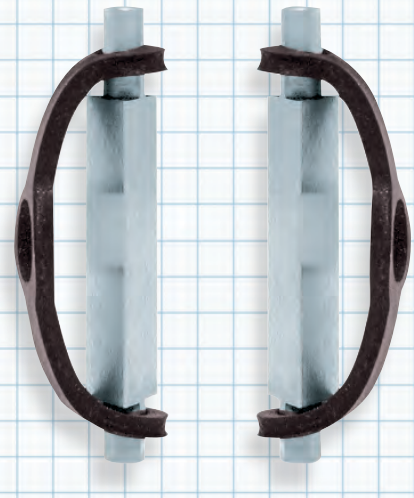
Part Number	Description
52-470-180	Angle Gage

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Thread Triangles



▲ *shown with 54-815-030 (not included)*

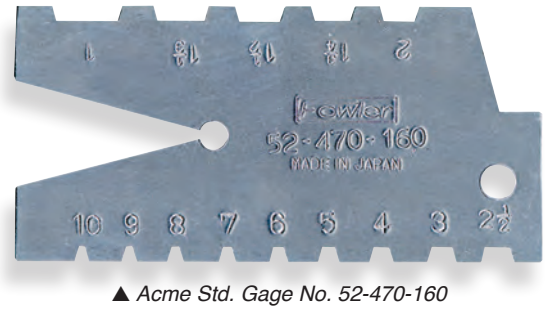


Fowler's Thread Measuring Triangles check pitch diameter of threads on all 60° threads. Perfect for checking thread dimensions when copying parts.

- Each set includes 2 Thread Triangles and two rubber micrometer holding straps.
- Includes fitted case.

Part Number	Description
52-603-303	Pair of Thread Triangles

Acme Thread Gage



▲ *Acme Std. Gage No. 52-470-160*

Features—No. 52-470-160 and No. 52-470-161:
- This gage is a standard for grinding & setting tools when cutting Acme threads.
- Acme threads have the same depth as square threads, but the sides of the thread are at an inclination of 14-1⁄2 degrees (29 degrees included angle or 30 degrees for metric).
- Angles & edges hardened and ground.

Part Number	Description
Inch Series:	
52-470-160	29 degree pitch. Range of pitch: 1-10 (1, 1-1⁄2, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Metric Series:	
52-470-161	30 degree pitch. Range of pitch: 3-10 (3, 4, 5, 6, 7, 8, 9, 10)

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Radius Gages



▲ *No. 52-470-100*



▲ *No. 52-470-120*

Fowler's Radius Gage, made of finely finished high quality steel, is used by layout men, tool and diemakers, screw machine operators, machinists, pattern-makers and mechanics.

- Features an eccentric mounting for clearance between leaf and case when gage is opened; each leaf stamped with radius size.
- Leaves shaped for use in any position or angle to measure fillets and radii in corners or against shoulders. Held securely in desired position by a locking device.
- Use to lay out and check radii of tools, dies, patterns, etc.

Part Number	No. Leaves	Range: Concave and Convex
Inch Series:		
52-470-100	30	1⁄32" —1⁄4" by 64ths. (15 male & 15 female).
52-470-102	32	17⁄64"—1⁄2" by 64ths. (16 male & 16 female).
52-470-120	16	1⁄32"—17⁄64" by 64ths. (Each leaf male & female).
52-470-121	16	9⁄32"—33⁄64" by 64ths. (Each leaf male & female).
Metric Series:		
52-470-110	34	1mm—7mm(1mm, 1.25mm, 1.5mm, 1.75mm, 2mm, 2.25mm, 2.5mm, 2.75mm, 3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm, 7mm.) (17 male & 17 female)
52-470-111	32	7.5mm—15mm (7.5mm, 8mm, 8.5mm, 9mm, 9.5mm, 10mm, 10.5mm, 11mm, 11.5mm, 12mm, 12.5mm, 13mm, 13.5mm, 14mm, 14.5mm, 15mm.) (16 male & 16 female)
52-470-130	18	.75mm—5mm (0.75mm, 1mm, 1.25mm, 1.5mm, 1.75mm 2mm, 2.25mm, 2.5mm, 2.75mm, 3mm, 3.25mm, 3.5mm, 3.75mm, 4mm, 4.25mm, 4.5mm, 4.75mm, 5mm.) (Each leaf male & female)
52-470-131	16	5.5mm—13mm (5.5mm, 6mm, 6.5mm, 7mm, 7.5mm, 8mm, 8.5mm, 9mm, 9.5mm, 10mm, 10.5mm, 11mm, 11.5mm, 12mm, 12.5mm, 13mm.) (Each leaf male & female).

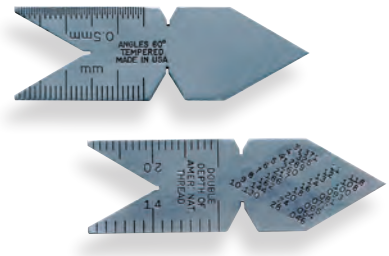
Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Thickness (Feeler) & Center Gages



▲ No. 52-485-010



▲ No. 52-505-001



▲ No. 52-485-007

Features-No. 52-485 Series:
- Each leaf of the thickness gage is made of fine tempered steel, hardened.
- The exact thickness is marked on each leaf. Steel case with lock nut.
- Meets U.S. Federal Specifications.

Features-No. 52-505 Series:
- Center gages made of spring tempered steel—lapped edges & notches according to American Nat'l & U.S. 60 degree standards.
- Notches have full clearance slots; satin chrome finish; microfine graduations.

Part Number	Description
52-485-005	Tapered Thickness Gages-Inch. 10 Leaf Set: .0015", .002", .003", .004", .006", .007", .010", .012", .015" and .025". Length: 4".
52-485-006	Tapered Thickness Gages-Inch.26 Leaf Set: .0015", .002", .0025", .003", .004", .005", .006", .007", .008", .009", .010", .011", .012", .013", .014", .015", .016", .017", .018", .019", .020", .021", .022", .023", .024" and .025". Length: 3".
52-485-007	Straight Blade (1⁄2" width at tip). 26 Leaf Set: 0015", .002", .003", .004", .005", .006", .007", .008", .009", .010", .011", .012", .013", .014", .015", .016", .017", .018", .020", .022", .024", .025", .028", .030", .032", .035". Length 3".
52-485-016	Straight Blade (1⁄2" width at tip). 15 Leaf Set: 0015", .002", .003", .004", .006", .008", .010", .012", .015", .020", .030", .040", .075", .100",.200". Length 3".
52-485-013	Straight Blade (1⁄2" width at tip). 13 Leaf Set: 0015", .002", .003", .004", .006", .008", .010", .020", .030", .040", .075", .100", .200". Length 41⁄2".
52-485-008	Tapered Thickness Gages-Metric. 13 Leaf Set: 0.05mm, 0.10mm, 0.15mm, 0.20mm, 0.25mm, 0.30mm, 0.40mm, 0.50mm, 0.60mm, 0.70mm, 0.80mm, 0.90mm & 1mm. Length: 100mm.
52-485-010	Tapered Thickness Gages-Metric. 20 Leaf Set: 0.05mm, 0.10mm, 0.15mm, 0.20mm, 0.25mm, 0.30mm, 0.35mm, 0.40mm, 0.45mm, 0.50mm, 0.55mm, 0.60mm, 0.65mm, 0.70mm, 0.75mm, 0.80mm, 0.85mm, 0.90mm, 0.95mm and 1mm. Length: 100mm.
52-505-001	Center Gage—Inch: in graduations of 14ths, 20ths, 24ths, 32nds.
52-505-002	Center Gage—Metric: in graduations of .5mm and 1mm.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Screw Pitch Gages



▲ *Acme Screw Pitch Gage No. 52-485-030*



▲ *Screw Pitch Gage No. 52-485-015*

Features No. 52-485-030:
- Acme Screw Pitch Gages (29° angle) made of fine stainless steel. Each blade is 3-1⁄2"/90mm long and .03"/.8mm thick.

