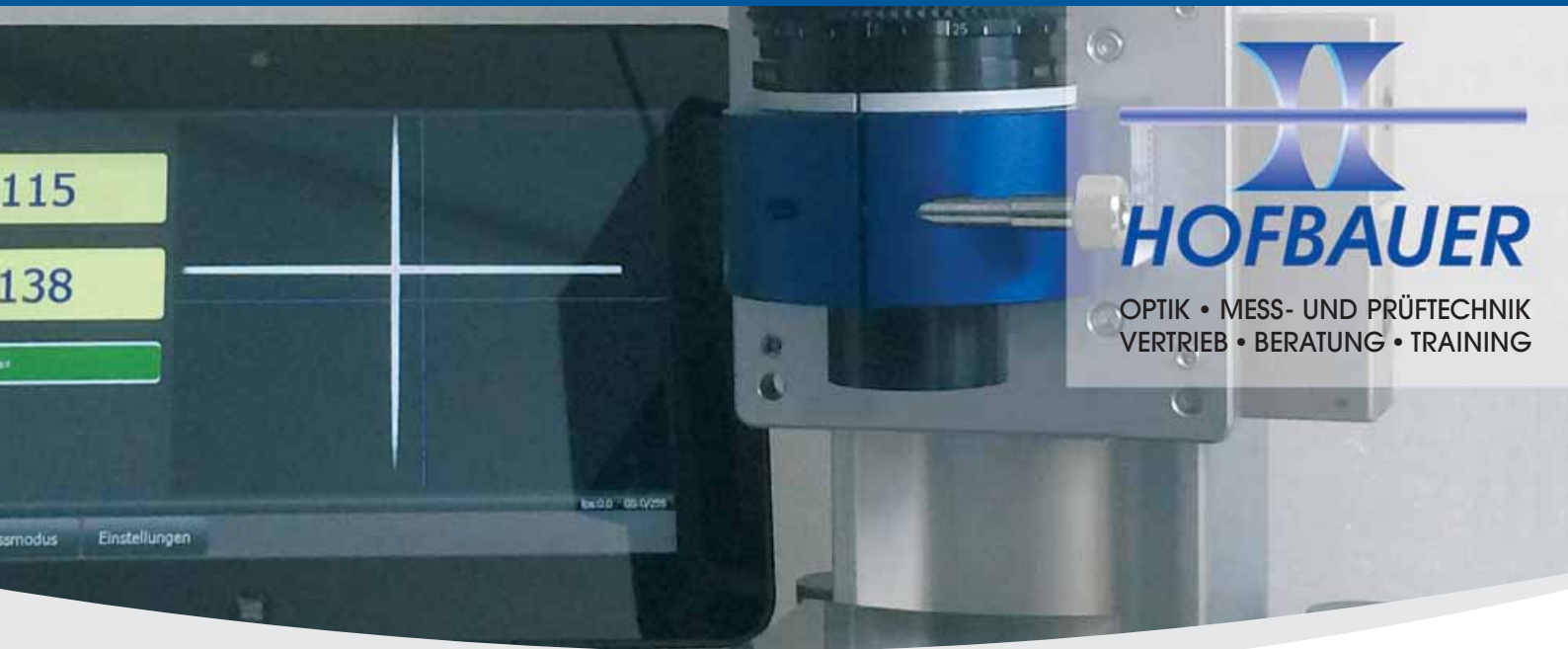


Autocollimators ELWIMAT and ELWIMAT_AKF



OPTIK • MESS- UND PRÜFTECHNIK
VERTRIEB • BERATUNG • TRAINING

ELWIMAT employing the Vignetting Principle

- Large angle measurement range: quasi independent from measurement distance*
- Ultra high repeatability using V-Spot: up to 0.05 arcsec*



