

PJ-A3000 Profile Projector

Bulletin No. 1734

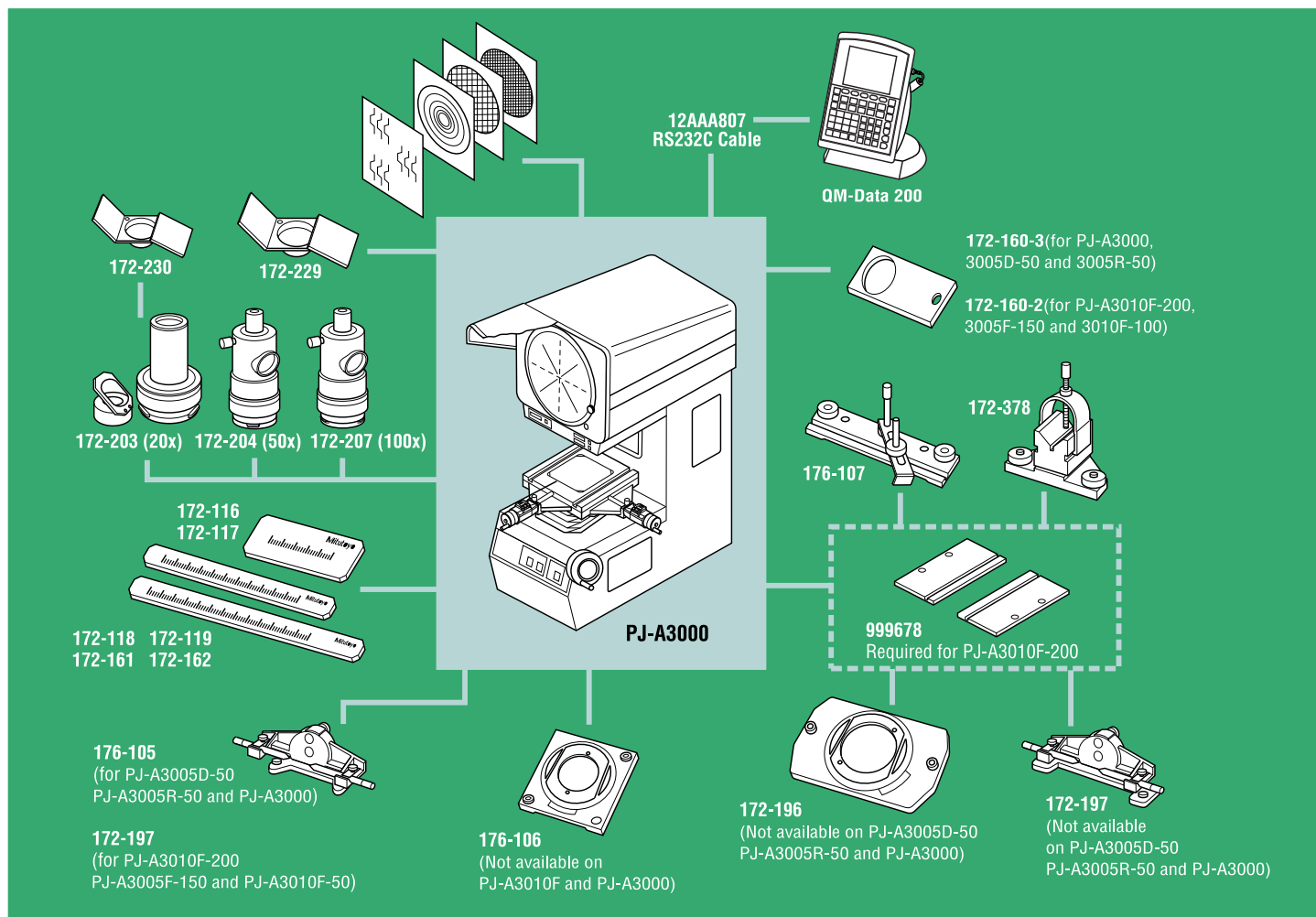


Shown with optional
QM-Data 200
2D Data Processing Unit

**A series of midsize
profile projectors**

Mitutoyo

Optional Accessories



Order No. and XY Stage Specifications

Model	PJ-A3005F-150	PJ-A3005D-50
Order No.	302-712A	302-714A
XY range	5.90" x 2" (150 x 50mm)	2" x 2" (50 x 50mm)
Resolution	.00005"/0.001mm	.00005"/0.001mm
Measuring unit	Built-in linear scales	Digimatic micrometer heads
Table size	11.02" x 5.98" (280 x 152mm)	5.98" x 5.98" (152 x 152mm)
Effective table area	7.24" x 3.23" (184 x 82mm)	3.23" x 3.23" (82 x 82mm)
Maximum workpiece height	4.07" (103.5mm)	4.86" (123.5mm)
Functions	Zero-Setting, +/- direction switching, SPC output	+/- direction switching, SPC output

