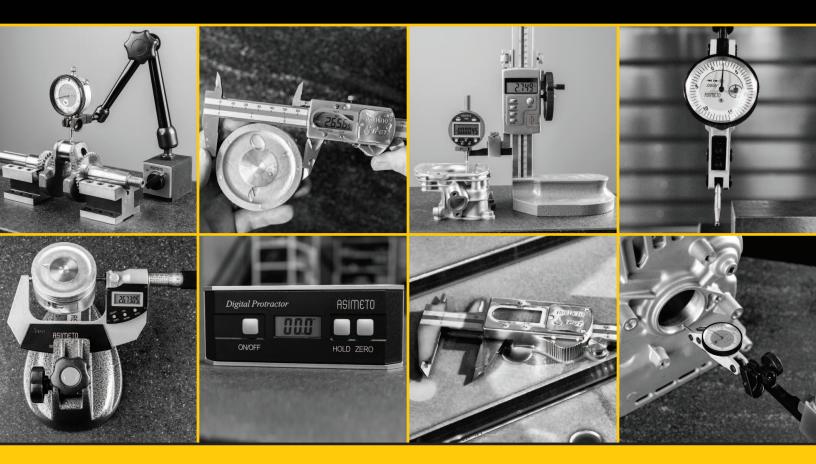


# ASIMETO



# ISO 17025 CALIBRATED 2 YEAR WARRANTY

WWW.SOWATOOL.COM



**Precision** is not only defined by degrees of exactness. It is defined by the vision and skill of engineers. By problems solved, challenges overcome, and reputations made. The real value of precision is the power it gives engineers to turn plans into reality.

Asimeto was founded in 2007 by renowned German metrologist Manfred Eisinger. Since then, the company has rapidly established a reputation for manufacturing high performance precision tools and solutions and delivering them at unexpectedly affordable prices.

Asimeto continues to win market share by applying German metrological design, American technological innovation, and Asian manufacturing competitiveness across a broad range of integrated precision solutions, distributed through a global network. Every tool is ISO 17025 certified for dependable accuracy and to ensure calibration is compliant with the regulatory requirements of each local market. Increasingly, Asimeto is the choice of engineers the world over including companies like Volkswagen, Guhring, and Boeing. We invite you to discover why.

# To supplement the industry standard 12 month warranty an additional 12 month warranty is available by registering your individual purchase online at www.asimeto.com within 30 days from the date of purchase.

# **Appearances and Specifications**

Appearances and specifications are subject to change without prior notice for product improvement.

# **RECALIBRATE YOUR EXPECTATIONS**

Downtime, poor quality and rising costs are a few variables unacceptable in any manufacturing environment and you need to trust that your suppliers have your back.

At Sowa Tool, we take this responsibility very seriously and why we are really proud to introduce our new Asimeto North American Catalog. With your feedback, we have identified a mix of the most popular precision metrology tools used in aerospace, automotive, energy, and general manufacturing.

Every Asimeto tool we supply comes with an ISO 17025 calibration certificate so our customers can be confident that the measuring accuracy conforms to national specifications. Coupled with Asimeto's strong quality promise, we've lowered prices across hundreds of items to make sure our customers are receiving the highest possible value for their dollar. Additionally, we've made significant investments in local inventory to ensure these products are consistently and reliably in stock to support our customers all across North America. In fact, our goal at Sowa is to achieve 100% service level on every item in this catalog. While reaching this goal may sound difficult earning and keeping your trust as a valued supplier is our number one priority.

We know you have a choice on where to buy your favorite brands. We thank you for choosing Sowa Tool and Asimeto.



# ISO 17025 CALIBRATED

ASIMETO

Calibration Lab

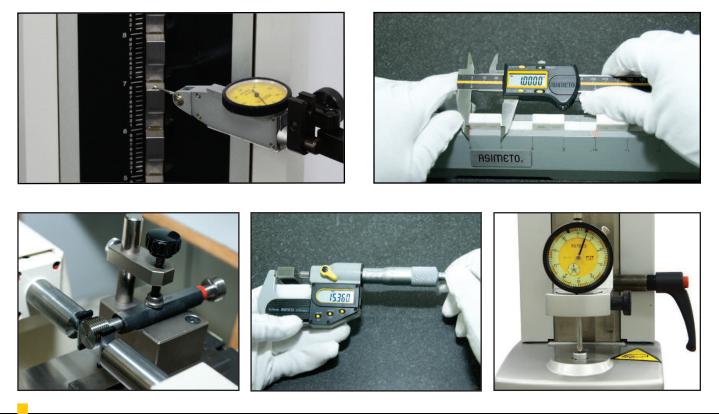
# **Asimeto Calibration Laboratory**

The quality and measuring accuracy of all Asimeto precision tools are guaranteed by the Asimeto Calibration Laboratory. All tools are inspected for conformance to the Asimeto design specifications and are then processed through the Asimeto calibration laboratory. Only the latest state of the art calibration equipment has been selected, from the leading global manufacturers, to ensure that the calibration costs are contained by increasing throughput, without compromising measurement accuracy or repeatability.

The Asimeto Calibration Laboratory has designed and incorporated universal calibration software that applies the applicable accuracy standard to the specific destination market of the precision measuring tool. ASME, DIN, and JJG are all supported.

It all means precisely that the dedication and diligence of the Asimeto Calibration Laboratory assures you that the accuracy is within the specifications of your local standard.





# **The Differences Between NIST and ISO Certification**



## NIST Traceable (National Institute of Standards and Technology)

A NIST certification means that a product has been tested against NIST's Standard Reference Materials (SRMs) and meets the organization's exact specifications.

The measurement is made using a standard reference artifact (in most cases a gauge block) that NIST has certified to be a specific size. Theoretically, this provides for an unbroken chain of measurement reference all the way back to a primary national standard. It does not, however, consider how that measurement is made. This gives rise to several questions:

- 1. Is the measurement made in a controlled environment, where temperature and humidity are tightly controlled within the tolerances required to make accurate measurements?
- 2. Have both the standard reference artifact and the product being measured been allowed to equilibrate in the measurement environment to ensure that both are stable at the time of measurement?
- 3. Is there a procedure for making the measurements?
- 4. Has the procedure been demonstrated to be repeatable in an R&R study?
- 5. Is the technician performing the measurement trained to operate the equipment properly?
- 6. Is the technician periodically tested to demonstrate continuing proficiency?
- 7. Is it possible to contact the company that supplied the traceable certificate to obtain a more detailed report certifying that the measurement is accurate?

### ISO Certified (International Standards Organization)

ISO 17025 certification means not only that it has been tested against NIST's (in the US, or other countries Standards Institutes) SRM through an unbroken chain of calibrations, but also that the technician is qualified to perform this calibration using an accepted method of calibration and is monitored by an effective Quality Management System, and indicates the equipment used to perform this calibration has been calibrated through an unbroken chain to the SRMs.

This measurement is also made using a gauge block or other standard reference artifact, however the measurement takes place in an ISO 17025 accredited calibration laboratory. In addition, that laboratory is periodically audited by an ISO 17025 accrediting body to ensure all requirements are being met. ISO 17025 requires that all calibration laboratories adhere to the following:

- 1. Measurement is made in a controlled environment, where temperature and humidity are tightly controlled within the tolerances required to make accurate measurements.
- 2. Both the standard reference artifact and the product being measured are allowed to equilibrate in the measurement environment to ensure that both are stable at the time of measurement.
- 3. There is a written procedure for making the measurements.
- 4. The procedure has been demonstrated to be repeatable in an R&R study.
- 5. The technician performing the measurement is trained to operate the equipment properly.
- 6. The technician is periodically tested to demonstrate continuing proficiency.
- 7. The accredited calibration laboratory supplies a traceable certificate, with detailed report, certifying that the measurement is accurate.

All ISO certificates of calibration adhere to ISO 17025:2005 standards, including: trace numbers, date of calibration, CMC data (Calibration Measurement Capability) and certified inspector signature.

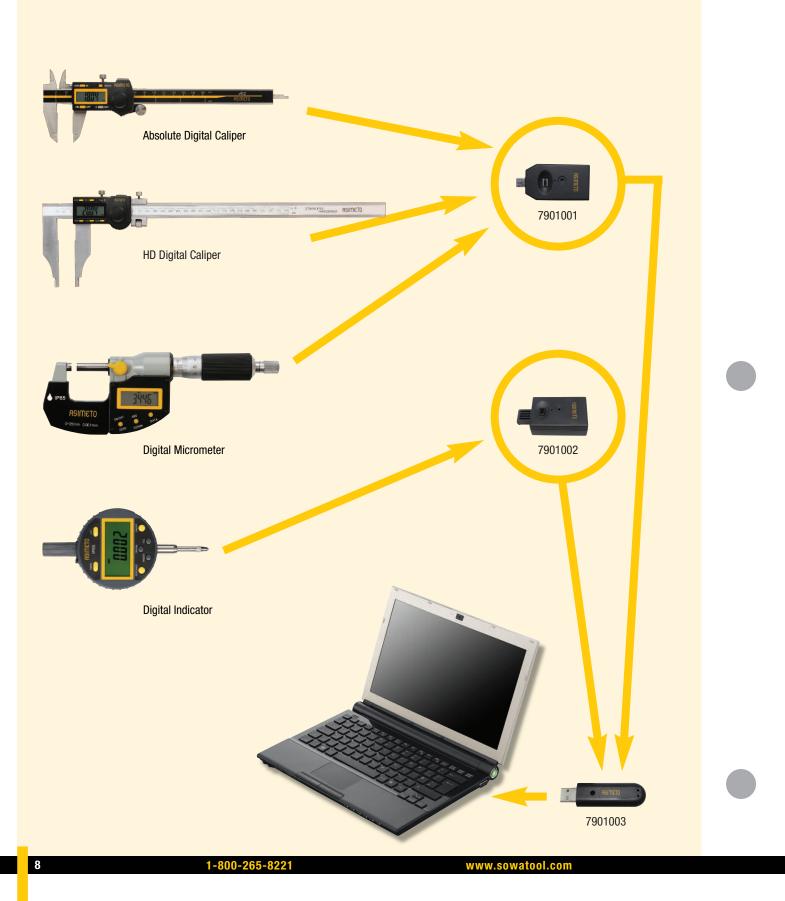


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# **Wireless Data Collection**

Plug Wireless Output Device (7901001 or 7901002) into the measuring tool as shown below. Wireless Input Device (7901003) plugs into a USB port on your computer.



# **Data Output Cables**

	Used For	PC Interface	Data	Product Series	Code No.
	ABS Digital Calipers	USB	Dot Data Format	7307-XX-3	7900054
	Digital Micrometers	USB	Dot Data Format	7105-XX-5	7900054
	Heavy Duty Digital Calipers	USB	Dot Data Format	7315-XX-6	7900054
	IP65 Digital Indicators	USB	Dot Data Format	7407-XX-3	7900070

# **Wireless Data Transfer**

	Used For	Function	Frequency	Code No.
Asime to	ABS Digital Calipers Digital Micrometers Heavy Duty Digital Calipers	Output	2.4G	7901001
Clause	IP65 Digital Indicators	Output	2.4G	7901002
e ismeto	ABS Digital Calipers Digital Micrometers Heavy Duty Digital Calipers IP65 Digital Indicators	Input	2.4G	7901003



# ISO 17025 CALIBRATED

# **IP65 Digital Outside Micrometers - Data Output**

- Resolution Digital: 0.00005"/ 0.001mm Scale: 0.0001"
- Flatness: 0.000012"/0.3µm
- Dual Ratchet combines both the
- Ratchet Stop and Friction Thimble • Data output cable: 7900054
- Wireless data transfer output: 7901001
- Upon switch-on the display will read the actual
- absolute measuring position
- Automatic On/Off to maximize battery life
- Inch/Metric conversion
   Absolute or incremental
- Absolute or incremental measuring modes
- Carbide tipped measuring faces
   Destantian level IDC5
- Protection level IP65Grey painted steel frame







ASIMETC

7105639

### STANDARD ACCESSORIES

- CR2032 Battery, Ball Anvil, S-Wrench, Standard (over 1" range)
- Warranty Card, Calibration Certificate, Instruction Manual

Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-1"	±0.0001"	0-25mm	±0.002mm	7105015
1-2"	±0.0002"	25-50mm	±0.002mm	7105025
2-3"	±0.0002"	50-75mm	±0.003mm	7105035
3-4"	±0.0002"	75-100mm	±0.003mm	7105045
4-5"	±0.0002"	100-125mm	±0.003mm	7105055
5-6"	±0.0002"	125-150mm	±0.003mm	7105065
SET				
Range	Quantity	Range		
0-3"	3	0-75mm		7105639







