



# Adjustment Screws

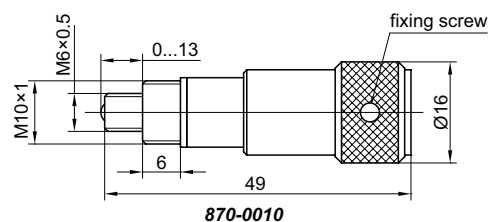
## 870-0010 • 870-0020 PRECISE AND MICROMETER SCREWS



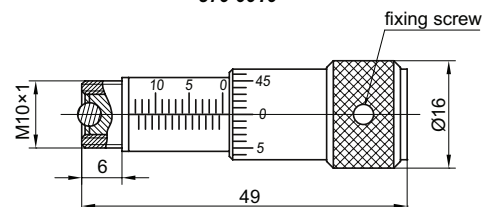
870-0010



870-0020



870-0010



870-0020

Precise screw 870-0010	
Precise screw travel, mm	13
Thread step, mm	0.5
Sensitivity, $\mu\text{m}$	1

Micrometer screw 870-0020 with reading marks	
Micrometer screw travel, mm	13
Division value, mm	0.01
Limit of permissible error, $\mu\text{m}$	$\pm 4$
Thread step, mm	0.5

Code	Weight, kg
870-0010	0.05
870-0020	0.05

## 870-0030

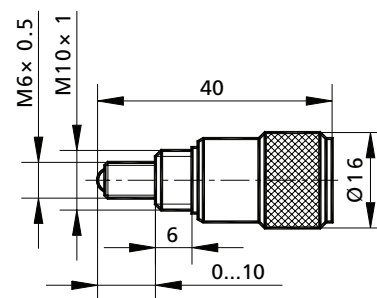
## FINE CLOSED SCREW



Fine Closed Screw 870-0030 offers high 1  $\mu\text{m}$  resolution and smooth movement. Its travel range is 10 mm. The screw is used with most of our mounts. The handle covers the thread over the complete travel range.

Fine Closed Screw is designed for use in optical mounts for manual angular adjustment.

Mount the screw by its brass collar on M10x1 thread (M10x0.5 as option).



Code	Weight, kg
870-0030	0.02

### Complementary Products

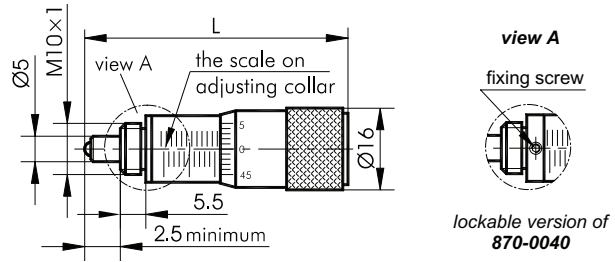
Code	Page
840-0040-34	5.62
840-0050-24	5.62



840-0050-24

840-0040-34

**870-0040 MICROMETER SCREWS**



- Designed especially for micro-positioning applications
- Stainless steel screw with hard steel ball tip
- Brass collar
- Very smooth motion allows positioning with sensitivity of 1 µm
- Scale gradation 10 µm
- Nominal travel 5, 10, 15, 20, 25, 30, 50 mm

Micrometers 870-0040 have M6×0.5 pitch. Positioning sensitivity is up to 1 µm (0.5 mm per revolution). Mount the micrometer by the M10×1 thread (M10×0.5 as option).

When the scale is not visible, bring it into view revolving the collar on which the scale is engraved. The scale is graduated in 0.01 mm increments.

The micrometers come in 7 different travel ranges.

870-0040 are utilized in our mirror mounts and translation stages. They may also be used in positioners of other manufacturers.