Model	PJ-A3010F-200	PJ-A3010F-100
Order No.	302-711A	302-713A
XY range	8" x 4" (200 x 100mm)	3.94" x 3.94" (100 x 100mm)
Resolution	.0001"/0.001mm	.0001"/0.001mm
Measuring unit	Built-in linear scales	Built-in linear scales
Table size	14.96" x 9.84" (380 x 250mm)	9.84" x 9.84" (250 x 250mm)
Effective table area	10.47" x 6.69" (266 x 170mm)	5.6" x 5.6" (142 x 142mm)
Maximum workpiece height	3.64" (92.5mm)	3.58" (91mm)
Functions	+/- direction switching, SPC output	Zero-Setting, +/- direction switching, SPC output



Optional Accessories

Swivel Center SJSAQ-052 Supports

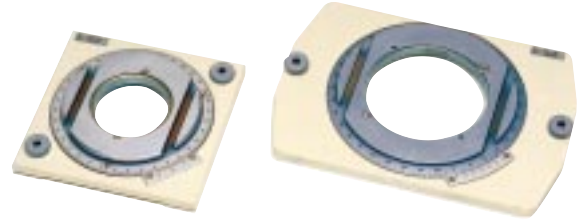


- Suitable for clamping cylinders and ball screws, etc.

Order No.	176-105	172-197
Maximum workpiece diameter	70mm (45mm)	80mm (65mm)
Maximum workpiece length	140mm	140mm
Swivel	$\pm 10^\circ$	$\pm 10^\circ$
Mass	2.4kg	2.5kg

(): When swiveled 10°

Rotary Tables



- Holder with clamp (176-107) can be mounted.

Order No.	176-106	172-196
Effective diameter	66mm	100mm
Angle reading	6'	2'
Height	22mm	20.5mm
Mass	1.7kg	2.5kg

Overlay Chart

Overlay	Inch	Metric
	12" Screen	300mm Screen
Combination	511344	—
Grid/15° Protractor	511345	201386
Radius/10° Protractor	511349	201387
Radius	511348	201388
Protractor	511346	201389
Screw Thread	511347	201390

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

Fixture Mount Adapter



999678

- Used for the mounting of fixtures such as a rotary table and swivel center supports on PJ-A3010F-200.
- Mass: 2kg

V-block with Clamp

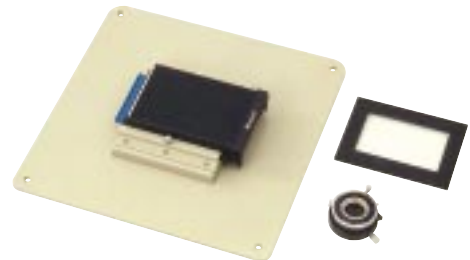


- Max. workpiece diameter: 25mm
- Mass: 2kg

Machine Stands

- 172-259
- 172-267 (Auxiliary stand)

Polaroid Photographic Attachment



- The projected surface image on the screen can be easily recorded.
- Film: Polaroid #669 (color) or Polaroid #665 (black and white).

Optional Accessories

Standard Scales



- Used for checking magnifying accuracy.

Order No.	172-116	172-117
Range	50mm	2"
Graduation	0.1mm	.01"
Accuracy	3.25 μ m	.00013"
Mass	15g	15g

Reading Scales



- Specially designed for checking the magnified image of a standard scale on the projection screen.

Order No.	172-118	172-119	172-161	172-162
Range	200mm	8"	300mm	12"
Graduation	0.5mm	.02"	0.5mm	.02"
Accuracy	18 μ m	.00071"	19.5 μ m	.00077"
Mass	65g	65g	100g	100g

Oblique Reflection Mirrors



- Suitable for inspecting the surfaces of low-reflection-ratio materials such as plastics.

Order No.	172-229	172-230
Application	10X lens	20X lens

Holder with Clamp



- Max. workpiece height: 35mm
- Mass: 0.42kg

Green Filter

172-160-2 (3005D-50)

172-160-3 (PJ-A3010F-200, A3005F150, 3010F-100)

- Increases the sharpness of a contour image on the screen.

QM-Data 200



- The QM-Data 200 supports direct X/Y-axis scale signal input for instrument interfaces that support PJ.
- One RS232C connecting cable (**12AAA807**) is required.
- For edge sensing capabilities, order the Optoeye-200, part number **332-151** and mounting plate number **12AAE671**



264-141A (ARM-Mount Model)

PJ-A3000

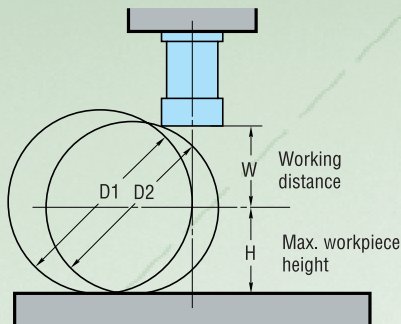
Profile Projectors

- A series of midsize profile projectors featuring bright, 12.40" (315mm) diameter screens and easy-to-operate XY measurement tables.
- Easy-to-read digital counters are located near the projection screen, thereby minimizing strain associated with excessive movement. A digital angle display eliminates the need to perform complex calculations.
- A floating table makes measuring quicker and easier.

