

Profile Projector PV-5110

CATALOG No. E4271-172



Large screen, profile and surface projector
with digital angle display.

Mitutoyo

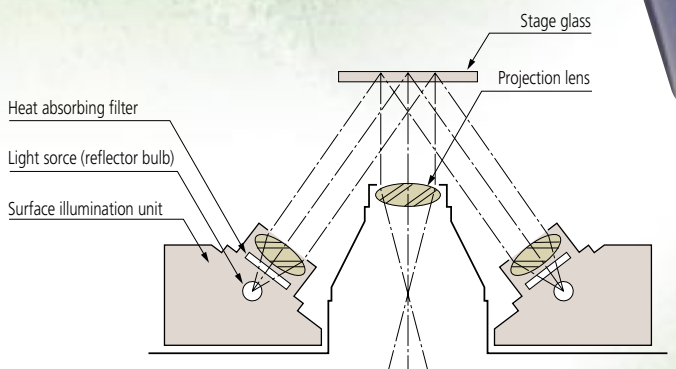
Presenting a measuring projector that displays contour or surface detail with startling clarity on its large, rotatable screen. This instrument delivers angular measurements with digital simplicity and accuracy, and you have the option of

The PV-5110 is a vertical-type precision profile projector with an effective screen diameter of 508mm. This digital-protractor equipped, large-screen display allows a 100mm (4") workpiece to be projected in its entirety when the 5X projection lens is used. Economically placed, the screen is positioned right in front of the operator to allow easy and comfortable access, thereby reducing the fatigue that can result when any task is performed over an extended period of time. Thanks to its large XY stage, the PV-5110 is highly efficient when measuring workpieces such as pressed parts and lead frames.

FEATURES

- Floor mounted design provides incident and transmitted light projection.
- Digital-readout protractor screen (including zero reset and ABS/INC measurement switching) for easy, error-free angular measurements.
- Sloping screen allows projected images to be easily traced or compared with a template.
- Incident, oblique surface illumination provides bright and clear images, allowing easy inspection of non-reflecting workpieces such as plastic parts or printed materials.

■ 5X, 10X, 20X Oblique surface illumination



adding just a basic XY display or, alternatively, powerful coordinate computing capabilities combined with a host of productivity-enhancing features.

SPECIFICATIONS

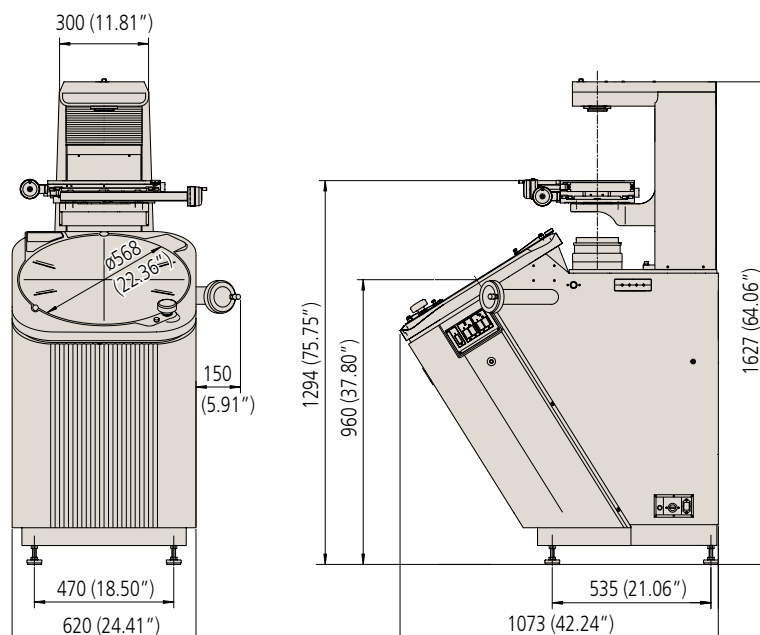
Order No.	110V	304-909C
	120V	304-909A
	220V	304-909D, 304-909DC, 304-909K
	240V	304-909E
XY table	200 x 100mm / 7.87" x 3.94"	
Protractor Screen	Effective diameter	ø 508mm / 20"
	Screen material	Fine ground glass
	Reference line	Staggered crosses and crosshairs
	Display range	±370°
	Resolution	0.01° or 1' (switchable)
	Function	Zero-setting, ABS/INC switching
Projection lens	(Optional)	
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
	Functions	High/low brightness switch, cooling fan, heat-absorbing filter, green filter (optional)
Surface illumination	Light source	Halogen bulb (24V, 150 W x 2)
	Optical system	Twin oblique
	Functions	High/low brightness switch, cooling fan, heat-absorbing filter, condensable adjustment method
Power supply	100/110/120/230/240V AC, 50/60Hz	
Power consumption	Approximately 500W max	
Mass	190kg /418lb	



