

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)



Micrometers	Pages 88 — 133
Inside Micrometers	Pages 134 — 149
Micrometer Heads	Pages 150 — 167

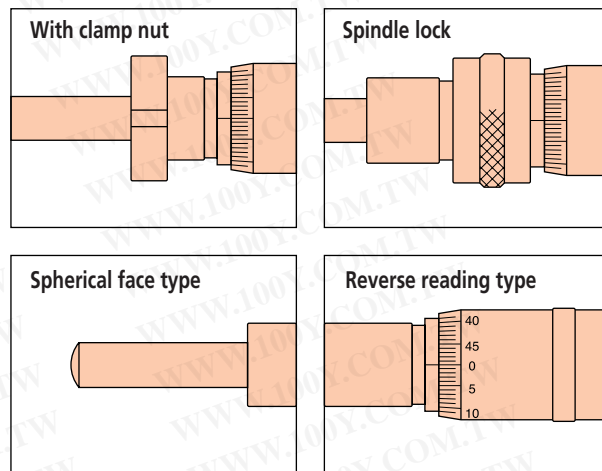
Micrometer Head Selection Guide

The table below provides an outline of Mitutoyo micrometer heads for each series so you can locate the pages to refer to select the micrometer head most appropriate to your specific application. When selecting consider the following points:

- Dimensions
- Graduation/resolution and accuracy
- With or without spindle lock
- With or without clamping nut
- Flat or spherical measuring face
- Normal or reverse reading
- With or without Ratchet Stop

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Variety of Specifications



SELECTION TABLE

Range		Series	Spindle	Remarks	Page
0 - 1mm (.02")	Mechanical	110	Non-rotating	Differential screw translator (extra-fine feeding) type	151
0 - 2.5mm (.05")	Mechanical	110	Non-rotating	Differential screw translator (extra-fine feeding) type	151
0 - 5mm (.2")	Mechanical	148	Rotating	—	152
0 - 6.5mm (.25")	Mechanical	148	Rotating	—	152
		148	Rotating	Large thimble diameter for easy reading	153
		148	Rotating	Large thimble diameter for easy reading (Fine feeding type)	153
0 - 10mm (.4")	Mechanical	152	Rotating	Fine reading type	159
0 - 13mm (.5")	Mechanical	148	Rotating	—	154
		148	Rotating	Fine feeding type	154
		148	Rotating	Zero-adjustable thimble type	155
		148	Rotating	Large thimble diameter for easy reading	153
		110	Rotating	Fine adjustment with non-rotating spindle	151
0 - 15mm (.5")	Mechanical	149	Rotating	—	156
		153	Non-rotating	—	161
		152	Rotating	Quick feeding type	159
0 - 25mm (1")	Digimatic	164	Non-rotating	—	163
		350	Rotating	Compact type	164
		227	Non-rotating	with constant and adjustable fine-loading device	162
	Mechanical	150	Rotating	—	157
		153	Non-rotating	—	161
		153	Non-rotating	Ultra-fine reading type	161
		151	Rotating	Heavy duty type	158
		152	Rotating	Quick feeding type	159
		152	Rotating	Fine reading type	159
		152	Non-rotating	for XY-stage	160
0 - 50mm (2")	Digimatic	164	Non-rotating	—	163
	Mechanical	151	Rotating	Heavy duty type	158
		152	Rotating	Quick feeding type	159
		152	Rotating	Fine reading type	159
		197	Non-rotating	Quick feeding type	162



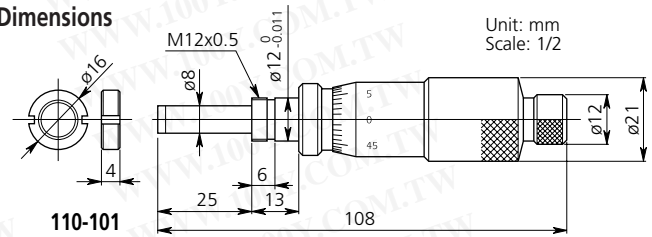
Micrometer Heads

SERIES 110 — Differential Screw Translator (Extra-Fine Feeding) Type

FEATURES

- Differential movements of spindle threads and nuts allow fine spindle feeding (0.05mm per thimble revolution), resulting in high resolution measurements.
- Carbide-tipped measuring face.
- Non-rotating spindle.

Dimensions



SPECIFICATIONS

Metric		Range	Order No. (plain stem) w/o spindle lock	Order No. (w/ clamp nut) w/ spindle lock	Graduation	Accuracy (): Accuracy in narrow range	Remarks
0 - 1mm	—	—	110-105	—	0.001mm	±3μm (±1.5μm/0.05mm)	—
	—	—	110-107	—	0.001mm	±3μm (±1.5μm/0.05mm)	Spherical face type
	—	—	110-106	—	0.0001mm	±3μm (±1.5μm/0.05mm)	—
	—	—	110-108	—	0.0001mm	±3μm (±1.5μm/0.05mm)	Spherical face type
0 - 2.5mm	—	—	110-101	—	0.001mm	±5μm (±1.5μm/0.05mm)	—
	—	—	110-102	—	0.0001mm	±5μm (±1.5μm/0.05mm)	—

Inch

Inch		Range	Order No. (plain stem) w/o spindle lock	Order No. (w/ clamp nut) w/ spindle lock	Graduation	Accuracy (): Accuracy in narrow range	Remarks
0 - .02"	—	—	110-115	—	.00005"	±.00012" (±.00006"/.00125")	—
	—	—	110-117	—	.00005"	±.00012" (±.00006"/.00125")	Spherical face type
	—	—	110-116	—	.000005"	±.00012" (±.00006"/.00125")	—
	—	—	110-118	—	.000005"	±.00012" (±.00006"/.00125")	Spherical face type
0 - .05"	—	—	110-111	—	.00005"	±.0002" (±.00006"/.00125")	—
	—	—	110-112	—	.000005"	±.0002" (±.00006"/.00125")	—

Note: 0.0001mm (.000005") reading is obtained with vernier.

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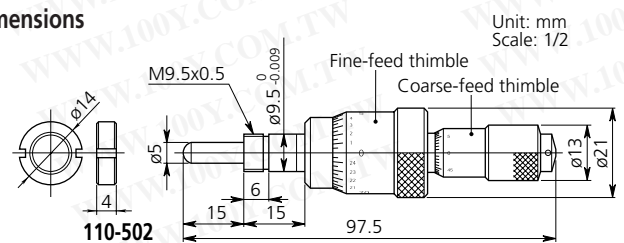
Micrometer Heads

SERIES 110 — with Fine Adjustment

FEATURES

- Double-thimble mechanism allows coarse and fine spindle feeding to be performed independently.
- Fine adjustment: 0.2mm (.006")
- Fine feeding with non-rotating spindle.

Dimensions



SPECIFICATIONS

Metric		Range	Order No. (plain stem) w/o spindle lock	Order No. (w/ clamp nut) w/ spindle lock	Graduation	Accuracy (): Accuracy in narrow range	Remarks
0 - 13mm	—	—	110-502	—	0.0005mm	±3μm (±1.5μm/0.025mm)	Spherical face type

Inch

Inch		Range	Order No. (plain stem) w/o spindle lock	Order No. (w/ clamp nut) w/ spindle lock	Graduation	Accuracy (): Accuracy in narrow range	Remarks
0 - .5"	—	—	110-504	—	.00002"	±.00012" (±.00006"/.001")	Spherical face type



Micrometer Heads

SERIES 148



148-215

148-203

148-201

FEATURES

- Miniature micrometer heads for ease of incorporating into machines.

SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 5mm	148-215	—	148-216	—	0.02mm	±5μm	Spherical face type
0 - 6.5mm	148-201	—	148-203	—	0.01mm	±5μm	—
	148-205	—	148-207	—	0.01mm	±5μm	Spherical face type
	148-209	—	148-211	—	0.01mm	±5μm	Reverse reading type

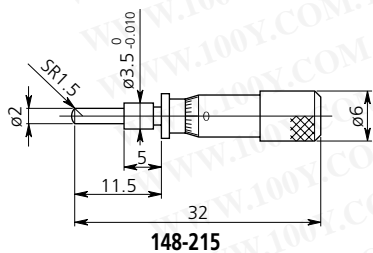
Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - .2"	148-217	—	148-218	—	.001"	±.0002"	Spherical face type
0 - .25"	148-202	—	148-204	—	.001"	±.0002"	—
	148-206	—	148-208	—	.001"	±.0002"	Spherical face type
	148-210	—	148-212	—	.001"	±.0002"	Reverse reading type

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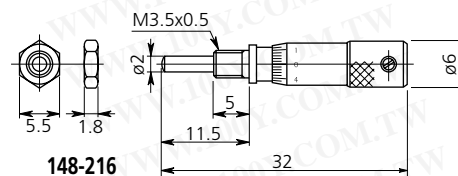
Dimensions

Plain stem



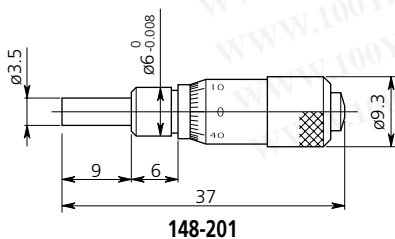
148-215

with clamp nut

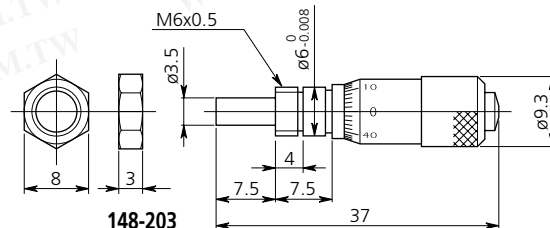


148-216

Unit: mm
Scale: 1/1



148-201



148-203

Micrometer Heads

SERIES 148 — Large Thimble Diameter for Easy Reading



148-301



148-322



148-303



148-305

FEATURES

- Easy reading due to the large thimble diameter. (Three types of thimble diameters can be selected.)
- Fine spindle feeding type (thread pitch: 0.25mm) is available.

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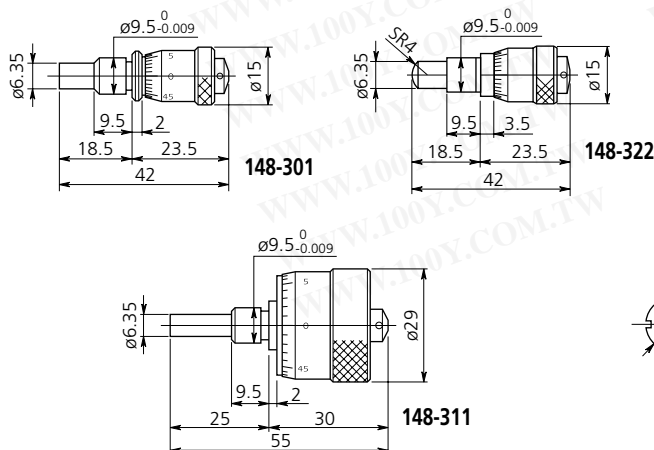
SPECIFICATIONS

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Thimble diameter	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock				
0 - 6.5mm	148-301	—	148-302	—	0.02mm	±2μm	15mm	—
	148-322	—	148-323	—	0.01mm	±2μm	15mm	Fine spindle feeding type
	148-303	—	148-304	—	0.01mm	±2μm	20mm	—
	148-305	—	148-306	—	0.01mm	±2μm	29mm	—
0 - 13mm	148-307	—	148-308	—	0.01mm	±2μm	15mm	—
	148-309	—	148-310	—	0.01mm	±2μm	20mm	—
	148-311	—	148-312	—	0.01mm	±2μm	29mm	—

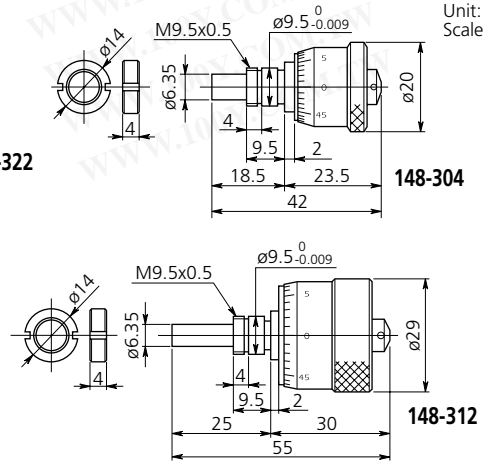
Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Thimble diameter	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock				
0 - .25"	148-351	—	148-352	—	.001"	±.0001"	.59"	—
	148-353	—	148-354	—	.001"	±.0001"	.79"	—
	148-355	—	148-356	—	.001"	±.0001"	1.14"	—
0 - .5"	148-357	—	148-358	—	.001"	±.0001"	.59"	—
	148-359	—	148-360	—	.001"	±.0001"	.79"	—
	148-361	—	148-362	—	.001"	±.0001"	1.14"	—

Dimensions

Plain stem



with clamp nut



Unit: mm
Scale: 1/2



Micrometer Heads

SERIES 148



148-104

148-132

148-121

FEATURES

- Ratchet Stop (950700) can be attached.
- Fine spindle feeding type (thread pitch: 0.25mm) is available.

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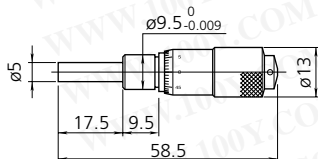
SPECIFICATIONS

Range	Metric		Order No.		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 13mm	148-104	148-121	148-103	148-120	0.01mm	±2μm	—
	148-132	—	148-133	—	0.01mm	±2μm	Fine spindle feeding type (Spherical face)
	148-801	148-803	148-802	148-804	0.01mm	±2μm	Spherical face type
	148-821	148-823	148-822	148-824	0.01mm	±2μm	Reverse reading type

Range	Inch		Order No.		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - .5"	148-112	148-123	148-111	148-122	.001"	±.0001"	—
	148-811	148-813	148-812	148-814	.001"	±.0001"	Spherical face type
	148-831	148-833	148-832	148-834	.001"	±.0001"	Reverse reading type

Dimensions

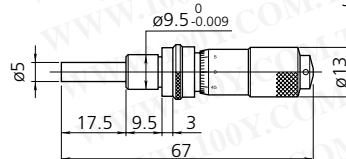
Plain stem



148-104

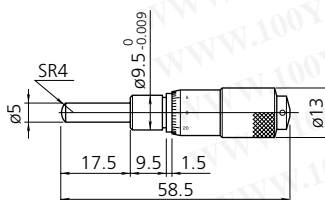
Plain stem, Spindle lock

Unit: mm
Scale: 1/2

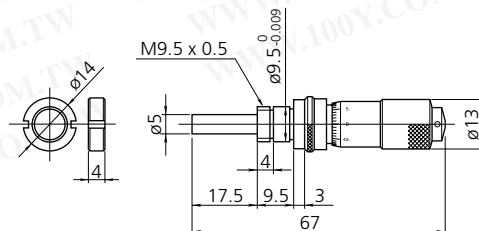


148-121

with clamp nut, Spindle lock



148-132



148-120

Micrometer Heads

SERIES 148 — Zero-Adjustable Thimble Type



FEATURES

- The thimble can be set to zero at any position by loosening the setscrew.

