



# Fowler®

HIGH PRECISION



HAND TOOLS  
Catalog 2022



Celebrating 75 years... and still growing.

*A message from Fowler High Precision CEO David Francis.*

Today's airplanes are safer than they have ever been before. Modern cars last tens of thousands more miles than previous generations. New factory equipment can assemble quality products for generations. One of the key reasons for these improvements is the quality of the parts that go into them. And for 75 years, Fowler has been helping make the world's parts better.

Fowler High Precision is a family-owned business. We are recognized globally as one of the world's leading suppliers of high-quality inspection, control, and calibration equipment. Since 1946, we have dedicated ourselves to providing the most innovative and precise measurement products available on Earth. Our company's longstanding affiliations with other industry leaders, such as Baty, Bowers, Fusion, Sylvac, Trimos, Wyler and zCat have helped us remain at the forefront of industry's ever-changing demands.

At Fowler High Precision, our mission is to make measurement easy. We continue to introduce innovations in inspection and measurement with new systems designed to increase accuracy, decrease measurement time, and automate record keeping. We offer solutions for all your measurement challenges.

High precision measurements demand an intricate network of expertise. Our technical field-sales team, our repair and service technicians, our engineering staff and our inside technical advisers work hand in hand with you. We are committed to making sure that your team has the highest level of product support and training. Both our East Coast and West Coast metrology labs are A2LA ISO/IEC 17025 accredited so if your equipment ever needs calibration and repair, you can have 100% confidence that your product will perform like new.

It has been my family's privilege to support this industry with quality metrology products for the last 75 years. You have my personal commitment that Fowler will continue to invest in the technologies and the people to support your measurement needs well into the future.

Thank you,



**David Francis**  
CEO



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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!

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## ***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



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***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**

**SWISS  
MADE**

### Features:

- IP67 protected against fluid and dust
- Available with or without Bluetooth
- 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

Part 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		
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	

\* > 4"/100mm: 0.0012"/30µm

## Water Resistant Electronic Measuring Set



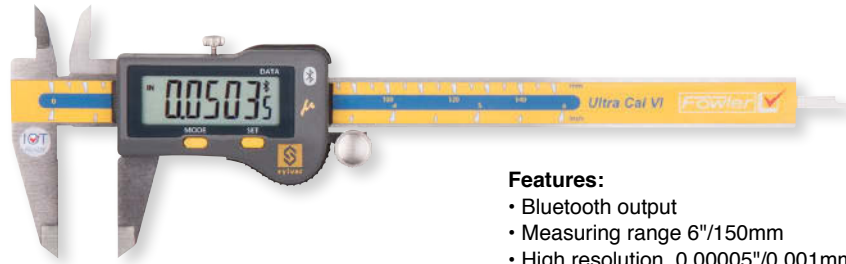
### Features:

- 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

Part 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)

**LIFETIME WARRANTY**

**SWISS MADE**

Part 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
- Moveable left jaw
- Stainless steel titanium coated jaws
- Hold, preset, min/max, tolerance functions

**SWISS MADE**

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

Part 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

Part 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 <sup>IV</sup> 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

Part 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

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



# FLIP PLUS Electronic Calipers

Display flips 180° with display rotation function for true left handed operation and can also be positioned for top viewing.

**Features:**

- Resolution 0.0005"/0.01mm
- Direct inch/metric conversion
- Thumbroll for smooth measuring
- Heavy duty frame
- Floating zero
- Stainless steel frame



54-200-506-0

Left-Handed View

Top View



Part Number	Range	Accuracy
54-200-506-0	6"/150mm	± 0.0012"/0.03mm
54-200-508-0	8"/200mm	± 0.0012"/0.03mm
54-200-512-0	12"/300mm	± 0.0016"/0.04mm

## 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

Part 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
<b>Accessories</b>		
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



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



## XTRA-VALUE CAL Electronic Calipers

Economy calipers at great prices!



54-101-150-2



Also available with a Super Large Display with Hold Feature!

### Features:

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

Part 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

## XTRA-VALUE CAL Electronic Caliper & Depth Attachment Set



### Xtra-Value Caliper Features:

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

### Depth Attachment Features:

- Attaches quickly
- Positive locking screw
- Precision-ground contact surface

Easy depth measurement!

Part Number	Range	Accuracy
54-008-715-0	6"/150mm	± 0.001"/0.02mm

## XTRA-VALUE CAL Centerline Accessory Set

A multi application set. Check centerlines, grooves and diameters.



### Xtra-Value Electronic Caliper Features:

- Accuracy: 0.001"/0.02mm
- Absolute/incremental measurement
- Direct inch/metric conversion
- 4-way measuring

### Accessory Set Features:

- 6 sets of interchangeable anvils
- Allows measurement of hard to reach places including undercuts, grooves, webs and shoulders
- Corrosion resistant black oxide plating

Part Number	Range	Accuracy
52-010-025-0	6"/150mm	± 0.001"/0.02mm

## Poly-Cal<sup>®</sup> 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



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

## XTRA-VALUE<sup>®</sup> Depth Gage and Poly-Cal Set

**Poly-Cal Features:**

- Range 6"/150mm
- Resolution 0.0005"/0.01mm, fractions by 1/64 increments
- Polycarbonate frame

**Xtra-Value Depth Gage Features:**

- Range: 16"/400mm
- Resolution: 0.0005"/0.01mm  
(Fractions in 1/64" increments)
- Spring-loaded with a hold measurement button for ease-of-use
- Super-large display
- Travel: 0-1"/25mm

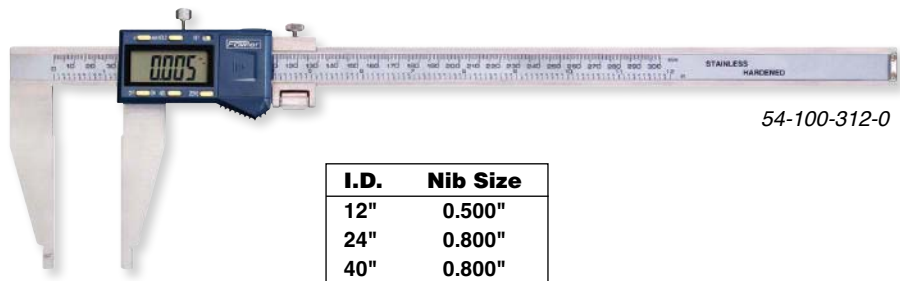


Part Number	Description
54-004-255-0	Xtra-Value Depth Gage and Poly-Cal Set

## XTRA-RANGE<sup>®</sup> Electronic Calipers

**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



54-100-312-0

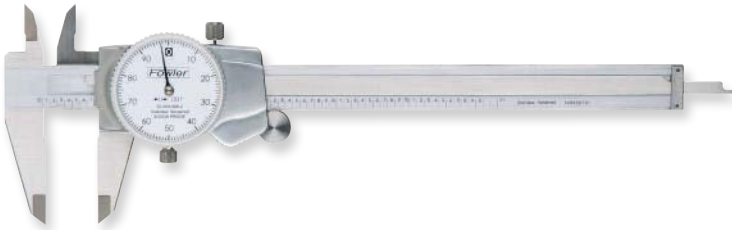
I.D.	Nib Size
12"	0.500"
24"	0.800"
40"	0.800"

Part 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		



## Supreme Dial Caliper

Our finest dial caliper.



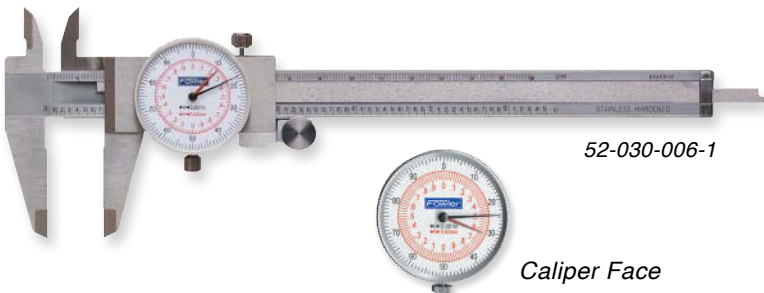
### Features:

- 4-way measuring for outside, inside, depth and step measurements
- Solid stainless steel construction
- Shockproof design prevents dial backlash
- Graduation: 0.001"
- Silky smooth movement throughout
- Dial hand completes one revolution per each 0.100"
- Covered rack

Part Number	Range	Accuracy
52-008-006-2	0 - 6"	0.001"/0.02mm

## 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

Part 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

## Indicator, Mag Base, Dial Caliper & Mic Set



### 0 - 3" Micrometer Set (52-229-213-0) Features:

- Carbide measuring faces
- Ratchet thimble and locking nut
- 0.0001" reading
- Sizes over 1" include standard

### Shockproof Dial Caliper (52-008-706-0) Features:

- 4-way measuring
- Solid stainless steel construction
- Silky smooth movement throughout
- 0.100" range per revolution
- 0.001" reading dial face
- Shockproof

### AGD Indicator (52-520-110-0) Features:

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

### Magnetic Base (52-585-010-0) Features:

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

Part Number	Description
52-229-780-0	Indicator, Mag Base, Dial Caliper & Mic Set

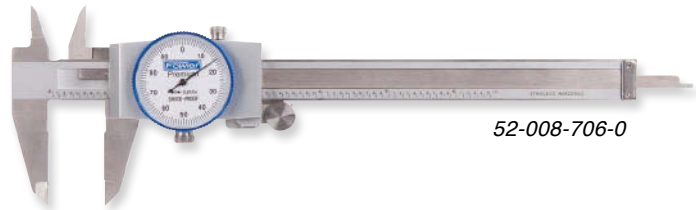


## Premium Grade Dial Calipers

Top quality.

### Features:

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



52-008-706-0



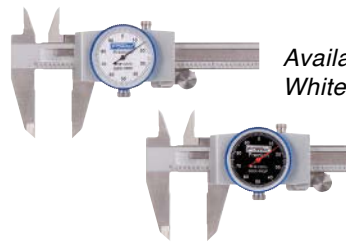
52-008-707-0

Part 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

## Machinist Dial Caliper & Depth Attachment Set

### Dial Caliper Features:

- 4-way measuring
- Positive stop carriage
- Solid stainless steel construction
- Silky-smooth movement throughout
- 0.100" range per revolution
- 0.001" reading dial face



Available with  
White or Black Dial



52-008-700-0

### Depth Attachment Features:

- Attaches quickly
- Positive locking screw
- Precision-ground contact surface

Part Number	Description
52-008-700-0	6" White Dial Premium Caliper & Depth Attachment Set
52-008-710-0	6" Black Dial Premium Caliper & Depth Attachment Set

## Black Dial Measuring Set

### Features:

- 0 - 6" Machinist Grade Caliper 52-008-707-0: 0.001" Graduations, 0.100" range, thumbroll, 4-way measuring
- 0 - 1" Outside Micrometer 52-229-201-0, Graduations: 0.0001", Carbide tipped measuring faces, insulated frame



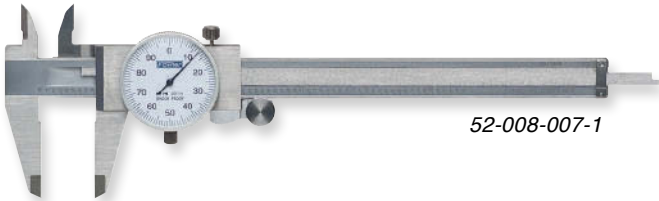
Part Number	Description
52-229-710-0	Black Dial Measuring Set



## Dial Calipers



52-008-005-1



52-008-007-1

### 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"
- Cover rack
- Shockproof gearing

Part 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

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

## Heavy Duty Dial Calipers

5-way measurement.



52-025-108-0

### 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

Part Number	Range	Accuracy	Jaw Depth
52-025-108-0	0 - 8"	± 0.0015"	2.5"
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.



52-008-018-0

**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

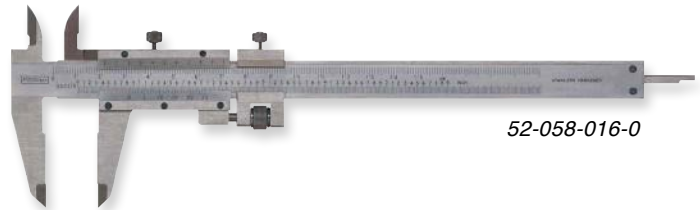
Part Number	Range	Accuracy	Jaw Depth
52-008-018-0	0 - 18"	± 0.003	3.125"
52-008-024-0	0 - 24"	± 0.003	3.125"

## Vernier Calipers

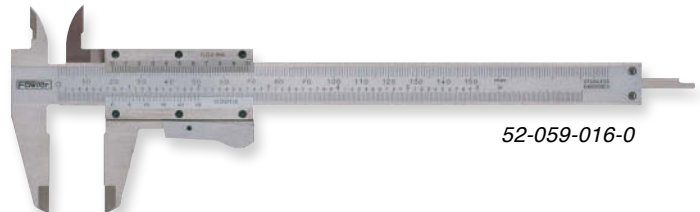
Back to Basics

**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

Part Number	Range	Accuracy	Jaws Depth
Vernier Caliper with Fine Adjustment			
52-058-016-0	0 - 6"/0 - 150mm	± 0.001"	1.6"
52-058-008-0	0 - 8"/0 - 200mm	± 0.0015"	1.9"
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"

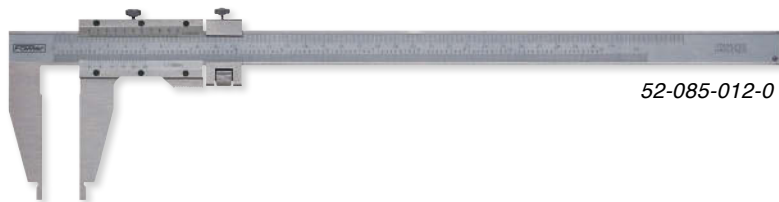


Part Number	Range	Accuracy
52-057-004-0	0 - 4"	0.001"



## Master Vernier Calipers

Large, heavy duty verniers.



The Fowler line of Master Vernier Calipers - in sizes up to 40"/1000mm - permit easy inch and metric measurement of larger workpieces.

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

### Features:

- Open face design permits both vernier scales to be located on one side of the gage for both inside and outside measurements
- 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

Part Number	Range	Accuracy	Jaw Depth
52-085-012-0	12"/300mm	± 0.002"	3"
52-085-024-0	24"/600mm	± 0.003"	4"
52-085-040-0	40"/1000mm	± 0.004"	5-1/2"

*Notes ...*





MICROMETERS

## Rapid-Mic Electronic Micrometers

More range and faster spindle travel than your standard micrometer.



54-815-030-0

**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

Part 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

## Electronic Coolant Resistant Micrometers

For basic outside measurements with higher protection.



54-860-001-1

**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

Part 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
54-860-003-1	2 - 3"/50 - 75mm w/standard	± 0.0002"/0.005mm
54-860-004-1	3 - 4"/75 - 100mm w/standard	± 0.0002"/0.005mm
54-860-005-1	4 - 5"/100 - 125mm w/standard	± 0.00024"/0.006mm
54-860-006-1	5 - 6"/125 - 150mm w/standard	± 0.00024"/0.006mm
Sets		
54-860-103-1	0 - 3"/0 - 75mm w/standard	
54-860-106-1	0 - 6"/0 - 150mm w/standard	



54-860-103-1

## 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



54-870-103-0

Part 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!*



Part Number	Range	Accuracy
54-866-001-0	0 - 1.2"/0 - 30mm	± 0.00016"/0.004mm
54-866-002-0	1 - 2.2"/25 - 55mm w/standard	± 0.00016"/0.004mm

## Point Anvil & Spindle Micrometers

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



54-860-661-0

Part Number	Range	Accuracy
54-860-661-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm
54-860-662-0	1 - 2"/25 - 50mm w/standard	± 0.00016"/0.004mm
54-860-663-0	2 - 3"/50 - 75mm w/standard	± 0.0002"/0.005mm
54-860-664-0	3 - 4"/75 - 100mm w/standard	± 0.0002"/0.005mm

## Electronic IP54 Ball Anvil Micrometers

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



Ball anvil and spindle for measuring special curved surfaces.