XY Table

XY range	200 x 100mm (8" x 4")
Effective area	266 x 170mm (10.47" x 6.69")
Stage size	380 x 250mm (14.96" x 9.84")
Measuring unit	Built-in linear scales (optional)
Swivel range	±3°
Maximum table loading	5kgf (11lb.)
Mass	18.5kg (40.7lb.)
Remarks	Quick release (on X and Y axes)

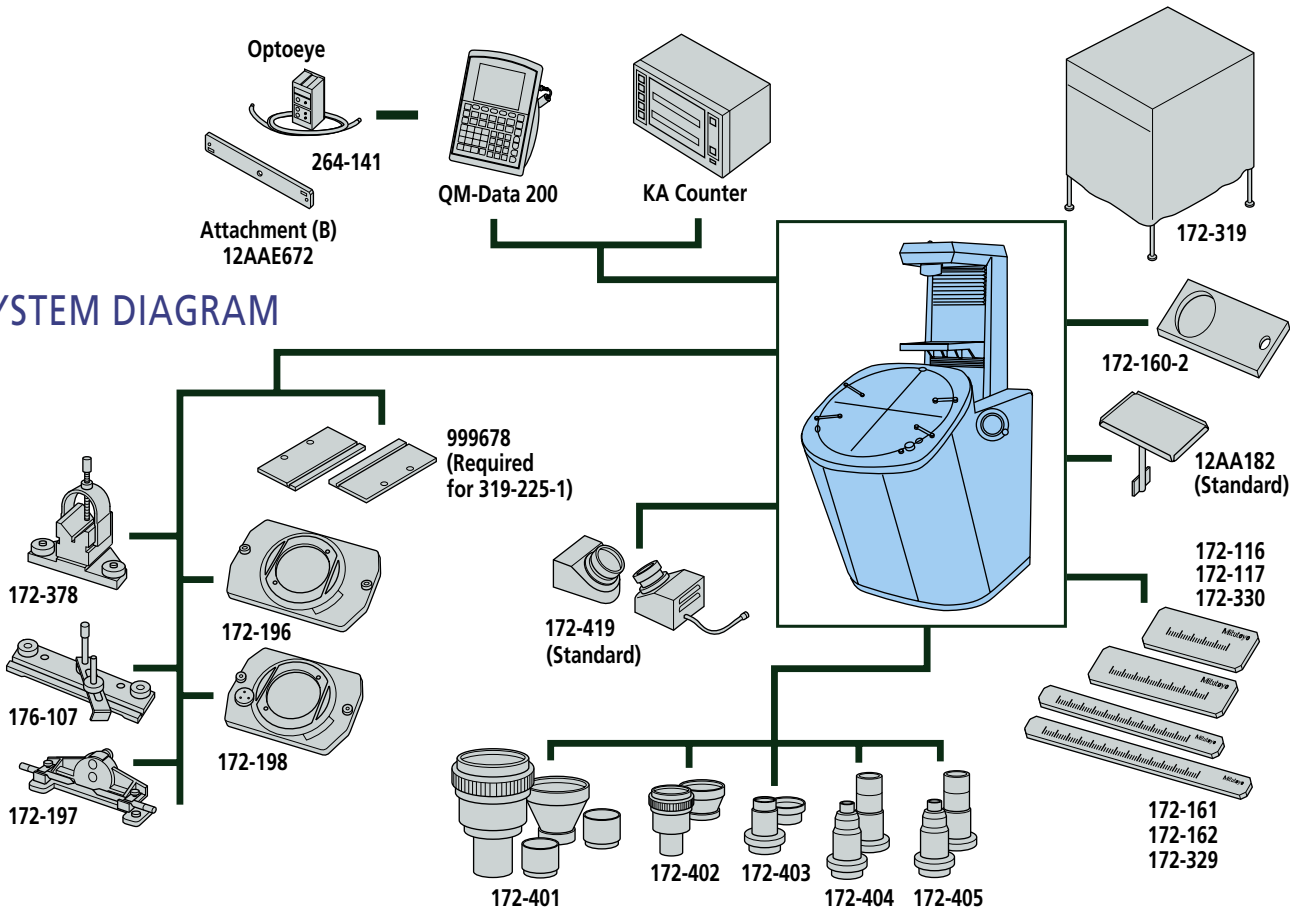
DIMENSIONS



Unit : mm (inch)



SYSTEM DIAGRAM



KA Counter Display Unit

- The basic and most affordable display unit for linear scales.



Order No.	174-173
Resolution	0.005mm/0.001mm (.0005"/.0001")
Output	RSS-232C interface (09CAB217) is optional.

QM-Data 200

- A 2D data processing unit for optical instruments fitted with linear scales. Features powerful 2D coordinate measurement capabilities with unmatched ease of use.



Optoeye

- Aids ease of measurement by enabling automatic edge detection. Used in combination with the QM-Data 200.



264-141 ■

- To denote your AC line receptacle/cable add the following suffixes (e.g. **264-141A**).
- A** for UL/CSA type, **C** for JAPAN type,
- D** for CEE type, **E** for BS type,
- K** for EK (South Korea) type, **DC** for CCC (China) type.

OPTIONAL ACCESSORIES

Green Filter

- Increases the sharpness of a contour image on screen.

Rotary Table

- Angle reading: 2'
- Effective dia.: 100mm
- holder with clamp (176-107) can be mounted.



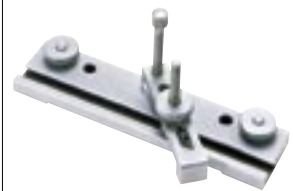
