



# PH-A14 PROFILE PROJECTOR

High performance, horizontal-beam projector equipped with highly accurate linear glass scales

OPTICAL MEASURING



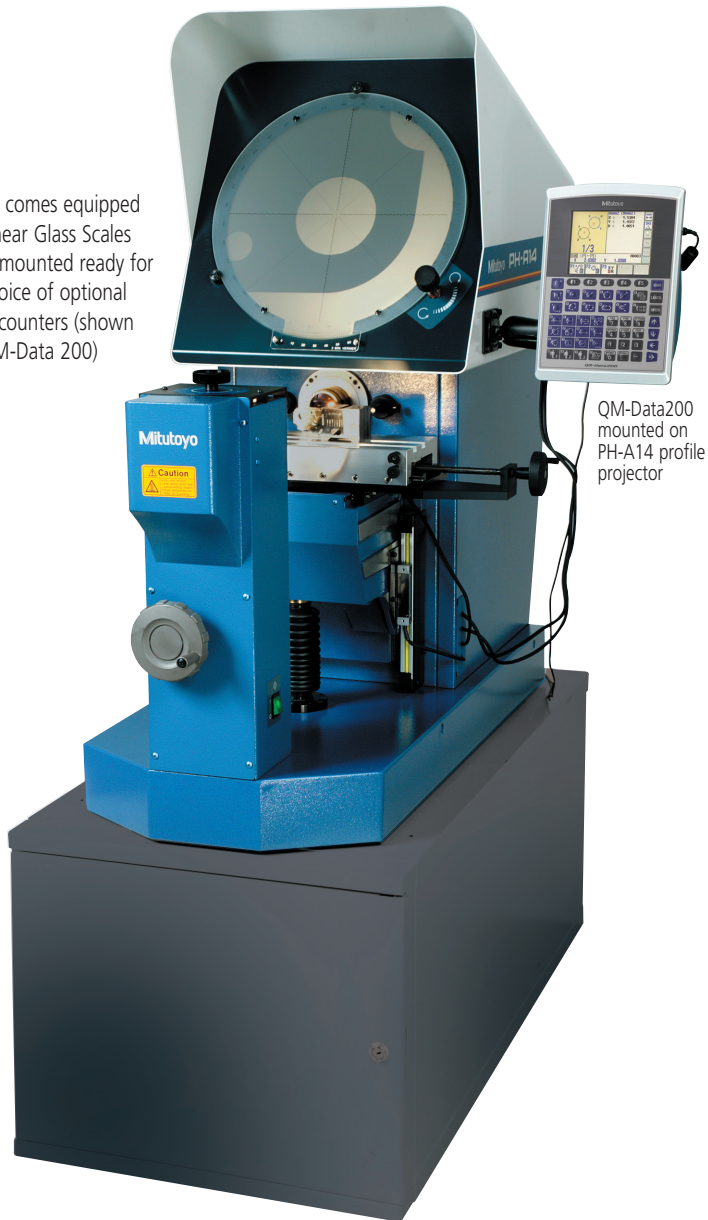
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# PH-A14 Horizontal Profile Projector

PH-A14 comes equipped with Linear Glass Scales factory mounted ready for your choice of optional display counters (shown with QM-Data 200)



QM-Data200 mounted on PH-A14 profile projector

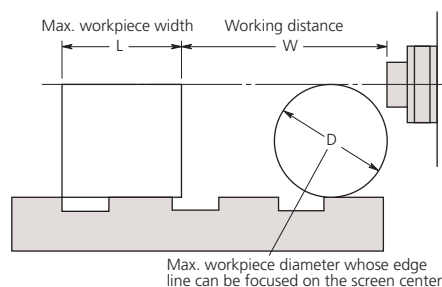
## FEATURES

- Bench-top model that uses horizontal optical system.
- Suitable for thread pitch measurements—blurred or distorted images will not be produced when workpiece is angled.
- Inverted image on the day-bright screen.
- 14" (356mm) diameter vernier protractor screen with solid line cross-hairs for easy alignment.
- Heavy-duty workpiece table incorporates linear scales for fast, accurate measurement.
- The PH-A14's generous X, Y workstage travel (8" x 4") provides users with ample range to cover application needs.
- New location of the Y-axis handle improves ease of operation.
- The workstage provides high accuracy and can handle a workload of up to 100 lbs.
- Fiber illuminator is standard accessory.