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SPECIFICATIONS

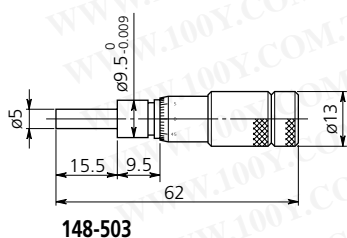
Range	Metric		Order No.		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 13mm	148-503	148-506	148-508	148-504	0.01mm	±2μm	—
	148-513	—	—	—	0.01mm	±2μm	Stainless steel throughout
	148-853	—	—	148-854	0.01mm	±2μm	Spherical face type
	148-863	—	—	148-864	0.01mm	±2μm	Reverse reading type

Range	Inch		Order No.		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - .5"	148-501	148-505	148-507	148-502	.001"	±.0001"	—
	148-511	—	—	—	.001"	±.0001"	Stainless steel throughout
	148-851	—	—	148-852	.001"	±.0001"	Spherical face type
	148-861	—	—	148-862	.001"	±.0001"	Reverse reading type

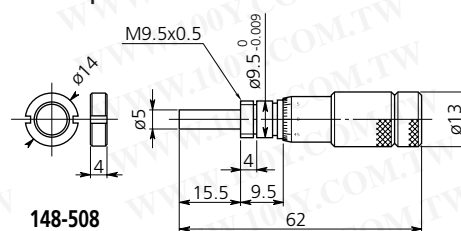
Dimensions

Unit: mm
Scale: 1/2

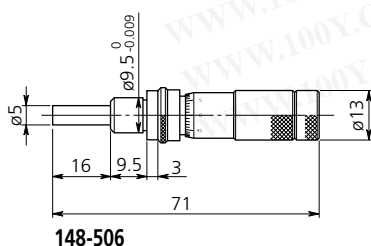
Plain stem



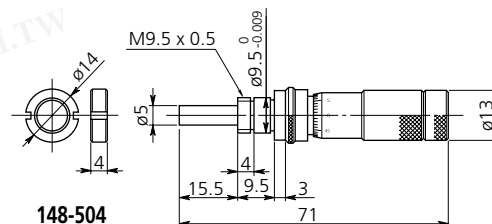
with clamp nut



Plain stem, Spindle lock



with clamp nut, Spindle lock



MICROMETER HEADS



Micrometer Heads

SERIES 149



FEATURES

- Carbide-tipped measuring face.
- Ratchet Stop (950700) can be attached.

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SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 15mm	149-132	149-183	149-131	149-184	0.01mm	±2μm	—
	149-801	—	149-802	—	0.01mm	±2μm	Spherical face type
	149-821	—	149-822	—	0.01mm	±2μm	Reverse reading type

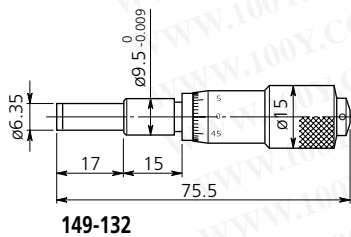
Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - .5"	149-148	149-185	149-147	149-182	.001"	±.0001"	—
	—	149-181	—	—	.001"	±.0001"	with Ratchet stop
	149-811	—	149-812	—	.001"	±.0001"	Spherical face type
	149-831	—	149-832	—	.001"	±.0001"	Reverse reading type

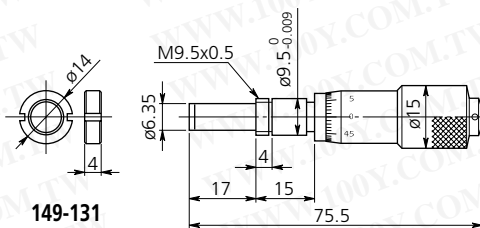
Dimensions

Unit: mm
Scale: 1/2

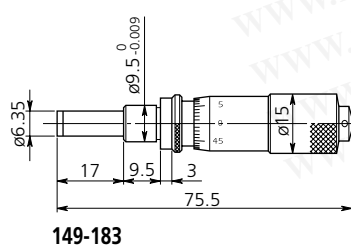
Plain stem



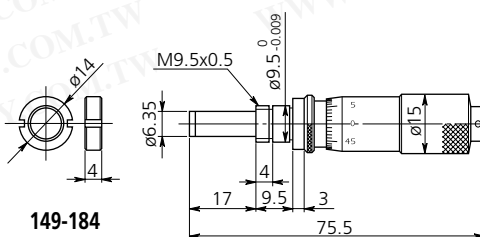
with clamp nut



Plain stem, Spindle lock



with clamp nut, Spindle lock



Micrometer Heads

SERIES 150



FEATURES

- Ratchet Stop for constant force.
- Long spindle type is available for a variety of applications.
- Carbide-tipped measuring face (except for long spindle type).

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SPECIFICATIONS

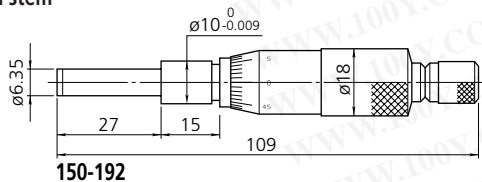
Metric		Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
Range		w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 25mm		150-192	150-209	150-191	150-210	0.01mm	±2μm	—
		150-196	150-211	150-195	150-212	0.01mm	±2μm	without Ratchet stop
		150-219	—	150-220	—	0.01mm	±2μm	Long spindle type (Spindle length: 65mm)
		150-801	—	150-802	—	0.01mm	±2μm	Spherical face type
		150-821	—	150-822	—	0.01mm	±2μm	Reverse reading type
		150-190	—	150-189	—	0.001mm	±2μm	—

Inch		Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
Range		w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 1"		150-208	150-213	150-207	150-214	.001"	±.0001"	—
		—	150-217	—	150-218	.001"	±.0001"	with Ratchet stop
		150-221	—	150-222	—	.001"	±.0001"	Long spindle type (Spindle length: 2.56")
		150-811	—	150-812	—	.001"	±.0001"	Spherical face type
		150-831	—	150-832	—	.001"	±.0001"	Reverse reading type
		150-206	150-215	150-205	150-216	.0001"	±.0001"	—

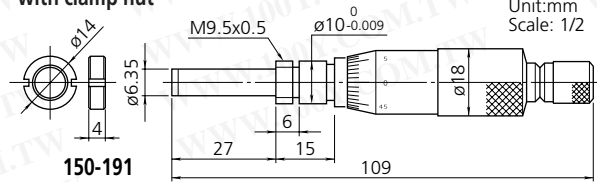
Note: 0.001mm (.0001") reading is obtained with vernier.