Projection Capacity

D1: Max. workpiece diameter whose edge line can be focused on the screen center

D2: Max. workpiece diameter whose edge line can be focused on the screen line

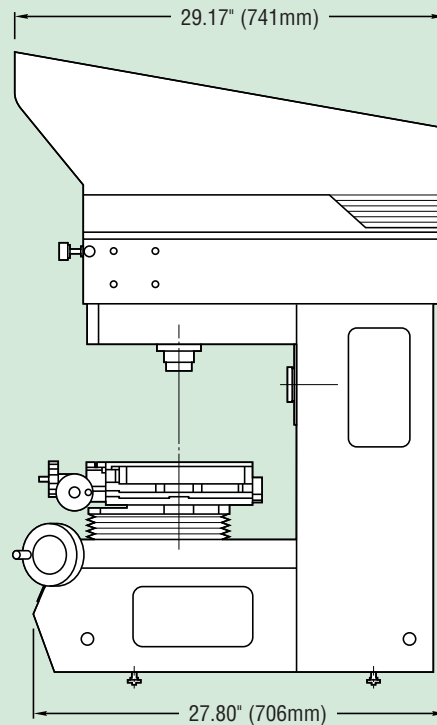
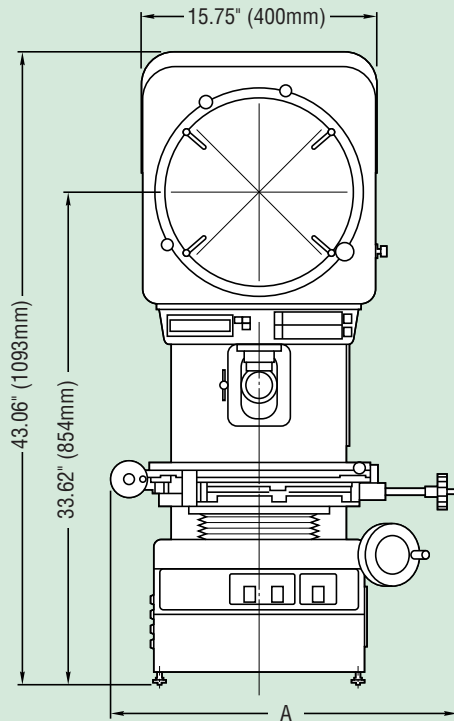


Unit: mm

Magnification	Contour illumination				Surface illumination			
	10X	20X	50X	100X	10X	20X	50X	100X
View field diameter	31.5	15.7	6.3	3.1	31.5	15.7	6.3	3.1
W	66	32.5	12.6	5	20	2	12.6	5
H								
PJ-A3005D-50	123.5	123.5	123.5	123.5	123.5	123.5	123.5	123.5
PJ-A3010F-100	91	91	91	91	91	91	91	91
PJ-13005F-150	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
PJ-13010F-200	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5
D1 PJ-A3005D-50	224	87	27	10	198	61	27	10
PJ-A3010F-100	182	87	27	10	182	61	27	10
PJ-13005F-150	207	87	27	10	198	61	27	10
PJ-13010F-200	185	87	27	10	185	61	27	10
D2 PJ-A3005D-50	154	69	25	10	120	23	25	10
PJ-A3010F-100	154	69	25	10	120	23	25	10
PJ-13005F-150	154	69	25	10	120	23	25	10
PJ-13010F-200	154	69	25	10	120	23	25	10



Dimensions



A: 23.35" (593mm)
 17.57" (446mm)
 16.81" (427mm)
 17.91" (455mm)

Common Specifications

Projected image		Inverted image
Protractor screen	Effective diameter	315mm (12.4")
	Screen material	Fine ground glass
	Reference line	Cross hair line
	Angle display (LED)	Resolution: 1' or 0.01° (switchable), Range: ±360° Functions: Absolute/incremental mode switching, Zero Set
Projection lens		Standard Accessory 10X (172-202)
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	2-stage brightness switch, Heat-absorbing filter
Surface illumination	Light source	Halogen bulb (24V, 150W)
	Optical system	Vertical illumination with a half-reflection mirror
Functions		Adjustable condenser lens, Oblique reflection mirrors (options for 10X and 20X lenses)
Power supply		100/110/120/220/230/240V AC (switchable), 50/60Hz
Mass		PJ-A3010F-200: 308 lbs. (140kg) PJ-A 3005F-150: 255 lbs. (116kg) PJ-A3010F-100: 246 lbs. (112kg) PJ-A3005D-50: 235 lbs. (107kg)
Standard accessories		10X projection lens set, masking shield, battery code, halogen bulb, tube fuse, grounding wire, Allen key, cap

Coordinate Measuring Machines

Vision Measuring Systems

Surface Roughness, Form and Contour Measurement

Digital Scale and DRO Systems

Optical Measuring Machines

Sensor Systems

Hardness Measuring Machines

Small Tool Instruments and Data Management

Mitutoyo America Corporation

www.mitutoyo.com

M³ Solution Center

Michigan
(734) 459-2810

Illinois
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California
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Massachusetts
(978) 692-8765

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(317) 577-6070

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(704) 875-8332



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