**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

Part Number	Range	Accuracy
Ball Anvil		
54-860-113-1	0 - 1"/0 - 25mm	0.00016"/0.004mm
54-860-114-1	1 - 2"/25 - 50mm w/standard	0.00016"/0.004mm
54-860-115-1	2 - 3"/50 - 75mm w/standard	0.0002"/0.005mm
54-860-116-1	3 - 4"/75 - 100mm w/standard	0.0002"/0.005mm
Ball Anvil & Spindle		
54-860-211-1	0 - 1"/0 - 25mm	0.00016"/0.004mm
54-860-212-1	1 - 2"/25 - 50mm w/standard	0.00016"/0.004mm
54-860-213-1	2 - 3"/50 - 75mm w/standard	0.0002"/0.005mm
54-860-214-1	3 - 4"/75 - 100mm w/standard	0.0002"/0.005mm

## 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

Part 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
54-219-003-0	2 - 3" w/standard	24 - 3.5 TPI/1 - 7mm	± 0.00008"/0.002mm
54-219-004-0	3 - 4" w/standard	24 - 3.5 TPI/1 - 7mm	± 0.00012"/0.003mm

## Electronic IP54 Disc Micrometers

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

Part Number	Range	Accuracy
54-860-301-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm
54-860-302-0	1" - 2"/25 - 50mm w/standard	± 0.00016"/0.004mm
Accessory		
54-115-779-0	SPC USB Cable	



## 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.

**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



Part 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
54-860-243-0	2" - 3"/50 - 75mm w/standard	± 0.0002"/0.005mm
54-860-244-0	3" - 4"/75 - 100mm w/standard	± 0.0002"/0.005mm
Accessory		
54-115-779-0	SPC USB Cable	

## Deep Throat Electronic Micrometers

Used for taking accurate measurements of steel and plastic sheets and plates whenever a large depth measurement is needed.

**Features:**

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Carbide measuring faces
- Ratchet thimble
- Diameter of measuring faces 0.256"
- 54-517-002-0 supplied with a ball anvil



Part Number	Range	Accuracy	Anvil	Throat Depth
54-517-001-0	0 - 1"/0 - 25mm	± 0.00012"/0.003mm	Flat	5.90"
54-517-002-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm	Ball	11.875"

## Universal Electronic Micrometer

7 interchangeable anvil sets for up to 49 combinations.

**Features:**

- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Friction thimble
- Non-rotating spindle
- Direct inch metric conversion
- Tolerance & preset function
- Comes complete with 7 anvil sets



Part Number	Range	Accuracy
54-817-777-0	0 - 1"/0 - 25mm	± 0.00016"/0.004mm

## Electronic IP54 Inside Micrometers

For diameters and slots.



54-860-275-0

**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

Part Number	Range	Accuracy
54-860-275-0	0.2 - 1.2"	0.00020"/0.005mm
54-860-276-0	1 - 2"	0.00024"/0.006mm

## Electronic IP54 Micrometer Head

For fixtures and stages.



0.472"/12mm x 0.689"/17.5mm

**Features:**

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

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

## Digital Micrometer Heads

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



54-210-100-BT



54-210-200-BT

**Features:**

- IP54 protected against fluid and dust
- Resolution: 0.00005"/0.001mm
- Absolute and incremental modes
- Repeatability: 0.000080"/0.002mm
- Non rotating spindle
- Menu customizable with free software
- Various handwheels upon request
- Manufacturer's Calibration certificate

Part Number	Range	Accuracy
54-210-100-BT	0 - 1"/25mm	0.0002"/0.005mm
54-210-200-BT	0 - 2"/50mm	0.00032"/0.008mm
Accessories		
54-210-301-0	Fine Adjustment Device	
54-210-302-0	Handwheel, 50mm with crank handle for fast motion	
54-210-303-0	Handwheel Ø 35mm	



## 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.

**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"



Part 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"
52-224-005-1	4 - 5" w/standard	0.0001"	0.00024"
52-224-006-1	5 - 6" w/standard	0.0001"	0.00024"
Metric			
52-224-009-1	0 - 25mm	0.01mm	0.004mm
Sets			
52-224-103-1	0 - 3" w/standards & case	0.0001"	
52-224-104-1	0 - 4" w/standards & case	0.0001"	
52-224-220-1	0 - 75mm w/standards & case	0.01mm	

## 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".

**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



Part 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 Micrometers

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"



Part Number	Range	Graduation	Accuracy
52-250-301-1	0 - 1"	0.0001"	0.00016"
52-250-302-1	1 - 2" w/standard	0.0001"	0.00016"

## Digit Counter Point Micrometer

For quick and accurate comparisons of thread accuracy in screw cutting operations, for taking measurements of small flutes or recesses, and for measuring small grooves, keyways and other hard to reach dimensions.



Anvil and spindle ends are conical and have a radius curvature of 0.012" at the extremity. Easy to read numbers on the digital counter assure you of accurate, error free readings.

**Features:**

- Ratchet thimble
- Anvil and spindle are carbide tipped and precision ground
- Microfine graduations on satin chrome finish for easy reading
- Positive locking nut on spindle

Part Number	Range	Graduation	Accuracy	Point°	Point Length
52-226-801-1	0 - 1"	0.0001"	0.00016"	60°	0.21"

## Digit Counter Spline Micrometer

Measures recesses, grooves and splines.



**Features:**

- Anvil and spindle diameters: 0.118"
- Carbide measuring faces
- Ratchet thimble
- Positive locking nut on spindle
- Graduation: 0.0001"
- Flatness: 0.00002"
- Parallelism : 0.00005"

Part Number	Range	Accuracy
52-218-301-1	0 - 1"	0.00016"

## Swiss-Style Micrometers

For outside measurements.



52-229-201-0

**Features:**

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

Part Number	Range	Accuracy
52-229-201-0	0 - 1"	± 0.00016"
52-229-202-0	1 - 2" w/standard	± 0.00016"
52-229-203-0	2 - 3" w/standard	± 0.0002"
52-229-209-0	0 - 25mm w/standard	± 0.004mm
Sets		
52-229-213-0	0 - 3" set w/standard	
52-229-214-0	0 - 4" set w/standard	



## Outside Inch Micrometers

The Fowler No. 52-240 series offers a wide variety of sizes to cover a range of measuring needs. Fowler micrometers are of the finest quality available, at prices that defy competition. Special care in design and workmanship create a long lasting precision tool.

**Features:**

- 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

Part 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)		

## Large Capacity Inch Micrometers

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

**Features:**

- Carbide measuring faces
- Ratchet thimble
- Microfine graduations on satin chrome finish
- Graduation: 0.001"
- Diameter of measuring faces: 0.295"
- Flatness: 0.00003"
- Positive lever locking clamp



52-240-013-1

Part Number	Range	Accuracy
52-240-013-0	12 - 13" w/standard	0.0004"
52-240-014-0	13 - 14" w/standard	0.0004"
52-240-015-0	14 - 15" w/standard	0.0004"
52-240-016-0	15 - 16" w/standard	0.0004"
52-240-017-0	16 - 17" w/standard	0.0005"
52-240-018-0	17 - 18" w/standard	0.0005"
52-240-019-0	18 - 19" w/standard	0.0005"
52-240-020-0	19 - 20" w/standard	0.0005"

## Outside Inch Micrometers

Feature 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

Part 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

## Outside Metric Micrometers

Fowler standards of fine quality and accuracy. A variety of sizes covers a range of measuring applications.



52-248-001-0



52-248-101-0

**Features:**

- Carbide measuring faces
- Friction or ratchet stop thimble
- Graduation: 0.01mm
- Microfine graduations on satin chrome finish
- Diameter of measuring faces: 6.5mm
- Flatness: 0.00076mm
- Parallelism: 0.00125mm for 0 - 25mm

Part Number	Range	Graduation	Accuracy	Thimble
52-248-001-1	0 - 25mm	0.01mm	0.004mm	Friction
52-248-101-0	0 - 25mm	0.01mm	0.004mm	Ratchet
52-248-002-1	25 - 50mm	0.01mm	0.004mm	Friction
52-248-102-0	25 - 50mm	0.01mm	0.004mm	Ratchet

## 0 - 0.600" Outside Micrometer

This micrometer is the 1/2" companion of the 52-253 series of micrometers.



Shown actual size!

**Features:**

- Pocket size
- Graduation: 0.001"
- Forged steel frame
- Anvil and spindle hardened and precision ground with microlapped ends
- Clear, crisp graduations on sleeve and thimble
- Diameter of measuring faces: 0.197"

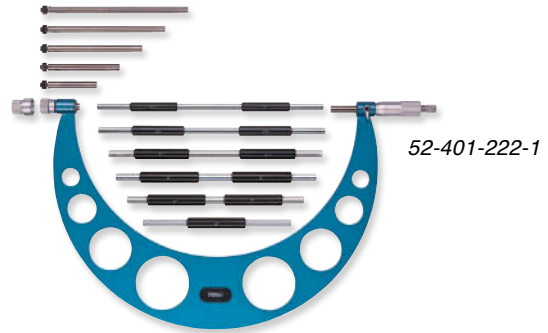
Part Number	Range	Accuracy
52-230-000-0	0 - 0.600"	0.001"

## 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.

**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



Part Number	Range	Graduation	Accuracy
52-401-221-1	0 - 6"	0.0001"	0.00024"
52-401-222-1	6 - 12"	0.0001"	0.00036"
52-401-204-1	12 - 16"	0.001"	0.00040"
52-401-205-1	16 - 20"	0.001"	0.00048"

## 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



Part 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"

## INDI-X® Indicating Micrometers

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"



Part Number	Range	Accuracy
52-245-501-0	0 - 1"	0.00016"
52-245-502-0	1 - 2" w/standard	0.00016"

## Deep Throat Micrometers

Deep Throat Micrometers are available with depths of 5.90" and 11.875" and are used for taking accurate measurements of steel and plastic sheets or plates whenever a deeper reach is needed.



**Features:**

- Ratchet thimble
- Microfine graduations on satin chrome finish for easy reading
- Graduations: 0.0001"
- Carbide tipped anvil and spindle
- Positive lever locking clamp
- Diameter of measuring faces 0.256"
- 52-517-612-1 supplied with a ball anvil

Part Number	Range	Accuracy	Anvil	Throat Depth
52-517-611-1	0 - 1"	0.00016"	Flat	5.90"
52-517-612-1	0 - 1"	0.0002"	Ball	11.875"

## Vernier Thread Micrometers

For external pitch diameter measurements.



**Features:**

- Ratchet thimble
- 60° measuring anvils
- Positive lever locking clamp
- Graduation: 0.001"

Part 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"

## Ball-Anvil Micrometers

Measure dimensions from the inside of holes to outside edges. The spherical anvil or spindle contacts the inside curved surface at a single point, permitting accurate readings of wall thickness to 0.0001".



**Features:**

- Ratchet thimble
- Microfine graduations on satin chrome
- Carbide tipped anvil and spindle
- Graduation: 0.0001"
- Positive lever locking clamp

Part Number	Description	Range	Accuracy
52-244-001-1	Ball Anvil	0 - 1"	0.00016"
52-244-101-1	Ball Anvil & Ball Spindle	0 - 1"	0.00016"



## Disc Micrometers

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

**Features:**

- Ratchet thimble
- Graduation: 0.0001"
- Positive lever locking clamp
- Quick and easy zero adjustment on sleeve
- Flatness: 0.00004"
- Parallelism: 0.00016"



Part Number	Range	Accuracy
52-250-111-1	0 - 1"	0.00016"
52-250-112-1	1 - 2" w/standard	0.00016"

## Cylindrical Tube Micrometers

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

**Features:**

- Measurements can be taken at locations far from the end due to the protruded rod-anvil design
- Ratchet thimble
- Anvil is hardened and precision ground
- Carbide tipped spindle
- Graduation: 0.0001"
- Positive lever locking clamp



Part Number	Range	Accuracy
52-510-601-1	0 - 1"	0.00024"

## 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

Part Number	Range	Graduation
Inch		
52-243-026-1	2 - 6"	0.001"
52-243-212-1	2 - 12"	0.001"
52-243-220-1	2 - 20"	0.001"
52-243-240-1	2 - 40"	0.001"
52-243-260-1	2 - 60"	0.001"
52-243-480-1	4 - 80"	0.001"
52-243-512-1	4 - 120"	0.001"
Metric		
52-243-705-1	50 - 300mm	0.01mm
52-243-710-1	50 - 500mm	0.01mm
52-243-715-1	50 - 1000mm	0.01mm
52-243-720-1	50 - 1500mm	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

Part Number	Range	Accuracy
52-275-001-1	0.2" - 1.2"	0.0002"
52-275-002-1	1" - 2"	0.00024"
52-275-005-0	0.2" - 2.2"	0.00024"

## Digital Micrometer Head

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



**Features:**

- Carbide measuring face
- Spindle dia.: 0.256"
- Graduations on digital counter and thimble 0.001"
- Graduations on sleeve 0.0001"

Part Number	Range	Grads.	Accuracy	Overall Length	Mounting Shoulder Dia.	Mounting Shoulder Length
52-222-222-1	0 - 1"	0.0001"	0.00012"	5.25"	0.625"	0.670"

## 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**



Micrometer not included

52-247-010-0

**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

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

## Micrometer Standards



Part Number	Size
52-227-001-1	1"
52-227-002-1	2"
52-227-003-1	3"
52-227-004-1	4"
52-227-005-1	5"
52-227-006-1	6"
52-227-007-1	7"
52-227-008-1	8"
52-227-009-1	9"
52-227-010-1	10"
52-227-011-1	11"
52-227-012-1	12"
52-227-013-0	13"
52-227-014-0	14"
52-227-015-0	15"
52-227-016-0	16"
52-227-017-0	17"
52-227-018-0	18"
52-227-019-0	19"

**Features:**

- Measuring faces 0.315" diameter up to 11", 0.430" sizes 12" and up
- Sizes above 11" feature **spherical faces**
- Heat insulated covers
- Measuring faces hardened and precision ground with microlap finish
- Meets DIN863/1 standards

## 11 Piece Micrometer Calibration Set

**Features:**

- 9 rectangular, gage blocks, grade 0, and two optical flats
- Includes NIST Certificate
- Assists in meeting both Federal specification GGG-C-105c and ISO 9000 requirements.
- Contains one block of each of the following sizes: 0.0625, 0.100, 0.125, 0.200, 0.250, 0.300, 0.500, 1.000 & 2.000"
- TWO OPTICAL FLATS that vary in size by 0.0125" which allows checking anvil faces at half revolutions of spindle for measuring flatness
- Flatness: 0.000004"
- Parallelism: 0.00002"



Part Number	Description	Grade
53-670-002-0	Calibration Set with Steel Blocks and Optical Flats	Ø

## Micrometer & Snap Gage Checking Set

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

**Features:**

- Stand height: 12.5"
- 9 pc. Grade AS-0 gage block set (sizes: 0.625", 0.100", 0.125", 0.200", 0.250", 0.300", 0.500", 1.000" & 2.000")
- Certificate of calibration is traceable to N.I.S.T. standards & provides the individual deviation of each block
- Optical flat (flatness: 0.000004" ; Parallelism: 0.00002")
- 4.0mm ball end T-handle hex wrench



Part Number	Description
53-813-001-1	Micrometer and Snap Gage Checking Set
53-813-002-0	Stand only, gage blocks not included

## Anvil Kit and Ball Attachment

Create 49 anvil-spindle combinations

### Features No. 52-249-007-0:

- Multi-Mic Micrometer Anvil Kit contains six anvils and a ball attachment
- Popular accessories used with outside micrometers
- Fits micrometers with spindle diameters of 0.235", 0.250", 0.256" and 0.270"
- Each anvil is 0.500" long and is held on with its own reinforced neoprene boot.
- Anvils are hardened and ground alloy steel with a lapped measuring surface
- Made in the U.S.A. to exacting standards



Micrometer Anvil Kit, No. 52-249-007-0  
(Micrometer not included)



### Features No. 52-285-000-0:

- Ball Attachment used on spindles or anvils. Allows for single point inside contact and measurements of cylindrical wall thicknesses.
- Fits micrometers with spindle diameters of 0.235", 0.250", 0.256" and 0.270"
- Reinforced rubber boot provides extra holding power
- Used with outside micrometers.
- Hardened chrome alloy steel.
- Ball: diameter .200"; accuracy 0.000025"
- Includes 2 balls, 1 boot and case

Ball Attachment, No. 52-285-000-0  
(Micrometer not included)

Part Number	Description
Multi-Mic Micrometer Anvil Kit 52-249-007-0	Kit includes six anvils and one ball attachment
Ball Attachment 52-285-000-0	0.200" dia. ball attachment with spare ball

## 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/-0.0004"
- Accuracy for sizes 0.120" through 0.185" is within +0/-0.0005"
- Measures all U.S. 60° threads from 3 - 48 threads per inch

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

## Thread Triangles

Thread Measuring Triangles check pitch diameter on 60° threads. Perfect for checking thread dimensions when copying parts.