Dimensions

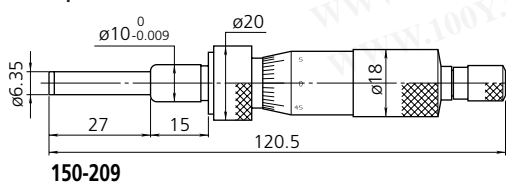
Plain stem



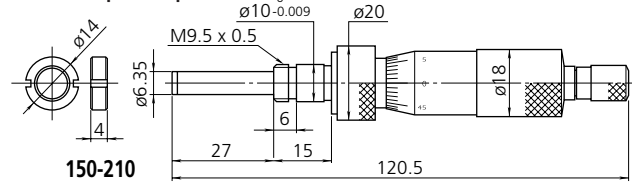
with clamp nut



Plain stem, Spindle lock

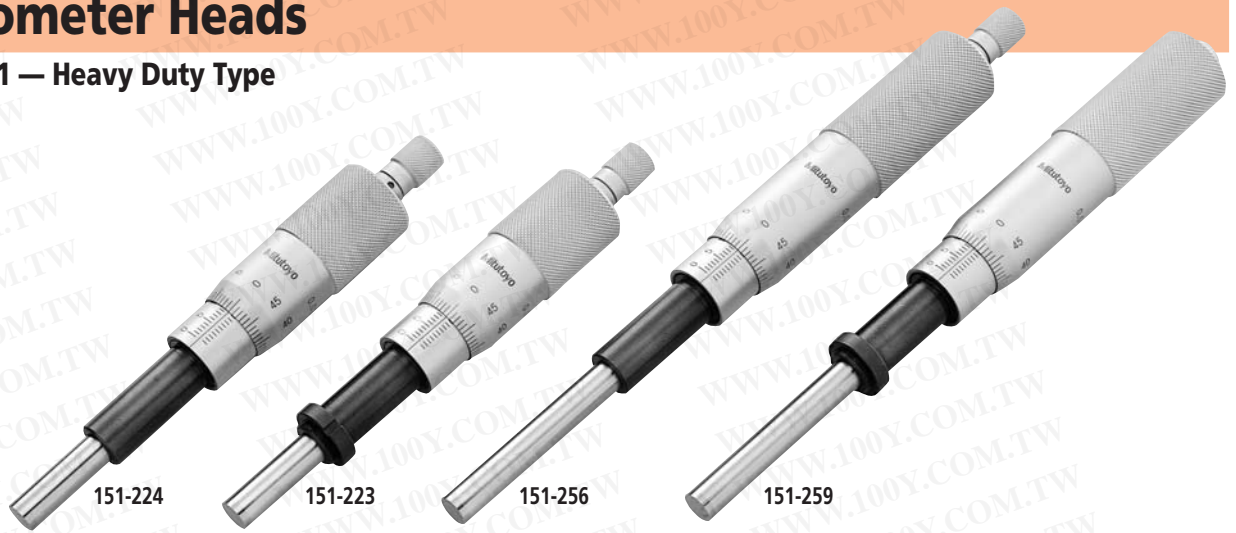


with clamp nut, Spindle lock



Micrometer Heads

SERIES 151 — Heavy Duty Type



MICROMETER HEADS

FEATURES

- Diameter of spindle: 8mm (.315")
- Carbide-tipped measuring face.
- Ratchet Stop for constant force.

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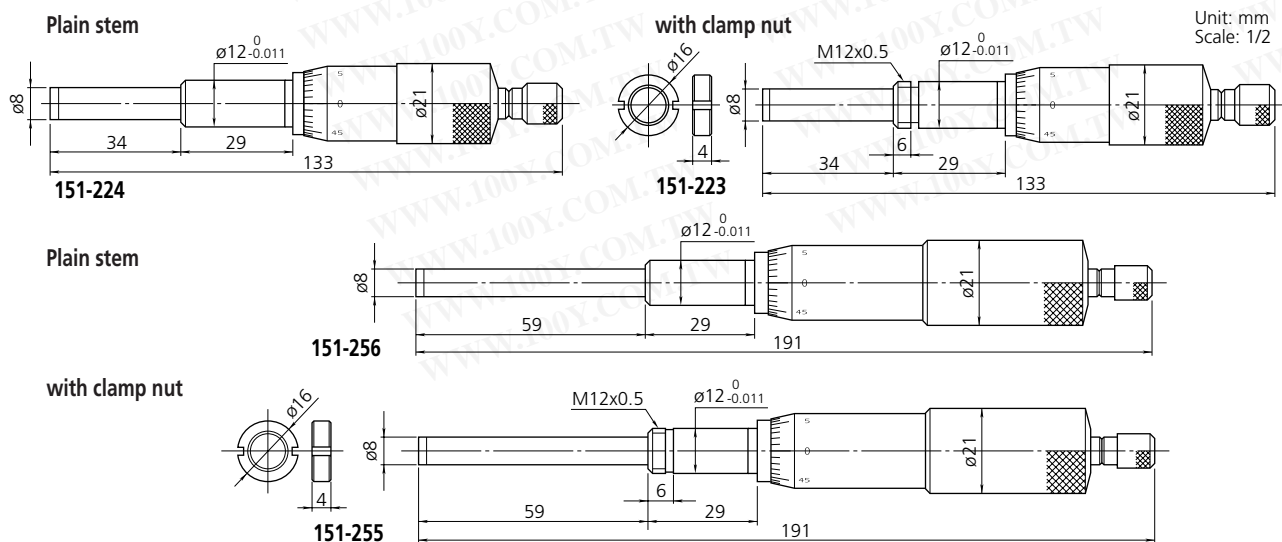
SPECIFICATIONS

Metric							
Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 25mm	151-224	—	151-223	—	0.01mm	±2μm	—
	—	151-225	—	151-226	0.01mm	±2μm	without Ratchet stop
	151-222	—	151-221	—	0.01mm	±2μm	—
0 - 50mm	151-256	—	151-255	—	0.01mm	±4μm	—
	151-260	—	151-259	—	0.01mm	±4μm	without Ratchet stop

Inch							
Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 1"	151-240	—	151-239	—	.001"	±.0001"	—
	—	151-241	—	151-242	.001"	±.0001"	without Ratchet stop
	151-238	—	151-237	—	.0001"	±.0001"	—
	—	151-243	—	151-244	.0001"	±.0001"	without Ratchet stop
0 - 2"	151-272	—	151-271	—	.001"	±.0002"	—

Note: 0.001mm (.0001") reading is obtained with vernier.

Dimensions



Micrometer Heads

SERIES 152 — Quick Feeding Type

FEATURES

- Pitch of spindle screw: 1 mm (.025")
- Carbide-tipped measuring face.

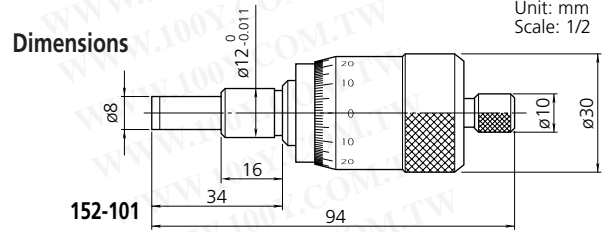
SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 15mm	152-101	—	—	—	0.01mm	±2μm	—
0 - 25mm	152-102	—	—	—	0.01mm	±2μm	—
0 - 50mm	152-103	—	—	—	0.01mm	±4μm	—

Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - .5"	152-110	—	—	—	.001"	±.0001"	—
0 - 1"	152-111	—	—	—	.001"	±.0001"	—
0 - 2"	152-112	—	—	—	.001"	±.0002"	—



Micrometer Heads

SERIES 152 — Fine Reading Type

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FEATURES

- The large diameter thimble provides high resolution measurements.
- Carbide-tipped measuring face.
- Bidirectional graduation has black and red figures for easy reading in both directions.

