

Inside micrometer

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List of products

Borematic
SERIES 568



Digimatic Holtest
SERIES 468



Holtest
SERIES 368



Holtest (Type II)
SERIES 368



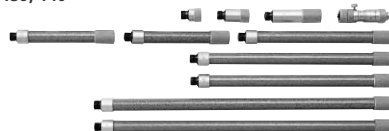
Inside Micrometers
SERIES 345, 145



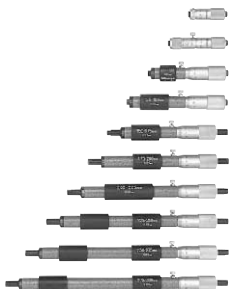
Digimatic Tubular Inside Micrometers
SERIES 337, 339



Tubular Inside Micrometers
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Tubular Inside Micrometers
SERIES 133



Inside Micrometers
SERIES 141



Setting Rings
SERIES 177



Borematic

SERIES 568 — Digimatic Snap-Open Bore Gages

INSIDE MICROMETERS



568-439



Note: Close contact of the measuring surfaces is necessary for the assured accuracy.

The Borematic enables the operator to take measurements more accurately and more quickly than ever before. One the origin point is set with the ORIGIN button, the Borematic retains the setting for the entire battery life. Therefore no longer repeated origin setting (presetting) is necessary.

FEATURES

- Large LCD digits of 8.5mm height for error-free reading.
- Carbide-tipped contact points (=anvils) ensure long life.
- 330-degree rotatable display unit for easy reading at any angle.
- GO/NO-GO judgment function.
- The absolute linear scale eliminates the fear of over-speed errors.
- With SPC data output.
- Setting rings for origin point setting are optional.
- Can measure deep holes by attaching an optional extension rod.
- Measurement can be taken closer to the bottom of a blind bore.

OPTIONAL ACCESSORIES

Order No.	Description
937387	SPC cable (1m)
965013	SPC cable (2m)
952322	Extension rod for 6 - 12mm (.275" - .500") gages
952621	Extension rod for 12 - 20mm (.50" - .80") gages
952622	Extension rod for 20 - 50mm (.8" - 2.0") gages
952623	Extension rod for 50 - 125mm (2.0" - 5.0") gages
(See page 149.)	Setting rings

SPECIFICATION

Metric		Individual		
Range	Order No.	Resolution	Accuracy	Mass
6 - 8mm	568-331	0.001mm	5μm	480g
8 - 10mm	568-332	0.001mm	5μm	485g
10 - 12mm	568-333	0.001mm	5μm	485g
12 - 16mm	568-334	0.001mm	5μm	475g
16 - 20mm	568-335	0.001mm	5μm	480g
20 - 25mm	568-336	0.001mm	6μm	540g
25 - 30mm	568-337	0.001mm	6μm	555g
30 - 40mm	568-338	0.001mm	6μm	565g
40 - 50mm	568-339	0.001mm	6μm	610g
50 - 63mm	568-340	0.001mm	6μm	730g
62 - 75mm	568-341	0.001mm	6μm	740g
75 - 88mm	568-342	0.001mm	6μm	790g
87 - 100mm	568-343	0.001mm	6μm	800g
100 - 113mm	568-344	0.001mm	6μm	900g
112 - 125mm	568-345	0.001mm	6μm	910g
50 - 63mm/ 62 - 75mm	568-346*	0.001mm	6μm	780g
75 - 88mm/ 87 - 100mm	568-347*	0.001mm	6μm	850g
100 - 113mm/ 112 - 125mm	568-348*	0.001mm	6μm	970g

*With extra anvils (interchangeable) giving a wide measuring range

Excluding quantizing error

Inch/Metric		Individual		
Range	Order No.	Resolution	Accuracy	Mass
.275" - .350"	568-431	.00005"/0.001mm	.0002"	1.06 lbs.
.350" - .425"	568-432	.00005"/0.001mm	.0002"	1.07 lbs.
.425" - .500"	568-433	.00005"/0.001mm	.0002"	1.07 lbs.
.50" - .65"	568-434	.00005"/0.001mm	.0002"	1.05 lbs.
.65" - .80"	568-435	.00005"/0.001mm	.0002"	1.06 lbs.
.8" - 1"	568-436	.00005"/0.001mm	.00025"	1.19 lbs.
1.0" - 1.2"	568-437	.00005"/0.001mm	.00025"	1.22 lbs.
1.2" - 1.6"	568-438	.00005"/0.001mm	.00025"	1.24 lbs.
1.6" - 2.0"	568-439	.00005"/0.001mm	.00025"	1.34 lbs.
2.0" - 2.5"	568-440	.00005"/0.001mm	.00025"	1.61 lbs.
2.5" - 3.0"	568-441	.00005"/0.001mm	.00025"	1.63 lbs.
3.0" - 3.5"	568-442	.00005"/0.001mm	.00025"	1.74 lbs.
3.5" - 4.0"	568-443	.00005"/0.001mm	.00025"	1.76 lbs.
4.0" - 4.5"	568-444	.00005"/0.001mm	.00025"	1.98 lbs.
4.5" - 5.0"	568-445	.00005"/0.001mm	.00025"	2.00 lbs.
2.0" - 2.5"/ 2.5" - 3.0"	568-446*	.00005"/0.001mm	.00025"	1.72 lbs.
3.0" - 3.5"/ 3.5" - 4.0"	568-447*	.00005"/0.001mm	.00025"	1.87 lbs.
4.0" - 4.5"/ 4.5" - 5.0"	568-448*	.00005"/0.001mm	.00025"	2.13 lbs.

*With extra anvils (interchangeable) giving a wide measuring range

Excluding quantizing error

Technical Data

Display: LCD
Functions: Zero-Set, presetting, GO/NO-GO judgment, power on/off, inch/mm conversion (inch/mm type only), SPC data output, data hold
Battery: SR44 (1 pc.) (938882)
Battery life: Approx. 1 year
Operating temperature: 5°C to 40°C
Measuring faces: Carbide-tipped

Metric Interchangeable-contact head set			
Order No.	Range	Set configuration	Mass
568-971	6 - 8mm/ 8 - 10mm/ 10 - 12mm	Display unit (568-012), contact heads (952906, 952907, 952908), adapter (954595), setting rings (177-125: $\varnothing 8\text{mm}$, 177-126: $\varnothing 10\text{mm}$)	0.6kg
568-972	12 - 16mm/ 16 - 20mm/ 20 - 25mm	Display unit (568-012), contact heads (952605, 952606, 952607), adapters (216556, 216557), setting rings (177-177: $\varnothing 16\text{mm}$, 177-286: $\varnothing 20\text{mm}$)	0.8kg
568-973	25 - 30mm/ 30 - 40mm/ 40 - 50mm	Display unit (568-012), contact heads (952608, 982147, 982148), adapter (216557), setting rings (177-288: $\varnothing 30\text{mm}$, 177-290: $\varnothing 40\text{mm}$)	1.3kg
568-974	50 - 63mm/ 62 - 75mm/ 75 - 88mm/ 87 - 100mm	Display unit (568-012), contact heads (982174, 982175, 982176, 982177), adapter (216558), setting rings (177-314: $\varnothing 62\text{mm}$, 177-318: $\varnothing 87\text{mm}$)	3.5kg
568-975*	50 - 63mm/ 62 - 75mm/ 75 - 88mm/ 87 - 100mm	Display unit (568-012), contact heads (04AZA044, 04AZA045), adapter (216558), setting rings (177-314: $\varnothing 62\text{mm}$, 177-318: $\varnothing 87\text{mm}$)	3.5kg

*Interchangeable anvil type

Metric Complete-unit set			
Order No.	Range	Set configuration	Mass
568-981	6 - 8mm/ 8 - 10mm/ 10 - 12mm	Individual Borematic gages (568-331, 568-332, 568-333), setting rings (177-125: $\varnothing 8\text{mm}$, 177-126: $\varnothing 10\text{mm}$)	1.6kg
568-982	12 - 16mm/ 16 - 20mm/ 20 - 25mm	Individual Borematic gages (568-334, 568-335, 568-336), setting rings (177-177: $\varnothing 16\text{mm}$, 177-286: $\varnothing 20\text{mm}$)	1.8kg
568-983	25 - 30mm/ 30 - 40mm/ 40 - 50mm	Individual Borematic gages (568-337, 568-338, 568-339), setting rings (177-288: $\varnothing 30\text{mm}$, 177-290: $\varnothing 40\text{mm}$)	2.5kg
568-984	50 - 63mm/ 62 - 75mm	Individual Borematic gages (568-340, 568-341), setting ring (177-314: $\varnothing 62\text{mm}$)	2.6kg
568-985	75 - 88mm/ 87 - 100mm	Individual Borematic gages (568-342, 568-343), setting ring (177-318: $\varnothing 87\text{mm}$)	3.4kg
568-986*	50 - 63mm/ 62 - 75mm/ 75 - 88mm/ 87 - 100mm	Individual Borematic gages (568-346, 568-347), setting rings (177-314: $\varnothing 62\text{mm}$, 177-318: $\varnothing 87\text{mm}$)	4.6kg