# **Digital Outside Micrometers**

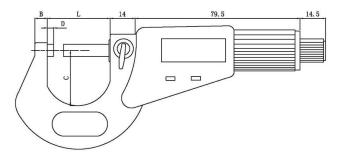
- Resolution: 0.00005"/ 0.001mm
- Carbide tipped measuring faces
- Spindle dia.: 0.25"
- Painted frame
- Ratchet friction thimble
- Inch/Metric conversion
- Absolute or incremental measuring modes
- Automatic On/Off to maximize battery life



### STANDARD ACCESSORIES

- CR2032 Battery, Ball Anvil, Standard (over 1" range)
- Warranty Card, Calibration Certificate, Instruction Manual

Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-1"	±0.0001"	0-25mm	±0.004mm	7116011
1-2"	±0.0002"	25-50mm	±0.004mm	7116021
2-3"	±0.0002"	50-75mm	±0.005mm	7116031



Range	C	L	В	D
Inch/Metric	mm	mm	mm	mm
0-1"/0-25mm	24 (0.945")	32 (1.260")	6 (0.236")	3 (0.118")
1-2"/25-50mm	32 (1.260")	57 (2.244")	8 (0.315")	3 (0.118")
2-3"/50-75mm	45 (1.772")	82 (3.228")	8 (0.315")	3 (0.118")

Ball Anvil

Standard

Battery



# ISO 17025 CALIBRATED

# **Outside Micrometers**

- Graduation: 0.0001"
- Flatness: 0.000024"
- Carbide tipped measuring faces
- Ratchet Stop
- Grey painted steel frame
- Locking clamp



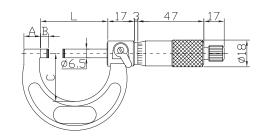


### STANDARD ACCESSORIES

- S-Wrench, Standard (over 1"range)
- Warranty Card, Calibration Certificate, Instruction Manual

Inch			
Range	Graduation	Accuracy	Code No.
0-1"	0.0001"	±0.0001"	7101013
1-2"	0.0001"	±0.0002"	7101023
2-3"	0.0001"	±0.0002"	7101033
3-4"	0.0001"	±0.0002"	7101043
4-5"	0.0001"	±0.0002"	7101053
5-6"	0.0001"	±0.0002"	7101063
6-7"	0.0001"	±0.0002"	7101073
7-8"	0.0001"	±0.0002"	7101083
8-9"	0.0001"	±0.0002"	7101093
9-10"	0.0001"	±0.0003"	7101103
10-11"	0.0001"	±0.0003"	7101113
11-12"	0.0001"	±0.0003"	7101123
SETS		•	
Range			Code No.
0-3"	0.0001"		7101637
0-6"	0.0001"		7101667
0-12"	0.0001"		7101727
6-12"	0.0001"		7101827





Range	Α	В	C	L
Inch	mm	mm	mm	mm
0-1"	9 (0.354")	3 (0.118")	28 (1.102")	32 (1.260")
1-2"	14 (0.551")	3 (0.118")	38 (1.496")	57 (2.244")
2-3"	14.5 (0.571")	3 (0.118")	49 (1.929")	82 (3.228")
3-4"	15 (0.591")	3 (0.118")	60 (2.362")	107 (4.213")
4-5"	16.5 (0.650")	3 (0.118")	73 (2.874")	133 (5.236")
5-6"	16.5 (0.650")	3 (0.118")	85 (3.346")	158 (6.220")
6-7"	19.4 (0.764'')	3 (0.118")	104 (4.094")	183 (7.205")
7-8"	19.4 (0.764'')	3 (0.118")	117 (4.606")	209 (8.228")
8-9"	19.4 (0.764'')	3 (0.118")	130 (5.118")	234 (9.213")
9-10"	19.4 (0.764")	3 (0.118")	142 (5.591")	260 (10.236")
10-11"	19.4 (0.764'')	3 (0.118")	155 (6.102")	285 (11.220")
11-12"	19.4 (0.764'')	3 (0.118")	168 (6.614")	310 (12.205")

# Interchangeable Anvil Outside Micrometers



- Graduation: 0.001"
- Flatness: 0.00004"
- Carbide tipped measuring faces
- Grey painted steel frame for models up to 12"
- Grey welded pipe frame for models over 12" models
- Interchangeable anvils provide
- wider measuring ranges
- Locking clamp

7111061

Ratchet Stop



### STANDARD ACCESSORIES

• S-Wrench, Standards, Interchangeable Anvils, Torque Wrench, 2 Guiding Rings

• Warranty Card, Calibration Certificate, Instruction Manual

Welded Pipe Frame	
Standards	

Torque Wrench

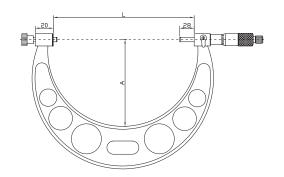
**Guiding Rings** 

S-Wrench

Standard

nango	Accuracy	AITTIS	otanidardo	
in.	in.			Code No.
0-6"	±0.0002"	6 pcs	5 pcs	7111061
6-12"	±0.0003"	6 pcs	6 pcs	7111121
12-16"	±0.0004"	4 pcs	2 pcs	7111161
16-20"	±0.0005"	4 pcs	2 pcs	7111201
20-24"	±0.0006"	4 pcs	2 pcs	7111241
24-28"	±0.0006"	4 pcs	2 pcs	7111281
28-32"	±0.0007"	4 pcs	2 pcs	7111321
32-36"	±0.0008"	4 pcs	2 pcs	7111361
36-40"	±0.0008"	4 pcs	2 pcs	7111401

Anvile



Range	Α	L
Inch	mm	mm
0-6"	82 (3.228")	158 (6.220")
6-12"	165 (6.496")	308 (12.126")
12-16"	224 (8.819")	409 (16.102")
16-20"	275 (10.827")	509 (20.039")
20-24"	321 (12.638")	609 (23.976")
24-28"	371 (14.606")	709 (27.913")
28-32"	426 (16.772")	809 (31.850")
32-36"	476 (18.740")	909 (35.787")
36-40"	576 (22.677")	1009 (39.724")

Note: The individual anvils are matched as a set with the frame. The accuracy can not be guaranteed if used with a different frame.

# ISO 17025 CALIBRATED

# **3 Point Internal Micrometers**



- Digital models: 0.00005" / 0.001mm Mechanical models: 0.0002"
- Protection level IP65 (digital models)
- Ratchet stop
- Setting Ring for origin point setting
- · Measuring contact points are designed to allow measurements near to the bottom of blind holes
- Additional extensions can be added to increase the
- measuring depth
- Measuring surfaces are carbide



### **STANDARD ACCESSORIES**

- LR44 Battery (digital models), Screwdriver, Extension Rod, Wrench, Setting Ring
- Warranty Card, Calibration Certificate,
- Instruction Manual



Setting Ring

Screwdriver

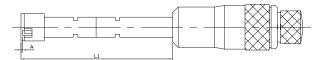
ASIMET

### Digital

Inch			Metric					Digital
Range	Accuracy	Setting Ring	Range	Accuracy	L1	Α	Extension Rod	Code No.
0.5-0.65"	±0.00016"	0.65"	12-16mm	±0.004mm	80mm (3.150")	0.5mm (0.020")	150mm (5.906")	7208241
0.65-0.8"	±0.00016"	0.65"	16-20mm	±0.004mm	80mm (3.150")	0.5mm (0.020")	150mm (5.906")	7208251
0.8-1"	±0.00016"	1"	20-25mm	±0.004mm	90mm (3.543")	0.5mm (0.020")	150mm (5.906")	7208261
1-1.2"	±0.00016"	1"	25-30mm	±0.004mm	90mm (3.543")	0.5mm (0.020")	150mm (5.906")	7208271
1.2-1.6"	±0.00016"	1.6"	30-40mm	±0.004mm	97mm (3.819")	0.5mm (0.020")	150mm (5.906")	7208281
1.6-2"	±0.0002"	1.6"	40-50mm	±0.005mm	97mm (3.819")	0.5mm (0.020")	150mm (5.906")	7208291
2-2.5"	±0.0002"	2.5"	50-63mm	±0.005mm	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7208301
2.5-3"	±0.0002"	2.5"	62-75mm	±0.005mm	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7208311
3-3.5"	±0.0002"	3.5"	75-88mm	±0.005mm	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7208321
3.5-4"	±0.0002"	3.5"	87-100mm	±0.005mm	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7208331

### Mechanical

Inch						Mechanical
Range	Accuracy	Setting Ring	L1	A	Extension Rod	Code No.
0.5-0.65"	±0.00016"	0.65"	80mm (3.150")	0.5mm (0.020")	150mm (5.906")	7209241
0.65-0.8"	±0.00016"	0.65"	80mm (3.150")	0.5mm (0.020")	150mm (5.906")	7209251
0.8-1"	±0.00016"	1"	90mm (3.543")	0.5mm (0.020")	150mm (5.906")	7209261
1-1.2"	±0.00016"	1"	90mm (3.543")	0.5mm (0.020")	150mm (5.906")	7209271
1.2-1.6"	±0.00016"	1.6"	97mm (3.819")	0.5mm (0.020")	150mm (5.906v)	7209281
1.6-2"	±0.0002"	1.6"	97mm (3.819")	0.5mm (0.020")	150mm (5.906")	7209291
2-2.5"	±0.0002"	2.5"	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7209301
2.5-3"	±0.0002"	2.5"	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7209311
3-3.5"	±0.0002"	3.5"	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7209321
3.5-4"	±0.0002"	3.5"	114mm (4.488")	0.5mm (0.020")	150mm (5.906")	7209331



# **Inside Micrometers**

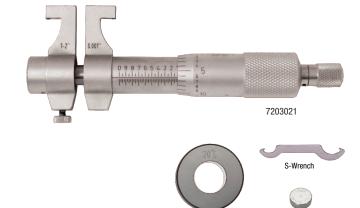


- Digital models: 0.00005" / 0.001mm Mechanical models: 0.001"
- Designed for the measurement of intricate internal characteristics
- Solid carbide pins for measurement contact points
- Caliper style jaws are made of high grade tool steel
- Satin chrome finished
- 0.2-1.2" and 1-2" range are supplied with Setting Ring
- Ratchet stop
- Protection level IP65 (digital models)



### STANDARD ACCESSORIES

- LR44 Battery (digital models), S-Wrench, Setting Ring (2" and under sizes)
- Warranty Card, Calibration Certificate, Instruction Manual



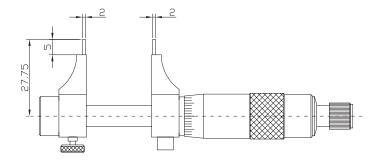
Setting Ring

### Digital

Inch			Metric				Inch
Range	Resolution	Accuracy	Range	Resolution	Accuracy	Jaw Style	Code No.
0.2-1.2"	0.00005"	±0.0001"	5-30mm	0.001mm	±0.004mm	Pin	7207011
1-2"	0.00005"	±0.0002"	25-50mm	0.001mm	±0.004mm	Caliper	7207021
2-3"	0.00005"	±0.0002"	50-75mm	0.001mm	±0.005mm	Caliper	7207031
3-4"	0.00005"	±0.0002"	75-100mm	0.001mm	±0.005mm	Caliper	7207041

### Mechanical

Inch				
Range	Graduation	Accuracy	Jaw Style	Code No.
0.2-1.2"	0.001"	±0.0001"	Pin	7203011
1.0-2.0"	0.001"	±0.0002"	Caliper	7203021
2.0-3.0"	0.001"	±0.0002"	Caliper	7203031
3.0-4.0"	0.001"	±0.0002"	Caliper	7203041





Batterv

# **Inside Micrometers - Interchangeable Rod Type**

- Rods marked with its measuring range
- Satin chrome finish throughout
- All contact points hardened for extra long tool life
- · With locking clamp
- · Zero point can be readjusted by rotating the micrometer head sleeve
- Carbide tipped measuring faces



S-Wrench

Y-Wrench

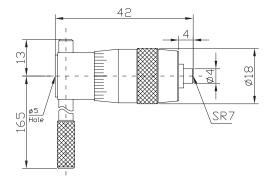


### STANDARD ACCESSORIES

- Micrometer Head, Extension Rods, S-Wrench, Y-Wrench
- Warranty Card, Calibration Certificate, Instruction Manual

Range	Head Travel	Graduation	Spacing Collar	Diameter of Rods	Note	Code No.
1-2"	0.25"	0.001"	0.250"	0.248"	1" Mic head & 2 Rods	7242021
2-12"	0.50"	0.001"	0.500"	0.248"	2" Mic head & 10 Rods	7242121
8-40"	1.00"	0.001"	1", 2"	0.355"	8" Mic head & 8 Rods	7242401