Order Code	Item	Measurement Range
802 300	ELWIMAT 30-6	$\pm 5.0^\circ \times 3.7^\circ$
802 301	ELWIMAT 46-4.8	$\pm 3.2^\circ \times 2.4^\circ$
802 302	ELWIMAT 90-8	$\pm 1.5^\circ \times 1.1^\circ$
802 303	ELWIMAT 140-8	$\pm 1.0^\circ \times 0.75^\circ$
802 304	ELWIMAT 200-8	$\pm 0.75^\circ \times 0.55^\circ$
802 305	ELWIMAT 300-11	$\pm 0.50^\circ \times 0.35^\circ$

ELWIMAT_AKF conventional

- Objective tube diameter 65 mm or 40 mm
- Very high repeatability using state of the art sensor technology and correction algorithm: up to 0.02 arcsec



Order Code	Item	Focal Length
801 301	ELWIMAT_AKF 46/40	46
801 302	ELWIMAT_AKF 90/40	90
801 303	ELWIMAT_AKF 140/40	140
801 304	ELWIMAT_AKF 200/40	200
801 305	ELWIMAT_AKF 300/40	300
801 306	ELWIMAT_AKF 200/65	200
801 307	ELWIMAT_AKF 300/65	300
801 308	ELWIMAT_AKF 500/65	500

*s. separate data sheet

ELW_AKF	46/40	90/40	140/40	200/40	300/40	200/65	300/65	500/65	xxx/yy*
Accuracy** (arcsec)	± 2.5	± 1.5	± 1	± 0.7	± 0.6	± 0.7	± 0.6	± 0.4	± 0.2 ... ± 4
Number of measurement axes	2	2	2	2	2	2	2	2	1 ... 2
Measurement range*** (deg)	4.48	2.29	1.47	1.03	0.69	1.03	0.69	0.41	0.2 ... 9
Measurement range (arcsec)	16.100	8.200	5.300	3.700	2.400	3.700	2.400	1.450	700...32.000
Lock-in range**** (deg)	8.8	4.4	2.8	2.0	1.2	2.0	1.2	0.8	0.4...18
Resolution/recommended (arcsec)	0.1	0.05	0.025	0.02	0.01	0.02	0.01	0.01	0.01...0.2
Repeatability (arcsec)	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.05	0.02...1
LED Wavelength (nm)	530	530	530	530	530	530	530	530	480...950
Focal length (mm)	46	90	140	200	300	200	300	500	30 ... 1000
Free Aperture (mm)	9.6	11	28	28	28	48	48	48	5 ... 100
Minimum reflector diameter (mm)	1	2	3	4	6	4	6	10	tbd.
Min. reflector diameter at n=1.5 (mm)	2	4	6	8	12	8	12	20	tbd.
Tube diameter (mm)	40 f8	40 f8	40 f8	40 f8	40 f8	65 f8	65 f8	65 f8	tbd.
Weight AK-sensor (kg)	0.7	0.7	0.8	0.9	1	2.3	2.5	4	tbd.
Dimensions AK-head (mm)	107 x 62 x 110								
Dimensions Touch-Module (mm)	230 x 155 x 26 / Dock: 220 x 195 x 172								
Weight Touch-Module (kg)	1.8								
Interfaces	RS-232 / USB 2.0 / LAN / WLAN								
Power supply	via USB; Touch-Module by power-supply unit								
Shipment	Autocollimator, Touch-Module 8 inch, Docking Station, Power Supply, Sensor cable Odu-USB, USB-Null modem cable for PC								
Order Code	801 301	801 302	801 303	801 304	801 305	801 306	801 307	801 308	*

