

# MODEL 16VS VERTICAL BEAM

With its dynamic head optical system this is the first of its kind manufactured in the USA. This new system allows a much greater stage capacity of up to 250 pounds, with optional measurement range up to 16" x 8", making it the largest capacity benchtop measuring instrument in the world.

## FEATURES:

- 16" (400mm) Diameter vertical screen for optimum viewing
- High resolution ground glass screen with calibration reticle, 90 degree cross lines and chart clips
- Output for electronic rotary screen protractor with selectable 1 minute or 1/100 of a degree resolution
- Machined chart ring with vernier protractor
- High specification table (Part # 8x4MN-1)
  - 125 lbs. Standard stage capacity
  - 15" x 10.5" Overall size
  - 7" x 4.5" Glass insert
  - 8" x 4" Travel
  - 4" Focus from dynamic optical head
  - Crossed roller bearings on all measuring axes
- Quartz halogen light source. Fan cooled and electronically dimmed for long lamp life
- Dynamic optical head to maintain constant mass accuracy
- Built in rotary lens & condenser turrets
- Diascopic surface illumination is standard
- Optional coaxial surface illumination
- Multiple stage options with up to 16"x8" of travel
- Welded plate steel case fabrication
- Lens choices of 5X through 100X
- Choice of readout or full CNC computerized systems available
- Internal or external edge detection available
- NIST traceable calibration certificate
- 2 Year limited warranty

Available with  
Dorsey Duralume  
Patented 10 year light source



Starting at:  
**\$10,795 Model 16VS**

	TECHNICAL SPECIFICATIONS	DIMENSIONS
Illumination	Profile: Built-in 24V/150W direct collimated halogen Surface: Built-in 24V/150W via illumination	
Screen size	16" (400mm) Ground glass with cross-lines	
Workstage	Nickel plated 15.5" x 10.5" with 11" x 7" glass insert	
Workstage travel	X = 8" (200mm) Y = 4" (100mm) Focus = 4" (100mm) True parfocal helix rotation = +/- 15 degree, 5 minute vernier	
Workstage options	Static fixture plate, part# SFP 12"x4" Travel, part# 12X4MX 8"x8" Travel, part# 8X8MX 16"x8" Travel, part# 16X8MX	
Workstage accuracy	Within +/- 0.004mm +[(L/20).001]	
Linear scale resolution	Standard: 0.001mm/.00005" Optional: 0.0005mm/.00002"	
Repeatability	+/- 1 Scale count (0.001mm/.00005")	
Coated telecentric lenses	5x, 10x, 20x, 25x, 31.25x, 50x, 62.5x, 100x	
Optical accuracy	Within +/- .10% Profile, +/- .15% Surface	
Power requirements	120V or 240V AC, 50/60 Hz, 10 Amp	
Weight	425 lbs. / 190kg	

Proudly made in the USA



E-10



Dorsey Metrology International  
Website: [www.DorseyMetrology.com](http://www.DorseyMetrology.com)



G.E. VAN WERT CO. INC.  
461 BOSTON ST. TOPSFIELD, MA.  
(978)-887-3389, [GEVANWERT.COM](http://GEVANWERT.COM)

# THE DORSEY ADVANTAGE

## CONSTRUCTION FEATURES OF OUR MODEL 16H

### Focus travel is always "optically coaxial"

Unique design features an intermediate plate that allows the focus axis to travel independently of the X axis

### Ultra Precision Cast Iron Stage

Large capacity 10" x 6" - 150 lbs. stage system  
Optional 20" X axis travel  
Solid cast iron - no aluminum

Lens is mounted to cast iron stage - not to sheet metal case

Y Axis glass scale has zero backlash and is mounted on lens center line to greatly increase accuracy

3 axis measurement available

Single hand quick release on X axis

Stage is mounted to independent base fabrication not sheet metal case

Both profile and surface illumination bulbs are located in lamphouse

Solid rail crossed roller bearings in all axes

Case fabrication is powder coated not painted

Y axis drive is located directly under the center of gravity, and uses a composite steel/Delrin bevel gear set for accurate and silent operation

Base is fabricated from cast composite granite

X Axis glass scale has zero backlash and is mounted directly under focal plane to greatly increase accuracy

Weight bearing stage base is longer than stage top

### Available with internal edge sensing ("IED")

This feature provides automatic edge detection without the viewing obstruction of a plexiglass arm on the screen. The IED target is aligned directly behind the screen crossline.