Features No. 52-485-015, 018, 020, 027, 028, 032 & 051:
- Narrow designed blades permit use for internal and external screw threads.
- Locking device at each end to secure all blades for storage or position.
- Correct pitch is determined by matching blade teeth with threads.
- Precisely ground and finished.
- Blades marked with thread size.



▲ *Screw Pitch Gage No. 52-485-051*

Part Number	Description
Inch Series:	
52-485-015	Screw Pitch Gage with 30 blades: 4 to 42 pitch standard V thread.
52-485-051	Screw Pitch Gage with 51 blades: 4 to 84 pitch standard V thread.
52-485-032	Screw Pitch Gage with 30 blades: 6 to 60 pitch.
Metric Series:	
52-485-018	Screw Pitch Gage with 18 blades: 0.50mm to 7.0mm. Center Gage with coarse and fine notch included.
52-485-020	Screw Pitch Gage with 24 blades: 0.25mm to 6.0mm.
52-485-028	Screw Pitch Gage with 28 blades: 0.25mm to 2.50mm.
Inch/Metric Series:	
52-485-027	Screw Pitch Gage with 28 blades. Inch 4—56 pitch. Metric 0.50—6.00mm
Acme Series:	
52-485-030	Acme Screw Pitch Gage with 16 blades (1, 1-1⁄3, 1-1⁄2, 1-3⁄4, 2, 2-1⁄2, 3, 3-1⁄2, 4, 5, 6, 7, 8, 9, 10 & 12 pitch); 29° angle.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

Thread Measuring Wires & Involute Gear Tooth Gages



▲ *Top left No. 52-470-141, bottom left No. 52-470-140; shown on right No. 52-485-048*

Features—No. 52-470 Series:
- With this Involute Gear Tooth Gage, it is easy to determine the diametral pitch of involute gears from 6—80 and 2—5 in inch and .5—5 and 6—12 in metric.
- Pressure angle = 14.5°.

Features—No. 52-485-048:
- Thread Measuring Wires include 48 wires in sixteen different sizes.
- Accuracy for sizes .018" through .108" is within +0 / -.0004"; sizes .120" through .185" is within +0 / -.0005".
- Measures all U.S. 60° threads from 3-48 threads per inch.
- Laminated conversion chart for 60° metric threads is included.

Part Number	Description
52-470-140	Involute Gear Tooth Gages—Inch Series: 14 Leaves with ring holder. Range of pitch: 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36, 40, 48, 64, 80.
52-470-141	Involute Gear Tooth Gages—Inch Series: 7 Leaves with ring holder. Range of pitch: 2, 2-1⁄2, 3, 3-1⁄2, 4, 4-1⁄2, 5.
52-470-150	Involute Gear Tooth Gages—Metric Series: 13 Leaves with ring holder. Range of Pitch: 0.5, 0.75, 1.0, 1.25, 1.5, 1.75, 2, 2.5, 2.75, 3, 3.25, 3.5, 3.75, 4.0, 4.5, 5.
52-470-151	Involute Gear Tooth Gages—Metric Series: 7 Leaves with ring holder. Range of Pitch: 6, 7, 8, 9, 10, 11, 12.
52-485-048	Thread Measuring Wire Set: 48 Wires

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



4 Piece Deburring Cutter Set



No. 52-483-777—4pc Deburring Cutter Set features four separate color coded cutters. Each color indicates the material that the cutter is intended for.

- Colored sleeves rotate to lock and unlock blades for easy changing.
- Unique rounded head blades for safe deburring of drilled and machined holes, end milled areas, tubing, backside of holes and an almost unlimited amount of uses.
- Curved blades swivel freely to automatically follow shapes, contours and holes.

Part Number	Description
52-483-777	4 pc. Deburring Cutter Set
52-483-006	Replacement blade for aluminum
52-483-007	Replacement blade for brass
52-483-009	Replacement blade for steel
52-483-010	Replacement blade for plastic
52-483-016	Package of 10 blades No. 52-483-006
52-483-017	Package of 10 blades No. 52-483-007
52-483-019	Package of 10 blades No. 52-483-009
52-483-020	Package of 10 blades No. 52-483-010

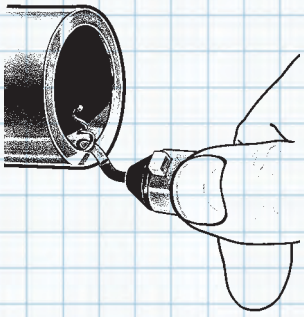
Disposable Deburring Tool

with Pocket Clip



Disposable deburring tool includes S-10 blade for steel, aluminum and plastic mounted in an aluminum handle

Part Number	Description
52-483-125	Disposable Deburring Tool



Deburring Cutters



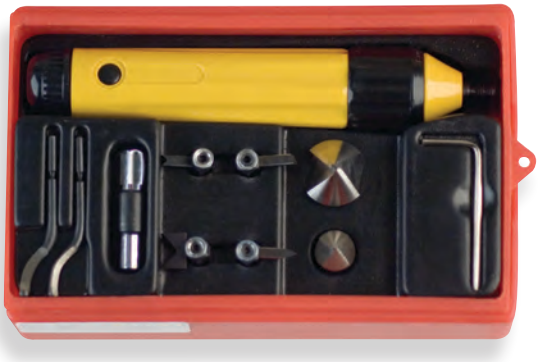
- "Quick-change" thumb operated button for instant removal, insertion and locking of new blades.
- Supplied with three blades: 1) for steel and aluminum, 2) for brass and cast iron, 3) for straight edges on all types of metals.
- Hollow handle with a removable end cap for storage of blades.
- Unique rounded head blades for safe deburring of drilled and machined holes, end milled areas, tubing, backside of holes and an almost unlimited amount of uses.
- Curved blades swivel freely to automatically follow shapes, contours and holes.
- Molded to comfortably fit the user's hand without slippage or fatigue.

Part Number	Description
52-483-003	Adjustable Scraper & Deburring Cutter with three blades

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Universal Deburring, Cleaning & Countersink Set

A complete kit for Machine Shop Applications!



