

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



Technical Data

- Measuring face
Material: Carbide
(110-502/504 are hardened 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

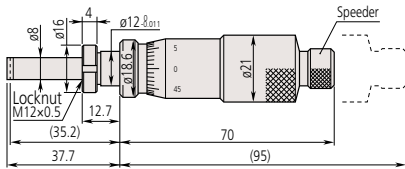
- Differential movement mechanism with double spindle.
- Non-rotating spindle.
- Fixture thickness: 9.5 mm

Equipped with vernier scale





Stem locknut




110-101
110-102 Equipped with vernier scale

Unit: mm

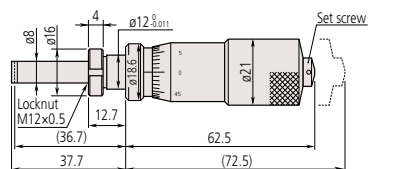
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Stem locknut



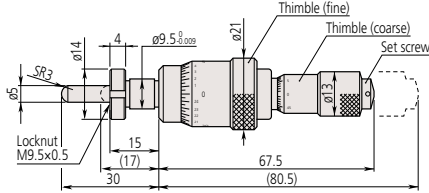
110-105
110-106 Equipped with vernier scale

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. | Stroke (mm) | | Graduation (mm) | | Graduation features | Stem dia. (mm) | Stem | Spindle end | Maximum permissible error J_{MPE}^{*2} (μm) |
|----------------|------------------|-----|------------------|--------|---|----------------|--------------------------------|--------------------|--|
| 110-101 | 2.5 | | 0.001 | | Standard | 12 | W/clamp nut | Flat (carbide tip) | $\pm 5/\pm 1.5$ |
| 110-102 | | | 0.0001 | | Fine | | | | |
| 110-105 | 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) | 0.2 | Thimble (fine) | 0.0005 | Dual scales; 0.2 mm fine-feed stroke | 9.5 | Spherical | $\pm 3/\pm 1.5$ | |
| | Thimble (coarse) | 13 | Thimble (coarse) | 0.01 | | | | | |

Inch

| Order No. | Stroke (in) | | Graduation (in) | | Graduation features | Stem dia. (in) | Stem | Spindle end | Maximum permissible error J_{MPE}^{*2} (in) |
|-------------------|------------------|-------|------------------|---------|---|----------------|--------------------------------|---------------------------|---|
| 110-111 | 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 | 0.02 | | 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) | 0.006 | 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) | 0.5 | Thimble (coarse) | 0.001 | | | | | |

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