*Interchangeable anvil type

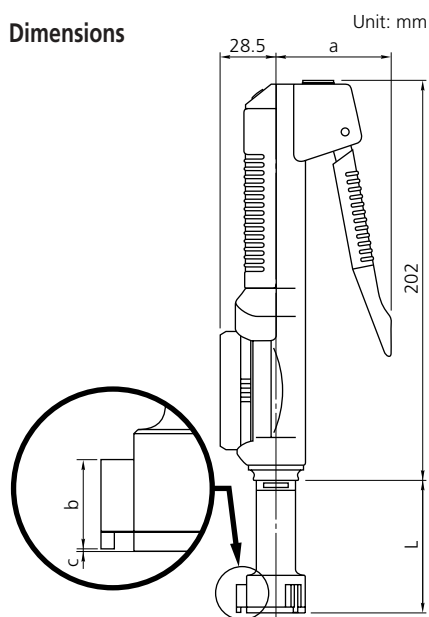
Inch/Metric Interchangeable-contact head set			
Order No.	Range	Set configuration	Mass
568-976	.275" - .350"/ .350" - .425"/ .425" - .500"	Display unit (568-013), contact heads (952909, 952910, 952911), adapter (954595), setting rings (177-179: $\varnothing .35"$, 177-283: $\varnothing .425"$)	1.32 lbs.
568-977	.50" - .65"/ .65" - .80"/ .8" - 1"	Display unit (568-013), contact heads (952670, 952671, 952672), adapters (216556, 216557), setting rings (177-182: $\varnothing .65"$, 177-287: $\varnothing .8"$)	1.76 lbs.
568-978	1.0" - 1.2"/ 1.2" - 1.6"/ 1.6" - 2.0"	Display unit (568-013), contact heads (952673, 982149, 982150), adapter (216557), setting rings (177-289: $\varnothing 1.2"$, 177-291: $\varnothing 1.6"$)	2.86 lbs.
568-979	2.0" - 2.5"/ 2.5" - 3.0"/ 3.0" - 3.5"/ 3.5" - 4.0"	Display unit (568-013), contact heads (982178, 982179, 982180, 982181), adapter (216558), setting rings (177-315: $\varnothing 2.5"$, 177-319: $\varnothing 3.5"$)	7.7 lbs.
568-980*	2.0" - 2.5"/ 2.5" - 3.0"/ 3.0" - 3.5"/ 3.5" - 4.0"	Display unit (568-013), contact heads (04AZA047, 04AZA048), adapter (216558), setting rings (177-315: $\varnothing 2.5"$, 177-319: $\varnothing 3.5"$)	7.7 lbs.

*Interchangeable anvil type

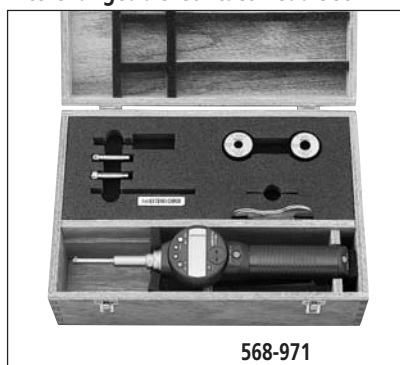
Inch/Metric Complete-unit set			
Order No.	Range	Set configuration	Mass
568-987	.275" - .350"/ .350" - .425"/ .425" - .500"	Individual Borematic gages (568-431, 568-432, 568-433), setting rings (177-179: $\varnothing .35"$, 177-283: $\varnothing .425"$)	3.52 lbs.
568-988	.50" - .65"/ .65" - .80"/ .8" - 1"	Individual Borematic gages (568-434, 568-435, 568-436), setting rings (177-182: $\varnothing .65"$, 177-287: $\varnothing .8"$)	3.96 lbs.
568-989	1.0" - 1.2"/ 1.2" - 1.6"/ 1.6" - 2.0"	Individual Borematic gages (568-437, 568-438, 568-439), setting rings (177-289: $\varnothing 1.2"$, 177-291: $\varnothing 1.6"$)	5.5 lbs.
568-990	2.0" - 2.5"/ 2.5" - 3.0"/	Individual Borematic gages (568-440, 568-441), setting ring (177-315: $\varnothing 2.5"$)	5.72 lbs.
568-991	3.0" - 3.5"/ 3.5" - 4.0"	Individual Borematic gages (568-442, 568-443), setting ring (177-319: $\varnothing 3.5"$)	7.48 lbs.
568-992*	2.0" - 2.5"/ 2.5" - 3.0"/ 3.0" - 3.5"/ 3.5" - 4.0"	Individual Borematic gages (568-446, 568-447), setting rings (177-315: $\varnothing 2.5"$, 177-319: $\varnothing 3.5"$)	10.12 lbs.

*Interchangeable anvil type

Dimensions



Interchangeable-Contact Head Set



Complete-Unit Set



Range	L	a	b	c
6 - 12mm	83	58	2.5	2
12 - 20mm	52.6	58	6.3	0.3
20 - 30mm	58.2	58	8.8	0.3
30 - 50mm	67.3	58	14	0.3
50 - 125mm	74.8	67	17	0.3

Digimatic Holtest

SERIES 468 — Three-Point Internal Micrometers

INSIDE MICROMETERS



468-143



468-145



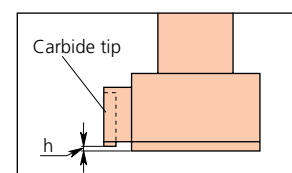
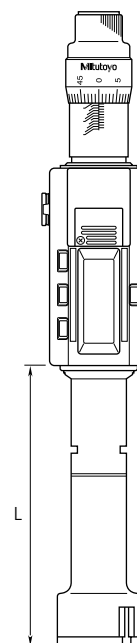
468-134

Note: Close contact of the measuring surfaces is necessary for the assured accuracy.

FEATURES

- Large LCD readout.
- Carbide-tipped contact points (anvils) ensure long life.
- Functions available: Presetting, Zero-setting, Data hold, Error alarm, Battery replacement alarm.
- Battery: SR44 (938882) x 1pc.
- With Ratchet Stop for constant force.
- Measurement can be taken closer to the bottom of the blind bore.
- Can measure deep holes by attaching an Extension Rod (optional).
- Setting Rings for origin point setting are optional.

Dimension



SPECIFICATIONS

Metric		Individual				
Range	Order No.	Resolution	Accuracy	Dimension h	Dimension L	Extension Rod (optional)
6 - 8mm	468-131	0.001mm	2μm	2mm	45mm	100mm (952322)
8 - 10mm	468-132	0.001mm	2μm	2mm	45mm	100mm (952322)
10 - 12mm	468-133	0.001mm	2μm	2mm	45mm	100mm (952322)
12 - 16mm	468-134	0.001mm	2μm	0.3mm	76mm	150mm (952621)
16 - 20mm	468-135	0.001mm	2μm	0.3mm	76mm	150mm (952621)
20 - 25mm	468-136	0.001mm	3μm	0.3mm	88mm	150mm (952622)
25 - 30mm	468-137	0.001mm	3μm	0.3mm	88mm	150mm (952622)
30 - 40mm	468-138	0.001mm	3μm	0.3mm	102mm	150mm (952622)
40 - 50mm	468-139	0.001mm	3μm	0.3mm	102mm	150mm (952622)
50 - 63mm	468-140	0.001mm	3μm	0.3mm	105mm	150mm (952623)
62 - 75mm	468-141	0.001mm	3μm	0.3mm	105mm	150mm (952623)
75 - 88mm	468-142	0.001mm	3μm	0.3mm	105mm	150mm (952623)
87 - 100mm	468-143	0.001mm	3μm	0.3mm	105mm	150mm (952623)
100 - 125mm	468-144	0.001mm	5μm	13mm	151mm	150mm (952623)
125 - 150mm	468-145	0.001mm	5μm	13mm	151mm	150mm (952623)
150 - 175mm	468-146	0.001mm	5μm	13mm	151mm	150mm (952623)
175 - 200mm	468-147	0.001mm	5μm	13mm	151mm	150mm (952623)
200 - 225mm	468-148	0.001mm	5μm	13mm	151mm	150mm (952623)
225 - 250mm	468-149	0.001mm	5μm	13mm	151mm	150mm (952623)
250 - 275mm	468-150	0.001mm	5μm	13mm	151mm	150mm (952623)
275 - 300mm	468-151	0.001mm	5μm	13mm	151mm	150mm (952623)

Excluding quantizing error

OPTIONAL ACCESSORIES

Order No.	Description
937387	SPC cable (1m)
965013	SPC cable (2m)
982693	Mounting plate
156-101	Stand
(See listing.)	Extension Rods
(See page 149.)	Setting Rings

Inch/Metric		Individual				
Range	Order No.	Resolution	Accuracy	Dimension h	Dimension L	Extension Rod (optional)
.275" - .35"	468-231	.00005"/0.001mm	.0001"	.079"	1.77"	4" (952322)
.35" - .425"	468-232	.00005"/0.001mm	.0001"	.079"	1.77"	4" (952322)
.425" - .5"	468-233	.00005"/0.001mm	.0001"	.079"	1.77"	4" (952322)
.5" - .65"	468-234	.00005"/0.001mm	.0001"	.112"	2.99"	6" (952621)
.65" - .8"	468-235	.00005"/0.001mm	.0001"	.112"	2.99"	6" (952621)
.8" - 1"	468-236	.00005"/0.001mm	.00015"	.112"	3.46"	6" (952622)
1" - 1.2"	468-237	.00005"/0.001mm	.00015"	.112"	3.46"	6" (952622)
1.2" - 1.6"	468-238	.00005"/0.001mm	.00015"	.112"	4.02"	6" (952622)
1.6" - 2"	468-239	.00005"/0.001mm	.00015"	.112"	4.02"	6" (952622)
2" - 2.5"	468-240	.00005"/0.001mm	.00015"	.112"	4.13"	6" (952623)
2.5" - 3"	468-241	.00005"/0.001mm	.00015"	.112"	4.13"	6" (952623)
3" - 3.5"	468-242	.00005"/0.001mm	.00015"	.112"	4.13"	6" (952623)
3.5" - 4"	468-243	.00005"/0.001mm	.00015"	.112"	4.13"	6" (952623)
4" - 5"	468-244	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
5" - 6"	468-245	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
6" - 7"	468-246	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
7" - 8"	468-247	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
8" - 9"	468-248	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
9" - 10"	468-249	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
10" - 11"	468-250	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)
11" - 12"	468-251	.00005"/0.001mm	.0002"	.51"	5.94"	6" (952623)



Metric		Complete-unit set		
Range	Order No.	Individual range	Setting Rings included	Remarks
6 - 12mm	468-961	6-8, 8-10, 10-12mm	ø8mm, ø10mm	—
12 - 25mm	468-962	12-16, 16-20, 20-25mm	ø16mm, ø20mm	—
25 - 50mm	468-963	25-30, 30-40, 40-50mm	ø30mm, ø40mm	—
50 - 75mm	468-964	50-63, 62-75mm	ø62mm	—
75 - 100mm	468-965	75-88, 87-100mm	ø87mm	—

Inch/Metric		Complete-unit set		
Range	Order No.	Individual range	Setting Rings included	Remarks
.275" - .5"	468-966	.275-.35", .35-.425", .425-.5"	.35" DIA., .425" DIA.	—
.5" - 1"	468-967	.5-.65", .65-.8", .8-1"	.65" DIA., .8" DIA.	—
1" - 2"	468-968	1-1.2", 1.2-1.6", 1.6-2"	1.2" DIA., 1.6" DIA.	—
2" - 3"	468-969	2-2.5", 2.5-3"	2.5" DIA.	—
3" - 4"	468-970	3-3.5", 3.5-4"	3.5" DIA.	—



Complete-Unit Set

Each set includes complete gages (display units and measuring heads for each size).