Code	Nominal travel, mm	Maximum travel, mm	L, mm	Weight, kg
870-0040-05	5	7	41	0.03
870-0040-10	10	13	56	0.04
870-0040-15	15	17	62	0.04
870-0040-20	20	22	72	0.05
870-0040-25	25	27	83	0.06
870-0040-30	30	32	94	0.08
870-0040-50	50	52	138	0.10

**870-0045 THIN MICROMETERS**



870-0045-02



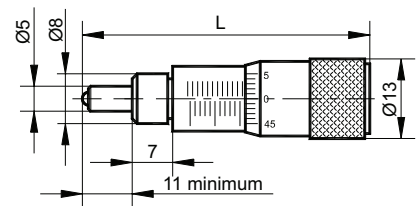
870-0045-04

Thin Micrometers 870-0045 are adjustment screws of very high-precision. Mount the micrometer on a Ø8 hole. Clutch 870-0045-02 with your own fixing screw. 870-0045-04 and 870-0045-54 have an extra thread and a fixing nut. Tighten the nut from the opposite side.

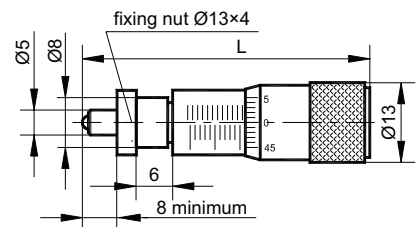
**SPECIFICATIONS**

Pitch	0.5 mm
Sensitivity	1 µm
Scale gradation	10 µm

Code	Travel, mm	L, mm	Weight, kg
870-0045-02	10	58.5	0.03
870-0045-52	5	46	0.02
870-0045-04	10	58.5	0.03
870-0045-54	5	46	0.02



870-0045-02

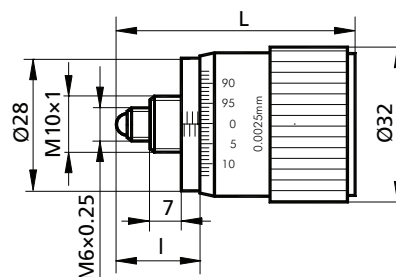


870-0045-04

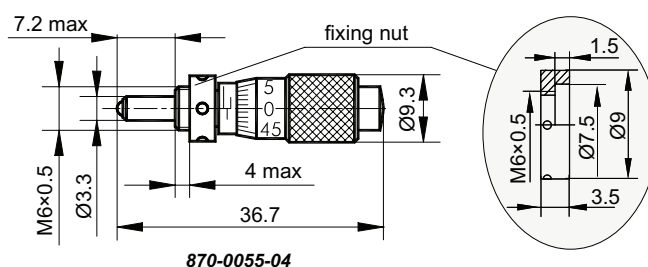
**870-0050**
**HIGH-RESOLUTION MICROMETERS**


High-Resolution Micrometers 870-0050, 870-0050-02 allow very fine reading accuracy by combining a large knob and a stainless steel screw with precise pitch of 0.25 mm.

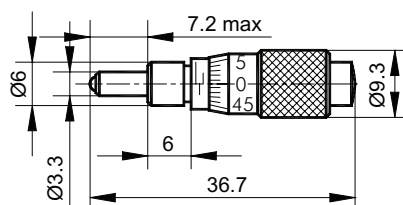
Mount the micrometer by the brass collar on a M10x1 thread (M10x0.5 as option). The knob is made of white anodized aluminium. Other colors are available on request.



Code	Travel, mm	Gradation, $\mu\text{m}$	L, mm	l, mm	Weight, kg
870-0050	5	2.5	40	16	0.05
870-0050-02	10	2.5	45	21	0.05

**870-0055**
**MINI MICROMETERS**


870-0055-04



870-0055-02

- Designed for small stages

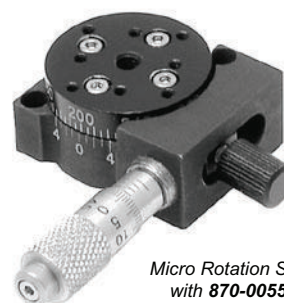
**SPECIFICATIONS**

Travel range	6.35 mm (1/4")
Scale gradation	10 $\mu\text{m}$
Sensitivity	1 $\mu\text{m}$
Weight	0.01 kg

