

# PH-A14 Profile Projector

Bulletin No. 1883



QM-Data200 mounted  
on PH-A14 profile  
projector

# PH-A14 Horizontal Profile Projector

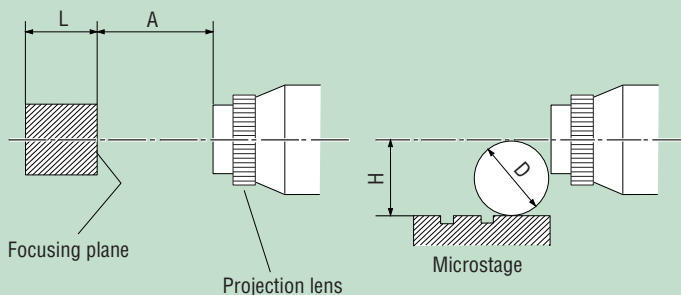
PH-A14 comes equipped with Linear Glass Scales factory mounted ready for your choice of optional display counters (shown with QM-Data 200)



## Features:

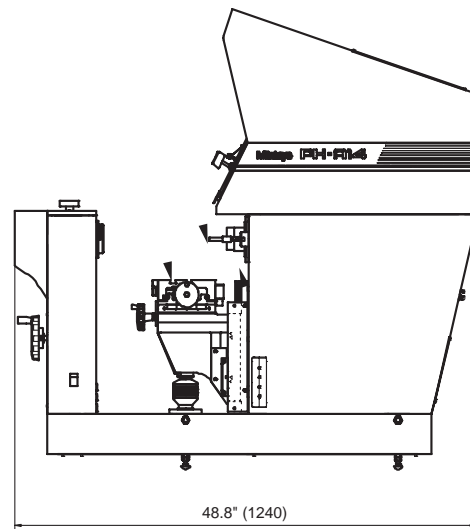
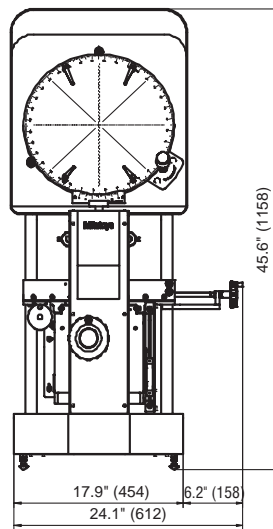
- Mitutoyo's lens technology and workmanship combine to provide a bright, crisp image for error free inspection.
- The PH-A14's generous x, y workstage travel (8"x4") provides users with ample range to cover application needs.
- New location of the Y-axis handle improves ease of operation.
- The workstage provides high accuracy and can handle a workload of up to 100 lbs.
- Fiber illuminator is standard accessory.

## Projection Lenses



Unit: mm

Magnification	10X	20X	50X	100X
Mounting method	Screw mount			
<b>Projection capacity</b>				
Field of view	35.6	17.3	7.12	3.56
Working distance	A	93	40	14.6
Maximum workpiece width	L	235	235	80
Maximum projecting diameter	D	105	105	30.4
Maximum distance between the optical axis and microstage top face	H	105		



## Specifications

<b>Order No.</b>	<b>172-810A</b>
<b>Model No.</b>	<b>PH-A14</b>
<b>Projected image</b>	Inverted image
<b>Protractor screen</b>	
Diameter	14" (356mm)
Material	Fine ground glass with cross - hair lines
Angle	Vernier reading, Resolution: 2'
<b>Illumination</b>	
Contour	24V, 150W (512305) halogen lamp, Telecentric illumination
Surface	24V, 150W (512305) halogen lamp, Twin fiber-optic illuminator
<b>Magnifications</b>	10X (Standard), 20X, 50X, 100X (Option)
<b>Magnifications Accuracy</b>	
Contour	0.1% or less
Surface	0.15% or less
<b>Workstage</b>	
<b>(X-axis)</b>	
Table travel	8" (203.2mm)
Table size	16" x 6" (407 x 153mm)
Reading unit	Linear Scale
Resolution	.00005" (0.001mm)*1
<b>(Y-axis)</b>	
Table travel	4" (101.6mm)
Reading unit	Linear Scale
Resolution	.00005" (0.001mm)*1
<b>(Z-axis)</b>	
Focusing travel	2" (50.8mm)
<b>XY counter</b>	Option
<b>Power supply</b>	120VAC, 50/60Hz
<b>Dimension (W x D x H)</b>	25.5" x 53.3" x 43.3" (648 x 1355 x 1100mm)
<b>Weight</b>	335lbs (152Kg)
<b>Max Load</b>	100lbs (45.37Kg)