Fixture Mount Adapter

- Used for mounting fixture such as a rotary table or swivel center support on 319-225-1 stage



Holder with Clamp

- Workpiece height: 35mm max.



Swivel Center Support

- Workpiece dia.: 80mm max.
- Swivel: $\pm 10^\circ$
- For clamping cylindrical workpieces with centered ends.



V-Block with Clamp

- Workpiece dia.: 25mm max.



Reading Scales

- Used on the screen for measuring the magnified image of a standard scale to determine magnification accuracy.



Standard Scales

- Used on the stage for projecting an accurate scale onto the screen.



Projection lenses



5X
172-401

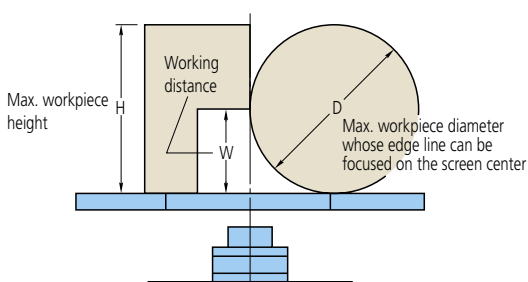
10X
172-402

20X
172-403

50X
172-404

100X
172-405

Projection Capacity



Illumination	Contour or Surface				
	5X	10X	20X	50X	100X
Magnification	5X	10X	20X	50X	100X
View field diameter	101.6	50.8	25.4	10.16	5.08
W	60 (27)	60 (60)	60 (60)	32.4 (32.4)	22.5 (22.5)
H	125	181	206	87	87
D	120	120	120	64.8	45

(): When using surface illumination

Note: Surface illumination is not available at 50X and 100X magnifications.



- Coordinate Measuring Machines
- Vision Measuring Systems
- Surface-, Form- and Contour Measurement
- Optical Measuring
- Sensor Systems
- Hardness Measuring
- Digital Scale and DRO Systems
- Small Tool Instruments and Data Management

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