Metric		Interchangeable-head set		
Range	Order No.	Individual range	Setting Rings included	Remarks
6 - 12mm	468-951	6-8, 8-10, 10-12mm	ø8mm, ø10mm	with Extension Rod
12 - 20mm	468-952	12-16, 16-20mm	ø16mm.	with Extension Rod
20 - 50mm	468-953	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm	with Extension Rod
50 - 100mm	468-954	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm	with Extension Rod
100 - 200mm	468-955	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm	with Extension Rod

Inch/Metric		Interchangeable-head set		
Range	Order No.	Individual range	Setting Rings included	Remarks
.275" - .5"	468-956	.275-.35", .35-.425", .425-.5"	.35" DIA., .425" DIA.	with Extension Rod
.5" - .8"	468-957	.5-.65", .65-.8"	.65" DIA.	with Extension Rod
.8" - 2"	468-958	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.	with Extension Rod
2" - 4"	468-959	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.	with Extension Rod
4" - 8"	468-960	4-5", 5-6", 6-7", 7-8"	5" DIA., 7" DIA.	with Extension Rod



Interchangeable-Head Set

Each set includes one display unit with interchangeable measuring heads of the sizes specified.

Holtest

SERIES 368 — Three-Point Internal Micrometers

INSIDE MICROMETERS



Note: Close contact of the measuring surfaces is necessary for the assured accuracy.

These Holtests are versatile, self-centering three-point internal micrometers for the accurate and efficient direct-measurement of internal diameters. Three anvils, evenly spaced at 120° apart, contact the internal wall surfaces and find true alignment with the axis of the bore for accurate ID measurement.

FEATURES

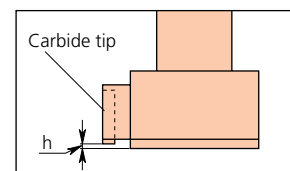
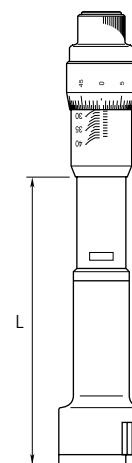
- Highly durable because of carbide-tipped contact points (anvils).
- Measurement can be taken closer to the bottom of the blind bore.
- Can measure deep holes using an Extension Rod (optional) which is available on models over 6mm (.275") measuring range.
- With Ratchet Stop for constant force.
- Setting Rings for zero point adjustment are optional.

SPECIFICATIONS

Metric	Individual					
Range	Order No.	Graduation	Accuracy	Dimension h	Dimension L	Extension Rod (optional)
2 - 2.5mm	368-001*	0.001mm	2μm	—	12mm	—
2.5 - 3mm	368-002*	0.001mm	2μm	—	12mm	—
3 - 4mm	368-003*	0.001mm	2μm	—	22mm	—
4 - 5mm	368-004*	0.001mm	2μm	—	22mm	—
5 - 6mm	368-005*	0.001mm	2μm	—	22mm	—
6 - 8mm	368-101	0.001mm	2μm	2mm	59mm	100mm (952322)
8 - 10mm	368-102	0.001mm	2μm	2mm	59mm	100mm (952322)
10 - 12mm	368-103	0.001mm	2μm	2mm	59mm	100mm (952322)
12 - 16mm	368-104	0.005mm	2μm	0.3mm	80mm	150mm (952621)
16 - 20mm	368-105	0.005mm	2μm	0.3mm	80mm	150mm (952621)
20 - 25mm	368-106	0.005mm	3μm	0.3mm	90mm	150mm (952622)
25 - 30mm	368-107	0.005mm	3μm	0.3mm	90mm	150mm (952622)
30 - 40mm	368-138	0.005mm	3μm	0.3mm	98mm	150mm (952622)
40 - 50mm	368-139	0.005mm	3μm	0.3mm	98mm	150mm (952622)
50 - 63mm	368-140	0.005mm	3μm	0.3mm	105mm	150mm (952623)
62 - 75mm	368-141	0.005mm	3μm	0.3mm	105mm	150mm (952623)
75 - 88mm	368-142	0.005mm	3μm	0.3mm	105mm	150mm (952623)
87 - 100mm	368-143	0.005mm	3μm	0.3mm	105mm	150mm (952623)
100 - 125mm	368-117	0.005mm	5μm	13mm	158mm	150mm (952623)
125 - 150mm	368-118	0.005mm	5μm	13mm	158mm	150mm (952623)
150 - 175mm	368-119	0.005mm	5μm	13mm	158mm	150mm (952623)
175 - 200mm	368-120	0.005mm	5μm	13mm	158mm	150mm (952623)
200 - 225mm	368-121	0.005mm	5μm	13mm	158mm	150mm (952623)
225 - 250mm	368-122	0.005mm	5μm	13mm	158mm	150mm (952623)
250 - 275mm	368-123	0.005mm	5μm	13mm	158mm	150mm (952623)
275 - 300mm	368-124	0.005mm	5μm	13mm	158mm	150mm (952623)

*Two-point contact type for very small holes

Dimension



OPTIONAL ACCESSORIES

Order No.	Description
(See listing.)	Extension Rods
(See page 149.)	Setting Rings

Inch Individual

Range	Order No.	Graduation	Accuracy	Dimension h	Dimension L	Extension Rod (optional)
.08" - .1"	368-021*	.0001"	.0001"	—	.47"	—
.1" - .12"	368-022*	.0001"	.0001"	—	.47"	—
.12" - .16"	368-023*	.0001"	.0001"	—	.87"	—
.16" - .2"	368-024*	.0001"	.0001"	—	.87"	—
.2" - .24"	368-025*	.0001"	.0001"	—	.87"	—
.24" - .28"	368-026*	.0001"	.0001"	—	.87"	—
.275" - .35"	368-201	.0001"	.0001"	.079"	2.32"	4" (952322)
.35" - .425"	368-202	.0001"	.0001"	.079"	2.32"	4" (952322)
.425" - .5"	368-203	.0001"	.0001"	.079"	2.32"	4" (952322)
.5" - .65"	368-204	.0002"	.0001"	.012"	3.15"	6" (952621)
.65" - .8"	368-205	.0002"	.0001"	.012"	3.15"	6" (952621)
.8" - 1"	368-206	.0002"	.00015"	.012"	3.54"	6" (952622)
1" - 1.2"	368-207	.0002"	.00015"	.012"	3.54"	6" (952622)
1.2" - 1.6"	368-238	.0002"	.00015"	.012"	3.86"	6" (952622)
1.6" - 2"	368-239	.0002"	.00015"	.012"	3.86"	6" (952622)
2" - 2.5"	368-240	.0002"	.00015"	.012"	4.13"	6" (952623)
2.5" - 3"	368-241	.0002"	.00015"	.012"	4.13"	6" (952623)
3" - 3.5"	368-242	.0002"	.00015"	.012"	4.13"	6" (952623)
3.5" - 4"	368-243	.0002"	.00015"	.012"	4.13"	6" (952623)
4" - 5"	368-217	.0002"	.0002"	.51"	6.22"	6" (952623)
5" - 6"	368-218	.0002"	.0002"	.51"	6.22"	6" (952623)
6" - 7"	368-219	.0002"	.0002"	.51"	6.22"	6" (952623)
7" - 8"	368-220	.0002"	.0002"	.51"	6.22"	6" (952623)
8" - 9"	368-221	.0002"	.0002"	.51"	6.22"	6" (952623)
9" - 10"	368-222	.0002"	.0002"	.51"	6.22"	6" (952623)
10" - 11"	368-223	.0002"	.0002"	.51"	6.22"	6" (952623)
11" - 12"	368-224	.0002"	.0002"	.51"	6.22"	6" (952623)

*Two-point contact type for very small holes

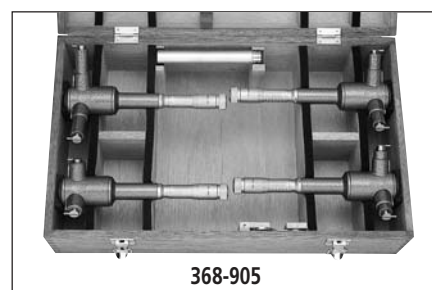
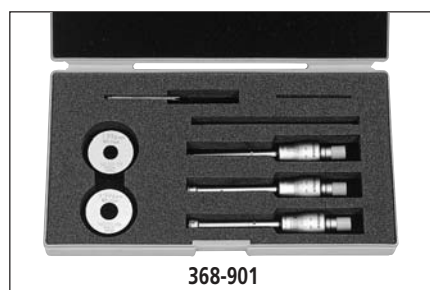
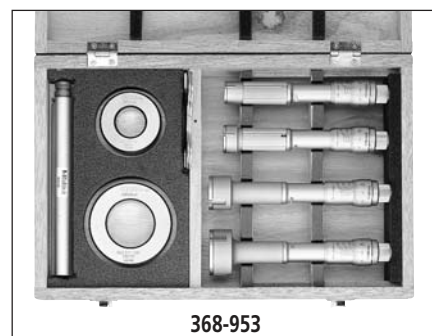