Micrometer shown not included

### Features:

- Each set includes 2 Thread Triangles and two rubber micrometer holding straps

Part Number	Description
52-603-303-0	Pair of Thread Triangles





INDICATORS, SETS & ACCESSORIES

**Mark VI Electronic Indicators**  
The BEST!

Indicators, Sets & Accessories



54-530-135-0



54-530-335-0



54-530-535-0

**LIFETIME WARRANTY**

**SWISS MADE**

**Features:**

- IP54 protected against fluid and dust ((IP67 with rubber boot)
- Repeatability: 2µm/0.00008"
- Output: Proximity/Power - USB/RS232/digimatic/Wireless
- Menu 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

Part 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
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



Part 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
Accessory		
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



Part 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"
Accessory		
54-115-527-0	Serial Cable	
54-115-528-0	Output Cable USB	

## INDI-X<sup>blue</sup> Electronic Indicators

Great value indicators.



54-520-255-0



54-520-250-0



54-520-256-0

**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

Part 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

## INDI-X<sup>®</sup> Electronic Indicator

With analog scale for indicating reversal point.

**Features:**

- Resolution: 0.0005"/0.01mm
- Lug Back and 3/8" stem mounting
- Tolerance indicators
- Min/Max measurement
- Floating zero
- Carbide-tipped ball contact
- Includes 2 extra points for small hole applications:  
one 0.078" dia. x 1" long and one needle point x 1" long



Part Number	Range	Accuracy
54-520-025-1	1"/25mm	± 0.0015"/0.04mm
Accessory		
54-520-026-1	Flat back	

## Fine Adjust Mag Base with INDI-X<sup>blue</sup> Electronic Indicator Set



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

**Magnetic Indicator Back Features:**

- Use for positioning the indicator on most metal surfaces

**Magnetic Base Features:**

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

**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

Part Number	Description
54-585-100-0	Fine Adjust Mag Base with Indi-X Blue Electronic Indicator Set



## CHROME FLEXMAG 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



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

### Magnetic Indicator Back Features:

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



**3 Indicator Style Options**

### 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<sup>blue</sup>

#### 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

### X-PROOF™

#### 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

Part 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

## INDI-X<sup>blue</sup>

### IP65 HIGH Resolution Electronic Indicator

Higher accuracy.



54-520-270-0

#### Features:

- IP65 protected against fluid and dust
- Carbide ball contact
- Tolerance function
- Contains flat and center lug backs
- Includes NIST certification and fitted case

### IP65 Electronic Indicator

Higher protection.



54-520-265-0

#### Features:

- IP65 protected against fluid and dust
- Carbide ball contact
- Tolerance function
- Contains flat and center backs
- Includes NIST certification and fitted case

### Small Face Electronic Indicator

Value in small space.



54-520-275-0

#### Features:

- 1.76" dial face
- Carbide ball contact
- Contains flat and center lug backs
- Includes NIST certification and fitted case

Part Number	Range	Resolution	Accuracy
54-520-275-0	0 - 0.50"/12.5mm	0.0005"/0.01mm	± 0.0008"/0.02mm
54-520-265-0	1"/25mm	0.0005"/0.01mm	± 0.0012"/0.03mm
54-520-270-0	1"/25mm	0.00005"/0.001mm	± 0.0002"/0.005mm

## INDI-MAX™ Electronic Indicators

Value with more features.



54-520-305-0



54-520-310-0



54-520-320-0

**Features:**

- Direct Inch/Metric Conversion
- IP54 Coolant & fluid resistant
- Auto Off feature
- 2-1/4" dial face
- 3/8" stem - 4-48 thread
- Resolution 0.00005"/0.001mm
- Tolerance indicators
- Absolute/incremental reading
- Lugback supplied on 1/2" model
- Floating zero
- Carbide ball contact



Shown with data cable connection (stand not included)

Part Number	Description	Accuracy
54-520-305-0	0.5"/12.5mm Indi-Max Electronic Indicator	0.00016"/0.004mm
54-520-310-0	1"/25mm Indi-Max Electronic Indicator	0.00020"/0.005mm
54-520-320-0	2"/50mm Indi-Max Electronic Indicator	0.00024"/0.006mm
Accessories		
52-525-605-0	Lugback for 1" and 2" models	
54-520-399-0	Absolute data cable*	
*works with 06ADV380C MIT cable		

## INDI-X<sup>®</sup> BT Electronic Indicators



54-520-285-0



54-520-280-0



**Features:**

- Wireless communication to most phones and tablets
- Resolution 0.00005"/0.001mm
- Inexpensive bluetooth option
- Includes lifting hook, ceramic ball contact point, 2 specialty contact points, NIST cert., lug and flat backs

Part Number	Range	Accuracy
54-520-280-0	0 - 1"/25mm	0.00035"/0.008mm
54-520-285-0	0 - 0.50"/12.5mm	0.0008"/0.02mm

## Girod "Horizontal" Test Indicators

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



52-562-453-0

**Features:**

- Monobloc body design and 7 fine jeweled bearings
- Anti-magnetic one-piece housing
- Auto-reverse mechanism
- Carbide contact points
- Dovetails supplied at top, front and back
- Adjustable bezel
- Replacement points: 0.040" No. 52-567-101-0; 0.080" No. 52-567-102-0 and 0.120" No. 52-567-103-0
- Includes indicator, fitted case, 2 carbide contact points, and two dovetail clamping stems: 7/32" and 1/4" diameter

Part Number	Dial Reading	Dial Grad.	Total Range	Dial Dia.	Accuracy	Point Length
52-562-253-0	0 - 4 - 0	0.0001"	0.008"	1"	0.00016"	0.500"
52-562-453-0	0 - 4 - 0	0.0001"	0.008"	1-1/2"	0.00016"	0.500"

## Girod "Vertical" Test Indicators

### Features:

- 52-562-272-0 supplied with 0.040", 0.080" and 0.120" carbide contact points. 52-563-474-0 supplied with one 0.080" contact point
- Measuring pressure - 7 grams
- Face Dia. 1" and 1-1/2" for easy reading



52-562-272-0



Part Number	Dial Reading	Dial Grad.	Total Range	Accuracy	Dial Dia.	Point Length
52-562-272-0	0 - 15 - 0	0.0005"	0.030"	0.00065"	1"	0.500"
52-562-474-0	0 - 10 - 0	0.0005"	0.020"	0.00065"	1-1/2"	1.500"

## 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".



52-562-778-0



52-562-775-0



52-562-792-0  
IP65



52-563-777-0



52-563-772-0



52-562-783-0



52-562-784-0



52-563-677-0



52-560-060-0

Part Number	Dial Color	Total Range	Dial Reading	Graduation	Accuracy	Dial Dia.	Point Length
0.030" Range							
52-562-774-0	white	0.030"	0 - 15 - 0	0.001"	0.0005"	1"	1/2"
52-562-778-0	black	0.030"	0 - 15 - 0	0.0005"	0.0005"	1"	1/2"
52-562-775-0	white	0.030"	0 - 1 5-0	0.0005"	0.0005"	1"	1/2"
52-562-776-0	white	0.030"	0 - 15 - 0	0.0005"	0.0005"	1-1/2"	1/2"
52-562-780-0	black	0.030"	0-15-0	0.0005"	0.0005"	1-1/2"	1/2"
0.030" Range - IP65							
52-562-790-0	white	0.030"	0 - 15 - 0	0.0005"	0.0005"	1"	1/2"
52-562-791-0	black	0.030"	0 - 15 - 0	0.0005"	0.0005"	1"	1/2"
52-562-792-0	white	0.030"	0 - 15 - 0	0.0005"	0.0005"	1-1/2"	1/2"
52-562-793-0	black	0.030"	0 - 15 - 0	0.0005"	0.0005"	1-1/2"	1/2"
0.008" Range							
52-563-770-0	white	0.008"	0 - 4 - 0	0.0001"	0.00015"	1"	1/2"
52-563-771-0	black	0.008"	0 - 4 - 0	0.0001"	0.00015"	1"	1/2"
52-563-777-0	white	0.008"	0 - 4 - 0	0.0001"	0.00015"	1-1/2"	1/2"
52-563-772-0	black	0.008"	0 - 4 - 0	0.0001"	0.00015"	1-1/2"	1/2"
0.020" Range							
52-562-781-0	white	0.020"	0 - 10 - 0	0.0005"	0.0005"	1"	1-7/16"
52-562-782-0	black	0.020"	0 - 10 - 0	0.0005"	0.0005"	1"	1-7/16"
52-562-783-0	white	0.020"	0 - 10 - 0	0.0005"	0.0005"	1-1/2"	1-7/16"
52-562-784-0	black	0.020"	0 - 10 - 0	0.0005"	0.0005"	1-1/2"	1-7/16"
0.08mm Range							
52-563-677-0	white	0.08mm	0 - 40 - 0	0.01mm	0.01mm	1-1/4"	1/2"
Inch/Metric							
52-560-060-0*	white/red	0.025"	0 - 10 - 0	0.0005"	0.0005"	1-1/2"	1/2"
		0.7mm	0 - 0.25 - 0	0.01mm	0.01mm"		

\*Includes 1 contact point 0.080"

## 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
- Adaptor sleeve: 5/32" to 3/8"
- Contact point wrench
- 2 dovetail clamps

Part 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"
52-562-120-0	52-562-003-0 with accessories	0.001"

## 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

Part 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

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

## XTEST Test Indicators

TWICE the range of most indicators!

**Features:**

- Range: 0.060"
- 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



52-562-002-BD

Part Number	Graduations	Dial Diameter	Dial Reading	Accuracy (One Rotation)	Accuracy (Full Travel)
Inch Series					
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"
52-562-002-BD	0.0005"	1"	0 - 15 - 0	0.0004"	0.0012"
52-562-003-0	0.001"	1"	0 - 15 - 0	0.0004"	0.0012"
Metric Series					
52-562-008-0	0.01mm	38mm	0 - 40 - 0	0.0012"	0.03mm

## XTEST Vertical X-Test Indicators

TWICE the range of most indicators!

**Features:**

- Range: 0.060"
- 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



52-562-004-0



52-562-005-0

Part 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"
52-562-005-0	0.0005"	1"	0 - 15 - 0	0.0004"	0.0012"

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

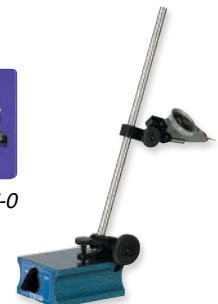
For comparative measurements.

**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



Part 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 Indicators**



52-520-250-1    52-520-444-1    52-520-450-0    52-520-455-0

- 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

**IP54**



1-5/8"

52-520-020-0    52-520-460-0    52-520-465-0

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

Part Number	Graduation	Range	AGD Group	Reading	Contact Point
52-520-450-0	0.001"	1"	2	0 - 100	4 - 48 (3/8" stem)
52-520-455-0	0.001"	1"	2	0 - 100	4 - 48 (3/8" stem)
52-520-250-1	0.0005"	0.40"	2	0 - 50 - 0	M2.5
52-520-444-1	0.001"	0.40"	2	0 - 100	M2.5
Premium - IP54 Rated					
52-520-020-0	0.0005"	0.125"	1	0 - 20 - 0	M2.5
52-520-460-0	0.001"	1"	2	0 - 100	4 - 48 (3/8" stem)
52-520-465-0	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



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

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

## Dial Indicators

Smooth, jeweled movements.



52-520-135-0



52-520-105-0



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

Part Number	Grad.	Range	Continuous Reading	Balanced Reading	Dial Dia.
<b>AGD Group 1</b>					
Inch					
52-520-005-0	0.001"	0.250"	0 - 100	—	1-5/8"
52-520-010-0	0.001"	0.250"	—	0 - 50 - 0	1-5/8"
<b>AGD Group 2</b>					
Inch					
52-520-105-0	0.001"	0.500"	0 - 100	0 - 100	2-1/4"
52-520-106-0	0.0005"	0.500"	0 - 50	—	2-1/4"
52-520-107-0	0.001"	0.500"	—	0 - 50 - 0	2-1/4"
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"
52-520-125-0	0.0005"	0.250"	0 - 50	0 - 25 - 0	2-1/4"
52-520-128-0	0.0005"	1.00"	0 - 50	—	2-1/4"
52-520-129-0	0.0005"	1.00"	0 - 50	0 - 50	2-1/4"
52-520-135-0	0.0001"	0.500"	0 - 100	0 - 100 - 0	2-1/4"
52-520-140-0	0.0001"	0.500"	0 - 100	—	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					
52-520-300-0	0.01mm	10mm	0 - 100	0 - 50 - 0	2-1/4"
52-520-500-0	0.01mm	25mm	0 - 100	0 - 50 - 0	2-1/4"

## Magnetic Base & Black 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



Part Number	Description
52-520-199-0	Fine Adjust Mag Base with 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<sup>blue</sup>

#### 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

Part 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

## 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

Part 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

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

## Fine Adjust Mag Base with AGD White Dial Indicator Set

**Magnetic Base Features:**

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

**AGD Indicator Features:**

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

**Magnetic Indicator Back Features:**

- Use for positioning the indicator on most metal surfaces



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

Part 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



Part 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



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



## Test Indicator Accessories

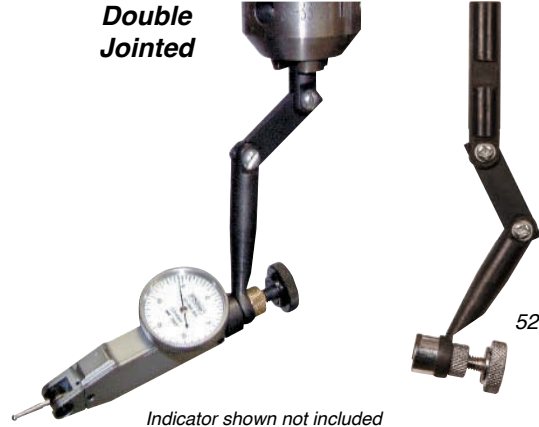
**Single  
Jointed**



52-565-006-0

*Indicator shown not included*

**Double  
Jointed**



52-565-007-0

*Indicator shown not included*

**Features:**

- Single and double jointed holders fit all dovetail equipped indicators. Mount on either front or rear of instrument.
- Indicators may be swiveled to any angular position. Because the extended reach allows large diameter centering, jointed holders are an ideal attachment for jig boring.

Part Number	Description
52-565-006-0	Single Jointed Holder, shank diameter 1/4"
52-565-007-0	Double Jointed Holder, shank diameter 3/8"



52-565-012-0



52-174-250-0



*Left to right: 52-565-093-0,  
52-565-092-0 and 52-565-090-0*



52-565-025-0

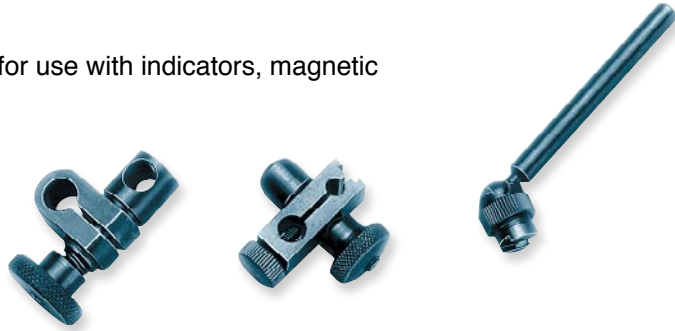


52-565-083-0

Part Number	Description	Shank Size
52-565-012-0	Axial Support	3/8" x 5-1/4" long
52-565-025-0	Dovetail clamp, bore diameter 1/4" and 3/8"	
52-174-250-0	Rectangular holder with clamp for height gages	3/8"
52-565-083-0	Rectangular holder with clamp 1/4" x 1/2"	
52-565-092-0	1/4" dia. dovetail clamp	
52-565-093-0	5/16" dia. dovetail clamp	
52-565-094-0	3/8" dia. dovetail clamp	

## Universal Clamps

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



Left to right: Swivel Joint Universal Clamp (52-565-111-0 thru 118-0); Universal Dovetail Clamp (52-565-150-0); and Universal Indicator Holder with swivel (52-565-200-0)

Part Number	Specifications
Swivel Joints (1-3/4" Length x 1/2" Diameter)	
52-565-111-0	Clamping Diameter: 5/16" x 1/4"
52-565-112-0	Clamping Diameter: 1/4" x 1/4"
52-565-113-0	Clamping Diameter: 5/16" x 5/32"
52-565-114-0	Clamping Diameter: 3/8" x 1/4"
52-565-115-0	Clamping Diameter: 5/16" x 5/16"
52-565-116-0	Clamping Diameter: 3/8" x 5/16"
52-565-117-0	Clamping Diameter: 3/8" x 3/8"
Swivel Joint (2-1/16" Length x 5/8" Diameter)	
52-565-118-0	Clamping Diameter: 1/2" x 3/8"
Universal Dovetail Clamp:	
52-565-150-0	Dovetail Clamps for 1/8" x 1/4" Shanks
Universal Indicator Holder with Swivel	
52-565-200-0	1/4" Shank