\*1 set by XY counter

## Standard Accessories

<b>Order No.</b>	
<b>172-011</b>	Projection Lens 10x
<b>512305</b>	Halogen bulb 24V 150W (500 Hours)
<b>358191</b>	Fuse 6A (for 10-120V)
<b>384208</b>	Fuse 2.5A (for 220-240V)
<b>538815</b>	Hexagonal wrench 2.5
<b>12BAC245</b>	Spanner wrench 2.5 1
<b>99MBA025A</b>	Operational manual

See the backside for optional accessories

## Optional Accessories

Order No.	Description
172-011	Projection Lens 10X (Standard)
172-012	Projection Lens 20X
172-013	Projection Lens Set 50X
172-014	Projection Lens Set 100X
172-116	Standard scale 50mm
172-117	Standard scale 2"
172-118	Reading scale 200mm
172-119	Reading scale 8"
172-161	Reading scale 300mm
172-162	Reading scale 12"
172-286	Green filter
172-142	Center support
172-143	Center support riser
172-132	Vertical holder
172-144	Rotary vise
172-234	V-block
64AAA129B	Machine stand (W = 23" x D = 45" x H = 20") Weight: 129 lbs (58.53 Kg)

### Data Processor and Display Counters

264-141A	QM Data200 (Arm Mount Type)
332-151	OPTOEYE 200
12AAE671*	Detector Plate
174-173A	KA Counter
58AAA407A	Counter tray

### Overlay Charts

201305	Combination
201306	Grid / 15° Protractor
201307	Protractor
201308	Screw Thread
201491	Radius
201493	Radius / 10° Protractor

\*Required with OPTOEYE 200

### Center Support



172-142  
Clamps a cylindrical workpiece such as a screw  
Workpiece dia.: 120mm max

### Rotary Vise



172-144  
Workpiece dia.: 60mm max

### Center Support Riser



172-143  
Widens the damping capacity of the center support to a maximum diameter of 240mm.

### Vertical Holder



172-132  
Set up a thin workpiece easily

## Optional Display Units



QM Data 200

### QM-Data200

Order No.	264-141A (Arm-mount model)
Resolution	.00002"/.00005"/.0001" (0.0005mm/0.001mm)
Software	Standard geometric element Geometry combination pattern Memory: 1000 elements (max)
Dimension	7.87" (W) x 11.02" (H) x 3.54" (D)

### OPTOEYE 200 - Edge Sensor

Order No.	332-151
*Detector Plate required with OPTPEYE 200	

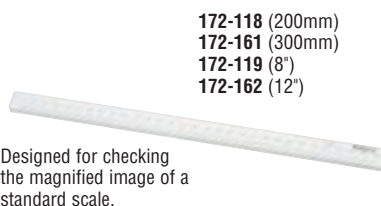


KA Counter

### KA Counter

Order No.	174-173A
Resolution	.0005"/.0002"/.0001"/.00005" (0.0005mm/0.002mm/0.001mm)
Dimension	10.2" (W) x 6.61" (H) x 3.2" (D)
*Requires Counter Tray 58AAA407A	

### Reading Scales



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

Designed for checking the magnified image of a standard scale.

### Standard Scales



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

Used for checking magnifying accuracy.

### V-Block with Clamp



172-234

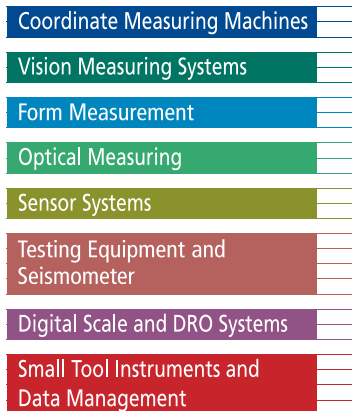
Workpiece dia.: 50mm max

### Green Filter



172-286

Increases the screen sharpness of the contour image.



## Mitutoyo America Corporation

www.mitutoyo.com

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JSAQ-052  
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