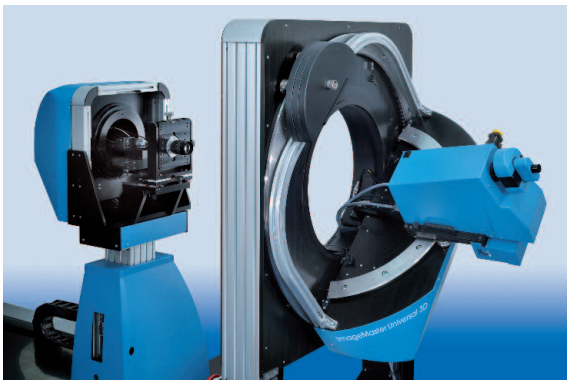
TRIOPTICS

TRIOPTICS GMBH · OPTISCHE INSTRUMENTE

ImageMaster® Universal 3D

Full Field MTF Measurement System for Infinite and Finite Object Distances





ImageMaster®

R&D Line

Universal Line

Production Line

Image Master® Universal 3D

The ImageMaster® Universal 3D instrument completes the ImageMaster® Universal family to enable the full field measurement without rotating the sample under test.

The sample remains in a fixed horizontal position while the automated target generator and the image analyzer scan the complete target respectively image plane. The instrument allows to measure lenses designed for infinity and for finite object distances.

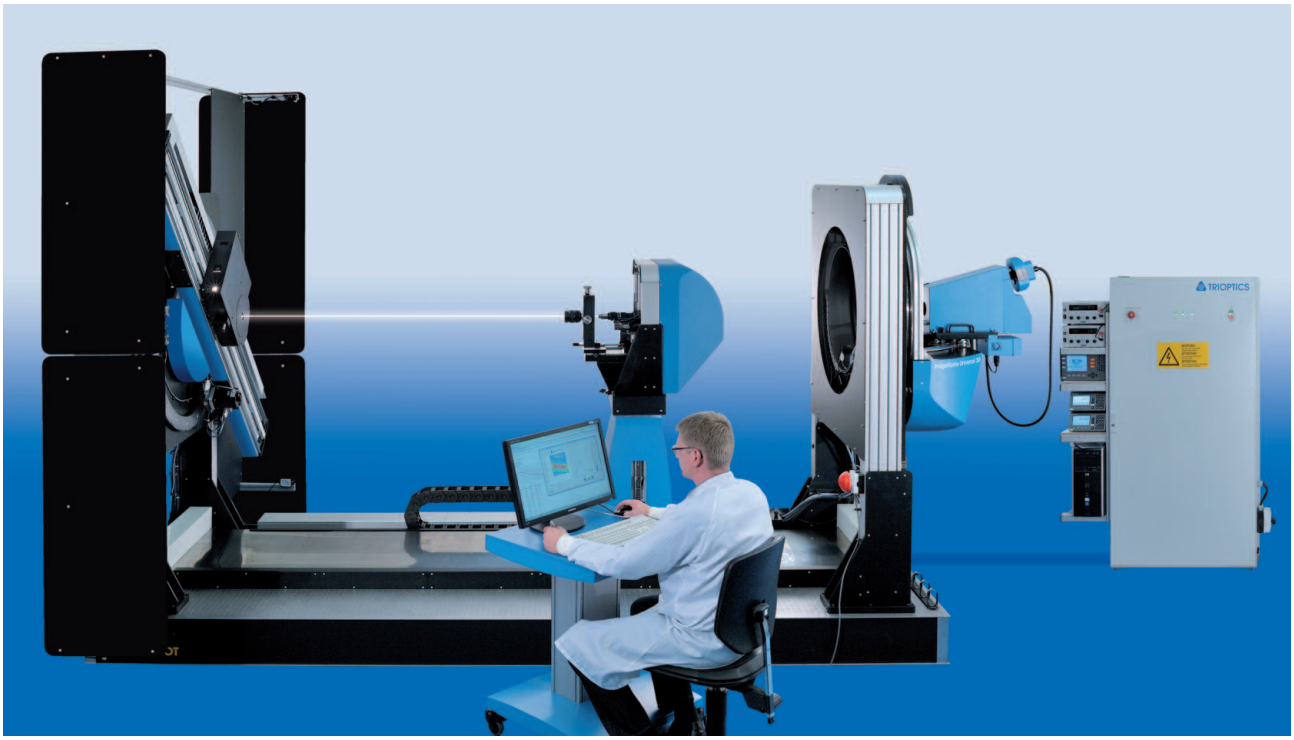
For infinite conjugated lenses exchangeable collimators are used to project the object to an infinite distance. The collimator can be rotated around two axes to cover an object angle of ± 60° over the full field azimuth.