Note: Individual rods are matched with micrometer and should not be interchanged with other sets





ASIME<sup>-</sup>

# **Screw Thread Micrometers**

- Resolution:
- Digital reading: 0.00005" / 0.001mm Scale on digital models: 0.0001" Scale on mechanical models: 0.001"
- Grey painted steel frame
- Absolute or incremental measuring modes
- For measuring various screw threads
- Non-rotating spindle
- Ratchet stop for digital models Ratchet thimble for mechanical models
- Protection level IP65

- Inch/Metric conversion
- Upon switching on the display will read
- the actual absolute measuring position
- Automatic On/Off to maximize battery life
- With locking clamp



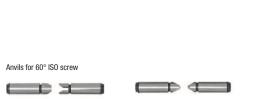
7132011

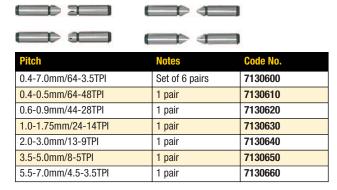
### STANDARD ACCESSORIES

- LR44 Battery (digital models), S-Wrench, Standard (over 1" range)
- Warranty Card, Calibration Certificate, Instruction Manual
- Anvils sold separately (see below)

### Digital

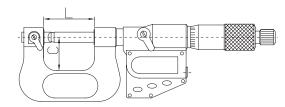
Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-1"	±0.0001"	0-25mm	±0.004mm	7136011
1-2"	±0.0002"	25-50mm	±0.004mm	7136021





# Mechanical

Inch		
Range	Accuracy	Code No.
0-1"	±0.0001"	7132011
1-2"	±0.0002"	7132021
2-3"	±0.0002"	7132031
3-4"	±0.0002"	7132041



Range	L	C
Inch/Metric	mm	mm
0-1"/0-25mm	42 (1.654")	26 (1.024")
1-2"/25-50mm	67 (2.638")	38 (1.496")
2-3"	92 (3.622")	50 (1.969")
3-4"	117.6 (4.630")	62 (2.441")

# **ISO 17025 CALIBRATED**

# **Digital Blade Micrometers**



- Resolution: Digital: 0.00005" / 0.001mm Scale: 0.0001"
- Carbide tipped measuring faces
- Ratchet stop

- For measuring the groove diameter of shafts, keyways, and other hard to reach portions
- Non-rotating spindle
- Automatic On/Off to maximize battery life
- $\bullet$  Grey painted steel frame

1-800-265-8221

- Inch/Metric conversion
- Upon switching on the display will read the actual absolute measuring position
- Absolute or incremental measuring modes
- Protection level IP65

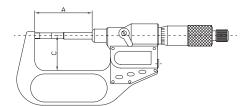


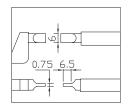


### STANDARD ACCESSORIES

- LR44 Battery, S-Wrench,
- Standard (over 1" range) • Warranty Card, Calibration Certificate,
- Instruction Manual

Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-1"	±0.0001"	0-25mm	±0.003mm	7117011
1-2"	±0.0002"	25-50mm	±0.003mm	7117021
2-3"	±0.0002"	50-75mm	±0.003mm	7117031
3-4"	±0.0002"	75-100mm	±0.004mm	7117041





Range	Α	C
Inch	mm	mm
0-1"	57 (2.244")	32 (1.260")
1-2"	82 (3.228")	44.5 (1.752")
2-3"	107 (4.213")	57 (2.244")
3-4"	132.6 (5.220")	69.5 (2.736")

# **Digital Disc Micrometers**



- Resolution:
- Digital: 0.00005" / 0.001mm Scale: 0.0001"
- Grey painted steel frame
- Ratchet stop

- Sizes over 1" come with Standard
- For measuring gears and paper thickness
- Non-rotating spindle
- Automatic On/Off to maximize battery life
- Absolute or incremental measuring modes
- Inch/Metric conversion
- Upon switching on the display will read
- the actual absolute measuring position
- Protection level IP65



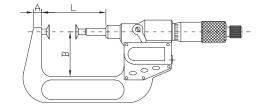


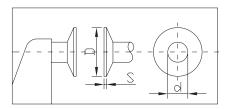
### STANDARD ACCESSORIES

• LR44 Battery, S-Wrench, Standard (over 1" range)

 Warranty Card, Calibration Certificate, Instruction Manual

Inch		Metric		Inch
Range	Accuracy	Range	Accuracy	Code No.
0-1"	±0.0001"	0-25mm	±0.005mm	7145011
1-2"	±0.0002"	25-50mm	±0.005mm	7145021
2-3"	±0.0002"	50-75mm	±0.006mm	7145031
3-4"	±0.0002"	75-100mm	±0.006mm	7145041





Range	Α	В	L	D	S	d
Inch/Metric	mm	mm	mm	mm	mm	mm
0-1"/0-25mm	8 (0.315")	32 (1.260")	43 (1.693")	20 (0.787")	0.7 (0.028")	8 (0.315")
1-2"/25-50mm	8 (0.315")	44.5 (1.752")	68 (2.677")	20 (0.787")	0.7 (0.028")	8 (0.315")
2-3"/50-75mm	8 (0.315")	57 (2.244")	93 (3.661")	20 (0.787")	0.7 (0.028")	8 (0.315")
3-4"/75-100mm	10 (0.394")	70 (2.756")	118.5 (4.665")	20 (0.787")	0.7 (0.028")	8 (0.315")



# ISO 17025 CALIBRATED

# **Depth Micrometers**



S-Wrench

Y-Wrench

Hex Wrench

Torque Wrench

Battery

- Resolution: Digital models: 0.00005" / 0.001mm
- Mechanical models: 0.001" • Protection level IP65
- Ratchet stop

- The integrity of the measurements are maintained throughout the total range of the measuring rods. However the measuring rods must be kept as a set and may not be interchangeable with other depth micrometer sets
- The measurement mode of Absolute or Incremental is displayed when turned on
- The battery life is maximized with
- the automatic On/Off feature Inch/Metric conversion





7201043

### STANDARD ACCESSORIES

• LR44 Battery (digital models), Rods, Y-Wrench, S-Wrench,

Hex Wrench (mechanical models), Torque Wrench (mechanical models)

• Warranty Card, Calibration Certificate, Instruction Manual

### Digital

Inch		Metric				Code No.
Range	Accuracy	Range	Accuracy	Base Length	Rods	Flat End
0-4"	±0.0002"	0-100mm	±0.005mm	63mm (2.480")	4 pcs	7205041
0-6"	±0.0002"	0-150mm	±0.005mm	63mm (2.480")	6 pcs	7205061
0-4"	±0.0002"	0-100mm	±0.005mm	101.5mm (3.996")	4 pcs	7205043
0-6"	±0.0002"	0-150mm	±0.005mm	101.5mm (3.996")	6 pcs	7205063

### Mechanical

Inch				Code No.
Range	Accuracy	Base Length	Rods	Flat End
0-4"	±0.0002"	63mm (2.480")	4 pcs	7201041
0-6"	±0.0002"	63mm (2.480")	6 pcs	7201061
0-4"	±0.0002"	101.5mm (3.996")	4 pcs	7201043
0-6"	±0.0002"	101.5mm (3.996")	6 pcs	7201063



# **Micrometer Anvil Attachment Set**

- A must accessory for every micrometer
- Each anvil is 1/2<sup>n</sup> long, comes with reinforced holding boot, and will fit on any 1-12" micrometer
- Anvils are hardened steel with black oxide finish
- Fits 0.235" and 0.250" spindle diameters





7 pcs Set Code No. : 7146700	
Individuals	Description
Knife	30 degrees
Comparator	30 degrees
Super Spline	0.050" face
Spline	0.100" face
Disc	0.500" face
Blade	0.300" thick
Ball Attachment	0.200"

# **Micrometer Stand**

• These stands are designed to allow bench top use with hand micrometers

Painted cast iron base

Micrometer Stand	
Description	Code No.
Painted Cast Iron Base	7109021



# **Micrometer Standards**

- Used for zero point setting of outside micrometers
- Heat insulating handle to prevent heat expansion due to body temperature
- Flat measuring face for up to 11" size standards Spherical measuring face for over 12" size standards



Standards			
Size	Accuracy	Diameter	Code No.
1"	±0.00005"	7mm (0.276")	7110011
2"	±0.0001"	7mm (0.276")	7110021
3"	±0.0001"	7mm (0.276")	7110031
4"	±0.0001"	8mm (0.315")	7110041
5"	±0.00015"	8mm (0.315")	7110051
6"	±0.00015"	8mm (0.315")	7110061
7"	±0.00015"	8mm (0.315")	7110071
8"	±0.00015"	8mm (0.315")	7110081
9"	±0.00020"	8mm (0.315")	7110091
10"	±0.00020"	8mm (0.315")	7110101
11"	±0.00020"	8mm (0.315")	7110111
12"	±0.00025"	16mm (0.630")	7110121
13"	±0.00025"	16mm (0.630")	7110131
14"	±0.00025"	16mm (0.630")	7110141
15"	±0.00025"	16mm (0.630")	7110151
16"	±0.00025"	16mm (0.630")	7110161
17"	±0.00025"	16mm (0.630")	7110171
18"	±0.00025"	16mm (0.630")	7110181
19"	±0.00030"	16mm (0.630")	7110191
20"	±0.00030"	16mm (0.630")	7110201
21"	±0.00030"	16mm (0.630")	7110211
23"	±0.00030"	16mm (0.630")	7110221

# AGIMETO www.sowatool.com

# CALIPERS

# **Absolute Digital Calipers - Data Output**

ASIMETO

Batterv

- Resolution: 0.0005" / 0.01mm
- The caliper will be ready for measurements as soon as it is switched on with the LCD screen displaying the actual slider position. There is no need to set the zero position each time the caliper is used as the origin setting is retained even when the caliper is switched off
- Absolute or incremental measuring modes available
- Inch/Metric conversion
- A thumb wheel is provided for easy use
- Data output cable: 7900054
- Wireless data transfer output: 7901001



Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-6"	±0.001"	0-150mm	±0.02mm	7307563
0-8"	±0.0015"	0-200mm	±0.03mm	7307583
0-12"	±0.0015"	0-300mm	±0.03mm	7307623

Range	L	a	b	C	d
Inch/Metric	mm	mm	mm	mm	mm
0-6"	236 (9.291")	40 (1.575")	21 (0.827")	16.5 (0.650")	16 (0.630")
0-8"	286 (11.260")	50 (1.969")	24 (0.945")	19.5 (0.768")	16 (0.630")
0-12"	400 (15.748")	60 (2.362")	25 (0.984")	20.5 (0.807")	17 (0.669")

# **Digital Calipers**

ASIMETO

- Resolution: 0.0005" / 0.01mm
- $\bullet$  The origin position is retained through the On/Off cycle
- Inch/Metric conversion
- A thumb wheel is provided for easy use



Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-6"	±0.001"	0-150mm	±0.02mm	7307065
0-8"	±0.0015"	0-200mm	±0.03mm	7307085
0-12"	±0.0015"	0-300mm	±0.03mm	7307125

1-800-265-8221

Range	L	а	b	C	d
Inch/Metric	mm	mm	mm	mm	mm
0-6"	236 (9.291")	40 (1.575")	21 (0.827")	16.5 (0.650")	16 (0.630")
0-8"	286 (11.260")	50 (1.969")	24 (0.945")	19.5 (0.768")	16 (0.630")
0-12"	400 (15.748")	60 (2.362")	25 (0.984")	20.5 (0.807")	17 (0.669")

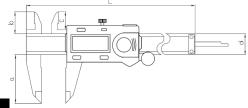


- 000000 D //
- CR2032 Battery

www.sowatool.com

### • Warranty Card, Calibration Certificate, Instruction Manual





# ISO 17025 CALIBRATED

SIMET

Battery

# **IP67 Coolant Proof Digital Calipers**

- Resolution: 0.0005" / 0.01mm
- Absolute function, there is no need to set the zero
- Absolute or incremental measuring modes
- Metal Housing design will allow the caliper to be used in normal workshop conditions and is resistant to coolant, water, dust or oil
- Conforms to the IP67 rating
  - Hold function for easy reading
  - Inch/Metric conversion
  - Big Screen design allows for very easy reading while also remaining resistant to coolant, water, dust or oil
- Auto power On/Off
  - Power: 3V lithium battery
  - With Thumb Wheel