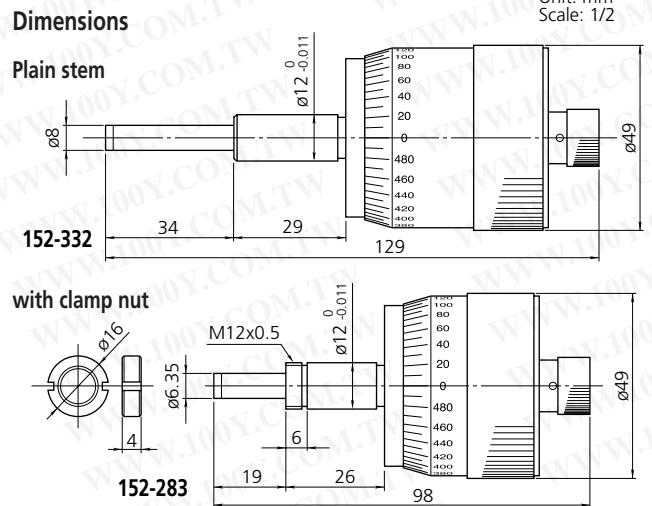
SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 10mm	—	—	152-283	—	0.002mm	±2μm	—
0 - 25mm	152-332	—	—	—	0.002mm	±2μm	—
	152-348	—	—	—	0.002mm	±2μm	with Bidirectional graduation
0 - 50mm	152-380	—	—	—	0.002mm	±4μm	with Bidirectional graduation

Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 1"	152-372	—	—	—	.0001"	±.0001"	with Bidirectional graduation
0 - 2"	152-388	—	—	—	.0001"	±.0002"	with Bidirectional graduation



Micrometer Heads

SERIES 152 — for XY-Stage

FEATURES

- Non-rotating device is attached to the spindle tip.
- Floating thimble (graduation) can be adjusted with the spindle clamped, allowing zero setting at any spindle position.
- Bidirectional graduation has black and red figures for easy reading in both directions.

SPECIFICATIONS

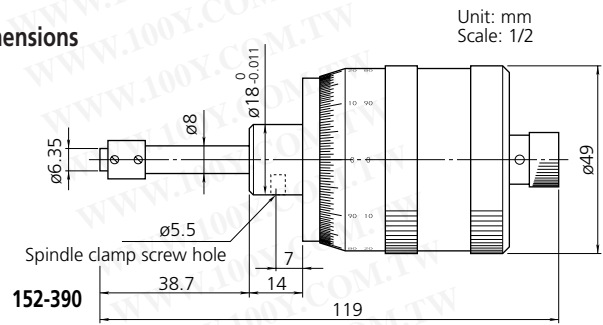
Metric

Range	Order No. (plain stem) w/o spindle lock	w/ spindle lock	Order No. (w/ clamp nut) w/o spindle lock	w/ spindle lock	Graduation	Accuracy	Remarks
0 - 25mm	152-390	—	—	—	0.005mm	±2μm	for X-axis measurement
	152-389	—	—	—	0.005mm	±2μm	for Y-axis measurement

Inch

Range	Order No. (plain stem) w/o spindle lock	w/ spindle lock	Order No. (w/ clamp nut) w/o spindle lock	w/ spindle lock	Graduation	Accuracy	Remarks
0 - 1"	152-391	—	—	—	.0001"	±.0001"	for X-axis measurement
	152-392	—	—	—	.0001"	±.0001"	for Y-axis measurement

Dimensions



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Micrometer Heads

SERIES 152 — Zero-Adjustable Type for XY-Stage

FEATURES

- Adjustable spindle can be moved with the thimble held at any position, allowing easy zero-setting.
- Carbide-tipped spherical measuring face.

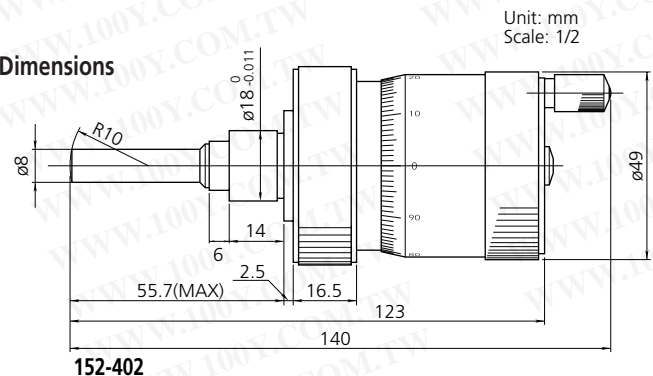
SPECIFICATIONS

Metric

Range	Order No. (plain stem) w/o spindle lock	w/ spindle lock	Order No. (w/ clamp nut) w/o spindle lock	w/ spindle lock	Graduation	Accuracy	Remarks
0 - 25mm	152-402	—	—	—	0.001mm*	±2μm	for X-axis measurement
	152-401	—	—	—	0.001mm*	±2μm	for Y-axis measurement

* 0.001mm reading is obtained with vernier.

Dimensions



Micrometer Heads

SERIES 153 — Non-Rotating Spindle Type



FEATURES

- Carbide-tipped measuring face.

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SPECIFICATIONS

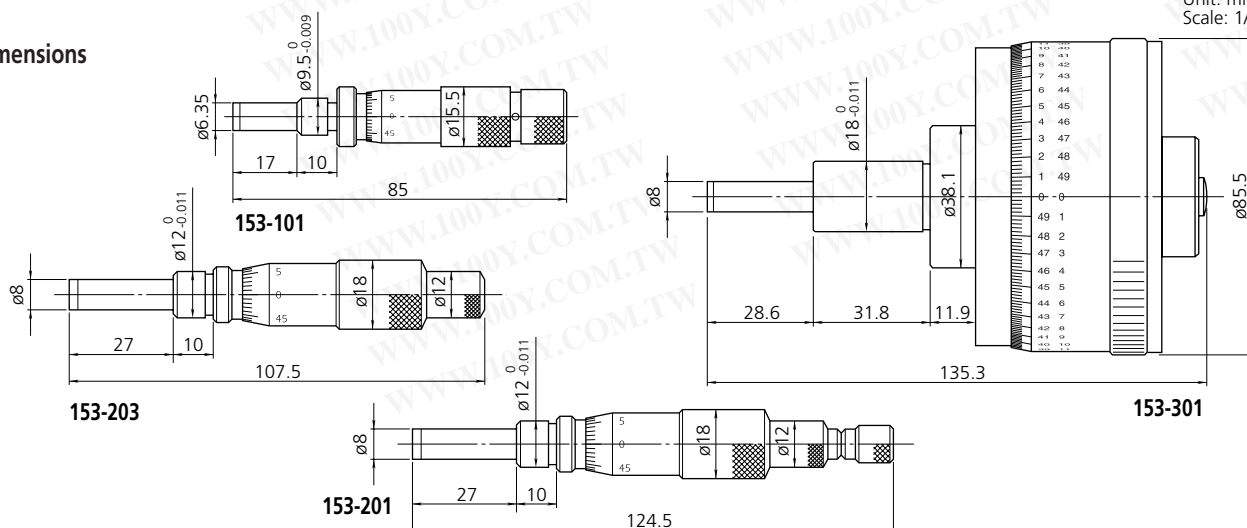
Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 15mm	153-101	—	—	—	0.01mm*	±3μm	—
0 - 25mm	153-203	—	—	—	0.01mm	±3μm	—
	153-201	—	—	—	0.01mm	±3μm	with Ratchet stop
	153-204	—	—	—	0.001mm*	±3μm	—
	153-202	—	—	—	0.001mm*	±3μm	with Ratchet stop
	153-301	—	—	—	0.0005mm	±1μm	High accuracy type

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - .5"	153-108	—	—	—	.0001"*	±.00015"	—
0 - 1"	153-207	—	—	—	.001"	±.00015"	—
	153-205	—	—	—	.001"	±.00015"	with Ratchet stop
	153-208	—	—	—	.0001"*	±.00015"	—
	153-206	—	—	—	.0001"*	±.00015"	with Ratchet stop
	153-302	—	—	—	.00001"	±.00015"	High accuracy type

* 0.001mm (.0001") reading is obtained with vernier.

