



Making Measurement Easy

HAND TOOLS | Catalog 2023



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Calibration & Service

We offer full service for Bowers, Sylvac, Trimos, Baty, zCAT and more. Our factory trained service and technical team can keep you up and running with as little down time as possible.

Our state of the art A2LA Accredited ISO/IEC 17025 calibration laboratory offers full calibration and certification for a wide variety of precision tools including gage blocks, ring gages, vision and scan systems, height gages and much more!

How does this benefit you as a customer?

- Minimizes risk by choosing a technically competent lab that has a proven quality system in place
- Reduces expensive retesting by assuring thorough evaluations by an independent, competent calibration lab that has been assessed by a third party
- Reduces cost and improves acceptance of your goods around the world through a system of International agreements (ILAC). Accredited laboratories receive a form of international recognition, which allows their data to be more readily accepted world wide
- A2LA accreditation provides confidence in the measurement results



To learn more about Fowler calibration, to schedule an on-site calibration, systems training, and service please contact our Technical Support team at 1-800-788-2353.



CALIPERS





Ultra-Cal VI Electronic Calipers

Our finest Swiss calipers.



54-100-167-0

**LIFETIME
WARRANTY**



Features:

- IP67 protected against fluid and dust
- Available with or without Bluetooth or cabled SPC
- Resolution: 0.0005"/0.01mm
- Absolute/Incremental measurement
- Heavy duty frame, 3.5mm
- Extra large display
- NOW available with ISO Cert
- 12"/300mm is supplied without depth rod

Order Number	Range	Accuracy
Bluetooth		
54-100-167-0	6"/150mm	0.0008"/20μm
54-100-168-0	8"/200mm	0.0012"/30μm
54-100-169-0	12"/300mm	0.0012"/30μm
Output (Proximity cables below)		
54-100-444-1	6"/150mm	0.0008"/20μm
54-100-448-1	8"/200mm	0.0012"/30μm
54-100-412-1	12"/300mm	0.0012"/30μm
Without Data Output		
54-100-177-0	6"/150mm	0.0008"/20μm
54-100-178-0	8"/200mm	0.0012"/30μm
54-100-179-0	12"/300mm	0.0012"/30μm
Accessories		
54-115-526-0	USB proximity cable with USB connection	
54-115-527-0	USB proximity cable with serial connection	
54-115-246-BT	USB Bluetooth receiver	

Water Resistant Electronic Measuring Set



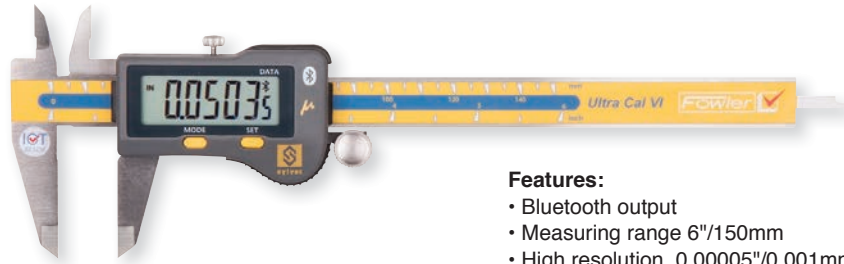
Features:

- Caliper protected to IP67 and micrometer is protected to IP54 standards
- 0 - 6" /150mm Ultra-Cal VI IP67 electronic caliper 54-100-444-1
- 0 - 1" IP54 electronic micrometer 54-860-001-1
- 5R graduations EZ-Read steel rule 52-347-006-0
- For output cables see micrometer and caliper sections under individual instruments

Order Number	Description
54-004-854-0	Water Resistant Electronic Measuring Set

Micron 0.00005" Electronic Caliper

High accuracy.



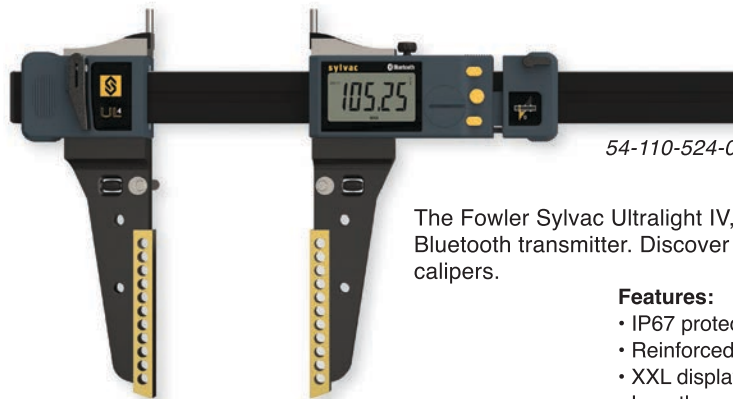
Features:

- Bluetooth output
- Measuring range 6"/150mm
- High resolution, 0.00005"/0.001mm
- Accuracy up to 4", 0.0006"/0.015mm
- Accuracy above 4", 0.0012"/0.03mm
- Repeatability 0.00016"/0.004mm
- Heavy duty frame (3.5mm)

Order Number	Range
54-100-100-0	6"/150mm
Accessories	
54-115-246-BT	USB Bluetooth Receiver

Ultralight IV Electronic Calipers

BIG calipers, 100" only 6.3 lbs.!



54-110-524-0



The Fowler Sylvac Ultralight IV, new design, new features, built-in Bluetooth transmitter. Discover our amazing Ultralight long range calipers.

Features:

- IP67 protected against fluid and dust
- Reinforced frame
- XXL display with 0.79"/20mm high digits
- Lengthened jaws 7.9"/200mm
- Includes upper ID measuring pins (5mm dia.)
- Internal and external measurement indicator
- Movable left jaw
- Stainless steel titanium coated jaws
- Hold, preset, min/max, tolerance functions

Alternative jaws and accessories available, contact the Fowler Technical Department for more information 1-800-788-2353

Order Number	Range	Accuracy	Repeatability	Weight
54-110-512-0	0 - 15"/0 - 400mm	0.0012"/30μm	0.0008"/20μm	3.3 lbs./1.5 kg.
54-110-524-0	0 - 24"/0 - 600mm	0.0016"/40μm	0.0008"/20μm	3.5 lbs./1.6 kg.
54-110-540-0	0 - 40"/0 - 1000mm	0.002"/50μm	0.0008"/20μm	4.1 lbs./1.9 kg.
54-110-560-0	0 - 60"/0 - 1500mm	0.0035"/90μm	0.0008"/20μm	5 lbs./2.3 kg.
54-110-580-0	0 - 80"/0 - 2000mm	0.0048"/120μm	0.0012"/30μm	5.7 lbs./2.6 kg.
54-110-600-0	0 - 100"/0 - 2500mm	0.0078"/200μm	0.0012"/30μm	6.3 lbs./2.9 kg.
Connectivity Cables/Accessory				
54-115-526-0	Proximity USB Cable			
54-115-527-0	Proximity Serial Cable			
54-115-246-BT	USB Bluetooth Receiver			



IP67 **PLUS+** Electronic Calipers



Features:

- IP67 protected against fluid and dust
- Resolution: 0.0005"/0.01mm
- HID Interface - no dongle needed
- Extra battery tray and 1" standard included
- Supplied with NIST certification
- Heavy duty frame with 4 way measuring
- Super large display

Order Number	Range	Accuracy
54-100-554-BT	4"/100mm	0.001"/0.02mm
54-100-556-BT	6"/150mm	0.001"/0.02mm
54-100-558-BT	8"/200mm	0.0015"/0.04mm
54-100-512-BT	12"/300mm	0.0015"/0.04mm

EURO-CAL ^{IV} Electronic Calipers

Inch, Metric, Fractions all-in-one caliper.



Features:

- IP54 protected against fluid and dust
- Resolution: 0.0005"/0.01mm (*Fractions in 1/64" increments*)
- Absolute/Incremental measurement
- Stainless steel frame

Order Number	Range	Accuracy
54-100-330-1	6"/150mm	± 0.001"/0.02mm
54-100-332-0	12"/300mm	± 0.0015"/0.03mm

XTRA-VALUE ^{Plus} Electronic Calipers

Inch, Metric, Fractions with a BIG display.



Features:

- IP54 protected against fluid and dust
- Resolution: 0.0005"/0.01mm (*Fractions in 1/128" increments*)
- Heavy Duty stainless steel frame for extra rigidity and wear
- Super large, easy to read 14 x 52mm display
- Combined thumbrest and thumbroll for fine adjustment

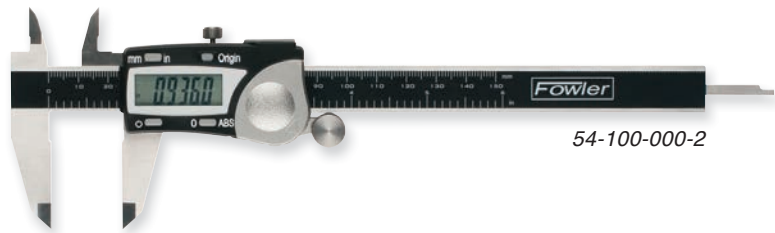
Order Number	Range	Accuracy
54-103-006-0	6"/150mm	± 0.001"/0.02mm
54-103-012-0	12"/300mm	± 0.0015"/0.03mm

Digital Calipers

Basic features.

Features:

- Resolution: 0.0005"/0.01mm
- Absolute/Incremental measurement
- Direct Inch/Metric conversion
- Large easy-to-read LCD display
- Stainless steel frame



54-100-000-2

Order Number	Range	Accuracy
54-100-004-2	4"/100mm	0.001"/0.02mm
54-100-000-2	6"/150mm	0.001"/0.02mm
54-100-008-2	8"/200mm	0.0015"/0.03mm
54-100-112-2	12"/300mm	0.0015"/0.03mm
Accessories		
54-520-399-0	USB data cable	
54-115-100-0	Wireless data transmitter	

Electronic Caliper & Micrometer Measuring Set

Features:

- 6" Electronic Caliper 54-100-000-2, resolution: 0.0005"/0.01mm
- 0 - 1"/25mm Electronic Micrometer 54-870-001-0
0.00005"/0.001mm resolution, direct inch/metric conversion



Order Number	Description
54-004-850-0	Electronic Caliper & Micrometer Measuring Set

XTRA-VALUE CAL Electronic Calipers

Economy calipers at great prices!

Features:

- Resolution: 0.0005"/0.01mm
- Absolute/Incremental Measurement
- Direct inch/metric conversion
- 4-way measuring
- Large easy-to-read display
- Stainless steel frame



54-101-150-2



Also available with a
Super Large Display with Hold Feature!

Order Number	Range	Accuracy	Display Type
54-101-150-2	6"/150mm	0.001"/0.02mm	Regular Display
54-101-600-1	6"/150mm	0.001"/0.02mm	Super Large Display with Hold Feature
54-101-200-1	8"/200mm	0.0016"/0.04mm	Regular Display
54-101-300-1	12"/300mm	0.0016"/0.04mm	Regular Display
54-101-900-1	12"/300mm	0.0016"/0.04mm	Super Large Display with Hold Feature



Poly-Cal[®] Electronic Caliper

Plastic frame, non-conductive, non-marking.



Features:

- Resolution: 0.0005"/0.01mm
(Fractions by 1/64" increments)
- Absolute/Incremental measurement
- Direct inch/metric/fraction conversion
- 4-way measuring
- Lightweight Polycarbonate frame
- Large easy-to-read display
- Supplied with clip-on vinyl pouch

Order Number	Range	Accuracy
54-101-175-0	0 - 6"/0 - 150mm	0.008"/0.2mm

IP65 Heavy Duty Carbon Fiber Calipers



54-100-140-0



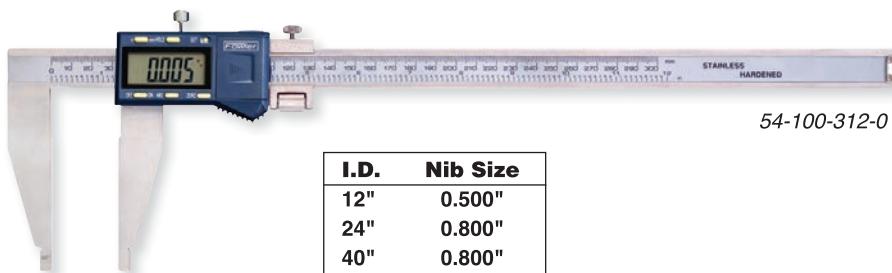
Features constant
measuring force mechanism

Features:

- IP65 protected against fluid and dust
- Resolution: 0.0005"/0.01mm
- Lightweight carbon fiber frame
- Stainless steel jaws with ID nibs
- ID/OD pressure device for repeatability
- USB data output
- Preset, ABS/INC, Floating zero, IN/MM, Hold function
- Super large display
- Fitted wooden case

Order Number	Range	Accuracy	Jaw Length
54-100-124-0	0 - 24"/0 - 600mm	0.0020"/0.05mm	5.4"/138mm
54-100-140-0	0 - 40"/0 - 1000mm	0.0025"/0.06mm	5.4"/138mm
54-100-160-0	0 - 60"/0 - 1500mm	0.0055"/0.13mm	5.9"/150mm

XTRA-RANGE[®] Electronic Calipers



54-100-312-0

I.D.	Nib Size
12"	0.500"
24"	0.800"
40"	0.800"

Features:

- IP54 protected against fluid and dust
- Resolution: 0.0005"/0.01mm
- Hold feature
- Absolute/Incremental measurement
- Preset mode includes offset size for ID measurements
- All sizes feature fine adjustment

Order Number	Range	Accuracy	Jaw Depth
54-100-312-0	0 - 12"/0 - 300mm	± 0.002"/0.05mm	3.5"
54-100-024-1	0 - 24"/0 - 600mm	± 0.003"/0.075mm	4"
54-100-042-1	0 - 40"/0 - 1000mm	± 0.004"/0.010mm	4.9"
Accessories			
54-115-779-0	SPC USB Cable		

Premium Grade Dial Calipers

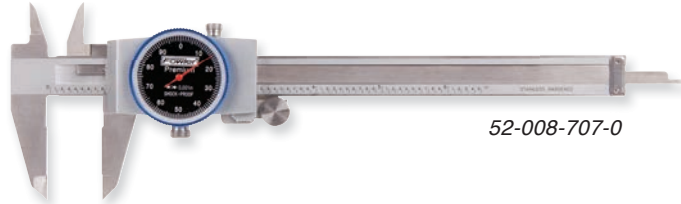
Top quality.

Features:

- 4-way measuring for outside, inside, depth and step measurements
- Solid stainless steel construction with precision ground and lapped measuring surfaces
- Shockproof design prevents dial backlash
- Silky smooth movement throughout
- Dial hand completes one revolution per each 0.100"
- Beam graduations: 0.100"
- Covered rack



52-008-706-0



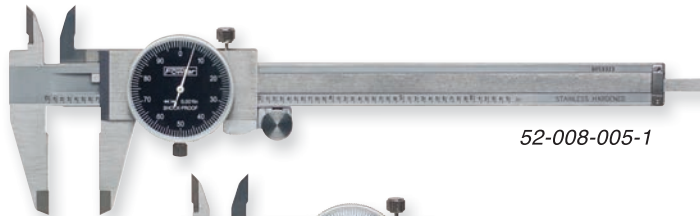
52-008-707-0

Order Number	Range	Dial Color	Graduation	Accuracy
Inch				
52-008-704-1	0 - 4"	White	0.001"	± 0.001"
52-008-714-1	0 - 4"	Black	0.001"	± 0.001"
52-008-706-0	0 - 6"	White	0.001"	± 0.001"
52-008-707-0	0 - 6"	Black	0.001"	± 0.001"
52-008-708-0	0 - 8"	White	0.001"	± 0.0015"
52-008-712-0	0 - 12"	White	0.001"	± 0.002"
Metric				
52-008-709-0	0 - 150mm	Yellow	0.02mm	± 0.02mm

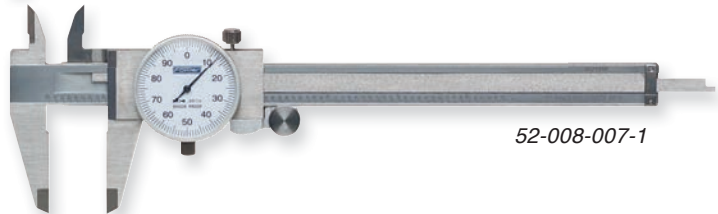
Dial Calipers

Features:

- 4-way measuring for outside, inside, depth and step measurements
- Beam graduations: 0.100"
- Hardened stainless steel throughout with measuring faces precision ground and microlapped for exceptional accuracy
- Scale surface is satin chrome finished to prevent glare, reduces operator fatigue; microfine graduations read in inches
- Graduation: 0.001"
- Covered rack
- Shockproof gearing



52-008-005-1



52-008-007-1

Order Number	Range	Dial Color	Accuracy	Range/ Revolution
52-008-005-1	0 - 6"	Black	± 0.001"	0.100"
52-008-007-1	0 - 6"	White	± 0.001"	0.100"
52-008-008-1	0 - 8"	White	± 0.0015"	0.100"
52-008-012-1	0 - 12"	White	± 0.002"	0.100"

Universal Measuring Set

Features:

- 6" Dial Caliper 52-008-007-1: 0.001" graduations
- Micrometer 52-229-201-0: 0.0001" graduations, range: 0 - 1"
- 6" Flexible rule with 32nds, 64ths, 10ths & 100ths graduations

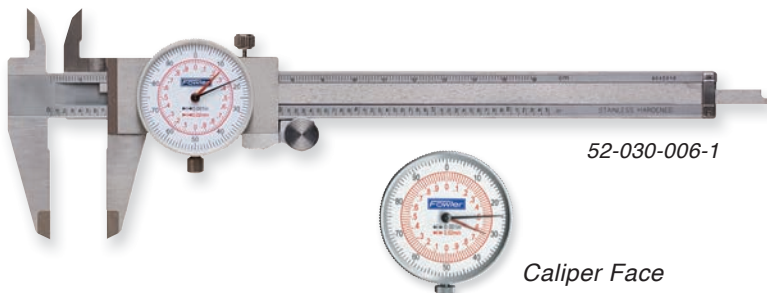


Order Number	Description
52-095-007-0	Universal Measuring Set



Inch/Metric Reading Dial Calipers

Reads 0.001" and 0.02mm.



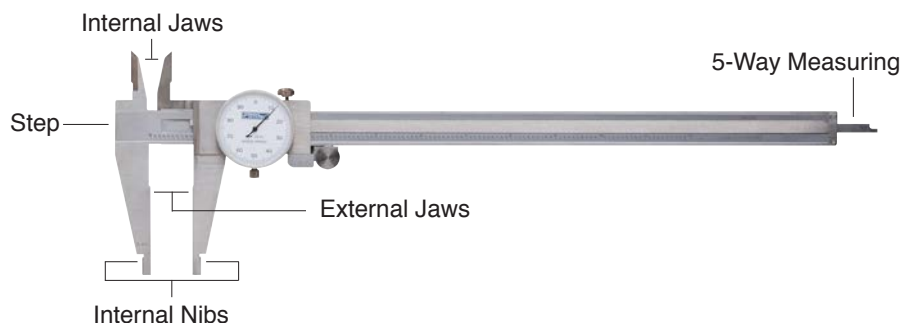
Features:

- 4-way measuring for outside, inside, depth and step measurements
- Dial face reads in both inch (black) and metric (red)
- Solid stainless steel construction
- Raised sliding surface prevents wear and defacement of graduations
- Covered rack

Order Number	Range	Accuracy
52-030-006-1	0 - 6"/0 - 150mm	0.001"/0.02mm
52-030-012-1	0 - 12"/0 - 300mm	0.002"/0.05mm

Heavy Duty Dial Calipers

5-way measurement.



Features:

- Thick, heavy duty frame
- Cross jaws for direct internal measurements
- Measuring nibs on bottom jaws for internal measurements
- Large, one-rev dial (0.1")
- Graduation: 0.001"
- Longer jaws permit greater accessibility
- Thumbroll for precise control

Order Number	Range	Accuracy	Jaw Depth
52-025-112-0	0 - 12"	± 0.002"	2.875"

Long Range Dial Calipers with Depth Rod

Combines microfine graduations, the protection of a covered rack and the accuracy of a hardened stainless steel rack.



Features:

- Measuring nibs for internal measurements on bottom of jaws
- Depth rod on both models
- Graduation: 0.001"
- Dial hand completes one revolution per each 0.100"
- Inverted covered rack prevents dirt accumulation in rack gear teeth.
- Exclusive dual pinion drive mechanism reduces wear on rack and pinion
- Hardened stainless steel
- Knurled lock assures precise settings
- Adjustable dial

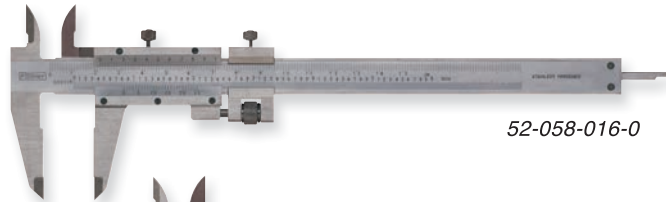
Order Number	Range	Accuracy	Jaw Depth
52-008-018-0	0 - 18"	± 0.003	3.125"
52-008-024-0	0 - 24"	± 0.003	3.125"

Vernier Calipers

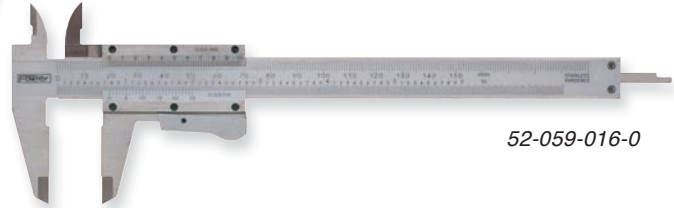
Back to Basics

Features:

- Made of fully hardened stainless steel; microfine black graduations on a satin chrome finish for easy, precise reading
- Measuring faces are ground and lapped for extreme accuracy
- 4-way jaws for outside, inside, depth and step measurements
- Graduations: 0.001" and 0.02mm
- All sliding surfaces are raised to prevent defacement and wear of graduations



52-058-016-0



52-059-016-0

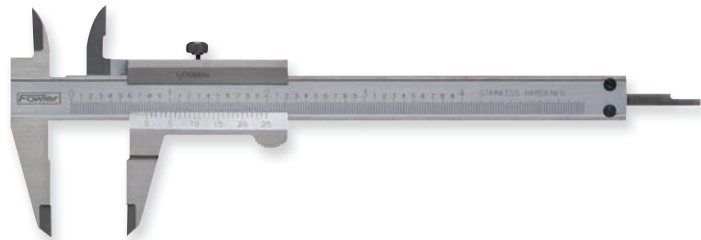
Order Number	Range	Accuracy	Jaws Depth
Vernier Caliper with Fine Adjustment			
52-058-016-0	0 - 6"/0 - 150mm	± 0.001"	1.6"
52-058-012-0	0 - 12"/0 - 300mm	± 0.002"	2.5"
Vernier Caliper with Thumb Lock			
52-059-016-0	0 - 6"/0 - 150mm	± 0.001"	1.6"

Vernier Pocket Caliper

4" pocket sized.

Features:

- 4-way measurement
- Graduation: 0.001"
- Satin chrome finish
- Stainless steel construction
- Overall: 6.2", Jaw depth: 1.175" and Internal jaw: 0.53"



Order Number	Range	Accuracy
52-057-004-0	0 - 4"	0.001"

Master Vernier Calipers

Large, heavy duty verniers.

The Fowler line of Master Vernier Calipers - in two sizes 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.



52-085-012-0

Features:

- Open face design permits both inch and metric vernier scales
- Satin chrome finish
- Hardened stainless steel throughout; ground and lapped for accuracy
- Graduation: 0.001"/0.02mm
- Extra long vernier scales have wide spaced microfine graduations on satin chrome finish to ensure easy reading
- A raised sliding surface prevents wear and defacement of graduations
- Verniers are adjustable for wear
- For larger workpieces, the long jaws permit greater accessibility and easier measurements

Order Number	Range	Accuracy	Jaw Depth
52-085-024-0	24"/600mm	± 0.003"	4"
52-085-040-0	40"/1000mm	± 0.004"	5-1/2"



Caliper Accessory Set

Add greater versatility to your dial, vernier or electronic calipers.



Accessory Set includes:

- Set of clamps
- 4 sets of screws
- 1 set of ball contact points
- 1 set of flat contact points
- 1 set of point contact points
- 1 set of spline contact points
- 1 Allen wrench
- Plastic case

Features:

- For difficult applications and configurations or hard to reach places
- Fits most standard 4" - 8" calipers and light duty 12" calipers
- Measures inside, outside, step, grooves, left or right applications with just a few simple calculations

Order Number	Description
52-010-005-0	Caliper Accessory Set

Notes ...



MICROMETERS





Rapid-Mic Electronic Micrometers

More range and faster spindle travel than your standard micrometer.



Features:

- IP67 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Non-rotating spindle with 10mm travel per thimble rotation
- USB output or Bluetooth available
- Adjustable measuring force, 5N/10N (54-815-030-0 and 54-815-130-0 only)
- Fastest micrometer on the market
- Menu customizable with free software
- Presetable display and position recall



Calibration certificates available for all sizes

Order Number	Range	Accuracy
54-815-030-0	0 - 1.18"/0 - 33mm	0.00012"/0.003mm
54-815-060-0	1.18" - 2.6"/30 - 66mm	0.00016"/0.004mm
54-815-100-0	2.6" - 4.0"/66 - 102mm	0.00020"/0.005mm
Set		
54-815-111-0	0 - 4.0"/0 - 102mm	
Bluetooth Models		
54-815-130-0	0 - 1.18"/0 - 33mm	0.00012"/0.003mm
54-815-160-0	1.18" - 2.6"/30 - 66mm	0.00016"/0.004mm
54-815-110-0	2.6" - 4.0"/66 - 102mm	0.00020"/0.005mm
Bluetooth Set		
54-815-112-0	0 - 4.0"/0 - 102mm	
Accessories		
54-115-526-0	Proximity cable with USB connection	
54-115-527-0	Proximity cable with serial connection	
54-115-246-BT	USB Bluetooth receiver	



54-815-111-0

DigiMic Electronic Micrometers

The new world standard of precision with IP67 and Bluetooth®.



Features:

- IP67 protected against fluid and dust
- Very High Accuracy
- Bluetooth IOT ready, no dongle or cable required for SPC data collection
- Super large display (0.460"/11.75mm)
- Carbide measuring surfaces, sleep and absolute modes
- Larger sizes available



Calibration certificate available.

Order Number	Range	Accuracy
54-816-025-0	0 - 1"/0 - 25mm	± 0.00008"/0.002mm
54-816-050-0	1" - 2"/25 - 50mm	± 0.00008"/0.002mm
54-816-075-0	2" - 3"/50 - 75mm	± 0.00012"/0.003mm
54-816-100-0	3" - 4"/75 - 100mm	± 0.00012"/0.003mm
Set		
54-816-110-0	0" - 4"/0 - 100mm	

Electronic Coolant Resistant Micrometers

For basic outside measurements with higher protection.

Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Carbide measuring faces
- Absolute & incremental modes
- Ratchet thimble
- Automatic switch off
- Free ball attachment included



54-860-001-1



Order Number	Range	Accuracy
54-860-001-1	0 - 1"/0 - 25mm	± 0.00016"/0.004mm
54-860-002-1	1 - 2"/25 - 50mm w/standard	± 0.00016"/0.004mm
Sets		
54-860-103-1	0 - 3"/0 - 75mm w/standard	

XTRA-VALUE II Electronic Micrometers

For basic outside measurements.

Features:

- IP40 protected against dust
- Resolution: 0.00005"/0.001mm
- Carbide measuring faces
- Absolute & incremental modes
- Ratchet thimble
- Automatic switch off
- Free ball attachment included



54-870-001-0



Order Number	Range	Accuracy
54-870-001-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm
54-870-002-0	1 - 2"/25 - 50mm w/standard	± 0.00016"/0.004mm
54-870-003-0	2 - 3"/50 - 75mm w/standard	± 0.0002"/0.005mm
54-870-004-0	3 - 4"/75 - 100mm w/standard	± 0.0002"/0.005mm
Set		
54-860-103-0	0 - 3"/0 - 75mm Set w/standard	

QuadraMic

Electronic 4-way Reading Micrometers.

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:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Carbide measuring faces
- Absolute and incremental modes
- Friction thimble
- Large 4-way reading LCD displays
- Automatic switch off



54-866-001-0

Micrometer reads 4 ways for incredible versatility!



Order Number	Range	Accuracy
54-866-001-0	0 - 1.2"/0 - 30mm	± 0.00016"/0.004mm

Point Anvil & Spindle Micrometer

For small grooves and measurements with limited access.



Features:

- 30° pointed anvil and spindle for measuring small grooves, key-ways, small flutes, and hard to reach dimensions
- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Carbide measuring faces
- Absolute and incremental modes
- Ratchet thimble
- Automatic switch off

Order Number	Range	Accuracy
54-860-661-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm

Electronic IP54 Ball Anvil Micrometer

For measuring tubes or the insides of holes to outer edges.



Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Ratchet thimble
- Hardened steel measuring face
- Automatic switch off

Order Number	Range	Accuracy
54-860-113-1	0 - 1"/0 - 25mm	0.00016"/0.004mm

Electronic IP54 Blade Micrometers

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



54-860-241-0

Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Blades: 0.236" wide, 0.255" length, 0.030" thickness
- Friction thimble
- Direct RS232 output

Order Number	Range	Accuracy
54-860-241-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm
54-860-242-0	1" - 2"/25 - 50mm w/standard	± 0.00016"/0.004mm
Accessory		
54-115-779-0	SPC USB Cable	

Electronic IP65 Thread Micrometers

For pitch diameter measurements.

Features:

- IP65 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Ratchet thimble
- 60° measuring anvils



Order Number	Range	Thread Range	Accuracy
54-219-001-0	0 - 1"	64 - 5 TPI/0.4 - 5mm	± 0.00008"/0.002mm
54-219-002-0	1 - 2" w/standard	44 - 3.5 TPI/0.6 - 7mm	± 0.00008"/0.002mm

Electronic IP54 Disc Micrometer

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

Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Friction thimble
- Direct RS232 output
- Extra large 0.788" disc with 0.035" edge thickness



Order Number	Range	Accuracy
54-860-301-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm
Accessory		
54-115-779-0	SPC USB Cable	

Electronic IP54 Inside Micrometer

For diameters and slots.

Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Friction thimble
- Measuring jaws & faces fully hardened & microlapped for accuracy
- Each gage includes appropriate setting ring



Order Number	Range	Accuracy
54-860-275-0	0.2" - 1.2"	± 0.00020"/0.005mm
Accessory		
54-115-779-0	SPC USB Cable	

Electronic IP54 Micrometer Head

For fixtures and stages.

Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Carbide measuring faces
- Absolute and incremental modes
- Friction thimble
- Large LCD display



Order Number	Range	Accuracy
54-220-777-1	0 - 1"/0 - 25mm	± 0.00015"/0.003mm

Digit Counter Outside Micrometers

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 tool chest, the shop floor or in the QC area.



52-224-001-1

Features:

- Carbide measuring faces
- Ratchet thimble
- Microfine graduations on satin chrome
- Diameter of measuring faces is 0.256"
- Digital counter reads to 0.001"/0.1mm with 0.0001"/0.01mm on vernier
- Positive locking nut on spindle
- Parallelism: 0.00005" for 0 - 1"
- Flatness: 0.00003"

Order Number	Range	Graduation	Accuracy
Inch			
52-224-001-1	0 - 1"	0.0001"	0.00016"
52-224-002-1	1 - 2" w/standard	0.0001"	0.00016"
52-224-003-1	2 - 3" w/standard	0.0001"	0.0002"
52-224-004-1	3 - 4" w/standard	0.0001"	0.0002"
Sets			
52-224-103-1	0 - 3" w/standards & case	0.0001"	
52-224-104-1	0 - 4" w/standards & case	0.0001"	

Digit Counter 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 0.0001".



52-244-201-1

Features:

- Carbide tipped measuring faces
- Ratchet thimble
- Microfine graduations on satin chrome. Digital counter reads to 0.001"; sleeve reads to 0.0001".
- Positive locking nut on spindle

Order Number	Description	Range	Graduation	Accuracy
52-244-201-1	Ball Anvil	0 - 1"	0.0001"	0.00016"
52-244-301-1	Ball Anvil & Spindle	0 - 1"	0.0001"	0.00016"

Digit Counter Disc Micrometer

Features extra large diameter discs which easily enter hard to reach places such as narrow grooves, slots and recesses.



Features:

- Ratchet thimble
- Positive locking nut on the spindle
- Flatness: 0.00004"
- Parallelism: 0.00016"
- Disc diameter: 0.708" and disc edge thickness: 0.035"

Order Number	Range	Graduation	Accuracy
52-250-301-1	0 - 1"	0.0001"	0.00016"

Swiss-Style Micrometers

For outside measurements.

Features:

- Carbide measuring faces
- Ratchet thimble
- Graduation: 0.0001"
- Insulated frame
- Microfine graduations on satin chrome finish



52-229-201-0

Order Number	Range	Accuracy
52-229-201-0	0 - 1"	± 0.00016"
Sets		
52-229-213-0	0 - 3" set w/standard	
52-229-214-0	0 - 4" set w/standard	

Outside Inch Micrometers

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:

- Carbide measuring faces
- Microfine graduations on satin chrome finish
- Diameter of measuring faces: 0.256"
- Flatness: 0.00003"
- Positive lever locking clamp
- Spindle thread hardened, ground and lapped for ultimate accuracy



52-240-001-1



52-215-003-1

Order Number	Range	Graduation	Accuracy	Thimble
52-240-001-1	0 - 1"	0.0001"	0.00015"	Friction
52-240-101-1	0 - 1"	0.0001"	0.00015"	Ratchet
52-240-002-1	1 - 2" w/standard	0.0001"	0.00015"	Friction
52-240-102-1	1 - 2" w/standard	0.0001"	0.00015"	Ratchet
52-240-003-1	2 - 3" w/standard	0.0001"	0.0002"	Ratchet
52-240-004-1	3 - 4" w/standard	0.0001"	0.0002"	Ratchet
52-240-005-1	4 - 5" w/standard	0.0001"	0.00025"	Ratchet
52-240-006-1	5 - 6" w/standard	0.0001"	0.00025"	Ratchet
52-240-007-1	6 - 7" w/standard	0.0001"	0.0003"	Ratchet
52-240-008-1	7 - 8" w/standard	0.0001"	0.0003"	Ratchet
52-240-009-1	8 - 9" w/standard	0.0001"	0.0003"	Ratchet
52-240-010-1	9 - 10" w/standard	0.0001"	0.0003"	Ratchet
52-240-011-1	10 - 11" w/standard	0.0001"	0.00035"	Ratchet
52-240-012-1	11 - 12" w/standard	0.0001"	0.00035"	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)		



Outside Inch 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.