CR2032 Battery, Screwdriver

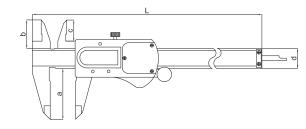
• Warranty Card, Calibration Certificate, Instruction Manual

### **Metal Housing**

Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-6"	±0.001"	0-150mm	±0.02mm	7305062
0-8"	±0.0015"	0-200mm	±0.03mm	7305082
0-12"	±0.0015"	0-300mm	±0.03mm	7305122

### **Big Screen**

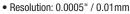
Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-6"	±0.001"	0-150mm	±0.02mm	7305065
0-8"	±0.0015"	0-200mm	±0.03mm	7305085
0-12"	±0.0015"	0-300mm	±0.03mm	7305125



Range	L	а	b	C	d
Inch/Metric	mm	mm	mm	mm	mm
0-6"	236 (9.291")	40 (1.575")	21 (0.827")	16.5 (0.650")	16 (0.630")
0-8"	286 (11.260")	50 (1.969")	24 (0.945")	19.5 (0.768")	16 (0.630")
0-12"	400 (15.748")	60 (2.362")	25 (0.984")	20.5 (0.807")	16 (0.630")

SIME

# **IP67 Coolant Proof Digital Caliper - Sylvac System**



- · Conforms to the IP67 ratings
- Inch/Metric conversion
- Auto power On/Off
- Sylvac system





### STANDARD ACCESSORIES

- CR2032 Battery
- Warranty Card, Calibration Certificate, Instruction Manual

Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-6"	±0.001"	0-150mm	±0.02mm	7301060

# **Digital Calipers With Adjustable Measuring Jaws**



- Resolution: 0.0005" / 0.01mm
- The stationary jaw on the beam is designed with vertical movement for the purpose of measuring various steps of different heights
- Inch/Metric conversion
- Zero-setting at any position



# Battery

### STANDARD ACCESSORIES

- CR2032 Battery
- Warranty Card, Calibration Certificate, Instruction Manual

Inch		Metric		L	а	b	C	d	е	
Range	Accuracy	Range	Accuracy	mm	mm	mm	mm	mm	mm	Code No.
0-6"	±0.0015"	0-150mm	±0.04mm	239 (9.409")	110 (4.331")	40 (1.575")	10 (0.394")	16 (0.630")	7 (0.276")	7317060
0-12"	±0.0020"	0-300mm	±0.05mm	389 (15.315")	130 (5.118")	60 (2.362")	10 (0.394")	16 (0.630")	7 (0.276")	7317120



# CALIPERS

SIMET

# Heavy Duty Absolute Digital Calipers - Data Output

- Resolution: 0.0005" / 0.01mm
- Designed with fine adjustment to allow precise movement of the slider
- Internal measurement jaws are rounded to provide accurate measurement of internal diameters
- Minimum internal diameter measurement capability of 20mm
- Six buttons
- Zero setting at any position
- Absolute or incremental measuring modes
- Inch/Metric conversion
- Data output cable: 7900054
- Wireless data transfer output: 7901001

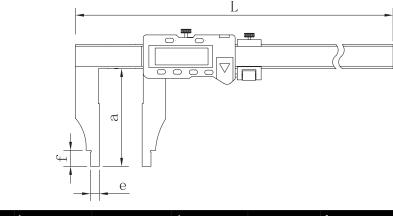


### STANDARD ACCESSORIES

CR2032 Battery

Warranty Card, Calibration Certificate, Instruction Manual

Inch		Metric				
Range	Resolution	Range	Resolution	Accuracy	Jaw Length	Code No.
0-12"	0.0005"	0-300mm	0.01mm	±0.04mm	90mm (3.543")	7315126
0-24"	0.0005"	0-600mm	0.01mm	±0.05mm	100mm (3.937")	7315246
0-40"	0.0005"	0-1000mm	0.01mm	±0.07mm	150mm (5.906")	7315406



Range	L	а	d	е	f
Inch/Metric	mm	mm	mm	mm	mm
0-12"/0-300mm	470 (18.504")	90 (3.543")	25 (0.984")	10 (0.394")	18 (0.709")
0-24"/0-600mm	730 (28.740")	100 (3.937")	25 (0.984")	10 (0.394")	18 (0.709")
0-40"/0-1000mm	1230 (48.425")	150 (5.906")	32 (1.260")	10 (0.394")	25 (0.984")

# CALIPERS

# **Dial Calipers**



- Graduation: 0.001"
- Stainless steel models have all measuring surfaces surface-hardened
- Preloaded dual pinions eliminate backlash and provide better repeatability
- Thumb roller included

- Aluminum models: Sturdy Aluminum ergonomic diecast housing can be used without damage in the harshest of manufacturing environments, including situations with hot steel chips
- Shock proof



### STANDARD ACCESSORIES

• Warranty Card, Calibration Certificate, Instruction Manual

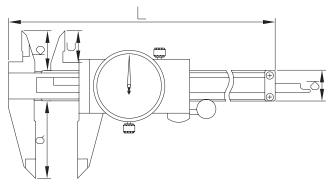
### **Stainless Steel**

Inch			
Range	Range Per Rev.	Accuracy	Code No.
0-6"	0.100"	±0.001"	7303061
0-8"	0.100"	±0.0015"	7303081
0-12"	0.100"	±0.0015"	7303121

### **Aluminum Diecast**

Inch			
Range	Range Per Rev.	Accuracy	Code No.
0-6"	0.100"	±0.001"	7304065
0-8"	0.100"	±0.0015"	7304085
0-12"	0.100"	±0.0015"	7304125

7304065



Range	L	а	b	C	d
Inch	mm	mm	mm	mm	mm
0-6"	234 (9.213")	40 (1.575")	21 (0.827")	16.5 (0.650")	16 (0.650")
0-8"	290 (11.417")	50 (1.969")	23.5 (0.925")	19 (0.748")	17 (0.669")
0-12"	393 (15.472")	64 (2.520")	24.5 (0.965")	20 (0.787")	17 (0.669")

# ISO 17025 CALIBRATED

SIMET

# **Heavy Duty Vernier Calipers**



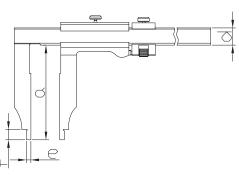
- Lower Scale: 0.001"
- Upper Scale: 0.02mm
- Stainless steel
- Designed with fine adjustment to allow precise movement of the slider
- Internal measurement jaws are rounded to provide accurate measurement of internal diameters
- Minimum internal diameter measurement capability of: 10mm for 300mm/12" range
- 20mm for over 450mm/18" range



### STANDARD ACCESSORIES

• Warranty Card, Calibration Certificate, Instruction Manual

Range	Graduation	Range	Graduation			
Lower	Lower	Upper	Upper	Accuracy	Jaw Length	Code No.
0-12"	0.001"	0-300mm	0.02mm	±0.0015"	75mm (2.953")	7311121
0-18"	0.001"	0-450mm	0.02mm	±0.0020"	100mm (3.937")	7311181
0-24"	0.001"	0-600mm	0.02mm	±0.0020"	100mm (3.937")	7311241
0-40"	0.001"	0-1000mm	0.02mm	±0.0030"	150mm (5.906")	7311401
0-60"	0.001"	0-1500mm	0.02mm	±0.0040"	200mm (7.874")	7311601
0-80"	0.001"	0-2000mm	0.02mm	±0.0050"	200mm (7.874")	7311801



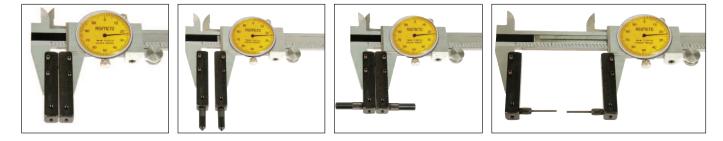
Range	L	а	d	e	f
Inch/Metric	mm	mm	mm	mm	mm
0-12" / 0-300mm	450 (17.717")	75 (2.953")	20 (0.787")	5 (0.197")	12 (0.472")
0-18" / 0-450mm	685 (26.969")	100 (3.937")	25 (0.984")	10 (0.394")	25 (0.984")
0-24" / 0-600mm	835 (32.874")	100 (3.937")	32 (1.260")	10 (0.394")	25 (0.984")
0-40" / 0-1000mm	1235 (48.622")	150 (5.906")	32 (1.260")	10 (0.394")	25 (0.984")
0-60" / 0-1500mm	1820 (71.654")	200 (7.874")	42 (1.654")	10 (0.394")	25 (0.984")
0-80" / 0-2000mm	2270 (89.370")	200 (7.874")	42 (1.654")	10 (0.394")	25 (0.984")

28

# **Universal Caliper Accessory Kit**

- The original caliper jaw attachment accessory
- The square bodies attach to the jaws of any 4", 6", 8" caliper. Threaded holes are located in the front, both sides, and the bottoms of the bodies, allowing the use of the points on any side
- Measures slots, grooves, shoulders, holes, pockets, and takes ID and OD measurements
- Steel, Black Oxide finish





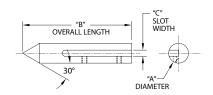
Code No.: 7300110							
Kit contains:	Qty	Description					
Universal Caliper Bodies	1 pair	3/8" square x 2" length. Slot for caliper jaws is 0.147" wide.					
oniversal caliper boules	i pali	4-40 holes for set screws fasten the body to the caliper jaw					
Flat Points	1 pair	3/16" diameter x 0.810" length. 4-48 threads					
Cone Points	1 pair	3/16" diameter x 0.810" length. 4-48 threads					
Stem Points	1 pair	3/16" body diameter, 0.084" stem diameter x 0.820" length. 4-48 threads					
Ball Points	1 pair	3/16" diameter x 0.810" length. 4-48 threads					

# **Centerline Gauges**

- Measures centerline distances
- Easily attaches to Dial, Vernier, and Digital Calipers
- 60° conical points
- · Hardened Steel with Black Oxide finish
- Attaches in seconds with set screws
- · Supplied in high-impact tubes with Allen wrench
- User friendly instructions







Used With	Min Measuring	Α	В	C	Code No.
4", 6", and 8" Calipers	3/8"	0.375"	2.313"	0.127"	7300130
12" Calipers	1/2"	0.500"	2.762"	0.144"	7300140

# **Absolute Digital Depth Calipers - Data Output**



Battery

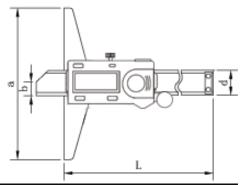
- Resolution: 0.0005" / 0.01mm
- Both of the measuring surfaces are precision ground for accuracy
- Absolute function: there is no need to set the zero position
- Absolute and incremental measuring modes available
- Inch/Metric conversion
- Data output cable: 7900054
- Wireless data transfer output: 7901001



### STANDARD ACCESSORIES

- CR2032 Battery
- Warranty Card, Calibration Certificate, Instruction Manual

Inch			Metric			Inch
Range	Graduation	Accuracy	Range	Graduation	Accuracy	Code No.
0-6"	0.0005"	±0.001"	0-150mm	0.01mm	±0.02mm	7327067
0-8"	0.0005"	±0.0015"	0-200mm	0.01mm	±0.03mm	7327087
0-12"	0.0005"	±0.0015"	0-300mm	0.01mm	±0.04mm	7327127



Range	Dimensions						
Inch/Metric	L	а	b	d			
0-6"/0-150mm	230mm (9.055")	100mm (3.937")	6mm (0.236")	14.5mm (0.571")			
0-8"/0-200mm	280mm (11.023")	100mm (3.937")	6mm (0.236")	14.5mm (0.571")			
0-12"/0-300mm	380mm (14.961")	100mm (3.937")	6mm (0.236")	14.5mm (0.571")			

# **Absolute Digital Single Hook Depth Calipers - Data Output**



Battery

**CALIPERS** 

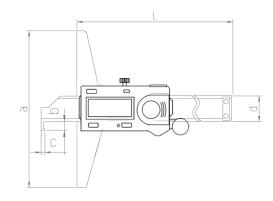
- Resolution: 0.0005" / 0.01mm
- The stationary measuring surface on the beam protrudes at right angles (measuring hook) to allow for the measurement of depths, internal groove positions, and other intricate characteristics
- Measurements can be taken on either side of the measuring hook
- All measuring surfaces are hardened
- Data output cable: 7900054
- Wireless data transfer output: 7901001



