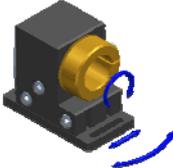
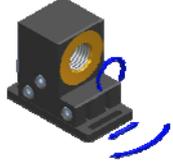
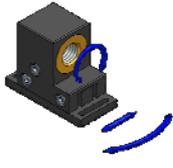
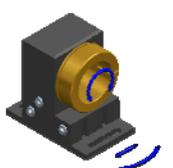


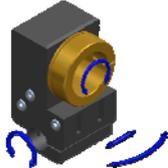


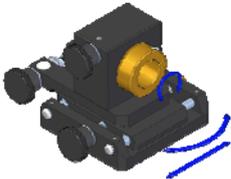
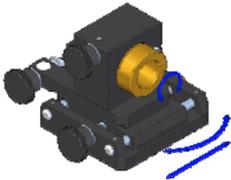
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PRECISION MOUNTINGS

Precision mountings allow an easy, fast and accurate alignment of the laser.

Product Name (Article code)	Product description	Image	Compatible with
H6 – Aluminum mounting with solid brass insert			
H6-20 (100180601)	With slot hole for installation. High precision adjustment in the following directions:		Ø20mm lasers ZA ZM18
H6-M18 (100427500)	With slot hole for installation. High precision adjustment in the following directions:		Lasers with external thread M18 ZM18
H6-M12 (100488900)	With slot hole for installation. High precision adjustment in the following directions:		Lasers with external thread M12 ZM12
H6-40 (100243602)	With slot hole for installation. High precision adjustment in the following directions:		Ø40mm Laser ZPT-F ZR ZRG-F

Product Name (Article code)	Product description	Image	Compatible with
H8 – Aluminum mounting with solid brass insert			
H8-20 (100180701)	Mountable on a \varnothing 20 mm shaft. High precision adjustment in the following directions: 		\varnothing 20mm lasers ZA ZM18
H8-M18 (100451600)	Mountable on a \varnothing 20 mm shaft. High precision adjustment in the following directions: 		Lasers with external thread M18 ZM18
H8-M12 (100516800)	Mountable on a \varnothing 20 mm shaft. High precision adjustment in the following directions: 		Lasers with external thread M12 ZM12
H8-40 (100246002)	Mountable on a \varnothing 20 mm shaft. High precision adjustment in the following directions: 		\varnothing 40mm lasers ZPT-F ZR ZRG-F

Product Name (Article code)	Product description	Image	Compatible with
Special precision mountings			
<p>HX-11 (HX-11-K)</p>	<p>PVC mounting Precision aluminum disk springs</p> 		<p>Ø11mm lasers ZD ZF-pe-F</p>
<p>MXYZ-20 (MXYZ-20B)</p>	<p>Aluminum mounting with high precision adjustment in the following directions:</p>  <p>Angularly tilt able by 20°, parallel movable by 20mm; no maintenance, free from backlash, self-locking</p>		<p>Ø20mm lasers ZA ZM18</p>
<p>MXYZ-M18 (MXYZ-M18)</p>	<p>Aluminum mounting with high precision adjustment in the following directions:</p>  <p>Angularly tilt able by 20°, parallel movable by 20mm; no maintenance, free from backlash, self-locking</p>		<p>Lasers with external thread M18 ZM18</p>

MOUNTINGS

Product Name (Article code)	Product description	Image	Compatible with
H0 – Aluminum mounting			
H0-20-20 (100182200) optionally: H0-20-22 (100182300)	Mountable on a 20 mm shaft. Adjustment in the following directions:  Mountable on a Ø 22 mm shaft		Ø20mm lasers ZA ZM18
H0-11-20 (100322100)	Combination package mounting + adapter: Mounting: H0-20-20, aluminum, horizontally twistable, Ø20mm Adapter: AP-11-0 with Ø11mm		Ø11mm lasers ZD ZF-pe-F
H0-14-20 (100322200)	Combination package mounting + adapter: Mounting: H0-20-20, Aluminum, horizontally twistable, Ø20mm Adapter: AP-14-0 with Ø14mm		Ø14mm lasers ZT
H0-40-20 (100182500) optionally: H0-40-22 (100182600)	Mountable on a Ø 20 mm shaft. Adjustment in the following directions:  Mountable on a Ø20mm shaft		Ø40mm lasers ZPT-F ZR ZRG-F