## Dial Indicator Backs



Center Lug Back



Flat Back

Part Number	Description
52-525-605-0	Center Lug Back
52-525-615-0	Flat Back

## Indicator Chucks

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

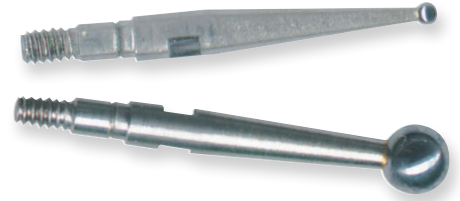


52-526-020-0

Part Number	Thread
52-526-020-0	4 - 48
52-526-021-0	M2.5

## Replacement Points for Test Indicators

<b>M2 Thread Type</b>		<b>M1.6 Thread Type</b>		<b>M1.4 Thread Type</b>	
<b>Contact Points</b>		<b>Contact Points</b>		<b>Contact Points</b>	
Part Number	Tip Dia.	Part Number	Tip Dia.	Part 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"
<b>For Indicators</b>		<b>For Indicators</b>		<b>For Indicators</b>	
Part Number		Part Number		Part 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	



<b>X-TEST (Silver Bezel)</b>		<b>Swiss 1-1/2"</b>		<b>Swiss 1/2"</b>	
<b>Contact Points</b>		<b>Contact Points</b>		<b>Contact Points</b>	
Part Number	Tip Dia.	Part Number	Tip Dia.	Part 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"
<b>For Indicators</b>		<b>For Indicators - Sylvac/Girod</b>		<b>For Indicators - Sylvac/Girod</b>	
Part Number		Part Number		Part 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	

<b>X-TEST Blue Bezel</b>		
<b>Contact Points</b>		
Part Number	Tip Dia.	
52-562-801-1	0.040"	
52-562-800-1	0.080"	
52-562-802-1	0.120"	
<b>For Indicators</b>		
Part 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

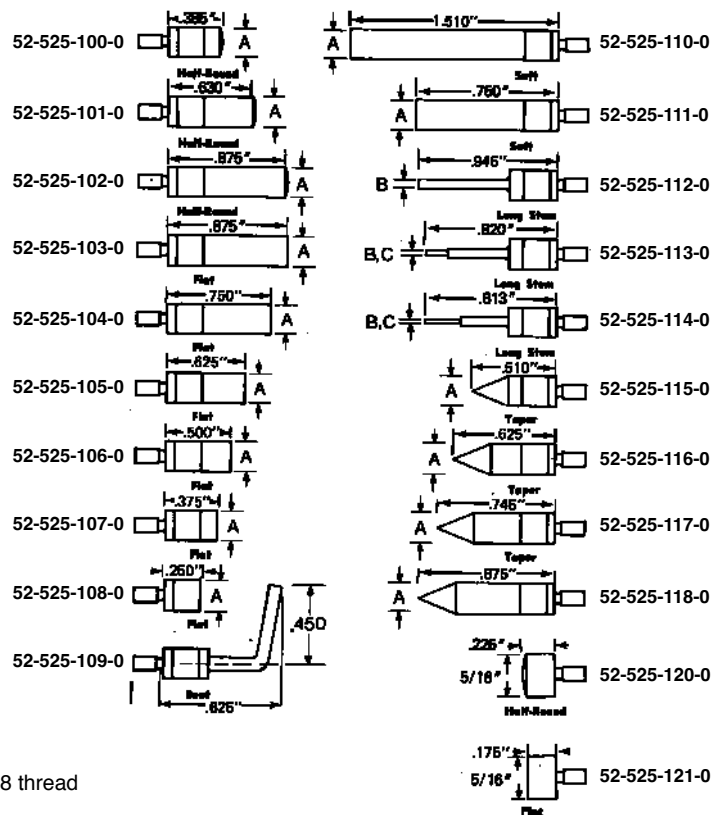


Part Number	Tip Length	Ball Size	Thread
52-525-250-0	1/4"	3mm	4-48
52-525-260-0	1/4"	3mm	M2.5
52-525-500-0	1/2"	3mm	4-48
52-525-750-0	3/4"	3mm	4-48

## Dial Indicator Contact Points



52-525-222-1



**Features:**

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

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



## Dial Indicator Contact Points

Special application contact points



52-525-140-0

Flat Contacts



Part Number	Description
Special Contacts	
52-525-140-0	Roller ball contact point
Flat Contact Points	
52-525-175-0	3/8" Flat contact point
52-525-180-0	1/2" Flat contact point
52-525-185-0	5/8" Flat contact point
52-525-190-0	3/4" Flat contact point

## Indicator Point Extensions and Bases



52-526-series

### 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

Part 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
52-526-012-0	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

Part 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)

## Magnetic Bases

### 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



52-585-095-0

52-585-099-0

Part Number	Description
52-585-095-0	Hydraulic Arm Magnetic Base
52-585-099-0	Dial Gage Holder Only (for special applications)

## 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

Part 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.



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

**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

Part 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

Part 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



52-585-015-0



52-585-045-0

**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

Part 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!

**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"

*Indicator not included with stand*



Part 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



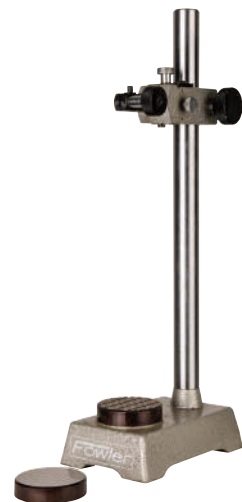
Part Number	Description
52-580-011-0	High Precision Dial Gage Stand

## 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



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

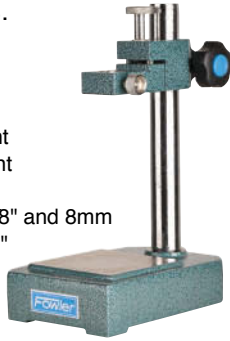
## Deluxe Dial Gage Stands

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



Part 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



Part 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.



*Indicator and standard shown not included*

**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

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



## Workshop Transfer Stands

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.

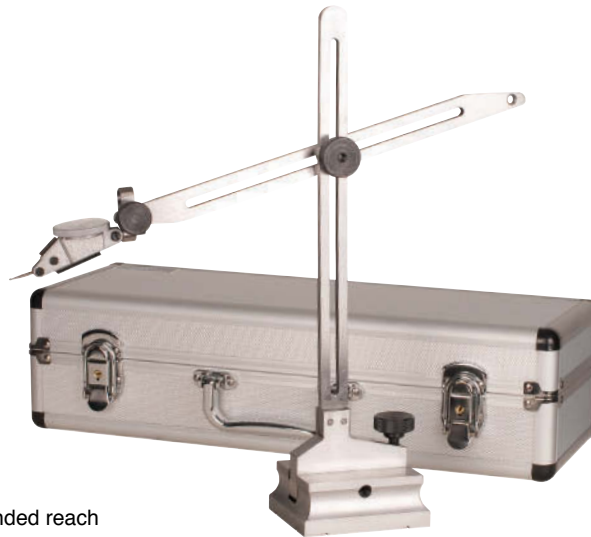
**Features:**

- 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

*Workshop Transfer Stand 52-620-019-0*



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.



*Workshop Transfer Stand 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



Part 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.

**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



52-155-010-0

Part 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



**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
- Swivel clamp to mount indicator
- 4" hardened scriber



52-155-747-0

Part 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

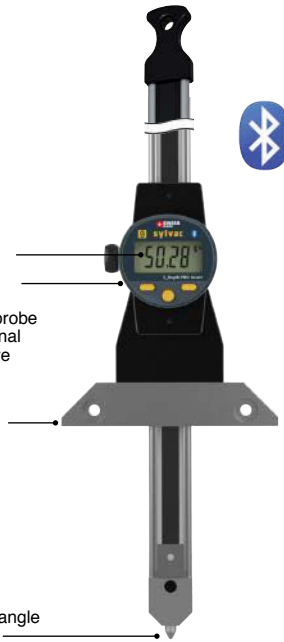
### Special Features:

- 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

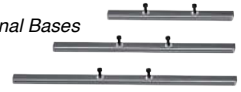
4"/100mm Base additional bases available

Shown with 54-139-103-0 right angle contact with 4mm pin included



### Compatible Accessories

#### Additional Bases



#### Vertical Contact Point comes standard



#### Even Top/Bottom Measuring Faces



#### Horizontal Pin



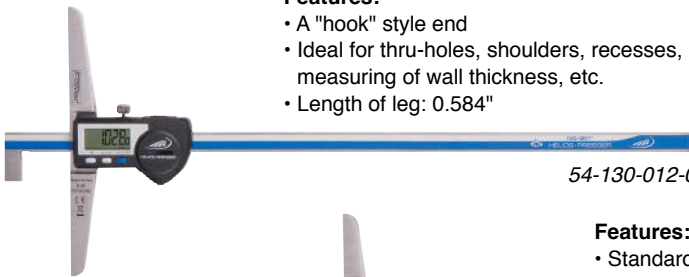
Part Number	Description	Accuracy
54-139-012-BT	12"/300mm S_Depth PRO	0.0012"/0.03mm
54-139-024-BT	24"/600mm S_Depth PRO	0.0016"/0.04mm
Accessories		
54-139-186-0	Additional Base - 180mm	
54-139-260-0	Additional Base - 260mm	
54-139-320-0	Additional Base - 320mm	
54-139-101-0	Vertical Contact Point	
54-139-102-0	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	

## Electronic Depth Gages

### Vernier style

#### Features:

- A "hook" style end
- Ideal for thru-holes, shoulders, recesses, measuring of wall thickness, etc.
- Length of leg: 0.584"



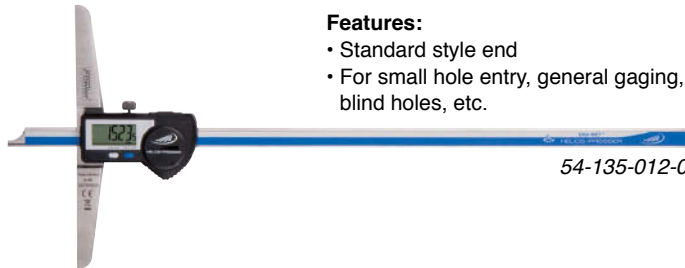
54-130-012-0

#### Specifications of Both Models:

- Resolution: 0.0005"/0.01mm
- Base length: 6"; base width: 0.300"; beam width: 0.637"; beam thickness: 0.120"
- Low drain, high efficiency lithium wafer battery (environmentally safe for disposal) offers 4500 hours of continuous on-time. Life extended 2 - 3 years with use of on/off switch

#### Features:

- Standard style end
- For small hole entry, general gaging, blind holes, etc.



54-135-012-0

Part Number	Description	Range	Accuracy
54-130-012-0	Depth Gage with hook	0 - 12"/300mm	0.0012"/0.03mm
54-135-012-0	Depth Gage with pin	0 - 12"/300mm	0.0012"/0.03mm
Accessories			
54-100-115-0	USB data cable		
54-100-120-0	Serial data cable		

## 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



Part Number	Range	Accuracy
54-225-456-0	0 - 6"/150mm	0.00016"/0.004mm

## 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



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

## X-DEPTH 22 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



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



## X-DEPTH 22<sup>®</sup> 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

Part 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"

Part 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"

Part 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

<b>Specifications:</b>	
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

Part Number	Description
<b>54-618-240-0</b>	D400S Digital Display
Accessories	
<b>54-618-165-0</b>	Foot Pedal
<i>* For M-bus modules, see page 74</i>	



## 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)

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

<b>Specifications:</b>	
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



Part Number	Description
54-618-159-0	D200S High Speed Probe Measurement System <i>(Requires computer and Sylvac probes)</i>
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



Part 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

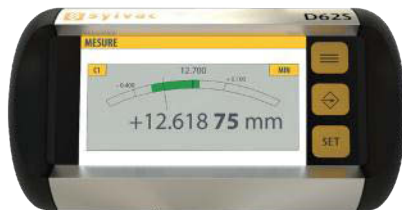
**Specifications:**

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

Part Number	Description
54-618-207-4	One input D70A Digital Display
54-618-207-5	Two input D70A Digital Display
<b>Accessories</b>	
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

Part Number	Description
54-618-106-2	D62S Digital Display
54-618-106-3	D62S Advanced Digital Display
<b>Accessories</b>	
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	IP54 protected
Connection Type	RS232 / USB (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.

Part 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



Part 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:

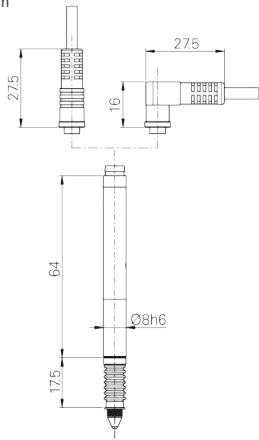
- Probes are made of stainless steel, heavily chrome-plated and supplied with 5' cable and standard carbide contact point .078"/2mm ball diameter. The friction bearing design provides smooth measuring for exceptional accuracy. Probes are shock-proof and unaffected by magnetism or humidity.
- Accessories 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: 0.01 $\mu$ m/ $^{\circ}$ C
- Temperature Range: 0-50 $^{\circ}$ C
- Cable Length: 5'/1.5m
- Contact Point Thread: M2.5
- Probes used with any Fowler Sylvac Display or Multiplexer



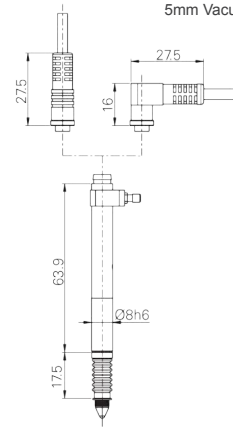
Part Number	Meas. Range	Meas. Force	Repeatability	Maximum Error	Cable Angle	Vacuum	Boot
54-618-350-0	5mm	0.6 - 1.2N	0.00001"/0.2 $\mu$ m	0.00004"/1 $\mu$ m	straight	no	yes
54-618-355-0	5mm	0.6 - 1.2N	0.00001"/0.2 $\mu$ m	0.00004"/1 $\mu$ m	straight	yes	yes
54-618-360-0	5mm	0.6 - 1.2N	0.00001"/0.2 $\mu$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

## Probes

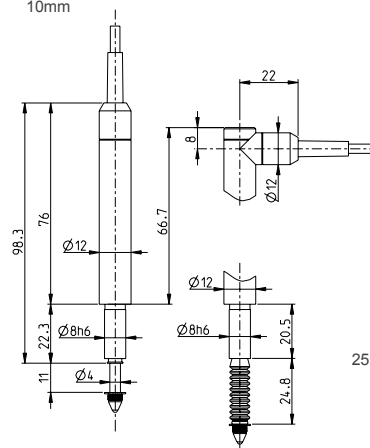
5mm



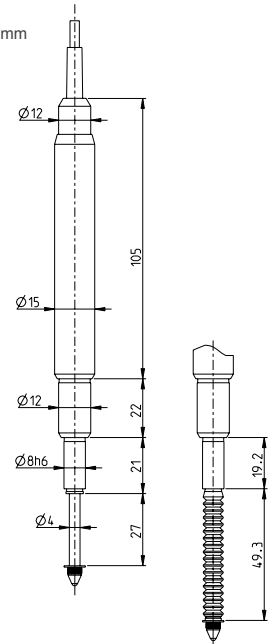
5mm Vacuum



10mm



25mm



Part Number	Description
<b>Accessories</b>	
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
<b>Cables</b>	
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

Part 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	0.6N	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	0.6N	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

Part 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!*



*Ultima Gaging System shown with Sylvac digital display. See the display section on page 000 for information.*

**Contact the Fowler Technical Department for special head applications.**

## Ultima Bore Gaging System

### Ultima Bore Gaging System- Individual Heads

Part 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



Part Number	Description
54-565-006-0	0.078" - 0.236"/2 - 6mm Includes: handle, rings & heads. Does not include readout
54-565-010-0	0.236" - 0.393"/6 - 10mm Includes: handle, rings & heads. Does not include readout
54-565-020-0	0.393" - 0.787"/10 - 20mm Includes: handle, rings & heads. Does not include readout
54-565-070-0	0.236" - 0.787"/6 - 20mm Includes: handle, rings & heads. Does not include readout
54-565-080-0	0.787" - 1.97"/20 - 50mm Includes: handle, rings & heads. Does not include readout
54-565-090-0	1.97" - 3.94"/50 - 100mm Includes: handle, rings & heads. Does not include readout
54-565-100-0	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 No.	Size	Order No.	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 No.	Description	Range
54-565-525-0	PH2 holder	0.078" - 0.236"/2 - 6mm
54-565-526-0	PH3 holder	0.236" - 0.787"/6 - 20mm
54-565-527-0	PH4 holder	0.787" - 3.94"/20 - 100mm
54-565-528-0	PH5 holder	3.94" - 12.2"/100 - 310mm

### Ultima Standard Extensions

Order No.	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 No.	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 62 & 65

Order No.	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

## 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.**

Part Number	Range	Accuracy	Depth
<b>2-Point Heads</b>			
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
<b>3-Point Heads</b>			
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 Hometric Pistol Grip Sets



54-567-050-BT

### Complete Range Sets

Part 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
54-567-620-BT	0.250" - 0.750"/6 - 20mm	5 heads, 1 handle, 3 rings

## Pistol Grips



54-567-375-BT

### Hometric XTH Pistol Grip Only

Part 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

Part 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.