Metric Complete-unit set

Range	Order No.	Individual range	Setting Rings included	Remarks
2 - 3mm	368-906	2-2.5, 2.5-3mm	ø2.5mm	—
3 - 6mm	368-907	3-4, 4-5, 5-6mm	ø4mm, ø5mm	—
6 - 12mm	368-901	6-8, 8-10, 10-12mm	ø8mm, ø10mm	with Extension Rod
12 - 20mm	368-902	12-16, 16-20mm	ø16mm	with Extension Rod
20 - 50mm	368-953	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm	with Extension Rod
50 - 100mm	368-954	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm	with Extension Rod
100 - 200mm	368-905	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm	with Extension Rod

Inch Complete-unit set

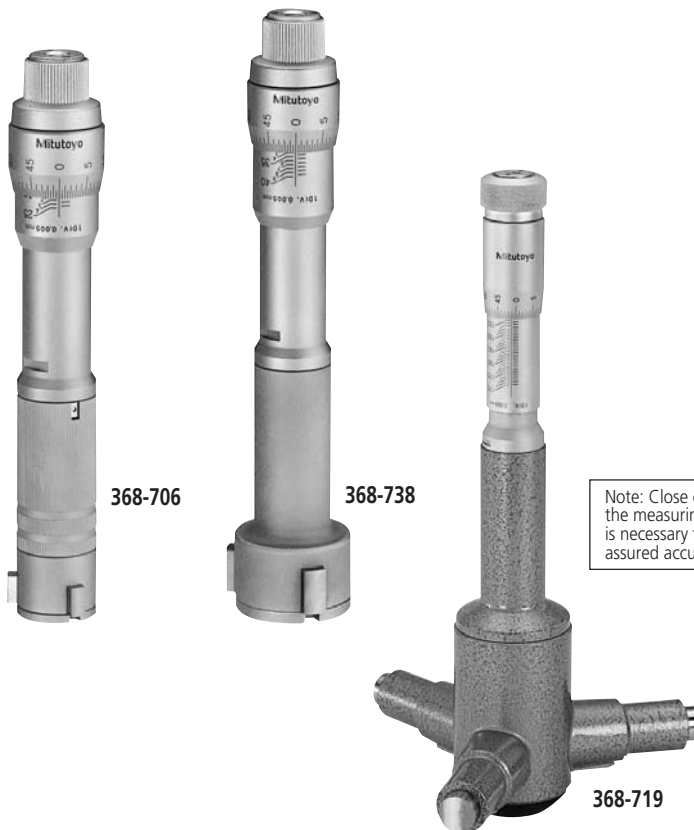
Range	Order No.	Individual range	Setting Rings included	Remarks
.08" - .12"	368-926	.08-.1", .1-.12"	.1" DIA.	—
.12" - .28"	368-927	.12-.16", .16-.2", .2-.24", .24-.28"	.16" DIA., .24" DIA.	—
.275" - .5"	368-921	.275-.35", .35-.425", .425-.5"	.35" DIA., .5" DIA.	with Extension Rod
.5" - .8"	368-922	.5-.65", .65-.8"	.65" DIA.	with Extension Rod
.8" - 2"	368-958	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.	with Extension Rod
2" - 4"	368-959	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.	with Extension Rod
4" - 8"	368-925	4-5", 5-6", 6-7", 7-8"	5" DIA., 7" DIA.	with Extension Rod



Holtest (Type II)

SERIES 368 — Three-Point Internal Micrometers

INSIDE MICROMETERS



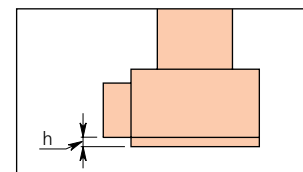
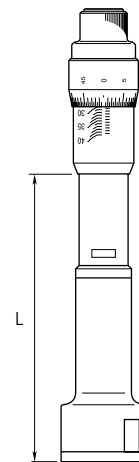
FEATURES

- The Holtests (type II) have three contact points made of alloyed steel.
- Economy price.
- The same accuracy as carbide-tipped Holtests.
- Measurement can be taken closer to the bottom of the blind bore.
- Can measure deep holes using an Extension Rod (optional).
- With Ratchet Stop for constant force.
- Setting Rings for zero point adjustment are optional.

SPECIFICATIONS

Metric		Individual				
Range	Order No.	Graduation	Accuracy	Dimension h	Dimension L	Extension Rod (optional)
12 - 16mm	368-704	0.005mm	2μm	2.2mm	80mm	150mm (952621)
16 - 20mm	368-705	0.005mm	2μm	2.2mm	80mm	150mm (952621)
20 - 25mm	368-706	0.005mm	3μm	2.2mm	90mm	150mm (952622)
25 - 30mm	368-707	0.005mm	3μm	2.2mm	90mm	150mm (952622)
30 - 40mm	368-738	0.005mm	3μm	3.4mm	98mm	150mm (952622)
40 - 50mm	368-739	0.005mm	3μm	3.4mm	98mm	150mm (952622)
50 - 63mm	368-740	0.005mm	3μm	3.4mm	105mm	150mm (952623)
62 - 75mm	368-741	0.005mm	3μm	3.4mm	105mm	150mm (952623)
75 - 88mm	368-742	0.005mm	3μm	3.4mm	105mm	150mm (952623)
87 - 100mm	368-743	0.005mm	3μm	3.4mm	105mm	150mm (952623)
100 - 125mm	368-717	0.005mm	5μm	19.6mm	158mm	150mm (952623)
125 - 150mm	368-718	0.005mm	5μm	19.6mm	158mm	150mm (952623)
150 - 175mm	368-719	0.005mm	5μm	19.6mm	158mm	150mm (952623)
175 - 200mm	368-720	0.005mm	5μm	19.6mm	158mm	150mm (952623)
200 - 225mm	368-721	0.005mm	5μm	19.6mm	158mm	150mm (952623)
225 - 250mm	368-722	0.005mm	5μm	19.6mm	158mm	150mm (952623)
250 - 275mm	368-723	0.005mm	5μm	19.6mm	158mm	150mm (952623)
275 - 300mm	368-724	0.005mm	5μm	19.6mm	158mm	150mm (952623)

Dimension



OPTIONAL ACCESSORIES

Order No.	Description
(See listing.)	Extension Rods
(See page 149.)	Setting Rings



Inch Individual

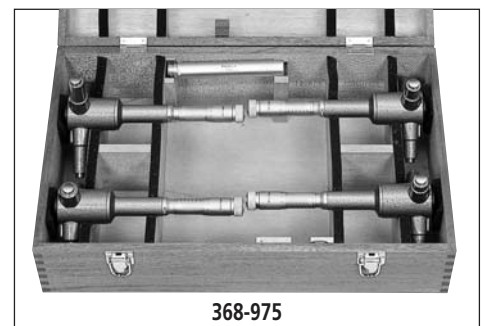
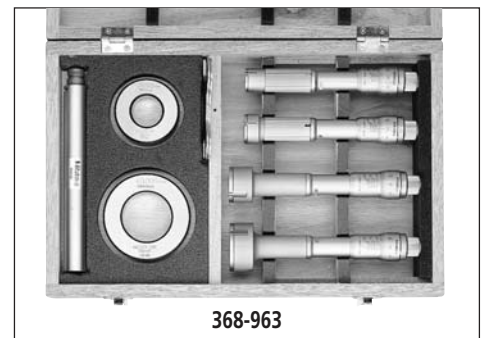
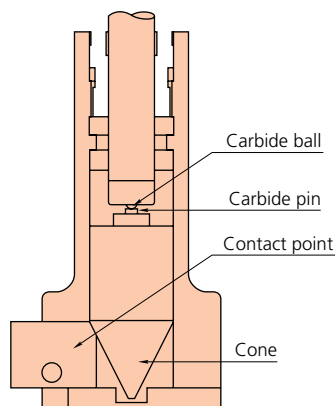
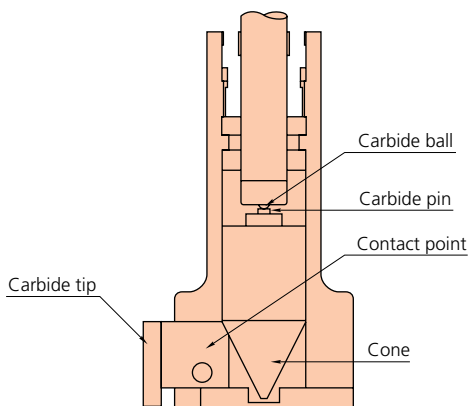
Range	Order No.	Graduation	Accuracy	Dimension h	Dimension L	Extension Rod (optional)
.5" - .65"	368-804	.0002"	.0001"	.09"	3.15"	6" (952621)
.65" - .8"	368-805	.0002"	.0001"	.09"	3.15"	6" (952621)
.8" - 1"	368-806	.0002"	.00015"	.09"	3.54"	6" (952622)
1" - 1.2"	368-807	.0002"	.00015"	.09"	3.54"	6" (952622)
1.2" - 1.6"	368-838	.0002"	.00015"	.014"	3.86"	6" (952622)
1.6" - 2"	368-839	.0002"	.00015"	.014"	3.86"	6" (952622)
2" - 2.5"	368-840	.0002"	.00015"	.014"	4.13"	6" (952623)
2.5" - 3"	368-841	.0002"	.00015"	.014"	4.13"	6" (952623)
3" - 3.5"	368-842	.0002"	.00015"	.014"	4.13"	6" (952623)
3.5" - 4"	368-843	.0002"	.00015"	.014"	4.13"	6" (952623)
4" - 5"	368-817	.0002"	.0002"	.78"	6.22"	6" (952623)
5" - 6"	368-818	.0002"	.0002"	.78"	6.22"	6" (952623)
6" - 7"	368-819	.0002"	.0002"	.78"	6.22"	6" (952623)
7" - 8"	368-820	.0002"	.0002"	.78"	6.22"	6" (952623)
8" - 9"	368-821	.0002"	.0002"	.78"	6.22"	6" (952623)
9" - 10"	368-822	.0002"	.0002"	.78"	6.22"	6" (952623)
10" - 11"	368-823	.0002"	.0002"	.78"	6.22"	6" (952623)
11" - 12"	368-824	.0002"	.0002"	.78"	6.22"	6" (952623)