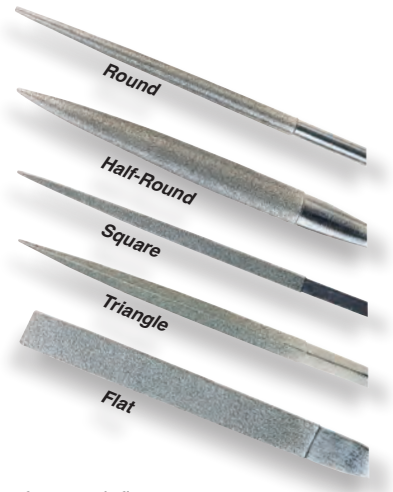
Set includes:
- 1 Universal Handle
- 2 Adapters
- 2 Deburring Blades
- 1 Countersink for 12mm/.47" diameter.
- 1 Countersink for 20mm/1.18" diameter.
- 4 Cleaner Blades, for sheet metal, small ridges, relieving corners and for narrow slots.
- Combined in a compact molded case.

Part Number	Description
52-483-888	Universal Deburring, Cleaning & Countersink Set

Diamond File & Deburring Set



DIAMOND IMPREGNATED for use on even the HARDEST ALLOYS!



Set includes:
- 1 handle, providing maximum grip comfort.
- 5 piece set of diamond impregnated files consisting of a round, flat, square, triangle and half-round file, 5-1/2" long with 2-1/2" length of cut.
- 2 triangular scraper/deburring tools (single and double ended).
- Fitted storage case.

Part Number	Description
52-483-666	Diamond File & Deburring Set

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Swiss Pattern File Sets



▲ Swiss Pattern Files

No. 55-130-060 & 062—Swiss Pattern Files are economically priced and each set includes a fitted case and 12 of the finest quality files in the most popular shapes.

Fowler Swiss Pattern Files are fine precision cutting tools used by tool and die makers, model makers, delicate instrument and part finishers for a variety of filing jobs. Made to closer tolerances than American pattern files, they are primarily finishing tools for removing burrs, truing narrow grooves, notches, keyways, cleaning corners, smoothing small parts and similar jobs.

Part Number	Description	Length	Cut No.
55-130-060	12 pc. Swiss Pattern File Set.	6"	#0
55-130-062	12 pc. Swiss Pattern File Set.	6"	#2

Diamond File Set

Fowler's Diamond File Set includes five quality files in the most popular shapes. Economically priced, files are supplied with a fitted case.

- Diamond Files, known for their durability, are fine precision cutting tools used by tool and die makers, model makers, delicate instrument and part finishers for a variety of filing jobs.
- Primarily used for finishing tools, removing burrs, truing narrow grooves, notches, keyways, cleaning corners, smoothing small parts and similar jobs.
- Five shapes are equaling, square, half-round, three-square and round.
- Overall length 5.5" with 2" rubber-tipped handles.



Part Number	Description	Length
55-160-777	5 pc. Diamond File Set.	5.5"

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Jeweler Screwdrivers



▲ *No. 52-490-005*



▲ *No. 52-490-007*

Jewelers' miniature screwdrivers feature a finger support swiveling head that can be held and rotated for precise control while removing and tightening screws.

Popular with toolmakers, machinists, technicians, repair and maintenance personnel, photographic and electronic repair, telescope and optical, automotive, aircraft, aero-space, instrument users, model makers, for the home or office.

Features:
- Blades hardened and tempered with a black parkerized finish.
- Made of nickel chrome molybdenum steel.
- Chrome plated steel handles.
- Includes case.

Part Number	Description
52-490-005	Set of six screwdrivers: 1⁄32", 3⁄64", 5⁄64", 3⁄32", 1⁄8" and 9⁄64".
52-490-007	Set of five screwdrivers: Crosspoint screwdrivers #0 & #1; Hex key wrenches : #2 (.049"), #3 (.061") & #4 (.077").

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Screwdriver and Tool Set

Features—No. 52-490-003:
- This precision Screwdriver and Tool Set is ideal for miniature work.
- Features knurled and chromed swiveling handles.
- Screwdriver and Tool Set contains 9 screwdrivers, 1 tapered point scratch awl and 1 magnetic pick-up tool.
- Screwdriver size range: #00, #0, #1, 1/32", 3/64" 1/16", 5/64", 3/32" and 1/8".



Part Number	Description
52-490-003	Precision Screwdriver & Tool Set.

Jeweler Wrenches

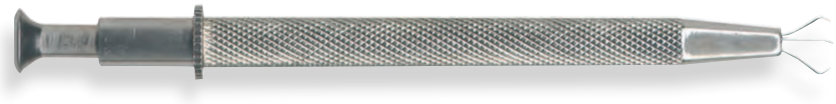
Fowler's Jeweler Wrenches are useful miniature tools used by toolmakers, machinists, assemblers, technicians, repair personnel, optical and electronic industries, machine shop or model makers.

Features:
- Jeweler Wrenches have knurled chrome-plated metal handles.
- Heads hardened and tempered with black parkerized finish. Carbon steel heads.
- Jewelers' open end wrenches No. 52-490-001 are used for working with small nuts and bolts.
- The Hex Wrenches (nut driver set) No. 52-490-000 fit a wide range of small fasteners with hex hole heads.



Part Number	Tap Size	Handle Length
52-490-000	Set of five Nut Drivers (5/64", 3/32", 7/64", 1/8" and 5/32")	3"

Pickup Tool



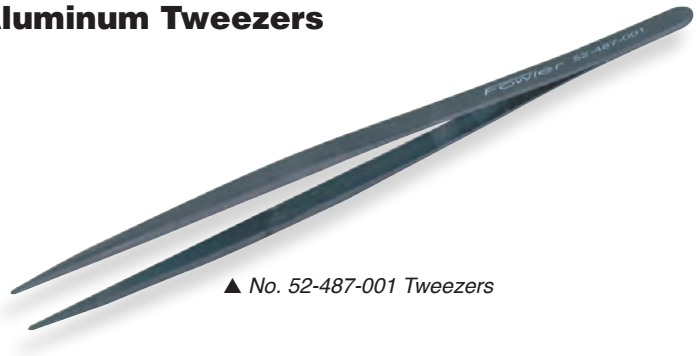
▲ *Pick-up Tool No. 52-490-012*

Features—No. 52-490-012:
- The Pick-up Tool is ideal for picking up and holding small items.
- Body is chrome plated and knurled.
- A must for machinists, assemblers and mechanics.
- Depress handle to extend the three prongs; release handle to grasp object.
- Overall length is approximately 5".

Part Number	Description
52-490-012	Pick-up Tool

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Aluminum Tweezers



▲ *No. 52-487-001 Tweezers*



▲ *No. 52-487-002 Tweezers*

Fowler's Aluminum Tweezers are ideal for people in the electronics industry, working on P. C. boards, etc. Fowler offers two styles—straight tip or bent tip. The special aluminum alloy shank is lightweight—about one-third that of conventional stainless steel tweezers. Aluminum tips offer long wear-resistance and are easy to handle.