### 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.**

Part Number	Range	Accuracy	Depth
<b>2-Point Heads</b>			
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
<b>3-Point Heads</b>			
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

Part 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

Part 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

Part 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.



### 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*

Part Number	Range	Grads.	Accuracy	Measuring Depth
<b>2-Point Heads</b>				
52-255-305-0	0.080" - 0.100"	0.00005"	0.00015"	0.350"
52-255-306-0	0.100" - 0.120"	0.00005"	0.00015"	0.350"
52-255-307-0	0.120" - 0.160"	0.00005"	0.00015"	0.470"
52-255-308-0	0.160" - 0.200"	0.00005"	0.00015"	0.700"
52-255-309-0	0.200" - 0.250"	0.00005"	0.00015"	0.700"
<b>3-Point Heads</b>				
52-255-310-0	0.250" - 0.312"	0.00025"	0.00015"	2.28"
52-255-311-0	0.312" - 0.375"	0.00025"	0.00015"	2.28"
52-255-312-0	0.375" - 0.500"	0.00025"	0.00015"	2.28"
52-255-313-0	0.500" - 0.625"	0.00025"	0.00015"	2.44"
52-255-314-0	0.625" - 0.750"	0.00025"	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

Part 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

Part Number	Size
54-332-004-0	.100"
54-332-005-0	.160
54-332-006-0	.200"
54-332-007-0	.312"
54-332-008-0	.500"
54-332-009-0	.750"
54-332-010-0	1.375"

Part 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"

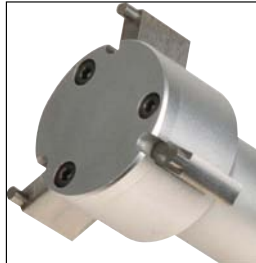


### XT Extensions

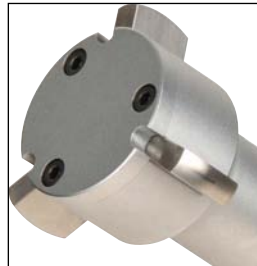
Part Number	Length	Diameter	Fits Heads
54-336-301-0	2.5"/63mm	0.230"	0.250" - 0.375"/6 - 10mm
54-336-302-0	3"/76mm	0.366"	0.375" - 0.500"/10 - 12.5mm
54-336-303-0	4"/100mm	0.479"	0.500" - 0.750"/12.5 - 20mm
54-336-304-0	6"/150mm	0.740"	0.750" - 2"/20 - 50mm
54-336-305-0	6"/150mm	0.924"	2" and up (50mm 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

Part No.	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

Part No.	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.



## 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 Part Number	Range	Measuring Depth	Digital Readout Part Number	Cone	Setting Ring Part 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

Part 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

Part 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

Part 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

Part 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.

Part 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

Part 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

Part 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

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

### XT500 Gage - Handle

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



### XT500 Gage - Extensions

Part No.	Range
54-336-305-0	6"/150mm
54-336-306-0	20"/500mm
54-336-307-0	40"/1000mm

### Connectivity Kits

Part No.	Description
54-115-444-0	RS232 Power Computer Connect Kit
54-115-528-0	USB Power Computer Connect Kit

## XTL Lever Bore Gage System

The Fowler Bowers XTL Lever Bore Gage Handle features a fast action and comfortable grip for applications where a vertical grip is necessary.

**Features:**

- For use with XT heads
- Measuring range: 6 - 100mm (diameters above 100 on request.)
- Excellent for vertical bore measurement
- Simple 2-button operation
- 3 preset memories
- RS-232 output and USB connectivity
- Constant measuring pressure
- Fast, accurate measurement
- Resolution: 0.00005"/0.001mm
- Extensions available for deep hole measurement

*Bowers XTL Lever Bore Gage - Handles with Indicator*

Part Number	Range
54-466-350-0	0.250" - 0.375"/6 - 10mm
54-466-375-0	0.375" - 0.750"/10 - 20mm
54-466-400-0	0.750" - 4"/20 - 100mm



54-466-375-0

## 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.



*Indicator shown not included*

**Features:**

- ID/OD measurement
- 0-1925mm external range
- 257-2155mm internal range
- Carbon fiber material for easy and accurate measurements
- Tooling ball anvils available for ball race measurement

Part Number	Description
54-466-660-0	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



Designed specifically for the measurement of bore diameters from 2" to 12"/50mm-310mm up to 50'/15 meters deep, the Bowers Pneumatic Deep-Hole Bore Gaging System provides an accurate, robust and easy-to-use solution to what would otherwise be a complex measuring task. The equipment consists of a 3-point bore gaging head with spherical anvils made of tungsten carbide and a variable number of 1m extensions screwed together to achieve the required depth.

The spherical contact anvil helps alignment in the bore while the carbide material promotes extremely long service life. Just behind the measuring anvils, an acetyl guide sleeve is fitted to the head to enable it to be pushed smoothly down to measurement depth without damaging either the anvils or the bore itself. The measuring head is operated by a pneumatic actuator powered by a 6 bar compressed air supply - either from a compressor or a workshop air-line. The measurement data is collected by a capacitive probe fitted just behind, and in constant contact with the measuring head. This direct contact ensures high-quality transducer-type accuracy, even at great depths. Measurements are taken by pressing a footswitch connected to the airline. The measurement is then shown on the digital readout at the operator end.

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

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



### Features:

- Measures diameters from 2" to 12"/50-310mm, up to 50'/15 meters deep
- 2 point and 3 point heads available
- Accuracy:  $\pm 0.0002'' \pm 0.005\text{mm}$  (subject to bore condition)
- Quick set-up time
- Easy to use
- Not adversely affected by temperature fluctuation
- Robust design

**Contact the Fowler Technical Department for more information.**

*Specifications subject to change without notice.*

## Smart Plug System

Smart Plugs offer a fast, robust, and easy-to-use measurement option, offering superb accuracy and repeatability to less than 0.00005". The reliable 2-point measuring system is designed to withstand harsh manufacturing floor environments. Smart plugs are manufactured to specific diameters and offer short measurement ranges (around 0.007"). This dedicated design is a great fit for high-volume manufacturing and quality control.

### Features:

- Tough, robust construction
- Easy-to-use
- Long life
- High accuracy
- Flexible, modular
- Hand-held measurement.
- Cost-effective
- High visibility displays
- Protective indicator shroud (with some indicators)
- All setting rings supplied as standard with UKAS calibration certificates.
- Coverplates as standard on all Smart Plugs, for protection of gage head.

**Smart Plugs are dedicated to one specific size.**  
**Range descriptions below are for pricing information only.**



### Smart Plugs

Part Number	Description	Thread
<i>Chrome Plugs with Carbide Contact Points (2 pt.)</i>		
<b>*SPECIFY EXACT SIZE &amp; TOLERANCE AT ORDERING TIME.</b>		
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

Part 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

Part 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

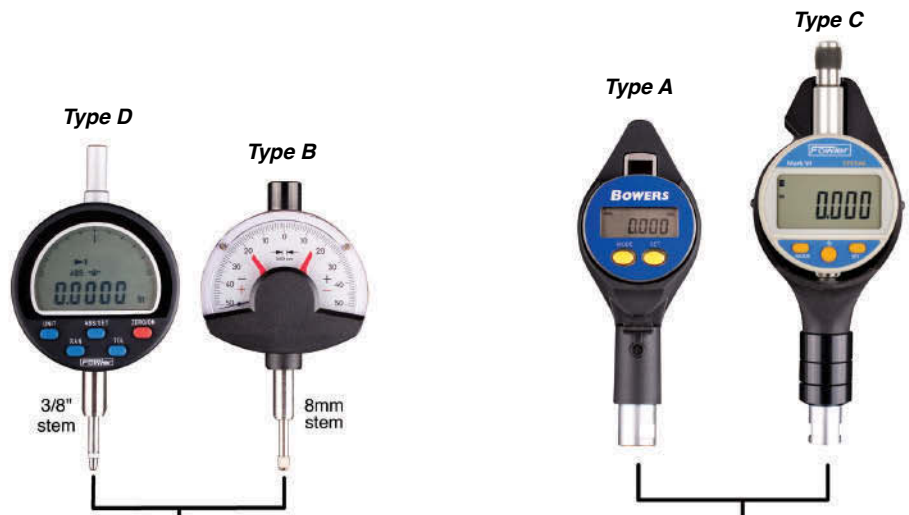
Part Number	Size
54-556-815-0	80 - 90mm
54-556-816-0	90 - 100mm
54-556-817-0	100 - 115mm
54-556-818-0	115 - 130mm
54-556-819-0	130 - 145mm
54-556-820-0	145 - 160mm
54-556-821-0	160 - 170mm
54-556-822-0	170 - 180mm
54-556-823-0	180 - 190mm
54-556-824-0	190 - 200mm
54-556-825-0	200 - 210mm
54-556-826-0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

### Rings

Part 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**

**Indicators Heads**

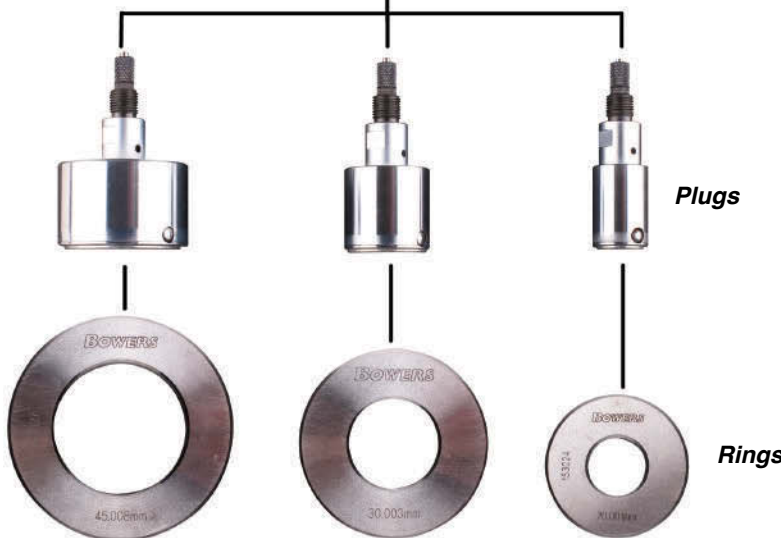


**Indicator Heads**

Part Number	Description	Thread
<b>Heads (require handle)</b>		
54-556-108-0	Handle for 8mm stem	M6
54-556-138-0	Handle for 3/8" stem	M6
54-556-117-0	Handle for 8mm stem	M10
54-556-118-0	Handle for 3/8" stem	M10
54-556-622-0	Type B mechanical dial gage 0.000050"/0.001mm resolution	
54-556-625-0	Type D Digital indicator	



Part No.	Description	Thread
<b>Heads (with built-in handle)</b>		
54-556-608-0	Type A mini-indicator with shroud	M6
54-556-708-0	Type C indicator with shroud	M6
54-556-617-0	Type A mini-indicator with shroud	M10
54-556-719-0	Type C indicator with shroud	M10
<b>Extensions</b>		
54-556-104-0	100mm extension	M6
54-556-110-0	100mm extension	M10



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

## Basic Universal Gage

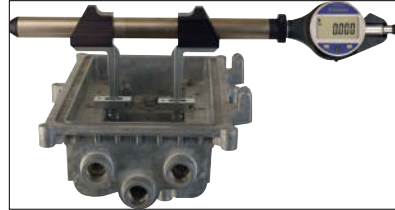
The Fowler Bowers Universal Measuring Gage is ideal for the measurement of inside and outside diameters, threads, slots, recesses, grooves, tapers, etc. The large variety of accessories are easily and quickly interchanged, allowing measurements of virtually any type of workpiece.



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 0.590" / 15mm

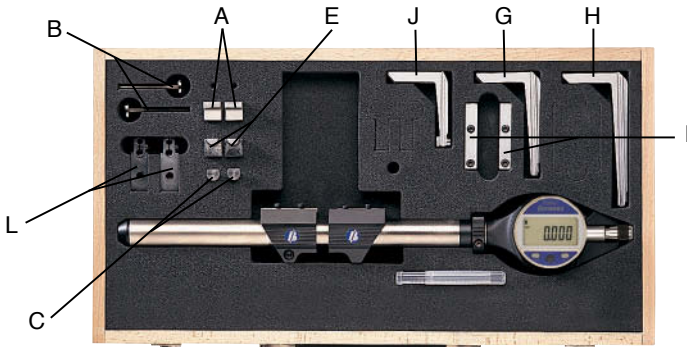


**Sylvac Electronic Features:**

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

Part 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



54-265-777-0

**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

Part 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

**\*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.

## 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.

### 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



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



Part 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

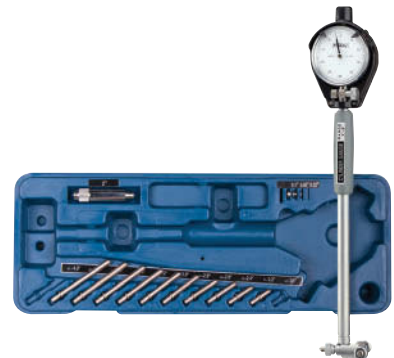


Part Number	Description	Graduation
52-646-400-0	Inch X-Tender Bore Gage Set	0.0005"
52-646-500-0	Inch X-Tender Bore Gage Set	0.0001"
52-646-220-0	Metric X-Tender Bore Gage Set	0.01mm
Accessories		
52-646-450-0	20" Extension	
52-646-475-0	40" Extension	

## 2" to 6" Dial Bore Gage

### Features:

- Range: 2" - 6"
- Carbide anvils
- Graduation: 0.0005"
- 9.5" Depth
- Easily adjustable
- Self-centering
- Insulated grip
- Chrome plated handle.
- Includes 2" contact extension



Part 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

Part 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

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

## XTRA-RANGE<sup>®</sup> 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



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

## 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)**

Part 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

Notes ...

## Deluxe Digital Caliper Gages



54-554-013-2

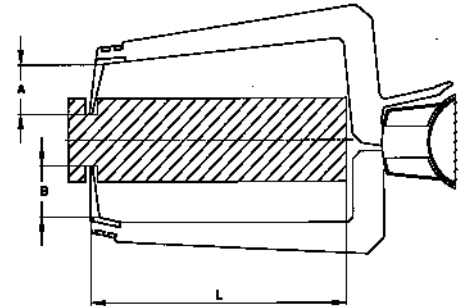
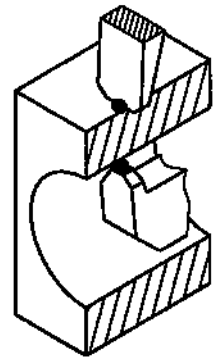


54-554-010-2

### Features:

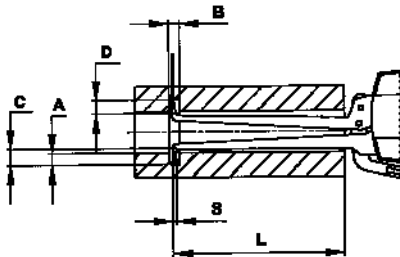
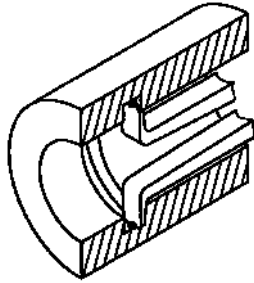
- Perfect for measuring bores, thickness, o-ring and snap-ring grooves.
- Fast and accurate measuring results
- Absolute and relative measurements
- Operates on a 3V lithium battery
- Inch/metric conversion
- Large LCD display
- Peak measuring modes
- Suitable for workshop use
- Data transfer via RS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

Part Number	Description	Range
54-554-005-2	Internal Electronic Caliper	5 - 15mm
54-554-010-2	Internal Electronic Caliper	10 - 30mm
54-554-030-2	Internal Electronic Caliper	30 - 50mm
54-554-050-2	Internal Electronic Caliper	50 - 70mm
54-554-070-2	Internal Electronic Caliper	70 - 90mm
54-554-012-2	External Electronic Caliper	0 - 10mm
54-554-013-2	External Electronic Caliper	0 - 20mm
Accessories		
54-554-100-0	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

Part Number	Range
<b>Internal Caliper Gages</b>	
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
<b>External Caliper Gages</b>	
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!