Product Name (Article code)	Product description	Image	Compatible with
H2 – Aluminum mounting, tiltable			
H2-20 (H2-20)	<p>With slot hole for installation. Adjustment in the following directions:</p> 		<p>Ø20mm lasers ZA ZM18</p>
H2-M12 (H2-M12)	<p>With slot hole for installation and internal M12 thread. Adjustment in the following directions:</p> 		<p>Lasers with external thread M12 ZM12</p>
H2-11 (H2-11)	<p>Combination package mounting + adapter:</p> <p>Mounting: H2-20, aluminum, Ø20mm Adapter: AP-11 with Ø11mm</p>		<p>Ø11mm lasers ZD ZF-pe-F</p>
H2-14 (H2-14)	<p>Combination package mounting + adapter:</p> <p>Mounting: H2-20, Aluminum, Ø20mm Adapter: AP-14 with Ø14mm</p>		<p>Ø14mm lasers ZT</p>
H2-40 (H2-40)	<p>With slot hole for installation. Adjustment in the following directions</p> 		<p>Ø40mm lasers ZPT-F ZR ZRG-F</p>

Product Name (Article code)	Product description	Image	Compatible with
H3-Mountings – Plastic mountings			
H3-20 (H3-20)	Plastic, with ball head and slot hole for installation. Adjustment in the following directions 		Ø20mm lasers ZA ZM18
H3-M18 (H3-M18)	Plastic, with swivel joint Internal thread M18		Lasers with external thread M18 ZM18
H3-M12 (H3-M12)	Plastic, with swivel joint Internal thread M12		Lasers with external thread M12 ZM12
H3-11 (H3-11)	Combination package mounting + adapter: Mounting: H3-20, plastic, with ball head, Ø20mm, with slot hole for installation Adapter: AP-11 with Ø11mm		Ø11mm lasers ZD ZF-pe-F
H3-14 (H3-14)	Combination package mounting + adapter: Mounting: H3-20, Plastic, with ball head, Ø20mm, with slot hole for installation Adapter: AP-14 with Ø14mm		Ø14mm lasers ZT

ADAPTERS

Product Name (Article code)	Product description	Image	Compatible with
Adapter for size adjustments			
AP-11-0 (100248700)	Reducing ring for mountings		H0, H6 and H8 with Ø20mm on Ø11mm
AP-14-0 (100248800)	Reducing ring for mountings		H0, H6 and H8 with Ø20mm on Ø14mm
AP11 (AP11)	Reducing ring for mountings, with retaining ring		H2 and H3 with Ø20mm on Ø11mm
AP14 (AP14)	Reducing ring for mountings, with retaining ring		H2 and H3 with Ø20mm on Ø14mm
AP40 (AP40)	Reducing ring for mountings		Mountings with Ø55mm on Ø40mm
AP-M18-20 (100568102)	Thread adapter from M18 thread to Ø20mm		Lasers with external thread M18 ZM18
AP-M18-19 (100568150)	Thread adapter from M18 thread to Ø19mm, for mountings with Ø19mm		Lasers with external thread M18 ZM18
AP-M12 (AP-M12)	Thread adapter from M12 thread to Ø20mm, for mountings with Ø20mm		Lasers with external thread M18 ZM12
H1D (H1D)	Diode sleeve H1D, Ø20x75mm, Aluminum		Laser with Ø11mm ZD

AUXILIARY MOUNTINGS AND CLIMATE CASE

Product Name (Article code)	Product description	Image	Compatible with
Special mountings			
BD (BD)	Wall and ceiling mounting Consisting of Console, 1m aluminum pipe (Ø40mm), plus 50cm steel crossbar (Ø20mm)		H0-40-20 H0-20-20
BG (BG)	Mounting system of aluminum profiles, with fastening angles, for flexible positioning of several lasers, also working for mounting on wall or table. For lasers with Ø11mm - 20mm		H2 H3
BM (BM)	Magnetic chock for mountings H2 and H3 Extremely strong magnet For lasers with Ø11mm - 20mm		H2 H3
BT (BT)	Linear adjusting device for 4 lasers, only in combination with H2 and H3 mountings		H2 H3
Adjustment drives and sidetracking wagons			
LS (LS0,5 / LS / LS2M / LS3M)	Linear shifting device Available lengths 0,5m, 1m, 2m, 3m		LW
LW (LW)	Carriage for linear shifting device		H2
MXYZ-20B-LW (100745700)	Mounting MXYZ mounted on carriage for linear shifting device		Ø20mm lasers ZM18
Climate Case			
ZM18 Climate Case (100643200)	Climate Case for ZM18 lasers Housing: 200x100x87 mm, Operating case temperature: -20° up to 60°C Internal heating & cooling of the laser 24VDC supply voltage		ZM18