Aluminum tweezers are non-magnetic (neither tips nor shanks are magnetized). Chemically stabilized finished tips resist corrosion.

Part Number	Description
52-487-001	Tweezer—straight style. Dimensions approx. 5-1⁄2" x 3⁄8" (140mm x 9mm)
52-487-002	Tweezer—bent style. Dimensions approx. 5-3⁄4" x 3⁄8" (165mm x 10mm)

Chemical Etching Pen for Metal



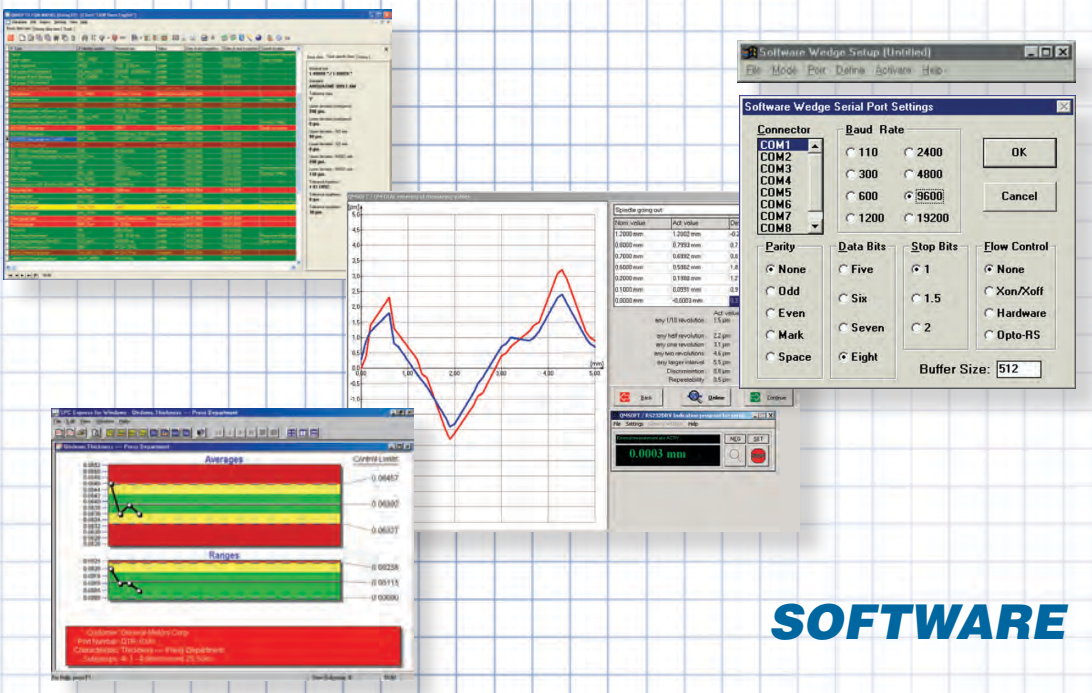
A "must" for any tool room and machine shop for general marking purposes, Fowler's metal etching pen is used on copper, copper alloy, stainless steel, hardened steel tools and castings, etc.

Use it to initial personal tools or to restore graduations on rules, height gages, calipers, micrometers, etc. Its low-cost, disposable design offers limitless applications.

Part Number	Description
52-730-005	Disposable Felt tip Metal Etching Pen. Overall length is 6-1⁄4"



Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

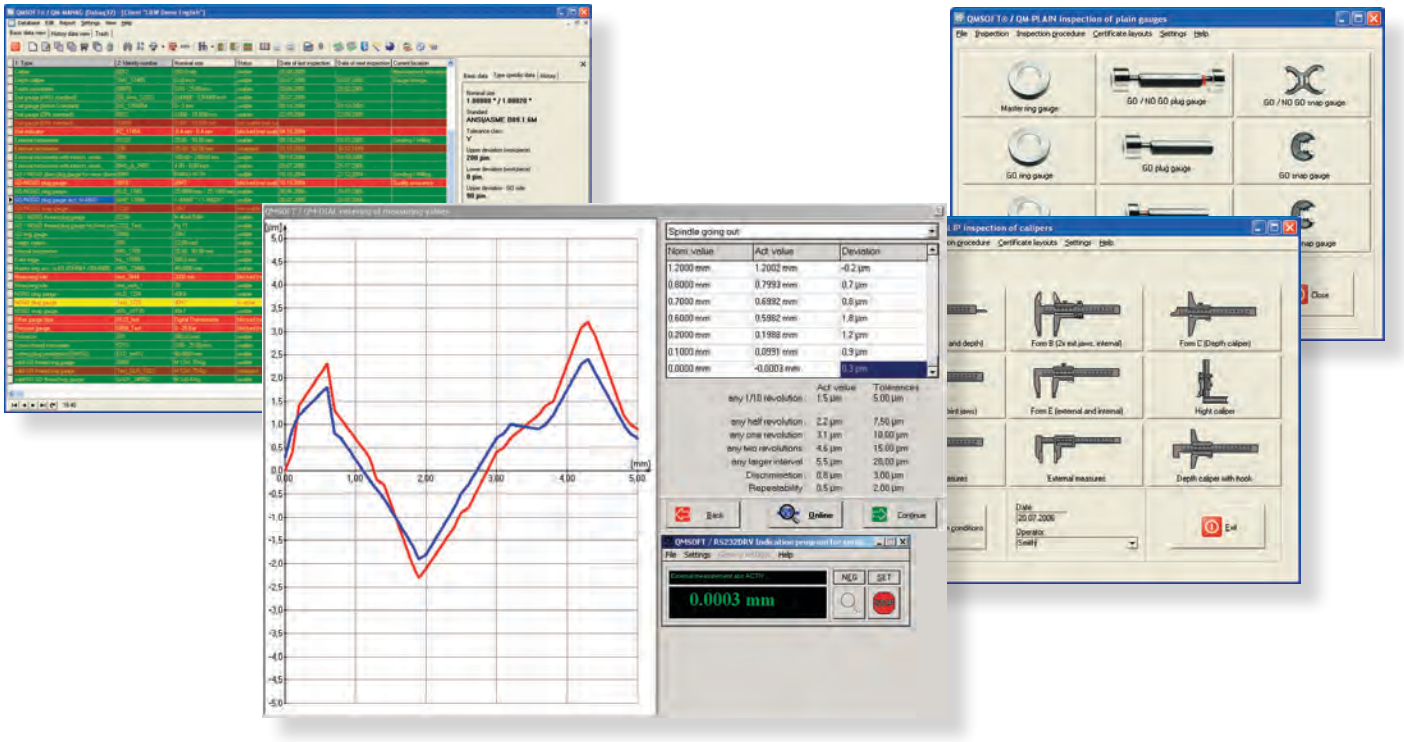


SOFTWARE

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Fowler

QMSOFT (Quality Management Software)



The QMSOFT (Quality Management SOFTware) system is a turn-key calibration package that enables the monitoring of a company's complete range of measuring and inspection equipment. To do this, QMSOFT uses a number of special modules which allow not only the management, but also the controlled measurement of gages.