0.120"/3mm

54-554-630-0



0.120"/3mm

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

Part 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 0.04"/0.1mm spline point
- Three interchangeable points
- M2.5 contact point thread



Part 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



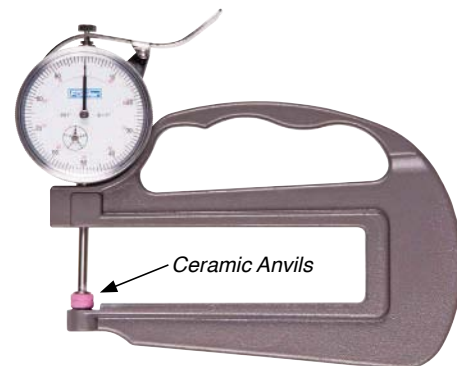
Part Number	Description	Accuracy
54-550-000-1	Snap Cal with Saddle leather holster	± 0.001"/0.02mm
54-550-300-0	Snap Cal without leather holster	

## Heavy-Duty Thickness Gages

Fowler's Dial Thickness Gages are light in weight, easy to handle and carry. These specially built gages are mounted in a hand contoured frame with a thumb release mechanism; has fast direct reading to 0.001". Used to measure thickness of paper, cellophane, plastic film and metal plates. These are high quality precision instruments.

**Features:**

- Ceramic anvils
- Direct reading 0-100 (with revolution counter) on easy-to-read dial
- Frame is hammertone baked enamel
- Spindle of hardened stainless steel
- Features a thumb release mechanism



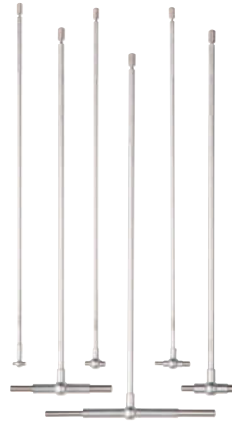
Part Number	Range	Throat Depth	Graduation	Anvil Dia.
52-550-010-0	1"	4-3/4"	0.001"	3/8"

## 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"

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

Part Number	Description
<b>52-472-105-0</b>	Blind Bore Style
<b>52-472-104-0</b>	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.



### 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



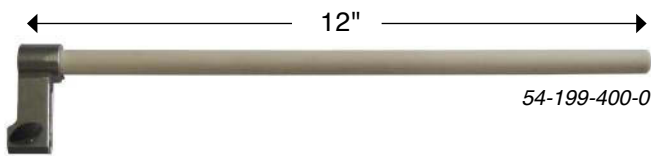
Adjustable in every direction



Part 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

Part Number	Description
Probe Sets	
54-199-105-0	21 pc. Micro Probe Set (see page 79)
54-199-106-0	16 pc. Macro Probe Set (see page 79)
54-199-107-0	7 pc. Economy Probe Set (see page 79)
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



54-199-022-BT

54-115-246-BT



## 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

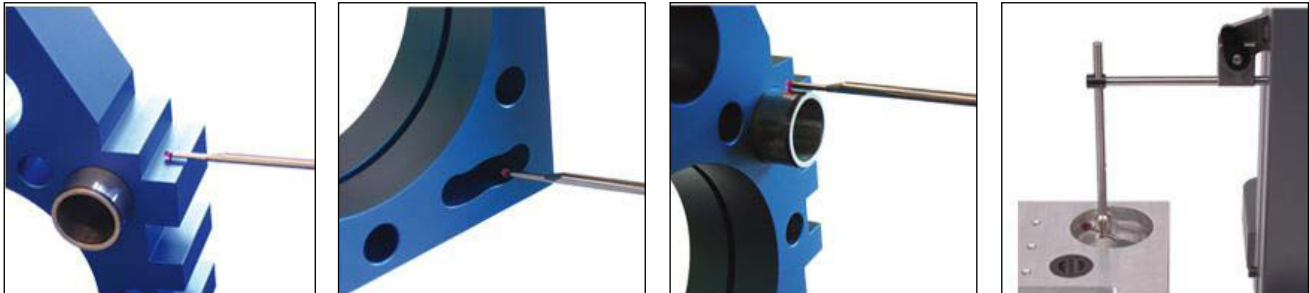
### Instrument Includes:

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



	PN: 54-931-150-BT	PN: 54-931-300-BT	PN: 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 $\mu\text{m}$	2.5 + L/175		
Repeatability	0.00008"/2 $\mu\text{m}$		
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

Part 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.



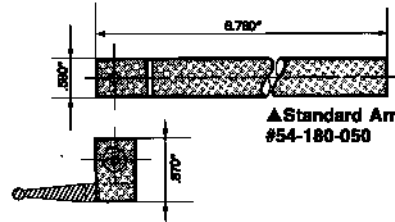
**Mini-Vertical Series**



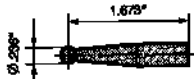
▲ Standard Ball Probe.  
#54-180-060



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

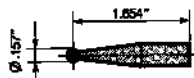


▲ Standard Arm  
#54-180-050

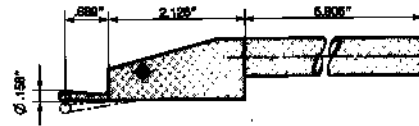


▲ .236" Diameter  
Ball Probe.  
#54-180-236

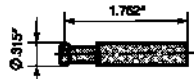
▲ Standard Intermediate Connector.  
(Used with Standard Arm).  
#54-180-055



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



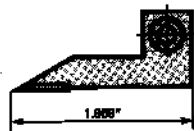
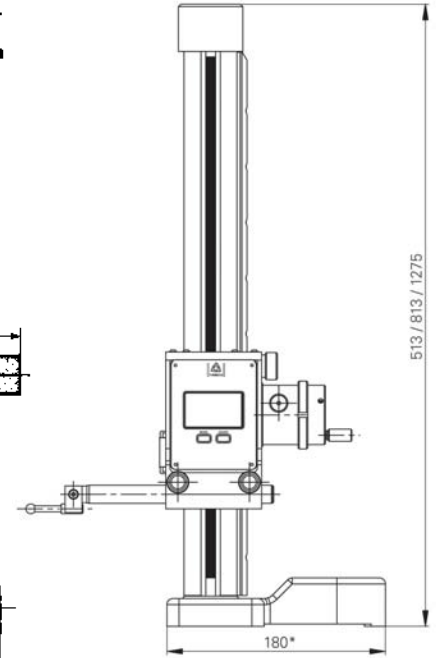
▲ BI-directional Probe.  
#54-180-040



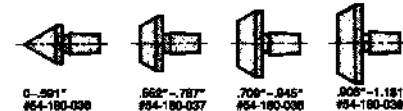
▲ Disc shape Probe.  
#54-180-316



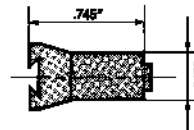
▲ Centering Cone Holder.  
#54-180-035



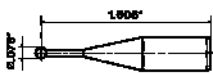
▲ Scriber attachment.  
#54-180-025



▲ Centering Cones.  
Available individually or in sets.



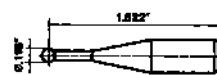
▲ Dovetail Clamp  
for Indicators.  
#52-565-093



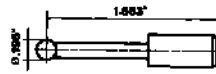
▲ .078" Dia. Ball  
Probe #54-180-152.



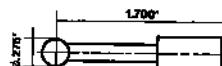
▲ .078" Dia. contact point for BI-  
directional Probe #54-180-042.



▲ .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

Part Number	Description
<b>4mm Probe Sets</b>	
<b>Includes:</b>	
Case	
Hemispheric probe	
54-199-105-0 for V3-V9	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	
	

<b>8mm Probe Sets</b>	
<b>Includes:</b>	
Case	
54-199-106-0 for V3-V9	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	
	

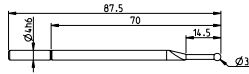
<b>Economy Probe Set</b>	
<b>Includes:</b>	
Case	
54-199-107-0 for V3-V9	54-199-503-0 Corner insert 1mm
	54-199-504-0 Measuring insert M2.5 with ball contact
	54-199-506-0 Extension, 80mm, M2.5
	54-199-515-0 Hex wrench 2.5mm
	54-194-206-0 Carbide ball probe Ø 2mm
	54-194-942-0 Measuring insert holder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



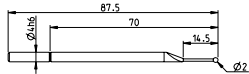
## 4mm Height Gage Probes

**Description** **Part No.**

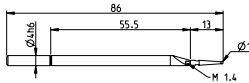
Ruby ball probe Ø 3mm **54-930-211-0**



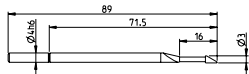
Ruby ball probe Ø 2mm **54-199-509-0**



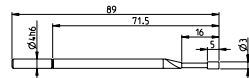
Tungsten carbide ball probe Ø 1mm **54-199-512-0**



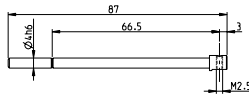
Knife-edged measuring probe TC Ø 3mm **54-199-510-0**



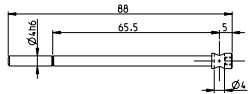
Cylindrical measuring probe TC Ø3mm **54-199-511-0**



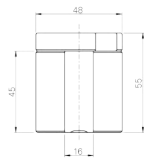
Probe holder 90° M2.5 **54-199-507-0**



Probe holder 90° Ø 4mm **54-199-508-0**



Hi-Cal Setting gage **54-930-202-0**



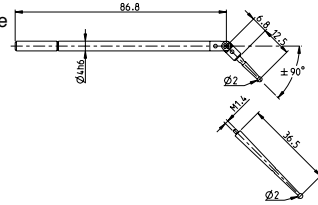
Charging set 120V US for Hi-Cal and V+ Series **54-199-018-0**



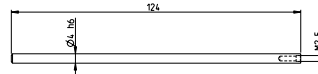
Charging set 120V US for New V Series **54-192-018-0**

**Description** **Part No.**

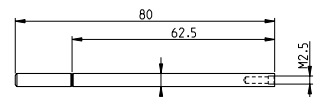
Swiveling tungsten carbide ball probe (M134) **54-930-212-0**



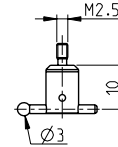
Extension 124mm M2.5 **54-199-505-0**



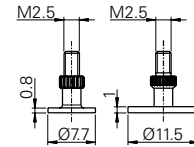
Extension 80mm M2.5 **54-199-506-0**



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 Syvac Probes 54-194-934



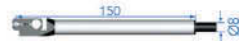
Swivel holder  
Ø 8 mm, Ø 4 mm

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



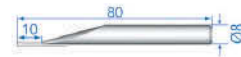
Ball probe tungsten carbide Ø 1 mm

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



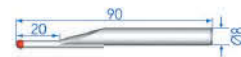
Ball probe tungsten carbide Ø 4 mm

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)

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

## 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



Exceptionally fast (60" per second traverse)!



54-212-024-1

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

## 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

Part 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)

Part 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

## 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

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

54-106-020-0



## 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

Part Number	Range	Accuracy
54-174-212-3	12"/300mm	$\pm 0.0016"/0.04$ mm
54-174-224-4	24"/600mm	$\pm 0.002"/0.05$ mm
Accessory		
54-174-226-0	Contact sensor	

54-174-212-3



## 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

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

52-174-212-0







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



### 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  $1\mu\text{in}$  to  $250\mu\text{in}$

"V" inserts for mounting on cylindrical surfaces

Part 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

Part 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.



Part 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



Part 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  $\mu\text{m}$  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



Part Number	Description
54-188-300-0	Tool Presetter
54-121-000-0	ISO 50/45 Tool Pot Adapter
54-121-005-0	ISO 50/40 Tool Pot Adapter
54-121-010-0	ISO 50/35 Tool Pot Adapter
54-121-015-0	ISO 50/30 Tool Pot Adapter
54-188-333-0	ISO 50 Setting Gage
54-188-335-0	ISO 40 Setting Gage
Accessory	
54-115-333-0	Opto - cable

## 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 (4.3Ø x 175mm).

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

## 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.



Part Number	Inch	Metric	Sensitivity		Overall Dimensions
			Angular		
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.*

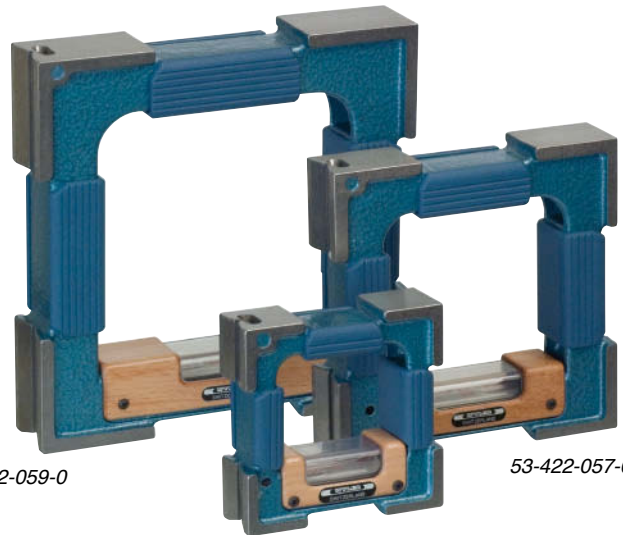
## Spirit Levels

### 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.



53-422-059-0

53-422-057-0

53-422-058-0

Part Number	Inch	Metric	Sensitivity		Overall Dimensions
			Angular		
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.



53-422-525-0

### 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

Part 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>

## 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

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

*Other styles, sizes and sensitivities are available upon request.*



## 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: ± 0.2°
- Repeatability: 0.05°
- Hold feature
- Dimensions: L: 2.19 x W: 2.19" x H: 1.2"



Display inverts for easy reading!



Part 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: ± 0.2°
- Resolution: 0.05°
- Hold feature
- Dimensions: L: 2.19 x W: 2.19" x H: 1.2"



Part 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: ± 0.2°
- Resolution: 0.05°
- Hold feature
- Zero function



Part 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:  $0.050^\circ$
- Rechargeable battery
- USB charging cable supplied



54-422-550-0

Vertical Positioning



Horizontal Positioning



Part 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  $360^\circ$  digital inclination display of any angle. Features aluminum housing, with large LCD, reading hold, absolute  $0^\circ$  at sea level.

### Features:

- Measuring Range:  $360^\circ$  ( $4 \times 90^\circ$ )
- Resolution:  $0.05^\circ$
- 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:  $-5^\circ\text{C}$  to  $50^\circ\text{C}$  ( $23^\circ\text{F}$  to  $122^\circ\text{F}$ )
- Weight: 1.1 lbs.



Part 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  $90^\circ$  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:  $0.05^\circ$
- Accuracy:  $\pm 0.2^\circ$
- Repeatability:  $\pm 0.05^\circ$
- 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

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

## 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:  $0.1^\circ$
- Includes standard 3V lithium battery



54-440-740-1

54-440-775-1

Part 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

Part 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:  $\pm 5$  minutes



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



## 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:  $\pm 4$  minutes
- Microfine adjustment for superior accuracy
- Hardened stainless steel blades
- Optional 12" and 20" blades



Part Number	Description
54-440-977-1	Deluxe Protractor Set (with 8" blade, "V" base & case)
54-440-930-0	12"/300mm blade
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:  $\pm 5$  minutes



Part 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:  $\pm 5$  minutes

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



## COAX-2D 2 Dimensional Coaxial Indicator Sets

Use the 2D Coaxial Set for accurate component centering and positioning in most machining applications. The 2D Coaxial indicator can be used at any angle and the dial remains stationary during the rotation of the machine spindle.

**Features:**

- Indicator assembly with 1.6" 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 .0002" (.005mm) of true center
- Capacity depends on feelers installed, but overall range is 5/32-12" (4-300mm) internal diameter; 0-12" (0-300mm) external diameter.



52-710-025-0

Part 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.

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





## 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:  $\pm 0.0002$ "



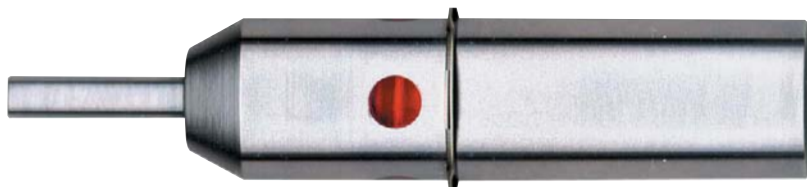
### Electronic Offset Gage No. 54-575-200-0:

- 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:  $\pm 0.0005$ "



Part Number	Description
54-575-000-0	Electronic Edge Finder with 4 batteries.
54-575-200-0	Electronic Offset Gage with 3 batteries.
54-575-300-0	3-D Electronic Sensor with 4 batteries.
54-575-400-0	Replacement A76 type Battery for 54-575-000, 200 and 300 (4 included)

## 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



Part 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



Part 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, E & F (corresponds to letters in chart below)

Part Number	Description/Size
Edge & Center Finders - Inch Series:	
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 .200"
52-575-025-0	D. Combo Edge and Center Finder 1/2" x .200"
Edge & Center Finders - Metric Series:	
52-575-030-0	E. Edge Finder 3/8" x 10mm
52-575-035-0	F. Edge Finder 10mm x 10mm



## 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

Part 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.