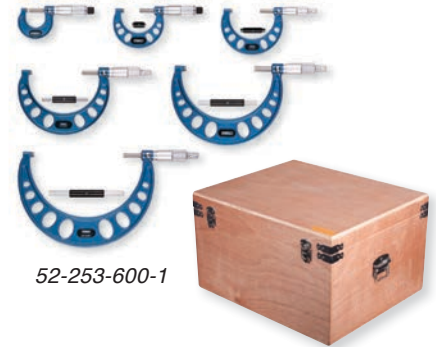


52-253-001-1

Features:

- Carbide measuring faces
- Microfine graduations on satin chrome finish
- Diameter of measuring faces: 0.256"
- Flatness: 0.00003"
- Parallelism: 0.00005" for 0 - 1"
- Positive lever locking clamp

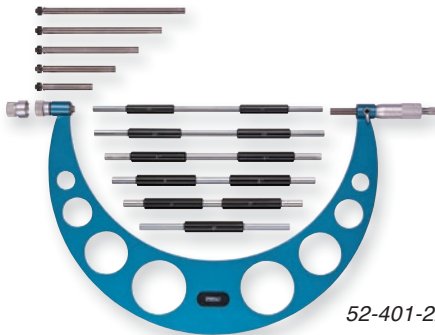
Order Number	Range	Graduation	Accuracy	Thimble
52-253-001-1	0 - 1"	0.001"	0.001"	Friction
52-253-101-1	0 - 1"	0.001"	0.001"	Ratchet
52-253-002-1	1 - 2" w/standard	0.001"	0.001"	Friction
52-253-102-1	1 - 2" w/standard	0.001"	0.001"	Ratchet
52-253-003-1	2 - 3" w/standard	0.001"	0.001"	Ratchet
52-253-004-1	3 - 4" w/standard	0.001"	0.001"	Ratchet
52-253-005-1	4 - 5" w/standard	0.001"	0.001"	Ratchet
52-253-006-1	5 - 6" w/standard	0.001"	0.001"	Ratchet
Set				
52-253-600-1	0 - 6" set			



52-253-600-1

Interchangeable Anvil Micrometers

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.



52-401-222-1

Features:

- Ratchet thimble
- Microfine graduations on satin chrome finish for easy reading
- Each anvil is fitted with an adjusting collar to set the overall dimension
- Carbide tipped measuring faces
- Positive lever locking clamp

Order Number	Range	Graduation	Accuracy
52-401-222-1	6 - 12"	0.0001"	0.00036"
52-401-204-1	12 - 16"	0.001"	0.00040"

INDI-X® Indicating Micrometer

For use in production and locating high or low spots on diameters.



Features:

- Thimble graduated in 0.001", sleeve in 0.0001", diameter of spindle: 0.256"
- Dial graduated in 0.00005"
- Retracting button conveniently located in relation to operator's hand for easy insertion and removal of parts
- Carbide tipped anvil and spindle
- Flatness: 0.000012"

Order Number	Range	Accuracy
52-245-501-0	0 - 1"	0.00016"

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:

- Ratchet thimble
- Microfine graduations on satin chrome finish for easy reading
- Graduation: 0.0001"
- Non-rotating spindle
- Blade thickness = 0.030"; blade width = 0.236"; blade penetration = 0.255"
- Sizes over 1" include a calibration standard



Order Number	Range	Accuracy
52-246-001-1	0 - 1"	0.00016"
52-246-002-1	1 - 2" w/standard	0.00016"
52-246-003-1	2 - 3" w/standard	0.0002"
52-246-004-1	3 - 4" w/standard	0.0002"
52-246-005-1	4 - 5" w/standard	0.00024"
52-246-006-1	5 - 6" w/standard	0.00024"
52-246-007-1	6 - 7" w/standard	0.00028"

Vernier Thread Micrometers

For external pitch diameter measurements.

Features:

- Ratchet thimble
- 60° measuring anvils
- Positive lever locking clamp
- Graduation: 0.001"
- Sizes over 1" include a calibration standard



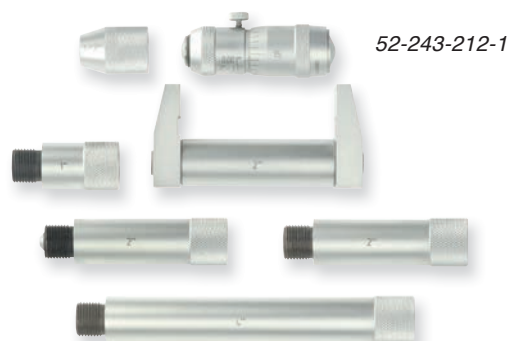
Order Number	Range	Thread Range	Accuracy
52-219-001-1	0 - 1"	64 - 5 TPI/0.4 - 5mm	0.00016"
52-219-002-1	1 - 2" w/standard	44 - 3.5 TPI/0.6 - 7mm	0.00016"
52-219-003-1	2 - 3" w/standard	24 - 3.5 TPI/1 - 7mm	0.0002"
52-219-004-1	3 - 4" w/standard	24 - 3.5 TPI/1 - 7mm	0.0002"

Inside Tube Micrometers

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

Features:

- Carbide measuring faces
- 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
- Rods are marked with corresponding length
- Accuracy = $.00005" \times (3 + L/2)$; L = Length Measured
- Reference standard included
- All include a calibration standard



Order Number	Range	Graduation
Inch		
52-243-026-1	2 - 6"	0.001"
52-243-212-1	2 - 12"	0.001"
52-243-260-1	2 - 60"	0.001"
52-243-480-1	4 - 80"	0.001"
Metric		
52-243-715-1	50 - 1000mm	0.01mm



Inside Micrometers

Inside Micrometers have a frame that is specially designed to enable the micrometer to provide extremely accurate small internal measurements.



52-275-001-1

Features:

- Ratchet thimble
- Measuring faces are fully hardened, precision ground and microlapped to assure exceptionally accurate measurements
- Graduation: 0.001"
- Includes a setting ring

Order Number	Range	Accuracy
52-275-001-1	0.2" - 1.2"	0.0002"
52-275-005-0	0.2" - 2.2"	0.00024"

Micrometer Stands



52-247-005-0

Features:

- Unique locking nut adjusts micrometer stand to multiple positions for perfect use and viewing
- Stand folds for storage
- Provides a measuring position and angle for outside micrometers and other instruments

XTRA MAG



52-247-010-0

Micrometer not included

Features:

- Use at machine centers, work, assembly and inspection stations, steel tables and shelves
- Holds standard 0-12" micrometers firmly to metal surfaces
- V-bottom for mounting on cylindrical surfaces
- On/Off magnet switch

Order Number	Description
52-247-005-0	Micrometer Stand
52-247-010-0	Xtra-Mag Micrometer Stand

Thread Measuring Wire Set



Features:

- NOW includes wire holders
- 48 wires in 16 different, 3 wire sets
- Accuracy for sizes 0.018" through 0.108" is within ± 0.0004 "
- Accuracy for sizes 0.120" through 0.185" is within ± 0.0005 "
- Measures all U.S. 60° threads from 3 - 48 threads per inch

Order Number	Description
52-485-048-0	Thread Measuring Wire Set



INDICATORS



Mark VI Electronic Indicators

The BEST!



54-530-135-0



54-530-335-0



54-530-535-0

LIFETIME WARRANTY



Features:

- IP54 protected against fluid and dust ((IP67 with rubber boot)
- Repeatability: 2µm/0.00008"
- Output: Proximity/Power - USB/RS232/digimatic/Wireless
- Menus customizable with free software
- Wide range of functions (MIN/MAX/DELTA, TOL, Factor, Preset, Auto Off, etc)
- Analog units feature graphic scale
- Display rotates 270°
- Large display with LED tolerance indicators
- Includes lug back

Order Number	Range	Accuracy	Resolution
Low Resolution			
54-530-125-0	0 - 0.500"/12.5mm	0.0004"/0.01mm	0.0005"/0.01mm
54-530-145-0	0 - 1"/25mm	0.0004"/0.01mm	0.0005"/0.01mm
High Resolution			
54-530-135-0	0 - 0.500"/12.5mm	0.00012"/0.003mm	0.00005"/0.001mm
54-530-155-0	0 - 1"/25mm	0.00016"/0.004mm	0.00005"/0.001mm
54-530-175-0	0 - 2"/50mm	0.00019"/0.005mm	0.00005"/0.001mm
54-530-195-0	0 - 4"/100mm	0.00024"/0.006mm	0.00005"/0.001mm
54-530-215-0	0 - 6"/150mm	0.0004"/0.01mm	0.00005"/0.001mm
Bluetooth Models:			
54-530-335-0	0 - 0.500"/12.5mm	0.00012"/0.003mm	0.00005"/0.001mm
54-530-355-0	0 - 1.000"/25mm	0.00016"/0.004mm	0.00005"/0.001mm
54-530-360-0 (8mm stem, M2.5 thread)	0 - 0.500"/12.5mm	0.00012"/0.003mm	0.00005"/0.001mm
54-530-365-0 (8mm stem, M2.5 thread)	0 - 1.000"/25mm	0.00016"/0.004mm	0.00005"/0.001mm
High Accuracy NANO with Bluetooth Models:			
54-530-635-0	0 - 0.500"/12.5mm	0.00007"/0.0018mm	0.00005"/0.001mm
54-530-640-0	0 - 1.000"/25mm	0.00008"/0.0022mm	0.00005"/0.001mm
Analog Display Models:			
54-530-535-0	0 - 0.500"/12.5mm	0.00012"/0.003mm	0.00005"/0.001mm
54-530-555-0	0 - 1.000"/25mm	0.00016"/0.004mm	0.00005"/0.001mm
8mm Stem Models:			
54-530-136-0	0 - 0.500"/12.5mm	0.00012"/0.003mm	0.00005"/0.001mm
54-530-156-0	0 - 1"/25mm	0.00016"/0.004mm	0.00005"/0.001mm
IP67 Models: (with Rubber Boot)			
54-530-137-0	0 - 0.500"/12.5mm	0.00012"/0.003mm	0.00005"/0.001mm
54-530-157-0	0 - 1"/25mm	0.00016"/0.004mm	0.00005"/0.001mm
Accessories:			
54-530-211-0	Standard Lug Back		
54-530-212-0	90° Lug Back		
54-115-526-0	Proximity USB Cable		
54-115-528-0	Power USB Cable		
54-115-246-BT	USB Bluetooth Receiver		

Mini S_Dial Indicators

For restricted spaces.

Features:

- Bluetooth models feature a wide range of functions
- IP67 protected against fluid and dust
- All indicators features 0.50"/12.5mm range
- Bluetooth connectivity to your phone or tablet
- Analog scale for reversal point indication
- 3/8" mounting diameter with 4-48 contact thread
- Auto power off feature
- Optional cable connectivity output



54-520-687-BT



54-520-692-0



Order Number	Accuracy	Resolution
Bluetooth Models		
54-520-687-BT	0.0004"/0.01mm	0.0005"/0.01mm
54-520-690-BT	0.0002"/0.005mm	0.00005"/0.001mm
Basic Models		
54-520-691-0	0.0004"/0.01mm	0.0005"/0.01mm
54-520-692-0	0.0002"/0.005mm	0.00005"/0.001mm
Accessories		
54-115-527-0	Serial Cable	
54-115-528-0	Output Cable USB	



Multimode Electronic Test Indicators

Perfect solution for test indicating applications.

Features:

- IP65 protected against fluid and dust
- Bluetooth connectivity to your phone or tablet
- 4 measuring modes: Min, Max, TIR and Direct
- 4 measuring resolutions - 0.00005"/0.001mm or 0.0005"/0.01mm
- 1.77" diameter dial face rotates a full 360°
- Analog scale for reversal point indication
- Meets or exceeds DIN/ISO Standards
(Maximum error on .00005" scale at full range: 0.0004")
- **54-562-890-BT is capable of interchanging contact point lengths**

4 Measuring Resolutions!

Resolution	Smallest Division
0 - 40 - 0	0.0005"
0 - 40 - 0	0.00005"
0 - 1 - 0	0.01mm
0 - 1 - 0	0.001mm



54-562-777-BT



Order Number	Range	Contact Point Length
54-562-777-BT	0.030"/0.80mm	1/2"
54-562-888-BT	0.080"/2.0mm	1-7/16"
54-562-890-BT	0.030"/0.80mm	1/2"
	0.080"/2.0mm	1-7/16"
Accessories		
54-115-527-0	Serial Cable	
54-115-528-0	Output Cable USB	



INDI-X^{blue} Electronic Indicators

Great value indicators.



Features:

- Carbide tipped ball contact
- Direct Inch/Metric or Inch/ Metric/Fraction Conversion
- Auto Off feature
- 2-1/4" dial face
- Lugback and flat back supplied
- 3/8" stem mountings
- Tolerance indicators
- Absolute/incremental reading
- Floating zero

Order Number	Range	Resolution	Accuracy
54-520-255-0	0.5"/12.5mm	0.0005"/0.01mm	± 0.001"/0.03mm
54-520-250-0	1"/25mm	0.0005"/0.01mm	± 0.001"/0.03mm
54-520-260-0	1"/25mm	0.0005"/0.01mm/1/64ths	± 0.001"/0.03mm

Fine Adjust Mag Base with INDI-X^{blue} Electronic Indicator Set



Magnetic Indicator Back Features:

- Use for positioning the indicator on most metal surfaces

Magnetic Base Features:

- 85 lb. pull
- Fine adjustment
- V-bottom base

Included Magnetic Indicator Back for mounting to most metal surfaces!

Indi-X Blue Indicator (54-520-250-0) Features:

- Carbide tipped ball contact
- Direct Inch/Metric or Inch/ Metric/Fraction Conversion
- Auto Off feature
- 2-1/4" dial face
- Lugback and flat back supplied
- 3/8" stem mountings
- Tolerance indicators
- Absolute/incremental reading
- Floating zero

Order Number	Description
54-585-075-0	Fine Adjust Mag Base with Indi-X Blue Electronic Indicator Set

CHROME FLEX MAG SET and Indicator Sets



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 cylindrical surfaces



Magnetic Indicator Back Features:

- Use for positioning the indicator on most metal surfaces
- Protective coating

Included Magnetic Indicator Back for mounting to most metal surfaces!

AGD Indicator Features:

- Dial diameter: 2-1/4"
- Travel: 1"
- Reading: 0.001"
- Continuous reading: 0.100"
- Carbide tipped point with 4 - 48 thread



Indi-X Blue Indicator Features:

- Carbide tipped ball contact
- Direct Inch/Metric or Inch/ Metric/Fraction Conversion
- Auto Off feature
- 2-1/4" dial face
- Lugback and flat back supplied
- 3/8" stem mountings
- Tolerance indicators
- Absolute/incremental reading
- Floating zero



3 Indicator Style Options



X-Proof IP54 Indicator Features:

- Robust, shockproof design
- Travel: 1"
- Reading: 0.001"
- Continuous reading: 0 - 100
- Tolerance markers
- AGD Group 2, 2-1/4" dia.
- Lugback and carbide point

Order Number	Description
54-585-100-0	Chrome Flex Mag Set with Indi-X Blue Electronic Indicator
52-585-450-0	Chrome Flex Mag Set with X-Proof White Dial Indicator
52-585-500-0	Chrome Flex Mag Set with AGD Black Dial Indicator

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.

All indicators include 3 points 0.040", 0.080" and 0.120".



52-562-784-0



52-563-777-0



52-562-778-0

Order Number	Dial Color	Total Range	Dial Reading	Graduation	Accuracy	Dial Dia.	Point Length
0.030" Range							
52-562-778-0	Black	0.030"	0 - 15 - 0	0.0005"	0.0005"	1"	1/2"
0.008" Range							
52-563-777-0	White	0.008"	0 - 4 - 0	0.0001"	0.00015"	1-1/2"	1/2"
0.020" Range							
52-562-784-0	Black	0.020"	0 - 10 - 0	0.0005"	0.0005"	1-1/2"	1-7/16"

XTEST Test Indicators

TWICE the range of most indicators!

Features:

- Range: 0.060"
- Contact length = 0.50"
- Super smooth jeweled movement, solid brass body
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- 5/32" pivotable stem with 210° Swivel arc
- Tungsten carbide points: 0.080", 0.120". Steel point: 0.040"
- NIST certificate of calibration included



52-562-001-0

Order Number	Graduations	Dial Diameter	Dial Reading	Accuracy (One Rotation)	Accuracy (Full Travel)
52-562-001-0	0.0005"	1-1/2"	0 - 15 - 0	0.0004"	0.0012"
52-562-001-BD	0.0005"	1-1/2"	0 - 15 - 0	0.0004"	0.0012"
52-562-002-0	0.0005"	1"	0 - 15 - 0	0.0004"	0.0012"

XTEST Vertical X-Test Indicator

TWICE the range of most indicators!

Features:

- Range: 0.060"
- Contact length = 0.50"
- Super smooth jeweled movement, solid brass body
- Revolution counter
- Easy-to-read tilted dial
- Automatic reversal
- 5/32" pivotable stem with 210° Swivel arc
- Tungsten carbide points: 0.080", 0.120". Steel point: 0.040"
- NIST certificate of calibration included



Order Number	Graduations	Dial Diameter	Dial Reading	Accuracy (One Rotation)	Accuracy (Full Travel)
52-562-004-0	0.0005"	1-1/2"	0 - 15 - 0	0.0004"	0.0012"

XTEST Indicator and Accessory Sets



52-562-100-0

X-Test Indicator Features:

- Jeweled movement
- Revolution counter, 0.060" range
- Easy-to-read tilted dial
- Automatic reversal
- 5/32" stem with 210° Swivel arc
- Tungsten carbide point: 0.080"

Each Set Includes:

- X-Test Dial Test Indicator
- Axial support
- Height gage bar with clamp
- Adapter sleeve: 5/32" to 3/8"
- Contact point wrench
- 2 dovetail clamps

Order Number	Description	Graduations
52-562-100-0	52-562-001-0 with accessories	0.0005"
52-562-110-0	52-562-002-0 with accessories	0.0005"

XTEST Indicator and XTRA MAG Set



Virtually unlimited positioning as a Universal Base!

X-Test Indicator Features:

- Range: 0.060"; Graduation: 0.0005"
- Jeweled movement
- Revolution counter
- Automatic reversal
- 210° Swivel arc
- Tungsten carbide point: 0.080"

Mag Base Features:

- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting
- Chuck adaptor

Order Number	Description
52-562-105-0	X-Test & Xtra-Mag Combo

Test Indicator and XTRA MAG Set



52-585-100-0



Virtually unlimited positioning as a Universal Base!

Test Indicator Features:

- Range: 0.030"
- Reading: 0 - 15 - 0
- Jeweled movement
- Graduation: 0.0005"
- Auto-reversing
- 0.080" diameter point

Mag Base Features:

- Microfine adjustment screw
- 3-9/16" extension arm
- Dovetail mounting
- Chuck adaptor

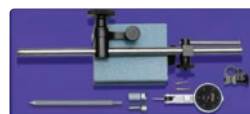
Order Number	Description
52-585-100-0	Xtra-Mag with Test Indicator Combo
52-585-105-0	Xtra-Mag Only

XTRA-SURF Surface Gage with a Built-in Switchable Magnetic Base

For comparative measurements.

Features:

- 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
- 0.0005" test indicator No. 52-562-778-0 (see page 39)
- Swivel clamp to mount indicator
- Two dovetail stems: 5/32" & 3/8"
- A 4" hardened scriber



52-155-747-0



Order Number	Description
52-155-747-0	Xtra-Surf Set with Test indicator
52-155-743-0	Xtra-Surf without indicator

X-PROOF® Fluid Resistant Dial Indicator

Features:

- Robust, shockproof design
- Travel: 1"
- Reading: 0.001"
- Continuous reading: 0-100
- Tolerance markers
- AGD Group 2, 2-1/4" dia.
- Lugback and carbide point
- Meets ANSI specs for accuracy

Protection Includes:

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



Order Number	Graduation	Range	AGD Group	Reading	Contact Point
52-520-450-0	0.001"	1"	2	0 - 100	4 - 48 (3/8" stem)

X-PROOF® Water Resistant Indicator Set

For harsh environments.

Magnetic Base Features:

- Fine adjustment
- Base dimensions: 2" x 2-11/32" x 1-13/16"
- Also mounts test indicators with 1/4" post
- 85 lb. pull
- On-Off lever release magnet
- V-base for placing on cylindrical surfaces

X-PROOF®

Indicator Features:

- Travel: 1"
- Reading: 0.001"
- Continuous reading: 0 - 100
- Tolerance markers
- Lugback and carbide point
- Robust, shockproof design



Order Number	Description
52-585-155-0	X-Proof Water Resistant Indicator Set

Dial Indicators

Smooth, jeweled movements.



52-520-135-0



52-520-110-1



52-520-110-2



52-520-120-0

Features:

- Revolution counter hand, knurled bezel
- Solid brass housing
- Carbide contact point
- Supplied with lug backs for positioning through 90° increments
- Microfine graduations in black for continuous readings and red for balanced readings
- Meets AGD specifications. Group I & II gages. Meets ANSI specs for accuracy

Order Number	Grad.	Range	Continuous Reading	Balanced Reading	Dial Dia.
AGD Group 2					
Inch					
52-520-110-0	0.001"	1.00"	0 - 100	—	2-1/4"
52-520-110-2	0.001"	1.00"	0 - 100	—	2-1/4"
52-520-120-0	0.001"	2.00"	0 - 100	0 - 100	2-1/4"
52-520-135-0	0.0001"	0.500"	0 - 100	0 - 100 - 0	2-1/4"
Black Dial					
52-520-109-0	0.001"	1.00"	0 - 100	0 - 50 - 0	2-1/4"
52-520-110-1	0.001"	1.00"	0 - 100	—	2-1/4"
Metric					
52-520-500-0	0.01mm	25mm	0 - 100	0 - 50 - 0	2-1/4"

Magnetic Base & Dial Indicator with Fine Adjustment



Magnetic Base Features:

- Fine adjustment
- Base dimensions: 2" x 2-11/32" x 1-13/16"
- Also mounts test indicators with 1/4" post
- 85 lb. pull
- On-Off lever release magnet.
- V-base for placing on cylindrical surfaces

AGD Indicator (52-520-109-0) Features:

- Range: 0 - 1"
- Graduation: 0.001"
- Continuous reading 0 - 100
- Revolution counter
- Tolerance indicators

Order Number	Description
52-520-199-0	Fine Adjust Mag Base with Black Dial Indicator Set
52-520-199-1	Fine Adjust Mag Base with White Dial Indicator Set

Articulating Mag Base and Indicator Sets

Adjust to virtually any position.



Articulating Mag Base Features:

- Adjust in almost unlimited ways
- Fine adjust
- 85 lb. pull
- V-slot on base for mounting on rounded surfaces

AGD Indicator:

- 1" travel
- Continuous reading: 0 - 100
- Tolerance markers
- Lug back mount
- Carbide point



52-585-150-0

INDI-X blue

Indi-X Blue Indicator Features:

- Direct Inch/Metric/Fraction Conversion
- Lugback and 3/8" stem mountings
- Resolution 0.0005"/0.01mm/64ths
- Tolerance indicators
- Absolute/incremental reading
- Floating zero
- Carbide tipped point



54-585-250-0

Order Number	Description
52-585-150-0	Articulating Mag Base & Dial Indicator Combo
54-585-250-0	Articulating Mag Base & Indi-X Blue Fraction Electronic Indicator Combo
52-585-008-0	Articulating Mag Base ONLY

Inch/Metric Reading Dial Indicator

TWO Gages in ONE!

Features:

- AGD group 2
- Carbide ball contact point
- Dial face reads in inch (**black**) and metric (**red**) simultaneously
- Reading: 0 - 100 (inch)/0 - 200 (metric)
- Separated dial for inch and metric
- 3/8" mounting stem



Order Number	Graduations	Range	Reading
52-530-110-0	0.001"/0.01mm	1"/25mm	0 - 100 (inch)/0 - 200 (metric)

Long Range Indicator Test Set

Features:

- Includes mag base with post and dual diameter rod
- Includes indicator which features 1" range; 0.001" graduations; reading: 0 - 100; 2-1/4" dial diameter and includes rod connector and holding clamp
- Carbide contact point



Order Number	Description
52-520-707-0	Long Range Indicator Test Set



Fine Adjust Mag Base with AGD White Dial Indicator Set



*Included Magnetic Indicator Back
for mounting to most metal surfaces!*

Magnetic Base Features:

- 85 lb. pull
- Fine adjustment
- V-bottom base

Magnetic Indicator Back Features:

- Use for positioning the indicator on most metal surfaces

AGD Indicator Features:

- Travel: 1"
- Reading: 0.001"
- Continuous reading: 0.100"
- Carbide tipped point with 4 - 48 thread

Order Number	Description
52-585-125-0	Fine Adjust Mag Base with AGD Dial Indicator Set

Flex Arm Base & White Dial Indicator Set



Flex-Arm Mag Base Features:

- 85 lb. pull
- Holds rigidly in any position desired
- V-base for placing on cylindrical surfaces
- On-Off lever release magnet

AGD Indicator Features:

- 1" travel
- Reading: 0.001"
- Continuous reading: 0 - 100
- Revolution counter
- Tolerance indicators

Order Number	Description
52-641-300-0	Flex Arm Mag Base with Dial Indicator Set

Magnetic Base & White Dial Indicator Set



Magnetic Base Features:

- Accepts all AGD dial indicators
- Base dimensions: 2" x 2-11/32" x 1-13/16"
- V-base for placing on cylindrical surfaces
- Mounts test indicators with 1/4" posts
- Magnet features 85 lb. pull
- On-Off lever release magnet

AGD Indicator Features:

- Range: 0 - 1"
- Graduation: 0.001"
- Meets AGD specifications
- Continuous reading 0 - 100
- Revolution counter
- Tolerance indicators

Order Number	Description
52-585-115-0	Magnetic Base with White Dial Indicator Set

Test Indicator Accessories



52-565-012-0



52-565-083-0



52-174-250-0

Order Number	Description	Shank Size
52-565-012-0	Axial Support	3/8" x 5-1/4" long
52-174-250-0	Rectangular holder with clamp for height gages	1/4" x 1/4" long
52-565-083-0	Rectangular holder with clamp 1/4" x 1/2"	

Universal Indicator Holder with Swivel

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



Order Number	Specifications
52-565-200-0	1/4" Shank

Indicator Chuck

For holding small pins for fine applications.

Features:

- Low carbon steel, black oxide finished
- 0.0140" - 0.040" chucking capacity
- Can be used with small pin gages for special or restricted applications
- Available in both 4 - 48 and M2.5 threads



Indicator shown
not included

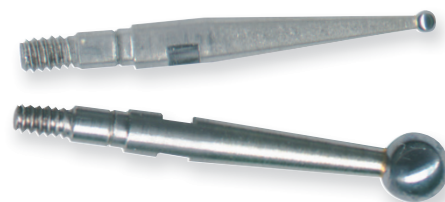


52-526-020-0

Order Number	Thread
52-526-020-0	4 - 48

Replacement Points for Test Indicators

M2 Thread Type		M1.6 Thread Type		M1.4 Thread Type	
Contact Points		Contact Points		Contact Points	
Order Number	Tip Dia.	Order Number	Tip Dia.	Order Number	Tip Dia.
52-567-040-0	0.040"	52-567-781-0	0.040"	52-563-780-0	0.040"
52-562-779-0	0.080"	52-567-782-0	0.080"	52-563-778-0	0.080"
52-567-120-0	0.120"	52-567-783-0	0.120"	52-563-779-0	0.120"
For Indicators		For Indicators		For Indicators	
Order Number		Order Number		Order Number	
52-562-774-0		52-562-781-0		52-563-770-0	
52-562-775-0		52-562-782-0		52-563-771-0	
52-562-776-0		52-562-783-0		52-563-772-0	
52-562-778-0		52-562-784-0		52-563-777-0	
52-562-780-0				52-563-677-0	
				52-560-060-0	



X-TEST (Silver Bezel)		Swiss 1-1/2"		Swiss 1/2"	
Contact Points		Contact Points		Contact Points	
Order Number	Tip Dia.	Order Number	Tip Dia.	Order Number	Tip Dia.
52-562-801-0	0.040"	52-567-104-0	0.040"	52-567-101-0	0.040"
52-562-800-0	0.080"	52-567-105-0	0.080"	52-567-102-0	0.080"
52-562-802-0	0.120"	52-567-106-0	0.120"	52-567-103-0	0.120"
For Indicators		For Indicators - Sylvac/Girod		For Indicators - Sylvac/Girod	
Order Number		Order Number		Order Number	
52-562-001-0		54-562-888-0		54-562-777-0	
52-562-002-0		52-563-474-0		52-563-252-0	
52-562-003-0		52-562-474-0		52-563-253-0	
52-562-004-0				52-563-452-0	
52-562-005-0				52-563-453-0	
52-562-006-0				52-563-272-0	
52-562-007-0				52-563-273-0	
52-562-008-0				52-563-473-0	
52-562-100-0				52-562-253-0	
52-562-105-0				52-562-453-0	
52-562-110-0				52-562-272-0	
52-562-120-0				52-562-273-0	
				52-562-473-0	

X-TEST Blue Bezel		
Contact Points		
Order Number	Tip Dia.	
52-562-801-1	0.040"	
52-562-800-1	0.080"	
52-562-802-1	0.120"	
For Indicators		
Order Number		
52-562-001-0	52-562-005-0	52-562-100-0
52-562-002-0	52-562-006-0	52-562-105-0
52-562-003-0	52-562-007-0	52-562-110-0
52-562-004-0	52-562-008-0	52-562-120-0

Ruby Ball Contact Points



Features:

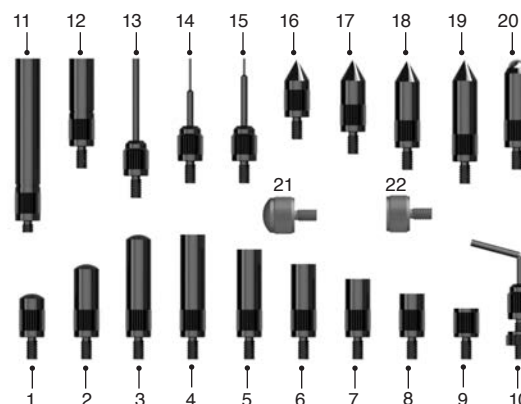
- Resistance to wear
- Chemical and thermal stability, extremely low friction coefficient, negligible thermal expansion

Order Number	Tip Length	Ball Size	Thread
52-525-250-0	1/4"	3mm	4-48
52-525-260-0	1/4"	3mm	M2.5
52-525-500-0	1/2"	3mm	4-48
52-525-750-0	3/4"	3mm	4-48

Dial Indicator Contact Points

Contact Points Included:

1	Radius point, 0.375" long
2	Radius point, 0.625" long
3	Radius point, 0.875" long
4	Flat point, 0.875" long
5	Flat point, 0.75" long
6	Flat point, 0.625" long
7	Flat point, 0.50" long
8	Flat point, 0.375" long
9	Flat point, 0.25" long
10	Needle (Bent) point with indexing nut
11	Machinable (non-hardened) point, 1.50" long
12	Machinable (non-hardened) point, 0.75" long
13	Needle point, 0.06" dia. x 1.00"
14	Needle point, 0.026" dia. point standard protrusion x 1.00"
15	Needle point, 0.031" dia. point standard protrusion x 1.00"
16	Conical point, 0.50" long
17	Conical point, 0.625" long
18	Conical point, 0.75" long
19	Conical point, 0.875" long
20	Cupped ball point, 0.75" long
21	Radius point, 0.25" dia. x 0.25" long
22	Flat point, 0.25" dia. x 0.25" long



Features:

- 22 piece AGD point set for maximum versatility in inspection using a drop indicator
- All pieces are hardened steel except as noted for a long service life
- Diameter of parts are 7/32" except as noted
- Fitted case included



Order Number	Description
52-525-222-1	Contact Points - Complete Set (Includes all points shown)

Indicator Point Extensions and Bases

52-526 Series Features:

- 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"
- Made of stainless steel
- Stackable for extended lengths

54-618-470-0 Features:

- 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 metric M2.5
- Made of stainless steel



54-618-470-0
conversion point adaptor



52-125-004-0
Flat base



52-125-005-0
Radius 0.430"

52-125 Series Features:

- Turn your dial or electronic indicator into a depth gage (may reduce range)
- Fits indicators with 3/8" and 8mm mounting stems
- Ground and lapped base

Order Number	Description
Metric to Inch Conversion Point	
54-618-470-0	1/2" Long Metric to Inch Conversion Point Adaptor
Extension Points	
Inch (4 - 48 thread)	
52-526-001-0	1" extension
52-526-002-0	1-1/2" extension
52-526-003-0	2" extension
52-526-004-0	2-1/2" extension
52-526-005-0	3" extension
52-526-006-0	4" extension
52-526-007-0	6" extension
52-526-333-0	Extension Kit (Includes 1", 2" and 3" Extension Points)
Metric (M2.5 thread)	
52-526-011-0	1" extension
52-526-012-0	1-1/2" extension
52-526-013-0	2" extension
52-526-014-0	2-1/2" extension
52-526-015-0	3" extension
52-526-016-0	4" extension
52-526-017-0	6" extension
Depth Bases	
52-125-004-0	Flat dial Indicator depth base - Length 4"
52-125-005-0	Radius dial Indicator depth base - Length 4"



Magnetic Back

Attaches to most 4 hole indicator backs.



