

Large Optics Accessories

4D Technology

For AccuFiz and Other Interferometers

4D Technology offers a suite of accessories for high quality, low cost measurement of optics up to 450 mm in diameter.

The large optics accessories integrate with a standard, 100 mm aperture AccuFiz® interferometer, taking advantage of its high wavefront quality and reliability. These precision components allow you to measure large afocal optics and large diameter curved surfaces. The accessories can also be adapted for use with other manufacturers' 100 mm aperture interferometers.

Aperture Converters (Beam Expanders)

Compact, high performance aperture converters produce collimated test beams of 300 or 450 mm diameter. The converters can be used in horizontal or look-down measurement configurations. Kinematic mounting makes it possible to quickly remove the AccuFiz for stand-alone operation, then to return it to the aperture converter with no need for re-alignment. A visible wavelength, coarse alignment laser is also available for quickly aligning the reference and test optics.

Tip/Tilt Mounts

4D mounts provide highly repeatable tip and tilt of the test and/or reference optics. The mounts accept either sling-mounted flats,

which are set in removable handling cells that provide precision, 360-degree rotation, or potted flats which can be rotated in 60 degree increments.

The 4D phase-shifting tip/tilt mount includes a piezo-actuated phase shifter for shifting the reference temporal measurements when an aperture converter is employed. A single Ethernet cable connects the phase-shifting mount to the AccuFiz for fast, easy setup.

Reference and Return Optics

A range of transmission and return flats are available in 300 and 450 mm diameters, with $\lambda/10$ or $\lambda/20$ wavefront quality.

FEATURES

- Measure Optics up to 450 mm with Standard AccuFiz
- Compact, Lightweight Components
- High Precision and Rugged Construction
- Custom Mounting for Use with Other Interferometers

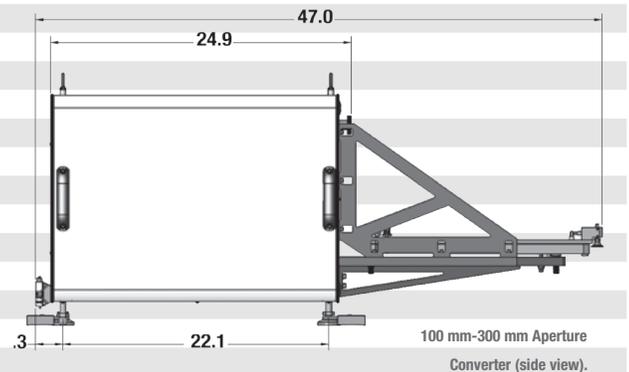


Right to left: AccuFiz Fizeau Interferometer, with 100-300 mm Aperture Converter, 300 mm Phase-Shifting Tip/Tilt Mount and 300 mm Tip/Tilt Mount.

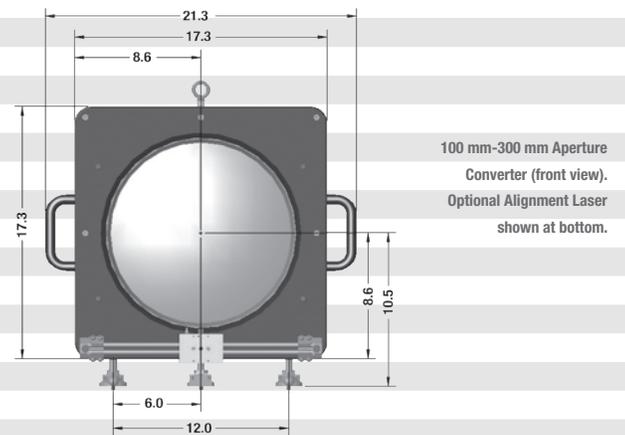
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Specifications

Description	Specification
Aperture Converter	
Mounting Configurations	Horizontal or vertical (look-down)
Input Beam Size	100 mm (3.94 in)
Output Beam Size	300 mm (11.8 in) or 450 mm (17.7 in)
Wavelength	632.8 nm standard; other wavelengths optional
Interferometer	100 mm aperture AccuFiz standard; other interferometers optional
Alignment Laser	Optional visible laser, <5 mW at 650 nm, adjustable mount
Physical Envelope	63.2 x 44.0 x 54.1 cm (24.9 x 17.3 x 21.3 in) 300 mm model;
	119.4 x 44.0 x 54.1 cm (47.0 x 17.3 x 21.3 in) 300 mm plus AccuFiz cradle
Weight	<53.1 kg (117 lbs) 300 mm model; <59.0 kg (130 lbs) 300 mm plus cradle



Tip/Tilt Mount	
Optic Diameter	300 mm or 450 mm clear aperture
Configuration	Horizontal
Tip/Tilt	± 3 degrees
Rotation	360 degree continuous with sling-mounted optic cell
Physical Envelope	59.7 x 51.0 x 20.3 cm (23.5 x 20.0 x 8 in) 300 mm mount
Weight	<17.3 kg (38.1 lbs) 300 mm mount only;
	<31.6 kg (69.7 lbs) 300 mm mount with sling-mounted cell and T-flat

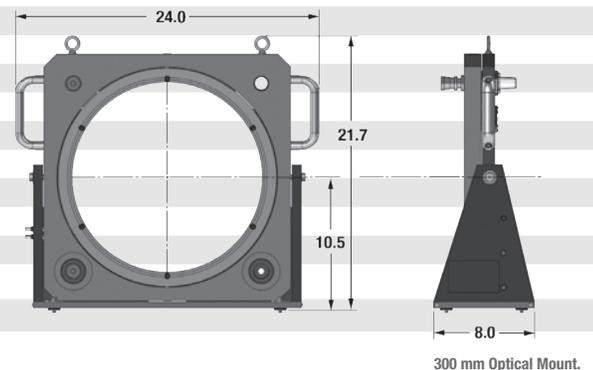


Phase-Shifting Tip/Tilt Mount	
Optic Diameter	300 mm or 450 mm clear aperture
Configuration	Horizontal
Tip/Tilt	± 3 degrees
Rotation	360 degree continuous with sling-mounted optic cell
Physical Envelope	61.0 x 54.9 x 20.3 cm (24.0 x 21.6 x 8 in)
Weight	<25.9 kg (57.1 lbs) 300 mm mount only;
	<40.2 kg (88.7 lbs) 300 mm mount with sling-mounted cell and T-flat

Reference & Return Flats	
Configuration	Potted in mount, or sling-mounted in removable cell
Diameter	300 or 450 mm clear aperture
Wavefront Quality	$\lambda/10$ or $\lambda/20$ for 300 mm; $\lambda/10$ for 450 mm
Reference Flat Coatings	4% or 20% for 300 mm; 4% for 450 mm
Return Optic Coatings	4% or 90% for 300 mm; 4% for 450 mm

Temperature Range	Operational: 16–27° C (60–80° F), non-condensing
(All accessories)	Storage: -1–38° C (30–100° F), non-condensing

Warranty	One Year, limited, on-site system installation and operator training
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All specifications subject to change without notice.

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