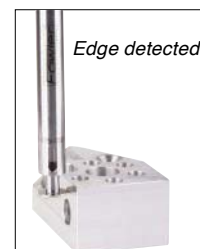
Part Number	Stylus	Shank	Audible	Battery
54-575-600-0	0.200"	1/2"	NO	12 volt
54-575-625-0	0.200"	1/2"	NO	12 volt
54-575-650-0	0.400"	3/4"	YES	12 volt

## M5 Edge Finder



### Features:

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

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

# Z-CHECK 65 PLUS+ Z-Axis Tool Setter

For Z-Axis setting of various machines.

**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



Part 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,  $\pm 0.000039"/0.001mm$
- 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)



Part 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"

## Fowler Tool Set

Is an easy and affordable way to set Z depths quickly and accurately!

**Features:**

- Can be operated directly off table or from machine vise
- Aluminum contact face eliminates carbide chipping on cutting tools
- Repeatability: 0.0002"
- Block dimensions: 1" x 2" x 3" (nominal)
- Batteries included (two LR44)



Slowly lower cutting tool toward Tool Set...



...indicator will light up upon contact!

Part Number	Description
54-575-750-0	Fowler Tool Set



## 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

Part 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

Part Number	Grade	Blocks per Set	Blocks included in Each Set
53-672-028-0	Ø	81	9 Blocks .1001" thru .1009" step of .0001"
53-672-030-0	AS1	81	49 Blocks .101" thru .149" step of .001" 19 Blocks .050" thru .950" step of .050" 4 Blocks 1.000" thru 4.000" step of 1.000"



## Economy Rectangular Gage Block Sets

An economy version of our deluxe Fowler Gage Block Sets, featuring  $\pm .000050$ " (fifty millionths) accuracy and a very significant price savings.

**Features:**

- $\pm 0.000050$ " 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



53-672-081-0

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"	

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

## Large Square Gage Blocks

**Features:**

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



Part 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  $\emptyset$  and supplied with NIST certificate

Part 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  $\emptyset$  and traceable to the National Institute of Standards and Technology.



Includes NIST certificate

Part 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"

Part 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"

Part 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"

Part 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

Part 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"

Part 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"

Part 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  $\emptyset$  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

Part 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"	+ 0.0000" - 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

Part 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.

Order Number	Size Nominal Diameter Range - Inch From - Up to & Including	Geometric Form Tolerance Ovality/Taper Inch	Size Tolerance Inch
53-686-010-0	0.060" - 0.100"	0.000012"	0.000039"
53-686-196-0	0.101" - 0.118"	0.000012"	0.000039"
53-686-196-0	0.119" - 0.393"	0.000016"	0.000049"
53-686-196-0	0.394" - 0.708"	0.000020"	0.000059"
53-686-196-0	0.709" - 1.181"	0.000024"	0.000079"
53-686-196-0	1.182" - 1.968"	0.000028"	0.000079"
53-686-196-0	1.969" - 2.360"	0.000031"	0.000098"
53-686-315-0	2.361" - 3.150"	0.000031"	0.000098"
53-686-394-0	3.151" - 3.940"	0.000039"	0.000118"
53-686-472-0	3.941" - 4.720"	0.000039"	0.000118"
53-686-551-0	4.721" - 5.510"	0.000047"	0.000157"
53-686-590-0	5.511" - 5.900"	0.000047"	0.000157"
53-686-630-0	5.901" - 6.300"	0.000047"	0.000157"
53-686-670-0	6.301" - 6.700"	0.000047"	0.000157"
53-686-709-0	6.701" - 7.090"	0.000047"	0.000157"
53-686-748-0	7.091" - 7.480"	0.000055"	0.000197"
53-686-787-0	7.481" - 7.870"	0.000055"	0.000197"
53-686-835-0	7.871" - 8.350"	0.000055"	0.000197"

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

Part Number	Size	Part 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

Part 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

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

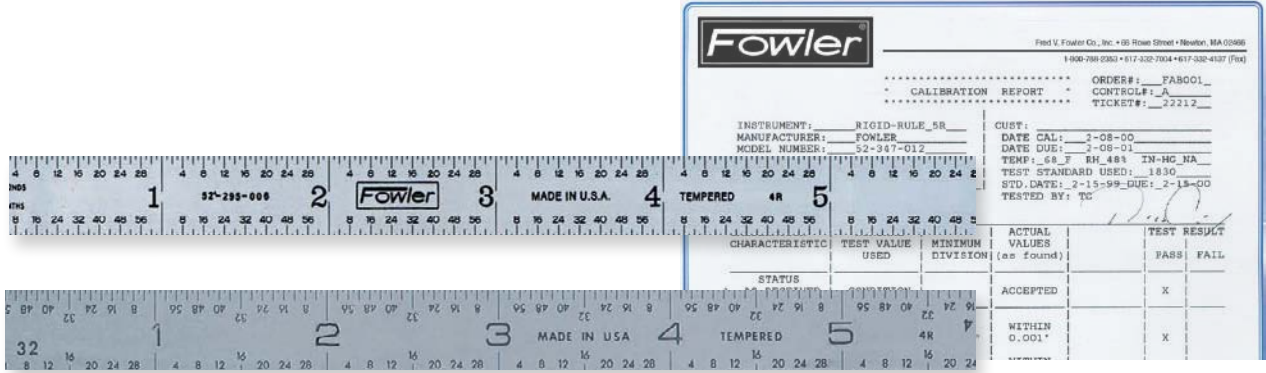
### Microgage Rings: Grade N (nominal)

Part Number	Size	Part 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

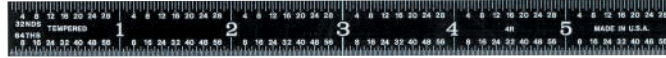


### GRADUATIONS:

- 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

Part 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
52-264-018-0	Flexible	18"/450mm	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
52-411-024-0	Flexible	24"	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
52-513-006-0	Rigid	6"	32nds, 64ths, 10ths & 100ths
52-513-012-0	Rigid	12"	32nds, 64ths, 10ths & 100ths
52-513-018-0	Rigid	18"	32nds, 64ths, 10ths & 100ths
52-513-024-0	Rigid	24"	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

Part 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
52-298-006-0	6"	1/2"	3R	Flexible
52-298-012-0	12"	1/2"	3R	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
52-308-018-0	18"	0.76"	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
52-336-012-0	12"	1.03"	3R	Rigid
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
52-338-018-0	18"	1.2"	16R	Rigid
52-338-024-0	24"	1.2"	16R	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
52-382-012-0	12"/300mm	1.03"	E/M	Rigid



## Rigid Steel Rules: Inch



52-330-006-0

**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

Part 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"
52-340-018-0	18"	5R	1-1/8"	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"
52-350-012-0	12"	16R	1"	0.04"
52-350-024-0	24"	16R	1-1/8"	0.04"
52-350-036-0	36"	16R	1-1/4"	0.04"
52-360-018-0	18"	3R	1-1/8"	0.04"

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



## Flexible Steel Rules: Inch



52-295-006-0



52-320-006-0

**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

Part 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"
52-295-024-0	24"	4R	3/4"	0.020"
52-295-036-0	36"	4R	3/4"	0.020"
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"

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



## 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



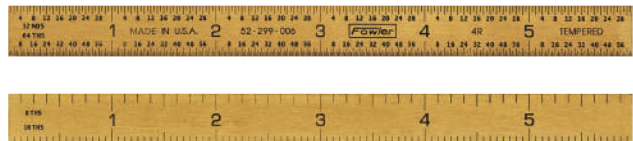
Part Number	Style	Overall Size	Graduation
Metric Series:			
52-380-005-0	Rigid	150mm x 18mm x 0.75mm	1mm, 0.5mm
52-380-010-0	Rigid	300mm x 25mm x 1mm	1mm, 0.5mm
52-380-017-0	Rigid	600mm x 28mm x 1mm	1mm, 0.5mm
52-380-025-0	Flexible	150mm x 13mm x 0.4mm	1mm, 0.5mm
52-380-030-0	Flexible	300mm x 13mm x 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
52-380-018-0	Flexible	450 x 20 x 0.4mm	1mm & 0.5mm/32nds & 64ths
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

Part 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

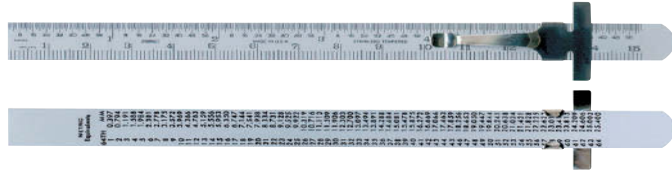


## Pocket Steel Rule

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.

Part 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:

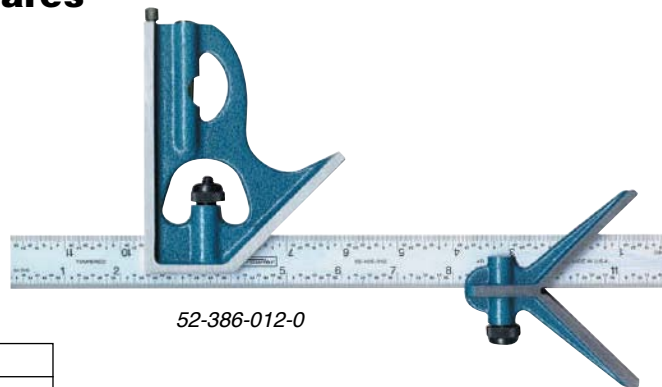
- For measuring properly ground 59° drill tips
- Rule and slide made of steel
- Made in the USA
- Satin chrome finish
- Slide graduated in 32nds
- Adjustable, removable hook
- Furnished in plastic case



Part 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

Part 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



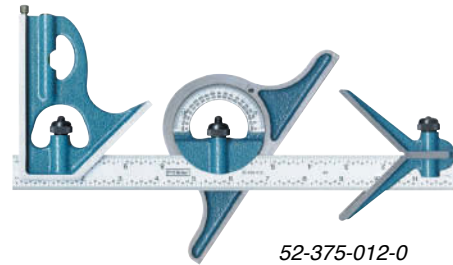


## Combination Square Sets

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

Part 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 scriber point



52-378-006-0

**GRADUATIONS:**

4R: 8ths, 16ths, 32nds & 64ths  
 16R: 32nds, 64ths, 50ths & 100ths

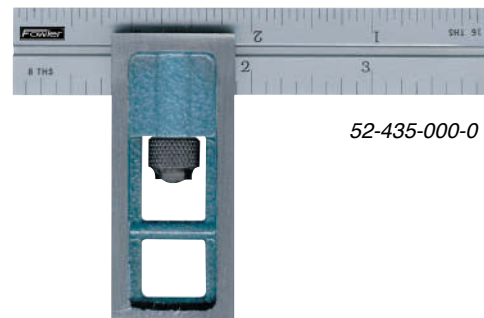


Part Number	Blade Size	Graduation
52-373-006-0	6"	4R
52-378-006-0	6"	16R
52-373-012-0	12"	4R

## 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:**

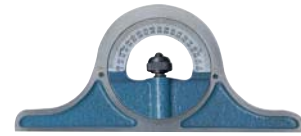
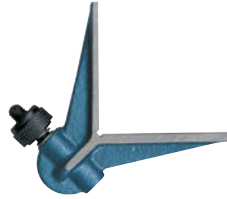
4R: 8ths, 16ths, 32nds & 64ths



Part 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



Part Number	Blade Size	Graduation
Blades:		
52-400-012-0	12"	4R
52-400-018-0	18"	4R
52-405-018-0	18"	16R
52-400-024-0	24"	4R
Part Number	Description	Accepts Blade Size
Heads:		
52-410-010-0	Cast Square Head	12", 18" and 24"
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 =  $0.00008" + \frac{\text{Length (blade)}}{100,000}$



52-426-002-0

Part Number	Blade Length	Beam Length
52-426-002-0	2-1/2"	2-5/8"
52-426-003-0	3-3/16"	2"
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"

## Straight Edge Squares

### Features:

- Designed for precision layout and measurement work which requires high accuracy
- Length of the blade is measured from the inner edge of beam to end of blades
- Fully hardened to Rockwell 55C
- Beams and blades are ground and lapped for straightness and parallelism
- Both the inside and outside of the squares have accurate right angles
- Packed in individual cartons
- Accuracy =  $0.0002" + \frac{\text{Length (blade)}}{50,000}$



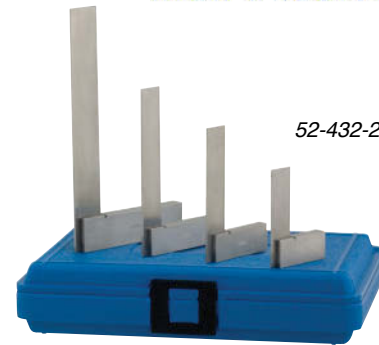
52-431-003-0

Part Number	Blade Length	Beam Length
52-431-002-0	2-3/8"	1-3/8"
52-431-003-0	3-1/8"	2"
52-431-006-0	6-3/4"	4"
52-431-008-0	8-1/2"	5-1/8"
52-431-010-0	10-1/2"	6-3/8"

## 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



52-432-246-0

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"

Part 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

Part 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



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



## SPACE X-BLOX® PLUS+ Sets

Pre-sized, solid aluminum. Common sizes used for setting heights, drill press depth stops and fences.

### Features:

- Accuracy: 0.001" on all sides
- All blocks are 3" long by 1/2" high
- 1-2-3 blocks feature 1/32" graduations on 2" and 3" sides
- 6" straight edge included
- Available in two combinations



52-439-055-0

Part Number	Description
52-439-050-0	Block sizes in matched pairs: 1-2-3 blocks, 3/4", 1/2", 3/8", 1/4", 3/16", 1/8", 1/16"
52-439-055-0	Block sizes (1 each): 1-2-3- block, 3/4", 23/32", 1/2", 15/32", 7/16", 3/8", 5/16", 1/4", 7/32", 3/16", 5/32", 1/8", 3/32", 1/16"

## Deluxe Stereo Microscopes

An excellent, high quality optical system in a small body with both top and bottom illumination.

Used on a daily basis as an inspection tool, the Deluxe Stereo Microscope is applicable in diverse fields ranging from electronic, food, inspection, chemical, metallographic, metallurgical, ceramic, textile and to the fields of medicine and biology, geology, mineralogy, paleontology, archeology and more.

Standard equipment includes 2X and 4X objectives, 10X eyepiece and two 12 volt illuminators (one surface or top illuminator and one transmitted or bottom illuminator with on/off switch).

### 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

Eyepiece	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

Part Number	Description
53-640-902-0	Deluxe 20/40x Stereo Microscope includes 2X and 4X objectives, 10X eyepiece, eye cups and dust cover.
Accessories	
53-640-910-0	Pair of 10X eyepieces - standard
53-640-915-0	Pair of 15X eyepieces - optional
53-640-920-0	Pair of 20X eyepieces - optional
53-640-925-0	12V Replacement bulb for surface & transmitted illuminators



## Stereo Microscopes

High quality optical instrument in a compact, simply constructed body. Used exclusively for surface inspection.

The Stereo Microscope is also used in diverse fields ranging from electronic, food, precision, chemical, metallographic, metallurgical, ceramic, textile and to the fields of medicine and biology, geology, mineralogy, paleontology, archeology and more.

Standard equipment includes 1X and 3X objectives, 10X eyepiece and 12 volt incident (top) illuminator with an off/on switch.

### 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

Eyepiece	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



Part Number	Description
<b>53-640-320-0</b>	10/30x Stereo Microscope. Includes 1X and 3X objectives, 10X eyepiece and eye cups.
Accessories	
<b>53-640-910-0</b>	Pair of 10X eyepieces - standard
<b>53-640-915-0</b>	Pair of 15X eyepieces - optional
<b>53-640-920-0</b>	Pair of 20X eyepieces - optional
<b>53-640-925-0</b>	12V Replacement bulb for surface illumination

## XTRA-RANGE® 20x Extended Range Microscope

Ideal for viewing the surface of items that will not fit into conventional microscope plates.

### Features:

- 10X eyepieces with adjustable centers and rubber eyecups
- 2X objective lens
- Top swiveling light source - 12 volt lamp, 110V supply
- Positive rack and pinion focusing
- Articulated 12" long extension arm
- Heavy base plate insures stability and houses transformer which measures 5" x 8" x 2.5"
- Overall base and column height of 12"



Part Number	Description
<b>53-640-280-0</b>	20X Microscope with Universal Stand





## 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

Part 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

Part 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.