## Projection Lenses



## Projection Capacity

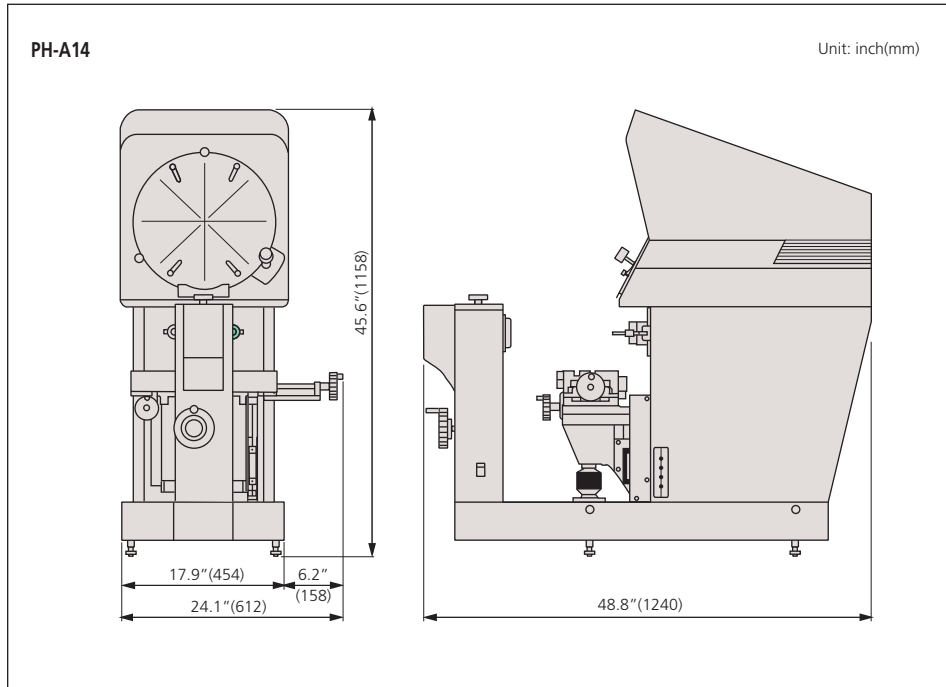


PH-A14

Unit: mm

	Magnification			
	10X	20X	50X	100X
View field	70.6	17.3	7.12	3.56
L	235	235	80	109
W	93	40	14.6	11
D	105	105	30.4	19

## DIMENSIONS



## SPECIFICATIONS

Model No.		PH-A14
Order No.		172-810-10A
Projected Image		Inverted image
Protractor screen	Effective diameter	14" / 356mm
	Screen material	Fine ground glass
	Reference line	Cross hair line
	Screen rotation	±360°, fine feed and clamp
	Angle display	Vernier reading, Resolution: 2'
Projection lens		Standard accessory: 10x(172-011), Optional accessories: 20X, 50X, 100X
Magnification accuracy	Contour illumination	±0.1% or less
	Surface illumination	±0.15% or less
Contour illumination	light source	Halogen bulb(24V 150W)
	Optical system	Telecentric system
	Functions	Heat-absorbing filter, Cooling fan
Surface illumination	light source	Halogen bulb(24V 150W)
	Optical system	Twin fiber optic illumination
XY Stage	Table travel (X-axis)	8" / 203.2mm
	Table size(X, Z)	16 x 6" / 407 x 153mm
	Vertical travel (Y-axis)	4" / 101.6mm
	Resolution	.00005" / 0.001mm*
	Measuring Unit	Built in Linear scale
	Max. workpiece width	See (L) on page I-12
	Max. workpiece load	100lbs / 45kg
	Power supply	120V AC, 50/60Hz
Mass		308lbs / 140kg
Standard accessories		10x projection lens set, work stage, power cord, halogen bulb, fuse, grounding wire, allen wrench