POWER SUPPLY; CABLES; FEMALE CONNECTORS

Product Name (Article code)	Product description	Image	Compatible with
Power supplies			
WPS-5-M12 (WPS-5-12 / WPS-5-12UK)	Power supply M12 socket, 5VDC output voltage, For Europe and US/Japan; or UK plug		ZM12 ZM18
WPS-9-M12 (WPS-9-12)	Power supply with M12 socket, 9VDC output voltage, For Europe and US/Japan; or UK plug		Z-24
WPS-24-M12 (100974700)	Power supply with M12 socket, 24VDC output voltage For Europe and US/Japan; or UK plug		Z-Fiber
WPSB-3.5 (WPSB-3,5 / WPSB-3,5UK)	Power supply with Texas® female connector 3,5VDC output voltage For Europe and US/Japan; or UK plug		ZD ZF-pe-F ZT
WPS-3.5 (WPS-3.5)	Power supply with Texas® plug 3,5VDC output voltage For Europe and US/Japan; or UK plug		VB1 or VB4 for ZD ZF-pe-F ZT

Product Name (Article code)	Product description	Image	Compatible with
NG-C-W-24M (100368500)	Power supply unit for DIN rail in switch cabinet 24VDC output voltage.		ZD-24 ZM12 ZM18
NG-C-W-5M (100368400)	Power supply unit for DIN rail in switch cabinet 5VDC output voltage.		ZD ZM12 ZM18
Distributor Box			
VB4 (VB4)	Distributor box to connect WPS power supply with up to 4 pcs. ZB, ZD, ZF or ZT lasers		ZB ZD ZF-pe-F ZT
VB4-M12 (VB4-M12)	M12-Distributor box to connect up to 4 pcs lasers, separately switchable, only with separate power supply (WPS-5-M12)		ZM12 ZM18
Cables			
KB4-2m (100499400) KB4-5m (100499300)	2m / 5m Cable, female connector, with "screw plug", straight, 4 wires		ZM12 ZM18
KB4w-2m (100499420) KB4w-5m (100499320)	2m / 5m Cable, female connector with "screw plug", rectangular, 4 wires		ZM12 ZM18
KB4g-2m (100499461) KB4g-5m (100499302) KB4g-10m (100499452) KB4g-25m (100499307)	2m / 5m 10m / 25m Shielded connection cable (shielding not connected), with "screw plug", straight, 4 wires		ZM12 ZM18

Product Name (Article code)	Product description	Image	Compatible with
VK2m (VKABEL2M)	Extension cable for WPS, 2m		ZD ZF-pe-F ZT
Plug adapter UK (100247510)	To use with WPS power supply For our UK clients		WPS WPSB
Plug adapter AU (100247530)	To use with WPS power supply. For our Australian clients		WPS WPSB
Female connectors			
Z24Straight (Z24gerade)	Female connector, 4 Pins, with "screw plug", straight female connector without cable for M18 lasers		ZM12 ZM18
Z24Rectangular (Z24winkel)	Female connector, 4 Pins, with "screw plug", rectangular female connector without cable for M18 lasers		ZM12 ZM18

ZQ2-ACCESSORIES

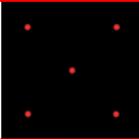
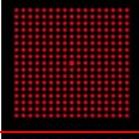
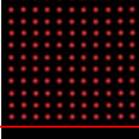
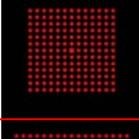
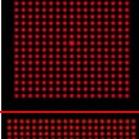
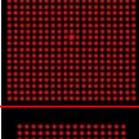
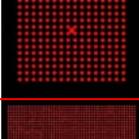
Heat sink (100949900)	Cooling element with 2 fans, 24V 120x250x75mm Aluminum alloy		ZQ2
RS232 to USB Adapter cable (100940220)	Interface adapter cable for ZQ2		ZQ2 ZQ
Clamping Ring ZQ2 (100988100)	Keeps focus ring in position		ZQ2