52-585-495-0
Indicator not included



52-520-485-0

Order Number	Description
52-585-495-0	Magnetic Back (for 4 hole back with 1.8" centerline distance only)
52-520-485-0	Magnetic Back with AGD group 2 Indicator (52-520-110-0)

Hydraulic Arm Magnetic Base



Features:

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

Order Number	Description
52-585-095-0	Hydraulic Arm Magnetic Base

Magnetic Bases

Features:

- Use with milling machines, lathes, etc.
- 52-585-010-0 & 020-0 supplied with fine adjustment clamp for indicators, electronic probes, etc.
- Base dimensions of 005-0 are 2" x 2-11/32" x 1-13/16" (50mm x 58.7mm x 46mm)
- Base dimensions of 020-0 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 cylindrical surfaces
- On/off lever releases magnet
- Mounts test indicators with 1/4" post mount
- On/off switch



Magnetic base with fine adjust
52-585-005-0



Magnetic base with fine adjust
52-585-020-0

Order Number	Description	Height
52-585-005-0	Magnetic base, 85 lb. pull.	9.5"
52-585-010-0	Magnetic base, 85 lb. pull w/fine adjustment	9.5"
52-585-020-0	Magnetic base, 176 lb. pull w/fine adjustment	9.5"

AnyForm Magnetic Base

Adapts to intricate surfaces to make this an extremely versatile magnetic base.

Features:

- 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



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



Order Number	Base Width	Base Height	Base Depth	Lbs. Pull
52-585-200-0	2-1/4"	2-1/8"	1-3/4"	40

Universal Magnetic Base

For use in small spaces.

Features:

- Locking screw and 2 universal ball sockets for setting at any angle or position
- Microfine adjustment screw
- Removable extension arm 3-9/16"
- Dovetail holder to hold dovetail test indicators
- Accepts 0.250" diameter test indicator stems



Order Number	Base Width	Base Height	O/A Height	Lbs. Pull
52-585-000-0	1-1/2"	1"	4-7/8"	25

Flex Arm Magnetic Bases

Adjustable to any position

Features:

- All purpose magnetic base with 100 lbs. of pulling power
- Base can be mounted vertically as well as horizontally
- V-bottom base allows mounting on cylindrical surfaces
- Accepts AGD indicators as well as Test Indicators with a stem

Chrome Flex Arm Features:

- Corrosion resistant chrome plated flex arm
- 100 lb pull magnetic base



52-585-015-0



52-585-045-0

Order Number	Description
52-585-015-0	Flex Arm Magnetic Base
52-585-045-0	Chrome Flex Arm Magnetic Base
52-585-016-0	Flex Arm only for 52-585-015-0
52-585-240-0	Chrome Flex Arm only for 52-585-045-0

Granite Dial Gage Stand

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



Indicator not included with stand

Features:

- Sturdy and compact with extreme stability
- 6" x 6" x 2" granite base
- Fine adjustment knob for zero setting
- Column height is 8"
- Accepts lug-back indicators
- Flatness: 0.00005"

Order Number	Description
52-580-030-0	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 fine adjustment
- Fine adjustment of 5/32"
- Total height of column 8"
- Dial gage stand holds indicators with stems of 3/8" and 8mm
- 2" round serrated anvil

Order Number	Description
52-580-011-0	High Precision Dial Gage Stand

Long Range Dial Gage Stand

Fowler's High Precision Dial Gage Stand is 14" in overall height and is supplied with 2 anvils; flat and serrated.



Features:

- 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

Order Number	Description
52-580-014-0	Long Range Dial Gage Stand with 2 anvils

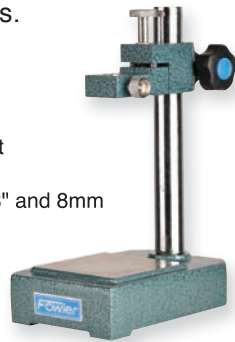
Deluxe Dial Gage Stands

Fowler's deluxe dial gage stands hold indicators and probes for thickness and comparative measurements.

Features:

- Quick positioning and adjustment
- Zero settings with fine adjustment
- Fine adjustment of 5/32"
- Holds indicators with stems of 3/8" and 8mm
- Working surface of 3-1/2" x 3-1/2"

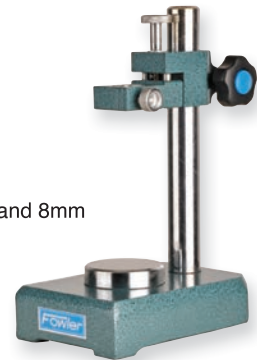
52-580-015-0-0



52-580-010-0 Features:

- Quick positioning and adjustment
- Zero settings with fine adjustment
- Fine adjustment of 5/32"
- Can hold indicators with stems of 3/8" and 8mm
- Round working surface of 2-1/4"

52-580-010-0-0



Order Number	Base Height	Base Width	Base Length	Overall Height	Measuring Range
52-580-015-0	1.5"	4"	6"	8.5"	5"/125mm
52-580-010-0	2"	4"	6"	10"	6"/150mm

Economy Dial Gage Stands

Features:

- Accepts lug-back indicators
- Fine adjustment: 3/8"
- Capacity of 6-1/2" from working surface
- Bracket with 1/4" bolt for dial indicator
- Fine adjustment for zero setting
- Ground working surface 5-1/2" x 4-1/4"

52-580-020-0



Features:

- Accepts dial indicators with 3/8" and 8mm stems
- Fine adjustment: 3/8"
- Capacity of 6-1/2" from working surface
- Microfine adjustment for zero setting
- Ground working surface 5-1/2" x 4-1/4"

52-580-016-0



Order Number	Description
52-580-016-0	Economy Dial Gage Stand for 3/8" indicators
52-580-020-0	Economy Dial Gage Stand for lug back indicators
54-618-460-0	3/8" to 8mm Bushing

Height Transfer & Squareness Gage

Small and compact.

Features:

- 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 place against a master for checking squareness
- Includes a 7.5" post, indicator rod

Indicator and standard shown not included

Order Number	Description
53-620-010-0	Height Transfer & Squareness Gage



Workshop Transfer Stands



52-620-717-0 - Fowler's 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.

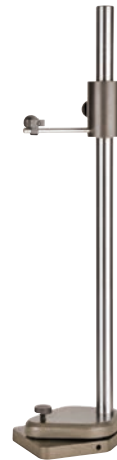


52-620-717-0
(indicator not included)

Features:

- Large positioning range allows extended reach
- Revolutionary design
- Large range fine adjustment
- Holds test indicators or dial gages with dovetail holders & special adaptors
- Can be locked in any position
- Base 3" wide x 3.54" long
- Steel construction

52-620-019-0 - 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, allows the operator to obtain precise readings.



Features:

- Overall Height 19.5"
- Sturdy construction gives complete rigidity when measuring
- Base is hardened and lapped
- Can be used with dial test indicators
- Includes clamp for dovetails and 3/8" dial indicators

52-620-019-0

Order Number	Description
52-620-019-0	18" Workshop Transfer Stand
52-620-717-0	12" Workshop Transfer Stand

Surface Gages

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 cylindrical shafts or flat surfaces.



52-155-010-0

Features:

- Fine adjustments may be obtained for quick and accurate settings with the knurled thumb screw
- Retractable pins in base for work on flat surfaces
- Double-ended scriber included
- Available in standard size and mini-model version
- Clamp can also hold test indicator stems

Order Number	Description	Base Dimensions		
		Height	Width	Length
52-155-007-0	Surface gage with 4" & 7" spindles	0.700"	1.500"	2.20"
52-155-010-0	Surface gage with 9" spindle	1.100"	2.50"	3.80"

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



52-155-747-0



Features:

- 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
- 0.0005" test indicator 52-562-778-0 with 0.040", 0.080" & 0.120" contact points (page 29)
- Swivel clamp to mount indicator
- 4" hardened scriber

Order Number	Description
52-155-747-0	Xtra-Surf Set with Test indicator
52-155-743-0	Xtra-Surf without indicator



DEPTH GAGES



S_Depth PRO Depth Gages

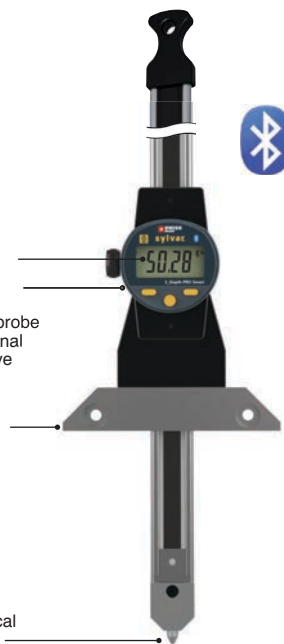
Special Features:

- Preset function
- Switchable measuring direction
- Battery life: 5,000 hours of operation
- Internal/External measurement
- Interchangeable bases (optional)

- LCD digital display
- Automatic reference change (REFI/REFII)
- Similar to a height gage the probe constant is added to an internal measurement for easy groove measurements

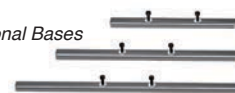
4"/100mm Base additional bases available

Shown with 54-139-101-0 vertical contact point



Compatible Accessories

Additional Bases



Vertical Contact Point comes standard



Even Top/Bottom Measuring Faces



Horizontal Pin



Order Number	Description	Accuracy
54-139-012-BT	12"/300mm S_Depth PRO	0.0012"/0.03mm
54-139-024-BT	24"/600mm S_Depth PRO	0.0016"/0.04mm
Accessories		
54-139-186-0	Additional Base - 180mm	
54-139-260-0	Additional Base - 260mm	
54-139-320-0	Additional Base - 320mm	
54-139-101-0	Vertical Contact Point - supplied as standard	
54-139-102-0	Even Top/Bottom Measuring Faces	
54-139-103-0	Horizontal Pin	
54-115-444-0	Computer Connect Kit RS-232	
54-115-528-0	Computer Connect Kit USB	

S_Depth Gages

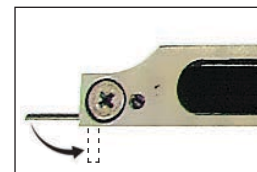


Perfect for measuring depths, groove widths, slot widths, recess heights, step heights and through holes.

Features:

- IP67 protected against fluid and dust
- Bluetooth connectivity to your phone or tablet
- 3 measuring styles available
- 4"/100mm measuring base as standard
- Optional bases available for larger widths
- Optional probes available for 54-139-160 series
- Extra large display
- Absolute measuring system

Rotary Pin Series 54-139-162-3



Showing the other position of the pin



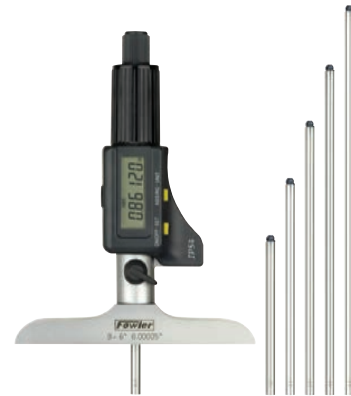
Order Number	Description	Range	Accuracy
54-139-160-1	Interchangeable Anvil Depth Gage	0 - 8"/200mm	0.0012"/0.03mm
54-139-160-3	Interchangeable Anvil Depth Gage	0 - 12"/300mm	0.0012"/0.03mm
54-139-160-5	Interchangeable Anvil Depth Gage	0 - 19"/500mm	0.002"/0.05mm
54-139-161-1	Standard Style Depth Gage	0 - 8"/200mm	0.0012"/0.03mm
54-139-161-3	Standard Style Depth Gage	0 - 12"/300mm	0.0012"/0.03mm
54-139-161-5	Standard Style Depth Gage	0 - 19"/500mm	0.002"/0.05mm
54-139-162-1	Rotary Pin Depth Gage	0 - 8"/200mm	0.0012"/0.03mm
54-139-162-3	Rotary Pin Depth Gage	0 - 12"/300mm	0.0012"/0.03mm
54-139-162-5	Rotary Pin Depth Gage	0 - 19"/500mm	0.002"/0.05mm

Electronic IP54 Depth Micrometer

Our most accurate depth measuring tool.

Features:

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- True inch/metric conversion
- Friction thimble
- 4" Base: Hardened tool steel, precision ground and microlapped
- Rod diameter: 0.176"
- Large easy-to-read LCD display
- Easy, snap-fit rod insertion



Order Number	Range	Accuracy
54-225-456-0	0 - 6"/150mm	0.00016"/0.004mm
Accessory		
54-115-779-0	SPC USB Cable	

XTRA-VALUE Electronic Depth Gage

Light and compact

Features:

- Resolution: 0.0005"/0.01mm/fractions in 1/64ths
- Spring-loaded and hold measurement button for ease-of-use
- Super-large display
- Travel: 0-1"/25mm



Order Number	Range	Accuracy
54-225-555-0	0 - 16"/406mm	± 0.001"/0.02mm

X-DEPTH 22-E Electronic Depth Gage

Provides rapid electronic 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"/0 - 558mm 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 threads

Indicator Features:

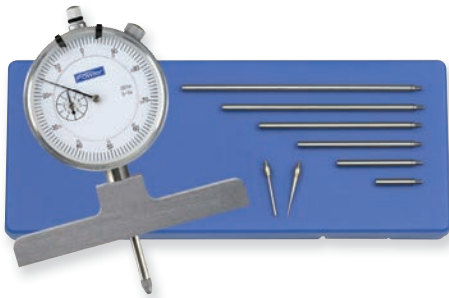
- 0 - 1" travel electronic indicator
- Resolution: 0.0005"/0.01mm
- Direct inch/metric conversion
- Zero reset at any position
- Hold feature
- Incremental/absolute measuring
- Tolerance function



Order Number	Range	Accuracy	Base Size
54-125-777-0	0 - 22"/558mm	± 0.001"/0.03mm	4" x 0.630"

X-DEPTH 22® Dial Depth Gage

Provides rapid measurement of hole depths.



Features:

- Measurements automatically registered directly on dial face in 0.001" graduations. The dial indicator can be easily adjusted for zero setting.
- 0 - 1" travel indicator
- Graduations: 0.001"
- 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 threads

Order Number	Range	Accuracy
52-125-006-1	0 - 22"/0 - 558mm	± 0.001"

Digit Counter Depth Micrometers



52-225-226-0

Features:

- Easy-to-read digit counter
- Graduation: 0.001"
- 4" base constructed of tool steel, hardened and ground
- Ratchet thimble
- Locking clamp
- Rod diameter: 0.176"

Order Number	Range	Accuracy	Base Size
52-225-176-0	0 - 6"	0.0002"	2.5"
52-225-226-0	0 - 6"	0.0002"	4"

Vernier Depth Micrometers



52-225-116-0

Features:

- Graduation: 0.001"
- Base surface hardened and ground
- Ratchet thimble
- Locking clamp
- Rod diameter: 0.176"

Order Number	Range	Accuracy	Base Size
52-225-110-0	0 - 4"	0.0002"	2.5"
52-225-112-0	0 - 6"	0.0002"	2.5"
52-225-114-0	0 - 4"	0.0002"	4"
52-225-116-0	0 - 6"	0.0002"	4"



DISPLAYS & PROBES



D400S Digital Display



Features:

- 7" digital touch screen display
- Multi-brand compatibility
- Up to 99 instruments can be connected at one time through M-Bus modules
- IP65 protection rating according to IEC 60529
- Stores up to 128 different part configurations
- Up to 30,000 measurements can be saved by configuration
- Displays up to 32 channels simultaneously on the same screen, or distributed up to 32 pages
- Powerful built-in statistics (SPC) module (run chart, Pareto, histogram with Gauss curve, etc)
- PLC functions and PLC communication protocols
- User friendly interface

Specifications:

Sizes (mm)	200 x 143 x 151.6
Weight (kg)	1.3
Protection rating IEC 60529	IP65 - front face
S_Connect	RS232 / USB
Programmable by PC	yes

Order Number	Description
54-618-240-0	D400S Digital Display
Accessories	
54-618-165-0	Foot Pedal
* For M-bus modules, see page 53	



D300S Digital Displays



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.

Features:

- 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
- Manage up to 64 instruments with multiplexors simultaneously by software
- Individual preset or by group
- Compatible with Sylvac Bluetooth tools (requires Bluetooth receiver dongle)

Order Number	Description	Inputs
54-618-300-0	D300S Digital Display	2 probes, 6 USB
54-618-320-0	D300S Digital Display	4 probes, 6 USB
54-618-300-1	D300S Digital Display	6 USB, M-Bus
54-618-330-0	D300S Digital Display	2 probes, 6 USB, M-Bus
54-618-340-0	D300S Digital Display	4 probes, 6 USB, M-Bus
Accessories		
54-618-165-0	Foot Pedal	
54-115-340-0	Bluetooth Foot Pedal (requires Bluetooth Receiver)	
54-115-246-BT	USB Bluetooth Receiver	

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



D200S High Speed Probe Measurement System



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



Multiplexer D200S:

- Direct connection of 8 Sylvac probes (max. 24)
- Speeds up to 200 measures/sec
- RS-232/USB output via included software or 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.
Sizes (mm)	304 x 171 x 61
Weight (kg)	1.2
Case	Aluminum profile, Terblen Plastic®, ABS and aluminum vanished
Protection rating IEC 60529	IP50
Setting by PC	yes



Order Number	Description
54-618-159-0	D200S High Speed Probe Measurement System (Requires computer and Sylvac probes)
54-618-163-0	Vacuum Unit for probes 54-618-355 & 365
54-618-164-0	Vacuum Extension Unit for probes 54-618-355 & 365

D70S/H/I Digital Displays

Features:

- IP65 protected against fluid and dust
- 4.3" touch screen display
- Size: 140 x 105 x 111mm, weight: 0.6 kg.
- USB/RS232 serial
- 2 Probe/instrument inputs on all displays
- Single or double display with analog or bargraph display styles
- Direct measurement, Min, Max, Average, Min-Max, or calculations
- Compatibility with Excel and SPC
- User friendly interface



Order Number	Description	Probes
54-618-275-0	D70S Digital Display	Sylvac capacitive probes
54-618-271-0	D70I Digital Display	Heidenhain ST/MT probes
54-618-270-1	D70H Digital Display	Sylvac inductive probes
Accessories		
54-618-165-0	Foot Pedal for D70S	
54-618-169-0	Foot Pedal for D70I and D70H	

Digital 70A Displays



Features:

- 4.3" touch screen display
- Compatible with all brands of plug and air gages
- Available in 1 input and 2 input versions
- Includes input for M-Bus MB-IO modules
- Single or double display with analog or bargraph display styles
- Direct measurement, Min, Max, Average, Min-Max, or Calculations
- Compatibility with Excel and SPC
- User friendly interface

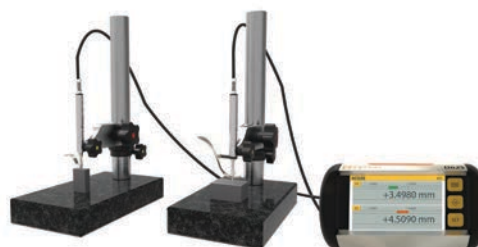
Specifications:

Sizes (mm)	140 x 105 x 111
Weight (kg)	0.6
Protection rating	IP65 (front face) / IP40
Connections	USB / RS232 serial
Instruments	Plug gages & air gages

Order Number	Description
54-618-207-4	One input D70A Digital Display
54-618-207-5	Two input D70A Digital Display
Accessories	
54-618-169-0	Foot Pedal
54-804-220-3	Air Kit for D70A
54-804-410-1	Restrictor Ø 0.3mm
54-804-410-2	Restrictor Ø 0.4mm
54-804-410-3	Restrictor Ø 0.5mm
54-804-410-4	Restrictor Ø 0.7mm



D62 Digital Displays



D62S Features:

- D62S displays are light weight, compact units designed exclusively for P12D probes using an M8 industrial connector. Each display features a 4.3" touchscreen color display, and a selectable resolution up to 0.00001"/0.01µm.
- 2 M8 connectors for P12D probes
- Foot Pedal connection
- Basic mathematical functions
- Tolerances, go-nogo, Int., Ext.

D62S Advanced Features:

- D62S Advanced units include all features of the D62S Digital Displays
- Bluetooth wireless technology
- Built in battery autonomy of 8 hours
- Global tolerance LED indicators
- Formulas, min, max, delta
- Time and date displays
- 2 foot pedal connections

Order Number	Description
54-618-106-2	D62S Digital Display
54-618-106-3	D62S Advanced Digital Display
Accessories	
54-618-165-0	Foot Pedal
54-199-018-0	Replacement Charging Unit

Specifications:

Sizes (mm)	167 x 90 x 90
Weight (kg)	0.75
Case	Aluminum case with shockproof rubber protection, Front screen
Protection rating	IP54 protected
IEC 60529	RS232 / USB
Connection Type	(Bluetooth on D62S Advanced)
Programmable by PC	Yes

Digital Indication Units for Sylvac Probes

Features:

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

D-50S Pro



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

Order Number	Description
54-618-142-0	Digital Indication Unit (D-50S Pro)
Accessories	
54-618-166-0	Data Cable RS232C 9m/9m 9 Pin 2m
54-618-165-0	Foot Pedal

Features:

- 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



Order Number	Description
54-618-148-0	Digital Indication Unit (D-50S), Includes foot pedal
Accessories	
54-618-165-0	Foot Pedal
54-618-166-0	Data Cable RS232C 9m/9m 9 Pin 2m

Sylvac Probes

Long range probes with high accuracy.

Features:

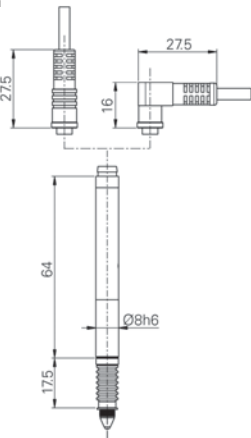
- Probes are made of stainless steel, heavily chrome-plated and supplied with 5' cable and standard carbide contact point .078"/2mm ball diameter. The friction bearing design provides smooth measuring for exceptional accuracy. Probes are shock-proof and unaffected by magnetism or humidity.
- Accessories 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



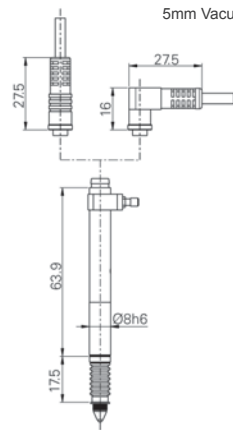
Order Number	Meas. Range	Meas. Force	Repeatability	Maximum Error	Cable Angle	Vacuum	Boot
54-618-350-0	5mm	0.6 - 1.2N	0.00001"/0.2µm	0.00004"/1µm	straight	no	yes
54-618-355-0	5mm	0.6 - 1.2N	0.00001"/0.2µm	0.00004"/1µm	straight	yes	yes
54-618-360-0	5mm	0.6 - 1.2N	0.00001"/0.2µm	0.00004"/1µm	right	no	yes
54-618-365-0	5mm	0.6 - 1.2N	0.00001"/0.2µm	0.00004"/1µm	right	yes	yes
54-618-400-0	10mm	0.6 - 0.8N	0.00001"/0.2µm	0.00004"/1µm	straight	no	no
54-618-401-0	10mm	—	0.00001"/0.2µm	0.00004"/1µm	straight	no	no
54-618-402-0	10mm	0.7 - 1.25N	0.00001"/0.2µm	0.00004"/1µm	straight	no	yes
54-618-403-0	10mm	—	0.00001"/0.2µm	0.00004"/1µm	right	no	no
54-618-404-0	10mm	0.7 - 1.25N	0.00001"/0.2µm	0.00004"/1µm	right	no	yes
54-618-444-0	10mm	0.6 - 0.8N	0.00001"/0.2µm	0.00004"/1µm	right	no	no
54-618-500-0	25mm	0.6 - 1N	0.00001"/0.2µm	0.00005"/1.2µm	straight	no	no
54-618-505-0	25mm	0.65 - 1.4N	0.00001"/0.2µm	0.00005"/1.2µm	straight	no	yes

Probes

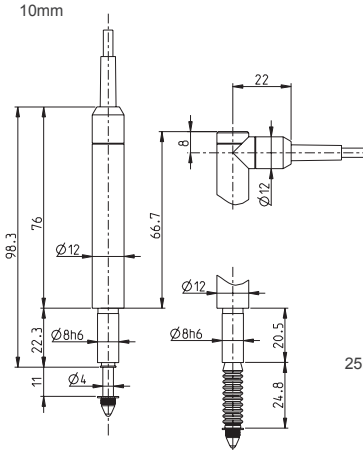
5mm



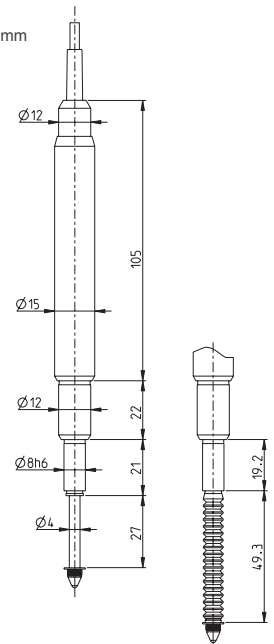
5mm Vacuum



10mm



25mm



Order Number	Description
Accessories	
54-618-540-0	Standard contact point (included with No. 54-618-400-0, 444-0, 500-0 and 700-0). M2.5 thread; 0.080" ball
54-618-544-0	Rubber boot for No. 54-618-400-0 & 444-0
54-618-545-0	Rubber boot for No. 54-618-500-0
54-618-460-0	3/8" to 8mm bushing
54-618-470-0	M2.5/4-48 adapter
Cables	
54-618-351-0	Replacement Cable for No. 54-618-350-0/355-0
54-618-361-0	Replacement Cable for No. 54-618-360-0/365-0
54-618-401-0	Replacement Cable for No. 54-618-400-0
54-618-445-0	Replacement Cable for No. 54-618-444-0
54-618-501-0	Replacement Cable for No. 54-618-500-0
54-618-701-0	Replacement Cable for No. 54-618-700-0
54-618-446-0	Heavy Duty 1.5m Replacement Cable for No. 54-618-400-0
54-618-504-0	Heavy Duty 5m Replacement Cable for No. 54-618-500-0

P12D Sylvac Probes



Features:

- Absolute digital measuring probes feature a travel range of 0.5" / 12.7mm, and use a patented dual inductive and capacitive system
- Probes contain an integrated correction, and do not require pairing with a display unit, while also being able to output data directly onto a PC by USB
- Probes come with an interchangeable stainless steel contact point, with a 0.078" / 2mm diameter tungsten carbide ball point, and a M2.5 thread
- Each probe includes a calibration certificate.
- Probes have an IP54 rating
- Standard cable length 5.9' / 1.8m

Order Number	Measuring Force	Repeatability	Maximum Error	Resolution	Output Type
54-619-101-2	0.2 - 0.3N	0.000003"/0.08µm	0.00002"/0.6µm	0.0000004"/0.01µm	USB
54-619-101-8	0.06N	0.000003"/0.08µm	0.00002"/0.6µm	0.0000004"/0.01µm	USB
54-619-121-2	0.2 - 0.3N	0.000003"/0.08µm	0.00002"/0.6µm	0.0000004"/0.01µm	M8
54-619-121-8	0.09N	0.000003"/0.08µm	0.00002"/0.6µm	0.0000004"/0.01µm	M8
54-619-201-2	0.4 - 0.8N	0.00001"/0.2µm	0.00004"/1µm	0.000004"/0.1µm	USB
54-619-201-7	0.2 - 0.3N	0.00001"/0.2µm	0.00004"/1µm	0.000004"/0.1µm	USB

M-Bus Multiplexer Units



54-804-212-2



54-804-211-4



54-804-211-8



54-804-213-0



54-804-214-0



54-804-217-0

Features:

- M-Bus multiplexing units are available in different versions, allowing for inputs of capacitive, inductive, Heidenhain, and Digitmatic probes. Other input options include PLC, Power Supply output, direct computer connection, temperature sensor input PT100 and thermocouple, Bluetooth instruments, and plug and air gages
- Allows for mixing and connecting of different brands together
- RS485 based protocol
- Different units can be mounted on a DIN rail

Order Number	Description	Instrument Input Type	Compatible Displays
54-804-210-4	MB - 4C	4 Sylvac capacitive probes inputs	D300S and D400S
54-804-210-8	MB - 8i	8 inductive probes inputs	D300S and D400S
54-804-212-2	MB - 2S	2 Heidenhain probes (11µmA/IVPP)	D300S and D400S
54-804-211-4	MB - 4D	4 Digitmatic inputs	D300S and D400S
54-804-211-8	MB - 8D	8 Digitmatic inputs	D300S and D400S
54-804-213-0	MB - 1O	8 PLC I/O inputs	D70A, D300S and D400S
54-804-214-0	MB - PS	12 - 30 VDC power supply	D300S and D400S
54-804-216-0	MB - RS	Computer input	Computer
54-804-217-0	MB - TP	Temperature sensor input PT100 and Thermocouple	D300S and D400S
54-804-218-0	MB - BT	8 Bluetooth instrument inputs	D400S
54-804-219-0	MB - AG	1 plug gage and air gage input	D400S



BORE GAGES



Ultima Bore Gaging System

Featuring Fowler 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.

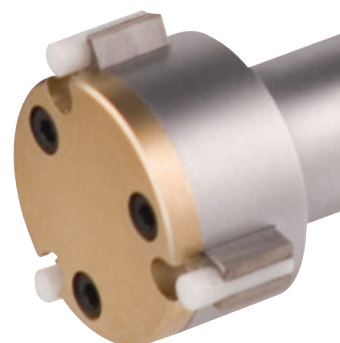


Special features:

- 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 with depth-stop as standard

Features:

- Measuring range: 0.078" - 12.3"/2 - 310mm
- Resolution: 0.00001"/0.0001mm
- Constant spring pressure ensures top repeatability
- Positive feel when heads self-center 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 0.472"/12mm
- Blind-bore measurement standard above 0.472"/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



Ceramic anvils for extended life!



Contact the Fowler Technical Department for special head applications.

See Sylvac D62 Digital Displays on page 50.



Ultima Bore Gaging System

Ultima Bore Gaging System - Individual Heads

Order Number	Range	Accuracy	Measuring Depth
54-565-201-0	0.078" - 0.098"/2.0 - 2.5mm	0.00004"/0.0010mm	0.35"/9mm
54-565-202-0	0.098" - 0.118"/2.5 - 3.0mm	0.00004"/0.0010mm	0.35"/9mm
54-565-203-0	0.118" - 0.157"/3 - 4mm	0.00004"/0.0010mm	0.47"/12mm
54-565-204-0	0.157" - 0.197"/4 - 5mm	0.00004"/0.0010mm	0.71"/18mm
54-565-205-0	0.197" - 0.236"/5 - 6mm	0.00004"/0.0010mm	0.71"/18mm
54-565-206-0	0.236" - 0.315"/6 - 8mm	0.00004"/0.0010mm	2.36"/60mm
54-565-207-0	0.315" - 0.393"/8 - 10mm	0.00004"/0.0010mm	2.36"/60mm
54-565-208-0	0.393" - 0.472"/10 - 12mm	0.00004"/0.0010mm	2.4"/61mm
54-565-209-0	0.472" - 0.550"/12 - 14mm	0.00004"/0.0010mm	2.4"/61mm
54-565-210-0	0.550" - 0.670"/14 - 17mm	0.00004"/0.0010mm	2.4"/61mm
54-565-211-0	0.670" - 0.787"/17 - 20mm	0.00004"/0.0010mm	2.4"/61mm
54-565-212-0	0.787" - 0.945"/20 - 24mm	0.00004"/0.0010mm	2.72"/69mm
54-565-213-0	0.945" - 1.1"/24 - 28mm	0.00004"/0.0010mm	2.72"/69mm
54-565-214-0	1.1" - 1.26"/28 - 32mm	0.00004"/0.0010mm	2.72"/69mm
54-565-215-0	1.26" - 1.5"/32 - 38mm	0.00004"/0.0010mm	2.83"/72mm
54-565-216-0	1.5" - 1.73"/38 - 44mm	0.00004"/0.0010mm	2.83"/72mm
54-565-217-0	1.73" - 1.97"/44 - 50mm	0.00004"/0.0010mm	2.83"/72mm
54-565-218-0	1.97" - 2.36"/50 - 60mm	0.00006"/0.0015mm	3.15"/80mm
54-565-219-0	2.36" - 2.756"/60 - 70mm	0.00006"/0.0015mm	3.15"/80mm
54-565-220-0	2.756" - 3.15"/70 - 80mm	0.00006"/0.0015mm	3.15"/80mm
54-565-221-0	3.15" - 3.543"/80 - 90mm	0.00006"/0.0015mm	3.15"/80mm
54-565-222-0	3.543" - 3.94"/90 - 100mm	0.00006"/0.0015mm	3.15"/80mm
54-565-223-0	3.94" - 4.33"/100 - 110mm	0.00006"/0.0015mm	3.15"/80mm
54-565-224-0	4.33" - 4.725"/110 - 120mm	0.00006"/0.0015mm	3.15"/80mm
54-565-225-0	4.725" - 5.12"/120 - 130mm	0.00006"/0.0015mm	3.15"/80mm
54-565-226-0	5.12" - 5.51"/130 - 140mm	0.00006"/0.0015mm	3.15"/80mm
54-565-227-0	5.51" - 5.9"/140 - 150mm	0.00006"/0.0015mm	3.15"/80mm
54-565-228-0	5.9" - 6.3"/150 - 160mm	0.00006"/0.0015mm	3.15"/80mm
54-565-229-0	6.3" - 6.69"/160 - 170mm	0.00006"/0.0015mm	3.15"/80mm
54-565-230-0	6.69" - 7.09"/170 - 180mm	0.00006"/0.0015mm	3.15"/80mm
54-565-231-0	7.09" - 7.48"/180 - 190mm	0.00006"/0.0015mm	3.15"/80mm
54-565-232-0	7.48" - 7.875"/190 - 200mm	0.00006"/0.0015mm	3.15"/80mm
54-565-233-0	7.875" - 8.27"/200 - 210mm	0.00006"/0.0015mm	3.15"/80mm
54-565-234-0	8.27" - 8.661"/210 - 220mm	0.00008"/0.0020mm	3.15"/80mm
54-565-235-0	8.661" - 9.055"/220 - 230mm	0.00008"/0.0020mm	3.15"/80mm
54-565-236-0	9.055" - 9.449"/230 - 240mm	0.00008"/0.0020mm	3.15"/80mm
54-565-237-0	9.449" - 9.842"/240 - 250mm	0.00008"/0.0020mm	3.15"/80mm
54-565-238-0	9.842" - 10.236"/250 - 260mm	0.00008"/0.0020mm	3.15"/80mm
54-565-239-0	10.236" - 10.63"/260 - 270mm	0.00008"/0.0020mm	3.15"/80mm
54-565-240-0	10.63" - 11.024"/270 - 280mm	0.00008"/0.0020mm	3.15"/80mm
54-565-241-0	11.024" - 11.417"/280 - 290mm	0.00008"/0.0020mm	3.15"/80mm
54-565-242-0	11.417" - 11.811"/290 - 300mm	0.00008"/0.0020mm	3.15"/80mm
54-565-243-0	11.811" - 12.2"/300 - 310mm	0.00008"/0.0020mm	3.15"/80mm

Ultima Bore Gaging System - Sets

For use with D62 and D300 displays.