Features:

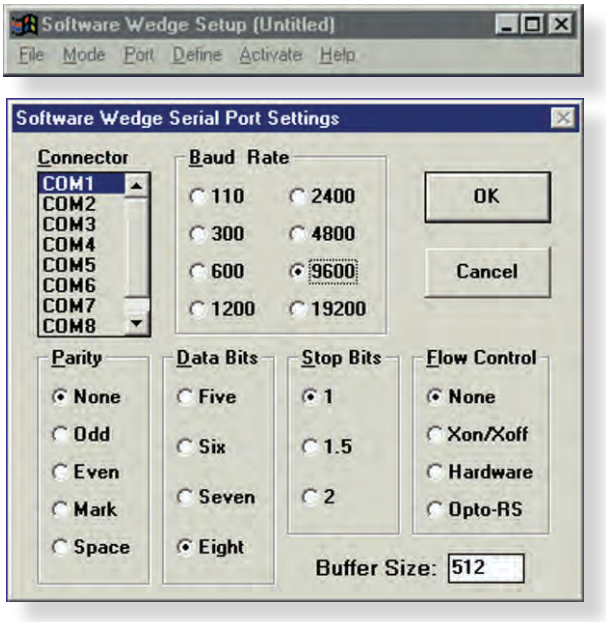
- Gage management and gage inspection are integrated into the system with equal importance.
- Specially developed modules make it possible for the calibration of all common gages using any national, international or user defined standard. It is therefore not necessary to define an inspection procedure for each gage type.
- Extensive support for directly connected measuring devices including Trimos & Sylvac calibration instruments.
- All normal sizes and tolerances for gages are calculated by the program.
- Inspection certificates may be customized for individual presentation using the built in word processor.
- Each module can be used as a stand-alone component.

QMSOFT is the perfect calibration and data management tool for Fowler's electronic calibration instruments such as the Horizon, Labconcept and THV.

Part Number	Description
54-778-100	QM-Management software
54-778-150	QM-Dial Gage software
54-778-500	QM Soft Standard Package: QM-Manage, QM-Plain & QM-Thread Gage, QM-Dial, QM-Caliper, QM-Micrometer Software
54-778-175	QM-Gage Block Software
54-778-200	QM-Caliper software
54-778-250	QM-Micrometer software
54-778-300	QM-Pin Gage software
54-778-350	QM-Starter Package: Management, plain gage and thread gage software
54-778-800	QM-TTAP Tapered Thread software
54-778-850	QM-SPLINE Spline software

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Software Wedge Products



- Software Wedge is designed to input RS232 (serial) data and then transfer that data in real-time directly into any other Windows application. It works by either simulating keystrokes that get fed to the other application or by passing the data using Dynamic Data Exchange (DDE)
- Add complete serial data acquisition (and control) to any Windows application, including Excel, Access, LIMS and MMIs.
- Easily set up in minutes using a simple menu driven configuration program. No special programming is necessary.
- Collect real-time data on any serial port (RS-232, RS-422 or RS-485) - even multiple serial ports simultaneously - directly into any other Windows programs.
- Quickly diagnose and correct serial communications problems with powerful, built-in serial data analysis tools.

Software Wedge supports 2-way serial I/O so it can transmit prompts or commands out the serial port to control or query your instruments directly from within Software Wedge or from within any other application. Think of Software wedge as a fully customizable serial device driver that will save you time while eliminating data entry errors

Software Wedge 32 Bit Standard Edition
The Standard Edition of Software Wedge is designed to work with most simple RS232 devices including electronic scales, calipers and gages, or any other device that transmits simple text data. It supports basic parsing and filtering of the incoming data as well as basic prompting and control of your serial devices. It can be used to input data from up to 16 devices simultaneously.

Software Wedge 32 Bit Professional Edition
Software Wedge Pro is designed to work with practically any serial device no matter how complex the serial output or how sophisticated the control required. Software Wedge Pro supports advanced parsing, filtering and formatting of incoming data including text, binary, hex, and ASCII data. It also supports up to 100 serial ports simultaneously.
Software Wedge Pro is ideally suited for more complex devices including industrial and laboratory instruments quality and process control devices, PBX systems, PLCs and more.

Expanded DDE support allows other applications to completely control Software Wedge and all serial I/O functions. This allows you to create extremely powerful data acquisition and device control interfaces from within any Windows application that supports DDE (including Excel, Access, MMIs and LIMS).

Advanced Features of Software Wedge Pro
Software Wedge Pro provides numerous advanced features including TCP/IP support, the ability to apply math expressions on data as it is being received and the ability to log serial data directly to a disk file in addition to sending the data to another application program. For a more complete list of all the advanced features available in Software Wedge Pro, please contact tech support.

Additional Software Included with Software Wedge Pro
In addition to being the most advanced serial data collection tool available, Software Wedge Pro also comes bundled with the following five additional RS232 and TCP/IP communications software products:

TCP-Wedge: Input TCP/IP data directly into any Windows application program. Works just like Software Wedge except that it inputs data from a TCP/IP network port

TCP-Com: RS232 to TCP/IP converter. Transmit and recieve RS232 serial data over any TCP/IP network.

File-Wedge: Feed data from any disk file directly into any Windows application program. Works just Software Wedge except it reads input data from a disk file.

COM-File: A very simple and easy to use serial data logger program.

TCP-File: A very simple and easy to use TCP/IP data logger program.

Part Number	Description
54-775-019	Software Wedge for Windows 32 bit standard. Includes installation/setup programs, direct online help files; CD; manual with software examples.
54-775-020	Software Wedge for Windows 32 Pro (Professional Version). Includes installation/setup programs, direct on-line help files; CD; manual with software examples.

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

SPC Software



SPC Express for Windows™

SPC Express for Windows is a fast, easy-to-use, professional statistical process control software package. It is true 32 bit application software package and was designed to be used by both novices and experts alike. It runs on IBM PC or compatible computers using the Windows 95/NT operating system.

What makes it special?

Ease-of-use is one of the key features of SPC ***Express for Windows.*** Just a few quick clicks of your mouse and you are ready to enter data and view a graph. It takes advantage of the standard

Windows graphical user interface (GUI) that is universally known and used throughout the computer industry. Its popularity is largely due to its speed, intuitive operation, beautiful charts and on-screen graphs.

What makes its main features?

- Standard Windows GUI interface.
- Query based reporting engine that lets you display or print all SPC charts based on almost any criteria you wish.
- Versatile data entry from the keyboard or electronic gages.
- Uses an Access compatible data base for maintaining records of your shop floor data and inspection information.

- Customizable traceability fields for data entry and reporting.
- Variable charts including X-Bar R, Individuals and Moving Range, Histograms and more!
- Attribute charts including P, U, N, C and Pareto charts.
- Excellent indexed User's Manual with a Tutorial that will have you up and running in minutes.
- Full network compatibility. (Requires user license for each station.)

