

Starrett®



OPTICAL COMPARATORS

HE400

HB400

HD400

HF600

HF750

HS600

HS750

VB300

VB400

VF600

METROLOGY  SOLUTIONS

STARRETT OPTICAL COMPARATORS

RUGGED, ACCURATE & EASY TO USE

Starrett optical comparators provide a time-tested, cost-effective solution for non-contact measurement. In this easy-to-learn technology, the image of a part is projected on a screen at a precisely known magnification. Measurements can then be taken off the image by moving the system's X-Y stage, or the image can simply be compared to a transparent overlay.



HORIZONTAL BENCH TOP OPTICAL PROJECTOR

The most economical of our bench top comparators, the HE400 offers a 16" (400mm) diameter screen, X-Y stage travel, bayonet-style interchangeable lens mount, and Q-axis angular readout: all to improve capability and performance. These horizontal bench top comparators are fitted with MetLogix™ M1 tablet or M2 PC-based touch screen measuring software as standard, making them simple to use, but having the power to satisfy the most complex measuring requirements.

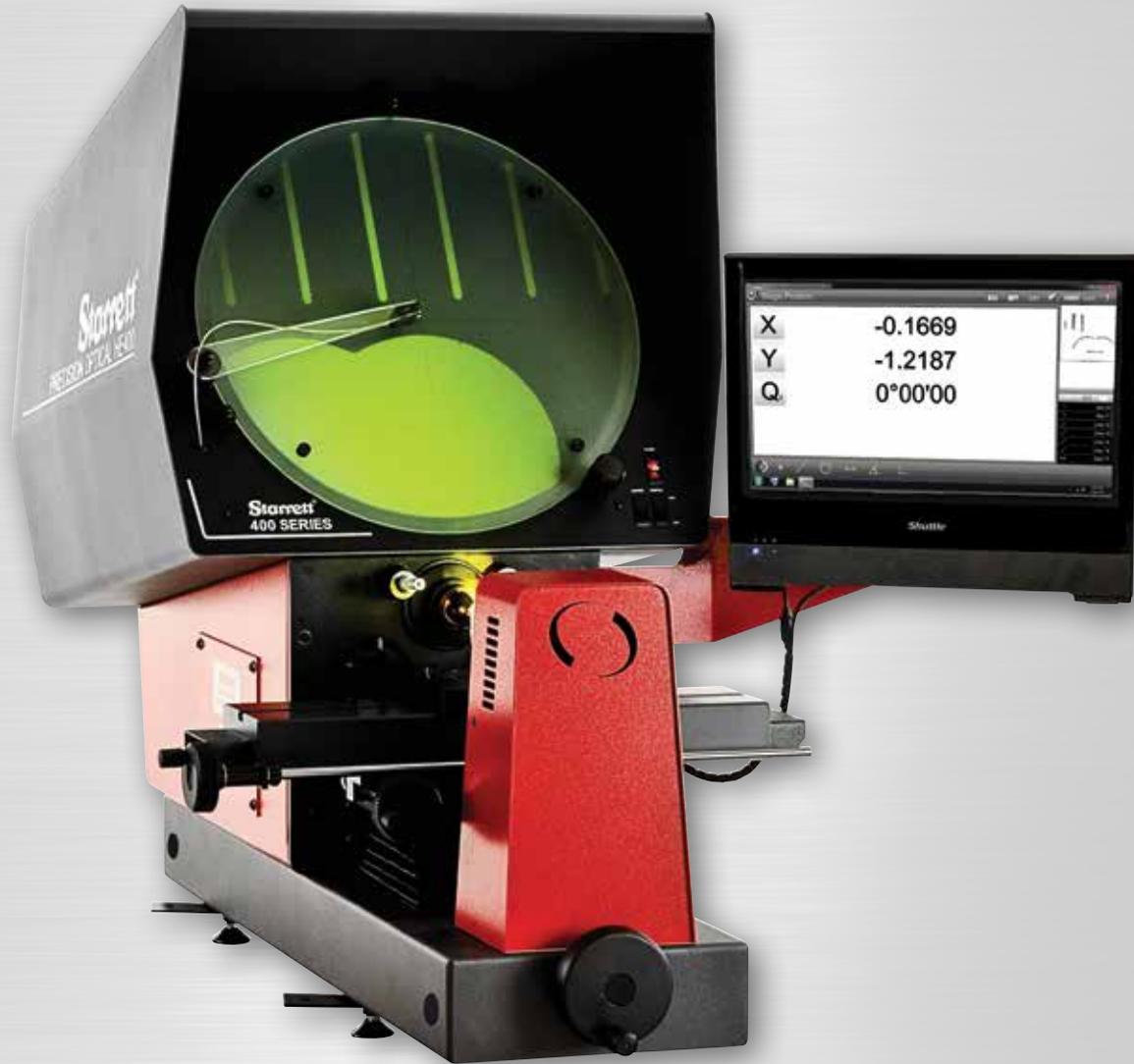


FEATURES

- All metal construction
- Single bayonet-style lens mounting system
- Collimating condenser with yellow/green filter and provision to mount further accessories
- Linear encoder with $.5\mu$ on both X and Y axes
- LED profile and surface illumination
- Fully retractable flexible duplex fiber optic surface illumination
- Digital protractor for accurate angle measurement 1' resolution
- Available with MetLogix™ M1 tablet or M2 PC-based touch screen measuring software