* according custom request

** Total span error

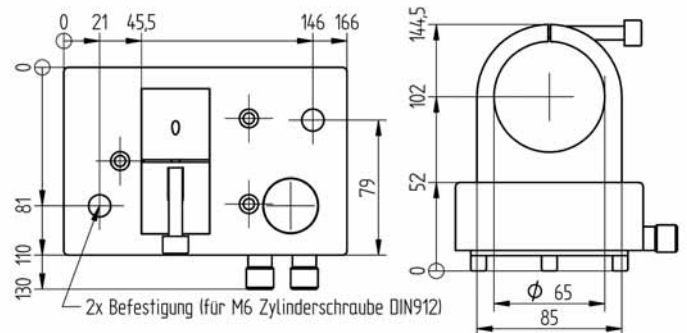
*** depending on working distance
(valid for distances of approx. 3 ... 8 - fold focal length)

**** within close-up range (valid till to a distance of approx.
one focal length)

Adjustable Holder 2 axes D65

- Adjustable range: ± 2° per axis
- Setting sensitivity: ± 2 arcsec
- Shell clamp for Objective Tube diameter 65 mm
- Adapter for Objective Tube diameter 40 mm available

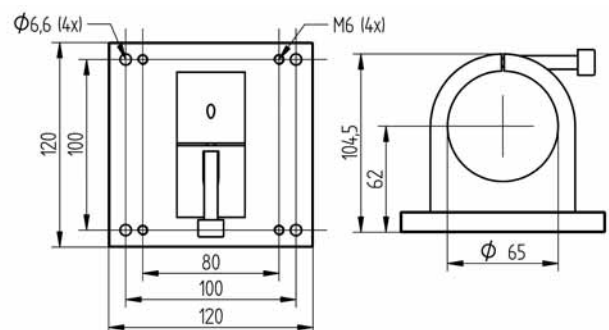
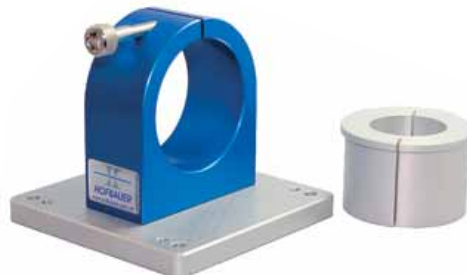
Order Code	Item
800 016	Adjustable Holder D65
800 036	Adapter D40



Holder D65

- Shell clamp for Objective Tube diameter 65 mm
- Adapter for Objective Tube diameter 40 mm available

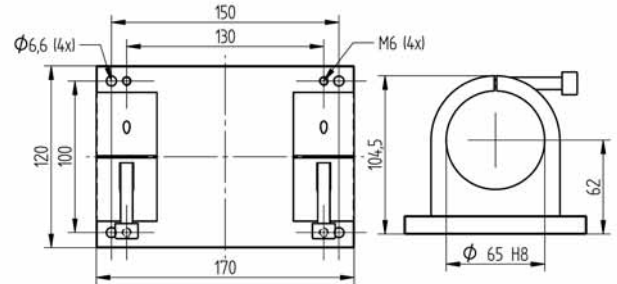
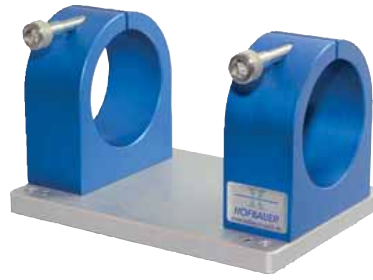
Order Code	Item
800 028	Holder D65
800 036	Adapter D40



Holder D65 double

- For stable fixture of long autokollimators
- Adapter for Objective Tube diameter 40 mm available

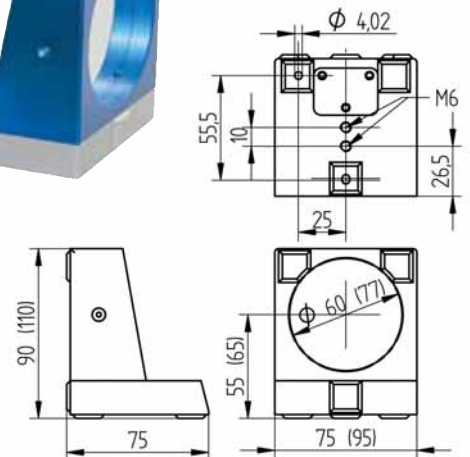
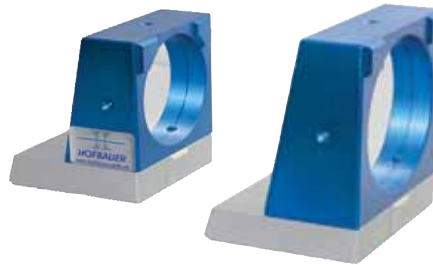
Order Code	Item
800 027	Holder D65 double
800 036	Adapter D40



