

# PROFILE PROJECTOR PH-3515F

Bulletin No. 2100



Heavy-Duty, Bench-Top Model with  
Horizontal Optical System

**Mitutoyo**

# Mitutoyo introduces the PH-3515F

Profile Projectors that will meet any optical measuring or inspection challenge your shop can offer!

## ***PH-3515F*** ***PROFILE*** ***PROJECTOR***



### **FEATURES**

- Erect image on high brightness screen.
- 14" (353mm) dia. protractor screen with crosshairs and staggered lines for easy alignment.
- Digital angle measurement of 1' or 0.01° with built in angle counter.
- Floating-type workstage incorporates linear scales for fast, accurate measurement.
- Halogen contour illumination.
- Fiber-optic illumination cables and halogen included.
- Suitable for thread pitch measurements — free from blurred or distorted images when the workpiece is angled.
- Wide range of accessories for varied applications.

Also available:  
Optional side mount surface  
illumination unit **(172-423)**  
(see page 4 for details)

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## KA COUNTER (OPTIONAL)

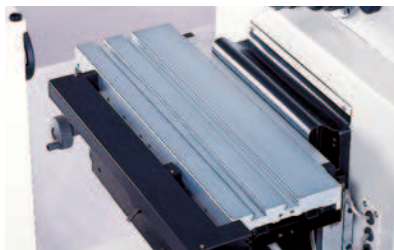


High performance, low cost 2-axis counter with traditional and advanced linear functions.

Order	174-173A
Scale input ports	2
Resolution	.00005"/.0001"/.0005"/0.001mm/0.005mm (changeable)
Display	7-digit LED and a negative [-] sign
Functions	Zero-setting, preset, counting direction setting, mm/inch conversion, 1/2 calculation, ABS/INC coordinate selection, diameter display, addition of 2-scale data, zero approach machining, bolt-hole circle machining, pitch machining, touch-signal probe input
Power supply	120VAC, 60Hz
Operating temperature	32°F to 104°F (0°C to 40°C)
Mass	2.43 lbs. (1.1kg)

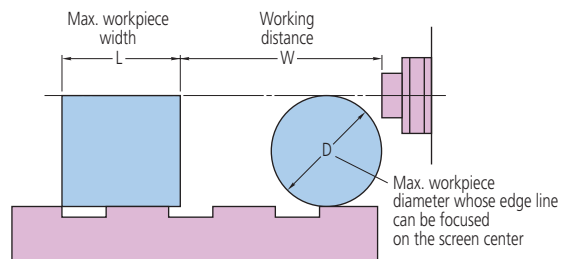
## WORKSTAGE

### (STANDARD ACCESSORY)



XY range	X-axis (horizontal travel): 10" (254mm) Y-axis (vertical travel): 6" (152mm)
Measuring unit	Linear Scale for each axis (AT100 Series)
Display unit	(Optional)
Stage size (WxD)	17.72" x 5.75" (450x146mm)
Swivel range	±10° (30' readout)
Max. workpiece load	99 lbs. (45kg)
Dovetail groove	Two (Pitch= 1.69" (43mm))
Focusing travel	2" (50mm)

## PROJECTION LENSES (OPTIONAL)



### PH-3515F Unit: Inch

Illumination	Contour				Surface					
	Magnification	5X	10X	20X	50X	100X	5X	10X	20X	50X
View field dia.	2.80	1.40	.70	.28	.13	2.80	1.40	.70	.28	.13
W	6.30	3.66	1.57	.57	.37	2.52	1.61	1.57	.57	.37
L	6.89	9.25	9.25	3.15	4.29	6.89	9.25	9.25	3.15	4.29
D	6	6	4.57	1.20	.75	6	6	4.56	1.19	.75

## QM-Data 200 (OPTIONAL)



### QM-Data200

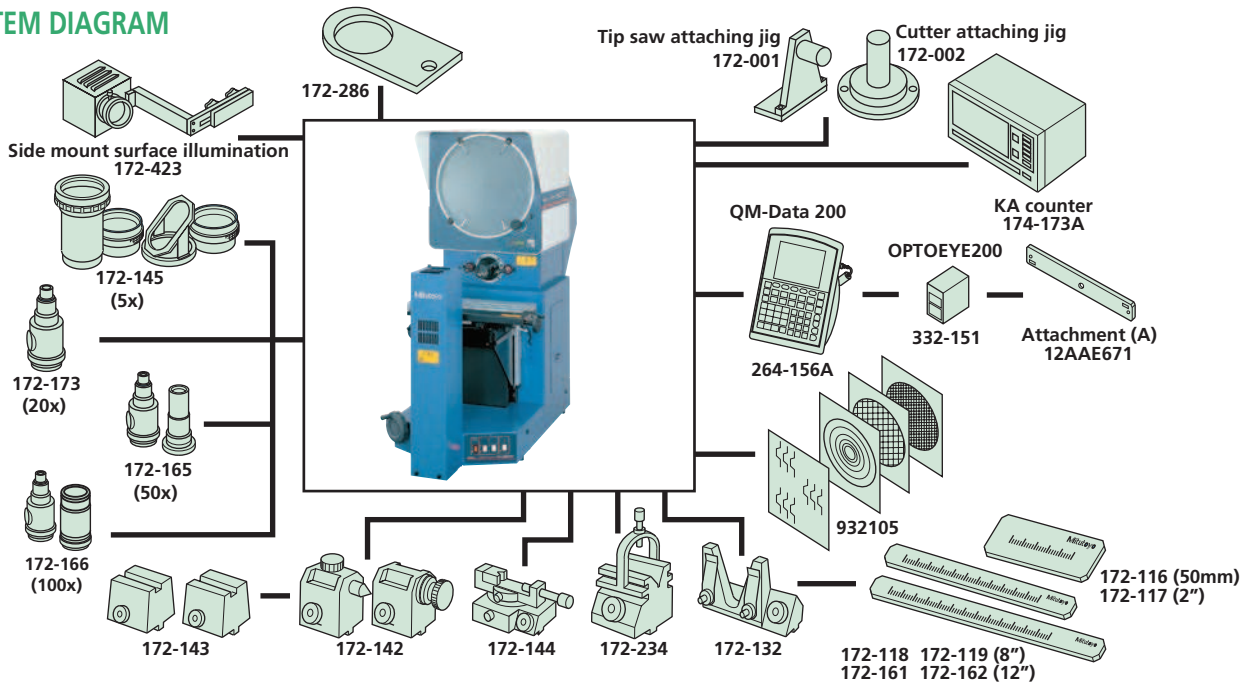
2-D data processing unit.  
**264-155A:** Stand mount type  
**264-156A:** Arm mount type