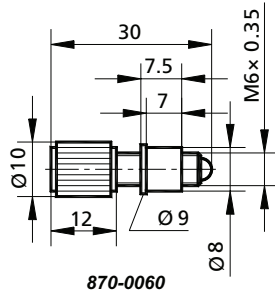
**Complementary Products**

Code	Page
860-0054	5.104
860-0100	5.117

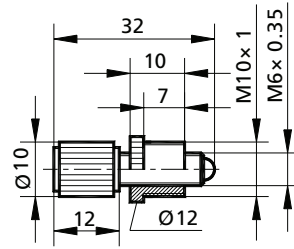

 Micro translation stage  
860-0100 with 870-0055-02

 Small stainless steel stage  
860-0054 with 870-0055-04

 Micro Rotation Stage 860-0130  
with 870-0055-04 installed

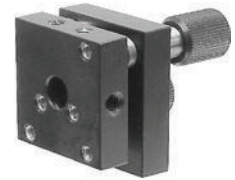
**870-0060 COMPACT FINE SCREWS**



870-0060



870-0060-01



840-0060

Compact Fine Screws 870-0060 are low profile, and compact. They provide high resolution. A special design provides smooth and repeatable action by mating stainless steel screw with a brass collar on a high-precision M6×0.35 thread. The combination of metals provides a superior match for both sticktionless movement and long lifetime.

870-0060 has a mounting diameter of Ø8 mm. The 870-0060-01 has a mounting thread M10×1, or M10×0.5 as option.

A compact knob is made from black anodized aluminium or steel. Fingers can sense minimal rotation of 0.5°–1°. The associated positioning resolution of the screw would be 1 µm/1°.

Code	Weight, kg
870-0060	0.015
870-0060-01	0.015

**Complementary Products**

Code	Page
840-0060	5.66

**870-0070 • 870-0071 ADJUSTMENT SCREWS**



870-0070



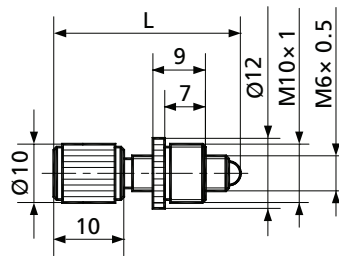
870-0071

Adjustment Screws 870-0070 are popular for their low cost and miniaturized size in applications where rough resolution is enough about 5 µm.

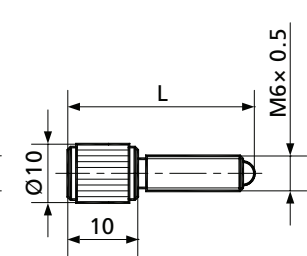
870-0071 has a screw M6×0.5 and a collar with a thread of M10×1 (M10×0.5 as option) for mounting. The screw and collar are made of black-finished steel.

870-0070 consists only of black-finished steel screw. It is installed directly, without collar.

870-0070 and 870-0071 are ideally suited for optical mounts of series 840-0040, 840-0050.



870-0071



870-0070

Code	Travel, mm	L, mm	Weight, kg
870-0070-08	8	29	0.015
870-0071-08	8	29	0.02
870-0070-18	18	39	0.025
870-0071-18	18	39	0.03



840-0036-01



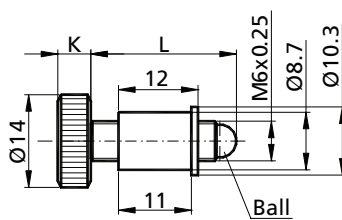
850-0095

**Complementary Products**

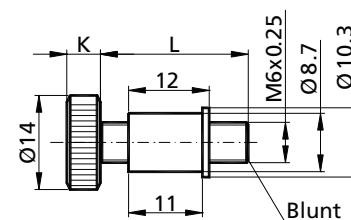
Code	Page
840-0036-01	5.60
850-0095	5.94

**870-0080**
**ULTRA-FINE ADJUSTMENT SCREWS**

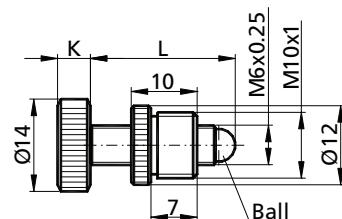

- Stainless steel screw with pitch of 0.25 mm
- Precision brass collars of 3 types
- Tolerances better than tightest industry standards



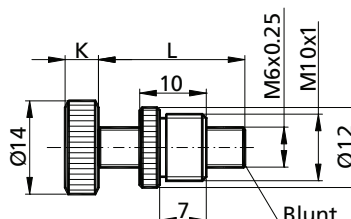
870-0080-A



870-0080-B



870-0080-C



870-0080-D

Ultra-Fine Adjustment Screws 870-0080 are compact and provide extremely high resolution. Special design provides a smooth and repeatable action by mating a high precision 0.25 pitch stain-less steel screw with a high precision brass collar. The screws can be provided with a hardened steel ball on the tip or with a blunt grounded tip.