- 15.4lbs (7kg) load capacity
- 18.75 x 4.74" (480 x 120mm) precision workstage top plate with machined slot for easy fixturing
- 10 x 4" (254 x 100mm) of XY stage travel
- 1-1/8" (28mm) focus travel
- Fine adjustment on all axes
- Quick release mechanism on the X-axis
- Image inverted and reversed
- Bench top model

OPTIONS

- Six interchangeable fixed magnification lenses including 10x, 20x, 25x, 31.25x, 50x and 100x
- MetLogix™ M1 tablet or M2 measuring software
- Automatic fiber optic edge detection
- Canopy and curtains (designed to mount on cabinet stand)
- Purpose built cabinet stand
- Extensive line of accessories



METLOGIX™ M1 measuring software utilizes an Android operating system and a Bluetooth connection. Clean and simple touch screen interface with large icon buttons and intuitive operation.

METLOGIX™ M2 measuring software with a PC-based 15.6" color touch screen monitor, 2D geometry software for point, line, circle, distance, angle and skew. Windows® based operating system. Supports optical edge detection.



Top: MetLogix™ M2
Right: MetLogix™ M1

OPERATOR INTERFACE

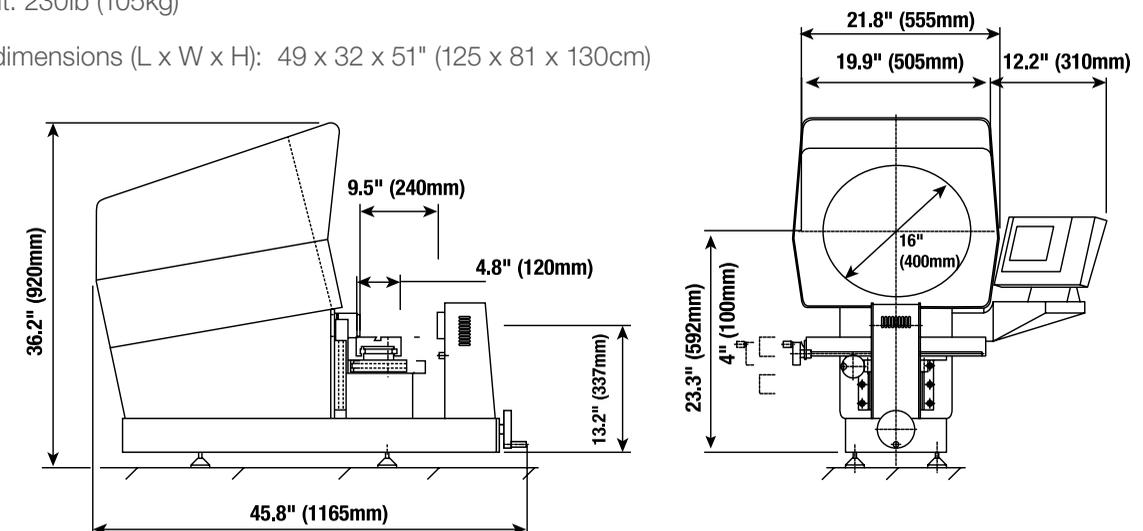
| FEATURE | METLOGIX™ M1 | METLOGIX™ M2 |
|--------------------------------------|--------------|--------------|
| Mounted to comparator arm | x | x |
| Color graphics | x | x |
| Touch screen operation | x | x |
| MS Windows®/Android operating system | Android | Windows® |
| X-Y-Q axis digital readout | x | x |
| 2D geometry software with skew | x | x |
| Optical edge detection option | x | x |
| Software developer | MetLogix™ | MetLogix™ |