Mitutoyo launches a new 2D data processing unit for optical instruments. The QM-Data 200 can add new features of 2D coordinate measurement, image processing, etc. into your ordinary optical instruments to improve the QC control system.

## OPTOEYE-200



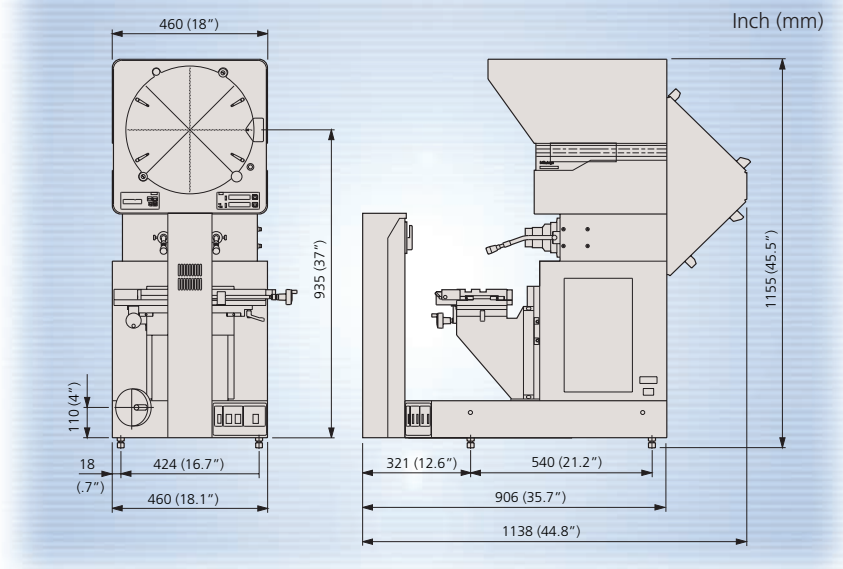
## SYSTEM DIAGRAM



## SPECIFICATIONS

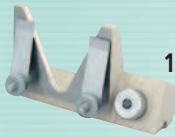
Order No.	172-868A	
Resolution	.0001"/.00005"/0.001mm/0.005mm	
Projection lens	10X (172-184)	
Magnification accuracy (Nominal magnification)	±0.1% under contour illumination, ±0.15% under surface illumination	
Screen	Effective DIA	13.9" (353mm)
	Screen material	Fine-grain ground glass
	Reference line	Staggered crosses and crosshairs
Protractor	Display range	±360° displays up to ±370°
	Resolution	1'/0.01° switchable
Functions	ABS/INC mode switch, zero-setting	
Contour illumination	Light source	Halogen bulb (24V, 150W)
	Optical system	Telecentric
	Functions	2-step brightness switching, cooling fan, heat-absorbing filter, green filter (optional)
Surface illumination	Light source	Halogen bulb (24V, 150W)
	Functions	Adjustable condenser lens ( for all magnifications), cooling fan, heat-absorbing filter, green filter (optional)
Power supply	120VAC, 60Hz	
Mass	331 lbs. (150kg)	
Standard accessories	10X projection lens set, workstage, power cord, halogen bulb 24V 150W, 2pcs. (515530), machine cover (383228), user's manual	
Optional accessories	Counter Stand (12AAF182)	

## DIMENSIONS



## OPTIONAL ACCESSORIES

### Vertical Holder



172-132

- Sets up a thin workpiece easily.

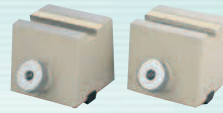
### Rotary Vise



172-144

- Workpiece dia.: 60mm max.

### Center Support Riser



172-143

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

### Center Support



172-142

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

### V-block with Clamp



172-234

- Workpiece dia.: 50mm max.

### Green Filter



172-286

- Increases the screen sharpness of the contour image.

### Standard Scales

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



- Used for checking magnifying accuracy.

### Stand

64AAB176



- Locking door
- 22"W x 25"H x 29"D

### Reading Scales



- Designed for checking the magnified image of a standard scale.

172-118 (200mm)

172-161 (300mm)

172-119 (8")

172-162 (12")



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