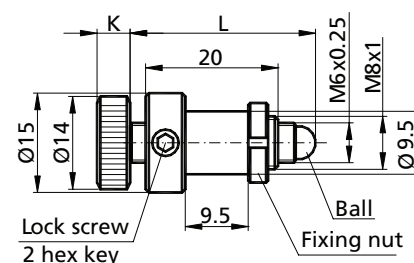
The collars can be provided with a cylindrical mounting surface or with a thread, and are ideally suitable for all mechanical stages and elements.

The handy dimensions of the knobs are optimally chosen for fingers to rotate a knob with 0.5°–1° resolution. This enables to achieve 0.5 µm positioning sensitivity. The knobs are made of hard aluminium and come in various colours: black, white, red, green, yellow, blue, etc. By default the knobs are in black or white colour, 5 mm thick.

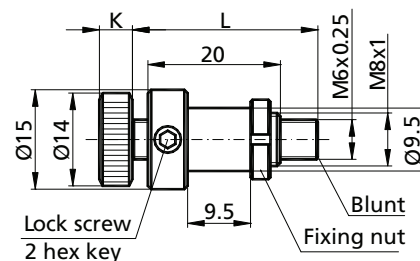
Weight, kg 0.01 to 0.02

Code	Travel, mm	L, mm	Tip type	Collar
870-0080-E1	5	28	ball	Ø9.5
870-0080-F1	5	25	blunt	Ø9.5
870-0080-A2	7	22	ball	Ø8.7
870-0080-C2	7	20	ball	M10×1 *
870-0080-B2	7	19	blunt	Ø8.7
870-0080-D2	7	19	blunt	M10×1 *
870-0080-A3	10	25	ball	Ø8.7
870-0080-C3	10	23	ball	M10×1 *
870-0080-B3	10	22	blunt	Ø8.7
870-0080-D3	10	22	blunt	M10×1 *
870-0080-E3	10	33	ball	Ø9.5
870-0080-F3	10	30	blunt	Ø9.5
870-0080-A4	25	40	ball	Ø8.7
870-0080-C4	25	38	ball	M10×1 *
870-0080-B4	25	37	blunt	Ø8.7
870-0080-D4	25	37	blunt	M10×1 *
870-0080-E4	25	48	ball	Ø9.5
870-0080-F4	25	45	blunt	Ø9.5

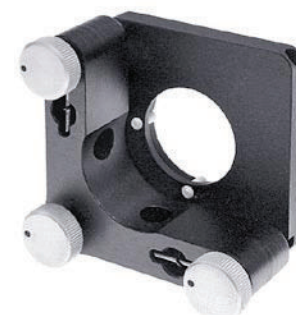
\* you may specify an alternative pitch of M10×0.5.  
Knobs may be 5 (standard), 10 or 15 mm thick. Please append the desired height of the knob when ordering, e.g. 870-0080-A2-K15.



870-0080-E



870-0080-F

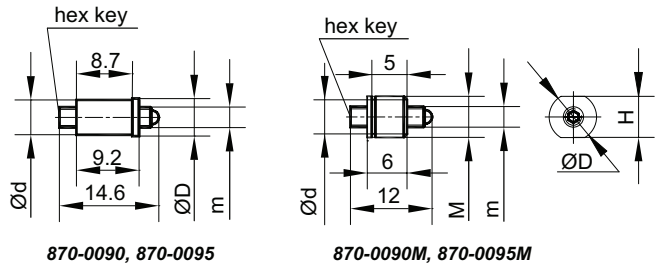


840-0033

**Complementary Products**

Code	Page
840-0033	5.59

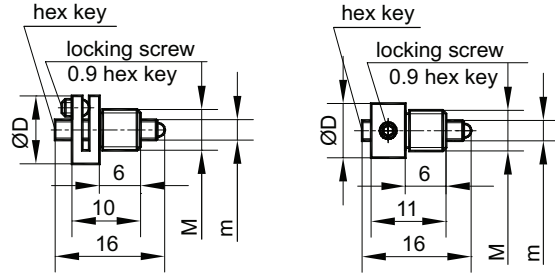
**870-0090 • 870-0095 FINE HEX ADJUSTMENT SCREWS**