HE400 DIMENSIONS

Gross weight: 300lb (135kg)

Net Weight: 230lb (105kg)

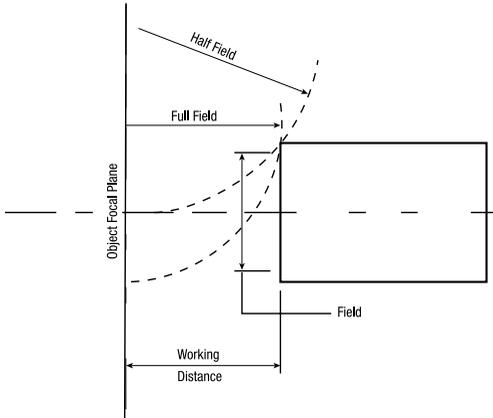
Shipping dimensions (L x W x H): 49 x 32 x 51" (125 x 81 x 130cm)



HE400 OPTICS

A wide range of interchangeable lens magnifications are available including - 10x, 20x, 25x, 31.25x, 50x and 100x.

| LENS SELECTION GUIDE | | | | | | |
|-----------------------|--------------|--------------|---------------|-------------|--------------|-------------|
| MAGNIFICATION | 10 | 20 | 25 | 31.25 | 50 | 100 |
| Screen Diameter | 16" | 16" | 16" | 16" | 16" | 16" |
| Field of View | 1.6" (40mm) | .8" (20mm) | .6" (16mm) | .5" (13mm) | .3" (8mm) | .16" (4mm) |
| Working Distance | 3.1" (80mm) | 3" (76mm) | 2.5" (62mm) | 2.2" (57mm) | 2" (50mm) | 1.5" (41mm) |
| Max. Dia.: Half Field | 9.5" (245mm) | 9.5" (245mm) | 10.3" (263mm) | 10" (253mm) | 7.1" (185mm) | 4" (106mm) |
| Max. Dia.: Full Field | 7" (180mm) | 8" (200mm) | 10" (250mm) | 9" (234mm) | 5" (125mm) | 3.9" (98mm) |



FIELD OF VIEW TERMINOLOGY

| | |
|----------------------|--|
| Working Distance: | Is the distance between the objective lens and the component when the component is in focus |
| Field Of View (FOV): | Is the viewable area. To fill the 16" (400mm) diameter screen when using a 10x lens, the maximum diameter object projected would be 1.6" (40mm). |
| Half Field View: | Is the maximum size a component can be projected to the center of the screen before colliding with the lens. |
| Full Field of View: | Is the maximum size a component can be projected over the full screen before colliding with the lens. |
| Projected Image: | Is how a component is projected onto the screen in relation to its placement on the workstage. |

ACCESSORIES

Starrett manufactures a comprehensive range of fixtures and accessories for our line of optical comparators. Each accessory is made from the highest quality material and is machined, assembled and inspected to the same stringent quality standards as the comparator itself.

| ACCESSORIES | | | |
|------------------------------|------------------------------|--------------|----------------|
| Precision Centers and Vees | Rotary Vee Blocks | Rotary Vises | Cabinet Stands |
| Vertical Glass Plate Holders | Magnification Check Gradules | Fixed Vises | |
| | | | |

Starrett Metrology Division

Starrett Kinematic Engineering, Inc.
26052-103 Merit Circle
Laguna Hills, CA USA 92653
Tel: 949-348-1213



Starrett.com

HB400

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Specifications Subject to Change