Dimensions

Unit: mm
Scale: 1/2



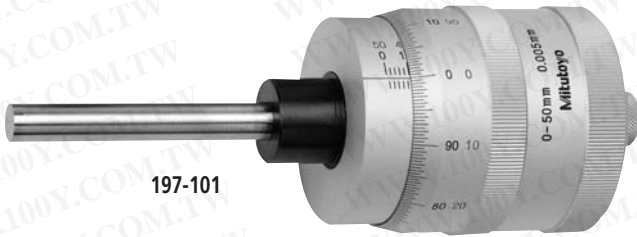
MICROMETER HEADS



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Micrometer Heads

SERIES 197 — Quick Feeding Type

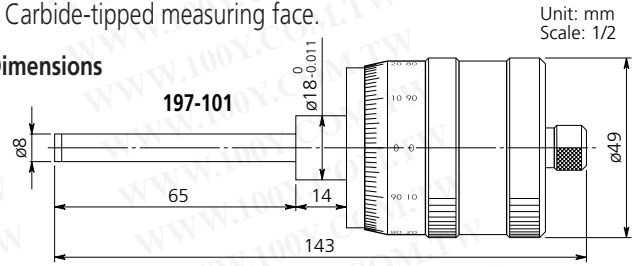


197-101

FEATURES

- Pitch of spindle screw: 1mm (.025")
- Non-rotating spindle.
- Carbide-tipped measuring face.

Dimensions



SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 50mm	197-101	—	—	—	0.005mm	±5μm	with Long spindle (length: 65mm)

Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 6"	197-201	—	—	—	.0002"	±.0002"	with Long spindle (length: 2.56")

Absolute Digimatic Micrometer Heads

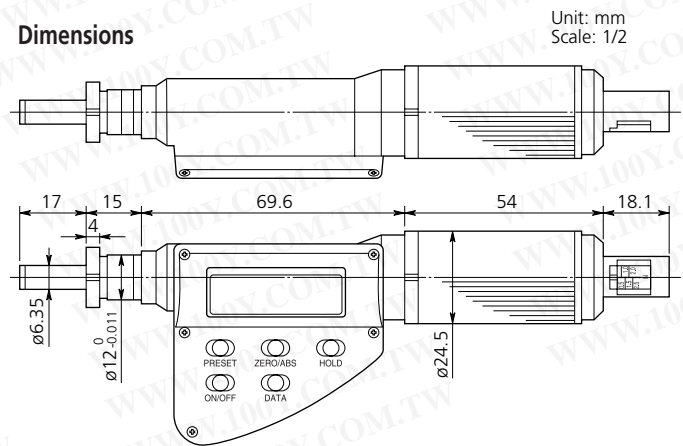
SERIES 227 — with constant & adjustable fine-loading device



227-241

SPC ABSOLUTE

Dimensions



FEATURES

- Constant and low measuring force mechanism (adjustable: 0.5N - 2.5N or 2N - 10N) in the thimble.
- Non-rotating spindle and the new ratchet friction thimble.
- Speedy spindle feed of 10mm/.4".
- With absolute linear scale.
- With SPC data output.

SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 15mm	227-241	—	—	—	0.001mm	±2μm	0.5N - 2.5N measuring force
	227-242	—	—	—	0.001mm	±2μm	2N - 10N measuring force
Excluding quantizing error							

Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock			
0 - 2"	227-251	—	—	—	.00005"/0.001mm	±.0001"	0.5N - 2.5N measuring force
	227-252	—	—	—	.00005"/0.001mm	±.0001"	2N - 10N measuring force
Excluding quantizing error							

Digimatic Micrometer Heads

SERIES 164

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FEATURES

- The Digimatic Micrometer Heads provide the easiest and most efficient means of obtaining precision measurement of linear travel on XY-stages and similar applications.
- Two measuring modes — Absolute and Incremental for efficient measurement.
- Preset capability. This allows the operator to set any desired measurement on the display and recall that measurement with a simple push of a button.
- Non-rotating spindle.
- Carbide-tipped measuring face.
- Battery: SR44 (**938882**) x 1pc. for 25mm (1") model. SR44 x 2pcs. for 50mm (2") model.

OPTIONAL ACCESSORIES

Order No.	Description
937387	SPC cable (1m)
965013	SPC cable (2m)

SPECIFICATIONS

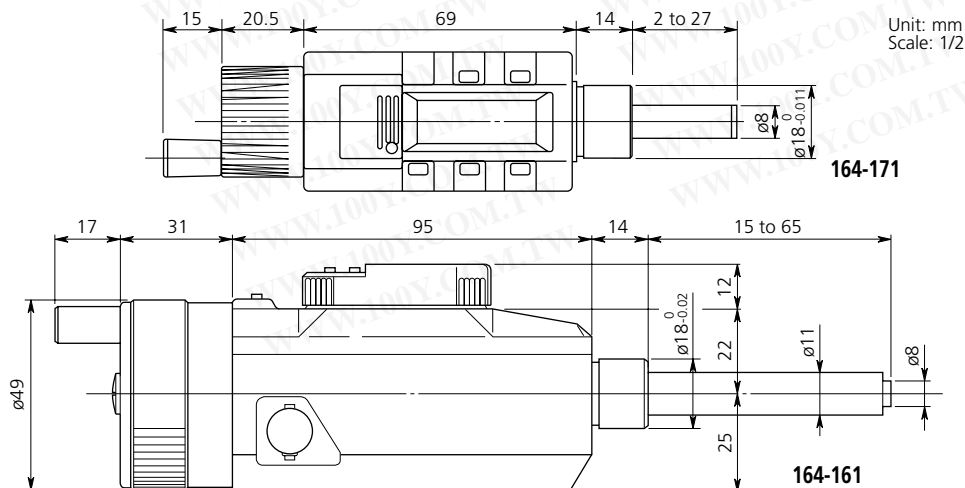
Range	Metric		Graduation	Accuracy	Stem diameter	Remarks
	Order No. (plain stem) w/o spindle lock	Order No. (w/ clamp nut) w/ spindle lock				
0 - 25mm	164-171	—	0.001mm	±2µm	18mm	—
0 - 50mm	164-161	—	0.001mm	±3µm	18mm	with 330° rotatable LCD

Excluding quantizing error

Range	Inch		Graduation	Accuracy	Stem diameter	Remarks
	Order No. (plain stem) w/o spindle lock	Order No. (w/ clamp nut) w/ spindle lock				
0 - 1"	164-172	—	.00005"/0.001mm	±.0001"	18mm	—
0 - 2"	164-162	—	.00005"/0.001mm	±.00015"	18mm	with 330° rotatable LCD

Excluding quantizing error

Dimensions



Digimatic Micrometer Heads

SERIES 350 — Compact Type



350-251



350-281

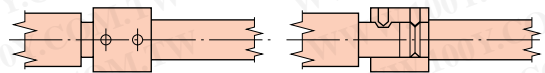
FEATURES

- Extra large LCD readout with 0.001mm resolution.
- Functions available: Presetting, Inch/mm selection (inch/mm model only), Zero-setting, Data hold/Data output, Error alarm.
- Preset capability. This allows the operator to set any desired measurement on the display and recall that measurement with a simple push of a button.
- Carbide-tipped measuring face.
- With Ratchet Stop for constant force.
- Battery: SR44 (938882) x 1pc.
- IP65 level water resistance protection.
- Non-rotating device is provided for **350-261** (metric) and **350-361** (inch/metric).

TECHNICAL INFORMATION

Non-rotating device

The non-rotating device provides no radial torsion on the workpiece surface so that workpiece wear and deformation are minimized.



