

Micrometer Heads

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



Technical Data

- Measuring face
Material: Carbide
(110-502/504 are alloy tool steel)
Hardness: 90 HRA or more
(Only 110-502/504 are 60 HRC or more)
Lapped
- Scale finishing:
Satin-chrome plated


- The differential movement of spindle threads and nuts allows ultra-fine feeding.

DIMENSIONS

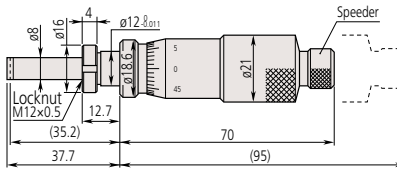
- Differential movement mechanism with double spindle.
- Non-rotating spindle.
- Fixture thickness: 9.5 mm

Equipped with vernier scale





Stem locknut




110-101
110-102 Equipped with vernier scale

Unit: mm

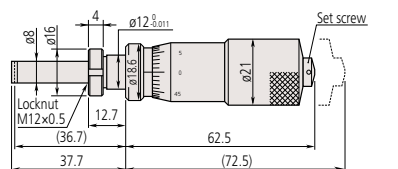
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Stem locknut

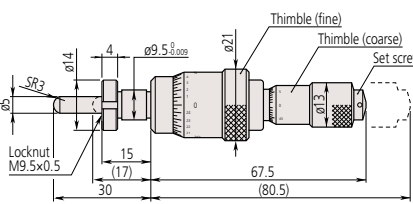


110-106 Equipped with vernier scale
Mass: 150 g

- Dual thimble
- Fixture thickness: 11.5 mm







Stem locknut Spherical face





110-502 Mass: 95 g

Spherical face

Equipped with vernier scale

Stem locknut Spherical face

SR10

110-107
110-108 Equipped with vernier scale
(): with spindle fully retracted.

SPECIFICATIONS

Metric

Order No.	Range (mm)		Graduation (mm)		Graduation features	Stem dia. (mm)	Stem	Spindle end	Maximum permissible error J_{MPE}^{*2} (μm)
110-101	0 - 2.5		0.001		Standard	12	W/clamp nut	Flat (carbide tip)	$\pm 5/\pm 1.5$
110-102			0.0001		Fine				
110-105	0 - 1		0.001		Standard				
110-106			0.0001		Fine				
110-107			0.001		Standard				
110-108			0.0001		Fine		Spherical (SR10) (carbide tip)	$\pm 3/\pm 1.5$	
110-502	Thimble (fine)	0 - 0.2	Thimble (fine)	0.0005	Dual scales; 0.2 mm fine-feed range	9.5	Spherical	$\pm 3/\pm 1.5$	
	Thimble (coarse)	0 - 13	Thimble (coarse)	0.01					

Inch

Order No.	Range (in)		Graduation (in)		Graduation features	Stem dia. (in)	Stem	Spindle end	Maximum permissible error J_{MPE}^{*2} (in)
110-111	0 - 0.05		0.00002		Standard	0.5	W/clamp nut	Flat (carbide tip)	$\pm 0.00025/\pm 0.00006$
110-112			0.000005		Fine				
110-115* ¹	0 - 0.02		0.00002		Standard				
110-116* ¹			0.000005		Fine				
110-117* ¹			0.00002		Standard				
110-118* ¹			0.000005		Fine		Spherical (SR10) (carbide tip)	$\pm 0.00015/\pm 0.00006$	
110-504	Thimble (fine)	0 - 0.006	Thimble (fine)	0.00002	Dual scales; 0.2 mm/0.006 in fine-feed range	0.375	Spherical	$\pm 0.00015/\pm 0.00006$	
	Thimble (coarse)	0 - 0.5	Thimble (coarse)	0.001					

*1 Made-to-order models *2 Wide range/narrow range