Metric Complete-unit set

Range	Order No.	Individual range	Setting Rings included	Remarks
12 - 20mm	368-972	12-16, 16-20mm	ø16mm	with Extension Rod
20 - 50mm	368-963	20-25, 25-30, 30-40, 40-50mm	ø25mm, ø40mm	with Extension Rod
50 - 100mm	368-964	50-63, 62-75, 75-88, 87-100mm	ø62mm, ø87mm	with Extension Rod
100 - 200mm	368-975	100-125, 125-150, 150-175, 175-200mm	ø125mm, ø175mm	with Extension Rod

Inch Complete-unit set

Range	Order No.	Individual range	Setting Rings included	Remarks
.5" - .8"	368-982	.5-.65", .65-.8"	.65" DIA.	with Extension Rod
.8" - 2"	368-968	.8-1", 1-1.2", 1.2-1.6", 1.6-2"	1" DIA., 1.6" DIA.	with Extension Rod
2" - 4"	368-969	2-2.5", 2.5-3", 3-3.5", 3.5-4"	2.5" DIA., 3.5" DIA.	with Extension Rod
4" - 8"	368-985	4-5", 5-6", 6-7", 7-8"	5" DIA., 7" DIA.	with Extension Rod

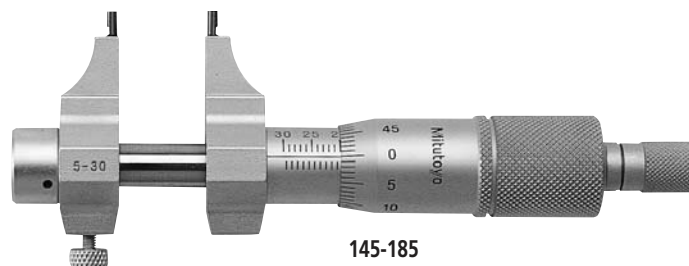


Inside Micrometers

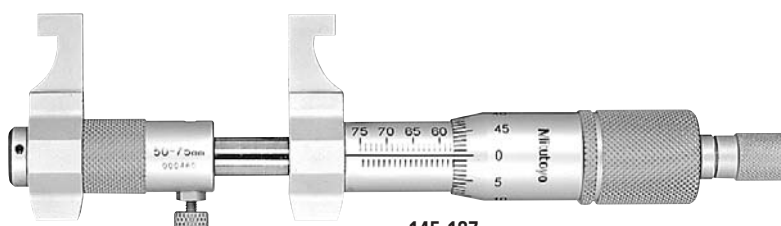
SERIES 345, 145 — Caliper Type



345-512-30



145-185



145-187

FEATURES

- Caliper type jaws are made of high-grade, tool steel.
- Satin-chrome finished.
- Locking clamp for positive locking of spindle.
- Setting Rings for origin point setting are optional.
- The 245 series is provided with a digit counter.
- A special holder is available. The holder (**300400**) and cap (**300401**) must be used with Mitutoyo Micrometer Stand or any other similar stand available in the shop.



SPECIFICATIONS

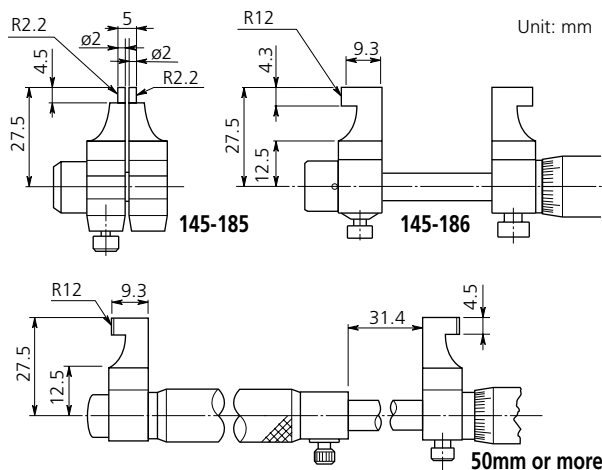
Metric	Digital model
Range	Order No.
5 - 30mm	345-511-30
25 - 50mm	345-512-30
	Resolution
	0.001mm
	Accuracy
	±5μm
	±6μm
	Excluding quantizing error

Inch/Metric	Digital model
Range	Order No.
.2" - 1.2"	345-711-30
1" - 2"	345-712-30
	Resolution
	.00005"/0.001mm
	Accuracy
	±.00025"
	±.0003"
	Excluding quantizing error

Metric	
Range	Order No.
5 - 30mm	145-185
25 - 50mm	145-186
50 - 75mm	145-187
75 - 100mm	145-188
100 - 125mm	145-189
125 - 150mm	145-190
150 - 175mm	145-191
175 - 200mm	145-192
200 - 225mm	145-217
225 - 250mm	145-218
250 - 275mm	145-219
275 - 300mm	145-220
	Graduation
	0.01mm
	Accuracy
	±5μm
	±6μm
	±7μm
	±8μm
	±9μm
	±9μm
	±10μm
	±10μm
	±11μm
	±11μm
	±12μm
	±12μm

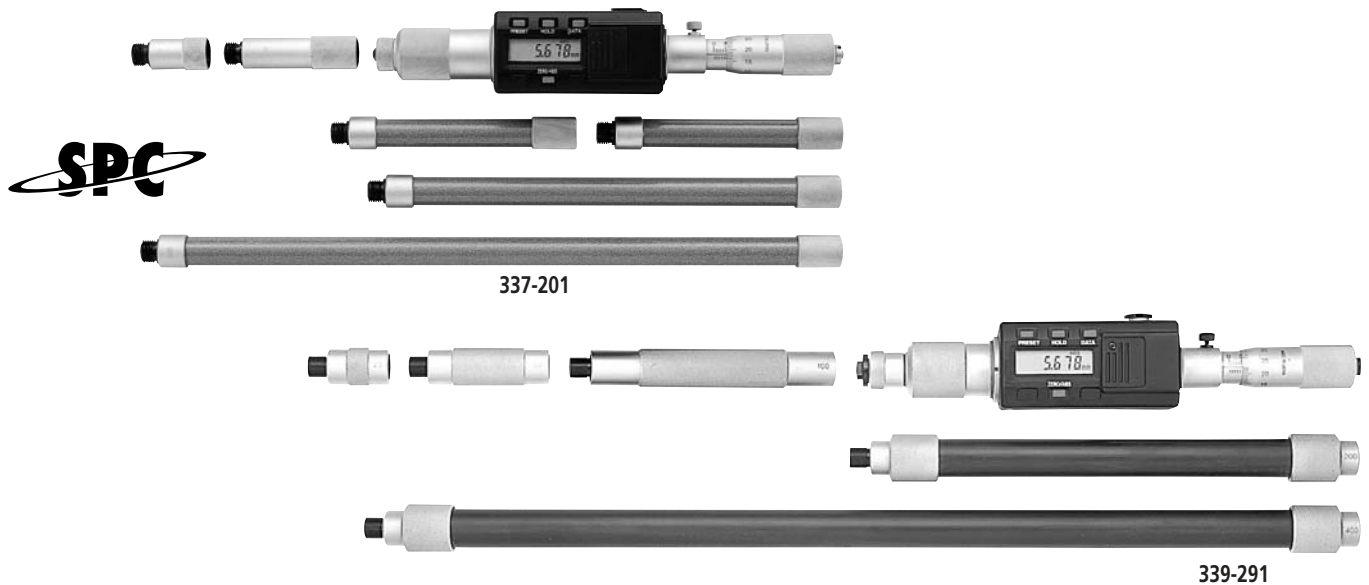
Inch	
Range	Order No.
.2" - 1.2"	145-193
1" - 2"	145-194
2" - 3"	145-195
3" - 4"	145-196
6" - 7"	145-199
	Graduation
	.001"
	Accuracy
	±.00025"
	±.0003"
	±.00035"
	±.0004"
	±.0005"

Dimensions



Digimatic Tubular Inside Micrometers

SERIES 337 — Extension Rod Type / SERIES 339 — Extension Pipe Type



FEATURES

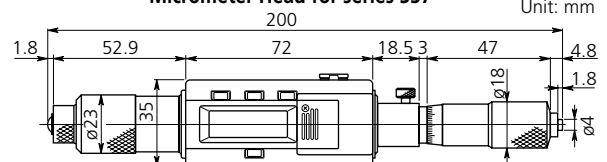
- Wide range of ID measurements by combining extension rods (pipes) and anvils with the micrometer head.
- Functions available: Presetting, Zero-setting, Inch/mm conversion (in/mm model only), Data hold, Error alarm, Data output.
- The 339 series uses highly-durable extension pipes.
- Carbide-tipped measuring faces (Series 339).

OPTIONAL ACCESSORIES

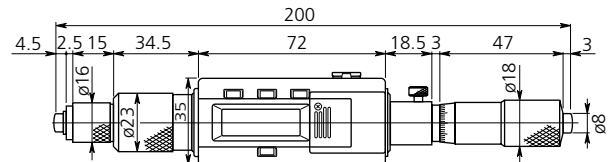
Order No.	Description
937387	SPC cable (1m)
965013	SPC cable (2m)
(See page 149.)	Setting Rings

Dimensions

Micrometer Head for series 337



Micrometer Head for series 339



SPECIFICATIONS

Accuracy

- $\pm(3+n+L/50)\mu\text{m}$ [$\pm(.00015+.00005n+.00005 (L/2))$ "]*

*n=Number of rod, L=Maximum measuring length (mm) [(inch)], Fraction rounded up, Excluding quantizing error (337 series)

Metric	Extension rod type			
Range	Order No.	Resolution	Travel of micrometer head	Extension rods
200 - 1000mm	337-201	0.001mm	25mm	25mm, 50mm, 100mm (2 pcs.), 200mm, 300mm
200 - 1500mm	337-202	0.001mm	25mm	25mm, 50mm, 100mm, 200mm, 300mm (3 pcs.)