SPECIFICATIONS

Metric

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Stem diameter	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock				
0 - 25mm	350-251	—	350-252	—	0.001mm	±2µm	10mm	—
	350-253	—	350-254	—	0.001mm	±2µm	10mm	Spherical face type
	350-281	—	350-282	—	0.001mm	±2µm	12mm	—
	350-283	—	350-284	—	0.001mm	±2µm	12mm	Spherical face type
	350-271	—	350-272	—	0.001mm	±2µm	12mm, 18mm*	—
	350-273	—	350-274	—	0.001mm	±2µm	12mm, 18mm*	Spherical face type
	350-261	—	—	—	—	0.001mm	±2µm	12mm, 18mm* with Non-rotating device

*When using a bushing (standard accessory for **350-271**, **350-273** and **350-261**).

Excluding quantizing error

Inch

Range	Order No. (plain stem)		Order No. (w/ clamp nut)		Graduation	Accuracy	Stem diameter	Remarks
	w/o spindle lock	w/ spindle lock	w/o spindle lock	w/ spindle lock				
0 - 1"	350-351	—	350-352	—	.00005"/0.001mm	±.0001"	.375"	—
	350-353	—	350-354	—	.00005"/0.001mm	±.0001"	.375"	Spherical face type
	350-381	—	350-382	—	.00005"/0.001mm	±.0001"	.5"	—
	350-383	—	350-384	—	.00005"/0.001mm	±.0001"	.5"	Spherical face type
	350-361	—	—	—	—	.00005"/0.001mm	±.0001"	.5", .709"

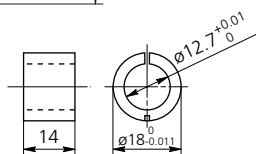
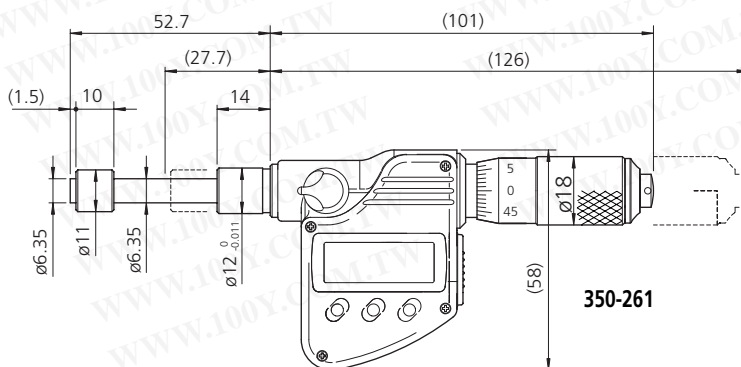
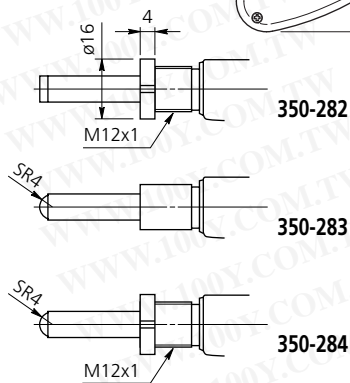
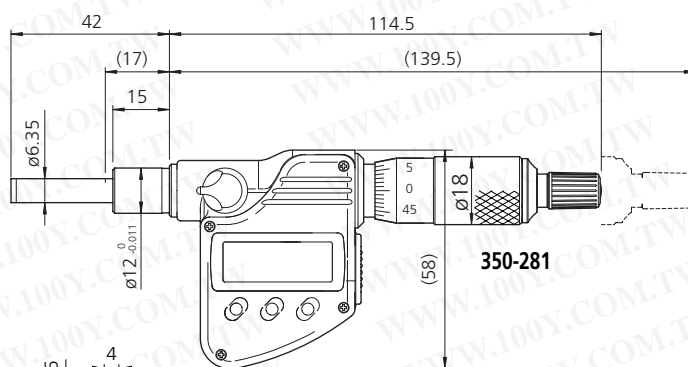
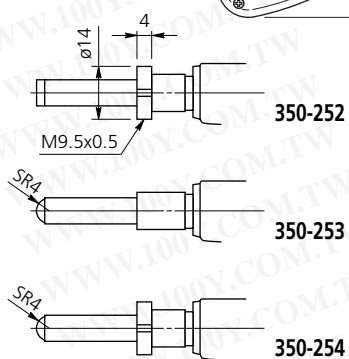
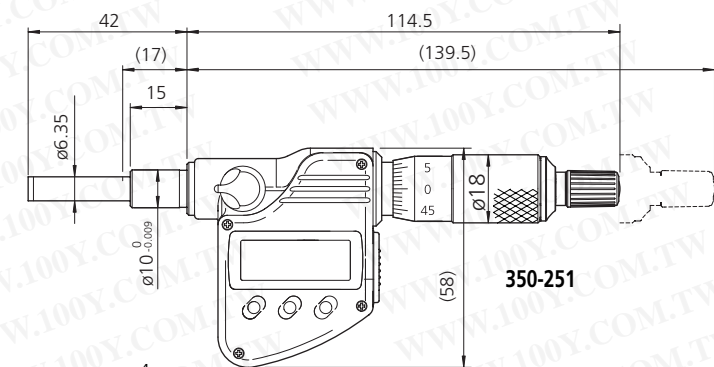
Excluding quantizing error

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Dimensions

Unit: mm
 Scale: 1/2



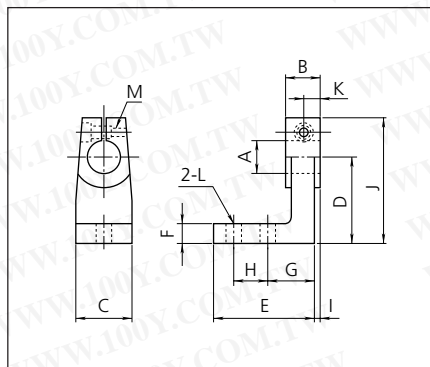
Fixtures for Micrometer Heads

MICROMETER HEADS

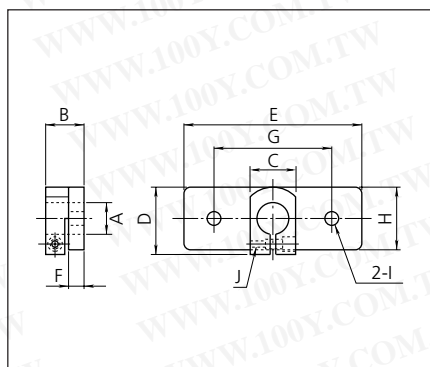


SPECIFICATIONS

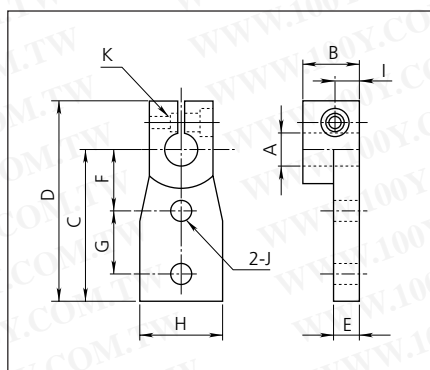
Fixtures for micrometer heads without clamp nut (plain stem type micrometer heads)



Order No.	303560	303569	303579
Dimensions (Unit: mm)			
A	ø9.5	ø9.5	ø10
B	9	14.5	14.5
C	14.5	19.5	19.5
D	20	30	30
E	23	35	35
F	5	7	7
G	11	16	16
H	8	12	12
I	1.5	3.25	3.25
J	32.5	42.5	42.5
K	4.5	7.25	7.25
L	ø3.4	ø4.5	ø4.5
M	M3x0.5	M3x0.5	M3x0.5