OPTICAL ACCESSORIES			
Product Name (Article code)	Product description	Image	Compatible with
Attachment for beam alteration			
AK20 Dimming Cap (AK20)	Dimming cap, to shorten laser line		Ø20mm lasers
AK-20S Dimming Cap (100620600)	Sloped dimming cap, to shorten laser line		Ø20mm lasers
SK20 Protective Cap (100666600)	Protective Cap IP67 with glass inserts, water- and dustproof		Ø20mm lasers
AK40 Dimming Cap (AK40)	Sloped dimming cap, to shorten laser line		Ø40mm lasers
LB11 Line Limiting Top (LB11)	Line length may be shortened according to individual needs.		Ø11mm lasers
LB20 Line Limiting Top (100525702)	Line length may be shortened according to individual needs (from ca. 11° to 84° opening angle).		Ø20mm lasers
ZM18 Cap (100507500)	Cap for M18 lasers with 400-700nm wavelength with non reflecting glass-pane (spare part!)		ZM18

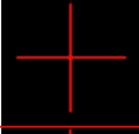
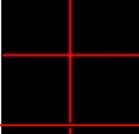
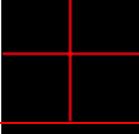
Product Name (Article code)	Product description	Image	Compatible with
Optic Head OK (ZTP, ZTL, ZTLP, ZTX5, ZTX30, ZTX60)	Exchangeable Optic Head for ZT lasers: Dot, line, line with dot, small/big crosses		ZT lasers
Clamping ring ZM18 (100637700)	Keeps focus ring in position		ZM18
Magnetic target RED (Z290500)	Magnetic laser target red		
Magnetic target GREEN (Z290501)	Magnetic laser target green		

DOE OPTICS (customized DOE available on request)

DOE dot matrix

2x2+1p	2x2+1 dot matrix Angle: 16,1°x16,1° @ 635nm Pattern size at 100mm: 28 x 28mm		ZM12 ZM18
17x17p14	17x17 dot matrix Angle: 14,6°x14,6° @ 635nm Pattern size at 100mm: 26 x 26mm		ZM12 ZM18
11x11p28 (former: 11x11p41)	11x11 dot matrix Angle: 28°x28° @ 635nm Pattern size at 100mm: 50 x 50mm		ZM12 ZM18
13x13p4	13x13 dot matrix Angle: 4°x4° @ 635nm Pattern size at 100mm: 7 x 7mm		ZM12 ZM18
17x17p5	17x17 dot matrix Angle: 4°x5° @ 635nm Pattern size at 100mm: 9 x 9mm		ZM12 ZM18
21x21p5	21x21 dot matrix Angle: 5°x5° @ 635nm Pattern size at 100mm: 9 x 9mm		ZM12 ZM18
16x16p5	16x16 dot matrix Angle: 5°x5° @ 635nm Pattern size at 100mm: 9 x 9mm		ZM12 ZM18
51x51p22 (former: 51x51p28)	51x51 dot matrix Angle: 22°x22° @ 635nm Pattern size at 100mm: 39 x 39mm		ZM12 ZM18
101x101p5	101x101 dot matrix Angle: 5°x5° @ 635nm Pattern size at 100mm: 8,7 x 8,7mm		ZM12 ZM18