Inch/Metric	Extension rod type			
Range	Order No.	Resolution	Travel of micrometer head	Extension rods
8" - 40"	337-203	.0001"/0.001mm	1"	1", 2", 4" (2 pcs.), 8", 16"
8" - 60"	337-204	.0001"/0.001mm	1"	1", 2", 4", 8", 12" (3 pcs.)

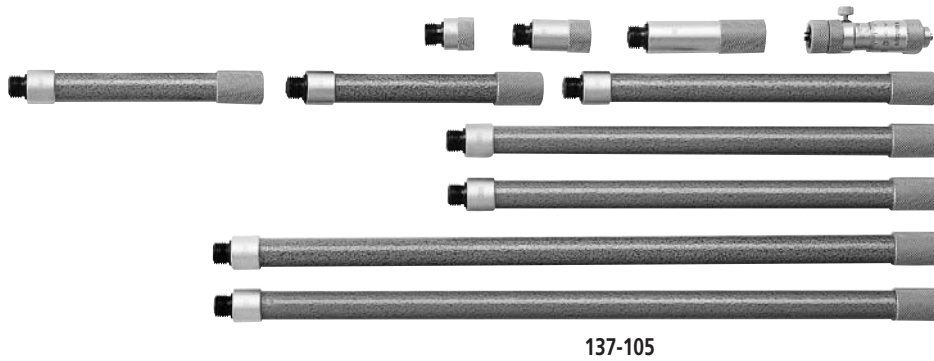
Metric	Extension pipe type			
Range	Order No.	Resolution	Travel of micrometer head	Extension pipes
200 - 1000mm	339-291	0.001mm	25mm	25mm, 50mm, 100mm, 200mm, 400mm
200 - 2000mm	339-292	0.001mm	25mm	25mm, 50mm, 100mm, 200mm (2 pcs.), 400mm (3 pcs.)

Inch/Metric	Extension pipe type			
Range	Order No.	Resolution	Travel of micrometer head	Extension pipes
8" - 40"	339-293	.0001"/0.001mm	1"	1", 2", 4", 8", 16"
8" - 80"	339-294	.0001"/0.001mm	1"	1", 2", 4", 8" (2 pcs.), 16" (3 pcs.)



Tubular Inside Micrometers

SERIES 137 — Extension Rod Type, Up to 1500mm / SERIES 139 — Extension Pipe Type, Up to 2100mm / SERIES 140 — Extension Pipe Type, Up to 5000mm



137-105

Extension rod type



139-177

Extension pip type

FEATURES

- Wide range of ID measurements by combining extension rods (pipes) and anvils with the micrometer head.
- Carbide-tipped measuring faces. (Economy models which have not carbide tips are also available on the 137 series.)
- The 139 series uses highly-durable extension pipes.
- The 140 series uses large-diameter extension pipes.

SPECIFICATIONS

Accuracy

- Series 137, 139:
 $\pm(3+n+L/50)\mu\text{m} [\pm(.00015+.00005n+.00005 (L/2))"]^*$
 - Series 140:
 $\pm(7+n+L/50)\mu\text{m} [\pm(.0003+.00005n+.00005 (L/2))"]^*$
- *n=Number of rod, L=Maximum measuring length (mm) [(inch)], Fraction rounded up

Metric		Extension rod type			
Range	Order No. Plain faces	Order No. Carbide-tipped faces	Graduation	Travel of micrometer head	Extension rods
50 - 63mm	137-011	137-013	0.01mm	13mm	—
50 - 150mm	137-201	137-206	0.01mm	13mm	13mm, 25mm, 50mm
50 - 300mm	137-202	137-207	0.01mm	13mm	13mm, 25mm, 50mm (2 pcs.), 100mm
50 - 500mm	137-203	137-208	0.01mm	13mm	13mm, 25mm, 50mm (2 pcs.), 100mm, 200mm
50 - 1000mm	137-204	137-209	0.01mm	13mm	13mm, 25mm, 50mm (2 pcs.), 100mm, 200mm (2 pcs.), 300mm
50 - 1500mm	137-205	137-210	0.01mm	13mm	13mm, 25mm, 50mm (2 pcs.), 100mm, 200mm (3 pcs.), 300mm (2 pcs.)

Inch		Extension rod type			
Range	Order No. Plain faces	Order No. Carbide-tipped faces	Graduation	Travel of micrometer head	Extension rods
2" - 2.5"	137-012	137-014	.001"	.5"	—
2" - 6"	137-211	137-216	.001"	.5"	.5", 1", 2"
2" - 12"	137-212	137-217	.001"	.5"	.5", 1", 2" (2 pcs.), 4"
2" - 20"	137-213	137-218	.001"	.5"	.5", 1", 2" (2 pcs.), 4", 8"
2" - 40"	137-214	137-219	.001"	.5"	.5", 1", 2" (2 pcs.), 4", 8" (2 pcs.), 12"
2" - 60"	137-215	137-220	.001"	.5"	.5", 1", 2", 4" (2 pcs.), 6", 8" (3 pcs.), 12" (2 pcs.)



Metric Extension pipe type

Range	Order No.	Graduation	Travel of micrometer head	Extension pipes
100 - 125mm	139-001	0.01mm	25mm	—
100 - 500mm	139-173	0.01mm	25mm	25mm, 50mm, 100mm, 200mm
100 - 900mm	139-174	0.01mm	25mm	25mm, 50mm, 100mm, 200mm, 400mm
100 - 1300mm	139-175	0.01mm	25mm	25mm, 50mm, 100mm, 200mm, 400mm (2 pcs.)
100 - 1700mm	139-176	0.01mm	25mm	25mm, 50mm, 100mm, 200mm, 400mm (3 pcs.)
100 - 2100mm	139-177	0.01mm	25mm	25mm, 50mm, 100mm, 200mm, 400mm (4 pcs.)

Inch Extension pipe type

Range	Order No.	Graduation	Travel of micrometer head	Extension pipes
4" - 5"	139-002	.001"	1"	—
4" - 20"	139-178	.001"	1"	1", 2", 4", 8"
4" - 36"	139-179	.001"	1"	1", 2", 4", 8", 16"
4" - 52"	139-180	.001"	1"	1", 2", 4", 8", 16" (2 pcs.)
4" - 68"	139-181	.001"	1"	1", 2", 4", 8", 16" (3 pcs.)
4" - 84"	139-182	.001"	1"	1", 2", 4", 8", 16" (4 pcs.)

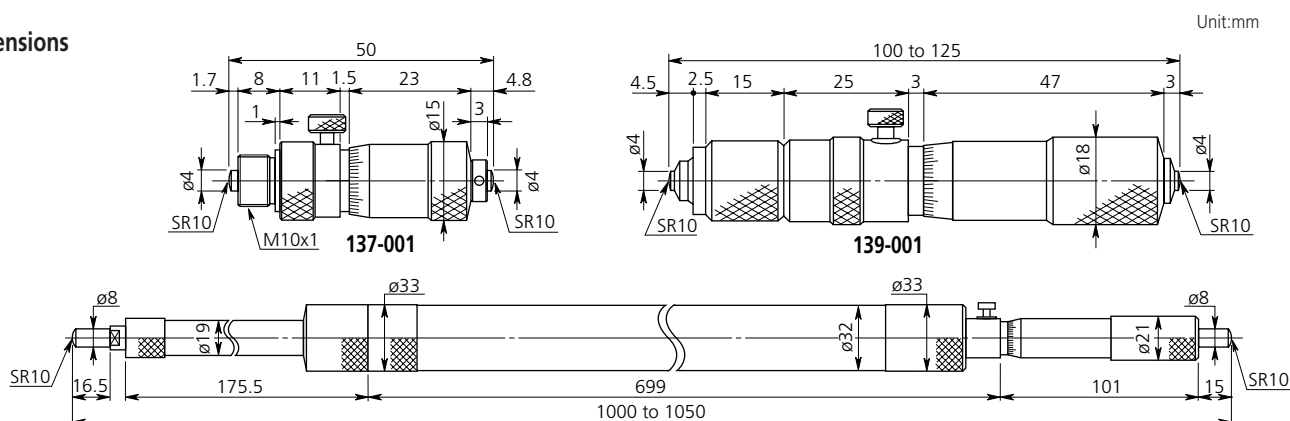
Metric Extension pipe type

Range	Order No.	Graduation	Travel of micrometer head	Extension pipes
1000 - 2000mm	140-157	0.01mm	50mm	50mm, 100mm (2 pcs.), 200mm, 500mm
1000 - 3000mm	140-158	0.01mm	50mm	50mm, 100mm (2 pcs.), 200mm, 500mm, 1000mm
1000 - 4000mm	140-159	0.01mm	50mm	50mm, 100mm (2 pcs.), 200mm, 500mm, 1000mm (2 pcs.)
1000 - 5000mm	140-160	0.01mm	50mm	50mm, 100mm (2 pcs.), 200mm, 500mm, 1000mm (3 pcs.)

Inch Extension pipe type

Range	Order No.	Graduation	Travel of micrometer head	Extension pipes
40" - 80"	140-161	.001"	2"	2", 4" (2 pcs.), 8", 20"
40" - 120"	140-162	.001"	2"	2", 4" (2 pcs.), 8", 20", 40"
40" - 160"	140-163	.001"	2"	2", 4" (2 pcs.), 8", 20", 40" (2 pcs.)
40" - 200"	140-164	.001"	2"	2", 4" (2 pcs.), 8", 20", 40" (3 pcs.)