### STANDARD ACCESSORIES

- CR2032 Battery
- Warranty Card, Calibration Certificate, Instruction Manual

Inch			Metric			
Range	Resolution	Accuracy	Range	Resolution	Accuracy	Code No.
0-6"	0.0005"	±0.001"	0-150mm	0.01mm	±0.02mm	7322067
0-8"	0.0005"	±0.0015"	0-200mm	0.01mm	±0.03mm	7322087
0-12"	0.0005"	±0.0015"	0-300mm	0.01mm	±0.04mm	7322127



Range	Dimensions								
Inch/Metric	L	а	b	C	d				
0-6"/0-150mm	230mm (9.055")	100mm (3.937")	5mm (0.197")	2mm (0.079")	14.5mm (0.571")				
0-8"/0-200mm	280mm (11.023")	100mm (3.937")	5mm (0.197")	2mm (0.079")	14.5mm (0.571")				
0-12"/0-300mm	380mm (14.961")	100mm (3.937")	5mm (0.197")	2mm (0.079")	14.5mm (0.571")				

# **Depth Gauges - Interchangeable Rod Type**



Resolution:

Digital models: 0.0005"/ 0.01mm Dial models: 0.001"

STANDARD ACCESSORIES

CR2032 Battery (digital models), Interchangeable Rods
Warranty Card, Calibration Certificate, Instruction Manual

- The total measuring range is accomplished with threaded depth rods in 1" intervals
- The base surface is precisely finished and hardened for accurate repeatable measurements
- Inch/Metric conversion for digital models



### Digital Model

Inch			Metric						
Range	Resolution	Accuracy	Range	Resolution	Accuracy	Stroke	Rods	Base Length	Code No.
0-4"	0.0005"	±0.001"	0-100mm	0.01mm	0.02mm	12.7mm	10 pcs	63 x 17mm	7475040

Battery

### **Dial Models**

Range	Resolution	Accuracy	Stroke	Rods	Base Length	Code No.
0-4"	0.001"	±0.002"	1"	4 pcs	2.5" x 0.63"	7473041
0-4"	0.001"	±0.002"	1"	4 pcs	4" x 0.63"	7473043

# **Digital Tire Depth Gauge**

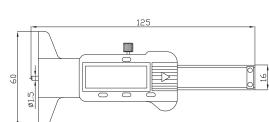
- Resolution: 0.0005" / 0.01mm
- The origin point is retained throughout the life of the battery
- Inch/Metric conversion
- Spherical end anvil



### STANDARD ACCESSORIES

- LR44 Battery
- Warranty Card, Calibration Certificate, Instruction Manual





Inch		Metric			
Range A	Accuracy	Range	Accuracy	Base Length	Code No.
0-1.2" ±	±0.0015"	0-30mm	±0.03mm	60mm (2.362")	7321010

# **HEIGHT GAUGES**



• Resolution: 0.0005" / 0.01mm

- · Large LCD display
- · Hand wheel design for fine adjustment
- Inch/Metric conversion at any position
- · Zero setting on any position
- Carbide tipped scriber provided
- Manual power On/Off

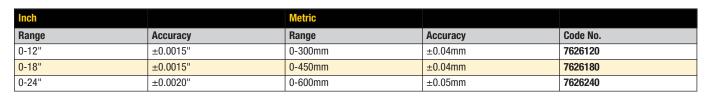
Batterv

T626120

### STANDARD ACCESSORIES

- LR44 Battery, Carbide Tipped Scriber With Clamp
- Warranty Card, Calibration Certificate, Instruction Manual

	55	
105	<u> </u>	



# **Single Beam Digital Height Gauges**

- Resolution: 0.0005" / 0.01mm
- Origin memory eliminates the need to zero the reading each time the height gauge is turned on
- Can be used with a test indicator and holder for precise measurement
- Inch/Metric conversion
- The fine-adjustment allows the slider to be precisely positioned
- The base is designed with a thermal heat isolation hand grip

### STANDARD ACCESSORIES

Battery

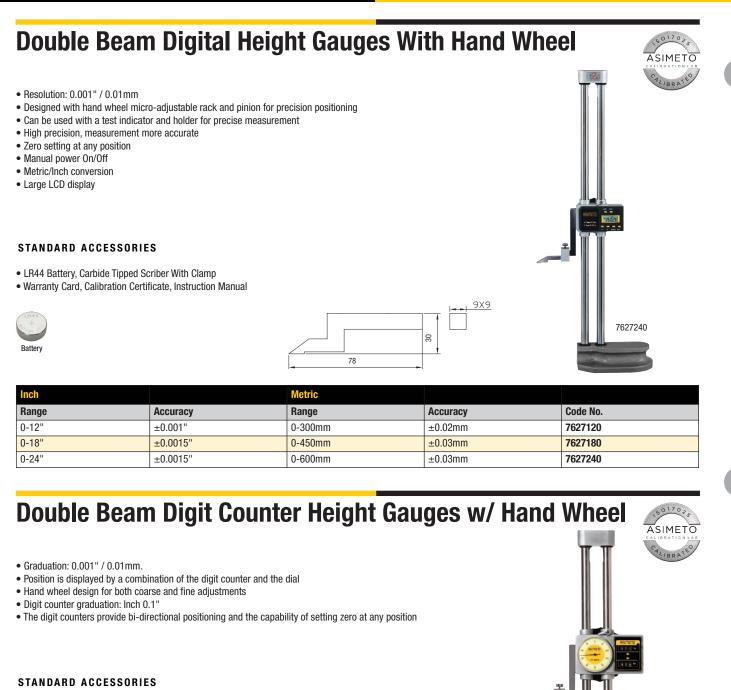
- LR44 Battery, Carbide Tipped Scriber With Clamp
- Warranty Card, Calibration Certificate, Instruction Manual

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Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-12"	±0.0015"	0-300mm	±0.04mm	7625120
0-24"	±0.0020"	0-600mm	±0.07mm	7625240

# **HEIGHT GAUGES**



- Carbide Tipped Scriber With Clamp
- Warranty Card, Calibration Certificate, Instruction Manual

			30	
[.	78			-

Inch		Metric		
Range	Accuracy	Range	Accuracy	Code No.
0-12"	±0.0015"	0-300mm	±0.04mm	7623121
0-18"	±0.0020"	0-450mm	±0.05mm	7623181
0-24"	±0.0020"	0-600mm	±0.07mm	7623241

9X9

7623181

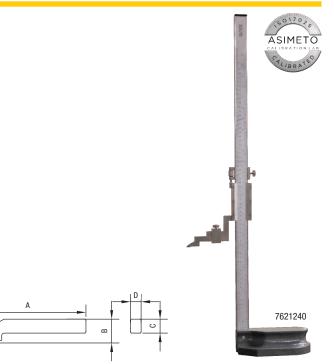
# **HEIGHT GAUGES**

# **Vernier Height Gauges**

- Graduation: 1/128" / 0.05mm
- The fine-adjustment allows the slider to be precisely positioned
- Matte chrome finish
- Stainless steel design
- The base is designed with a thermal heat isolation hand grip

### STANDARD ACCESSORIES

- Carbide Tipped Scriber With Clamp
- Warranty Card, Calibration Certificate, Instruction Manual



Range				Range	Dimensions			
	Graduation	Accuracy	Code No.		A	В	C	D
0-12"/0-300mm	1/128" / 0.05mm	±0.0015"	7621120	0-12" / 0-300mm	97mm (3.819")	32mm (1.260")	15mm (0.590")	11mm (0.433")
0-24"/0-600mm	1/128" / 0.05mm	±0.0020"	7621240	0-24" / 0-600mm	97mm (3.819")	32mm (1.260")	15mm (0.590")	11mm (0.433")

# **IP Ratings**

### **First Digit: Solids**

The first digit indicates the level of protection that the enclosure provides against access to hazardous parts (e.g., electrical conductors, moving parts) and the ingress of solid foreign objects.

Leve	Protected Against	Effective Against
0	Not protected	No protection against contact and ingress of objects
1	>50mm	Any large surface of the body, such as the back of the hand, but no protection against deliberate contact with a body part.
2	>12.5mm	Fingers or similar objects.
3	>2.5mm	Tools, thick wires, etc.
4	>1mm	Most wires, screws, etc.
5	Dust Protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.
6	Dust Tight	No ingress of dust; complete protection against contact.

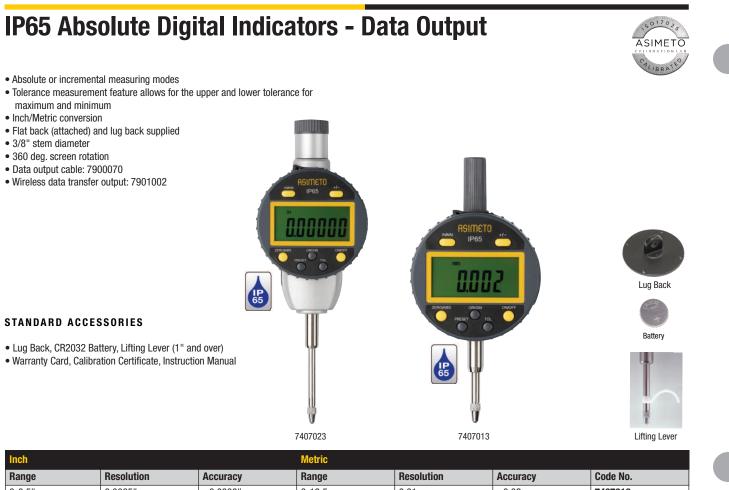
### **Second Digit: Liquids**

Protection of the equipment inside the enclosure against harmful ingress of water.

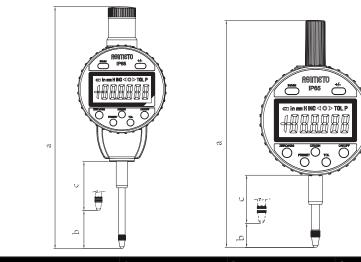
Lou	al Drotacted Anainst	Effective Argunst
Lev	el Protected Against	Effective Against
0	Not protected	-
1	Dripping water	Dripping water (vertically falling drops) shall have no harmful effect.
2	Dripping water when tilted up to 15°	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.
3	Spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.
4	Splashing water	Water splashing against the enclosure from any direction shall have no harmful effect.
5	Water jets	Water projected by a nozzle (6.3mm) against enclosure from any direction shall have no harmful effects.
6	Powerful water jets	Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects.
7	Immersion up to 1m	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1m of submersion).
8	Immersion > 1m	The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects.

# **INDICATORS**

# **ISO 17025 CALIBRATED**



Range	Resolution	Accuracy	Range	Resolution	Accuracy	Code No.
0-0.5"	0.0005"	±0.0008"	0-12.5mm	0.01mm	±0.02mm	7407013
0-1"	0.0005"	±0.0012"	0-25mm	0.01mm	±0.02mm	7407023
0-2"	0.0005"	±0.0012"	0-50mm	0.01mm	±0.02mm	7407033



Range	Α	В	C
	mm	mm	mm
0-0.5"/0-12.5mm	126.5 (4.980")	13.5 (0.531")	26.8 (1.055")
0-1"/0-25mm	169 (6.654")	26.5 (1.043")	34.3 (1.350")
0-2"/0-50mm	246 (9.685")	52 (2.047")	33.7 (1.327")

# **Digital Indicators**

- $\bullet$  The maximum, minimum, or runout value can be displayed during measurement
- Tolerance measurement feature allows for the upper and lower tolerance for maximum and minimum
- Inch/Metric conversion
- Absolute or incremental measuring modes
- Flat back (attached) and lug back supplied
- 3/8" stem diameter





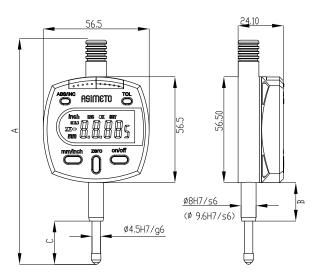


Battery

#### STANDARD ACCESSORIES

- Lug Back, CR2032 Battery
- Warranty Card, Calibration Certificate, Instruction Manual

Inch			Metric				
Range	Resolution	Accuracy	Range	Resolution	Accuracy	Code No.	
05"	0.0005"	±0.0008"	0-12.5mm	0.01mm	±0.02mm	7405951	
0-1"	0.0005"	±0.0012"	0-25mm	0.01mm	±0.03mm	7405011	
0-2"	0.0005"	±0.0012"	0-50mm	0.01mm	±0.03mm	7405021	

