

## High-power motorized beam expanders MEX-HP



High power motorized laser beam expanders MEX series are used to increase the laser beam diameter and adjust divergence. The optical design is dedicated for high power ultrafast femtosecond laser applications. These magnification (zoom) beam expanders are designed for required wavelength and each type of our beam

expanders has motorized divergence adjustability. Standard or custom-made beam expanders feature a unique mechanical closed loop sliding-lens design ensuring high pointing stability and minimal dimensions.

### Main features

- High power optical design (up to 200 W @ 1030 nm, 500 fs, 1 Mhz)
- No internal reflections on optical elements
- Highest beam pointing stability < 0,2 mrad
- All-in-one design with an integrated controller
- Two lens simultaneous movement assuring no misfocus
- Absolute encoder (both lenses)
- Fused silica optical elements
- Diffraction limited performance for all magnifications

### Application examples

- Precise laser micromachining
- High power laser beam management
- Research

### Standard specifications

HIGH POWER MOTORIZED LASER BEAM EXPANDERS SPECIFICATIONS	
Adjustment	Motorized
Divergence	Adjustable
Lens material	UVFS
Transmission	>97% (MEX13-HP), >95% (MEX15-HP)
Control interface	USB or RS232
Controller	Integrated
Housing material	Black anodized aluminum
Max. laser power	Up to 200 W @ 1030 nm, 500 fs, 1 Mhz
LIDT	3 J/cm <sup>2</sup> (10 ns @ 355nm) 5 J/cm <sup>2</sup> (10 ns @ 532 nm) 10 J/cm <sup>2</sup> (10 ns @ 1064 nm)

\*Custom design available

### Standard products

ITEM MODEL	EXPANSION	CLEAR INPUT APERTURE	CLEAR OUTPUT APERTURE	RECOMMENDED MAX. INPUT BEAM SIZE, 1/E <sup>2</sup>	DIMENSIONS (H X W X L)	WAVELENGTH	POINTING STABILITY	SKU	PRICE
MEX13-HP	1,0x - 3,0x continuous	11,5 mm	28 mm	ø7 mm - 1x ø6 mm - 3x	60 x 60 x 207 mm	343-355 nm	< 0,5 mrad	9242	3300 €
						343-355 nm	< 0,2 mrad	9243	3500 €
						515-532 nm	< 0,5 mrad	9240	3100 €
						515-532 nm	< 0,2 mrad	9241	3300 €
						1030-1064 nm	< 0,5 mrad	9238	3100 €
						1030-1064 nm	< 0,2 mrad	9239	3300 €
						343-355 + 515-532 nm	< 0,5 mrad	9246	3400 €
						343-355 + 515-532 nm	< 0,2 mrad	9247	3600 €
						515-532 + 1030-1064 nm	< 0,5 mrad	9244	3300 €
						515-532 + 1030-1064 nm	< 0,2 mrad	9245	3500 €
MEX15-HP	1,0x - 5,0x continuous	11,5 mm	24 mm	ø7 mm - 1x ø3,3 mm - 5x	65 x 65 x 250 mm	343-355 nm	< 0,5 mrad	9252	3600 €
						515-532 nm	< 0,5 mrad	9250	3400 €
						1030-1064 nm	< 0,5 mrad	9248	3400 €
						343-355 + 515-532 nm	< 0,5 mrad	9256	3700 €
						515-532 + 1030-1064 nm	< 0,5 mrad	9254	3600 €

### Mounting options for high-power motorized beam expanders MEX-HP

MOUNTING OPTION	FOR BEAM HEIGHT OF	SKU	PRICE
Manual 4 axis translation stage M5TAGE-HP [Additional adapter included]	27 mm (±2 mm travel)	12571	580 €