MADE IN THE USA

Part Number	Description
54-777-040	SPC EXPRESS for Windows

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

SylConnect *Next Generation Metrology Software*

SylConnect is a next generation metrology software. It consists of the following key features:



Modern Touchscreen Interface:

- Simple to use user interface designed mostly for Touch Screen devices. All operations can be performed without a mouse or keyboard; numerical values such as tolerances can be entered using contextual keypads and text can be entered via on-screen keyboard. Alternatively, a user can still enter values using keyboard and mouse if a touch screen is not available.
- Simplified Data Export to Spreadsheets is achieved by embedding a component (an ActiveX control) into the target spreadsheet. The control takes care of guiding visually the user throughout the configuration of the export profile as well as capturing the data during the measuring session.
- Plug and play tool recognition with USB cables. Expandable to 16 tools using standard USB hubs.

Flexible Measurement Handling:

- Multiple visual representations, tolerance indicators, analog gauge and Bar Chart.
- Various measurement modes including application based (DIRECT), instrument based (BLIND) or timer based
- Multiple measurement captures: actual, min/max, average etc.
- Sequential measurements with visual and audio sequence indication
- Measure controls can be alternatively invoked by:
- Keyboard short keys as found commonly in many applications.
- Association with a physical device such as a foot pedal.
- Interaction with the on-screen commands with the mouse or Touch Screen.
- Direct interaction from the instrument (SET button).

Touch Screen based Canvas configuration:

- Simple screen configuration based on a select and touch to position widgets on the screen.
- Multi-mode function buttons save screen real-estate, decrease the complexity of the interface and improve the operation ergonomic.
- SylConnect supports Inspection concepts by allowing user to associate a measurement profile to inspection data including part pieces and drawing characteristics.
- Fixture and operation details.
- Any other user defined variables to be exported to spreadsheet.
- Highly configurable display area with measure display that can be moved and rearranged at will.

Multi-Operator Operation,

- Designed to identify independent measure control device (foot pedal) and notifications to support deployment of a single SylConnect system managing a number of connected operators each performing independent measures.
- Multiple language support and customization.
- Windows XP and Windows 7 compatible.



Plug and play tool recognition with USB cables.

Part Number	Description
54-777-115	SylConnect Software

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Cable Cross Reference Guide

The following guide offers a visual identification key and a cross reference guide for selecting and using interface cables with Fowler instruments.

Instrument Interfaces



Fowler OPTO INTERFACE



Fowler PROXIMITY INTERFACE



Fowler POWER INTERFACE

Computer Interfaces



Fowler RS-232 DIRECT



Fowler USB CONNECTIVITY

Part Number	Instrument Interface	Computer Interface
54-115-333	Opto	Serial
54-115-525	Opto	USB
54-115-526	Inductive/Proximity	USB
54-115-527	Inductive/Proximity	Serial
54-115-528	Power	USB
54-115-444	Power	Serial

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Index

A

Angle Gages 377
Angle Plates 342, 354, 355

B

Bases and Stands
- AnyForm Mag Base 126
- Ceramic Dial Gage Stands 129
- Deluxe Dial Gage Stands 131
- Economy Dial Gage Stands 132
- Flex Arm Magnetic Base 128
- Granite Dial Gage Stand 130
- Height Transfer & Squareness Gage 136
- High Precision Dial Gage Stand 130, 133
- Magnetic Bases 124, 125, 127
- Surface Gages 135
- Transfer Stands 134
- Universal Magnetic Base 128
- Xtra-Surf Surface gage 135

Beam Gages
- Comparator Beam Gage 178

Bench Test Centers 349
Blocks 1-2-3 339
Blocks 2-4-6 339
Bore Gages
- Carbon Fiber Beam Gage 177
- Cylinder Bore Gages 184
- Dial Bore Gage 186, 187
- Digital Cylinder Bore Gages 183
- INTEX Comparator Beam Gage 178
- MicroGage 169
- Pneumatic Deep-Hole Bore Gaging System 170
- Setting Master Holders 188
- Setting Master Kit 189
- Shallow Bore Gage 182
- Smart Plug System 175
- Special Applications 171, 172, 173, 174
- Ultima Bore Gaging System 154, 155, 156
- Universal Gage 179, 180
- XT-500 Large Diameter Bore Gage 167, 168
- XTA Analog Holemikes 163
- XTA Holemikes 162
- XT Bore Gaging System 157
- XTD Electronic Holemikes 160
- XTD Electronic Holemike Sets 161
- X-Tender Dial Bore Gage Set 186
- XTH Holematic Pistol Grip 158
- XTH Holematic Pistol Grip Sets 159
- XT Holemike Sets 164
- XTL Lever Bore Gage System 166
- Xtra-Range Bore Gage 187

C

Cable Cross Reference Guide ..... , 394
Calibration
- Labconcept 220, 222, 223, 232
- Labconcept Nano 216, 217, 218
- Labconcept Premium 219

Caliper Gages
- Dial
  - Deluxe External Dial Caliper Gages 145, 146
  - Deluxe Internal Dial Caliper Gages 147
  - Internal Dial Caliper Gages 148
  - Long Range External Dial Caliper Gages 143, 144
- Electronic
  - Deluxe Digital Caliper Gages 138, 139
  - Internal & External Caliper Gages 140
  - Xtra-Value Internal & External Electronic Caliper Gages 141

Calipers
- Checking Set 38, 321
- Dial 54, 55, 56, 58
  - Heavy Duty 63
  - Long Range 62
- Electronic 52, 53, 58
  - Ultra-Cal III Heavy Duty 61
  - Ultra-Cal IV 51
  - Ultra-Cal V 50
  - Ultra-Lite Mark III 59, 60
  - Xtra-Range 61
- Vernier 57, 58, 62

Callibration
- Labconcept 221

Center Finders 366
Center Gages 380
Center Punches 371, 372, 374
Coaxial Indicator 363
Contour Gage 377

D

Deburring 383, 384
Deburring, Cleaning & Countersink Set 384
Deep Hole Light 298
Depth Gages
- Inch/Metric Dial 73
- S_Depth PRO 66, 67
- Ultra-Cal III 68
- Vernier 73
- X-Depth 22 Dial 71
- X-Depth 22-E 69

Depth Micrometers
- Economy 72
- Electronic IP54 70

Diamond File & Deburring Set 384

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Displays
D300S Digital ... 120
Digital Indication Units
D-50S ... 121
D-50S Pro ... 121
Dividers
Electronic
8"/200mm Electronic Dividers ... 142
Drill Gages ... 375
Drill Point Gage ... 330
Drive Pin Punches ... 373
Durometers ... 275, 276

E

Edge Finders ... 364, 366, 367
Electronic
Micrometers
Coolant Resistant Mics ... 10
Etching Pen ... 388

F

Feeler Gages ... 380
File Sets ... 385
Flashlight and Base Sets ... 301

G

Gage Ball Sets ... 323
Gage Blocks
Carbide Rectangular Gage Block Sets ... 308
Economy Rectangular Gage Block Sets ... 309
Individual Rectangular Steel Gage Blocks ... 312
Individual Square Steel Gage Blocks ... 311
Long Gage Blocks-Individuals & Sets ... 310
Rectangular Gage Block Sets ... 307
Square Ceramic Gage Block Sets ... 304
Square Gage Block Sets ... 306
Standards ... 313, 314
Zirconia Ceramic Rectangular Gage Blocks ... 305
Gear Tooth Gages ... 382