Order Number	Description
54-565-006-1	0.078" - 0.236"/2 - 6mm Includes: handle, rings & heads. Does not include readout
54-565-010-1	0.236" - 0.393"/6 - 10mm Includes: handle, rings & heads. Does not include readout
54-565-020-1	0.393" - 0.787"/10 - 20mm Includes: handle, rings & heads. Does not include readout
54-565-070-1	0.236" - 0.787"/6 - 20mm Includes: handle, rings & heads. Does not include readout
54-565-080-1	0.787" - 1.97"/20 - 50mm Includes: handle, rings & heads. Does not include readout
54-565-090-1	1.97" - 3.94"/50 - 100mm Includes: handle, rings & heads. Does not include readout
54-565-100-1	0.787" - 3.94"/20 - 100mm Includes: handle, rings & heads. Does not include readout

Ultima Bore Gaging System



Ultima Bore Gaging System- Rings: Bowers Precision Class

Order Number	Size	Order Number	Size
54-565-401-0	0.098"/2.5mm	54-565-412-0	3.94"/100mm
54-565-402-0	0.157"/4mm	54-565-413-0	4.725"/120mm
54-565-403-0	0.197"/5mm	54-565-414-0	5.51"/140mm
54-565-404-0	0.315"/8mm	54-565-415-0	6.3"/160mm
54-565-405-0	0.472"/12mm	54-565-416-0	7.09"/180mm
54-565-406-0	0.670"/17mm	54-565-417-0	7.875"/200mm
54-565-407-0	0.945"/24mm	54-565-418-0	8.661"/220mm
54-565-408-0	1.26"/32mm	54-565-419-0	9.449"/240mm
54-565-409-0	1.73"/44mm	54-565-420-0	10.236"/260mm
54-565-410-0	2.36"/60mm	54-565-421-0	11.024"/280mm
54-565-411-0	3.15"/80mm	54-565-422-0	11.811"/300mm

Transducer Handle

Order Number	Description	Range
54-565-525-1	PH2 holder	0.078" - 0.236"/2 - 6mm
54-565-526-1	PH3 holder	0.236" - 0.787"/6 - 20mm
54-565-527-1	PH4 holder	0.787" - 3.94"/20 - 100mm
54-565-528-1	PH5 holder	3.94" - 12.2"/100 - 310mm

Ultima Standard Extensions

Order Number	Length	Range
54-565-601-0	2.48"/63mm	0.236" - 0.393"/6 - 10mm
54-565-602-0	2.952"/75mm	0.393" - 0.472"/10 - 12mm
54-565-603-0	3.937"/100mm	0.472" - 0.787"/12 - 20mm
54-565-604-0	5.905"/150mm	0.787" - 1.97"/20 - 50mm
54-565-605-0	5.905"/150mm	1.97"/50mm and up

Ultima Short Extensions

Order Number	Length	Range
54-565-606-0	1.97"/50mm	0.787" - 1.97"/20 - 50mm
54-565-607-0	1.97"/50mm	1.97"/50mm and up

Available Readouts - see pages 48, 50 & 51

Order Number	Description
54-618-300-0	Sylvac D-300S Digital Display
54-618-148-0	Sylvac D-50S Digital Display
54-618-142-0	Sylvac D-50S Pro Digital Display
54-618-106-2	Sylvac D-62S Display
54-618-106-3	Sylvac D-62S Advanced Display

XT3 Bore Gaging System

The XT3 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.



Special Applications

Although Fowler Bowers produces the most comprehensive series of bore gages and internal measuring equipment available, not all applications can be covered by our standard instrument range. In line with our customer care ethos, Bowers has earned a reputation for manufacturing special heads for measuring non-standard applications. The following illustrates some of the many difficult measuring problems easily solved by these special heads.



Contact the Fowler Technical Department 1-800-788-2353

XTH3 Bluetooth Holematic Pistol Grips

Fowler Bowers XT3 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."



54-567-740-BT



54-567-706-BT

Features:

- IP67 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Bluetooth connectivity to your phone or tablet
- Self centering 3 point heads above 0.250"
- Tungsten carbide measuring faces on all 3-point heads from 0.5"/12.5mm and up
- Sizes over 0.500"/12.5mm feature blind bore capability
- Includes UKAS certificates for all pistol grips, heads and rings

Bluetooth Electronic Holematic Pistol Grip XTH3 - Individual sizes includes pistol grip, head and ring.

Contact the Fowler Technical Department for special anvil applications.

Order Number	Range	Accuracy	Depth
2-Point Heads			
54-567-701-BT	0.080" - 0.100"/2 - 2.5mm	0.00015"/0.004mm	0.350"/9mm
54-567-702-BT	0.100" - 0.120"/2.5 - 3mm	0.00015"/0.004mm	0.350"/9mm
54-567-703-BT	0.120" - 0.160"/3 - 4mm	0.00015"/0.004mm	0.470"/12mm
54-567-704-BT	0.160" - 0.200"/4 - 5mm	0.00015"/0.004mm	0.700"/18mm
54-567-705-BT	0.200" - 0.250"/5 - 6mm	0.00015"/0.004mm	0.700"/18mm
3-Point Heads			
54-567-706-BT	0.250" - 0.312"/6 - 8mm	0.00015"/0.004mm	2.28"/58mm
54-567-708-BT	0.312" - 0.375"/8 - 10mm	0.00015"/0.004mm	2.28"/58mm
54-567-710-BT	0.375" - 0.500"/10 - 12.5mm	0.00015"/0.004mm	2.28"/58mm
54-567-712-BT	0.500" - 0.625"/12.5 - 16mm	0.00015"/0.004mm	2.44"/62mm
54-567-716-BT	0.625" - 0.750"/16 - 20mm	0.00015"/0.004mm	2.44"/62mm
54-567-720-BT	0.750" - 1"/20 - 25mm	0.00015"/0.004mm	2.62"/66mm
54-567-725-BT	1" - 1.375"/25 - 35mm	0.00015"/0.004mm	2.62"/66mm
54-567-735-BT	1.375" - 2"/35 - 50mm	0.00015"/0.004mm	3.15"/80mm
54-567-740-BT	2" - 2.625"/50 - 65mm	0.00020"/0.005mm	3.15"/80mm
54-567-745-BT	2.625" - 3.250"/65 - 80mm	0.00020"/0.005mm	3.15"/80mm
54-567-750-BT	3.250" - 4"/80 - 100mm	0.00020"/0.005mm	3.35"/85mm
54-567-800-BT	4" - 5"/100 - 125mm	0.00025"/0.006mm	3.94"/100mm
54-567-825-BT	5" - 6"/125 - 150mm	0.00025"/0.006mm	3.94"/100mm
54-567-850-BT	6" - 7"/150 - 175mm	0.00030"/0.007mm	3.94"/100mm
54-567-875-BT	7" - 8"/175 - 200mm	0.00030"/0.007mm	3.94"/100mm
54-567-876-BT	8" - 9"/200 - 225mm	0.00030"/0.008mm	3.94"/100mm
54-567-877-BT	9" - 10"/225 - 250mm	0.00030"/0.008mm	4.05"/103mm
54-567-878-BT	10" - 11"/250 - 275mm	0.00035"/0.009mm	4.05"/103mm
54-567-879-BT	11" - 12"/275 - 300mm	0.00035"/0.009mm	4.05"/103mm



XTH3 Bluetooth Holecmatic Pistol Grip Sets



54-567-050-BT

Complete Range Sets

Order Number	Range	Includes
54-567-009-BT	0.080" - 0.250"/2 - 6mm	5 heads, 1 handle, 3 rings
54-567-010-BT	0.250" - 0.375"/6 - 10mm	2 heads, 1 handle, 1 ring
54-567-020-BT	0.375" - 0.750"/10 - 20mm	3 heads, 1 handle, 2 rings
54-567-050-BT	0.750" - 2"/20 - 50mm	3 heads, 1 handle, 2 rings
54-567-100-BT	2" - 4"/50 - 100mm	3 heads, 1 handle, 2 rings
54-567-105-BT	4" - 6"/100 - 150mm	2 heads, 1 handle, 1 ring
54-567-110-BT	6" - 8"/150 - 200mm	2 heads, 1 handle, 1 ring
54-567-200-BT	4" - 8"/100 - 200mm	4 heads, 1 handle, 2 rings
54-567-210-BT	0.750" - 4"/20 - 100mm	6 heads, 1 handle, 4 rings
54-567-620-BT	0.250" - 0.750"/6 - 20mm	5 heads, 1 handle, 3 rings

Pistol Grips



54-567-375-BT

Holecmatic XTH Pistol Grip Only

Order Number	Range
54-567-350-BT	0.080" - 0.250"/2 - 6mm
54-567-375-BT	0.250" - 0.750"/6 - 20mm
54-567-400-BT	0.750" - 4"/20 - 100mm
54-567-480-BT	4" - 12"/100 - 300mm

Connectivity Kits

Order Number	Description
54-115-526-0	Proximity cable with USB connection
54-115-527-0	Proximity cable with serial connection
54-115-246-BT	USB bluetooth receiver

XTD3 Bluetooth Electronic Holemikes

The Fowler Bowers XT3 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.



54-367-022-BT



54-367-014-BT

Features:

- IP67 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Bluetooth connectivity to your phone or tablet
- Self centering 3 point heads above 0.250"
- Tungsten carbide measuring faces on all 3-point heads from 0.5"/12.5mm and up
- Sizes over 0.500"/12.5mm feature blind bore capability
- Includes UKAS certificates for all pistol grip, heads and rings

Bluetooth Electronic Holemike XTD3 - Individual sizes includes head, handle and ring.

Contact the Fowler Technical Department for special anvil applications.

Order Number	Range	Accuracy	Depth
2-Point Heads			
54-367-003-BT	0.080" - 0.100"/2 - 2.5mm	0.00015"/0.004mm	0.350"/9mm
54-367-004-BT	0.100" - 0.120"/2.5 - 3mm	0.00015"/0.004mm	0.350"/9mm
54-367-005-BT	0.120" - 0.160"/3 - 4mm	0.00015"/0.004mm	0.470"/12mm
54-367-006-BT	0.160" - 0.200"/4 - 5mm	0.00015"/0.004mm	0.700"/18mm
54-367-007-BT	0.200" - 0.250"/5 - 6mm	0.00015"/0.004mm	0.700"/18mm
3-Point Heads			
54-367-008-BT	0.250" - 0.312"/6 - 8mm	0.00015"/0.004mm	2.28"/58mm
54-367-011-BT	0.312" - 0.375"/8 - 10mm	0.00015"/0.004mm	2.28"/58mm
54-367-012-BT	0.375" - 0.500"/10 - 12.5mm	0.00015"/0.004mm	2.28"/58mm
54-367-014-BT	0.500" - 0.625"/12.5 - 16mm	0.00015"/0.004mm	2.44"/62mm
54-367-016-BT	0.625" - 0.750"/16 - 20mm	0.00015"/0.004mm	2.44"/62mm
54-367-018-BT	0.750" - 1"/20 - 25mm	0.00015"/0.004mm	2.62"/66mm
54-367-021-BT	1" - 1.375"/25 - 35mm	0.00015"/0.004mm	2.62"/66mm
54-367-022-BT	1.375" - 2"/35 - 50mm	0.00015"/0.004mm	3.15"/80mm
54-367-024-BT	2" - 2.625"/50 - 65mm	0.00020"/0.005mm	3.15"/80mm
54-367-026-BT	2.625" - 3.250"/65 - 80mm	0.00020"/0.005mm	3.15"/80mm
54-367-028-BT	3.250" - 4"/80 - 100mm	0.00020"/0.005mm	3.94"/100mm
54-367-030-BT	4" - 5"/100 - 125mm	0.00025"/0.006mm	4.53"/115mm
54-367-032-BT	5" - 6"/125 - 150mm	0.00025"/0.006mm	4.53"/115mm
54-367-034-BT	6" - 7"/150 - 175mm	0.00030"/0.007mm	4.53"/115mm
54-367-036-BT	7" - 8"/175 - 200mm	0.00030"/0.007mm	4.53"/115mm
54-367-037-BT	8" - 9"/200 - 225mm	0.00030"/0.008mm	4.65"/118mm
54-367-038-BT	9" - 10"/225 - 250mm	0.00030"/0.008mm	4.65"/118mm
54-367-039-BT	10" - 11"/250 - 275mm	0.00035"/0.009mm	4.65"/118mm
54-367-040-BT	11" - 12"/275 - 300mm	0.00035"/0.009mm	4.65"/118mm



XTD3 Bluetooth Electronic Holemike Sets



54-367-020-BT

Electronic Holemike XTD3 Complete Range Sets

Order Number	Range	Set Includes
54-367-000-BT	0.080" - 0.250"/2 - 6mm	5 heads, 1 handle, 3 rings
54-367-010-BT	0.250" - 0.375"/6 - 10mm	2 heads, 1 handle, 1 ring
54-367-020-BT	0.375" - 0.750"/10 - 20mm	3 heads, 1 handle, 2 rings
54-367-050-BT	0.750" - 2"/20 - 50mm	3 heads, 1 handle, 2 rings
54-367-100-BT	2" - 4"/50 - 100mm	3 heads, 1 handle, 2 rings
54-367-105-BT	4" - 6"/100 - 150mm	2 heads, 1 handle, 1 ring
54-367-110-BT	6" - 8"/150 - 200mm	2 heads, 1 handle, 1 ring
54-367-200-BT	4" - 8"/100 - 200mm	4 heads, 1 handle, 2 rings

Holematic XTD3 Holemike Handle Only

Order Number	Range
54-367-556-BT	0.080" - 0.250"/2 - 6mm
54-367-550-BT	0.250" - 0.375"/6 - 10mm
54-367-551-BT	0.375" - 0.750"/10 - 20mm
54-367-552-BT	0.75" - 2"/20 - 50mm
54-367-553-BT	2" - 4"/50 - 100mm
54-367-554-BT	4" - 8"/100 - 200mm
54-367-557-BT	8" - 12"/200 - 300mm

Connectivity Kits

Order Number	Description
54-115-526-0	Proximity cable with USB connection
54-115-527-0	Proximity cable with serial connection
54-115-246-BT	USB bluetooth receiver

XT Analog Holemikes

The Fowler Bowers range of mechanical two and three point bore micrometers are now available as XTA extended travel versions between 0.080"/2mm and 12"/300mm. This allows wide measurement range without the need to interchange anvils.



52-255-316-0



52-255-312-0

Features:

- 3-pt contact with tungsten carbide measuring anvils above 0.5"
- Blind bore measuring heads featured above 0.5"
- Ratchet stop for consistent measuring
- Extensions available for deep measuring
- Includes UKAS certificates for all Holemikes and setting rings

Analog XTA Holemike - Includes handle, head & ring

Order Number	Range	Grads.	Accuracy	Measuring Depth
2-Point Heads				
52-255-305-0	0.080" - 0.100"	0.0001"	0.00015"	0.350"
52-255-306-0	0.100" - 0.120"	0.0001"	0.00015"	0.350"
52-255-307-0	0.120" - 0.160"	0.0001"	0.00015"	0.470"
52-255-308-0	0.160" - 0.200"	0.0001"	0.00015"	0.700"
52-255-309-0	0.200" - 0.250"	0.0001"	0.00015"	0.700"
3-Point Heads				
52-255-310-0	0.250" - 0.312"	0.0001"	0.00015"	2.28"
52-255-311-0	0.312" - 0.375"	0.0001"	0.00015"	2.28"
52-255-312-0	0.375" - 0.500"	0.0001"	0.00015"	2.28"
52-255-313-0	0.500" - 0.625"	0.0001"	0.00015"	2.44"
52-255-314-0	0.625" - 0.750"	0.0001"	0.00015"	2.44"
52-255-315-0	0.750" - 1"	0.00025"	0.00015"	2.60"
52-255-316-0	1" - 1.375"	0.00025"	0.00015"	2.60"
52-255-317-0	1.375" - 2"	0.00025"	0.00015"	3.15"
52-255-318-0	2" - 2.625"	0.00025"	0.00020"	3.15"
52-255-319-0	2.625" - 3.250"	0.00025"	0.00020"	3.15"
52-255-320-0	3.250" - 4"	0.00025"	0.00020"	3.94"
52-255-321-0	4" - 5"	0.00025"	0.00025"	4.53"
52-255-322-0	5" - 6"	0.00025"	0.00025"	4.53"
52-255-323-0	6" - 7"	0.00025"	0.00030"	4.53"
52-255-324-0	7" - 8"	0.00025"	0.00030"	4.53"
52-255-325-0	8" - 9"	0.00025"	0.00030"	4.65"
52-255-326-0	9" - 10"	0.00025"	0.00030"	4.65"
52-255-327-0	10" - 11"	0.00025"	0.00035"	4.65"
52-255-328-0	11" - 12"	0.00025"	0.00035"	4.65"



XT Analog Holemike Sets

Order Number	Range	Includes
52-255-365-0	0.080" - 0.120"	2 heads, 2 handles, 1 ring
52-255-465-0	0.120" - 0.250"	3 heads, 3 handles, 2 rings
52-255-565-0	0.250" - 0.375"	2 heads, 2 handles, 1 ring
52-255-665-0	0.375" - 0.750"	3 heads, 3 handles, 2 rings
52-255-775-0	0.750" - 2"	3 heads, 3 handles, 2 rings
52-255-885-0	2" - 4"	3 heads, 3 handles, 2 rings
52-255-890-0	4" - 6"	2 heads, 2 handles, 1 ring
52-255-900-0	6" - 8"	2 heads, 2 handles, 1 ring



XT Series Components and Accessories

XT Setting Rings: Bowers Class

Order Number	Size
54-332-004-0	0.100"
54-332-005-0	0.160
54-332-006-0	0.200"
54-332-007-0	0.312"
54-332-008-0	0.500"
54-332-009-0	0.750"
54-332-010-0	1.375"

Order Number	Size
54-332-012-0	2.625"
54-332-013-0	3.250"
54-332-014-0	5"
54-332-015-0	7"
54-332-016-0	9"
54-332-017-0	11"



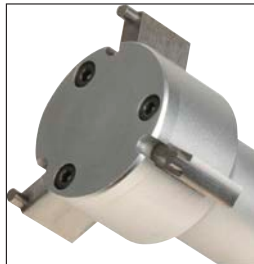
XT Extensions

Order Number	Length	Diameter	Fits Heads
54-336-301-0	2.5"/63mm	0.230"	0.250" - 0.375"/6 - 10mm
54-336-302-0	3"/76mm	0.366"	0.375" - 0.500"/10 - 12.5mm
54-336-303-0	4"/100mm	0.479"	0.500" - 0.750"/12.5 - 20mm
54-336-304-0	6"/150mm	0.740"	0.750" - 2"/20 - 50mm
54-336-305-0	6"/150mm	0.924"	2" and up (50mm and up)
54-336-306-0	20"/500mm	0.757"	0.750" and higher
54-336-307-0	40"/1000mm	1.365"	1.375" and higher

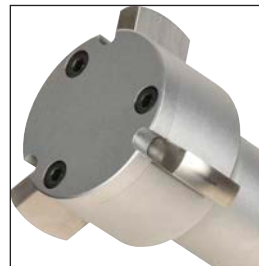


Replacement Heads with Standard Anvils

Order Number	Size
54-342-006-0	0.080" - 0.100"/2 - 2.5mm
54-342-007-0	0.100" - 0.120"/2.5 - 3mm
54-342-008-0	0.120" - 0.160"/3 - 4mm
54-342-009-0	0.160" - 0.200"/4 - 5mm
54-342-010-0	0.200" - 0.250"/5 - 6mm
54-342-011-0	1/4" - 5/16"/6 - 8mm
54-342-012-0	5/16" - 3/8"/8 - 10mm
54-342-013-0	3/8" - 1/2"/10 - 12.5mm
54-342-014-0	1/2" - 5/8"/12.5 - 16mm
54-342-015-0	5/8" - 3/4"/16 - 20mm
54-342-016-0	3/4" - 1"/20 - 25mm
54-342-017-0	1" - 1-3/8"/25 - 35mm
54-342-018-0	1-3/8" - 2"/35 - 50mm
54-342-019-0	2" - 2-5/8"/50 - 65mm
54-342-020-0	2-5/8" - 3-1/4"/65 - 80mm
54-342-021-0	3-1/4" - 4"/80 - 100mm
54-342-022-0	4" - 5"/100 - 125mm
54-342-023-0	5" - 6"/125 - 150mm
54-342-024-0	6" - 7"/150 - 175mm
54-342-025-0	7" - 8"/175 - 200mm
54-342-026-0	8" - 9"/200 - 225mm
54-342-027-0	9" - 10"/225 - 250mm
54-342-028-0	10" - 11"/250 - 275mm
54-342-029-0	11" - 12"/275 - 300mm



Standard Anvils



Spherical Anvils

Replacement Heads with Spherical Anvils

Order Number	Size
54-343-006-1	0.080" - 0.100"/2 - 2.5mm
54-343-007-1	0.100" - 0.120"/2.5 - 3mm
54-343-008-1	0.120" - 0.160"/3 - 4mm
54-343-009-1	0.160" - 0.200"/4 - 5mm
54-343-010-1	0.200" - 0.250"/5 - 6mm
54-343-011-1	1/4" - 5/16"/6 - 8mm
54-343-012-1	5/16" - 3/8"/8 - 10mm
54-343-013-1	3/8" - 1/2"/10 - 12.5mm
54-343-014-1	1/2" - 5/8"/12.5 - 16mm
54-343-015-1	5/8" - 3/4"/16 - 20mm
54-343-016-1	3/4" - 1"/20 - 25mm
54-343-017-1	1" - 1-3/8"/25 - 35mm
54-343-018-1	1-3/8" - 2"/35 - 50mm
54-343-019-1	2" - 2-5/8"/50 - 65mm
54-343-020-1	2-5/8" - 3-1/4"/65 - 80mm
54-343-021-1	3-1/4" - 4"/80 - 100mm
54-343-022-1	4" - 5"/100 - 125mm
54-343-023-1	5" - 6"/125 - 150mm
54-343-024-1	6" - 7"/150 - 175mm
54-343-025-1	7" - 8"/175 - 200mm
54-343-026-1	8" - 9"/200 - 225mm
54-343-027-1	9" - 10"/225 - 250mm
54-343-028-1	10" - 11"/250 - 275mm
54-343-029-1	11" - 12"/275 - 300mm

Contact the Fowler Technical Department for special anvil applications.

XT Holematic Groove Sets

Internal groove diameter is the most common application for special bore gaging equipment. Now Fowler Bowers offers ready made sets and individual heads in the most popular groove sizes requested.

- Fast, easy, accurate groove measurements with the proven Fowler Bowers Holematic Measuring System
- 3 point measuring heads ensure self centering, repetitive measurements
- Other anvil configurations are also available for custom grooves, threads, splines, slots, deep bores and more
- Bluetooth connection to most tablets, phones and laptops



Features:

- Pistol grip handle for FAST measurements
- Self-centering, 3 point heads provide exceptional repeatability
- Resolution: 0.00005"/.001mm, direct in/mm conversion
- Diameters from 1/4" - 4" / 6 - 100mm
- Error free bluetooth data transfer
- IP67 protected against fluid and dust
- Anvil profiles suit common groove sizes - see table
- Includes depth stops and UKAS certified setting rings
- Special sizes, profiles and depth extensions available to measure any bore feature



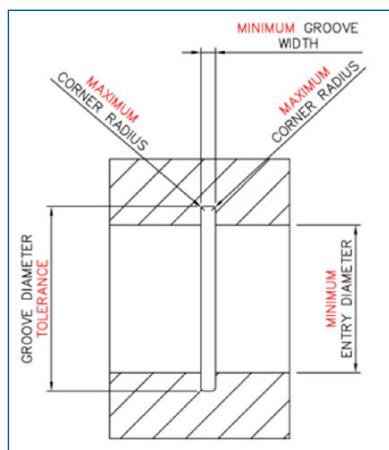
54-344-002-0

XT Holematic Groove Sets

Custom Groove Set

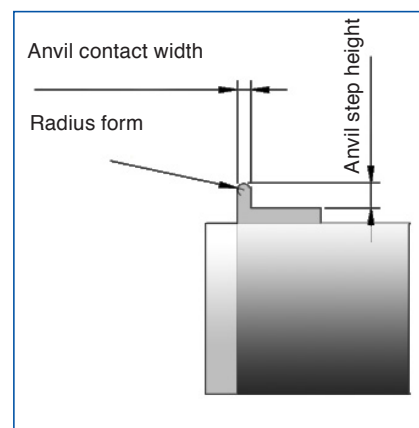
If our standard groove anvil profile is not suitable for your application, please provide us with these 4 dimensions for a specific offer.

We will design a tailor-made head that will fit your specific application.



Standard Groove Anvil Detail

Minimum entry diameter:
0.012"/0.3mm below minimum bore size



Individual Heads

For current holematic users

Order Number	Range
54-344-006-0	1/4" - 5/16"
54-344-008-0	5/16" - 3/8"
54-344-010-0	3/8" - 1/2"
54-344-012-0	1/2" - 5/8"
54-344-016-0	5/8" - 3/4"
54-344-020-0	3/4" - 1"
54-344-025-0	1" - 1-3/8"
54-344-035-0	1-3/8" - 2"
54-344-050-0	2" - 2-5/8"
54-344-065-0	2-5/8" - 3"
54-344-080-0	3-1/4" - 4"

*Head range must match handle range.
Setting ring may be required.

Includes pistol grip and everything you need to measure.

Order Number	Set Range	Heads Included	Anvil Step Height	Anvil Contact Width	Depth Stop OD	Setting Ring Sizes Included
54-344-001-0	1/4" - 3/4"	1/4" - 5/16"	0.049"	0.059"	0.709"	5/16"
		5/16" - 3/8"	0.049"	0.059"	0.787"	
		3/8" - 1/2"	0.059"	0.059"	0.866"	1/2"
		1/2" - 5/8"	0.079"	0.059"	1.024"	
		5/8" - 3/4"	0.098"	0.059"	1.299"	3/4"
54-344-002-0	3/4" - 2"	3/4" - 1"	0.108"	0.079"	1.535"	3/4"
		1" - 1-3/8"	0.217"	0.079"	1.772"	1-3/8"
		1-3/8" - 2"	0.157"	0.079"	2.362"	
		2" - 2-5/8"	0.315"	0.118"	3.150"	2-5/8"
54-344-003-0	2" - 4"	2-5/8" - 3-1/4"	0.315"	0.118"	3.740"	3-1/4"
		3-1/4" - 4"	0.413"	0.118"	4.528"	

MicroGage - 2 Point Bore Gaging System

The MicroGage 2-point bore gaging system has been designed specifically for the measurement of small bores between 1.0-10.0mm. Featuring a completely new digital readout and extremely compact overall dimensions, the MicroGage is truly a pocket-sized instrument.

Features:

- Measuring range: 1 - 10mm
- New slimline digital display
- Switchable resolution 0.01/0.001/0.0005mm
- Simple 2-button operation
- Clear LCD display
- Data output: RS232 / USB proximity sensor
- Linearity: Diameter 1.0-1.5 max 2% of measuring travel, min 0.001mm. Diameter 1.5-10 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
- Depth-stops available
- Stand available as an option



MicroGage with Depth Stop



Individual Measuring Heads, Readouts and Setting Rings

Head Order Number	Range	Measuring Depth	Digital Readout Order Number	Cone	Setting Ring Order Number	Setting Ring
54-551-201-0	0.037 - 0.045"/0.95 - 1.5mm	0.024 - 0.433"/0.6 - 11mm	54-551-101-0	54-551-301-0	54-551-400-0	0.039"/1mm
54-551-202-0	0.042 - 0.049"/1.07 - 1.25mm	0.024 - 0.433"/0.6 - 11mm	54-551-101-0	54-551-301-0	54-551-401-0	0.043"/1.10mm
54-551-203-0	0.046 - 0.053"/1.17 - 1.35mm	0.024 - 0.433"/0.6 - 11mm	54-551-101-0	54-551-301-0	54-551-402-0	0.047"/1.20mm
54-551-204-0	0.050 - 0.057"/1.27 - 1.45mm	0.024 - 0.433"/0.6 - 11mm	54-551-101-0	54-551-301-0	54-551-403-0	0.051"/1.30mm
54-551-205-0	0.054 - 0.061"/1.37 - 1.55mm	0.024 - 0.433"/0.6 - 11mm	54-551-101-0	54-551-301-0	54-551-404-0	0.055"/1.40mm
54-551-206-0	0.059 - 0.075"/1.50 - 1.90mm	0.035 - 0.669"/0.9 - 17mm	54-551-102-0	54-551-302-0	54-551-405-0	0.069"/1.75mm
54-551-207-0	0.071 - 0.087"/1.80 - 2.20mm	0.035 - 0.669"/0.9 - 17mm	54-551-102-0	54-551-302-0	54-551-406-0	0.079"/2.00mm
54-551-208-0	0.081 - 0.096"/2.05 - 2.45mm	0.035 - 0.669"/0.9 - 17mm	54-551-102-0	54-551-302-0	54-551-407-0	0.089"/2.25mm
54-551-209-0	0.089 - 0.108"/2.25 - 2.75mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-302-0	54-551-408-0	0.098"/2.50mm
54-551-210-0	0.098 - 0.118"/2.50 - 3.00mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-303-0	54-551-409-0	0.108"/2.75mm
54-551-211-0	0.108 - 0.128"/2.75 - 3.25mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-303-0	54-551-410-0	0.118"/3.00mm
54-551-212-0	0.118 - 0.138"/3.00 - 3.50mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-303-0	54-551-411-0	0.128"/3.25mm
54-551-213-0	0.128 - 0.148"/3.25 - 3.75mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-303-0	54-551-412-0	0.138"/3.50mm
54-551-214-0	0.138 - 0.157"/3.50 - 4.00mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-303-0	54-551-413-0	0.148"/3.75mm
54-551-215-0	0.148 - 0.167"/3.75 - 4.25mm	0.047 - 0.866"/1.2 - 22mm	54-551-102-0	54-551-303-0	54-551-414-0	0.157"/4.00mm
54-551-216-0	0.144 - 0.171"/3.65 - 4.35mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-414-0	0.157"/4.00mm
54-551-217-0	0.163 - 0.191"/4.15 - 4.85mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-415-0	0.177"/4.50mm
54-551-218-0	0.183 - 0.211"/4.65 - 5.35mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-416-0	0.197"/5.00mm
54-551-219-0	0.203 - 0.230"/5.15 - 5.85mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-417-0	0.217"/5.50mm
54-551-220-0	0.222 - 0.250"/5.65 - 6.35mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-418-0	0.236"/6.00mm
54-551-221-0	0.242 - 0.270"/6.15 - 6.85mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-419-0	0.256"/6.50mm
54-551-222-0	0.262 - 0.290"/6.65 - 7.35mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-420-0	0.276"/7.00mm
54-551-223-0	0.281 - 0.309"/7.15 - 7.85mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-305-0	54-551-421-0	0.295"/7.50mm
54-551-224-0	0.301 - 0.329"/7.65 - 8.35mm	0.079 - 1.575"/2.0 - 40mm	54-551-102-0	54-551-304-0	54-551-422-0	0.315"/8.00mm
54-551-225-0	0.321 - 0.349"/8.15 - 8.85mm	0.079 - 1.969"/2.0 - 50mm	54-551-102-0	54-551-304-0	54-551-423-0	0.335"/8.50mm
54-551-226-0	0.340 - 0.368"/8.65 - 9.35mm	0.079 - 1.969"/2.0 - 50mm	54-551-102-0	54-551-304-0	54-551-424-0	0.354"/9.00mm
54-551-227-0	0.360 - 0.388"/9.15 - 9.85mm	0.079 - 1.969"/2.0 - 50mm	54-551-102-0	54-551-304-0	54-551-425-0	0.374"/9.50mm
54-551-228-0	0.380 - 0.408"/9.65 - 10.35mm	0.079 - 1.969"/2.0 - 50mm	54-551-102-0	54-551-304-0	54-551-426-0	0.394"/10.00mm

Note: MicroGage individual set configurations available on request

MicroGage - 2 Point Bore Gaging System

SETS

Includes Digital Readout, Measuring Heads and Setting Rings with UKAS Certificate

Order Number	Range
54-551-001-0	0.037 - 0.061"/0.95 - 1.55mm
54-551-002-0	0.059 - 0.096"/1.50 - 2.45mm
54-551-003-0	0.089 - 0.167"/2.25 - 4.25mm
54-551-004-0	0.144 - 0.250"/3.65 - 6.35mm

LARGE SETS

Includes Digital Readout, Measuring Heads and Setting Rings with UKAS Certificate

Order Number	Range
54-551-010-0	0.037 - 0.096"/0.95 - 2.45mm
54-551-011-0	0.059 - 0.167"/1.50 - 4.25mm
54-551-012-0	0.089 - 0.250"/2.25 - 6.35mm
54-551-013-0	0.242 - 0.407"/6.15 - 10.35mm



54-551-004-0

STANDARD DEPTH STOP

Order Number	Range
54-551-501-0	0.037 - 0.061"/0.95 - 1.55mm
54-551-502-0	0.059 - 0.096"/1.50 - 2.45mm
54-551-503-0	0.089 - 0.167"/2.25 - 4.25mm
54-551-504-0	0.144 - 0.250"/3.65 - 6.35mm
54-551-505-0	0.242 - 0.407"/6.15 - 10.35mm



ACCESSORIES

Order Number	Description
54-115-526-0	Proximity USB Cable
54-245-800-0	MicroGage Bench Stand
54-551-100-0	Floating Table Stand
54-551-105-0	MicroGage Adapter



54-551-100-0
MicroGage not included

XT-500 Large Diameter Bore Gage

The Fowler 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 radiused 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
- Radiused anvils of tool-steel for optimum centering
- Accuracy: $\pm 15\mu\text{m}$
- Repeatability: $3\mu\text{m}$
- 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

Contact the Fowler Technical Department for special anvil applications.

