

PROFILE PROJECTOR PH-3515F

Bulletin No. 1891



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

Mitutoyo

Mitutoyo introduces the PH-3515F

— a series of profile projectors that will meet any optical measuring or inspection challenge your shop can offer!

PH-3515F *PROFILE* *PROJECTOR*

Shown with optional fiber
optic illumination cable



FEATURES

- Erect image on Day-bright screen.
- 14" (356mm) dia. protractor screen with crosshairs and staggered lines for easy alignment.
- Digital angle measurement to 1' or 0.01°.
- Floating-type workstage incorporates linear scales for fast, accurate measurement.
- Contour illumination with halogen bulb. Surface illumination with halogen bulb.
- Suitable for thread pitch measurements — free from blurred or distorted images when the workpiece is angled.
- Wide range of accessories for varied applications.

KA COUNTER (OPTIONAL)

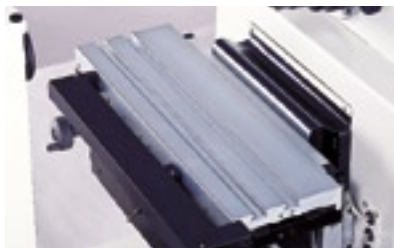


High cost performance 2-axis counter with new 10-coordinate functions and existing KL counter functions. Existing AT100 series optical scales can be connected.

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)

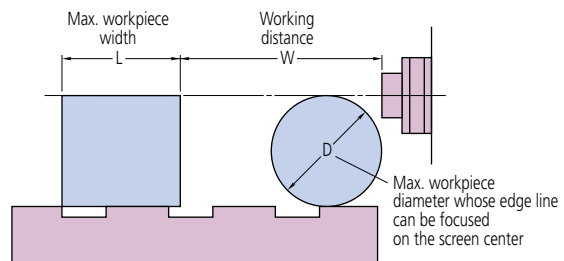
WORKSTAGE

(STANDARD ACCESSORY)



XY range	X-axis (horizontal travel): 10" (254mm) Y-axis (vertical travel): 6" (152mm)
Measuring unit	Linear scale for each axis
Display unit	(Optional)
Stage size (WxD)	17.72" x 5.75" (450x146mm)
Swivel range	±10° (30' reading)
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	100X
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-Data200 (OPTIONAL)