\*Counter not included

### Standard Accessories

- 172-011:** Projection Lens 10x
- 512305:** Halogen bulb 24V 150W (500 Hours)
- 358191:** Fuse 6A (for 10-120V)
- 538815:** Hexagonal wrench 2.5
- 538616:** Hexagonal wrench 3
- 2BAC245:** Spanner wrench 2.5 1
- 99MBA051A:** Operational manual

See the backside for optional accessories



**KA-200 Counter: 174-183A**  
**64AAB149:** Counter stand



**QM-Data200**  
2-D data processing unit.  
**264-155A:** Stand mount type  
**264-156A:** Arm mount type



**332-151: Optoeye**  
Edge detection system for QM-Data 200  
**12AAE671:** Detector attachment (A)



## Optional Accessories

- 172-011:** 10X projection lens (standard accessory)
- 172-012:** 20X projection lens
- 172-013:** 50X projection lens set
- 172-014:** 100X projection lens set
- 172-116:** Standard scale (50mm)
- 172-117:** Standard scale (2")
- 172-118:** Reading scale (200mm)
- 172-161:** Reading scale (300mm)
- 172-119:** Reading scale (8")
- 172-162:** Reading scale (12")
- 172-286:** Green filter
- 512305:** Halogen bulb (24V, 150W) (standard accessory)

## Fixture and Stage accessories

- 172-142:** Center support
- 172-143:** Center support riser
- 172-144:** Rotary vise  
(Max. workpiece dia.: 2.4" / 60mm)
- 172-234:** V-block with clamp  
(Max. workpiece dia.: 2" / 50mm)
- 172-132:** Vertical holder
- 64AAA129B:** Machine stand 23"W x 45" D x 20"H

### Reading Scales

- 172-118** (200mm)
- 172-161** (300mm)
- 172-119** (8")
- 172-162** (12")

Designed for checking the magnified image of a standard scale.



### Center Support

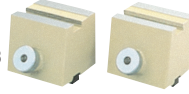
**172-142**



Clamps a cylindrical workpiece such as a screw  
Workpiece dia.: 120mm max

### Center Support Riser

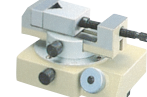
**172-143**



Widens the damping capacity of the center support to a maximum diameter of 240mm.

### Rotary Vise

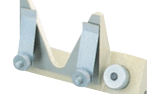
**172-144**



Workpiece dia.: 60mm max

### Vertical Holder

**172-132**



Set up a thin workpiece easily

### Standard Scales

- 172-116** (50mm)
- 172-117** (2")



Used for checking magnifying accuracy.

### V-Block w/ Clamp

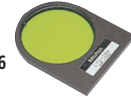
**172-234**



Workpiece dia.: 50mm max

### Green Filter

**172-286**



Increases the screen sharpness of the contour image.

## Coordinate Measuring Machines



Sensor Systems

## Vision Measuring Systems



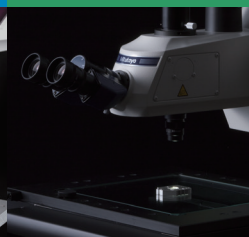
Test Equipment and Seismometers

## Form Measurement

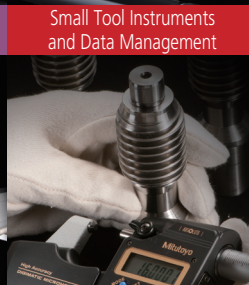
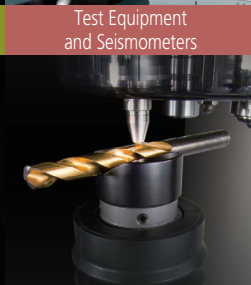
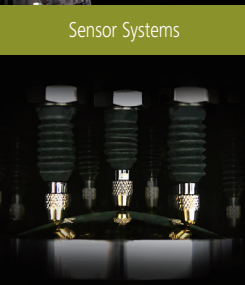


Digital Scale and DRO Systems

## Optical Measuring



Small Tool Instruments and Data Management



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