Product Name (Article code)	Product description	Image	Compatible with
DOE multi lines			
5L6 (former: 5L29)	5 parallel lines Angle: 6°x28,8° @ 635nm Pattern size at 100mm: 10,4 x 51,2mm		ZM12 ZM18
7L5 (former: 7L9)	7 parallel lines Angle: 5°x7° @ 635nm, Pattern size at 100mm: 8,7 x 12,2mm		ZM12 ZM18
5L17 (former: 5L24)	5 parallel lines Angle: 17°x17° @ 635nm Pattern size at 100mm: 29,9 x 29,9mm		ZM12 ZM18
7L21 (former: 7L30)	7 parallel lines Angle: 21,4°x21,4° @ 635nm Pattern size at 100mm: 38 x 38mm		ZM12 ZM18
11L30	11 parallel lines Angle: 30°x30° @ 635nm Pattern size at 100mm: 54 x 54mm		ZM12 ZM18
11TL30	11 thin parallel lines Angel: 30°x30° @ 635nm Pattern size at 100mm: 54 x 54mm		ZM12 ZM18
25L27 (former: 25L37)	25 parallel lines Angle: 27°x27° @ 635nm Pattern size at 100mm: 48 x 48mm		ZM12 ZM18
21L7	21 parallel lines Angle: 7°x7° @ 635nm Pattern size at 100mm: 12 x 12mm		ZM12 ZM18
65L18 (former: 65L26)	65 parallel lines Angle: 18,4°x18,4° @ 635nm (central line thicker) Pattern size at 100mm: 32 x 32mm		ZM12 ZM18
41L53	41 parallel lines Angle: 53°x41° @ 635nm Pattern size at 100mm: 99 x 57mm		ZM12 ZM18
25+1L11	25 parallel lines + 1 perpendicular line Angle: 11,4°x11,4° @ 635nm Pattern size at 100mm: 20 x 20mm		ZM12 ZM18

Product Name	Product description	Image	Compatible with
DOE square grid			
51x51q23 (former: 51x51q32)	51x51 squares Angle: 22,6°x22,6° @ 635nm Pattern size at 100mm: 40 x 40mm		ZM12 ZM18
DOE cross			
x2	Cross Angle: 2°x2° @ 645nm Pattern size at 100mm: 3mm		ZM12 ZM18
x5 (former: x55)	Cross Angle: 5°x5° @ 635nm Pattern size at 100mm: 9mm		ZM12 ZM18
x10	Cross Angle: 10°x10° @ 635nm Pattern size at 100mm: 18mm		ZM12 ZM18
x15	Cross Angle: 15°x15° @ 635nm Pattern size at 100mm: 26mm		ZM12 ZM18
x30 (former: xhc)	Cross Angle: 36°x36° @ 635nm Pattern size at 100mm: 66mm		ZM12 ZM18
x45	Cross Angle: 45°x45° @ 635nm Pattern size at 100mm: 83mm		ZM12 ZM18
x60	Cross Angle: 60°x60° @ 635nm Pattern size at 100mm: 116mm		ZM12 ZM18
x5	Cross Angle: 5°x5° @ 520nm Pattern size in 100mm: 9mm		ZM12 ZM18
x15	Cross Angle: 15°x15° @ 520nm Pattern size at 100mm: 26mm		ZM12 ZM18
x25	Cross Angle: 25°x25° @ 532nm Pattern size at 100mm: 45mm		ZM12 ZM18
x52	Cross Angle: 52°x52° @ 515nm Pattern size at 100mm: 98mm		ZM12 ZM18

Product Name	Product description	Image	Compatible with
Other DOE			
5pl6	5 dots in line Angle: 6° @ 635nm Pattern size at 100mm: 10,5mm		ZM12 ZM18
9pl0,85	9 dots in line Angle: 0,85° @ 635nm Pattern size at 100mm: 1,5mm		ZM12 ZM18
11pl16	11 dots in line Angle: 16,1° @ 635nm Pattern size at 100mm: 28,1mm		ZM12 ZM18
19pl13	19 dots in line Angle: 13,5° @ 635nm Pattern size at 100mm: 23,5mm		ZM12 ZM18
99pl18	99 dots in line Angle: 18,4° @ 635nm Pattern size at 100mm: 32mm		ZM12 ZM18
c34	Circle Angle: 34° @ 635nm Pattern size at 100mm: 60mm		ZM12 ZM18
5c28	5 concentric rings Angle: 28,2° @ 635nm Pattern size at 100mm: 50,2mm		ZM12 ZM18
q34	Square Angle: 34° @ 635nm Pattern size at 100mm: 60 x 60mm		ZM12 ZM18
rp31	Random pattern (repeating) Angle: 45°x31° @ 635nm Pattern size at 100mm: 83 x 55mm		ZM12 ZM18
Diodes available on request			
405, 450nm	Blue wavelength		
520, 532nm	Green wavelength		
635, 660nm	Red wavelength		
785, 808, 830nm	Infrared wavelength		