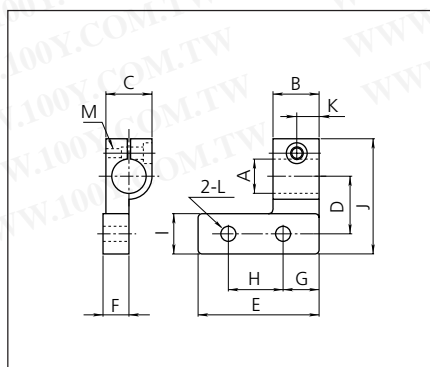
Order No.	303562	303571	303581
Dimensions (Unit: mm)			
A	ø9.5	ø9.5	ø10
B	9	14.5	14.5
C	15	15	15
D	20	22.5	22.5
E	40	60	60
F	3	5	5
G	30	40	40
H	15	20	20
I	ø3.4	ø4.5	ø4.5
J	M3x0.5	M3x0.5	M3x0.5



Order No.	303564	303573	303583
Dimensions (Unit: mm)			
A	ø9.5	ø9.5	ø10
B	9	14.5	14.5
C	30	40	40
D	42.5	52.5	52.5
E	4	6	6
F	15	18	18
G	10	15	15
H	15	20	20
I	4.5	7.25	7.25
J	ø3.4	ø4.5	ø4.5
K	M3x0.5	M3x0.5	M3x0.5

FEATURES

- The act of fabricating brackets to mount micrometer heads for each particular application can be laborious and costly. Mitutoyo offers various types of fixtures for micrometer heads to meet a wide range of applications. These fixtures are made of nickel-plated cast iron.
- There are two types of fixtures for micrometer heads with or without clamping nut on the stem.

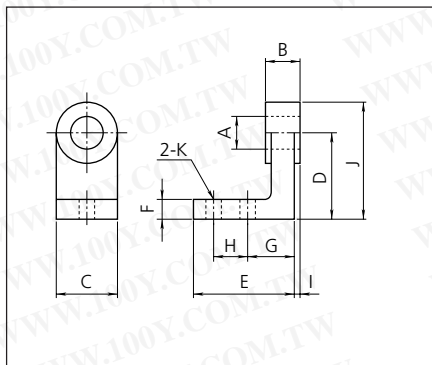


Order No.	303566	303575	303585
Dimensions (Unit: mm)			
A	ø9.5	ø9.5	ø10
B	9	14.5	14.5
C	15	15	15
D	15	20	20
E	25	40	40
F	8.5	8.5	8.5
G	7.5	10	10
H	10	20	20
I	10	15	15
J	32.5	40	40
K	4.5	7.25	7.25
L	ø3.4	ø4.5	ø4.5
M	M3x0.5	M3x0.5	M3x0.5

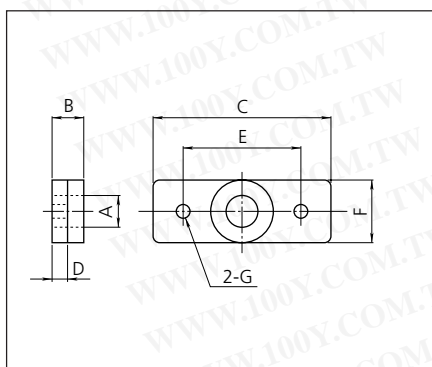
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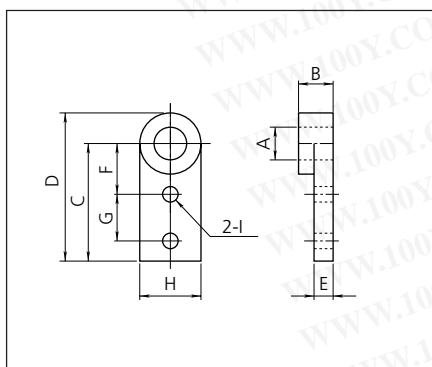
Fixtures for micrometer heads with clamp nut



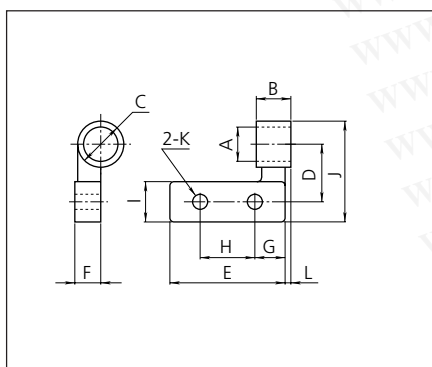
Order No.	303559	303568	303578
Dimensions	A ø9.5	ø9.5	ø10
(Unit: mm)	B 6	11.5	11.5
	C 14.5	19.5	19.5
	D 20	30	30
	E 24	35	35
	F 5	7	7
	G 11	16	16
	H 8	12	12
	I 0.5	1.75	1.75
	J 27.5	40	40
	K ø3.4	ø4.5	ø4.5



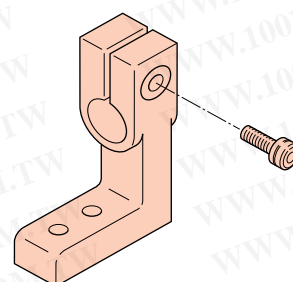
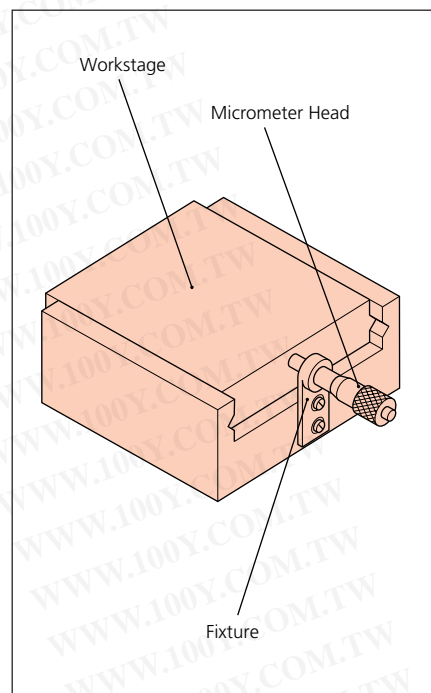
Order No.	303561	303570	303580
Dimensions	A ø9.5	ø9.5	ø10
(Unit: mm)	B 6	11.5	11.5
	C 40	60	60
	D 3.5	5.5	5.5
	E 30	40	40
	F 15	20	20
	G ø3.4	ø4.5	ø4.5



Order No.	303563	303572	303582
Dimensions	A ø9.5	ø9.5	ø10
(Unit: mm)	B 6	11.5	11.5
	C 30	40	40
	D 37.5	50	50
	E 4.5	6.5	6.5
	F 15	18	18
	G 10	15	15
	H 15	20	20
	I ø3.4	ø4.5	ø4.5



Order No.	303565	303574	303584
Dimensions	A ø9.5	ø9.5	ø10
(Unit: mm)	B 6	11.5	11.5
	C ø15	ø15	ø15
	D 15	20	20
	E 25	40	40
	F 8.5	8.5	8.5
	G 7.5	10	10
	H 10	20	20
	I 10	15	15
	J 27.5	35	35
	K ø3.4	ø4.5	ø4.5
	L 0.75	1.25	1.25



Note: Supplied with a socket head screw (M3x0.5x12mm) for the fixtures to be used with a micrometer head without clamp nut (plain stem type micrometer head).