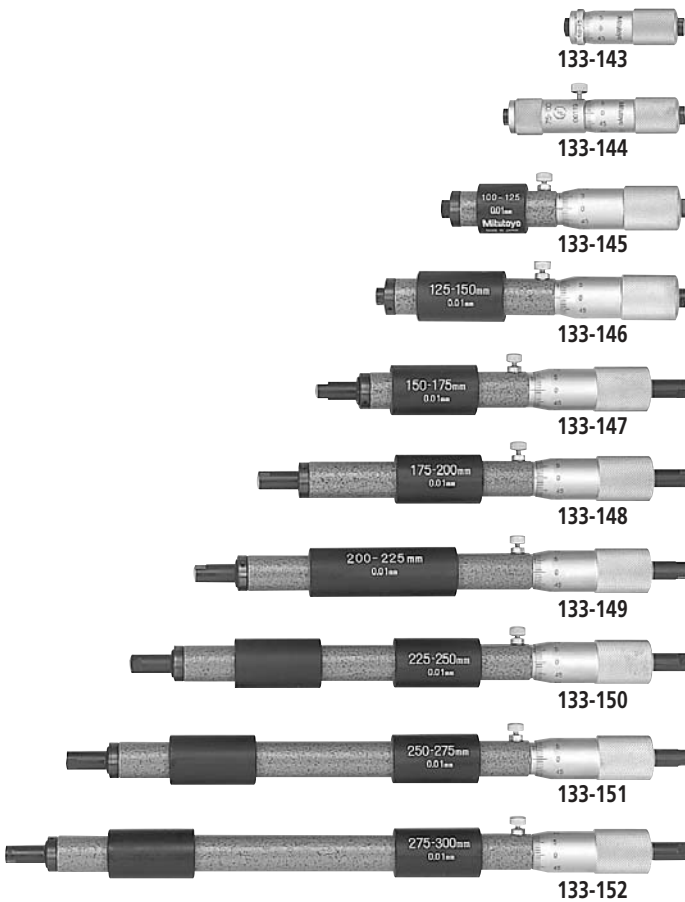
Dimensions



Tubular Inside Micrometers

SERIES 133 — Single Rod Type

INSIDE MICROMETERS



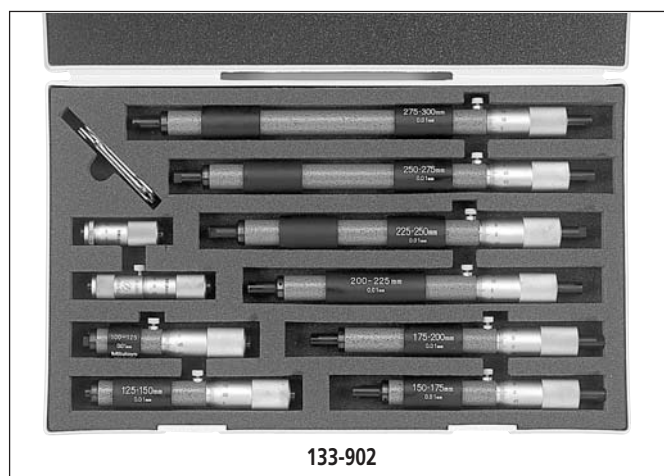
FEATURES

- With locking clamp.
- Zero point can be readjusted by twisting the micrometer head sleeve. A key wrench is supplied.
- Clear, crisp graduations on the satin chrome finished micrometer head.
- Carbide-tipped measuring faces.
- The 233 series is provided with a digit counter.

SPECIFICATIONS

Metric		Individual	
Range	Order No.	Graduation	Accuracy
50 - 75mm	133-143	0.01mm	±3μm
75 - 100mm	133-144	0.01mm	±4μm
100 - 125mm	133-145	0.01mm	±5μm
125 - 150mm	133-146	0.01mm	±5μm
150 - 175mm	133-147	0.01mm	±5μm
175 - 200mm	133-148	0.01mm	±5μm
200 - 225mm	133-149	0.01mm	±5μm
225 - 250mm	133-150	0.01mm	±6μm
250 - 275mm	133-151	0.01mm	±6μm
275 - 300mm	133-152	0.01mm	±6μm
300 - 325mm	133-153	0.01mm	±7μm
325 - 350mm	133-154	0.01mm	±7μm
350 - 375mm	133-155	0.01mm	±7μm
375 - 400mm	133-156	0.01mm	±8μm
400 - 425mm	133-157	0.01mm	±8μm
425 - 450mm	133-158	0.01mm	±8μm
450 - 475mm	133-159	0.01mm	±9μm
475 - 500mm	133-160	0.01mm	±9μm
500 - 525mm	133-161	0.01mm	±9μm
525 - 550mm	133-162	0.01mm	±10μm
550 - 575mm	133-163	0.01mm	±10μm
575 - 600mm	133-164	0.01mm	±10μm
600 - 625mm	133-165	0.01mm	±11μm
625 - 650mm	133-166	0.01mm	±11μm
650 - 675mm	133-167	0.01mm	±11μm
675 - 700mm	133-168	0.01mm	±12μm
700 - 725mm	133-169	0.01mm	±12μm
725 - 750mm	133-170	0.01mm	±12μm
750 - 775mm	133-171	0.01mm	±13μm
775 - 800mm	133-172	0.01mm	±13μm
800 - 825mm	133-173	0.01mm	±13μm
825 - 850mm	133-174	0.01mm	±14μm
850 - 875mm	133-175	0.01mm	±14μm
875 - 900mm	133-176	0.01mm	±14μm
900 - 925mm	133-177	0.01mm	±15μm
925 - 950mm	133-178	0.01mm	±15μm
950 - 975mm	133-179	0.01mm	±15μm
975 - 1000mm	133-180	0.01mm	±16μm

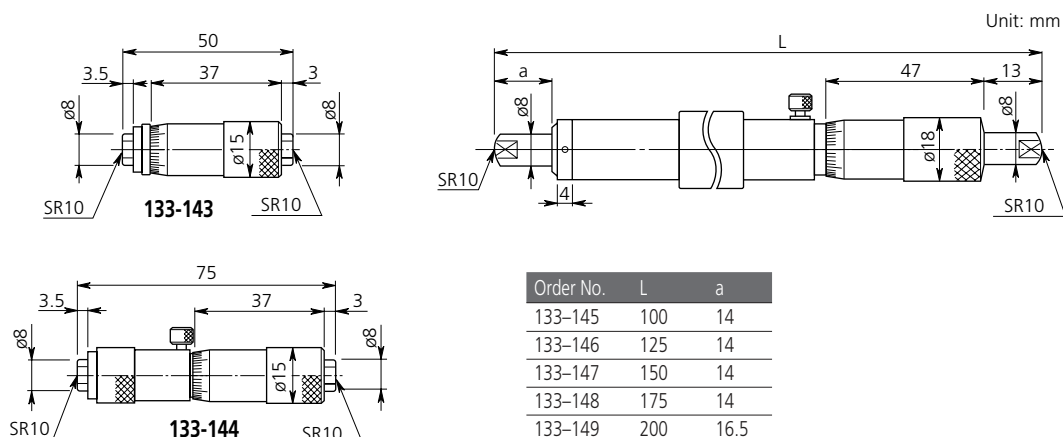
Inch		Individual	
Range	Order No.	Graduation	Accuracy
2" - 3"	133-223	.001"	±.00015"
3" - 4"	133-224	.001"	±.0002"
4" - 5"	133-225	.001"	±.00025"
5" - 6"	133-226	.001"	±.00025"
6" - 7"	133-227	.001"	±.00025"
7" - 8"	133-228	.001"	±.00025"
8" - 9"	133-229	.001"	±.00025"
9" - 10"	133-230	.001"	±.0003"
10" - 11"	133-231	.001"	±.0003"
11" - 12"	133-232	.001"	±.0003"



Metric Micrometer set		
Range	Order No.	Assortment of micrometers
50 - 150mm (4 mikes/set)	133-901	133-143, 133-144, 133-145, 133-146 - with fitted case
50 - 300mm (10 mikes/set)	133-902	133-143, 133-144, 133-145, 133-146, 133-147, 133-148, 133-149, 133-150, 133-151, 133-152 - with fitted case

Inch Micrometer set		
Range	Order No.	Assortment of micrometers
2" - 6" (4 mikes/set)	133-903	133-223, 133-224, 133-225, 133-226 - with fitted case
2" - 12" (10 mikes/set)	133-904	133-223, 133-224, 133-225, 133-226, 133-227, 133-228, 133-229, 133-230, 133-231, 133-232 - with fitted case

Dimensions



Note: The dimensions change on the Digit Tubular Inside Micrometer.

Inside Micrometers

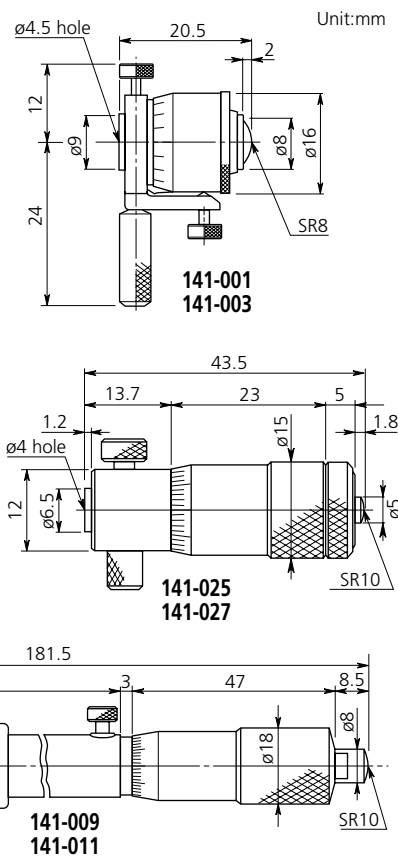
SERIES 141 — Interchangeable Rod Type



141-101



Dimensions



FEATURES

- Wide range of ID measurements with interchangeable rods.
- Each interchangeable rod is marked with its measuring range.
- The sizes of interchangeable rods can be adjusted with spacing collars.
- Both micrometer head and furnished rods are satin-chrome finished throughout.