- IED is more accurate because the image is "read directly and is not diffused through ground glass screen.
- IED is also not subject to the stability and rigidity of a plastic arm, our IED sensor can't be bumped out of alignment.
- Cross calibration is not necessary when you switch between surface illumination and IED edge detection

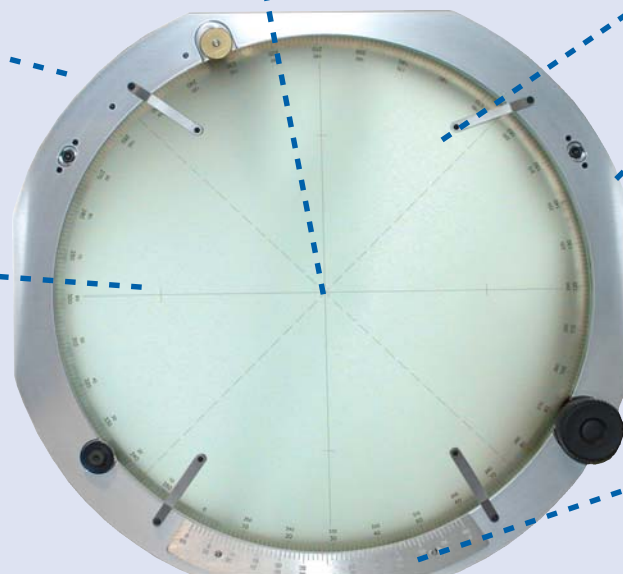
Screen is mounted in precision machined chart ring for increased rigidity, optical accuracy, and improved protractor operation

High resolution lapped glass screen

Recessed screen protects damage and eliminates contamination of internal optics

Built in calibration reticle for easy magnification verification

Large format vernier protractor with one minute graduations



Proudly made in the USA



# WORK STAGE TOOLING CONTINUED



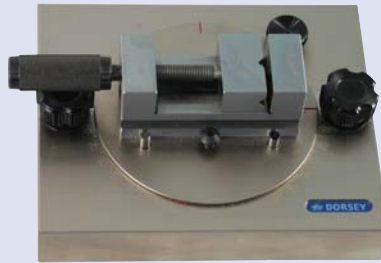
Part # ACC-BF \$105



Part # ACC-LBF \$135

## FIXTURE BANKING PLATES

- Part# ACC-BF (6" x 1")
- Part# ACC-LBF (3"x2.5")
- Precision ground steel
- Reversible for left or right bank
- Can be used on horizontal or vertical stages



Part # ACC-RV1 \$650



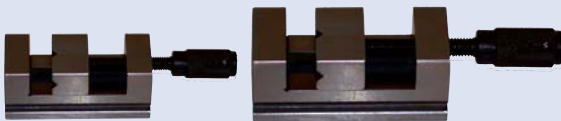
Part # ACC-RV2 \$975

## ROTARY VICE STAGE

- Part# ACC-RV1 jaw opening of 1.25"
- Part# ACC-RV2 jaw opening of 2.12"
- Precision ground steel
- Positions vice in X, Y, or Z axis
- 360 degree rotation with 1 degree graduation

Part # ACC-V1 \$175

Part # ACC-V2 \$275



Part # ACC-VB1 \$245



## PRECISION FIXTURE VICE

- Part# ACC-V1 jaw opening of 1.25"
- Part# ACC-V2 jaw opening of 2.12"
- Precision ground steel
- Vertical and horizontal V

## PRECISION V BLOCK

- Part# ACC-VB1
- Precision V block
- Hardened and ground steel
- 90 degree V 2.7" high



Part # ACC-VF7X5 \$271

## VERTICAL GLASS FIXTURE

- Part# ACC-VF7x5
- Used to mount flat parts on horizontal comparators
- 7" x 5" glass
- 2 Chart clips & V

Part # ACC-VBC2.5 \$455



Part # ACC-VBCHD \$1295



## PRECISION V BLOCK & CENTER KIT

- Part# ACC-VBC2.5
- Matched ground hardened steel
- 90 degree V
- 2.7" tall
- 1" diameter centers with interchangeable Morse taper insert

## HEAVY DUTY V BLOCK & CENTER KIT

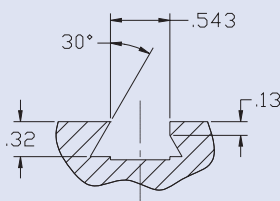
- Part# ACC-VBCHD
- Matched Ground cast iron
- 90 degree V
- 5" tall
- 1" diameter centers with interchangeable Morse taper insert

Part # ACC-RF \$1375



## PRECISION ROTARY FIXTURE

- Part# ACC-RF
- Manual or motorized versions
- Scroll chuck available
- Collet set available
- 3 Jaw chuck available
- Wooden Storage Box



Typical universal dove tail detail used on all horizontal staging

Proudly made in the USA