XT-500 Large Diameter Bore Gage

XT500 Gage- Individual Instruments

Supplied with digital display handle, measuring head with anvils and setting ring with UKAS certificate.

Order No.	Range	Accuracy	Measuring Depth	Ring Included
54-370-101-0	11.811"- 12.795"/300 - 325mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-102-0	12.795"-13.770"/325 - 350mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-103-0	13.799"-14.764"/350 - 375mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-104-0	14.764"-15.748"/375 - 400mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-105-0	15.748"-16.732"/400 - 425mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-106-0	16.732"-17.716"/425 - 450mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-107-0	17.716"-18.701"/450 - 475mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-108-0	18.701"-19.685"/475 - 500mm	0.0006"/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

Order No.	Range	Accuracy	Measuring Depth	Ring Included
54-370-201-0	11.811"-15.748"/300 - 400mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-202-0	15.748"-19.685"/400 - 500mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm
54-370-203-0	11.811"-19.685"/300 - 500mm	0.0006"/15µm	4.724"/120mm	11.811"/300mm

XT500 Gage - head only

Order No.	Range	Accuracy	Measuring Depth
54-370-301-0	11.811"- 12.795"/300 - 325mm	0.0006"/15µm	4.724"/120mm
54-370-302-0	12.795" - 13.770"/325 - 350mm	0.0006"/15µm	4.724"/120mm
54-370-303-0	13.799" - 14.764"/350 - 375mm	0.0006"/15µm	4.724"/120mm
54-370-304-0	14.764" - 15.748"/375 - 400mm	0.0006"/15µm	4.724"/120mm
54-370-305-0	15.748" - 16.732"/400 - 425mm	0.0006"/15µm	4.724"/120mm
54-370-306-0	16.732" - 17.716"/425 - 450mm	0.0006"/15µm	4.724"/120mm
54-370-307-0	17.716" - 18.701"/450 - 475mm	0.0006"/15µm	4.724"/120mm
54-370-308-0	18.701" - 19.685"/475 - 500mm	0.0006"/15µm	4.724"/120mm



XT500 Gage - Setting Ring: X Class

Order Number	Range
54-370-401-0	11.811"/300

XT500 Gage - Handle

Order Number	Description
54-370-501-0	XTD 500 Controller



XT500 Gage - Extensions

Order Number	Range
54-336-305-0	6"/150mm
54-336-306-0	20"/500mm
54-336-307-0	40"/1000mm

Connectivity Kits

Order Number	Description
54-115-444-0	RS232 Power Computer Connect Kit
54-115-528-0	USB Power Computer Connect Kit

SMARTPLUG

SMARTPLUG offers 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. Manufactured to specific diameters, SMARTPLUG offers short measurement ranges (around 0.007"). This dedicated design is a great fit for high-volume manufacturing and quality control.

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 are as standard on every SMARTPLUG, for protection of gage head.

SMARTPLUG is dedicated to one specific size.

Range descriptions below are for pricing information only.



SMARTPLUG

Order Number	Description	Thread
<i>Chrome Plugs with Carbide Contact Points (2 pt.)</i>		
*SPECIFY EXACT SIZE & TOLERANCE AT ORDERING TIME.		
54-556-010-0	0.236" - 0.787"/6 - 20mm	M6x0.75
54-556-012-0	0.590" - 0.984"/15 - 25mm	M10x1
54-556-014-0	0.984" - 1.378"/25 - 35mm	M10x1
54-556-016-0	1.378" - 1.772"/35 - 45mm	M10x1
54-556-018-0	1.772" - 2.362"/45 - 60mm	M10x1
54-556-020-0	2.362" - 3.150"/60 - 80mm	M10x1
54-556-022-0	3.150" - 3.937"/80 - 100mm	M10x1
54-556-024-0	3.937" - 4.921"/100 - 125mm	M10x1
54-556-026-0	4.921" - 5.906"/125 - 150mm	M10x1
54-556-028-0	5.906" - 6.890"/150 - 175mm	M10x1
54-556-030-0	6.890" - 7.874"/175 - 200mm	M10x1
54-556-032-0	7.874" - 8.858"/200 - 225mm	M10x1
54-556-034-0	8.858" - 9.843"/225 - 250mm	M10x1
54-556-036-0	9.843" - 11.025"/250 - 280mm	M10x1

Depth Stops

Order Number	Size
54-556-150-0	0 - 6mm
54-556-151-0	6 - 8.5mm
54-556-152-0	8.5 - 13mm
54-556-153-0	13 - 17.5mm
54-556-154-0	17.5 - 25mm
54-556-155-0	25 - 32.5mm
54-556-156-0	32.5 - 40mm
54-556-157-0	40 - 47.5mm
54-556-158-0	47.5 - 55mm
54-556-159-0	55 - 62.5mm
54-556-160-0	62.5 - 70mm
54-556-161-0	70 - 77.5mm
54-556-162-0	77.5 - 85mm
54-556-163-0	85 - 92.5mm
54-556-164-0	92.5 - 100mm

Rings

Order Number	Size
54-556-801-0	1.5 - 2mm
54-556-802-0	2 - 3mm
54-556-803-0	3 - 4mm
54-556-804-0	4 - 5mm
54-556-805-0	5 - 6mm
54-556-806-0	6 - 10mm
54-556-807-0	10 - 20mm
54-556-808-0	20 - 25mm
54-556-809-0	25 - 30mm
54-556-810-0	30 - 40mm
54-556-811-0	40 - 50mm
54-556-812-0	50 - 60mm
54-556-813-0	60 - 70mm
54-556-814-0	70 - 80mm

Rings

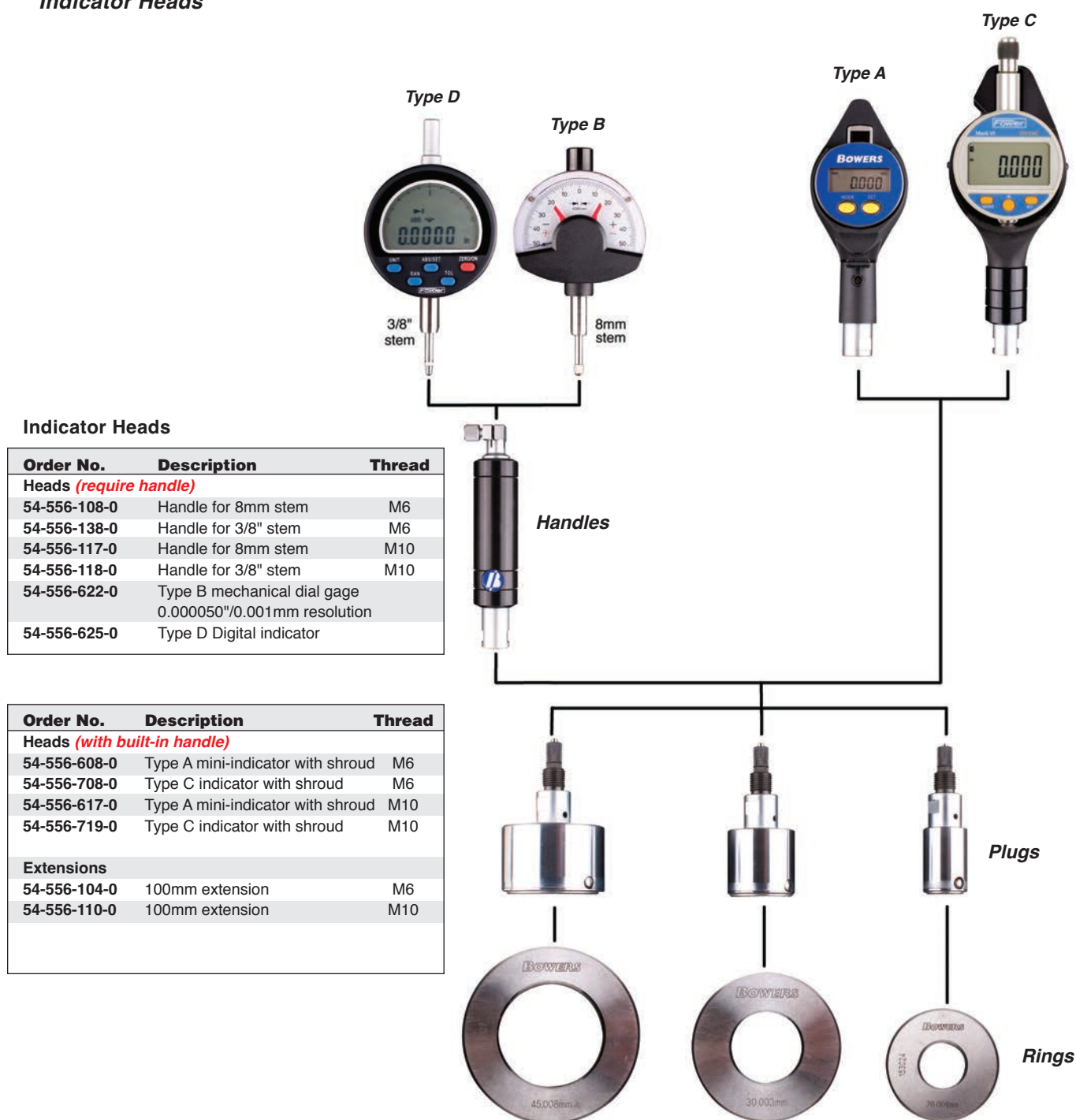
Order Number	Size
54-556-815-0	80 - 90mm
54-556-816-0	90 - 100mm
54-556-817-0	100 - 115mm
54-556-818-0	115 - 130mm
54-556-819-0	130 - 145mm
54-556-820-0	145 - 160mm
54-556-821-0	160 - 170mm
54-556-822-0	170 - 180mm
54-556-823-0	180 - 190mm
54-556-824-0	190 - 200mm
54-556-825-0	200 - 210mm
54-556-826-0	210 - 220mm
54-556-827-0	220 - 230mm
54-556-828-0	230 - 240mm

Rings

Order Number	Size
54-556-829-0	240 - 250mm
54-556-830-0	250 - 260mm
54-556-831-0	260 - 270mm
54-556-832-0	270 - 280mm
54-556-833-0	280 - 290mm
54-556-834-0	290 - 300mm

***SPECIFY EXACT SIZE RING**

Indicator Heads



Contact the Fowler Technical Department for more application concepts and accessories.

Carbon Fiber Beam Gage

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



Order Number	Description
54-466-660-0	Carbon fiber beam gage
54-466-661-0	1 meter extension
54-466-662-0	Threaded anvils
54-466-664-0	Gage ball anvils



Contact the Fowler Technical Department for more information.

Pneumatic Deep-Hole Bore Gaging System



Features:

- Measures diameters from 2" to 12"/50-310mm, up to 50'/15 meters deep
- 2 point and 3 point heads available
- Accuracy: $\pm 0.002"/\pm 0.05mm$ (subject to bore condition)
- Quick set-up time
- Easy to use
- Not adversely affected by temperature fluctuation
- Robust design



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.

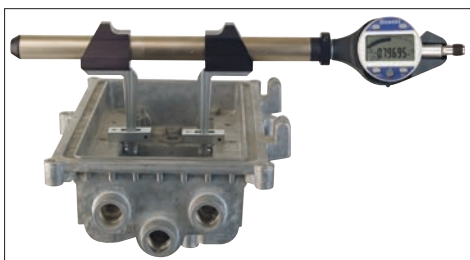
Various readouts are available, all have an RS232 output for data-transmission to a PC.

Applications range from oil industry, extrusion machines to military cannon, to name a few. Ideal for deep bore applications in general.

Contact the Fowler Technical Department for more information.

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.



54-265-700-0

Features:

- Internal and external measurement
- Extremely large measuring range: 0 - 118"/0 - 3000mm
- Constant measuring pressure
- Internal range: 1.18" - 10"/30 - 250mm; External range: 0 - 8.4"/0 - 215mm
- Digital readout
- Large range of accessories*
- Anvil travel of 0.984"/25mm

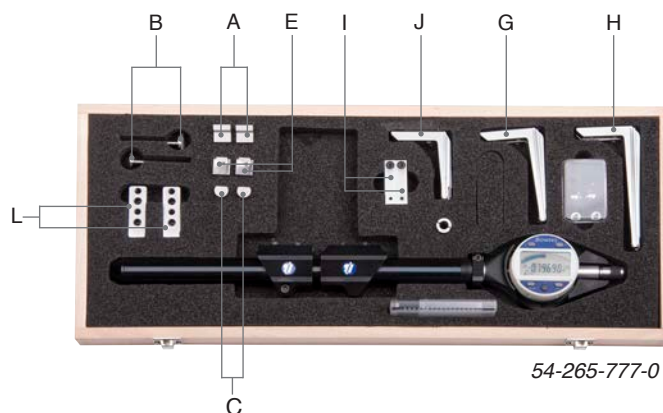
Sylvac Electronic Features:

- Min/Max/TIR modes
- 0.0005"/0.00005" (0.01/0.001mm) resolution
- Direct RS232 output
- Tolerance indication
- Rotating display
- Two presets

Order Number	Description
54-265-700-0	Universal Gage with Digital Readout. Includes: pair of 2" arms, pair of depth stops, pair of clamping adaptors and contact points

Deluxe Universal Gage

Accessories		
A.	54-265-045-0	Pair of Flat Shoulder Anvils
B.	54-265-048-0	Pair of Internal Disc Anvils (large)
C.	54-265-049-0	Pair of Internal/External Disc Anvils (small)
D.	54-265-055-0	Pair of Clamping adaptors
E.	54-265-047-0	Pair of Cylindrical Shoulder Anvils
F.	54-265-015-0	Pair of Spherical Tip Contact Points
G.	54-265-030-0	Pair of Measuring Arms 3"(75mm) long
H.	54-265-040-0	Pair of Measuring Arms 4"(100mm) long
I.	54-265-043-0	Pair of Depth Stops
J.	54-265-020-0	Pair of Measuring Arms 2"(50mm) long
K.	54-265-010-0	Pair of Flat Contact Points
L.	54-265-041-0	Pair of Mounting attachments



54-265-777-0

*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.

Order Number	Description
54-265-777-0	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:	
54-265-000-0	Universal Gage Only with Indicator
54-265-001-0	Universal Gage Only (no indicator)
54-265-090-0	6" Extension: Increases range of Universal Gage by 6"/150mm
54-265-100-0	20" Extension: Increases range of Universal Gage by 20"/500mm
54-265-023-0	Bench Stand
54-265-002-0	Cowl
54-265-119-0	13mm Cone Anvil
54-265-120-0	25mm Cone Anvil
54-265-121-0	50mm Cone Anvil

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.



Industry's two most popular bore gage ranges combined in one easy-to-use set!



Bore Gage Features:

- Range: 1.4" - 6"/35 - 150mm
- Carbide anvils
- Easily adjustable
- Self-centering
- Includes 2" contact extension

Indicator Features:

- Dual reading inch/metric electronic indicator
- Bar graph and numeric digital display
- Resolution: 0.00005"/.001mm
- Preset with recall
- ABS/INC measurement
- Min/Max/TIR

Setting masters not included

Order Number	Description
54-646-401-0	XTender-E Bore Gage Set
Accessories	
52-646-450-0	20" Extension
52-646-475-0	40" Extension

XTENDER 1.4" to 6" or 35 to 160mm Dial Bore Gage Set

Industry's two most popular bore gage ranges combined in one easy-to-use set!



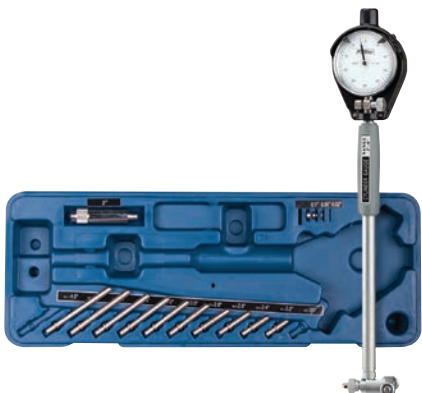
Features:

- Carbide Anvils
- Easy-to-read
- Economical
- Graduation: 0.0005", 0.0001" or 0.01mm
- Insulated grip
- 1.4" to 6" range or 35 to 160mm
- 9.5" Depth
- Chrome plated handle
- Includes 2" contact extension

Setting masters not included

Order Number	Description	Graduation
52-646-400-0	Inch X-Tender Bore Gage Set	0.0005"
52-646-500-0	Inch X-Tender Bore Gage Set	0.0001"
52-646-220-0	Metric X-Tender Bore Gage Set	0.01mm
Accessories		
52-646-450-0	20" Extension	
52-646-475-0	40" Extension	

2" to 6" Dial Bore Gage



Features:

- Carbide anvils
- Graduation: 0.0005"
- 9.5" Depth
- Easily adjustable
- Self-centering
- Insulated grip
- Chrome plated handle.
- Includes 2" contact extension

Setting masters not included

Order Number	Description
52-646-300-0	2" - 6" Bore Gage Set
Accessories	
52-646-450-0	20" Extension
52-646-475-0	40" Extension

0.7" to 1.5" Dial Bore Gage

Features:

- Range: 0.7" - 1.5"
- Carbide anvils
- Graduation: 0.0005"
- 8" Depth
- Easily adjustable
- Self-centering
- Insulated grip
- Chrome plated handle



Setting masters not included

Order Number	Description
52-646-100-0	0.7" - 1.5" Bore Gage Set

2" to 6" Right Angle Dial Bore Gage

For measuring difficult-to-reach bores in tight or inconveniently located spaces on machine applications.

Features:

- Carbide anvils
- Easy-to-read
- Economical
- Range: 2" to 6"
- Graduation: .0005"
- Chrome plated handle
- Insulated grip
- Includes 2" contact extension



Setting masters not included

Order Number	Description
52-646-250-0	2" - 6" Dial Bore Gage Set

XTRA-RANGE® 4" - 12" Bore Gage

Features:

- Carbide Anvils
- 4" to 12" range
- 10" measuring depth
- Easy-to-read
- Economical
- Graduation: 0.0005"
- Insulated grip
- Chrome plated handle
- Includes 2 extensions



Setting masters not included

Order Number	Description
52-646-600-0	Xtra-Range Bore Gage

Deluxe Digital Caliper Gages



54-554-013-2

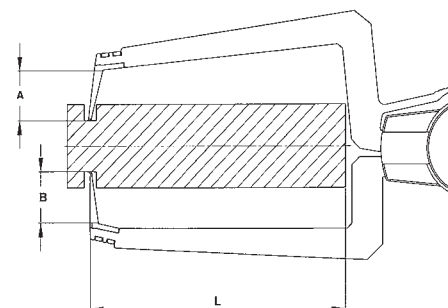
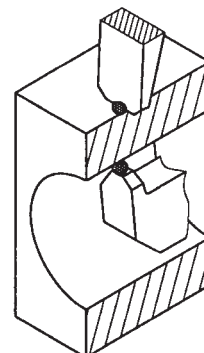


54-554-010-2

Features:

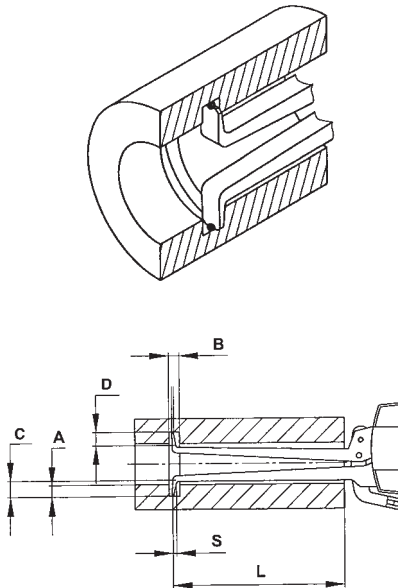
- Perfect for measuring bores, thickness, o-ring and snap-ring grooves.
- Fast and accurate measuring results
- Absolute and relative measurements
- Operates on a 3V lithium battery
- Inch/metric conversion
- Large LCD display
- Peak measuring modes
- Suitable for workshop use
- Data transfer via RS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

External Calipers



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

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

Order 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		
54-554-100-0	Replacement 3V Lithium DL123AB Battery	
54-554-107-1	USB Cable	

Internal & External Caliper Gages

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



54-554-611-0



54-554-711-0

Features:

- Analog scale indicates reversal point for easy, accurate readings
- Easy to hold
- Resolution: 0.0002"/0.005mm
- Accuracy: ± 0.0008 "/0.02mm
- Preset capability
- Direct inch/metric conversion
- Absolute/incremental measurements

Order Number	Range
Internal Caliper Gages	
54-554-611-0	0.200" - 0.590"/5 - 15mm
54-554-622-0	0.200" - 1"/5 - 25mm
54-554-623-0	0.400" - 1.2"/10 - 30mm
54-554-624-0	0.790" - 1.6"/20 - 40mm
54-554-625-0	1.2" - 2"/30 - 50mm
External Caliper Gages	
54-554-711-0	0 - 0.400"/0 - 10mm
54-554-722-0	0 - 0.790"/0 - 20mm
54-554-723-0	0.4" - 1.2"/10 - 30mm
54-554-724-0	0.790" - 1.6"/20 - 40mm
54-554-725-0	1.2" - 2"/30 - 50mm

XTRA-VALUE Internal & External Electronic Caliper Gages

6"/150mm Range!



54-554-630-0



54-554-730-0

Features:

- Robust housing
- Large LCD display
- Reading: 0.01"/0.1mm/1/64ths
- Accuracy: 0.01"/0.3mm/1/64ths
- Spring loaded with locking nut



4" Setting Master

Order Number	Description	Range	Reach
54-554-630-0	Outside Caliper Gage	0 - 6"/150mm	4.5"
54-554-730-0	Inside Caliper Gage	0.5 - 6"/12.7 - 150mm	4"
Set			
54-554-730-0	Inside/Outside Caliper Gage Set w/4" internal setting master		

XTRA-VALUE Digital Thickness Gage

Features:

- Robust housing
- Large LCD display
- Reading: 0.001"/0.01mm/1/64ths
- Includes: 1/8" ball contact, cone point and a 0.140" x 0.040" spline point
- Three interchangeable points
- M2.5 contact point thread



Order Number	Description	Accuracy
54-554-830-0	0 - 1"/25mm	0.004"/0.1mm

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.

Features:

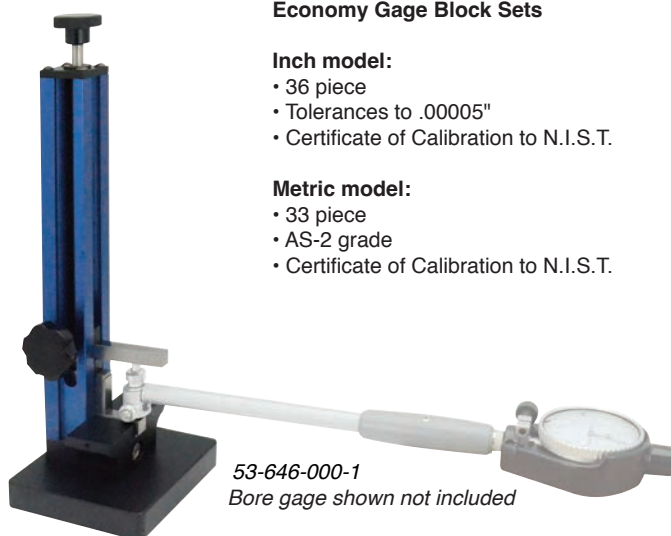
- Range: 0 - 1.25"/31.5mm
- Resolution: 0.0005"/0.01mm (*Fractions in 1/64th increments*)
- Spring-loaded travel
- Wide faced flat jaw for easy positioning
- Dimensions of fixed jaw: 0.470" x 0.900"
- Hardened stainless steel construction
- Direct inch/metric/fraction conversion
- Measuring speed of 60"/second
- Large, high contrast LCD display
- Hanging loop included for attachment to belt or chain



Order Number	Description	Accuracy
54-550-300-0	Snap Cal without leather holster	± 0.001"/0.02mm

Bore Gage Setting Master Kit - Inch & Metric

Fowler's Bore Gage Setting Master Kit is used for accurately setting any 2 point bore gage up to 6"/150mm in diameter to an accuracy of 0.0001"/0.003mm.



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.

Set includes:

Setting Device

- Base anvil:
53-646-000-1: 3.950" x 1.050"
53-646-010-0: 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.
- **Can also be used for external setting, depending on application (external mics, snap gages, caliper gages)**

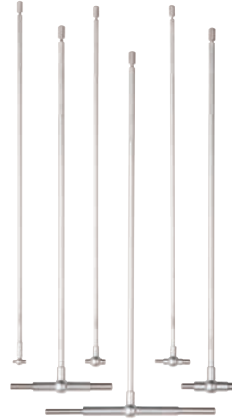
Order Number	Description
53-646-000-1	Inch Bore Gage Setting Master Kit
53-646-010-0	Metric Bore Gage Setting Master Kit
53-646-005-0	Bore Gage Setting Master Kit without Gage Blocks

Telescoping Gages

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.



52-470-000-0



52-470-007-0

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"

Order Number	Range	Set Includes	Depth
Complete Sets			
52-470-006-0	5/16" - 6"	Set: 6 gages	4" - 5"
Titanium Coated Set			
52-470-000-0	5/16" - 6"	Set: 6 gages	4" - 5"
12" Reach Set			
52-470-007-0	5/16" - 6"	Set: 6 gages	12"

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.



52-472-105-0



52-472-104-0

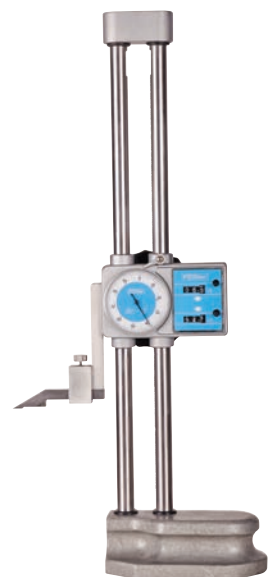
Features:

- 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 0.125" - 0.500"

Order Number	Description
52-472-105-0	Blind Bore Style
52-472-104-0	Full Ball Style



HEIGHT GAGES



V Electronic Height Gages

The Fowler Trimos V vertical measuring instruments have been developed for the most difficult workshop environments. Manufactured in their entirety in Switzerland, they guarantee a robust, precise and reliable product.



54-192-340-0



54-199-770-0



54-199-970-0

Features:

- "Black Mask" display with user friendly functions
- Electronically adjustable measuring force 0.75/1.5 (N)
- Lithium-ion rechargeable batteries last up to 40 hours
- All adjustments possible without tools
- Cast iron base for optimal stability and rigidity
- RS232 and USB interfaces requires 54-192-112-0 cable. Bluetooth transmitter also available
- Dual probe holders (V4 - V5)
- Carriage displacement: Manual for V3 and V4 models
- **V5 - V9 includes selectable manual or motorized carriage displacement**
- Measures heights, diameters, perpendicularity, centerlines, Min/Max/Delta
- Resolution: 0.00005"/0.001mm, V3 - V6
0.00001"/0.0001mm, V7 - V9
- Repeatability (2s): 0.00008"/0.002mm (Ø 0.00016"/0.004mm), V3 - V6
0.00002"/0.0005mm (Ø 0.00004"/0.001mm), V7 - V9
- Accessory measuring probes up to 340mm in length available and provide excellent repeatability

All models include:

- Charging unit
- Measuring insert with ruby ball Ø4mm
- Probe holder elbow Ø 8mm
- Setting gage
- Test certificate



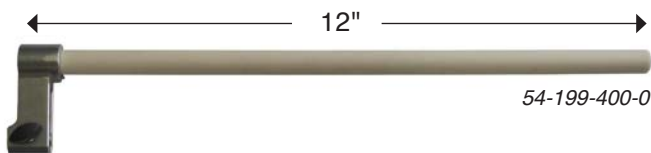
Adjustable in every direction



Order Number	Measuring Range	Range w/ Probe Invert.	Maximum Perm. Errors	Frontal Squareness	Squareness Probe Avail.	Air Cushion	Battery Life
V3							
54-192-340-0	16"/407mm	20"/508mm	0.00032"/0.008mm	0.0004"/0.010mm	—	NO	40 hrs.
54-192-370-0	28"/711mm	31.9"/812mm	0.00032"/0.008mm	0.0006"/0.015mm	—	NO	40 hrs.
V4							
54-191-440-0	16"/407mm	28.3"/719mm	0.0002"/0.005mm	0.0004"/0.010mm	—	YES	20hrs.
54-191-470-0	28"/711mm	40.2"/1023mm	0.00028"/0.007mm	0.0006"/0.015mm	—	YES	20hrs.
V5							
54-199-540-0	16"/407mm	28.3"/719mm	2.5 + L(mm)/300	0.0002"/0.005mm	—	YES	12hrs.
54-199-570-0	28"/711mm	40.2"/1023mm	2.5 + L(mm)/300	0.00032"/0.008mm	—	YES	12hrs.
54-199-590-0	43.7"/1110mm	56"/1422mm	2.5 + L(mm)/300	0.00043"/0.011mm	—	YES	12hrs.
V6							
54-199-640-0	16"/407mm	28.3"/719mm	2.5 + L(mm)/400	0.0002"/0.005mm	YES	YES	12hrs.
54-199-670-0	28"/711mm	40.2"/1023mm	2.5 + L(mm)/400	0.00032"/0.008mm	YES	YES	12hrs.
54-199-690-0	43.7"/1110mm	56"/1422mm	2.5 + L(mm)/400	0.00043"/0.011mm	YES	YES	12hrs.
V7							
54-199-740-0	16"/407mm	28"/719mm	2.5 + L(mm)/400	0.0002"/0.005mm	YES	YES	12hrs.
54-199-770-0	28"/711mm	40"/1023mm	2.5 + L(mm)/400	0.00032"/0.008mm	YES	YES	12hrs.
54-199-790-0	44"/1110mm	56"/1422mm	2.5 + L(mm)/400	0.00043"/0.011mm	YES	YES	12hrs.
V8 with Fine Adjustment							
54-199-840-0	16"/407mm	28"/724mm	1.2 + L(mm)/1000	0.0002"/0.005mm	YES	YES	12hrs.
54-199-870-0	28"/710mm	40"/1028mm	1.2 + L(mm)/1000	0.00032"/0.008mm	YES	YES	12hrs.
54-199-890-0	43"/1109mm	56"/1427mm	1.2 + L(mm)/1000	0.00043"/0.011mm	YES	YES	12hrs.
V9							
54-199-940-0	16"/406mm	28"/724mm	1.2 + L(mm)/1000	0.0002"/0.005mm	YES	YES	12hrs.
54-199-970-0	28"/710mm	40"/1028mm	1.2 + L(mm)/1000	0.00032"/0.008mm	YES	YES	12hrs.
54-199-990-0	43"/1109mm	56"/1427mm	1.2 + L(mm)/1000	0.00043"/0.011mm	YES	YES	12hrs.

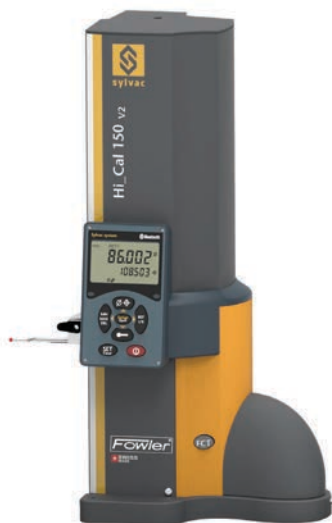
Probe Sets and Accessories

Order Number	Description
Probe Sets	
54-199-105-0	21 pc. Micro Probe Set (see page 00)
54-199-106-0	16 pc. Macro Probe Set (see page 00)
54-199-107-0	7 pc. Economy Probe Set (see page 00)
Accessories	
54-199-400-0	300mm probe holder (for 8mm probes)
54-199-022-BT	Bluetooth module
54-115-246-BT	Bluetooth receiver
54-777-120-0	Vmux software - for connecting multiple units to one PC



Hi_CAL V2 Electronic Height Gages

Measures parts quickly, easily and accurately in a small footprint.



54-931-150-BT



54-931-300-BT



54-931-450-BT

Features:

- 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
- Bluetooth, USB and RS232 data outputs
- Battery life: 40 hours rechargeable during operation
- Touch sensitive probe speed for easy operation
- Base with small footprint
- 4mm probe shank

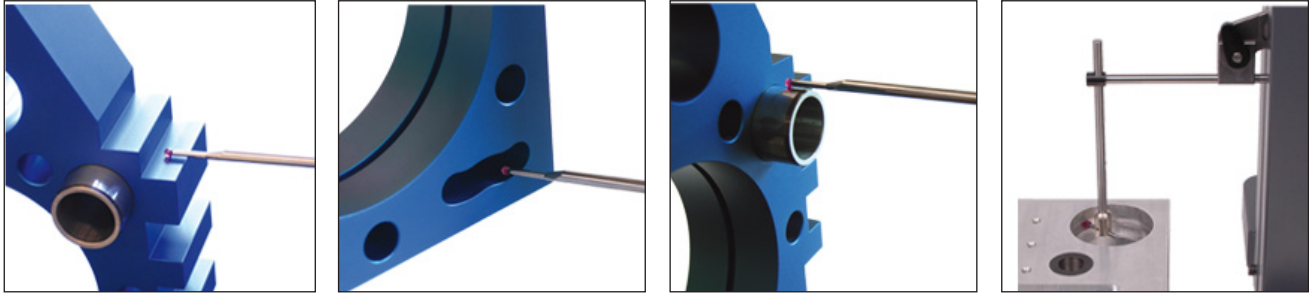
Instrument Includes:

Protective Cover, Charging Set, Ruby Ball Probe Ø3mm, Setting gage and Calibration Certificate.



Motorized movement with Touch sensitive probe speed for easy operation.

Hi_CAL V2 Electronic Height Gages



Innovative Intuitive Keypad

- Inch/Metric and datum reference display
- Display of measuring value
- Active measuring mode diameter/surface
- Centerline display
- Min/Max/Tir mode
- Diameter/surface selection
- Access to setup menu
- Selection of Datum reference Ref I / Ref II
- On/Off Switch
- Ball probe constant
- Zero set and preset
- Probe contact indication lamp



Order Number:	54-931-150-BT	54-931-300-BT	54-931-450-BT
Measuring range	6"/150mm	12"/300mm	17.5"/450mm
Application range	6.1"/0-155mm	12.6"/0-320mm	18.5"/470mm
Max Error μm	2.5 + L/175		
Repeatability	0.00008"/2 μm		
Resolution	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	26.73"/679mm
Weight	8.6 lb/3.9kg	10.14 lb/4.6 kg	15 lb/6.8kg
S_Connect	USB/mini USB/ RS232		
Programmable by PC	✓		
Zero setting	✓		
Min/max/delta	✓		
PRESET function	✓		
2 references	✓		
Height measurement, \varnothing and centerlines	✓		
2 types of progressive speed	✓		

Mini-Vertical Series - The Shop Workhorse

Mini-Vertical Series II, a self-contained height measuring and scribing instrument, with direct RS232 output and resolution of 0.00005"/0.001mm. Proven robustness on the shop floor.