Reference-Mirror D60 / D80

- Diameter 60 mm and 80 mm
- Flatness better $1/8$ @ 633 nm
- For fixture on mirror base
- Suitable to measure straightness of machine parts and linear bearings

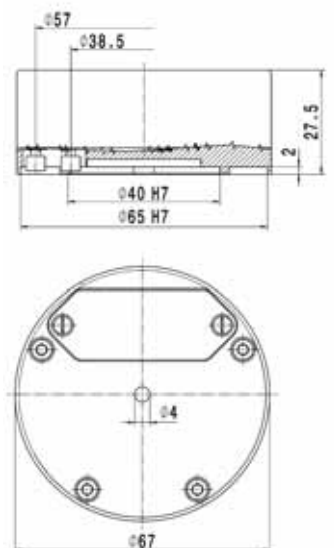
Order Code	Item
800 029	Mirror D60
800 033	Mirror D80 up to > 30 m
800 034	Mirror base 200 x 50 x 40



Alignment Laser D65 / D40

- Laser with magnetic base, battery driven
- Adapted for fixture on Objective Tube diameter 65 mm or 40 mm
- For alignment at large distances (Straightness-, Rotary table with polygon ...)
- Laser automatically activated by sticking at the tube, power-off after removal

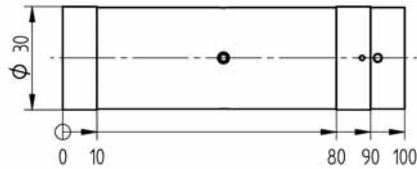
Order Code	Item
800 030	Laser D65 / D40



Single Reflector for Angle and Centering Measurements

- Length 100 mm, Diameter 30 h6
- Mirror 26 mm, Centering error < 0.1 arcmin
- Reflector 12 mm, Centering error < 5 μm

Order Code	Item
800 039	Mirror - Reflector
800 040	Triple - Reflector
800 yyy*	Combi - Reflector double

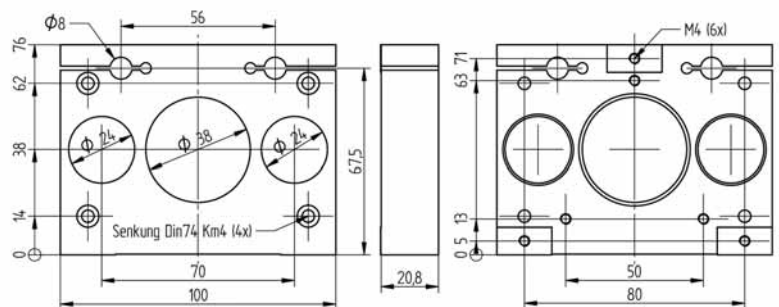


Multi - Reflector

Reflectors for 6-axes measurements

- Plan Mirror and 2 Reflectors 1P2R
- Plan Mirror and 4 Reflectors 1P4R
- Plan Mirror and 6 Reflectors 1P6R

Order Code	Item
800 041	Reflector 1P2R B70
800 302	Reflector 1P2R B96
800 301	Reflector 1P4R
800 304	Reflector 1P6R
800 yyy*	Customized Reflector



Transport and Storage

- For save transport of Autocollimators and accessories

Order Code	Item
800 026	Carrying case ELWIMAT



* Customized on request