H

Hardness Testers ... 269, 270, 271
File Set ... 277
Magnetic Portable ... 274
Portable ... 273
Rangemaster Portable ... 272
Height Gages
Dial 209
Dials
Twin Beam ... 208
Electronic ... 206
Hi_Gage One ... 204
Twin Beam ... 208
Ultra-Height ... 205
Z-Height-E ... 207
Z-Height-E Jr ... 207
Hi_Cal ... 198, 199, 200
Hi_Cal XZ ... 210
Mestra-Touch ... 194
Mini-Vertical ... 202, 203
Probe Kits ... 213
Probes
4mm ... 211
8mm ... 212
Vectra-Touch ... 195
Vernier ... 209
V Plus Series ... 196
V Series ... 197
Z-600 ... 201
Horizontal Measurement
Checkmaster ... 240
Granite Horizontals ... 241
High Precision Bench Stands ... 238
Horizon Premium ... 224, 227, 228, 229, 230, 231, 232
Analog ... 225
Digital ... 226
Horizontal Bench Table ... 239
Mini-Horizontal System ... 235, 236, 237
THV 233, 234
Twinner ... 241

I

Indicators
Accessories
Backs ... 112
Contact Points ... 113, 114, 115
Magnetic Back ... 124
Point Adaptors ... 116
Dial 110
Back Plunger ... 86
Inch/Metric ... 111
Premium ... 111
X-Proof ... 109
Electronic
Indi-Max ... 108
Indi-X ... 107
Indi-X Blue ... 107
IP65 Mini-Resistant ... 105
Mark VI ... 102, 103
S_Dial One ... 104
Vertical IP65 Mini-Resistant ... 106

L

Lamps
Magnetic ... 300
Magnifying ... 300

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Levels
Electronic
BlueCLINO ... 249
BlueCLINO High Precision ... 248
BlueMETER Sigma ... 253
BlueSYSTEM ... 244
BlueSYSTEM Surface Plate Kit ... 247
BlueSYSTEM wireless ... 245
Cables ... 256
Clino 2000 ... 250
Clinotronic Plus ... 251
Digi-Level ... 262
nivelSWISS-D ... 252
Zerotronic ... 254
Software
MT-Soft Machine Tool Software ... 246
Spirit
Circular ... 261
Clinometer ... 257
Cross ... 259
Magnetic Precision ... 258
Precision ... 259, 260
Precision Frame ... 258
Screw-on ... 261
Locating Gages ... 365

M

Machinist Set Up Kit ... 361
Magellan Vision System ... 280
Micrometers
Accessories ... 37, 47
Calibration Set ... 38
Checking Set ... 38, 321
Digit Counter ... 12
Electronic
QuadraMic ... 11
Rapid-Mic Electronic Micrometer ... 8
Xtra-Value Digi-Mics ... 9
Xtra Value II Mics ... 10
Indicating ... 22
Inside ... 42, 43, 44, 45, 46
Micrometer Heads ... 39, 40, 41
Specialty
Ball ... 24, 25, 26
Blade ... 27, 28
Disc ... 30, 31, 32
Multi-Anvil ... 34
Point ... 29
Spline ... 35
Tube ... 33
Universal ... 36
Vernier ... 13, 14, 15, 16, 18, 19, 21
Deep Throat ... 23
Interchangeable Anvil ... 17
Large Capacity ... 20

O

Optical Center Punches ... 371
Optical Measurement
12" Optical Comparator ... 284
Gage Master Profile Projector ... 282
Gage Master Profile Projector (cont.) ... 283
Magellan Vision System ... 280
Optics
BoreView Inspection Set ... 297
Magnifiers ... 291, 292, 293, 294, 295, 296, 299
Microscopes ... 285, 286, 287, 288, 289, 290

P

Parallels ... 340, 341
Pickup Tool ... 387
Pin Gages
Pin Gage Sets ... 317, 318
Pin Vises ... 359
Planer & Shaper Gage ... 343
Probes
Accessories
D200S High Speed Probe Measurement System ... 122
Sylvac ... 118, 119
Protractors
Analog
Economy ... 265
Rectangular Head ... 266
Semi-Circular Head ... 266
Universal ... 264
Universal Bevel ... 264
Electronic
Deluxe ... 263
Mini-Mag ... 262
Universal ... 263

Q

QMSOFT ... 390

R

Radius Gages ... 376, 379
Roughness Tester
X-Pro Portable ... 268
Rules 326, 327, 328, 329, 330, 331

S

Screwdrivers ... 386, 387
Screw Jacks ... 360
Screw Pitch Gages ... 381
Scribers ... 369, 370
Setting Master Holders ... 188
Setting Master Kit ... 316
Setting Masters ... 315, 322

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

Setting Rings 319, 320
Sine Bars 350, 351
Sine Plates 350, 352, 353
Snap Gages
Checking Set 38, 321
Snapmatic 152
Software
QMSOFT ..... , 390
Software Wedge ..... , 391
SPC Software ..... , 392
SylConnect ..... , 393
Software Wedge 391
SPC Software 392
Spring Calipers 368
Spring Dividers 368
Squares 332, 333, 334, 335, 337, 338
Accesories 336
Straight Edges 343
SylConnect 393

T

Test Indicators
Accessories 97, 98, 99, 100
Replacement Points 101
Zero-Set Holding Tool 100
Dial 95
Girod 89, 90, 91
UltraTast 94
X-Test 92
Electronic
Quadra Test 88
Indicator & Xtra-Mag Combo 96
Kit with Cert of Cal 96
X-Test and Accessory Kit 93
X-Test & X-Tra Mag Combo 93
Thickness Gages 380
Dial
Thickness Gage 150
Electronic
Digital Thickness Gage 141
Heavy-Duty 151
Snap-Cal 149
Thickness Gage 149
Thread Gage 378
Thread Triangles 378
Thread Wires 382
Tool Set 367
Tool Sets
AGD Indicator and Mag Base Set 84
Back Plunger Indicator Sets 86
Blackface Measuring Sets 77
Chrome Flex Mag Set 83
Electronic Caliper & Mic Set 76
Four Piece Measuring Set 80
Indicator, Mag Base, Dial Caliper & Mic Set Combo 81
Indi-X-Blue and Mag Base Set 84
Long Range Indicator Test Set 85
Magnetic Base & Dial Indicator Sets 85
Premium Measuring Set 77
Shockproof Dial Caliper & Depth Attachment Combo 79
Test Indicator & Xtra-Mag Set 82
Universal Measuring Set 77
Water Resistant Electronic Measuring Set 76
X-Proof IP-54 Measuring Set 76
Xtra-Mag and Indicator Sets 82
Xtra-Surf Surface gage with Magnetic Base 81
Xtra-Value Depth Gage and Euro-Cal IV® Set 78
Xtra-Value Depth Gage and Poly-Cal Kit 78
Xtra-Value Elec. Caliper & Depth Attachment Combo 79
Transfer Punch Set 372
Tweezers 388

