

Starrett®

Precision, Quality, Innovation

METROLOGY SYSTEMS

THE HB400 BENCHTOP OPTICAL COMPARATOR

Optical Comparators

Readouts

Software



HORIZONTAL BENCH-TOP OPTICAL COMPARATOR HB400

The HB400 Optical Comparator provides exceptional performance with a 16" (400mm) diameter viewing screen, LED lighting, and 110lbs (50kg) workstage load capacity. Available with optical and/or video edge detection which removes operator subjectivity in locating edges of parts being measured. A bayonet style lens mounting system accepts a choice of five interchangeable lenses as well as the OV2 Zoom or TOV2 fixed telecentric magnification video camera systems. Motorized stage and swing-away lamp house are all optional features. This comparator provides performance previously only available with floor standing models.

FEATURES AND SPECIFICATIONS

- 16" x 6" X-Y travel workstage (400mm x 150mm)
- All metal construction with hard-anodized stage tooling plate
- Single bayonet-style lens mounting system
- Collimating condenser with yellow/green filter and provision to mount further accessories
- Linear encoder (glass scale) with 20µin (0.5µm) resolution on both X and Y axes
- LED profile and surface illumination
- Fixed duplex fiber optic surface illumination
- Digital protractor for accurate angle measurement (1' resolution) via Q-axis readout
- Available with MetLogix™ M2 all-in-one touchscreen PC, M3 PC with touchscreen monitor, or Mx-Series digital readout.
- Fine adjustment on all axes
- Quick release mechanism on the X-axis

OPTIONS

- Five interchangeable fixed magnification lenses including 10x, 20x, 25x, 50x and 100x
- Automatic optical edge detection
- Automatic video edge detection (available only with OV2 or TOV2 video cameras and M3 software)
- OV2 Video Camera with 6.5:1 zoom lens
- TOV2 Telecentric Video Camera with choice of 0.3x, 0.5x, or 1.0x fixed magnification lens
- Motorized X and Y axes
- Swing-away lamp house
- Canopy and curtains
- Purpose built cabinet stand
- Extensive line of accessories

OPERATOR INTERFACE

Feature	M2	M3	Mx100	Mx200
Optical edge detection (Option)	✓	✓	—	✓
Geometric Functions	✓	✓	—	✓
Graphic Based Constructions	✓	✓	—	✓
Tolerancing	✓	✓	—	✓
Data export reporting	✓	✓	✓	✓
Part programming and playback	✓	✓	—	✓
Operating system	MS Windows®	Windows®	MLX Android™	MLX Android™
Part view display	✓	✓	—	—
Feature annotation	✓	✓	—	—
Video edge detection (option)	—	✓	—	—
CAD file import and export option	—	✓	—	—
Software developer	MetLogix™	MetLogix™	MetLogix™	MetLogix™

SPECIFICATIONS

	HB400
Horizontal Travel	16" (400mm)
Vertical Travel	6" (150mm)
Focus Travel	2" (50mm)
Top Plate*	21" x 5" (530mm x 120mm)
Image	Vertically correct

*With machined single slot for easy fixturing

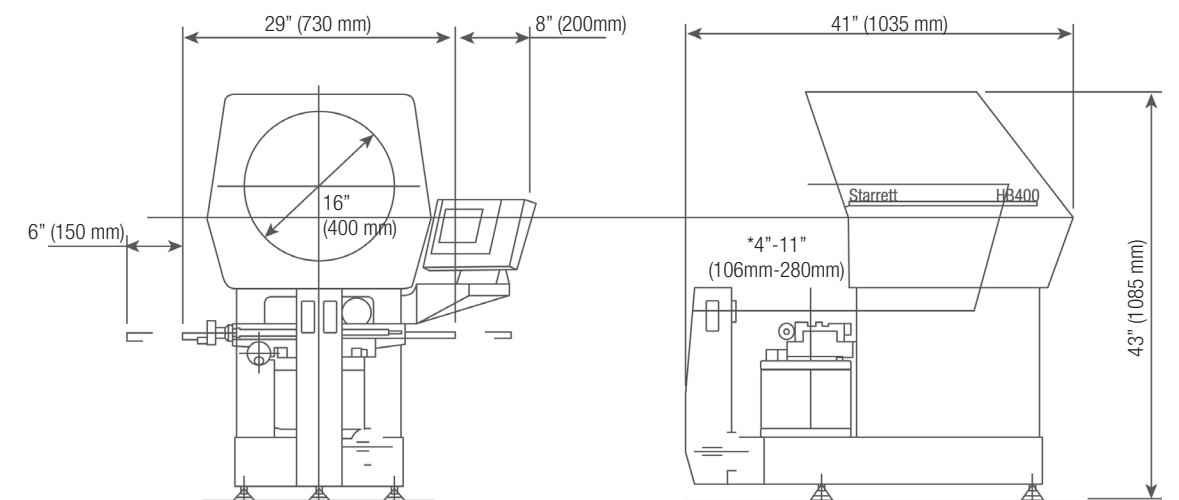
WEIGHT AND DIMENSIONS

	HB400
Net Weight	320lbs 145kg
Shipping Weight	385lbs 175kg
Shipping Dimensions	49" x 32" x 51" (125cm x 81cm x 130cm)

- ✓ LED LIGHTING STANDARD
- ✓ INCREASED STAGE TRAVEL
- ✓ VIDEO CAMERA COMPATIBLE



HB400 DIMENSIONS



*Distance refers to range of the maximum size a component can be projected to the center of the screen before colliding with the lens. (100X-10X)

Click the QR code to view the HB400



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ACCESSORIES

Starrett offers a full range of accessories and purpose-built cabinet stands designed for our optical comparator systems to ensure efficient system setup for a broad range of applications.



Photo Key	Part No.	Description	For Models
A	4H003-1	Rotary Vise with 1-1/4" Capacity	HE400, HB400, HD400
B	4H002	Fixed Position Vise with 1-1/4" Capacity	HE400, HB400, HD400
C	4H004	Universal Vee Block on Rotary Base	HE400, HB400, HD400
D	7P000	Centers and Vees	HE400, HB400, HD400
E	8170	31" Cabinet Stand	HE400, HB400, HD400
	8171	22" Cabinet Stand	HE400, HB400, HD400
F	8276	Canopy and Curtains	HE400, HB400, HD400
G	7E010	10X Lens	HE400, HB400, HD400
H	7E020	20X Lens	HE400, HB400, HD400
I	7E025	25X Lens	HE400, HB400, HD400
J	7E050	50X Lens	HE400, HB400, HD400
K	7E100	100X Lens	HE400, HB400, HD400
L	7T001	Iris Diaphragm	HE400, HB400, HD400
M	7U000	Glass Plate Work Holder	HE400, HB400, HD400

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