For finite conjugated lenses an illuminated reticule is used as a test target. The distance between the sample under test and the target is changed by moving the sample together with the detector unit. The reticle including illumination unit can be moved to cover a rectangular object field of ±1200 mm (horizontal) and ± 800 mm (vertical). All stages are controlled and supervised by the comprehensive and user friendly software.

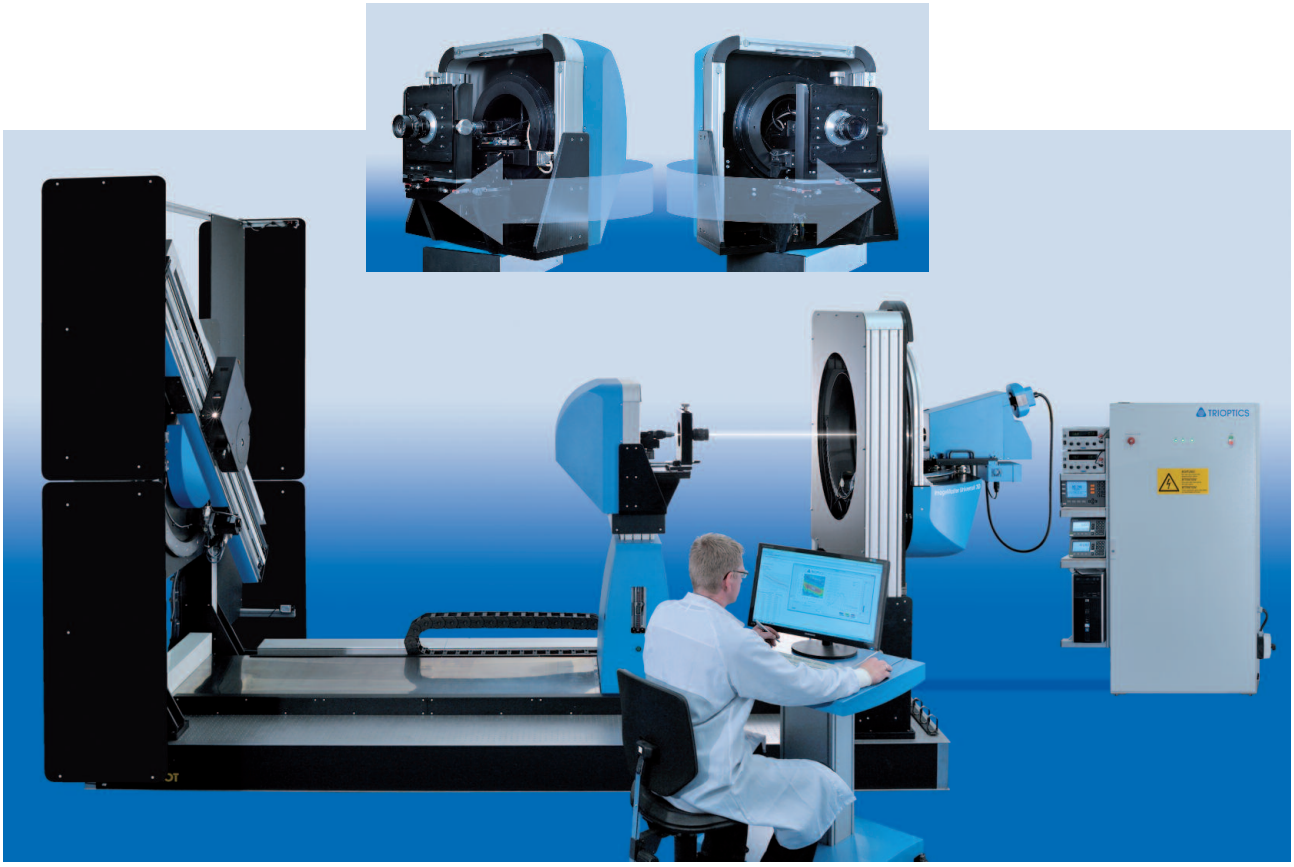
Specifications ImageMaster® Universal 3D

Description	Specification
Lens Configuration	• Infinity conjugate • Finite conjugate
Image Circle	± 25mm
Object Angle (Infinite conjugate)	± 60°
Object Circle (Finite conjugate)	± 1200 mm
Object distance (Finite conjugate)	200 … 2500 mm
Spectral range	VIS (400 … 1000 nm)
EFL of sample	5 … 300 mm
Max. clear aperture	60 mm
Spatial frequency	0 … 500 lp/mm

Measurement Parameters	Software function
Line Spread Function (LSF)	×
Modulation Transfer Function (MTF)	×
Phase Transfer Function (PTF)	×
Effective Focal Length (EFL)	×
Distortion	×
MTF versus Field	×
Longitudinal Chromatic Aberration	×
Lateral Chromatic Aberration	×
Field Curvature	×
Depth of Focus	×
Astigmatism	×
Chief Ray Angle	×



Finite conjugated lens measurement setup



Infinite conjugated lens measurement setup



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