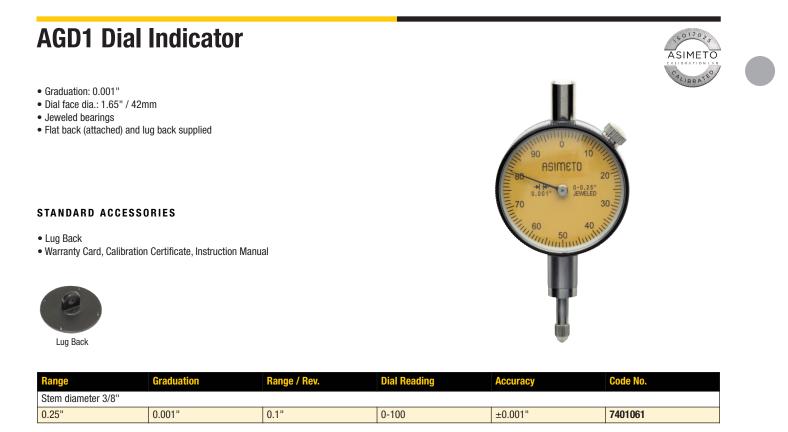


Range	Α	В	C
	mm	mm	mm
0-0.5"/0-12.5mm	122 (4.803")	26 (1.024")	24 (0.945")
0-1"/0-25mm	174 (6.850")	47 (1.850")	41 (1.614")
0-2"/0-50mm	248 (9.764")	71 (2.795")	61 (2.402")

1-800-265-8221

www.sowatool.com

### ISO 17025 CALIBRATED



# **Straight Metric Indicator Stem Bushing**

- · Accepts 8mm stem, converts to 3/8" diameter stem
- Straight bushing, no head
- 0.500" length
- · Nickel plated brass

Description	Code No.
0.500" Stem Bushing	7500320





### **Dial Indicator Extension Rods**

• Use to gain extra length

- 7/32" diameter points
- Stainless Steel

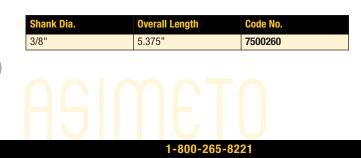
	Inch	
Length	Thread	Code No.
1/2"	4-48	7477107
3/4"	4-48	7477117
1"	4-48	7477127
1-1/4"	4-48	7477137
1-1/2"	4-48	7477147
1-3/4"	4-48	7477157
2"	4-48	7477167
2-1/2"	4-48	7477177
3"	4-48	7477187
4"	4-48	7477197
6"	4-48	7477207
Set		
One each of 1", 2", 3"	4-48	7477038



# Axial Support Bracket

- Used for mounting Indicators with dovetails or rods
- 3/8" diameter body for secure clamping
- Bends in many directions







### **ISO 17025 CALIBRATED**

SIMET

## **AGD2 Dial Indicators**

- Graduation: 0.0001" / 0.0005" / 0.001"
- Easy to read dial face: Ø2.20"
- Jeweled bearings
- Internal tolerance marker
- Flat back (attached) and lug back supplied
- With counter pointer
- $\bullet$  IP54 water proof series: with sealed housing & water resistant ring
- Stem diameter: 3/8"

#### STANDARD ACCESSORIES

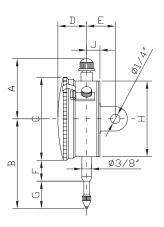
- Lug Back
- Warranty Card, Calibration Certificate, Instruction Manual



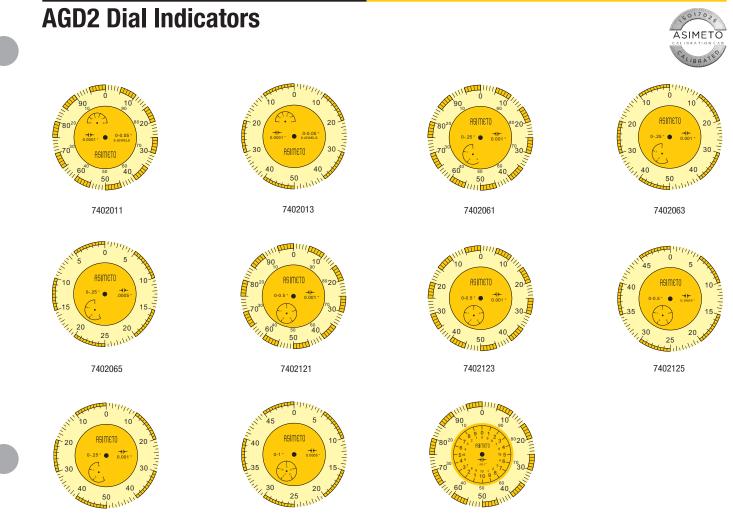
7402265

7402267

Range	Graduation	Range / Rev.	Dial Reading	Accuracy	Code No.
0.05"	0.0001"	0.01"	0-100	±0.0001"	7402011
0.05"	0.0001"	0.01"	0-50-0	±0.0001"	7402013
0.25"	0.001"	0.1"	0-100	±0.002"	7402061
0.25"	0.001"	0.1"	0-50-0	±0.002"	7402063
0.25"	0.0005"	0.05"	0-25-0	±0.0015"	7402065
0.50"	0.001"	0.1"	0-100	±0.002"	7402121
0.50"	0.001"	0.1"	0-50-0	±0.002"	7402123
0.50"	0.0005"	0.05"	0-50	±0.002"	7402125
1"	0.001"	0.1"	0-50-0	±0.002"	7402263
1"	0.0005"	0.05"	0-50	±0.002"	7402265
2"	0.001"	0.1"	0-100	±0.004"	7402511
IP54 Water Proof Series	·				
0.4" (Stem Dia. 3/8")	0.001"	0.1"	0-100	±0.002"	7402267
0.4" (Stem Dia. 3/8")	0.0005"	0.05"	0-50	±0.0015"	7402269



Range	Α	В	C	D	E	F	G	Н	J
Inch									
0-0.05"	1.76"	2.39"	2.28"	0.64"	0.76"	0.69"	0.56"	2.11"	0.32"
0-0.25"	1.48"	2.54"	2.28"	0.64"	0.76"	0.69"	0.71"	2.11"	0.32"
0-0.5"	1.48"	2.74"	2.28"	0.64"	0.76"	0.69"	0.91"	2.11"	0.32"
0-1"	1.48"	3.21"	2.28"	0.64"	0.76"	0.69"	1.38"	2.11"	0.32"
0-2"	4.73"	5.5"	2.28"	0.7"	0.76"	2"	2.34"	2.11"	0.32"



7402263

7402265

7402511

# **Universal Dovetail Indicator Holder**

- 1/4" shank diameter with 3" reach
- This spring loaded holder locks in any of (4) 90 degree quadrants, and allows many variable angles of holding
- · Brass contact will not scar indicator
- · Fits all dovetail equipped indicators
- Stainless Steel



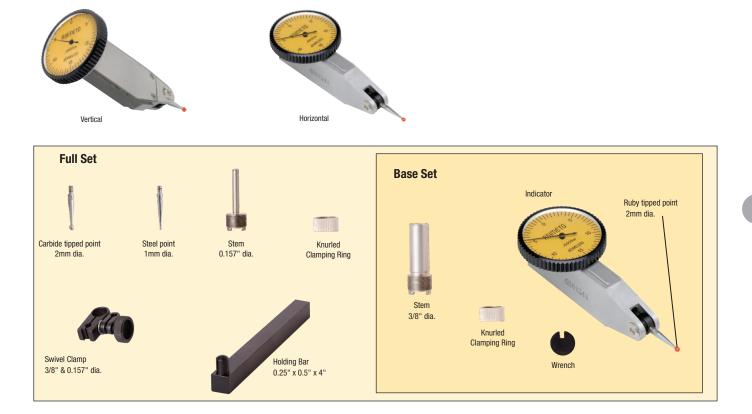


# **Dial Test Indicators**

- Jeweled bearings
- Comes with Ø3/8" dovetail stem
- Easy to read yellow face
- Horizontal and vertical models available
- Ruby contact point
- Dial face dia.: 1.26"

#### STANDARD ACCESSORIES

• Warranty Card, Calibration Certificate, Instruction Manual



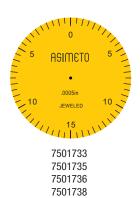
					Base Set	Full Set
Range	Graduation	Dial Reading	Accuracy	Note	Code No.	Code No.
0.008"	0.0001"	0-4-0	±0.0001"	Horizontal	7501783	7501787
0.03"	0.0005"	0-15-0	±0.0005"	Horizontal	7501733	7501738
0.008"	0.0001"	0-4-0	±0.0001"	Vertical	7501785	-
0.03"	0.0005"	0-15-0	±0.0005"	Vertical	7501735	-
0.03"	0.0005"	0-15-0	±0.0005"	Horizontal / Long Point (1")	7501736	-

### ISO 17025 CALIBRATED

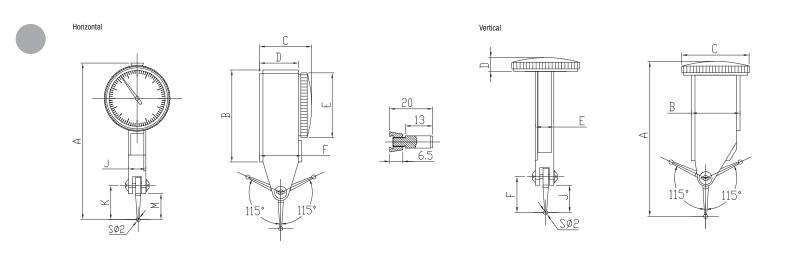


# **Dial Test Indicators**









Graduation	A	В	C	D	E	F	J	К	М
Vertical									
0.0001"	71 (2.795")	44 (1.732")	25 (0.984")	17 (0.669")	32 (1.260")	19 (0.748")	8.5 (0.335")	15 (0.591")	11 (0.433")
0.0005"	78.6 (3.094")	45 (1.772")	27 (1.063")	19 (0.748")	32 (1.260")	21 (0.827")	8.5 (0.335")	18 (0.709")	14 (0.551")
Horizontal	•				·				
0.0001"	69 (2.717")	23 (0.906")	32 (1.260")	8 (0.315")	8.5 (0.335")	15 (0.591")	11 (0.433")	-	-
0.0005"	76 (2.992")	23 (0.906")	32 (1.260")	8 (0.315")	8.5 (0.335")	17 (0.669")	13 (0.512")	-	-

# **Extended Range Dial Test Indicators**



- Stem diameter: 3/8"
- Ruby contact point swivels 230 degrees
- Horizontal and vertical models are available







SIMET

#### STANDARD ACCESSORIES

• Wrench

 Range

 0.060"

 0.060"

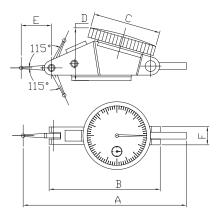
 0.060"

0.060"

• Warranty Card, Calibration Certificate, Instruction Manual

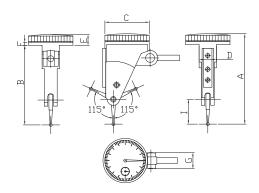
					Wrend
				30mm Dia.	38mm Dia.
Graduation	Dial Reading	Accuracy	Note	Code No.	Code No.
0.001"	0-15-0	±0.0012"	Horizontal	7503061	-
0.0005"	0-15-0	±0.0012"	Horizontal	7503561	7504561
0.001"	0-15-0	±0.0012"	Vertical	7503063	-
0.0005"	0-15-0	±0.0012"	Vertical	7503563	7504563

Horizontal



А	В	С	D	E	F
91mm	64mm	30/38mm	36mm	19.7mm	12.3mm
3.58"	2.52"	1.18"/1.50"	1.42"	0.78"	0.48"

Vertical



А	В	С	D	E	F	G
66mm 2.60"	57.5mm 2.26"	30/38mm 1.18"/1.50"	12mm 0.47"	8.5mm 0.33"	20mm 0.79"	12.3mm 0.48"

## **Extended Range Dial Test Indicator Sets**

#### **SET #1**

- · Doubles the range of most of indicators
- Jeweled movement
- · Easy to read dial
- Range: 0 0.060"



#### STANDARD ACCESSORIES

- · Calibration certificate, instruction manual, warranty card, wrench
- Height Gauge Bar (1/4" x 1/2") w/Swivel Clamp w/ 5/32", 7/32", 1/4" holes
- Axial support w/ 3/8" stem and dovetail
- Reduction sleeve 3/8" to 5/32"
- Two dovetail stems. 3/8" & 5/32"
- Three contact points: 0.04" (hardened steel), 0.08", 0.12" (Tungsten Carbide) x 5/8" long

Range	Graduation	Dial Dia.	Accuracy	Indicator Code No.	Set Code No.
0.060"	0.0005"	1.5"	±0.0012"	7504561	7504811
0.060"	0.0005"	1.0"	±0.0012"	7503561	7504813
0.060"	0.001"	1.0"	±0.0012"	7503061	7504815