Features:

- 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
- Constant measuring pressure approx. 3N
- Bidirectional data communication
- 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)
- 8mm ball probe
- Protection cover
- Instruction manual
- Test and guarantee certificate

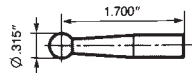


54-180-212-0

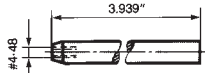
Order Number	Range	Accuracy	Base w/ Weight
54-180-212-0	12.6"/20mm	0.0008"/0.02mm	Cast iron base, 13.7 lbs.
54-180-215-0	12.6"/320mm	0.0008"/0.02mm	Granite base, 30.9 lbs.
54-180-224-0	24.4"/620mm	0.0012"/0.03mm	Cast iron base, 23.2 lbs.
54-180-226-0	24.4"/620mm	0.0012"/0.03mm	Granite base, 40.4 lbs.



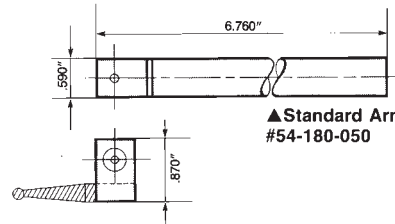
Mini-Vertical Series



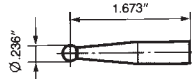
▲Standard Ball Probe.
#54-180-060



▲#4-48 probe shaft
for Indicator Points.
#54-180-031

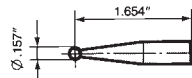


▲Standard Arm
#54-180-050

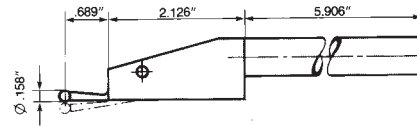


▲.236" Diameter
Ball Probe.
#54-180-236

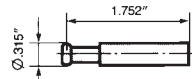
▲Standard Intermediate Connector.
(Used with Standard Arm).
#54-180-055



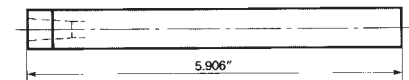
▲.157" Diameter
Ball Probe.
#54-180-157



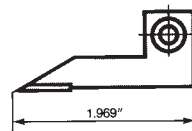
▲Bi-directional Probe.
#54-180-040



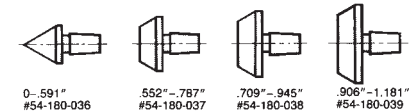
▲Disc shape Probe.
#54-180-315



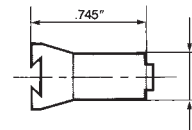
▲Centering Cone Holder.
#54-180-035



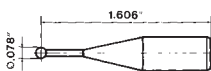
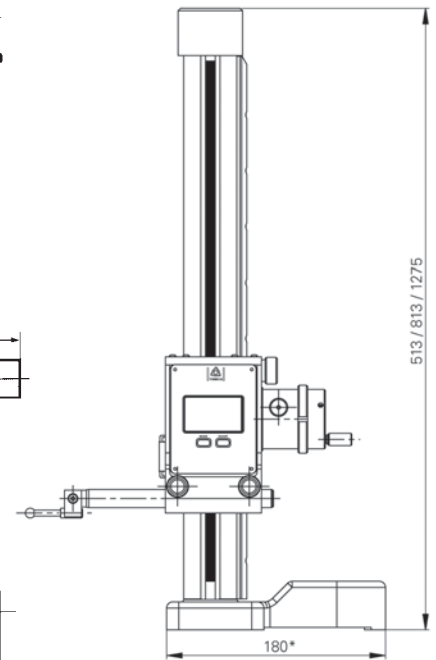
▲Scriber attachment.
#54-180-025



▲Centering Cones.
Available individually or in sets.



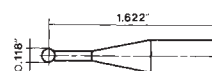
▲Dovetail Clamp
for Indicators.
#52-565-093



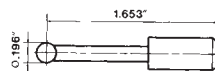
▲.078" Dia. Ball
Probe #54-180-152.



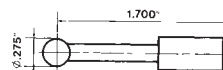
▲.078" Dia. contact point for Bi-
directional Probe #54-180-042.



▲.118" Dia. Ball
Probe #54-180-153.





▲.196" Dia. Ball Probe #54-180-155.




▲.275" Dia. Ball Probe #54-180-156.

Height Gage Probe Sets

Order Number	Description
54-199-105-0 for V3-V9	4mm Probe Sets
	Includes:
	Case
	Hemispheric probe
	Probe with pin (plus 4 additional pins)
	54-199-502-0 Disc-shaped insert Ø 7.7mm
	Disc-shaped insert Ø 11.5mm
	54-199-503-0 Corner insert 1mm
	Test indicator tip Ø 1mm
	Test indicator tip Ø 2mm
	Test indicator tip Ø 3mm
	54-194-948-0 Measuring insert holder for: M2.5, M1.6, M1.4
	54-199-507-0 Insert holder L=80mm M2.5
	54-197-508-0 Insert holder 90° L=80mm Ø 4mm
	54-199-512-0 Measuring insert holder Ø 1mm
	54-199-509-0 Ruby Ball Probe Ø 2mm
	Ball Probe Ø 1mm
	54-199-510-0 Knife-edged measuring probe L=88mm
	54-199-019-0 Holder with reduction 8mm/4mm
	54-194-935-0 Swivel holder Ø4/Ø8mm
	Key for ball insert
	Hex wrench 1.5mm
	Hex wrench 2.5mm
	

54-199-106-0 for V3-V9	8mm Probe Sets
	Includes:
	Case
	54-194-910-0 Carbide Ball Probe Ø 4mm L 140mm
	54-194-906-0 Carbide Ball Probe Ø 2mm
	54-194-912-0 Carbide Probe with pin Ø 1.5mm
	54-194-938-0 Measuring insert holder 90°, Ø 4mm, L=65mm
	54-194-942-0 Measuring insert holder Ø 2mm
	54-194-930,931 Insert holder (metric) M2.5
	54-199-505-0 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
	

54-199-107-0 for V3-V9	Economy Probe Set
	Includes:
	Case
	54-199-503-0 Corner insert 1mm
	54-199-504-0 Measuring insert M2.5 with ball contact
	54-199-506-0 Extension, 80mm, M2.5
	54-199-515-0 Hex wrench 2.5mm
	54-194-206-0 Carbide ball probe Ø 2mm
	54-194-942-0 Measuring insert holder Ø 2mm
	54-194-938-0 Measuring insert holder 90°, Ø 4mm, L=65mm
	

4mm Height Gage Probes

Description	Order No.
Ruby ball probe Ø 3mm	54-930-211-0
Ruby ball probe Ø 2mm	54-199-509-0
Tungsten carbide ball probe Ø 1mm	54-199-512-0
Knife-edged measuring probe TC Ø 3mm	54-199-510-0
Cylindrical measuring probe TC Ø3mm	54-199-511-0
Probe holder 90° M2.5	54-199-507-0
Probe holder 90° Ø 4mm	54-199-508-0
Hi-Cal Setting gage	54-930-202-0
Charging set 120V US for Hi-Cal and V+ Series	54-199-018-0
Charging set 120V US for New V Series	54-192-018-0

Description	Order No.
Swiveling tungsten carbide ball probe (M134)	54-930-212-0
Extension 124mm M2.5	54-199-505-0
Extension 80mm M2.5	54-199-506-0
Probe holder and ruby ball probe Ø3mm, M2.5	54-199-501-0
Disk shaped anvils Ø7.7mm and Ø11.5mm, M2.5	54-199-502-0
Ball point Ø 2mm/M2.5	54-618-540-0
Corner insert 1mm/M2.5	54-199-503-0
Full accessories set in wooden box. Content: 54-199-509-0, 54-199-512-0, 54-199-510-0, 54-199-511-0, 54-199-507-0, 54-199-508-0, 54-199-502-0, 54-199-506-0, 54-618-540-0, 54-199-501-0, 54-199-503-0, 54-199-505-0	54-930-215-0
Basic accessories set in wooden box. Content: 54-199-509-0, 54-199-512-0, 54-199-510-0, 54-199-511-0	54-930-217-0
External contact (foot-pedal) for Hi-Cal and V-Series	54-618-165-0

8mm Height Gage Probes

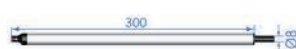
Insert holder (metric) M2.5 L=95 mm

Insert holder (inch) 4-48 L=95 mm
54-194-930, 54-194-931



Insert holder (metric) 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

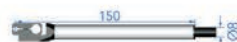
54-194-935



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

54-194-943



Measuring insert holder for Mestra/Vectra
M2.5 male, M1.6 f, M1.4 f

54-194-948

Measuring insert holder for Mestra/Vectra
4-48 male, M1.6 f, M1.4 f

54-194-949



Electronic probe

run 12 mm, accuracy ± 1 µm

54-194-605



Ball probe tungsten carbide Ø 1 mm

54-194-905



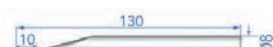
Ball probe tungsten carbide Ø 2 mm

54-194-906



Ball probe tungsten carbide Ø 2 mm

54-194-907



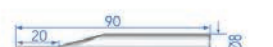
Ball probe ruby Ø 2 mm

54-194-908



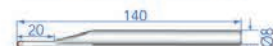
Ball probe tungsten carbide Ø 4 mm

54-194-909



Ball probe tungsten carbide Ø 4 mm

54-194-910



Ball probe ruby Ø 4 mm

54-194-911



Probe with pin tungsten carbide Ø 1.5 mm

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)

Order Number	Description
54-199-000-0	Printer including: Printer & AC adaptor (without cable & bracket)
54-199-005-0	Complete Printer kit (Includes printer, AC adaptor, cable and bracket)
54-199-004-0	Printer bracket with mounting hardware
54-199-002-0	RS232 printer cable
54-618-166-0	RS232 PC cable
54-199-010-0	Thermal printer paper (5 rolls)
54-199-018-0	110V AC adaptor for V Series
54-199-580-0	V-Series setting gage
54-199-560-0	Wooden accessory support block
54-194-937-0	Probe holder elbow

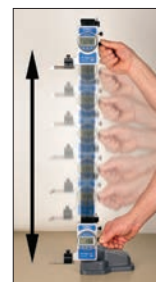
Hi_Gage One Electronic Height Gages

Fowler Sylvac's Hi_Gage One Electronic Height Gage features a proven electronic scale that is not affected by oil, dust, chips or shock.

Features:

- The Sylvac measuring system is exceptionally fast and is the most reliable and maintenance free system ever created for measurement
- Customizable with free software
- True inch/metric conversion
- Accuracy: 0.002"/50µm
- Resolution: 0.0005"/0.01mm
- Repeatability: 0.0005"/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

Order Number	Range
54-212-016-1	0 - 16"/400mm
54-212-024-1	0 - 24"/600mm
Accessories	
54-212-001-0	Indicator post attachment



Exceptionally fast
(60" per second traverse)!

54-212-024-1



Z-HEIGHT Electronic Height Gages

Features:

- Base design with painted enamel finish has a more comfortable grip and is finely ground and lapped for smooth movement on surface plates
- Fine adjust feature allows precise adjustment to required settings
- Preset feature allows setting pre-determined or reference measurements
- Indicator holding bar included
- Direct inch/metric conversion
- Resolution 0.0005"/0.01mm
- Floating zero
- Large, high contrast LCD display
- Coarse adjustment hand wheel
- Carriage locking lever
- Carbide tipped scriber

Order Number	Range	Accuracy
54-175-012-0	0 - 12"/300mm	± 0.0015"/0.04mm
54-175-018-0	0 - 18"/500mm	± 0.002"/0.05mm
54-175-024-0	0 - 24"/600mm	± 0.002"/0.05mm

54-175-024-0



Z-HEIGHT ABS PLUS+ Electronic Height Gages

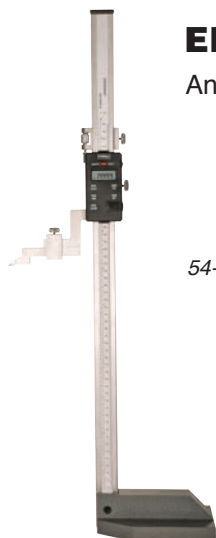
Features:

- True ABS measuring system even after powering down
- Supplied with a NIST certified test block (1" x 2" x 3")
- Includes indicator holding bar (3/8" and 8mm)
- Supplied with mini USB data cable
- Heavy duty single column design
- Carbide scriber
- Ground and lapped base for smooth movement
- Steel rack with large hand wheel for coarse and fine adjustment
- Positive locking level for scribing
- Can be used with wireless transmitter (54-115-100-0, page 9)

Order Number	Range	Accuracy
54-175-012-1	0 - 12"/300mm	± 0.0015"/0.04mm
54-175-018-1	0 - 18"/500mm	± 0.002"/0.05mm
54-175-024-1	0 - 24"/600mm	± 0.002"/0.05mm

54-175-012-1





54-106-020-0

Electronic Single Beam Height Gages

An economical height gages that offers high quality, accuracy and durability.

Features:

- Large base for stability
- True inch/metric conversion
- Resolution: 0.0005"/0.01mm
- Repeatability: 0.0005"/0.01mm ($\pm 2s$)
- Large easy to read LCD
- Presetable display

Order Number	Range	Accuracy
54-106-020-0	0 - 20"/500mm	$\pm 0.0025/0.06\text{mm}$
54-106-040-0	0 - 40"/1000mm	$\pm 0.0035/0.09\text{mm}$



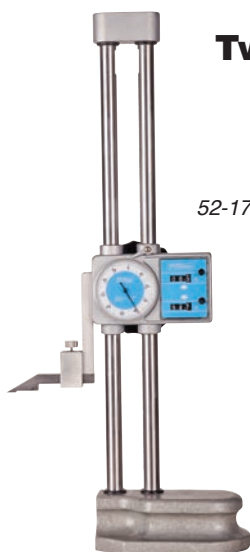
54-174-212-3

Twin Beam Electronic Height Gages with Offset Scriber

Features:

- Carriage design with offset scriber holder
- Base is ground and lapped for flatness
- Handwheel provides course and fine movement
- Updated electronic and mechanical design offers better accuracy and movement of carriage
- Carbide tipped scriber
- Functions include preset, in/mm conversion and ABS/INC for direct or comparative measuring

Order Number	Range	Accuracy
54-174-212-3	12"/300mm	$\pm 0.0016"/0.04\text{mm}$
54-174-224-3	24"/600mm	$\pm 0.002"/0.05\text{mm}$
Accessory		
54-174-226-0	Contact sensor	



52-174-212-0

Twin Beam Dial Height Gages

Features:

- Separate digit counters register both upward & downward travel
- Zero setting can be obtained throughout the gage's range
- Coarse readings in 0.100" graduations: fine readings taken on indicator are 0.001"
- Dual chrome plated beams
- Carbide-tipped scriber.
- Base is hardened, ground & lapped for maximum flatness

Order Number	Range	Accuracy
52-174-212-0	12"	$\pm 0.0015"$
52-174-224-0	24"	$\pm 0.002"$



SHOP TOOLS





Portable Roughness Testers

Use stationary or handheld.

The X-Pro Portable Roughness Tester can be used for many applications by selecting from a variety of accessories, including:

- Stand with swivel
- Special application probes
- RS232 output available on selected models



54-410-500-0

Features:

- 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 (approx. 3000 measurements).
- Ra 1 μ in to 250 μ in

Model 54-410-500-0, (54-410-511-0 with RS-232) is furnished with a certified specimen and 0.0004" diamond stylus probe per ANSI-B46, ISO and MIL specs.

Model 54-410-600-0, (54-410-622-0 with RS-232) is furnished with a certified specimen and 0.0002" diamond stylus probe per DIN-4768 and certain ISO specs.

"V" inserts for mounting on cylindrical surfaces

Order Number	Description
54-410-500-0	Portable Surface Roughness Tester with .0004" probe without RS232
54-410-600-0	Portable Surface Roughness Tester with .0002" probe without RS232
54-410-511-0	Portable Surface Roughness Tester with .0004" probe with RS232
54-410-622-0	Portable Surface Roughness Tester with .0002" probe with RS232
Accessories:	
54-400-896-0	Stand with Swivel Attachment
54-420-120-0	AC Adapter Kit
54-400-110-0	Replacement reference standard

X-Pro Portable Roughness Tester Probes

Order Number	Description	Probe Radius
54-400-319-0	General Purpose Probe	0.0004"
54-400-326-0	General Purpose Probe	0.0002"
54-420-321-0	Small Bore Probe	0.0004"
54-420-327-0	Small Bore Probe	0.0002"
54-420-301-0	Traverse Chisel Probe	0.0004"
54-420-302-0	Parallel Chisel Probe	0.0004"
54-420-328-0	Groove Bottom Probe	0.0004"



X-Pro shown with optional stand with swivel.

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.

Features:

- 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.



Order Number	Penetrator	Shore Scale	Graduations
53-762-101-0	Blunt taper 35°	A	1 Shore
53-762-102-0	Sharp 30°	D	1 Shore

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 indenter
- Rockwell ball indenter 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



Order Number	Description
53-770-600-0	Analog Rockwell Hardness Tester



Tool Set 300 Presetter

Used for the quick checking of heights and diameters (radii) of various types of machine tools. Accuracy is guaranteed by a precise steel measuring column and displacement devices in X and Z coordinates utilizing constant measuring force.



Tool Holding Spindle

Tool presetter is supplied with high precision tool pot (Grade 0)

High precision spindle has:

- ISO 50 taper
- Less than 2 μm concentricity error

Features:

- Measuring range: (X)11.8"/300mm, (Z)15.7"/400mm
- Min/Max functions for TIR readings
- 2 reference indications
- Preset and Tolerance value inputs
- Radius or diameter indication on X-axis display
- Measuring unit (mm/inch) indication
- Display hold to retain readings
- Output - OPTO RS232 for each axis
- Floating zero function anywhere within axis range
- Carbide measuring insert for durability
- Counter balanced measuring carriage
- Constant measuring force in both axes
- High precision Swiss measuring system



Order Number	Description
54-188-300-0	Tool Presetter
54-121-005-0	ISO 50/40 Tool Pot Adapter
Accessory	
54-115-333-0	Opto - cable (1 required for each axis)

Hardness Tester File Set



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 0.157" in diameter and 7" in length (4.30 x 175mm).

Order Number	Description
52-760-000-0	Hardness Tester File Set - a six color-coded system

Cross Spirit Level



Features:

- The Cross Spirit Level is used for leveling machines & other apparatus
- Overall length: 3.15"/80mm; width: 2.64"/67mm; thickness: 0.667"/17.2mm
- Center to center distance of holes is 1.378"/35mm
- Sensitivity is .001"/10", 20 seconds 0.1mm/m
- Level is screw-on type

Order Number	Description
52-422-078-0	Cross Spirit Level - 3"/80mm

Other styles, sizes and sensitivities are available upon request.



Magnetic Precision Spirit Levels

Fowler 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.

Fowler 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.



Order No.	Inch	Metric	Sensitivity Angular	Overall Dimensions
53-422-048-0	0.0002"/10"	0.02mm/m	4 sec.	6" x 1-9/16" x 6" (150mm x 40mm x 150mm)

Other styles, sizes and sensitivities are available upon request.

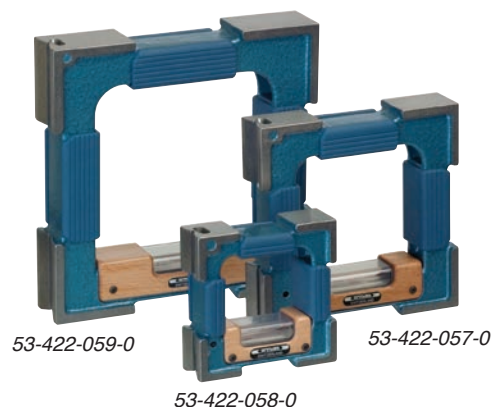
Spirit Levels

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.

Features:

- 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.



Order No.	Inch	Metric	Sensitivity Angular	Overall Dimensions
53-422-057-0	0.0005"/10"	0.05mm/m	10 sec.	6" x 1-3/8" x 6" / 150 x 35 x 150mm
53-422-058-0	0.0005"/10"	0.05mm/m	10 sec.	4" x 1-3/8" x 4" / 100 x 35 x 100mm
53-422-059-0	0.0005"/10"	0.05mm/m	10 sec.	7-7/8" x 1-9/16" x 7-7/8" / 200 x 40 x 200mm

Precision Spirit Levels

The Fowler Wyler Horizontal Spirit Level is used for inspecting and leveling 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 $\pm 5^\circ$
- Simple adjustment system



Order No.	Level Sensitivity	Dimensions
53-422-525-0	0.0005"/10" (0.05mm/m), 10 sec.	7-7/8" x 1-11/16" x 1-5/8" / 200 x 43 x 41mm
53-422-555-0	0.0005"/10" (0.05mm/m), 10 sec.	11-13/16" x 2" x 2" / 300 x 51 x 51mm
<i>Other sizes and sensitivities available.</i>		<i>Prices quoted upon request.</i>



mini-MAG Protractor™ - The Original

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.



Features:

- Embedded magnets with 3.5lb. pull
- Uses standard 9V battery (250 hrs.)
- Measuring range: 360° (4 x 90°)
- Display inverts
- Resolution: 0.05°
- Accuracy: $\pm 0.2^\circ$
- Repeatability: 0.05°
- Hold feature
- Dimensions: L: 2.19 x W: 2.19" x H: 1.2"



Display inverts for easy reading!

Order Number	Description
54-422-450-1	Mini-Mag Protractor

mini-MAG II Protractor™

With tilt % and backlight.



Features:

- On/off, tilt %, light, zero functions
- Display is backlit for low light areas
- Embedded magnets with 3.5lb. pull
- Display automatically inverts
- Measuring range: 360° (4 x 90°)
- Accuracy: $\pm 0.2^\circ$
- Resolution: 0.05°
- Hold feature
- Dimensions: L: 2.19 x W: 2.19" x H: 1.2"

Order Number	Description
54-422-460-0	Mini-Mag II Protractor

mini-MAG PLUS Protractor™

The Mini-Mag PLUS Protractor features a USB rechargeable battery, a backlit display, Tilt% function and IP54 protection against water, oil, and fluids.



Features:

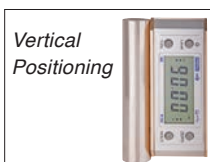
- IP54 protected against fluid and dust
- Auto off after 5 minutes
- Embedded magnets
- Display automatically inverts
- Smaller size: 2.12" x 2.12" x 0.9"
- Measuring range: 360° (4 x 90°)
- Accuracy: $\pm 0.2^\circ$
- Resolution: 0.05°
- Hold feature
- Zero function

Order Number	Description
54-422-500-0	Mini-Mag PLUS Protractor

Digi-Level PLUS+ Electronic Protractor

Features:

- IP65 protected against fluid and dust
- Large auto inverting backlit display
- Includes a 6" straight edge with beveled edge and 1/32nds graduations
- Smart wireless available to connect to phone or tablet
- V's on top and bottom for measuring on cylindrical surfaces
- Embedded magnets on bottom base for vertical and horizontal hold
- Accuracy: $\pm 0.2^\circ$
- Resolution: 0.050°
- Rechargeable battery
- USB charging cable supplied



54-422-550-0

Order Number	Description
54-422-550-0	Digi-Level PLUS
54-422-550-BT	Digi-Level PLUS with smart wireless

XTRA-VALUE Digi-Level Electronic Protractor

Provides instant 360° digital inclination display of any angle. Features aluminum housing, with large LCD, reading hold, absolute 0° at sea level.

Features:

- Measuring Range: 360° ($4 \times 90^\circ$)
- Resolution: 0.05°
- Accuracy: $\pm 0.2^\circ$ maximum error
- Repeatability: $\pm 0.05^\circ$
- Dimension: 4" L x 1" W x 3" H
- Uses standard 9V Battery
- Battery Life: up to 250 hrs.
- Operating Temp: -5°C to 50°C (23°F to 122°F)
- Weight: 1.1 lbs.



Order Number	Description
54-422-444-0	Xtra-Value Digi-Level

XTRA-VALUE 9" Electronic Level

The 9" Laser Level provides instant $4 \times 90^\circ$ digital inclination display. With embedded magnets on its measuring surface, a beamsplitter projects a 90° laser cross hair for leveling at-a-distance. It also includes a 1/4-20 mount for tripod use.

Features:

- Measuring range: $4 \times 90^\circ$
- Resolution: 0.05°
- Accuracy: $\pm 0.2^\circ$
- Repeatability: ± 0.05
- Standard 9 volt battery (250 hours life)
- Dimensions: 9"L x 1" H x 2-1/4" W
- Includes two-way level and plumb vials
- Reversible reading for inverted use



Order Number	Description
54-440-600-0	Xtra-Value 9" Electronic Level

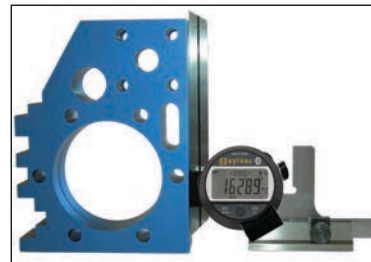


Deluxe Electronic Protractor

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.

Features:

- Includes 8" blade
- Accuracy: ± 4 minutes
- Microfine adjustment for superior accuracy
- Hardened stainless steel blades
- Optional 12" and 20" blades



Order Number	Description
54-440-977-1	Deluxe Protractor Set (with 8" blade, "V" base & case)
54-440-930-0	12"/300mm blade
Accessories	
54-440-940-0	20"/500mm blade
54-115-525-0	Opto-USB Cable

Electronic Universal Protractor

Features:

- Hardened stainless steel
- Range selection: 1x360°, 2x180°, 4x90°
- Dual reading LCD display arc minutes/decimal degrees
- 6" and 12" blades and acute angle attachment included
- Fine adjustment
- Resolution: 30 seconds
- Accuracy: ± 5 minutes



Order Number	Description
54-440-750-0	Electronic Universal Protractor

Economy Universal Dial Protractor

Get accurate, dependable angular information.

Features:

- Easy to read, each dial revolution equals 10°
- Hardened stainless steel construction throughout
- 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
- Accuracy: ± 5 minutes

Order Number	Description
52-440-777-0	Universal Dial Protractor



Digi-Level PRO Electronic Protractor

Includes embedded magnets for unique measurement areas. On/Off, Zero, Hold and Reverse features.

Features:

- Ideal for fabrication applications
- Embedded 25 lb. pull magnets
- Full, 360° measuring range
- Accuracy: $\pm 0.2^\circ$
- Repeatability: $\pm 0.05^\circ$
- Resolution: 0.1°
- Includes standard 3V lithium battery



54-440-740-1



54-440-775-1

Order Number	Description
54-440-740-1	4" Digi-Level PRO
54-440-775-1	12" Digi-Level PRO

Protractors

Invaluable tools for machinists, toolmakers, draftsmen and mechanics.

Features No. 52-450-005-0:

- Measures angles from 0 - 180°
- Used for drawing radial lines at any angle
- Measures 3-5/16" in diameter and features a lock nut

Features No. 52-450-010-0:

- Measures angles from 0-180 degrees
- Used to transfer angles and to set bevels
- 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.



52-450-005-0



52-450-010-0

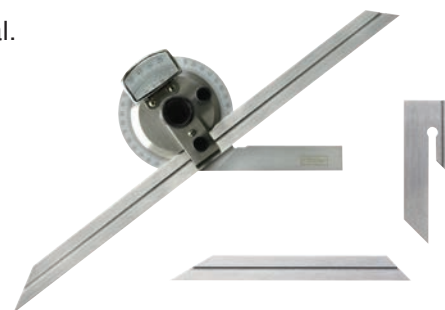
Order Number	Description
52-450-005-0	6" Protractor with semi-circular head
52-450-010-0	6" Protractor with rectangular head

Universal Bevel Protractor

Features a magnifying glass for easily reading verniers and dial.

Features:

- Finished in satin chrome for easy reading
- Includes 6" and 12" blades, beveled 45° on one side; 60° on other.
- 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
- Accuracy: ± 5 minutes



Order Number	Description	Grad.
52-440-612-0	Bevel protractor w/magnifier lens, 6" & 12" blade.	5 min.



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.



52-710-025-0

Features:

- Indicator assembly with 1.6" dial
- Graduations and revolution counter 0.0005"/0.01mm
- 3 Internal and 3 External feelers
- Center point feeler
- Restraining arm

Specifications:

- Length: 6-7/8" (175mm)
- Shank: 3/8" dia. x 7/8" (10mm x 20mm)
- 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 0.0002"/0.005mm 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.

Order Number	Description
52-710-025-0	2D Coaxial Set-Inch
52-710-030-0	2D Coaxial Set-Metric

Weight & Counting Scale



Features:

- Accurately measures weights and quantities
- Use for counting large batches of small parts
- Measure weights up to 66 lbs./30 kg.
- Removable stainless steel weighing pan and durable ABS housing
- Converts pounds, ounces, grams, kilograms
- Internal battery with 100 hours of use
- Front panel leveling indicator with adjustable leveling feet
- 3 panel backlit LCD display indicates weight, average piece weight and count



Measures up to 66 lbs.

Order Number	Description
54-750-030-0	Weight & Counting Scale

Z-CHECK 65 PLUS+ Z-Axis Tool Setter

For Z-Axis setting of various machines.



Display lights
when ZERO
reference
is reached

Features:

- Supplied with zero reference setting block
- IP65 protected against fluid and dust
- Back light turns on when zero reference is achieved
- 4 magnets embedded into base
- 2" default setting height
- Steel contact surface with 0.0002" flatness
- Resolution: 0.00005"/0.001mm
- Repeatability: 0.00015"/0.004mm
- Accuracy: 0.0001"/0.003mm

Order Number	Description
54-188-200-0	Z-Check 65 PLUS Z-Axis Tool Setter

HIGH Accuracy Z-Axis Detectors

For use in CNC machines and other applications where high accuracy is required!

Features:

- IP67 protected against fluid and dust
- High accuracy and repeatability, $\pm 0.000039"/0.001\text{mm}$
- Carbide touch surface (0.196"/5mm)
- High precision bearing guide system for long life
- Interchangeable magnetic base (included)
- High visibility LED indicator
- Movement stroke 0.078"/2mm
- Battery life approximately 250 hours (on time)



Order Number	Model	Dimensions
54-188-150-0	Inch	Height: 2"/50.8mm, Dia. 0.97"/24.638mm
54-188-140-0	Metric	Height: 40mm/1.57", Dia. 20mm/0.78"

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.

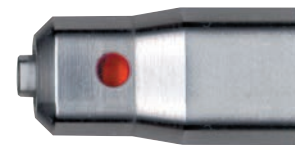
Electronic Edge Finder No. 54-575-000-0:

- High sensitivity probe for accurate positioning relative to workpiece
- Spring loaded
- Very safe against overruns
- Ball diameter: 0.400"
- Shank diameter: 3/4"
- Shank length: 1-3/4"
- Overall length: 3-1/2"
- Repeatability: $\pm 0.0002"$



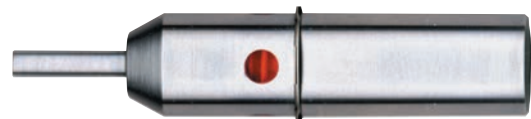
Electronic Offset Gage No. 54-575-200-0:

- High sensitivity gage for height offset presetting.
- Overall diameter: 1"
- Overall length: 2"
- Sensor diameter: 5/16"
- Repeatability: $\pm 0.0002"$



3-D Electronic Sensor No. 54-575-300-0:

- 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: 0.200"
- Shank diameter: 0.750"
- Z-axis to reference surface: 2"
- Repeatability: $\pm 0.0005"$



Order Number	Description
54-575-000-0	Electronic Edge Finder
54-575-200-0	Electronic Offset Gage
54-575-300-0	3-D Electronic Sensor



Audible Edge Finders

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.



52-575-060-0



52-575-040-0

Features:

- Available in two sizes: 1/2" and 3/8"
- Hardened and ground on all working surfaces

Order Number	Shaft & Tip Sizes
52-575-040-0	3/8" x 0.200"
52-575-045-0	1/2" x 0.200"
52-575-060-0	1/2" x 0.500"



Electronic Edge Finders



54-575-600-0

Solid Tips



54-575-625-0

Spring loaded



54-575-650-0

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: 0.0002"

Along with light indication, model 54-575-650-0 emits an audible "beep" at time of contact with electrically conductive metal.

Order Number	Stylus	Shank	Audible	Battery
54-575-600-0	0.200"	1/2"	NO	12 volt
54-575-625-0	0.200"	1/2"	NO	12 volt
54-575-650-0	0.400"	3/4"	YES	12 volt



M5 Edge Finder

With this tool, edges can be detected with doors open and spindles off.