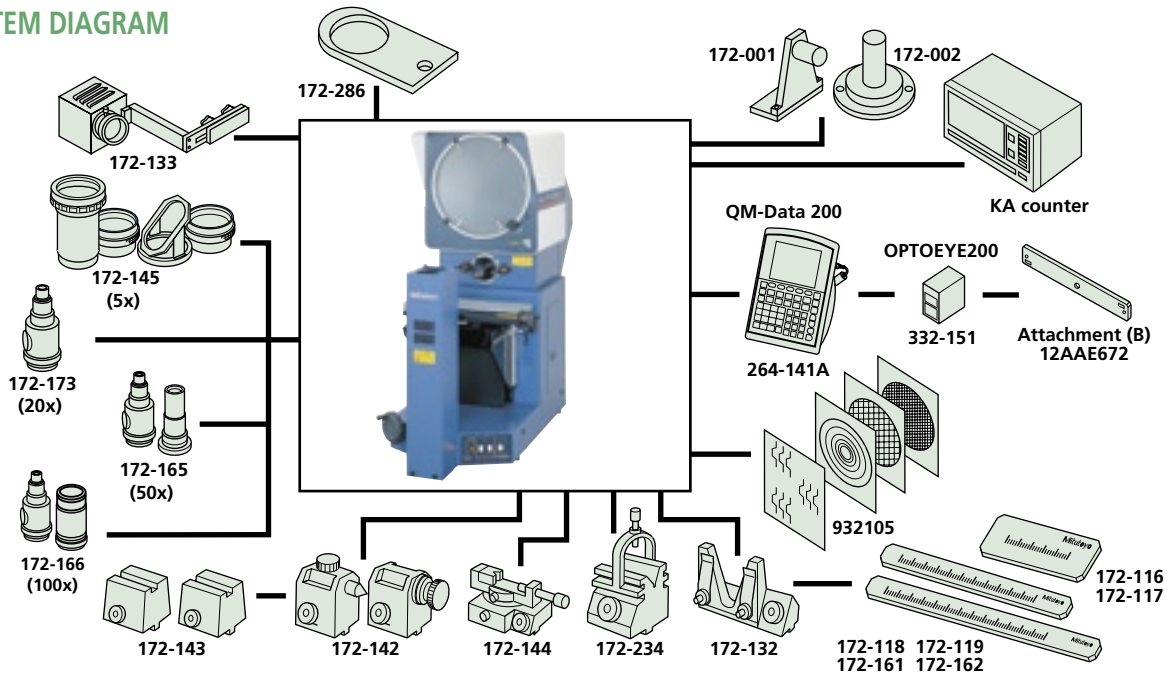
264-141A

Mitutoyo launches a new 2D data processing unit for optical instruments. The QM-Data200 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

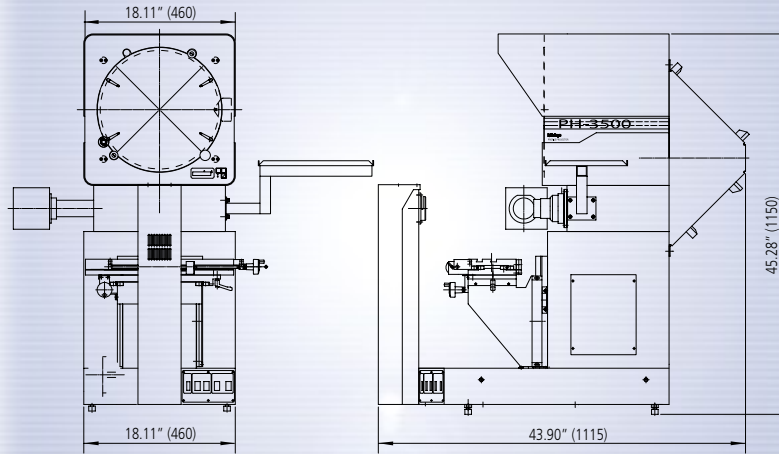


SPECIFICATIONS

Order No.	172-848-1A	
Resolution	.0001"/.00005"/0.001mm/0.005mm	
Projection lens	10X (172-184)	
Magnification accuracy	±0.1% under contour illumination, ±0.15% under surface illumination	
Screen	Effective DIA	14" (356mm)
	Screen material	Fine-grain ground glass
	Reference line	Staggered crosses and crosshairs
Protractor	Display range	±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	341 lbs. (155kg)	
Standard accessories	10X projection lens set, workstage (319-227-1), surface illumination unit (172-133), power cord, counter stand (990271), halogen bulb 24V 150W, 2pcs. (512305), machine cover (383228), user's manual	



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.

Chipping Saw Blade Measuring Jig

172-001

Cutting Saw Blade Measuring Jig

172-002

Standard Scales

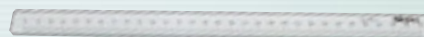


172-116 (50mm)

172-117 (2")

- Used for checking magnifying accuracy.

Reading Scales



172-118 (200mm)

172-161 (300mm)

172-119 (8")

172-162 (12")

Overlay Chart Set



932105

- Makes inspection of projected images easy.
- Twelve different patterns are available in a set.

Stand

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

050004





- Coordinate Measuring Machines
- Vision Measuring Systems
- Form Measurement
- Optical Measuring
- Sensor Systems
- Testing Equipment and Seismometer
- Digital Scale and DRO Systems
- Small Tool Instruments and Data Management

Mitutoyo America Corporation

www.mitutoyo.com

M³ Solution Centers

Aurora, Illinois

(Corporate Headquarters)
(630) 978-5385

Westford, Massachusetts

(978) 692-8765

Huntersville, North Carolina

(704) 875-8332

Mason, Ohio

(513) 754-0709

Plymouth, Michigan

(734) 459-2810

City of Industry, California

(626) 961-9661

Kirkland, Washington

(408) 396-4428

Mitutoyo

Precision is our Profession

Note: All information regarding our products (the illustrations, drawings, dimensional, performance and other technical data) contained in this pamphlet, is to be regarded as approximate average values. We reserve the right to make changes to the corresponding designs, dimensions and weights. The stated standards, similar technical regulations, descriptions and illustrations of the products were valid at the time of printing. The latest applicable version of our General Sales Policy will apply. Only quotations submitted by Mitutoyo or our approved distributors are valid.