Part 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

Part 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)		
52-662-050-0	20X Pocket-Scope and Micro-lite set		
52-662-055-0	40X Pocket-Scope and Micro-lite set		



## 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

Part 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

Part 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

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

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

### Zirconia Ceramic 1-2-3 Blocks, No. 53-439-101-0



**Features:**

- Parallelism and squareness: 0.0002"/1"
- Constructed of Zirconia Ceramic
- Blocks feature a coefficient of expansion only  $2 \times 10^{-6}/C^{\circ}$  different than steel blocks
- Dimensions: 1" x 2" x 3"
- Flatness within 0.00004"
- Size accuracy within 0.0002"/1"

### 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 $\mu$ "
- Includes hex wrench and 5 mounting bolts (3/8"-16)

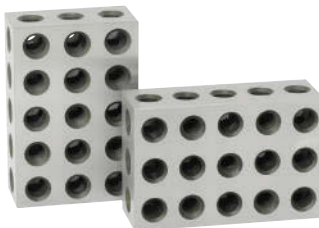
### Steel 1-2-3 Blocks, No. 52-439-001-0 to 031-0



**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".
- Very useful in mounting work for precision grinding, layout work, etc
- Blocks hardened to 58-60 Rockwell C.
- Ground to surface finish 6-10 microinches
- Matched to size within  $\pm 0.0002$ "

### 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  $\pm 0.0005$ "

Part 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
53-439-101-0	Set of 2 Zirconia Ceramic blocks with 1 hole
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



Part 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



## Parallels & Sets

### 1/8" Parallel Set, No. 52-437-000-0



**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  $\pm 0.0002$ " each pair
- Heights matched within  $\pm 0.001$ " each pair

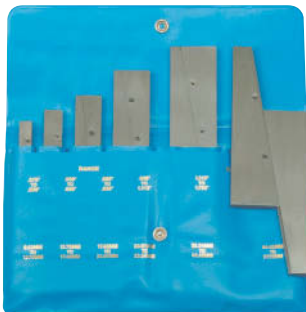
### 1/2" Parallel Set, No. 52-437-001-0



**Features:**

- Set of four pairs of parallels are hardened and ground. A must for every shop
- Sizes: 1", 1-1/4", 1-1/2" and 1-3/4" in height x 6" long with 5/16" holes
- 1-1/2" and 1-3/4" parallels are 1/2" thick
- 1" and 1-1/4" parallels are 3/16" thick
- Width & height variations: maximum 0.0004"

### Adjustable Parallel Set, No. 52-437-006-0



**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"

Part Number	Description
52-437-000-0	1/8" Parallel Set
52-437-001-0	1/2" Parallel Set
52-437-006-0	Adjustable Parallel Set

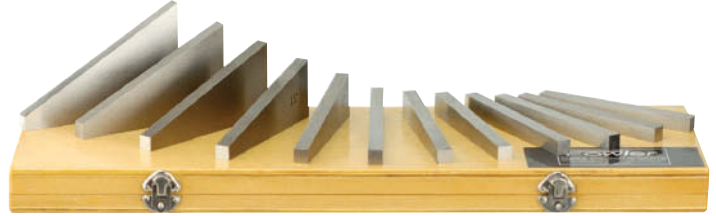


## 12 Piece Angle Block Set

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:  $\pm 2.5$  arc minutes
- All blocks are 3" long and 1/4" thick



Part 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:  $\pm 30$  arc seconds
- Set up angles quickly and easily
- Angular accuracy:  $\pm 30$  arc seconds
- All blocks 3" long x 1/4" thick



Part Number	Description
52-666-777-0	12 piece Angle Block 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

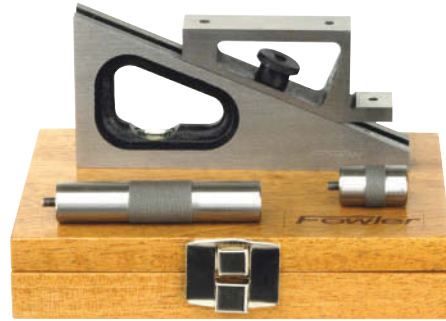


Part Number	Length	Width	Straightness	Thick
52-480-050-0	18"	1.57"	0.0003"	0.150"
52-480-055-0	24"	1.57"	0.0003"	0.150"

## 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



52-460-005-0

Part 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.



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

## V-Block Set

Precise tool used for layout work in the toolroom and has the capability of holding square or round workpieces with greater accuracy.

### Features:

- Two clamps, with screw hole at 90 degrees for positive clamping of work, are included.
- Clamping capacity= 2"(50mm.)
- V-Blocks are constructed with stepped grooves which allow the clamps to be inserted without protrusion, thus allowing V-Blocks to be used on base, ends or sides.
- Hardened steel. All sides of V-Blocks precision ground parallel and square within .0004".
- Matched pair of V-Blocks are perfectly aligned with 90 degree V-grooves ground central and parallel to the sides and base



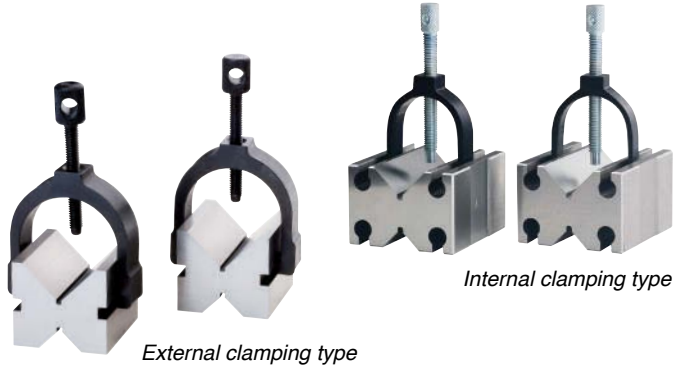
Part Number	Height	Length	Width
52-475-555-0	2"	2-3/4"	2"



## SHOP-BLOX® V-Block Sets

### 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



Part 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



Part Number	Description
52-475-500-0	X-Blox Set

## 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"



Part 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 sec
- Squareness within 0.0002"



Part 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.

**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.



52-585-075-0

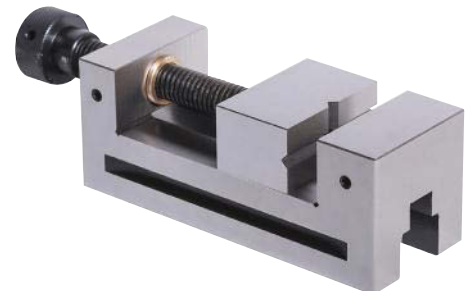
Part Number	Description	Overall Dimensions
52-585-070-0	V-Block with on-off switch	2-3/8" wide x 4-7/8" long x 2-7/8" high
52-585-075-0	V-Block with on-off switch	2-3/8" wide x 4" long x 3-7/8" high

## 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.



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





## Sine Bars

Highly recommended for securing a high degree of accuracy in measuring angles for grinder and milling machine set ups. Both sine and rolls hardened and ground for extreme accuracy.



52-455-010-0  
(Gage block shown not included)



52-455-020-0

### Features:

- Top surface is flat to 0.00003" per inch of length, parallelism: 0.0004"
- Flange on end for resting work
- Both sine bars have holes for mounting/clamping

Part Number	Description	Width	Distance between Center of Rolls
52-455-010-0	5" Sine Bar	15/16"	5" ± .0004"
52-455-020-0	5" Sine Plate	2"	5" ± .0002"

## Economy Sine Bar



52-455-030-0

### Features:

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

Part Number	Description	Width	Distance between Center of Rolls
52-455-030-0	Economy 2-1/2" Sine Bar	1"	2-1/2" ± 0.0004"
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°, 1° thru 15° in 1° increments, 1/4° and 1/2° to measure taper per foot
- Exact constant within 0.001"

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

## 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"

Part 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



Part 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.)



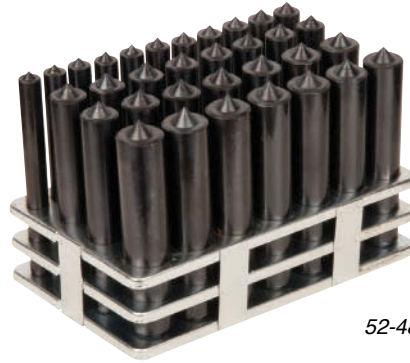
Part Number	Description
52-104-025-0	Machinist Screw Jack Set



## 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

Part 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

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

## 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

Part 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

## 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"



Part 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"



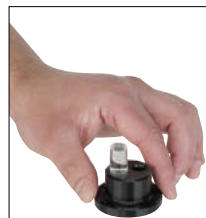
Part Number	Description
52-500-015-0	5 piece Center Punch Set

## 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



Part 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.

Part 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

Part Number	Description
52-500-010-0	Automatic Center Punch.
52-515-047-0	Replacement Point for No. 52-500-010 Center Punch

## 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".

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



## Carbide "Super Scriber"



**Features:**

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

Part 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

Part 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

Part 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

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

## Cutter Scriber



**Features:**

- Knurled steel handle
- Hardened point and blade

Part Number	Description	Overall Length
52-515-040-0	Cutter Scriber	6-1/2"



## Universal Deburring, Cleaning & Countersink Set

A complete kit for Machine Shop Applications!



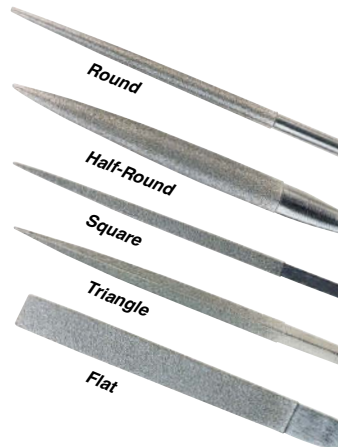
### Set includes:

- 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

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

## Diamond File & Deburring Set

Diamond impregnated for use on even the hardest alloys!

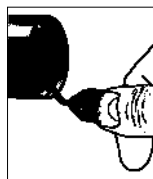


### Set includes:

- 1 handle, providing maximum grip comfort
- 5 piece set of diamond impregnated files consisting of a round, flat, square, triangle and half-round file, 5-1/2" long with 2-1/2" length of cut
- 2 triangular scraper/deburring tools (single and double ended)

Part Number	Description
52-483-666-0	Diamond File & Deburring 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.

Part 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



Part 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.



55-130-062-0

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

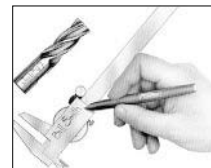
## Chemical Etching Pen for Metal



### 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.



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



## 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°

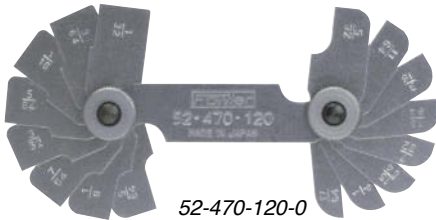


52-470-010-0

Part 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.
52-470-040-0	8 piece set without holder. 9/16" - 1" by 16ths 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.



52-470-120-0

### 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.

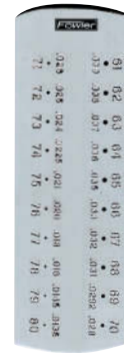
Part Number	No. Leaves	Range: Concave and Convex
Inch Series:		
52-470-120-0	16	1/32" - 17/64" by 64ths, (Each leaf male & female)
Metric Series:		
52-470-110-0	34	1mm - 7mm(1mm, 1.25mm, 1.5mm, 1.75mm, 2mm, 2.25mm, 2.5mm, 2.75mm, 3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 6.5mm, 7mm.) (17 male & 17 female)

## Drill Gages

For checking of drill sizes



52-480-005-0



52-480-015-0

Part Number	Description	Accuracy
Hardened & Ground:		
52-480-005-0	1/16" - 1/2" Jobber Drill; 29 holes	+0.0015"/-0
52-480-010-0	#1 - #60 Number Drill; 60 holes	+0.001"/-0
52-480-015-0	#61 - #80 Number Drill; 20 holes	+0.001"/-0



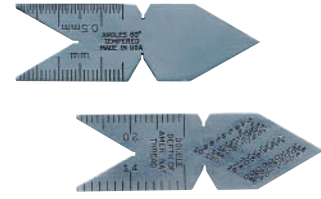
## Thickness (Feeler) & Center Gages



52-485-007-0



52-485-010-0



52-505-001-0

### 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

Part Number	Description
52-485-005-0	Tapered Thickness Gages-Inch. 10 Leaf Set: 0.0015", 0.002", 0.003", 0.004", 0.006", 0.007", 0.010", 0.012", 0.015" and 0.025". Length: 4".
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".
52-485-007-0	Straight Blade (1/2" width at tip). 26 Leaf Set: 0.0015", 0.002", 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", 0.020", 0.022", 0.024", 0.025", 0.028", 0.030", 0.032", 0.035". Length 3".
52-485-008-0	Tapered Thickness Gages-Metric. 13 Leaf Set: 0.05mm, 0.10mm, 0.15mm, 0.20mm, 0.25mm, 0.30mm, 0.40mm, 0.50mm, 0.60mm, 0.70mm, 0.80mm, 0.90mm & 1mm. Length: 100mm.
52-485-010-0	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.

Part 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



52-470-141-0



52-485-048-0



52-470-140-0

### 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

Part 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.
52-470-141-0	Involute Gear Tooth Gages - Inch Series: 7 Leaves with ring holder. Range of pitch: 2, 2-1/2, 3, 3-1/2, 4, 4-1/2, 5.
52-470-150-0	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

## Micrometer Calibration Set

Perform your own calibration checks.



53-670-002-0

### Features:

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

Part Number	Description	Grade
53-670-002-0	Calibration Set with Steel Blocks and Optical Flats	Ø

## Micrometer Checking Set

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

**Set Includes:**

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

**53-813-002 (Checker without blocks)**

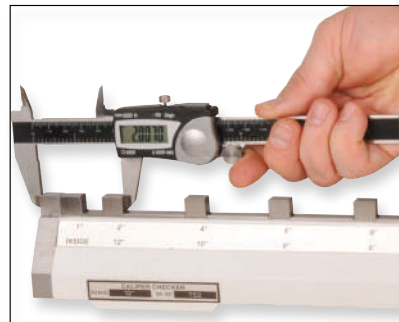
- Use blocks you already have and select the sizes to fit your specific needs



Part Number	Description
53-813-001-1	Micrometer Checking Set
53-813-002-0	Checker without blocks

## Setting Masters

Fowler's setting masters are quick, easy and extremely accurate. Each comes with a certificate of calibration and a wood case. Save time and money by calibrating your own measuring tools.



**No. 53-813-010-0 Caliper/Height Gage Checker:**

- Horizontal and vertical use
- Used for the calibration of height gages and calipers
- Scale on one side reads: 0.5", 2", 4", 6", 8", 10" and 12" for inside caliper measurements, 1", 2", 4", 6", 8", 10" and 12" for outside caliper measurements
- Scale on other side reads: 1", 2", 4", 6", 8", 10" and 12" for height gage checking
- Accuracy:  $\pm .0002"$

Part 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

Part 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 and fitted wood case
- All sizes marked are actual



Part Number	Description
53-813-015-0	Quick Check Multi-Function Check Standard

# 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 $\pm l_c$ $\mu\text{in.}$	Tolerance for the Variation in Length $l_v$ $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{in.}$	Tolerance for the Variation in Length $l_v$ $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{in.}$	Tolerance for the Variation in Length $l_v$ $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{in.}$	Tolerance for the Variation in Length $l_v$ $\mu\text{in.}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{in.}$	Tolerance for the Variation in Length $l_v$ $\mu\text{in.}$
	$l_n \leq 0.05$	12	2	4	2	8	4	12	6	24
$0.05 < l_n \leq 0.4$	10	2	3	2	5	4	8	6	18	12
$0.46 < l_n \leq 1$	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	26
$24 < l_n \leq 28$	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 $\pm l_c$ $\mu\text{m}$	Tolerance for the Variation in Length $l_v$ $\mu\text{m}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{m}$	Tolerance for the Variation in Length $l_v$ $\mu\text{m}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{m}$	Tolerance for the Variation in Length $l_v$ $\mu\text{m}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{m}$	Tolerance for the Variation in Length $l_v$ $\mu\text{m}$	Limit Deviations of Length at any Point From Nominal Length $\pm l_c$ $\mu\text{m}$	Tolerance for the Variation in Length $l_v$ $\mu\text{m}$
	$l_n \leq 0.5$	0.30	0.05	0.10	0.05	0.14	0.10	0.30	0.16	0.60
$0.6 < l_n \leq 10$	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
$26 < l_n \leq 50$	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
$76 < l_n \leq 100$	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
$260 < l_n \leq 300$	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	0.80	0.20	1.80	0.30	3.60	0.60
$400 < l_n \leq 500$	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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