Accuracy

- $\pm(6+L/50)\mu\text{m}$
 $[\pm(.0003+.00005 (L/2))"]^*$

*L=Maximum measuring length (mm) [(inch)], Fraction rounded up

SPECIFICATIONS

Metric

Range	Order No. Plain faces	Order No. Carbide-tipped faces	Graduation	Travel of micrometer head	Remarks
25 - 32mm	141-001	141-003	0.01mm	7mm	—
25 - 50mm	141-101	141-103	0.01mm	7mm	with 2 rods
50 - 63mm	141-025	141-027	0.01mm	13mm	—
50 - 200mm	141-205	141-211	0.01mm	13mm	with 3 rods
50 - 300mm	141-206	141-212	0.01mm	13mm	with 5 rods
200 - 225mm	141-009	141-011	0.01mm	25mm	—

Inch

Range	Order No. Plain faces	Order No. Carbide-tipped faces	Graduation	Travel of micrometer head	Remarks
1" - 1.25"	141-002	141-004	.001"	.25"	—
1" - 2"	141-102	141-104	.001"	.25"	with 2 rods
2" - 2.5"	141-026	141-028	.001"	.5"	—
2" - 8"	141-208	141-214	.001"	.5"	with 3 rods
2" - 12"	141-233	141-215	.001"	.5"	with 5 rods
8" - 9"	141-010	141-012	.001"	1"	—

Setting Rings

SERIES 177 — Accessories for Inside Micrometers, Holtest and Dial Bore Gages



SPECIFICATION

Setting Rings

Metric			
Size	Order No.	Accuracy	Mass
1mm	177-220	$\pm 1.5\mu\text{m}$	12g
1.1mm	177-222	$\pm 1.5\mu\text{m}$	12g
1.2mm	177-225	$\pm 1.5\mu\text{m}$	12g
1.3mm	177-227	$\pm 1.5\mu\text{m}$	12g
1.4mm	177-230	$\pm 1.5\mu\text{m}$	12g
1.75mm	177-236	$\pm 1.5\mu\text{m}$	27g
2mm	177-239	$\pm 1.5\mu\text{m}$	27g
2.25mm	177-242	$\pm 1.5\mu\text{m}$	27g
2.5mm	177-208	$\pm 1.5\mu\text{m}$	27g
2.75mm	177-246	$\pm 1.5\mu\text{m}$	27g
3mm	177-248	$\pm 1.5\mu\text{m}$	27g
3.25mm	177-250	$\pm 1.5\mu\text{m}$	27g
3.5mm	177-252	$\pm 1.5\mu\text{m}$	30g
3.75mm	177-255	$\pm 1.5\mu\text{m}$	30g
4mm	177-204	$\pm 1.5\mu\text{m}$	30g
4.5mm	177-257	$\pm 1.5\mu\text{m}$	30g
5mm	177-205	$\pm 1.5\mu\text{m}$	30g
5.5mm	177-263	$\pm 1.5\mu\text{m}$	30g
6mm	177-267	$\pm 1.5\mu\text{m}$	30g
6.5mm	177-271	$\pm 1.5\mu\text{m}$	30g
7mm	177-275	$\pm 1.5\mu\text{m}$	30g
8mm	177-125	$\pm 1.5\mu\text{m}$	60g
10mm	177-126	$\pm 1.5\mu\text{m}$	58g
12mm	177-284	$\pm 1.5\mu\text{m}$	62g
14mm	177-132	$\pm 1.5\mu\text{m}$	110g
16mm	177-177	$\pm 1.5\mu\text{m}$	110g
17mm	177-133	$\pm 1.5\mu\text{m}$	190g
20mm	177-286	$\pm 1.5\mu\text{m}$	110g
25mm	177-139	$\pm 1.5\mu\text{m}$	204g
30mm	177-288	$\pm 1.5\mu\text{m}$	400g
35mm	177-140	$\pm 1.5\mu\text{m}$	364g
40mm	177-290	$\pm 1.5\mu\text{m}$	330g
45mm	177-178	$\pm 1.5\mu\text{m}$	490g
50mm	177-146	$\pm 1.5\mu\text{m}$	580g
60mm	177-292	$\pm 1.5\mu\text{m}$	1.14kg
62mm	177-314	$\pm 1.5\mu\text{m}$	1.05kg
70mm	177-147	$\pm 1.5\mu\text{m}$	0.93kg
75mm	177-316	$\pm 1.5\mu\text{m}$	1.54kg
80mm	177-294	$\pm 1.5\mu\text{m}$	1.42kg
87mm	177-318	$\pm 1.5\mu\text{m}$	1.85kg
90mm	177-148	$\pm 1.5\mu\text{m}$	1.75kg
100mm	177-296	$\pm 1.5\mu\text{m}$	2.38kg
125mm	177-298	$\pm 2.5\mu\text{m}$	5.5kg
150mm	177-300	$\pm 2.5\mu\text{m}$	6.1kg
175mm	177-302	$\pm 2.5\mu\text{m}$	6.7kg
200mm	177-304	$\pm 2.5\mu\text{m}$	10.4kg
225mm	177-306	$\pm 2.5\mu\text{m}$	11.4kg
250mm	177-308	$\pm 2.5\mu\text{m}$	12.1kg
275mm	177-310	$\pm 2.5\mu\text{m}$	17kg
300mm	177-312	$\pm 2.5\mu\text{m}$	17.8kg

Inch			
Size	Order No.	Accuracy	Mass
.1"	177-209	$\pm .00004"$	.059lbs.
.16"	177-206	$\pm .00004"$	.057lbs.
.24"	177-207	$\pm .00004"$	.055lbs.
.275"	177-281	$\pm .00004"$	.055lbs.
.35"	177-179	$\pm .00004"$	.127lbs.
.425"	177-293	$\pm .00004"$	.123lbs.
.50"	177-180	$\pm .00004"$	.116lbs.
.60"	177-181	$\pm .00004"$	.162lbs.
.65"	177-182	$\pm .00004"$	.242lbs.
.70"	177-183	$\pm .00004"$	.242lbs.
.80"	177-287	$\pm .00004"$	.220lbs.
1.0"	177-184	$\pm .00004"$	.440lbs.
1.2"	177-289	$\pm .00004"$	.836lbs.
1.4"	177-185	$\pm .00004"$	.770lbs.
1.6"	177-291	$\pm .00004"$	.682lbs.
1.8"	177-186	$\pm .00004"$	1.034lbs.
2.0"	177-187	$\pm .00004"$	1.254lbs.
2.4"	177-293	$\pm .00004"$	2.420lbs.
2.5"	177-315	$\pm .00006"$	2.200lbs.
2.8"	177-188	$\pm .00006"$	2.024lbs.
3.0"	177-317	$\pm .00006"$	3.300lbs.
3.2"	177-295	$\pm .00006"$	3.080lbs.
3.5"	177-319	$\pm .00006"$	3.960lbs.
3.6"	177-189	$\pm .00006"$	3.740lbs.
4.0"	177-297	$\pm .00008"$	5.060lbs.
5.0"	177-299	$\pm .00008"$	11.660lbs.
6.0"	177-301	$\pm .00008"$	12.980lbs.
7.0"	177-303	$\pm .00010"$	14.740lbs.
8.0"	177-305	$\pm .00010"$	22.000lbs.
9.0"	177-307	$\pm .00010"$	23.980lbs.
10.0"	177-309	$\pm .00012"$	26.180lbs.
11.0"	177-311	$\pm .00012"$	35.860lbs.
12.0"	177-313	$\pm .00012"$	37.840lbs.

Ceramic setting rings



FEATURES

- Used for quick zero adjustment of dial bore gages, Holtest, and inside micrometers.
- Actual inside diameter is marked on each ring.
- Ceramic Setting Rings are also available. No more anticorrosion treatment is required when handling Ceramic Setting Rings normally, resulting in simple maintenance and storage.

Technical Data

Tolerance between the nominal size and the actual diameter:

$\pm 0.01\text{mm}$ for $\varnothing 1 - 45\text{mm}$ setting rings
 $\pm 0.02\text{mm}$ for $\varnothing 50 - 300\text{mm}$ setting rings
 $\pm .0004"$ for .1" - 1.8" DIA. setting rings
 $\pm .0008"$ for 2" - 12" DIA. setting rings

Cylindricity:

1.0 μm for $\varnothing 1 - 60\text{mm}$ setting rings
1.5 μm for $\varnothing 62 - 90\text{mm}$ setting rings
2.0 μm for $\varnothing 100 - 150\text{mm}$ setting rings
2.5 μm for $\varnothing 175 - 225\text{mm}$ setting rings
3.0 μm for $\varnothing 250 - 300\text{mm}$ setting rings
.00004" for .1" - 2.4" DIA. setting rings
.00006" for 2.5" - 3.6" DIA. setting rings
.00008" for 4" - 6" DIA. setting rings
.00010" for 7" - 9" DIA. setting rings
.00012" for 10" - 12" DIA. setting rings

Ceramic Setting Rings

Metric			
Size	Order No.	Accuracy	Mass
6mm	177-420	$\pm 1.5\mu\text{m}$	19g
8mm	177-423	$\pm 1.5\mu\text{m}$	45g
10mm	177-424	$\pm 1.5\mu\text{m}$	43g
12mm	177-425	$\pm 1.5\mu\text{m}$	41g
16mm	177-427	$\pm 1.5\mu\text{m}$	82g
20mm	177-429	$\pm 1.5\mu\text{m}$	75g
25mm	177-430	$\pm 1.5\mu\text{m}$	152g
30mm	177-431	$\pm 1.5\mu\text{m}$	288g
35mm	177-432	$\pm 1.5\mu\text{m}$	266g
40mm	177-433	$\pm 1.5\mu\text{m}$	239g
45mm	177-434	$\pm 1.5\mu\text{m}$	362g

Inch			
Size	Order No.	Accuracy	Mass
.275"	177-522	$\pm .00006"$	.042lbs.
.35"	177-523	$\pm .00006"$	.097lbs.
.425"	177-524	$\pm .00006"$	.092lbs.
.5"	177-525	$\pm .00006"$	.088lbs.
.65"	177-527	$\pm .00006"$	.178lbs.
.8"	177-529	$\pm .00006"$	.165lbs.
1"	177-530	$\pm .00006"$	.332lbs.
1.2"	177-531	$\pm .00006"$	.629lbs.
1.4"	177-532	$\pm .00006"$	.577lbs.
1.6"	177-533	$\pm .00006"$	.519lbs.
1.8"	177-534	$\pm .00006"$	.788lbs.