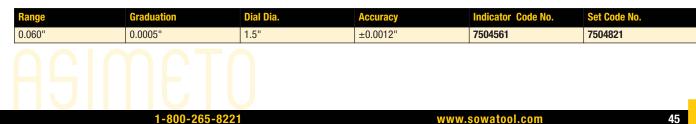
#### **SET #2**

- Doubles the range of most of indicators
- · Jeweled movement and easy to read dial
- Supplied with Xtra-Mag magnetic base
- Range: 0- 0.060"
- Graduation: 0.0005"
- Dial Reading 0-15-0, Dial Dia.: 1-5/16"
- 5/32" Stem, dovetail on front and back



#### STANDARD ACCESSORIES

- · Calibration certificate, instruction manual, warranty card, wrench
- · Xtra-Mag magnetic base with 2 universal ball sockets
- Micro-fine adjustment screw
- 3-9/16" extension arm
- Two dovetail stems: 3/8" & 5/32"
- Three contact points: 0.04" (hardened steel), 0.08", 0.12" (Tungsten Carbide) x 5/8" long



### **Contact Points For Test Indicators**

AAAAAAA		
THE PLANE STORE	the second	-
STARAGE 2		

			Steel	Carbide	Ruby
Indicator Range	Tip Dia.	Length	Code No.	Code No.	Code No.
	1mm (0.039")	14mm (0.551")	7500611	-	-
0.03"/ 0.0005"	2mm (0.079")	14.5mm (0.571")	7500621	7500622	7500623
	3mm (0.118")	15mm (0.591")	7500631	7500632	-
0.008"/ 0.0001"	3mm (0.118")	15mm (0.591")	7500731	7500732	-
0.001	1mm (0.039")	18.5mm (0.728")	7500811	-	-
0.06"/ 0.001" 0.06"/ 0.0005"	2mm (0.079")	19mm (0.748")	7500821	7500822	7500823
	3mm (0.118")	19.5mm (0.768")	7500831	7500832	-

### **Dovetail Stem Sets For Test Indicators**

Size	Code No.
3/8"	7500311
5/32"	7500313

### **Swivel Clamps For Test Indicators**

Description	Code No.
For 3/8" & 5/32" dia. Dovetail Stem	7500251
For 8mm & 6mm dia. Dovetail Stem	7500252

## **Holding Bars For Test Indicators**

Size	Code No.
0.25" x 0.5", Length: 4"	7500213
9 x 9mm, Length: 50mm	7500210
9 x 9mm, Length: 100mm	7500212

## **Centering Holders For Test Indicators**

265-8221

Allows large diameter cylinders or holes to be centered

Description	Code No.
8mm dia. stem	7500350
0.25" dia. stem	7500351





Knurled Clamping Ring

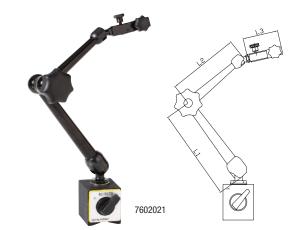






### **Articulating Arm Magnetic Bases**

- Accepts test indicators with dovetail clamping mechanism
- Dial gauges can be held by the 3/8" or 8mm diameter stem or by the lug backing plate
- Arm has 3 articulating joints that can be locked with the single hand knob
- The rotary knob switches natural magnet on or off
- The precision surfaces and the bottom V are securely fastened to the ferrous work piece or machine table when the rotary knob is in the on position
- 7602011 does not have fine adjustment



Magnetic Power	Magnetic Base	Height	Dia. of Hole					Code No.
	(L X W X H)			L1	L2	L3	Slot	
30 kgf	40x30x35mm	215mm (8.46")	3/8" / 8mm	65mm (2.56")	55mm (2.17")	60mm (2.36")	6.5mm (0.26")	7602011
80 kgf	60x50x55mm	350mm (13.78")	3/8" / 8mm	120mm (4.72")	105mm (4.13")	60mm (2.36")	6.5mm (0.26")	7602021
80 kgf	60x50x55mm	440mm (17.32")	3/8" / 8mm	160mm (6.30")	140mm (5.51")	75mm (2.95")	6.5mm (0.26")	7602031
130 kgf	117x50x55mm	690mm (27.17")	3/8" / 8mm	345mm (13.58")	230mm (9.06")	60mm (2.36")	6.5mm (0.26")	7602051

## **Hydraulic Magnetic Bases**

- · Accepts test indicators with dovetail clamping mechanism
- Dial gauges can be held by the 3/8" or 8mm diameter stem or by the lug backing plate
- The rotary knob switches natural magnet on or off
- The precision surfaces and the bottom V are securely fastened to the ferrous work piece or machine table when the rotary knob is in the on position



Magnetic Power	Magnetic Base	Height	Dia. of Hole		Code No.
	(L X W X H)			Slot	
80 kgf	60x50x55mm	385mm (15.16")	3/8" / 8mm	6.5mm (0.26")	7603010
100 kgf	73x50x55mm	685mm (26.97")	3/8" / 8mm	6.5mm (0.26")	7603020

### **Permanent Magnetic Base**

• With permanent magnetic base, without On/Off switch

· Dovetail groove included



Magnetic Power	Main Body	Main Stem Length	Dia. of Hole		Code No.
			Hole	Slot	
17 kgf	Ø30x25mm	85mm (3.346")	8mm (0.315")	6mm (0.236")	7601120

## **Standard Magnetic Bases**

- · Accepts test indicators with dovetail clamping mechanism
- Dial gauges can be held by the 3/8" or 8mm diameter stem or by the lug backing plate
- The rotary knob switches natural magnet on or off
- The precision surfaces and the bottom V are securely fastened to the ferrous
- work piece or machine table when the rotary knob is in the on position
- 7601021 with Fine Adjustment



<b>Magnetic Power</b>	Magnetic Base	Main Stem		Sub Pole			Remark	Inch
	(LXWXH)	Dia.	Length	Dia.	Length	Dia. of hole		Code No.
80 kgf	60x50x55mm	12mm (0.47")	176mm (6.93")	10mm (0.39")	165mm (6.50")	3/8" / 8mm		7601011
80 kgf	60x50x55mm	12mm (0.47")	176mm (6.93")	10mm (0.39")	150mm (5.91")	3/8" / 8mm	with fine adjustment	7601021

## **Magnetic Bases**



Magnetic Power	Dimension	Thread Size	Code No.
60kgf	60x50x55mm	M8	7600011
80kgf	60x50x55mm (metal switch)	M8	7600012



### **BORE GAUGES**

SIME

## **Dial Bore Gauges**

- Dynamic carbide contact point
- 0.24-0.4"/6-10mm range is with fixed anvils
- 0.4-0.74"/10-18mm range is with plate guide and fixed anvils 0.7-1.4"/18-35mm range is with canister and fixed anvils Over 1.4"/35mm range is with wheel guide and inserting anvils

#### STANDARD ACCESSORIES

- Spacers, Anvils, and Sub-Anvils (refer to the table)
- Warranty Card, Instruction Manual, Calibration Certificate









0.24"-0.4"

0.4"-0.74" Plate Guide

0.7"-1.4" Canister Guide



Over 1.4" Wheel Guide

Range	Graduation	Dial Travel	Accuracy	Number of Anvils	Number of Spacers	Number of Sub-Anvils		Code No.
Inch			-	-	-	-		
0.24-0.4"	0.0001"	0.05" (AGD2)	±0.0002"	9	-	-	2"	7483111
0.4-0.7"	0.0001"	0.05" (AGD2)	±0.0003"	9	1	-	4"	7483121
0.7-1.5"	0.0001"	0.05" (AGD2)	±0.0003"	10	2	-	6"	7483211
1.4-2.4"	0.0001"	0.05" (AGD2)	±0.0003"	6	4	-	6"	7483221
2-6"	0.0001"	0.05" (AGD2)	±0.0003"	11	4	1	6"	7483311
6-10"	0.0001"	0.05" (AGD2)	±0.0003"	6	6	1	16"	7483321
10-16"	0.0001"	0.05" (AGD2)	±0.0003"	6	6	2	16"	7483331



#### Adjustment Anvils

Range		Anvils Rang	e (in)									
	Qty.	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11
0.24" - 0.4"	9	0.24	0.26	0.28	0.3	0.32	0.34	0.36	0.38	0.4		
0.4" - 0.7"	9	0.4	0.44	0.48	0.52	0.58	0.62	0.64	0.68	0.7		
0.7" - 1.5"	10	0.7	0.78	0.86	0.94	1.02	1.1	1.18	1.26	1.34	1.42	
1.4" - 2.4"	6	1.4	1.6	1.8	2	2.2	2.4					
2" - 6"	11	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	3.8	4
6" - 10"	6	6	6.4	6.8	7.2	7.6	8					
10" - 16"	6	10	10.4	10.8	11.2	11.6	12					

#### Spacers & Sub-Anvils

	Spacer Dimensions (in)						Sub-Anvils (in)			
Range	Spacer Qty.	#1	#2	#3	#4	#5	#6	Extension Rod Qty.	#1	#2
0.24-0.4"										
0.4-0.7"	1	0.02								
0.7-1.5"	2	0.02	0.04							
1.4-2.4"	4	0.02	0.04	0.08	0.12					
2-6"	4	0.02	0.04	0.08	0.12			1	2	
6-10"	6	0.02	0.04	0.08	0.1	0.2	0.3	1	2	
10-16"	6	0.02	0.04	0.08	0.1	0.2	0.3	2	2	4



### ISO 17025 CALIBRATED

### **Bevel Steel Squares**

- Made of precision ground hardened stainless steel
- Accuracy according to DIN875



		Bevel Type	
Inch Size	Metric Size	Squareness	Code No.
2" x 1.6"	50 x 40mm	00	7639210
3" x 2"	75 x 50mm	00	7639220
4" x 2.75"	100 x 70mm	00	7639230
6" x 4"	150 x 100mm	00	7639240
8" x 5"	200 x 130mm	00	7639250

## **Die Maker's Square Set**

- Use for precise miniature layouts
- · Hardened and ground with very fine finish extremely accurate
- Set includes: 3 hardened beveled edge squares; 3/4", 1-1/4", 2-3/8" plus 1- 1/2" triangular straight edge with handle complete in a fitted case
- Straight edge sides are machined in the middle for clearance of burs and dirt Specifications of Squares: Beam Blade

Beam	Blade
1-15/16"	2-15/16"
1-1/8"	1-9/16"
3/4"	1"



Description	Included	Code No.
Die Maker's Square Set	3 beveled edge squares, 1 triangular straight edge	7606670

### **Telescoping Gauges**

- Spring-loaded plunger expands within the bore (or groove), allowing determination of the internal diameter
- With a knurled clamp

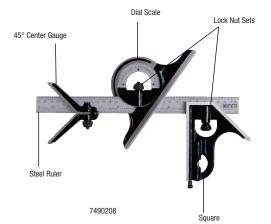


	Inch				
Model	Range	Depth	Code No.	Depth	Code No.
A	5/16" - 1/2"	4.2"	7487011	12"	7487013
В	1/2" - 3/4"	4.4"	7487021	12"	7487023
C	3/4" - 1-1/4"	4.4"	7487031	12"	7487033
D	1-1/4" - 2-1/8"	5.85"	7487041	12"	7487043
E	2-1/8" - 3-1/2"	5.85"	7487051	12"	7487053
F	3-1/2" - 6"	5.85"	7487061	12"	7487063
SETS					
6 pcs (A, B, C, D, E, F)	5/16"-6"		7487869		

# **Combination Square Sets**

#### • Graduation:

- Protractor: 1°
- Blade: E/M  $\,$  1mm, 64ths, 32nds, 1/2mm  $\,$ 
  - : 4R 8ths, 16ths, 32nds, 64ths
- Blades are hardened and tempered for durability
- Square head has level and pointed attachment for hand scribing
- Micro-fine blade graduations
- Gauge heads are hardened cast finished in baked enamel with exception of the measurement faces



Description	Blade Length	Code No.
4 pc Set (With E/M ruler)	12"/300mm	7490208
4 pc Set (With 4R ruler)	12"	7490218

Description	Code No.
45° Centre Gauge	7490250
Dial Scale Protractor Head	7490260
Square Head	7490270
Lock Nut Set	7490220
12" Steel Rule - 4R	7490210
12"/300mm Steel Rule - E/M	7910051

### ISO 17025 CALIBRATED

### **Thread Pitch Gauges**

- · Each individual gauge is stamped with the thread pitch size
- See chart below for different thread forms



Metric Screw Pitch Gauges (60°)