U

UniCal ..... , 181
Universal 3D Sensors 362
Universal Gage 179, 180

V

V-Blocks 344, 345, 346, 347, 348
Vises 356, 357, 358

W

Wire Gages 375
Wrenches 387

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

52
52-004 77
52-008 ..... 54, 56, 58, 62, 79
52-010 80
52-025 63
52-030 54
52-057 58
52-058 57
52-059 57
52-060 57
52-085 62
52-095 ..... 77, 80
52-104 360
52-105 368
52-106 368
52-107 368
52-108 368
52-110 368
52-115 368
52-116 368
52-125 ..... 71, 116
52-130 73
52-140 73
52-155 ..... 81, 135
52-170 209
52-174 ..... 98, 208, 209
52-215 19
52-217 21
52-218 35
52-222 40
52-224 12
52-225 72
52-226 29
52-227 37
52-229 ..... 13, 77, 81
52-230 16
52-235 ..... 14, 15
52-240 ..... 19, 20
52-243 ..... 44, 45
52-244 25
52-246 28
52-247 37
52-248 21
52-249 47
52-250 ..... 31, 32
52-253 18
52-255 ..... 163, 164
52-263 46
52-264 326
52-265 326
52-270 298
52-275 43
52-285 47
52-295 328
52-297 327
52-298 327
52-299 329
52-300 328
52-307 327
52-308 327
52-309 329
52-310 328
52-320 328
52-330 ..... 328, 330
52-335 330
52-336 327
52-337 327
52-338 327
52-339 329
52-340 328
52-347 327
52-349 329
52-350 ..... 328, 330
52-360 ..... 328, 330
52-361 329
52-370 ..... 333, 334
52-372 334
52-373 ..... 332, 334
52-375 ..... 333, 334
52-377 334
52-378 334
52-379 327
52-380 ..... 329, 331
52-381 ..... 329, 331
52-382 327
52-386 332
52-388 332
52-389 329
52-391 332
52-392 332
52-399 329
52-400 336
52-401 17
52-405 336
52-410 336
52-411 326
52-412 336
52-413 326
52-415 336
52-417 336
52-420 336
52-421 336
52-422 ..... 259, 261
52-426 337
52-431 338
52-432 338
52-435 335
52-437 ..... 340, 341
52-438 323
52-439 339
52-440 ..... 264, 265
52-445 ..... 264, 265
52-448 264
52-450 266
52-455 ..... 350, 351
52-456 342
52-460 343
52-465 359
52-466 358
52-470 ..... 190, 376, 377, 378, 379, 382
52-471 190
52-472 191
52-475 ..... 345, 346, 347
52-480 ..... 330, 343, 375
52-482 372
52-483 ..... 383, 384
52-485 ..... 380, 381, 382
52-487 388
52-490 ..... 386, 387
52-500 ..... 369, 371, 372, 373, 374
52-505 380
52-510 33
52-511 326
52-513 326
52-515 ..... 369, 370
52-517 23
52-520 ..... 85, 109, 110, 111, 124
52-522 85
52-525 ..... 112, 113, 114, 115
52-526 116
52-530 111
52-546 150
52-547 182
52-548 184
52-552 144
52-553 ..... 146, 148
52-554 ..... 143, 145, 147
52-560 95
52-562 82, 89, 90, 91, 92, 93, 95, 96, 101
52-563 ..... 89, 90, 95, 101
52-565 ..... 97, 98, 99, 100
52-566 97
52-567 101
52-568 94
52-570 86
52-575 ..... 366, 367
52-580 ..... 130, 131, 132, 133
52-585 82, 83, 84, 96, 124, 126, 127, 128, 300, 348
52-588 125
52-603 378
52-620 134
52-630 ..... 300, 301
52-646 ..... 186, 187
52-660 ..... 295, 297, 299

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com

52-661 ..... 291, 292
52-662 296
52-664 291
52-665 ..... 291, 293
52-667 ..... 293, 294
52-710 363
52-730 388
52-760 277
53
53-105 240
53-190 ..... 235, 236
53-422 ..... 258, 259, 260
53-620 136
53-635 257
53-640 ..... 285, 286, 287, 288, 289
53-646 ..... 189, 290, 316
53-666 ..... 152, 342, 361
53-670 ..... 38, 307, 321
53-672 ..... 306, 309
53-675 ..... 310, 312
53-676 311
53-684 ..... 304, 305
53-685 308
53-686 319
53-710 362
53-760 ..... 272, 273
53-762 ..... 275, 276
53-770 271
53-813 ..... 38, 321, 322
53-880 ..... 317, 318
53-900 ..... 283, 284
53-910 283
54
54-004 ..... 76, 78
54-008 79
54-100 ..... 50, 51, 52, 53, 61
54-101 ..... 53, 58
54-105 205
54-106 206
54-110 ..... 59, 60
54-112 181
54-115 394
54-125 69
54-130 68
54-135 68
54-139 66
54-174 208
54-175 207
54-180 ..... 201, 202
54-191 197
54-193 195
54-194 194
54-194-016 213
54-196 231
54-197 ..... 219, 220, 223
54-198 ..... 233, 234
54-199 ..... 196, 211
54-210 39
54-212 204
54-220 40
54-225 70
54-245 22
54-265 ..... 179, 180, 188, 315
54-332 165
54-336 ..... 165, 168
54-342 ..... 165, 166
54-364 161
54-366 160
54-370 168
54-400 268
54-410 268
54-420 268
54-422 262
54-440 263
54-466 ..... 166, 177, 178
54-520 ..... 105, 106, 107, 108
54-530 ..... 102, 103, 104
54-549 ..... 183, 188
54-550 ..... 149, 151
54-551 169
54-554 ..... 139, 140, 141, 142
54-556 ..... 159, 175, 176
54-562 88
54-565 ..... 155, 156, 320
54-566 ..... 158, 159
54-575 ..... 364, 365, 367
54-585 ..... 83, 84
54-618 116, 118, 120, 121, 122, 129, 156, 238, 239
54-635 251
54-646 185
54-710 362
54-760 272
54-770 ..... 269, 270
54-775 391
54-777 ..... 392, 393
54-778 390
54-800 252
54-815 ..... 8, 9
54-820 ..... 246, 247
54-825 ..... 248, 249, 250
54-845 ..... 245, 247, 250, 253
54-860 ..... 10, 24, 30, 42
54-866 11
54-870 10
54-893 245
54-894 245
54-895 ..... 245, 247
54-896 ..... 245, 248, 249, 250
54-900 281
54-930 ..... 210, 211
54-931 198
55
55-130 385
55-160 385
57
57-226 356
57-228 357
57-230 349
57-235 356
57-374 352
57-375 353
57-470 ..... 354, 355
57-475 344

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com



Fowler™

HIGH PRECISION

66 Rowe Street • Newton • Massachusetts 02466
(800) 788-2353 • (617) 332-4137 fax
www.fvfowler.com • sales@fvfowler.com

Rapp Industrial Call 724 789-7853 for your discount sales@rappindustrialsales.com