Features:

- Solves safety door lock issues
- Made in the USA
- High repeatability and accuracy at 0.0005"
- Indicates centerline of spindle at 0.20" from edge
- Made from 4140 pre-hardened steel
- Easy viewing without obstruction of coolant covered windows



Pre-loaded
M5 Edge Finder



Edge detected

Order Number	Description	Shank
52-575-150-0	M5 Edge Finder	3/8"



Edge & Center Finders

Audible/Conventional Edge Finder Set

Features:

- Contains: 3/8 x 0.200" combo edge & center finder
- 1/2 x 0.200" combo edge & center finder
- 3/8 x 0.200" audible edge finder
- 1/2 x 0.500" audible edge finder



Order Number	Description
52-575-100-0	Audible/Conventional Edge Finder Set

Edge Finder Set

Features:

Contains:

- shank tip
- 3/8" x 0.200" Edge Finder
- 1/2" x 0.200" Edge Finder
- 1/2" x 0.200" Combo Edge Finder
- 1/2" x 0.500" Edge Finder

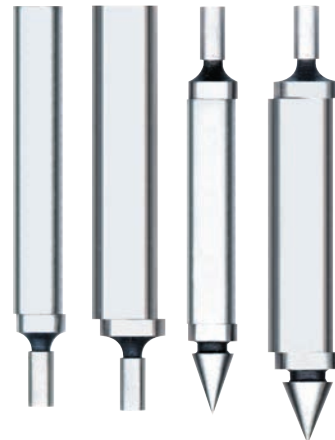


Order Number	Description
52-575-125-0	Edge Finder Set

Edge and Center Finders

Features:

- Edge and Center Finders are hardened and ground on all surfaces
- Accurately locates the starting point for all types of machine work and jig boring
- Accuracy: 0.0002"



A, B, C, & D (corresponds to letters in chart below)

Order Number	Description/Size
52-575-010-0	A. Edge Finder 3/8" x .200"
52-575-015-0	B. Edge Finder 1/2" x .200"
52-575-020-0	C. Combo Edge and Center Finder 3/8" x 0.200"
52-575-025-0	D. Combo Edge and Center Finder 1/2" x 0.200"



Rectangular Gage Block Sets

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)

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



53-670-038-0

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

Order Number	Blocks per Set	Grade
Deluxe Sets - Inch Series:		
53-670-036-0	36	AS1
53-670-038-0	36	Ø
53-670-080-0	81	Ø
53-670-081-0	81	AS1
Deluxe Sets - Metric Series:		
53-671-050-0	103	AS2
53-671-053-0	87	Ø
53-671-055-0	47	Ø

Square Gage Block Sets

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 0.4 millionths



53-672-030-0

Order Number	Grade	Blocks per Set	Blocks included in Each Set
53-672-028-0	Ø	81	9 Blocks 0.1001" thru 0.1009" step of 0.0001"
53-672-030-0	AS1	81	49 Blocks 0.101" thru 0.149" step of 0.001" 19 Blocks 0.050" thru 0.950" step of 0.050" 4 Blocks 1.000" thru 4.000" step of 1.000"

Economy Rectangular Gage Block Sets

An economy version of our deluxe Fowler Gage Block Sets, featuring ± 0.000050 " (fifty millionths) accuracy and a very significant price savings.

Features:

- ± 0.000050 " 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

36 pcs. in wood case. Consists of:	81 pcs. in wood case. Consists of:
9 Blocks .1001" thru .1009" step of .0001"	9 Blocks .1001" thru .1009" step of .0001"
9 Blocks .101" thru .109" step of .001"	49 Blocks .101" thru .149" step of .001"
9 Blocks .110" thru .190" step of .01"	19 Blocks .050" thru .950" step of .050"
5 Blocks .100" thru .500" step of .1"	4 Blocks 1.000" thru 4.000" step of 1.000"
3 Blocks 1", 2", 4"	
1 Block .050"	



53-672-081-0

Order Number	Blocks per Set
53-672-036-0	36
53-672-081-0	81

Large Square Gage Blocks

Features:

- Grade Ø
- NIST Traceable
- Vertically more stable than rectangular blocks
- Large sizes help eliminate block stacks
- Meets or exceeds Federal Specifications ASME B89.1.9-2002



Order Number	Description
53-676-216-0	5" Large Square Gage Block
53-676-218-0	6" Large Square Gage Block
53-676-220-0	7" Large Square Gage Block
53-676-222-0	8" Large Square Gage Block
53-676-224-0	10" Large Square Gage Block
53-676-226-0	12" Large Square Gage Block
53-676-228-0	16" Large Square Gage Block
53-676-230-0	20" Large Square Gage Block

Large Rectangular Gage Blocks - Individuals & Sets

Rectangular in shape, Grade Ø and supplied with NIST certificate

Order Number	Description
53-675-216-0	5" Gage block
53-675-218-0	6" Gage block
53-675-220-0	7" Gage block
53-675-222-0	8" Gage block
53-675-224-0	10" Gage block
53-675-226-0	12" Gage block
53-675-228-0	16" Gage block
53-675-230-0	20" Gage block
53-670-008-0	8 piece Gage block set
53-670-777-0	Holding clamp for two large blocks



53-670-008-0





Individual Square Steel Gage Blocks

All Fowler Individual Square Steel Gage Blocks are Grade 0 and traceable to the National Institute of Standards and Technology.



Includes NIST certificate

Order Number	Block Size
53-676-000-0	0.10005"
53-676-001-0	0.050"
53-676-048-0	0.100"
53-676-050-0	0.1001"
53-676-052-0	0.1002"
53-676-054-0	0.1003"
53-676-056-0	0.1004"
53-676-058-0	0.1005"
53-676-060-0	0.1006"
53-676-062-0	0.1007"
53-676-064-0	0.1008"
53-676-066-0	0.1009"
53-676-068-0	0.101"
53-676-070-0	0.102"
53-676-072-0	0.103"
53-676-074-0	0.104"
53-676-076-0	0.105"
53-676-078-0	0.106"
53-676-080-0	0.107"
53-676-082-0	0.108"
53-676-084-0	0.109"

Order Number	Block Size
53-676-086-0	0.110"
53-676-088-0	0.111"
53-676-090-0	0.112"
53-676-092-0	0.113"
53-676-094-0	0.114"
53-676-096-0	0.115"
53-676-098-0	0.116"
53-676-100-0	0.117"
53-676-102-0	0.118"
53-676-104-0	0.119"
53-676-106-0	0.120"
53-676-108-0	0.121"
53-676-110-0	0.122"
53-676-112-0	0.123"
53-676-114-0	0.124"
53-676-116-0	0.125"
53-676-118-0	0.126"
53-676-120-0	0.127"
53-676-122-0	0.128"
53-676-124-0	0.129"
53-676-126-0	0.130"

Order Number	Block Size
53-676-128-0	0.131"
53-676-130-0	0.132"
53-676-132-0	0.133"
53-676-134-0	0.134"
53-676-136-0	0.135"
53-676-138-0	0.136"
53-676-140-0	0.137"
53-676-142-0	0.138"
53-676-144-0	0.139"
53-676-146-0	0.140"
53-676-148-0	0.141"
53-676-150-0	0.142"
53-676-152-0	0.143"
53-676-154-0	0.144"
53-676-156-0	0.145"
53-676-158-0	0.146"
53-676-160-0	0.147"
53-676-162-0	0.148"
53-676-164-0	0.149"
53-676-166-0	0.150"
53-676-176-0	0.200"

Order Number	Block Size
53-676-178-0	0.250"
53-676-180-0	0.300"
53-676-182-0	0.350"
53-676-184-0	0.400"
53-676-186-0	0.450"
53-676-188-0	0.500"
53-676-190-0	0.550"
53-676-192-0	0.600"
53-676-194-0	0.650"
53-676-196-0	0.700"
53-676-198-0	0.750"
53-676-200-0	0.800"
53-676-202-0	0.850"
53-676-204-0	0.900"
53-676-206-0	0.950"
53-676-208-0	1.000"
53-676-210-0	2.000"
53-676-212-0	3.000"
53-676-214-0	4.000"

Individual Rectangular Steel Gage Blocks

Order Number	Block Size
53-675-001-0	0.050"
53-675-040-0	0.060"
53-675-048-0	0.100"
53-675-050-0	0.1001"
53-675-052-0	0.1002"
53-675-054-0	0.1003"
53-675-056-0	0.1004"
53-675-058-0	0.1005"
53-675-060-0	0.1006"
53-675-062-0	0.1007"
53-675-064-0	0.1008"
53-675-066-0	0.1009"
53-675-068-0	0.101"
53-675-070-0	0.102"
53-675-072-0	0.103"
53-675-074-0	0.104"
53-675-076-0	0.105"
53-675-078-0	0.106"
53-675-080-0	0.107"
53-675-082-0	0.108"
53-675-084-0	0.109"
53-675-086-0	0.110"
53-675-088-0	0.111"
53-675-090-0	0.112"
53-675-092-0	0.113"
53-675-094-0	0.114"
53-675-096-0	0.115"
53-675-098-0	0.116"
53-675-100-0	0.117"

Order Number	Block Size
53-675-102-0	0.118"
53-675-104-0	0.119"
53-675-106-0	0.120"
53-675-108-0	0.121"
53-675-110-0	0.122"
53-675-112-0	0.123"
53-675-114-0	0.124"
53-675-116-0	0.125"
53-675-118-0	0.126"
53-675-120-0	0.127"
53-675-122-0	0.128"
53-675-124-0	0.129"
53-675-126-0	0.130"
53-675-128-0	0.131"
53-675-130-0	0.132"
53-675-132-0	0.133"
53-675-134-0	0.134"
53-675-136-0	0.135"
53-675-138-0	0.136"
53-675-140-0	0.137"
53-675-142-0	0.138"
53-675-144-0	0.139"
53-675-146-0	0.140"
53-675-148-0	0.141"
53-675-150-0	0.142"
53-675-152-0	0.143"
53-675-154-0	0.144"
53-675-156-0	0.145"
53-675-158-0	0.146"

Order Number	Block Size
53-675-160-0	0.147"
53-675-162-0	0.148"
53-675-164-0	0.149"
53-675-166-0	0.150"
53-675-168-0	0.160"
53-675-170-0	0.170"
53-675-172-0	0.180"
53-675-174-0	0.190"
53-675-176-0	0.200"
53-675-178-0	0.250"
53-675-180-0	0.300"
53-675-182-0	0.350"
53-675-184-0	0.400"
53-675-186-0	0.450"
53-675-188-0	0.500"
53-675-190-0	0.550"
53-675-192-0	0.600"
53-675-194-0	0.650"
53-675-196-0	0.700"
53-675-198-0	0.750"
53-675-200-0	0.800"
53-675-202-0	0.850"
53-675-204-0	0.900"
53-675-206-0	0.950"
53-675-208-0	1.000"
53-675-210-0	2.000"
53-675-212-0	3.000"
53-675-214-0	4.000"



Includes NIST Certificate

Individual Steel Gage Blocks are rectangular in shape, Grade 0 and traceable to the National Institute of Standards and Technology.

Pin Gage Sets

High precision Pin Gage (Plug Gage) sets at very economical prices. Offered in two grades of tolerance: Plus (+ 0.0002") & Minus (- 0.0002").

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.

Features:

- 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 0.061".
- 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 0.0002"
- Gage increments are in 0.001" steps

Order Number	Range	Accuracy	No. of Gages per Set
Inch			
53-880-995-0	0.006" to 0.060"	+ 0.0002" - 0.0000"	55
53-880-996-0	0.006" to 0.060"	+ 0.0000" - 0.0002"	55
53-880-060-0	0.011" to 0.060"	+ 0.0002" - 0.0000"	50
53-880-070-0	0.011" to 0.060"	+ 0.0000" - 0.0002"	50
53-880-000-0	0.011" to 0.250"	+ 0.0000" - 0.0002"	240
53-880-005-0	0.011" to 0.250"	+ 0.0002" - 0.0000"	240
53-880-250-0	0.061" to 0.250"	+ 0.0002" - 0.0000"	190
53-880-260-0	0.061" to 0.250"	+ 0.0000" - 0.0002"	190
53-880-500-0	0.251" to 0.500"	+ 0.0002" - 0.0000"	250
53-880-510-0	0.251" to 0.500"	+ 0.0000" - 0.0002"	250
53-880-620-0	0.501" to 0.625"	+ 0.0002" - 0.0000"	125
53-880-630-0	0.501" to 0.625"	+ 0.0000" - 0.0002"	125
53-880-750-0	0.626" to 0.750"	+ 0.0002" - 0.0000"	125
53-880-760-0	0.626" to 0.750"	+ 0.0000" - 0.0002"	125
53-880-830-0	0.751" to 0.832"	+ 0.0002" - 0.0000"	82
53-880-840-0	0.751" to 0.832"	+ 0.0000" - 0.0002"	82
53-880-920-0	0.833" to 0.916"	+ 0.0002" - 0.0000"	84
53-880-930-0	0.833" to 0.916"	+ 0.0000" - 0.0002"	84
53-880-980-0	0.917" to 1.000"	+ 0.0002" - 0.0000"	84
53-880-990-0	0.917" to 1.000"	+ .0000" - 0.0002"	84
Metric			
53-881-000-0	5 - 9.98mm	+ 0.005mm - 0	250
53-881-005-0	5 - 9.98mm	+ 0 - 0.005mm	250
53-881-250-0	10 - 13.98mm	+ 0.005mm - 0	200
53-881-260-0	10 - 13.98mm	+ 0 - 0.005mm	200
53-881-500-0	14 - 16.48mm	+ 0.005mm - 0	125
53-881-510-0	14 - 16.48mm	+ 0 - 0.005mm	125
53-881-620-0	16.50 - 18.98mm	+ 0.005mm - 0	125
53-881-630-0	16.50 - 18.98mm	+ 0 - 0.005mm	125
53-881-750-0	19 - 20.98mm	+ 0.005mm - 0	100
53-881-760-0	19 - 20.98mm	+ 0 - 0.005mm	100
53-881-830-0	21 - 22.48mm	+ 0.005mm - 0	75
53-881-840-0	21 - 22.48mm	+ 0 - 0.005mm	75
53-881-920-0	22.50 - 23.98mm	+ 0.005mm - 0	75
53-881-930-0	22.50 - 23.98mm	+ 0 - 0.005mm	75
53-881-980-0	24 - 25.48mm	+ 0.005mm - 0	75
53-881-990-0	24 - 25.48mm	+ 0 - 0.005mm	75
53-881-995-0	0.20 - 1.28mm	+ 0.005mm - 0	55
53-881-996-0	0.20 - 1.28mm	+ 0 - 0.005mm	55
53-881-997-0	1.30mm to 4.98mm	+ 0.005mm - 0	185
53-881-998-0	1.30mm to 4.98mm	+ 0 - 0.005mm	185





Pin Gage Handles



53-885-000-0

Features:

- 4 sizes cover a range of pin gages (0.011" - 0.625")
- Color coded handle for GO, NO/GO applications
- Both handle and collets are made of aluminum for pin protection
- Collets are spring loaded and self-centering



53-885-001-0

Order Number	Description
53-885-000-0	0.011" - 0.060"
53-885-001-0	0.061" - .0250"
53-885-002-0	0.251" - 0.500"
53-885-003-0	0.501" - 0.625"

Custom Size Master Setting Rings

- 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.



- *When ordering please specify the exact diameter of the ring desired.*

NIST Calibration is available at an additional cost.

Custom Sizes

Order Number	Size Range
53-686-009-0	0.06" - 0.075"
53-686-010-0	0.076" - 0.1"
53-686-020-0	0.11" - 0.2"
53-686-196-0	0.2" - 1.18"
53-686-236-0	1.181" - 2.36"
53-686-315-0	2.36" - 3.15"
53-686-394-0	3.15" - 3.94"
53-686-472-0	3.94" - 4.72"
53-686-551-0	4.72" - 5.51"
53-686-590-0	5.51" - 5.9"
53-686-630-0	5.9" - 6.3"
53-686-670-0	6.3" - 6.7"
53-686-709-0	6.7" - 7.09"
53-686-748-0	7.09" - 7.48"
53-686-787-0	7.48" - 7.87"
53-686-835-0	7.87" - 8.35"
53-686-882-0	8.351" - 8.82"
53-686-929-0	8.821" - 9.29"
53-686-984-0	9.291" - 9.84"
53-686-990-0	9.841" - 10.43"
53-686-991-0	10.431" - 11.02"
53-686-992-0	11.021" - 11.81"
53-686-993-0	11.811" - 12.4"

Rings Fixed Size Numbers

Order Number	Size Range
53-686-050-0	0.5"
53-686-100-0	1"
53-686-150-0	1.5"
53-686-200-0	2"
53-686-250-0	2.5"
53-686-300-0	3"
53-686-350-0	3.5"
53-686-400-0	4"
53-686-450-0	4.5"
53-686-500-0	5"
53-686-550-0	5.5"
53-686-600-0	6"
53-686-650-0	6.5"
53-686-700-0	7"
53-686-750-0	7.5"
53-686-800-0	8"
53-686-850-0	8.5"
53-686-900-0	9"
53-686-950-0	9.5"
53-686-960-0	10"
53-686-970-0	10.5"
53-686-980-0	11"
53-686-994-0	11.5"

Ring "Popular Sizes"

Order Number	Size Range
53-686-011-0	0.1"
53-686-016-0	0.16"
53-686-021-0	0.2"
53-686-031-0	0.312"
53-686-050-0	0.5"
53-686-075-0	0.75"
53-686-137-0	1.375"
53-686-265-0	2.625"
53-686-325-0	3.25"
53-686-700-0	7"
53-686-900-0	9"
53-686-980-0	11"

XX Class Rings available. Please contact our Technical Department for more information: 1-800-788-2353

Bowers Rings

Ultima Bore Gaging System- Rings: XX Class

Order Number	Size	Order Number	Size
54-565-401-0	0.098"/2.5mm	54-565-412-0	3.94"/100mm
54-565-402-0	0.157"/4mm	54-565-413-0	4.725"/120mm
54-565-403-0	0.197"/5mm	54-565-414-0	5.51"/140mm
54-565-404-0	0.315"/8mm	54-565-415-0	6.3"/160mm
54-565-405-0	0.472"/12mm	54-565-416-0	7.09"/180mm
54-565-406-0	0.670"/17mm	54-565-417-0	7.875"/200mm
54-565-407-0	0.945"/24mm	54-565-418-0	8.661"/220mm
54-565-408-0	1.26"/32mm	54-565-419-0	9.449"/240mm
54-565-409-0	1.73"/44mm	54-565-420-0	10.236"/260mm
54-565-410-0	2.36"/60mm	54-565-421-0	11.024"/280mm
54-565-411-0	3.15"/80mm	54-565-422-0	11.811"/300mm

Electronic Holemike XT Setting Rings: X Class

Order Number	Size
54-332-004-0	0.100"
54-332-005-0	0.160"
54-332-006-0	0.200"
54-332-007-0	0.312"
54-332-008-0	0.500"
54-332-009-0	0.750"
54-332-010-0	1.375"
54-332-012-0	2.625"
54-332-013-0	3.250"
54-332-014-0	5"
54-332-015-0	7"
54-332-016-0	9"
54-332-017-0	11"



XT500 Gage- Setting Ring: XClass

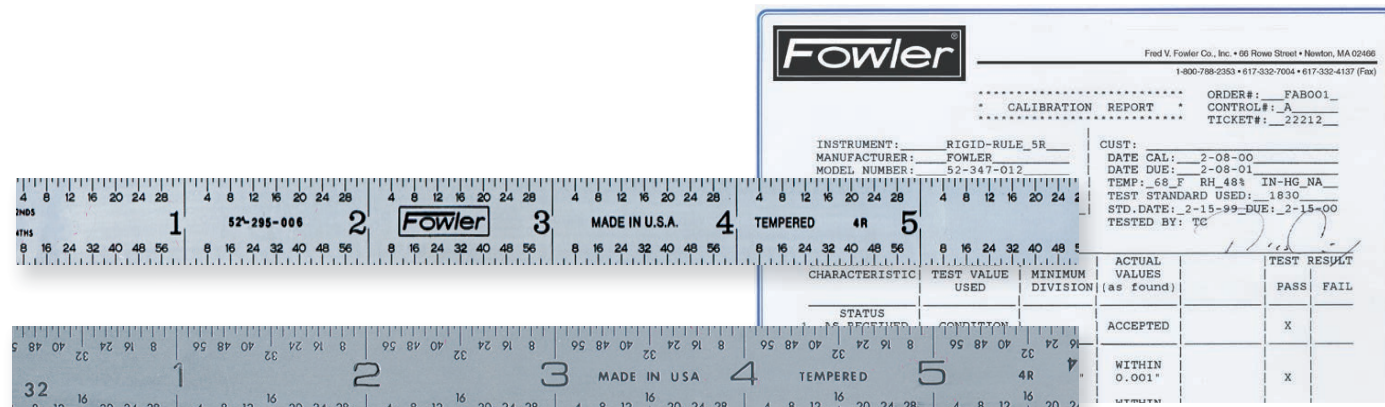
Order Number	Range
54-370-401-0	11.811"/300mm

Microgage Rings: Grade N (nominal)

Order Number	Size	Order Number	Size
54-551-400-0	1.00mm	54-551-410-0	3.00mm
54-551-401-0	1.10mm	54-551-411-0	3.25mm
54-551-402-0	1.20mm	54-551-412-0	3.50mm
54-551-403-0	1.30mm	54-551-413-0	3.75mm
54-551-404-0	1.40mm	54-551-414-0	4.00mm
54-551-405-0	1.75mm	54-551-415-0	4.50mm
54-551-406-0	2.00mm	54-551-416-0	5.00mm
54-551-407-0	2.25mm	54-551-417-0	5.50mm
54-551-408-0	2.50mm	54-551-418-0	6.00mm
54-551-409-0	2.75mm		



Certified Rules



GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths
E/M: 0.5mm, 1mm, 32nds, 64ths

Order Number	Style	Size	Graduation
Inch/Metric Series:			
52-264-006-0	Flexible	6"/150mm	32nds, 64ths, 1mm, 0.5mm
52-264-012-0	Flexible	12"/300mm	32nds, 64ths, 1mm, 0.5mm
52-264-036-0	Flexible	36"/900mm	32nds, 64ths, 1mm, 0.5mm
52-264-048-0	Flexible	48"/1200mm	32nds, 64ths, 1mm, 0.5mm
52-265-006-0	Rigid	6"/150mm	32nds, 64ths, 1mm, 0.5mm
52-265-012-0	Rigid	12"/300mm	32nds, 64ths, 1mm, 0.5mm
52-265-018-0	Rigid	18"/450mm	32nds, 64ths, 1mm, 0.5mm
52-265-024-0	Rigid	24"/600mm	32nds, 64ths, 1mm, 0.5mm
52-265-048-0	Rigid	48"/1200mm	32nds, 64ths, 1mm, 0.5mm
Inch Series:			
52-411-006-0	Flexible	6"	8ths, 16ths, 32nds & 64ths
52-411-012-0	Flexible	12"	8ths, 16ths, 32nds & 64ths
52-411-018-0	Flexible	18"	8ths, 16ths, 32nds & 64ths
52-411-048-0	Flexible	48"	8ths, 16ths, 32nds & 64ths
52-413-006-0	Rigid	6"	8ths, 16ths, 32nds & 64ths
52-413-012-0	Rigid	12"	8ths, 16ths, 32nds & 64ths
52-413-018-0	Rigid	18"	8ths, 16ths, 32nds & 64ths
52-413-024-0	Rigid	24"	8ths, 16ths, 32nds & 64ths
52-413-036-0	Rigid	36"	8ths, 16ths, 32nds & 64ths
52-413-048-0	Rigid	48"	8ths, 16ths, 32nds & 64ths
52-511-006-0	Flexible	6"	32nds, 64ths, 10ths & 100ths
52-511-012-0	Flexible	12"	32nds, 64ths, 10ths & 100ths
52-511-018-0	Flexible	18"	32nds, 64ths, 10ths & 100ths
52-513-036-0	Rigid	36"	32nds, 64ths, 10ths & 100ths
52-513-048-0	Rigid	48"	32nds, 64ths, 10ths & 100ths

EZ Read Rules



52-297-006-0



52-297-012-0

Features:

- Made in the USA
- EZ Read Rules are constructed of hardened stainless steel
- Etched, white numerals and graduations are easy to read against the non-glare, black finish
- Flexible rules are 0.020" thick
- Rigid rules are 0.035" thick

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths
E/M: 0.5mm, 1mm, 32nds, 64ths



Order Number	Size	Width	Graduation	Style
52-297-006-0	6"	1/2"	4R	Flexible
52-297-012-0	12"	1/2"	4R	Flexible
52-297-018-0	18"	3/4"	4R	Flexible
52-297-024-0	24"	3/4"	4R	Flexible
52-307-006-0	6"	1/2"	5R	Flexible
52-307-012-0	12"	1/2"	5R	Flexible
52-307-018-0	18"	0.76"	5R	Flexible
52-307-024-0	24"	0.76"	5R	Flexible
52-308-006-0	6"	1/2"	16R	Flexible
52-308-012-0	12"	1/2"	16R	Flexible
52-379-006-0	6"/150mm	1/2"/12.5mm	E/M	Flexible
52-379-012-0	12"/300mm	1/2"/12.5mm	E/M	Flexible
52-337-006-0	6"	3/4"	4R	Rigid
52-337-012-0	12"	1.03"	4R	Rigid
52-337-018-0	18"	1.2"	4R	Rigid
52-337-024-0	24"	1.2"	4R	Rigid
52-347-006-0	6"	3/4"	5R	Rigid
52-347-012-0	12"	1.03"	5R	Rigid
52-347-018-0	18"	1.2"	5R	Rigid
52-347-024-0	24"	1.2"	5R	Rigid
52-382-006-0	6"/150mm	3/4"/19mm	E/M	Rigid



Rigid Steel Rules: Inch



52-330-006-0

Features:

- Hardened and tempered steel
- Rust and wear resistant for durability
- Micro-fine graduations for easy reading
- Meets Federal accuracy specifications

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths
E/M: 0.5mm, 1mm, 32nds, 64ths

Order Number	Size	Graduation	Width	Thickness
52-330-006-0	6"	4R	3/4"	0.04"
52-330-012-0	12"	4R	1"	0.04"
52-330-018-0	18"	4R	1-1/8"	0.04"
52-330-024-0	24"	4R	1-1/8"	0.04"
52-330-036-0	36"	4R	1-1/4"	0.04"
52-340-006-0	6"	5R	3/4"	0.04"
52-340-012-0	12"	5R	1"	0.04"
52-340-024-0	24"	5R	1-1/8"	0.04"
52-340-036-0	36"	5R	1-1/4"	0.04"
52-350-006-0	6"	16R	3/4"	0.04"
52-350-024-0	24"	16R	1-1/8"	0.04"
52-350-036-0	36"	16R	1-1/4"	0.04"



Flexible Steel Rules: Inch



52-295-006-0



52-320-006-0

Features:

- Hardened and tempered steel
- Rust and wear resistant for durability
- Micro-fine graduations for easy reading
- Meets Federal accuracy specifications

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths
5R: 32nds, 64ths, 10ths & 100ths
16R: 32nds, 64ths, 50ths & 100ths
3R: 32nds, 64ths, 10ths & 50ths
E/M: 0.5mm, 1mm, 32nds, 64ths

Order Number	Size	Graduation	Width	Thickness
52-295-006-0	6"	4R	1/2"	0.015"
52-295-012-0	12"	4R	1/2"	0.015"
52-300-012-0	12"	5R	1/2"	0.015"
52-300-018-0	18"	5R	3/4"	0.020"
52-300-024-0	24"	5R	3/4"	0.020"
52-300-036-0	36"	5R	3/4"	0.020"
52-310-006-0	6"	16R	1/2"	0.015"
52-310-012-0	12"	16R	1/2"	0.015"
52-310-024-0	24"	16R	3/4"	0.020"
52-320-006-0	6"	3R	1/2"	0.015"
52-320-012-0	12"	3R	1/2"	0.015"
52-320-018-0	18"	3R	3/4"	0.020"
52-320-024-0	24"	3R	3/4"	0.020"



Satin Chrome Steel Rules

Steel Rules feature easy-to-read graduations on a non-glare satin-chrome finish.

Features:

- Hardened and tempered steel
- Made in the USA
- Rust and wear resistant for durability
- Micro-fine graduations for easy reading
- Meets Federal accuracy specifications



52-380-006-0



Order Number	Style	Overall Size	Graduation
Metric Series:			
52-380-005-0	Rigid	150mm x 18mm x 0.75mm	1mm, 0.5mm
52-380-010-0	Rigid	300mm x 25mm x 1mm	1mm, 0.5mm
52-380-017-0	Rigid	600mm x 28mm x 1mm	1mm, 0.5mm
52-380-025-0	Flexible	150mm x 13mm x 0.4mm	1mm, 0.5mm
52-380-030-0	Flexible	300mm x 13mm x 0.4mm	1mm, 0.5mm
Inch & Metric Series:			
52-380-006-0	Flexible	150 x 13 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-380-020-0	Flexible	150 x 13 x 0.4mm	1mm & 0.5mm/10ths & 100ths
52-381-005-0	Flexible	150 x 13 x 0.4mm	1mm & 0.5mm/10ths & 50ths
52-380-012-0	Flexible	300 x 13 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-381-010-0	Flexible	300 x 13 x 0.4mm	1mm & 0.5mm/10ths & 50ths
52-380-024-0	Flexible	600 x 20 x 0.4mm	1mm & 0.5mm/32nds & 64ths
52-361-006-0	Rigid	150 x 20 x 0.75mm	1mm & 0.5mm/32nds & 64ths
52-361-012-0	Rigid	300 x 25 x 1mm	1mm & 0.5mm/32nds & 64ths
52-361-018-0	Rigid	450 x 28 x 1mm	1mm & 0.5mm/32nds & 64ths
52-361-024-0	Rigid	600 x 28 x 1mm	1mm & 0.5mm/32nds & 64ths

Golden Rules

Titanium coated for exceptional wear and visibility!

Features:

- Long-lasting, hard wearing, non-glare finish = RC80 hardness
- Scratch resistant, microfine graduations with excellent clarity and contrast
- 30% harder than standard chrome rulers



52-299-006-0

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths

5R: 32nds, 64ths, 10ths & 100ths

E/M: 0.5mm, 1mm, 32nds, 64ths

Order Number	Size	Type	Graduation
52-299-006-0	6"	Flexible	4R
52-299-012-0	12"	Flexible	4R
52-309-012-0	12"	Flexible	5R
52-339-006-0	6"	Rigid	4R
52-339-012-0	12"	Rigid	4R
52-349-006-0	6"	Rigid	5R
52-349-012-0	12"	Rigid	5R
52-389-006-0	6"/150mm	Flexible	in/mm
52-389-012-0	12"/300mm	Flexible	in/mm
52-399-006-0	6"/150mm	Rigid	in/mm
52-399-012-0	12"/300mm	Rigid	in/mm

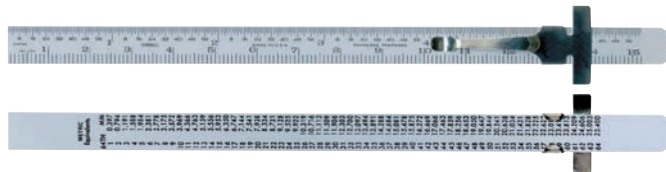


Pocket Steel Rule

Pocket Steel Rule with convenient clip is constructed of tempered stainless steel with a satin-chrome finish for easy, glare-free reading.

Features:

- One end of the rule is rounded to prevent damage to the pocket
- Inch graduations are in 64ths
- Metric scale is in 1mm increments
- Made in the USA
- Rule width: 0.470"
- Rule thickness: 0.021"



52-380-100-0: Top - front view (1mm, 64ths).
Bottom - reverse side shows conversion table.

Order Number	Size	Graduation
52-380-100-0	6"/150mm	1/64" & 1mm



Drill Point Gage

Can be used as a rule, hook rule, depth rule or caliper as well as for layout purposes.

Features:

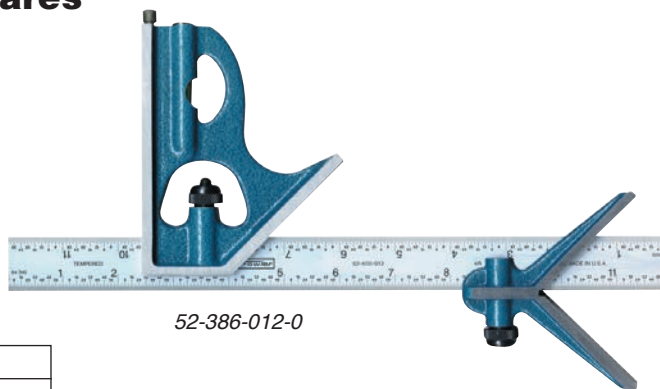
- For measuring properly ground 59° drill tips
- Rule and slide made of steel
- Made in the USA
- Satin chrome finish
- Slide graduated in 32nds
- Adjustable, removable hook
- Furnished in plastic case



Order Number	Size	Graduations
52-480-000-0	6"	8ths, 16ths, 32nds and 64ths



Combination Squares



52-386-012-0

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths

Order Number	Blade Size	Graduation
3-Pc. Combo Square Sets - Hardened Heads (Includes blade square head & centering head)		
52-386-012-0	12"	4R
2-Pc. Combo Square Sets - Hardened Heads (Includes blade and square head)		
52-388-012-0	12"	4R

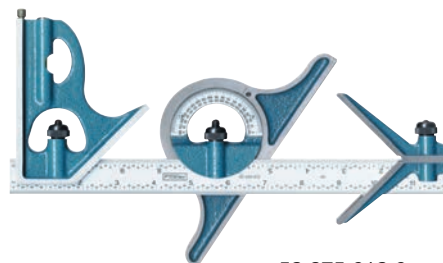


Combination Square Sets

Useful for all mechanical jobs and are used as squares, height gages, depth gages, levels, marking gages, scribes, center gages, bevel protractors, steel rules and plumbs.



52-370-012-0



52-375-012-0

Features:

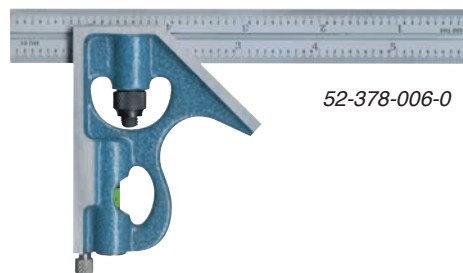
- Blades are chrome plated, fully hardened and tempered
- 4 piece includes: square, protractor and center heads with 12" blade

Order Number	Blade Size	Graduation
52-370-012-0	12"	4R
52-375-012-0	12"	16R

6" & 12" - 2 Piece Combination Squares

Features:

- Square head has level and scribe point



52-378-006-0

GRADUATIONS:

4R: 8ths, 16ths, 32nds & 64ths

16R: 32nds, 64ths, 50ths & 100ths

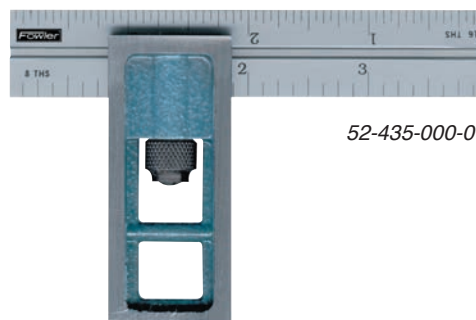


Order Number	Blade Size	Graduation
52-373-006-0	6"	4R
52-378-006-0	6"	16R
52-373-012-0	12"	4R

Double Squares

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



52-435-000-0

GRADUATIONS:

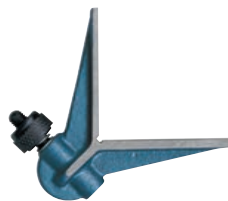
4R: 8ths, 16ths, 32nds & 64ths



Order Number	Description
52-435-000-0	Double Square, Cast Head with 4" Blade
52-435-006-0	Double Square, Cast Head with 6" Blade



Combination Square Accessories



Order Number	Blade Size	Graduation
Blades:		
52-400-012-0	12"	4R
52-400-024-0	24"	4R
Order Number	Description	Accepts Blade Size
Heads:		
52-415-010-0	Cast Center Head	12", 18" and 24"
52-421-000-0	Cast Reversible Protractor Head	12", 18" and 24"



Bevel Edge Squares

Features:

- Designed for layout & measurement work
- Squares have accurate right angles both inside and outside
- Made from a single piece of fully seasoned tool steel
- Beams and blades are ground and lapped for straightness and parallelism.