870-0090, 870-0095

870-0090M, 870-0095M

**ML, MN, MF models are lockable**



870-0090ML, 870-0095ML

870-0090MN, 870-0095MN

- Small (M3 or M4) adjustment screws
- Screw of stainless steel
- Brass nut with outer M6 mounting thread
- Hex key drive
- Pitch 0.25 mm
- Travel 5 mm
- Lockable models available

**Miniature screws**

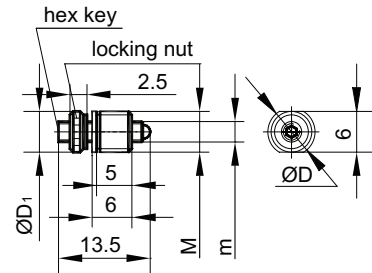
Fixing nuts **3N6X05** (for 870-0090 series) and **3N8X1** (for 870-0095 series) are available for screws with threaded collar.

It will allow to fix the screw at any depth in walls too thin for the 6 mm collar thread.

It will fix a screw so that the locking screw is in desired orientation.

When you order our units with these screws, we will make sure to include the fixing nut, in case the unit's wall is thin. In other cases you may order the nut separately.

See examples below.

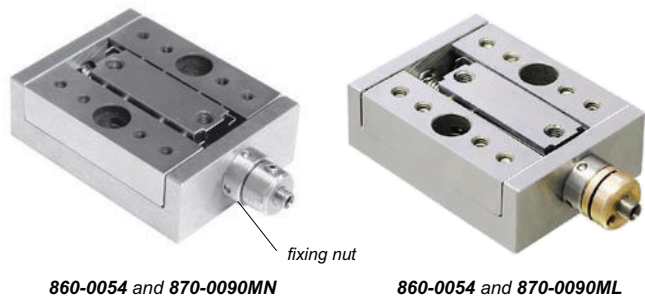


870-0090MF, 870-0095MF

Model	d, mm	D, mm	D1, mm	m, mm	M, mm	H	hex key
870-0090	5.1	5.5	-	M3x0.25	-	-	1.5
870-0090M	-	7	-	M3x0.25	M6x0,5	6	1.5
870-0090ML	-	9	-	M3x0.25	M6x0,5	-	1.5
870-0090MN	-	8	-	M3x0.25	M6x0,5	-	1.5
870-0090MF	-	7	6	M3x0.25	M6x0,5	6	1.5
870-0095	6	7	-	M4x0.25	-	-	2
870-0095M	-	9	-	M4x0.25	M8x1	8	2
870-0095ML	-	11	-	M4x0.25	M8x1	-	2
870-0095MN	-	10	-	M4x0.25	M8x1	-	2
870-0095MF	-	9	8	M4x0.25	M8x1	8	2

*You may order lockable versions of our positioners. There are different locking mechanisms. They lock a Fine Screw, while causing a slightest displacement possible. A lock at each Fine Screw is tightened with a hex key.*

*For lockable versions the code is formed by appending letter "L" to the code of the standard unit.*



860-0054 and 870-0090MN

860-0054 and 870-0090ML

**Fixing Nuts**

Model	M, mm
3N6X05	M6x0.5
3N8X1	M8x1

OPTICAL TABLES  
BRACKETS & RAILS  
BASE MOUNTS & ACCESSORIES  
OPTICAL MOUNTS  
OPTICAL POSITIONERS  
BASE POSITIONERS  
TRANSLATION & ROTATION STAGES  
ADJUSTMENT SCREWS  
MOTORIZED POSITIONERS  
OPTO-MECHANICS SETS