

## 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

**110-101**  
**110-102** Equipped with vernier scale

Unit: mm

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

Equipped with vernier scale

**110-105**  
**110-106** Equipped with vernier scale

Mass: 150 g

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- Dual thimble
- Fixture thickness: 11.5 mm

**110-502** Mass: 95 g

Spherical face

Equipped with vernier scale

**110-107**  
**110-108** Equipped with vernier scale

( ): with spindle fully retracted.

#### SPECIFICATIONS

##### Metric

Order No.	Stroke (mm)		Graduation (mm)		Accuracy*2 (μm)	Stem dia. (mm)	Stem	Spindle end	Graduation features
<b>110-101</b>	2.5		0.001		±5/±1.5	12	W/clamp nut	Flat (carbide tip)	Standard
<b>110-102</b>			0.0001						Fine
<b>110-105</b>			0.001						Standard
<b>110-106</b>	1		0.0001		±3/±1.5	9.5	W/clamp nut	Spherical (SR10) (carbide tip)	Fine
<b>110-107</b>			0.001						Standard
<b>110-108</b>			0.0001						Fine
<b>110-502</b>	Thimble (fine)	0.2	Thimble (fine)	0.0005	±3/±1.5	9.5	W/clamp nut	Spherical (SR3)	Dual scales; 0.2 mm fine-feed stroke
	Thimble (coarse)	13	Thimble (coarse)	0.01					

##### Inch

Order No.	Stroke (in)		Graduation (in)		Accuracy*2 (in)	Stem dia. (in)	Stem	Spindle end	Graduation features
<b>110-111</b>	0.05		0.00002		±0.00025/±0.00006	0.5	W/clamp nut	Flat (carbide tip)	Standard
<b>110-112</b>			0.000005						Fine
<b>110-115*1</b>			0.00002						Standard
<b>110-116*1</b>	0.02		0.000005		±0.00015/±0.00006	0.375	W/clamp nut	Spherical (SR10) (carbide tip)	Fine
<b>110-117*1</b>			0.00002						Standard
<b>110-118*1</b>			0.000005						Fine
<b>110-504</b>	Thimble (fine)	0.006	Thimble (fine)	0.00002	±0.00015/±0.00006	0.375	W/clamp nut	Spherical (SR3)	Dual scales; 0.2 mm/0.006 in fine-feed range
	Thimble (coarse)	0.5	Thimble (coarse)	0.001					

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