Blades beveled both edges

- Fully hardened to Rockwell 55C
- Packed in individual carton
- Accuracy = $0.00008" + \frac{\text{Length (blade)}}{100,000}$



Order Number	Blade Length	Beam Length
52-426-002-0	2-1/2"	2-5/8"
52-426-004-0	3-15/16"	2-3/4"
52-426-005-0	4-7/8"	3-1/8"
52-426-006-0	6-5/16"	3-15/16"
52-426-008-0	7-7/8"	5-1/8"

Steel Squares & Square Sets

Features:

- Designed for schools, apprenticeships and training programs
- 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



Blade Size	Beam Size	Accuracy
2"	1-1/2"	0.0006"
3"	2-1/2"	0.0006"
4"	3"	0.0008"
6"	4"	0.0008"
9"	6"	0.0012"
12"	8"	0.0012"

Order Number	Description
Steel Squares	
52-432-004-0	4" Steel Square
52-432-006-0	6" Steel Square
52-432-009-0	9" Steel Square
52-432-012-0	12" Steel Square
Steel Square Sets	
52-432-444-0	2", 4" and 6" Hardened Steel Square Set
52-432-246-0	2", 3", 4" and 6" Hardened Steel Square Set
52-432-469-0	4", 6", 9" and 12" Hardened Steel Square Set



Cylindrical Squares

Features:

- Used for checking squares, height gages and other instruments
- Hardened and the ends are lapped to 90° angular accuracy
- 6" cylindrical squares: ± 0.0001 "
- 12" cylindrical square: ± 0.00015 "
- Includes handle and wood case

52-750-006-0



52-750-012-0



Order Number	Description
52-750-006-0	6" Cylindrical Square
52-750-012-0	12" Cylindrical Square

XTRA-TRI PLUS+ Square Set

Perfect for set up and layout work, measuring and marking angles. Used for metal working, wood working and fabrication. Extremely versatile.

Features:

- 4" and 7" squares with embedded magnets for horizontal and vertical position holding
- Carbide tipped scriber
- 6" etched straight edge in inches and degrees included

Order Number	Description
52-432-100-0	Xtra-Tri PLUS Square Set

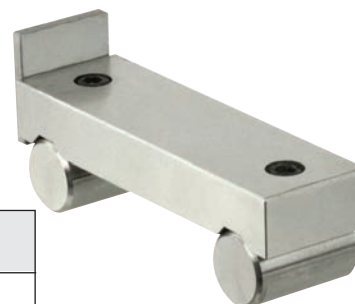


Economy Sine Bar

Features:

- Flange on end for resting work
- Parallelism ± 0.0004 " on both the top and bottom

Order Number	Description	Width	Distance between Center of Rolls
52-455-035-0	Economy 5" Sine Bar	1"	5" ± 0.0004 "



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 0.0002"

Risers:

- 18 risers of the following angles: $1/2^\circ$, 1° thru 15° in 1° increments, $1/4^\circ$ and $1/2^\circ$ to measure taper per foot
- Exact constant within 0.001"

Order Number	Description
52-455-050-0	EZ-Sine Bar Set





Deluxe Stereo Microscope

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.

Features:

- 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



Eyeiece	Objective	Magnification	Working Distance	Field of View
10X	2X	20X	3.15"/80mm	0.40"/10mm
10X	4X	40X	2.24"/57mm	0.20"/5mm
15X	2X	30X	3.15"/80mm	0.30"/7.5mm
15X	4X	60X	2.24"/57mm	0.15"/3.75mm
20X	2X	40X	3.15"/80mm	0.20"/5mm
20X	4X	80X	2.24"/57mm	10"/2.5mm

Order Number	Description
53-640-902-0	Deluxe 20/40x Stereo Microscope includes 2X and 4X objectives, 10X eyepiece, two 12 volt illuminators, eye cups and dust cover.
Accessories	
53-640-925-0	12V Replacement bulb for surface & transmitted illuminators

Stereo Microscope

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.

Features:

- 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



Eyeiece	Objective	Magnification	Working Distance	Field of View
10X	1X	10X	2.0"/50mm	0.80"/20mm
10X	3X	30X	2.40"/61mm	0.30"/7.5mm
15X	1X	15X	2.0"/50mm	0.60"/15mm
15X	3X	45X	2.40"/61mm	0.20"/5mm
20X	1X	20X	2.0"/50mm	0.40"/10mm
20X	3X	60X	2.40"/61mm	0.13"/3.3mm

Order Number	Description
53-640-320-0	10/30x Stereo Microscope. Includes 1X and 3X objectives, 10X eyepiece, 2 volt incident (top) illuminator with an off/on switch and eye cups.
Accessories	
53-640-925-0	12V Replacement bulb for surface illumination

10x Pocket Optical Comparators

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.



52-664-609-0



52-664-009-0

Order Number	Description
52-664-001-0	10X Comparator with No. 52-661-009 reticle
52-664-009-0	10X Comparator with 9 reticles
52-664-609-0	10x Pocket Optical Comparator Set with 9 reticles and Illuminator Attachment
52-665-006-0	Illuminator attachment only (requires 2 "C" size batteries)

7x Pocket Optical Comparators

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.



Illuminator Attachment No. 52-665-006-0
shown with No. 52-665-005-0



52-665-005-0

Order Number	Description
52-665-001-0	"Peak" 7X Comparator with #5 reticle
52-665-005-0	"Peak" 7X Comparator with 5 reticles
52-665-006-0	Illuminator attachment only (requires 2 "C" size batteries)



Optical & Illuminated Magnifiers

The highest optical quality and offer fine resolution. Ideal for machinists, toolmakers, philatelists, lithographers, coin collectors, etc.



Illuminated Magnifier No. 52-660-050-0 takes two "C" size batteries (not included), includes a rust proof brass battery case and offers excellent illumination.

Order Number	Description
Optical Magnifiers:	
52-660-001-0	5X Loupe (plastic); focal distance 2". High quality, precise.
52-660-010-0	Double element magnifier, excellent optical quality; 10X magnification.
3-Piece Loupe Set:	
52-660-020-0	Includes a 2X, 5X and 10X loupes.
Illuminated Magnifier:	
52-660-050-0	Magnifier 10X. Batteries not included. Requires 2 "C" size batteries.

Pocket Scope & Micro-Lite

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. Ideal for toolmakers, inspectors, machinists, field service personnel, designers, artists, printers, jewelers, electricians and photographers.

Features No. 52-662-020-0, 040-0:

- No moving parts, the Pocket-Scope never loses focus.
- Compound lens system of four parts gives accurate readings without adjusting.
- Reticles graduated in 0.002" or 0.001".
- 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.

Features No. 52-662-045-0:

- 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



Pocket-Scope shown with Micro-Lite

Order Number	Description	Field of View	Scale Range
52-662-020-0	20X Pocket-Scope with 0.002" reticle	0.190"	0 - 0.18"
52-662-040-0	40X Pocket-Scope with 0.001" reticle	0.082"	0 - 0.07"
52-662-045-0	Micro-lite (uses AAA battery, not included)		

Triplets Folding Pocket Magnifier

Features:

- 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



Order Number	Description
52-660-004-0	Triplet lens magnifier - 10X magnifier

Large Diameter Magnetic Mini Flex Bar with LED Flashlight

Features:

- 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



Order Number	Description
52-630-455-0	Large Diameter Magnetic Mini Flex Bar with light

Universal Magnetic Mini Flex Bar with Zoom LED Flashlight

Features:

- 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 release mounting bracket clamp
- Batteries included



Order Number	Description
52-630-451-1	Universal Magnetic Mini Flex Bar with light



1-2-3/2-3-4/2-4-6 Blocks

Premium Brand 1-2-3 Block, No. 52-439-032-0



Features:

- Parallelism and squareness: 0.0002"/1"
- Hardened (HRC 55 - 60)
- 23 holes for easy clamping, 5 tapped, 18 untapped thru holes
- Surface finish: 6 - 16 μ "
- Includes hex wrench and 5 mounting bolts (3/8"-16)

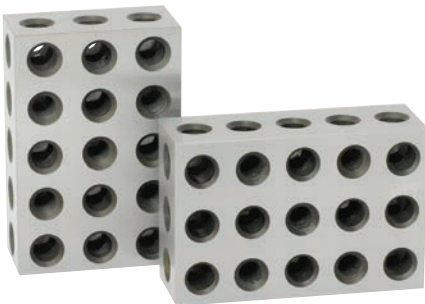
Steel 1-2-3 Blocks, No. 52-439-001-0 to 031-0



Features:

- Parallelism and squareness: 0.0001"/1"
- Available in two styles - with 1 or 23 holes. Blocks are matched in pairs and measure 1" x 2" x 3". Tapped holes have 3/8" - 16 threads.
- Very useful in mounting work for precision grinding, layout work, etc
- Blocks hardened to 58-60 Rockwell C.
- Ground to surface finish 6-10 micro inches
- Matched to size within ± 0.0002 "
- Includes hex wrench and 5 mounting bolts (3/8"-16)

Steel 2-3-4 and 2-4-6 Blocks, No. 52-439-246-0



Features:

- Parallelism and squareness: 0.0003"/1"
- Block hardened to 56 - 60 RC
- Flatness within 0.0002" per inch
- Matched to size within ± 0.0005 "/1"
- Includes hex wrench and 5 mounting bolts (3/8"-16)

Order Number	Description
1-2-3 Blocks	
52-439-001-0	Set of 2 Blocks with 1 hole
52-439-031-0	Set of 2 Blocks with 31 holes
52-439-032-0	Premium Brand 1-2-3 Block Set
2-3-4 Blocks	
52-439-234-0	Set of Blocks with 31 holes
2-4-6 Blocks	
52-439-246-0	Set of Blocks with 31 holes

Premium Parallel Sets

1/32" Parallel Set, No. 52-437-031-0

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: $\pm 0.0001"$
- Paired in height: $\pm 0.0001"$
- Hardness: 50 HRC



1/8" Parallel Set, No. 52-437-125-0

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: $\pm 0.0002"$
- Paired in height: $\pm 0.00015"$
- Hardness 58-63 HRC



1/4" Parallel Set, No. 52-437-250-0

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: $\pm 0.0002"$
- Paired in height: $\pm 0.0002"$
- Hardness 52-58 HRC



Order Number	Description
52-437-031-0	1/32" Parallel Set
52-437-125-0	1/8" Parallel Set
52-437-250-0	1/4" Parallel Set



1/8" Parallel Set

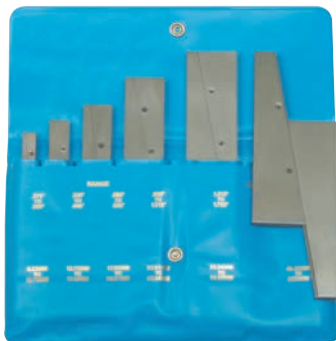


Features:

- 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 ± 0.0008 " each pair
- Heights matched within ± 0.001 " each pair

Order Number	Description
52-437-000-0	1/8" Parallel Set

Adjustable Parallel Set



Features:

- Set of 6 Adjustable Parallels. Sizes: 3/8" - 1/2", 1/2" - 11/16", 11/16" - 15/16", 15/16" - 1-5/16", 1-5/16" - 1-3/4" and 1-3/4" - 2-1/4".
- 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

Accuracy (parallelism)	
3/8" - 11/16":	0.0005"
11/16" - 1-5/16":	0.0006"
1-5/16" - 2-1/4":	0.0009"

Order Number	Description
52-437-006-0	Adjustable Parallel Set

Straight Edges

For fabrication, alignment and layout work.



Features:

- 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

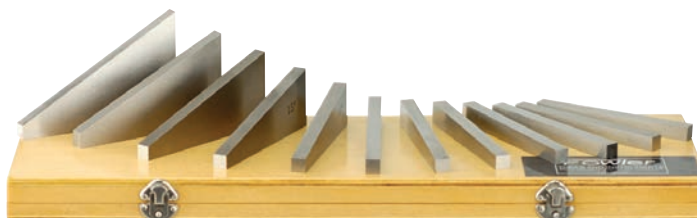
Order Number	Length	Width	Straightness	Thick
52-480-050-0	18"	1.57"	0.0003"	0.150"
52-480-055-0	24"	1.57"	0.0003"	0.150"

12 Piece Angle Block Set

Made of solid, hardened steel with specific angles. Includes 1/4 and 1/2 degree sizes to handle most angle requirements.

Features:

- 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.
- 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.
- Angular accuracy: ± 2.5 arc minutes
- All blocks are 3" long and 1/4" thick



Order Number	Description
53-666-000-0	12 piece Angle Block Set

12 Piece Angle Block Set

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
- Angular accuracy: ± 30 arc seconds
- All blocks 3" long x 1/4" thick

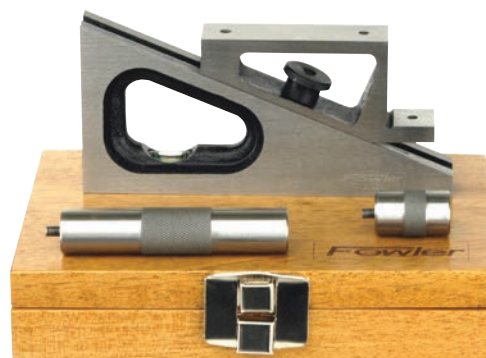


Order Number	Description
52-666-777-0	12 piece Angle Block Set

Planer & Shaper Gage

Features:

- Base and slide are beveled to provide accurate alignment and parallelism
- Hardened to 50 HRC
- Supplied with 1" and 3" extension posts, maximum height 6-1/4"
- Precision level ensures accuracy
- Parallelism: base to top surface = 0.00032"
- Platform has tapped holes to accommodate extensions



Order Number	Range	Base Size	Extensions
52-460-005-0	1/4" to 6-1/4"	3/4" x 5"	1" and 3"



V-Block Set



Features:

- Parallel and square within 0.0003"
- Dimensions: 1-3/8" x 1-3/8" x 1-3/16"
- Reversible swing-away clamps
- Ø capacity: 0.080" to 1.285"
- Versatile clamp plus unique offset hole pattern in top of blocks, offers a large variety of clamping possibilities

Order Number	Description
52-475-001-1	V-Block Set

V-Block Set

Precise tool used for layout work in the tool room 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

Order Number	Height	Length	Width
52-475-555-0	2"	2-3/4"	2"

SHOP-BLOX® V-Block Sets

Internal clamping type



External clamping type



Features:

- Parallelism and squareness: 0.0005"
- All sides are ground square and parallel to each other
- V-slots are centered, parallel and square to each other in pairs
- Constructed hardened tool steel
- Ideal for setup, milling, grinding and drilling applications

Order Number	Dimensions	Clamping Type	Capacity
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			
52-476-010-0	2 clamps for 52-475-010-1		
52-476-015-0	2 clamps for 52-475-015-1		

X-BLOX® X-Block Set

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.

Features:

- Surfaces are square and parallel within 0.0005"
- V-grooves are square and parallel with all surfaces within 0.0005"
- Corresponding dimensions for each pair are alike within 0.0005"

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



Order Number	Description
52-475-500-0	All-Angle V-Block and Clamp

All-Angle V-Block

For grinding, milling or drilling.

Features:

- Made of hardened and precision ground tool steel
- Sides are parallel and vee is central to 0.0003"
- Central hole is provided for drilling or removing pins
- Has four 3/8" - 16 tapped holes, two in the bottom and one on each side for clamping
- Dimensions: 3-5/8" long x 1-7/8" wide x 1-7/8" high (including clamp)
- Holding capacity: 1-5/16"



Order Number	Description
52-475-050-0	All-Angle V-Block and Clamp

Adjustable V-Block

A precision ground angle block that is ideal for drilling, milling, grinding and set-up tasks.

Features:

- Hardened to 50-55 HRC and precision ground
- 3.75" L x 1.75" W x 2" H and offers approximately 1.75" work space
- Angle accuracy: ± 10 minutes
- Squareness within 0.0004"



Order Number	Description
52-585-090-0	Adjustable V-Block



Magnetic V-Block

Features 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.



52-585-075-0

Features:

- Permanent, powerful magnet
- Faces and V accurately ground
- Parallelism and squareness: 0.0008"
- V central to 0.008"
- Hardened to 35-45 HRC
- The holder exerts a magnetic force on the upper, lower and V-channel surfaces. Magnetic force is simply switched off by means of a switch.

Order Number	Description	Overall Dimensions
52-585-070-0	V-Block with on-off switch	2-3/8" wide x 4-7/8" long x 2-7/8" high
52-585-075-0	V-Block with on-off switch	2-3/8" wide x 4" long x 3-7/8" high

Toolmaker's Vise

Toolmaker's Vise make precision holding possible for inspection, precision jig boring, milling and grinding.



Features:

- Features solid base and front jaw construction.
- Parallelism and squareness accuracy: 0.0004"
- Clamping slots on the bottom of the base easily affix to angle plates, vises, etc.

Order Number	Maximum Opening	Dimensions
52-466-000-1	2.48"	6.1" x 1.9" x 2.0"

Parallel Clamps

Useful for holding work together in tapping and drilling and on various machine set-ups.

Features:

- Fowler's Parallel Clamps are designed for maximum strength and rigidity
- Ends of jaws are chamfered
- Case hardened steel finish
- Screw heads are drilled, allowing use of pin for tightening

Order Number	Jaw Opening	Jaw Length
52-465-005-0	1-1/4"	2"
52-465-010-0	2-1/4"	3"
52-465-015-0	3"	4"



52-465 series

MAX-JACK® Heavy-Duty Screw Jack

Simplify set-up applications on all machine and inspection operations.

Features:

- Adjustable from 4.5" to 8"
- Quick-acting height adjustment
- Fine adjust ring for easy leveling
- Height locking ring
- Capacity: 2000 lbs. (approx.)



52-104-050-0 and 055-0
Adjustable from 4.5" to 8"



Order Number	Description
52-104-050-0	Max-Jack screw jack
52-104-055-0	Pair of Max-Jack screw jacks (2 each)

Screw Jack Set

Features:

- Range: 2.25" to 3.375"
- Jack base diameter: 1.25"
- 1" and 2" extension bases
- Capacity: 1000 lbs. (approx.)
- Extensions may be combined



Order Number	Description
52-104-000-0	Screw Jack Set

Machinist Screw Jack Set

Features:

- 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"
- Capacity: 1000 lbs. (approx.)



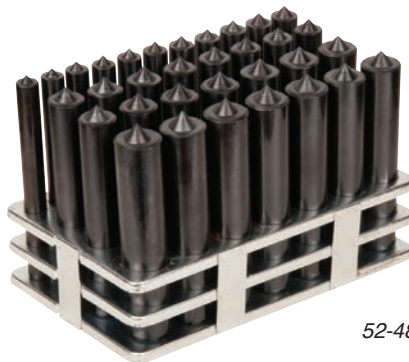
Order Number	Description
52-104-025-0	Machinist Screw Jack Set



Transfer Punch Sets



52-482-028-0



52-482-030-0

Features:

- Punches are made of hardened and tempered tool steel, black oxide finished
- All sizes are marked and diameters are slightly undersized for easy handling
- Set supplied with index stand

Order Number	Description	Range
52-482-028-0	28 Piece Transfer Punch Set	3/32" to 1/2", + 17/32"
52-482-030-0	33 Piece Transfer Punch Set	1/2" to 1"

XTRA-PUNCH

Heavy Duty Transfer Punch Set



Features:

- 1/2" - 1" range in 1/64"
- 36 piece set, 3 master punches and 33 individually sized sleeves
- Simply select the laser etched sleeve for the size required, place it on one of the master punches for that range and it is ready to use
- Punch tips are hardened 48-55 HRC
- Master punches are 4-7/8" in length and sleeves are 1" in length
- 1/4" the weight of a conventional transfer punch set

Order Number	Description
52-482-040-0	Xtra-Punch Heavy Duty Transfer Punch Set

Screwdriver and Tool Set



Features:

- This precision Screwdriver and Tool Set is ideal for miniature work
- Features knurled and chromed swiveling handles
- 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"

Order Number	Description
52-490-003-0	Precision Screwdriver & Tool Set

Extra Long Drive Pin Punches

Features:

- Black nitrate finished. 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"



Order Number	Description
52-500-300-0	5 Extra Long Drive Pin Punch Set

5 Piece Center Punch Set

Features:

- Black nitrate finished. Made of chrome alloy steel.
- 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"



Order Number	Description
52-500-015-0	5 piece Center Punch Set

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.

Features:

- 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



Order Number	Description
52-500-075-0	Optical Center Punch



Heavy Duty Automatic Center Punch



Features:

- 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.

Order Number	Description
52-500-290-0	Super Heavy Duty Automatic Center Punch; length 6"; 5/8" diameter

Light Duty Automatic Center Punch



Features:

- Comes with a convenient clip
- Overall length is 6"
- Adjustable compression allows for different types of material

Order Number	Description
52-500-010-0	Automatic Center Punch

Universal Deburring, Cleaning & Countersink Set

A complete kit for Machine Shop Applications!

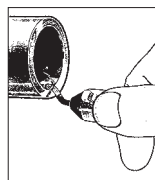


Set includes:

- 1 Universal Handle
- 2 Adapters
- 2 Deburring Blades
- 1 Countersink for 12mm/.47" diameter
- 1 Countersink for 20mm/.79" diameter
- 4 Cleaner Blades, for sheet metal, small ridges, relieving corners and for narrow slots

Order Number	Description
52-483-888-0	Universal Deburring, Cleaning & Countersink Set

Deburring Tool



Features:

- "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.

Order Number	Description
52-483-003-0	Adjustable Scraper & Deburring Cutter with three blades

4 Piece Deburring Tool Set

Deburring Cutter Set features four separate color coded cutters. Each color indicates the material that the cutter is intended for.

Features:

- 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



Order Number	Description
52-483-777-0	4 pc. Deburring Cutter Set
52-483-006-0	Replacement blade for aluminum
52-483-007-0	Replacement blade for brass
52-483-009-0	Replacement blade for steel
52-483-010-0	Replacement blade for plastic
52-483-016-0	Package of 10 blades No. 52-483-006-0
52-483-017-0	Package of 10 blades No. 52-483-007-0
52-483-019-0	Package of 10 blades No. 52-483-009-0
52-483-020-0	Package of 10 blades No. 52-483-010-0

Swiss Pattern File Sets

Each set includes a fitted case and 12 of the finest quality files in the most popular shapes.

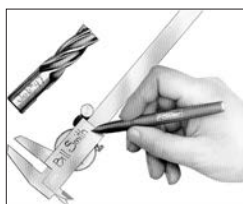
Features:

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, key-ways, cleaning corners, smoothing small parts and similar jobs.



Order Number	Description	Length	Cut No.
55-130-062-0	12 pc. Swiss Pattern File Set	6"	#2

Chemical Etching Pen for Metal



Features:

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.

Order Number	Description
52-730-005-0	Disposable Felt tip Metal Etching Pen. Overall length is 6-1/4"



Carbide "Super Scriber"



Features:

- Retractable carbide tip
- Knurled grip
- Machined aluminum body
- Pocket clip

Order Number	Description
52-500-050-0	Carbide "Super Scriber"
52-500-055-0	Replaceable Carbide Refill

Pocket Carbide Scriber



Features:

- Lightweight
- Retractable carbide tip
- Fluted grip
- Blue anodized aluminum body
- Pocket clip

Order Number	Description	Overall Length
52-500-000-0	Pocket Carbide Scriber	6.0"
52-515-046-0	Carbide Refill	

Retractable Tip Carbide Scriber w/Magnetic End Cap



Features:

- Heavy duty
- Replaceable carbide tip
- Knurled grip
- Pocket clip
- Magnetic end cap

Order Number	Description	Overall Length
52-500-080-0	Replaceable Tip Carbide w/magnetic end cap	5.75"
52-500-085-0	Carbide Refill	

Fixed Tip Scriber



Features:

- Heavy duty
- Fixed carbide tip
- Pencil-like design
- Pocket clip

Order Number	Description	Overall Length
52-500-090-0	Fixed Tip Scriber	6.0"

Cutter Scriber



Features:

- Knurled steel handle
- Hardened point and blade

Order Number	Description
52-515-040-0	Cutter Scriber

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°

Order Number	Description
52-470-010-0	26 piece set with holder. Ranges: 1/64" - 17/64" by 64ths and 9/32" - 1/2" by 32nds in vinyl case

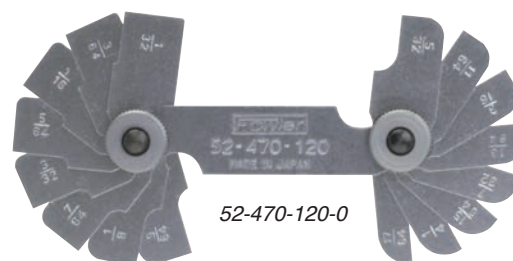


Radius Gages

Made of finely finished high quality steel, used by tool and diemakers, screw machine operators, machinists, pattern-makers and mechanics.

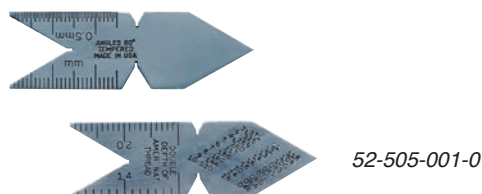
Features:

- 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.



Order Number	No. Leaves	Range: Concave and Convex
Inch Series:		
52-470-120-0	16	1/32" - 17/64" by 64ths, (Each leaf male & female)
Metric Series:		
52-470-110-0	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)

Thickness (Feeler) & Center Gages



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

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

Order Number	Description
52-485-006-0	Tapered Thickness Gages-Inch. 26 Leaf Set: 0.0015", 0.002", 0.0025", 0.003", 0.004", 0.005", 0.006", 0.007", 0.008", 0.009", 0.010", 0.011", 0.012", 0.013", 0.014", 0.015", 0.016", 0.017", 0.018", 0.019", 0.020", 0.021", 0.022", 0.023", 0.024" and 0.025". Length: 3".
52-485-010-0	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.
52-505-001-0	Center Gage - Inch: in graduations of 14ths, 20ths, 24ths, 32nds



Screw Pitch Gages



52-485-015-0



52-485-051-0



52-485-030-0

Features No. 52-485-015-0, 018-0, 020-0, 027-0 & 051-0:

- 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

Features No. 52-485-030-0:

- Acme Screw Pitch Gages (29° angle) made of fine stainless steel. Each blade is 3-1/2"/90mm long and 0.03"/0.8mm thick.

Order Number	Description
Inch Series:	
52-485-015-0	Screw Pitch Gage with 30 blades: 4 to 42 pitch standard V thread.
52-485-051-0	Screw Pitch Gage with 51 blades: 4 to 84 pitch standard V thread.
Metric Series:	
52-485-018-0	Screw Pitch Gage with 18 blades: 0.50mm to 7.0mm. Center Gage with coarse and fine notch included.
52-485-020-0	Screw Pitch Gage with 24 blades: 0.25mm to 6.0mm.
Inch/Metric Series:	
52-485-027-0	Screw Pitch Gage with 28 blades. Inch 4 - 56" pitch. Metric 0.50 - 6.00mm
Acme Series:	
52-485-030-0	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.

Thread Measuring Wires & Involute Gear Tooth Gages



52-470-140-0



52-485-048-0

Features No. 52-470 Series:

- With this Involute Gear Tooth Gage, it is easy to determine the diametrical pitch of involute gears from 6 - 80 and 2 - 5 in inch and 0.5 - 5 and 6 - 12 in metric.
- Pressure angle = 14.5°

Features No. 52-485-048-0:

- Thread Measuring Wires include 48 wires in sixteen different sizes.
- Accuracy for sizes 0.018" through 0.108" is within +0 / -.0004"; sizes 0.120" through 0.185" 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

Order Number	Description
52-470-140-0	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.
52-470-150-0	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.
52-485-048-0	Thread Measuring Wire Set: 48 Wires with holders

Setting Master - Caliper & Height Gage Checker

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.

Features:

- 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: $\pm 0.0002"$



Order Number	Description
53-813-010-0	12" Caliper/Height Gage Checker
<i>note: Larger size and metric versions available on special order</i>	

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



52-438-766-0

Order Number	Description
52-438-766-0	52 Pc. Gage Ball Set
52-438-777-0	50 Pc. Metric Gage Ball Set

QUICK CHECK

Multi-Function Check Standard

Features:

- One compact, multi-function, precise standard
- Can be used to check and verify a multitude of measuring instruments
- Checks calipers, micrometers, depth gages, bore gages, test and dial indicators, caliper gages, height gages, protractors, combination sets and more
- Supplied with a manufacturer's test certificate
- All sizes marked are actual



Order Number	Description	Accuracy
53-813-015-0	Quick Check Multi-Function Check Standard	$\pm 0.00012"/0.003\text{mm}$

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 l_n in inches	Calibration Grade K		Grade 00		Grade 0		Grade AS-1		Grade AS-2	
	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ $\mu\text{in.}$	Tolerance for the Variation in Length t_v $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ $\mu\text{in.}$	Tolerance for the Variation in Length t_v $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ $\mu\text{in.}$	Tolerance for the Variation in Length t_v $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ $\mu\text{in.}$	Tolerance for the Variation in Length t_v $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ $\mu\text{in.}$	Tolerance for the Variation in Length t_v $\mu\text{in.}$
$l_n \leq 0.05$	12	2	4	2	6	4	12	6	24	12
$0.05 < l_n \leq 0.4$	10	2	3	2	5	4	8	6	18	12
$0.45 < l_n \leq 1$	12	2	3	2	6	4	12	6	24	12
$1 < l_n \leq 2$	16	2	4	2	8	4	16	6	32	12
$2 < l_n \leq 3$	20	2	5	3	10	4	20	6	40	14
$3 < l_n \leq 4$	24	3	6	3	12	5	24	8	48	14
$4 < l_n \leq 5$	32	3	8	3	16	5	32	8	64	16
$5 < l_n \leq 6$	32	3	8	3	16	5	32	8	64	16
$6 < l_n \leq 7$	40	4	10	4	20	6	40	10	80	16
$7 < l_n \leq 8$	40	4	10	4	20	6	40	10	80	16
$8 < l_n \leq 10$	48	4	12	4	24	6	48	10	104	18
$10 < l_n \leq 12$	56	4	14	4	28	7	56	10	112	20
$12 < l_n \leq 16$	72	5	18	5	36	8	72	12	144	20
$16 < l_n \leq 20$	88	6	20	6	44	10	88	14	176	24
$20 < l_n \leq 24$	104	6	25	6	52	10	104	16	200	28
$24 < l_n \leq 28$	120	7	30	7	60	12	120	18	240	28
$28 < l_n \leq 32$	136	8	34	8	68	12	136	20	260	32
$32 < l_n \leq 36$	152	8	38	8	76	14	152	20	300	36
$36 < l_n \leq 40$	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 l_n in mm	Calibration Grade K		Grade 00		Grade 0		Grade AS-1		Grade AS-2	
	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ μm	Tolerance for the Variation in Length t_v μm	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ μm	Tolerance for the Variation in Length t_v μm	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ μm	Tolerance for the Variation in Length t_v μm	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ μm	Tolerance for the Variation in Length t_v μm	Limit Deviations of Length at any Point From Nominal Length $\pm t_o$ μm	Tolerance for the Variation in Length t_v μm
$l_n \leq 0.5$	0.30	0.05	0.10	0.05	0.14	0.10	0.30	0.16	0.60	0.30
$0.5 < l_n \leq 10$	0.20	0.05	0.07	0.05	0.12	0.10	0.20	0.16	0.45	0.30
$10 < l_n \leq 25$	0.30	0.05	0.07	0.05	0.14	0.10	0.30	0.16	0.60	0.30
$25 < l_n \leq 50$	0.40	0.06	0.10	0.06	0.20	0.10	0.40	0.18	0.80	0.30
$50 < l_n \leq 75$	0.50	0.06	0.12	0.07	0.25	0.12	0.50	0.18	1.00	0.35
$75 < l_n \leq 100$	0.60	0.07	0.15	0.07	0.30	0.12	0.60	0.20	1.20	0.35
$100 < l_n \leq 150$	0.80	0.08	0.20	0.08	0.40	0.14	0.80	0.20	1.60	0.40
$150 < l_n \leq 200$	1.00	0.09	0.25	0.09	0.50	0.16	1.00	0.25	2.00	0.40
$200 < l_n \leq 250$	1.20	0.10	0.30	0.10	0.60	0.16	1.20	0.25	2.40	0.45
$250 < l_n \leq 300$	1.40	0.10	0.35	0.10	0.70	0.18	1.40	0.25	2.80	0.50
$300 < l_n \leq 400$	1.80	0.12	0.45	0.12	0.90	0.20	1.80	0.30	3.60	0.50
$400 < l_n \leq 500$	2.20	0.14	0.50	0.14	1.10	0.25	2.20	0.35	4.40	0.60
$500 < l_n \leq 600$	2.60	0.16	0.65	0.16	1.30	0.25	2.60	0.40	5.00	0.70
$600 < l_n \leq 700$	3.00	0.18	0.75	0.18	1.50	0.30	3.00	0.45	6.00	0.70
$700 < l_n \leq 800$	3.40	0.20	0.85	0.20	1.70	0.30	3.40	0.50	6.50	0.80
$800 < l_n \leq 900$	3.80	0.20	0.95	0.20	1.90	0.35	3.80	0.50	7.50	0.90
$900 < l_n \leq 1000$	4.20	0.25	1.00	0.25	2.00	0.40	4.20	0.60	8.00	1.00



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