Range	No. of Leaves	Composition of Leaves	Code No.
0.25 - 2.5mm	28	0.25 - 0.90mm by 0.05mm , 1 - 2mm x 0.1mm step , plus 1.25, 1.75, 2.5mm	7605500
0.35 - 6mm	22	0.35, 0.4, 0.45, 0.5, 0.6, 0.7, 0.75, 0.8, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6mm, and 60° angle gauge	7605510
0.4 - 7mm	21	0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	7605520
0.4 - 7mm	18	0.4, 0.5, 0.75, 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7mm	7605530

Unified Screw Pitch Gauges (60°)

Range	No. of Leaves	Composition of Leaves	Code No.
4 - 42 TPI	30	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42 TPI	7605502
4 - 84 TPI	51	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30 - 84 by 2, TPI	7605512

Metric and Unified Screw Pitch Gauges (60°)

Range	No. of Leaves	Composition of Leaves	Code No.
0.4 - 7mm 4 - 42 TPI	51	7605520 and 7605502	7605508

## **Digital Protractors - Level Type**

- This protractor provides an immediate digital reading of any angle in a full circle with 0°-90°-0°-90°-0° readings. The machined Aluminum frame is rigid and light with a precise platform that allows the sensor and its microprocessor circuit to provide high accuracy throughout the entire 360° range
- Four 90° quadrants for display purposes
- Calibrates in minutes without any special fixtures
- HOLD button for freezing a reading in an unreadable position
- ZERO button allows 2 measuring modes, Standard and Alternate Reference
- V-grooves on top and bottom for use on curved surfaces
- Angle displayed upright regardless of protractor position
- Item 7490162 comes with magnet on base, which is helpful for fixing

#### STANDARD ACCESSORIES

• CR2032 Battery, Warranty Card, Instruction Manual

Code No.	7490160 / 7490162
Range	360°
Resolution	0.1°
Operating Temp. Range	23°F-122°F/-5°C-50°C
Power	3V, Lithium cell
Accuracy	±0.1°
Size	152x63.8x60mm
Weight	343g

1-800-265-8221



7490160



### **Precision Parallel Sets**

- Hardened and ground high grade alloy steel
- Hardness 52-58 HRC
- 6" length
- · Height specifications consistent within each pair
- Absolute heights are nominal
- Supplied in durable molded plastic case



	Description	Thickness	Parallelism	Paired Accuracy	Width Accuracy	Length Accuracy	Code No.
8 Pair Parallel Set	7/8" to 1-3/4" in 1/8" increments	1/2"	±0.0003"	±0.0003"	±0.0008"	±0.0006"	7607080
9 Pair Parallel Set	3/4" to 1-3/4" in 1/8" increments	1/4"	±0.0002"	±0.0002"	±0.0008"	±0.0006"	7607090
10 Pair Parallel Set	1/2" to 1-5/8" in 1/8" increments	1/8"	±0.0002"	±0.0002"	±0.0008"	±0.0006"	7607100
10 Pair Parallel Set	1/2" to 1-5/8" in 1/8" increments	1/32"	±0.0002"	±0.0002"	±0.0008"	±0.0006"	7607101

### **Ultra Precision Wavy Parallel Set**

- Made of high quality spring steel, hardened, stress relieved, and precision ground
- Parallel within ±0.0002", paired ±0.0002"
- Includes 9 pairs 4-1/4" long with the following heights: 1/2, 5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2"
- . Shims can be compressed, which proves useful in the holding of thin parts



Des	cription	Code No.
Ultra	Precision Wavy Parallel Set	7607660

1-800-265-8221

## **Rectangular Gauge Block Sets**

- · Individual serial numbers on each block, regardless of grade
- A complete certificate of calibration traceable to the N.I.S.T.
- or P.T.B. showing the deviation of each block
- Mirror polished surfaces provide superior wringing characteristics



#### Inch

				Steel
Blocks Per Set	Blocks Included In Set	Grade	Former Grade	Code No.
	1 Block: 0.050" 10 Blocks: 0.1000"- 0.1009" x 0.0001" step	0	2	7650010
81 (ASME)	49 Blocks: 0.101"- 0.149" x 0.001" step 17 Blocks: 0.150"- 0.950" x 0.050" step 4 Blocks: 1.000"-4.000" x 1.000" step	AS-1	3	7650011
		AS-2	В	7650012
	1 Block: 0.050" 10 Blocks: 0.1000"- 0.1009" x 0.0001" step 9 Blocks: 0.101"- 0.109" x 0.001" step 9 Blocks: 0.110"- 0.190" x 0.010" step 4 Blocks: 0.200"- 0.500" x 0.100" step 3 Blocks: 1", 2", 4"	0	2	7650020
36 (ASME)		AS-1	3	7650021
		AS-2	В	7650022

#### Metric 1 mm base set

			Steel
Blocks Per Set	Blocks Included In Set	Grade	Code No.
88 (ASME / DIN /JIS / GB)	1 Blocks: 1.0005mm 9 Blocks: 1.001- 1.009mm x 0.001mm step 49 Blocks: 1.01- 1.49mm x 0.01mm step 19 Blocks: 0.5 - 9.5mm x 0.5mm step 10 Blocks: 10 - 100mm x 10mm step	1	7650181

# **Precision Inspection Gauge Ball Sets**

- Meets all grade 25 AFBMA standards
- Chrome alloy steel, hardened to 63 HRC
- Surface finish to 1.5 micro-inches
- Within 0.0001"/0.0025mm of actual size
- Spherical accuracy within 0.000025"/0.0006 mm



7679901

	Quantity	Description	Code No.
Ball Set - Inches	26 Pair	1/8"-5/32"x64ths, 3/16"-3/4"x32nds, 13/16"-1"x16ths	7679901
Ball Set - Metric	25 Pair	1mm to 25 mm in 1 mm increments	7679900

# Pin Gauge Sets

- For quick and accurate measurements. Measure hole sizes, slot widths, calculate distances between holes, use as Go/NoGo gauging, etc.
- Each set includes pin gauge holder
- Furnished in attractive molded plastic case
- Class ZZ guaranteed to 0.0002"/0.005 mm tolerance limit
- $\bullet$  Inspected with equipment which has been calibrated and is traceable to NIST
- $\bullet$  Marked with size and direction of tolerance on gauge over 0.060"/1.5 mm
- Hardened drill rod 60-62 HRC, 2 inches long
- 10 micron finish or better
- Black Oxide coating prevents corrosion and shows gauge wear
- Certificate of accuracy included



			Accuracy: +0.0002" -0"	Accuracy: -0.0002" +0"
Qty	Range	Surface	Code No.	Code No.
50	0.011" - 0.060" x 0.001" step	Bright Finish	7697010	7697012
190	0.061" - 0.250" x 0.001" step	Bright Finish	7697020	7697022
250	0.251" - 0.500" x 0.001" step	Bright Finish	7697030	7697032
125	0.501" - 0.625" x 0.001" step	Bright Finish	7697040	7697042
125	0.626" - 0.750" x 0.001" step	Bright Finish	7697050	7697052

### **Pin Gauge Handles**

- Comfortable, ergonomically designed handle for pin gauge
- Can be used with GO pin (green) on one end, NO GO pin (red) on opposite end

Gauge Size Range	Code No.
0.011" - 0.060"	7697410
0.061" - 0.250"	7697411
0.251" - 0.500"	7697412
0.501" - 0.625"	7697413
0.626" - 0.750"	7697414



# **Thread Measuring Wire Set**

- 48 wires 16 different sizes
- Measures all threads from 3 48 threads per inch
- Measures all metric threads from 0.5 mm to 6 mm
- Also measures ACME threads
- Laminated chart included

Description	Code No.
Thread Measuring Set	7697300



### **Rockwell Type Hardness Tester**

- · For testing the hardness of various materials to determine the Rockwell hardness to scales A, B, and C
- · Unit is designed with mechanical loads for precise hardness readings
- . Conforms to the requirements of ASTM E18, ISO 6508-2, and GB/T 230.2 standards
- Readings provided to a minimum resolution 0.5HR

#### STANDARD ACCESSORIES

•	Diamond	cone	penetrator	1 pc
---	---------	------	------------	------

- V-notch anvil 1 pc
- Small flat anvil 1 pc 1 pc Large flat anvil
- · Rockwell standard
- 5 pcs • 1/16" steel ball penetrator 1 pc
- Instruction manual 1 pc



Range	Test Force	Test Height	Throat Depth	Code No.
20-88HRA, 20-100HRB, 20-70HRC	588.4, 980.7, 1471N (60, 100, 150kgf)	170mm	135mm	7640010

### **Surface Roughness Standards Set**

- Set of 30 specimens, 7/8" x 3/8" electro formed, solid nickel
- Used for the visual comparison of surface roughness



Code No.		7506010
Qty.	Contents	Roughness
2 pcs	Flat Lapping	0.05; 0.1µm (2; 4µ")
4 pcs	Reaming	0.2; 0.4; 0.8; 1.6µm (8; 16; 32; 63µ")
6 pcs	Grinding	0.05; 0.1; 0.2; 0.4; 0.8; 1.6µm (2; 4; 8; 16; 32; 63µ")
6 pcs	Horizontal Milling	0.4; 0.8; 1.6; 3.2; 6.3; 12.5μm (16; 32; 63; 125; 250; 500μ")
6 pcs	Vertical Milling	0.4; 0.8; 1.6; 3.2; 6.3; 12.5μm (16; 32; 63; 125; 250; 500μ")
6 pcs	Turning	0.4; 0.8; 1.6; 3.2; 6.3; 12.5μm (16; 32; 63; 125; 250; 500μ")

### **Impact Hardness Tester**

- Large screen (128×64 dot matrix LCD), allows for clear display of all functions and parameters
- · Hardness test can be taken at any angle including inverted
- · A wide measuring range supports the hardness of all metallic materials. Hardness results are directly displayed in HRB, HRC, HV, HB, HS, HL hardness scales
- · Six impact devices are available for special application with automatic impact device recognition
- Diameter of carbide ball: 3mm
- Large capacity memory storage of 500 sub groups. Stored information including single measured value, mean value, test data, impact direction, impact times, material, and hardness scale are available
- Five languages are supported: English, French, German, Italian, and Spanish
- . Upper and lower limit can be preset. An audio alarm will automatically sound when the reading is outside of the preset limits
- · Battery voltage information is displayed including the charge status
- Calibration function is available
- . USB1.1 port allows for information to be uploaded directly to a PC

1 pc

1 pc

1 pc

1 pc

- High speed thermal printer allows for the readings to be immediately printed
- 6V Ni-MH rechargeable battery are supplied. The batteries can be charged with the integrated charger. Up to 150 hours of continuous operation battery life between charges (eL off and no printing)
- Automatic power off after five minutes

#### STANDARD ACCESSORIES

- · Impact device
- 1 pc Hardness test block 1 pc
- Small support ring 1 pc
- Cleaning brush 1 pc
- · Battery charger
- Paper for printing 1 pc
- Manual
- DataPro software
- Communication cable

Range	Accuracy	Application Range	Impact Devices	Impact Capacity	Code No.
(170-960) HLD (17-68.5) HRC (19-651) HB	HLD: ±5 HRC: ±1 HB: ±4	Test normal smooth, flat surfaces	D	11 Nmm	7640171

### **Hardness Test Block**



Description	Range of Hardness	Dimension	Weight	Code No.
Rockwell Standardized Block	20 - 30 HBC	60 x 40 x 10mm (2.36 x 1.57 x 0.39")	0.19kg	7640810

### **Hardness Tester Penetrator Sets**



Description	Specification	Code No.
Penetrators for Rockwell Hardness Tester	120° diamond cone penetrator Ø1.588mm (1/16") steel ball penetrator	7640830
Penetrators for Brinell Hardness Tester	Ø2.5, 5, 10mm tungsten carbide ball penetrators	7640840



# **3**-POINT Micrometer, Internal

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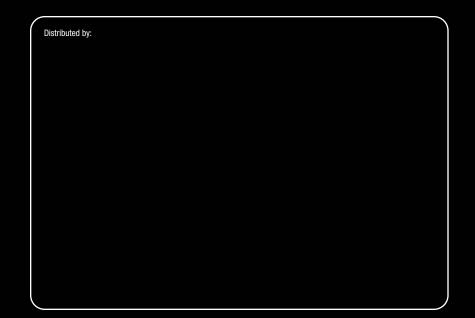
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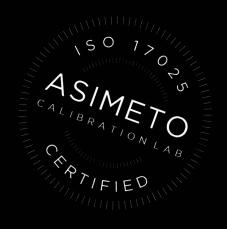
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