SAFETY GOGGLES

Product Name (Article code)	Product description	Image
LSB BG (190 – 532nm) (100757650)	Goggles Daylight transmittance (VLT) ca. 40% Filter color: orange 190 - 315 D LB7 + IR LB4 (OD7+) >315 - 532 D LB5 + IR LB6Y (OD6+)	
LSB BGIR (180 – 532nm / 808 – 1065nm) (100496304)	Goggles Daylight transmittance (VLT) ca. 30% Filter color: orange 180 - 315 D LB8 + IR LB4 + M LB6 (OD8+) >315 - 532 D LB6 + I LB7 + RM LB8 (OD8+) 808 - <890 DIR LB3 (OD3+) 890 - <940 DIR LB4 (OD4+) 940 - <980 DIR LB5 (OD5+) 980 - 1065 D LB6 + IRM LB7 (OD7+)	
LSB IR (730 – 855nm) (100496303)	Goggles Daylight transmittance (VLT) ca. 35% Filter color: magenta 190 - 315 OD5+ D LB5 + RLB4 >315 - 375 OD5+ D LB4 + RLB5 730 - <755 OD4+ DIR LB4 755 - 840 OD7+ DR LB5 + I LB7Y >840 - 855 OD4+ DIR LB4	
LSB R (630 – 710nm) (100496301)	Goggles Daylight transmittance (VLT) ca. 45% Filter color: light green 630 - <690 DIR LB3 (OD3+) 690 - 710 D LB5 + IR LB7 (OD7+)	
LSB RIR (600 – 820nm) (100882800)	Goggles Daylight transmittance (VLT) ca. 10% Filter color: blue green 600 - <610 DIR LB2 (OD2+) 610 - <620 DIR LB3 (OD3+) 620 - <630 DIR LB3 (OD3+) 630 - <660 DIR LB4 (OD4+) 660 - <670 DIR LB5 (OD5+) 670 - <710 DIR LB5 (OD5+) 710 - <730 DIR LB4 (OD4+) 730 - <770 DIR LB5 (OD5+) 770 - <790 DIR LB5 (OD5+) 790 - <800 DIR LB4 (OD4+) 800 - 820 DIR LB3 (OD3+)	

LASER ENHANCEMENT GOGGLES

Product Name (Article code)	Product description	Image
LZB red (LZB)	Laser enhancement goggles designed to increase visibility of red laser projections on dark and light surfaces	
LZB green (LZB green)	Laser enhancement goggles designed to increase visibility of green laser projections on dark and light surfaces	

ACCESSORIES FOR LP (Laser projectors)

Product Name (Article code)	Product description	Image	Compatible with
Cardanic Mount (SZ0000001)	Cardanic mounting for laser projectors, for a flexible positioning along all three directional axes. Flexible, simple, stable, industrial standard.		LP-HFD LP-CUBE CPS red CPS green
Passive Cooling: Airing hose (SZ0000038)	For higher temperatures, the extended airing hose may be used in order to cool the projector.		LP-HFD LP-CUBE
Active Cooling: Peltier Cooling (100588000)	Peltier cooler for LP-HFD integrated as add-on kit in the case cover, external power supply.		LP-HFD LP-CUBE
Active cooling: Watercooling (100679800)	SK mini-recooling system 1,49kW, Pressure-sealed with reinforced pump Hardware bounded connections at the projector. (* not retrofittable at the standard projector)		LP with modified block for water cooling connection *
4-key Remote Control (SZ0000009)	4-key remote control, cable-bound incl. C55 software extension module, IP65, up to 10m cable, other lengths or multi-box on request.		

Product Name (Article code)	Product description	Image	Compatible with
Radio Remote Control XBOX (100987200)	Controller with 2x Analog Sticks, digital 8-way directional pad and 4 keys, 2x trigger, 2x button, range up to 10 m		
Radio Remote Control (SZ0000036)	Radio remote control with 8 keys, range up to 100m		
Industrial PC cabinet (100575510)	For 1-6 projectors, optional with independent power supply (UPS) und water cooling		
Barcode-Reader (SZ0000011)	By using barcodes, predefined projections can be easily retrieved.		
Customer-designed laser menu (SZ0000010)	The laser projector can be controlled through a projected menu via reflection. This menu can be customized for your needs.		
Glass reflectors (straight: 8003040, (angled: 8003045)	Used for the drift compensation and referencing the laser system. Exact adjustments of the laser to the operating area at mechanical and thermal effects.	 Image exemplary	