

# JT12A-B

## φ 300 Digital Measuring Projector

### Characteristics

- Clear image, accurate magnification, easy operation for comparing measurement
- With a non-spherical collector lighting system, the visual field of the projector screen would be all the more bright and homogeneous; thus reducing measurement errors and further securing the accuracy.
- Imported long-life halogen tungsten lamps are adopted to satisfy the requirement of long-time uses of the projector. With axial flow blower fans, the bilateral heat radiation can provide super-strong radiating power.
- JT12A-B has a DS401SM multi-function digital meter and micro-printer available as an optional parts.

### Technical Parameters

#### Projection screen

Screen diameter: φ 300 mm

Rotation range: 0° ~ 360°

Resolution of the rotary angle: 1'

Accuracy of the rotary angle: 6'

#### Worktable

Worktable area: 340mm × 152mm

Range of X-coordinate: 0~150 (mm) Resolution: 0.001 (mm)

Range of Y-coordinate: 0~50 (mm) Resolution: 0.001 (mm)

Range of Z-coordinate (Focusing): 0~90 (mm)

Accuracy of the instrument:  $(4+L/25) \mu m$ , of which, L = length of the workpiece measured ( unit: mm)

Load capacity of the worktable: 5kg

#### Lighting source

Transmission lighting: 12V 100W Halogen tungsten lamp

Indirect lighting: 24V 150W Halogen tungsten lamp



### Objective

Magnification Power	10 ×	20 ×	50 ×	100 ×
Object Visual Field	φ 30mm	φ 15mm	φ 6mm	φ 3mm
Object Working Distance	74mm	69mm	44mm	26mm
Errors of magnifying power	0.08%			

Errors of magnifying power: 0.08%

### Ambient environment of the instrument service

Room temperature: 20°C ± 5°C

Relative humidity: 40%~70%

**Overall sizes of the instrument (mm):** 480 × 780 × 1150

**Mainframe weight:** 135 kg

### Remarks on the Power Source

Rated voltage for the instrument is 220V/110V

Frequency: 50HZ/60HZ

## JT20 (Built-in Readout)

φ 300 Digital Measuring Projector

## JT20A (External Readout)

φ 300 Digital Measuring Projector

### Characteristics

- The up-and-down hoisting structure adopted for the projecting box can provide with a large focusing stroke in Z-direction.
- The worktable is provided with three different travels for selection in accordance with the dimensions of the measured workpiece.
- Precious built in objective, rotated button for changing the surface light and profile light.
- Optical path could be adjusted based on different objective for changing the magnification.
- Beautiful in its outward appearances, with the accuracy of .  
(  $3+L/75$  )  $\mu m$

### Technical Parameters

#### Projection screen

Screen diameter: φ 300 mm

Rotation range: 0° ~ 360°

Resolution of the rotary angle: 1'

Accuracy of the rotary angle: 6'

#### Objective

Magnification Power	10 ×	20 ×	50 ×
Object Visual Field	φ 30mm	φ 15mm	φ 6mm
Object Working Distance	74mm	69mm	63 mm
Errors of magnifying power	0.08%		

#### Worktable ( Three Optional )

Type	Small	Medium	Large
Range of X-coordinate	0~150	0~200	0~250
Range of Y-coordinate	0~100	0~150	0~150
Load capacity of the worktable	10kg	15kg	20kg
Worktable area	350 × 240	400 × 280	450 × 286



Resolution: 0.001 (mm)

Stroke of Z-coordinate (Focusing): 0~100 (mm)

Accuracy of the instrument: (  $3+L/75$  )  $\mu m$ , of which, L = length of the workpiece measured ( unit: mm)

#### Lighting source

Transmission lighting: 24V 150W Halogen tungsten lamp

Reflecting lighting: 24V 150W Halogen tungsten lamp

**Overall sizes of the instrument (mm):** L/410 × W/650 × H/1100

**Mainframe weight:** 80 kg

# JT300

## Φ 300 Digital Measuring Projector

### Characteristics

- Use circular arc curve modeling, beautiful and easy to operate
- Use linear guide and no interference in the nut on the up and down system, more stable and easy to operate
- Patent coating process used on the reflective mirror, better performance of the dustproof.
- The two high-and-low adjustable light intensities for transmission lighting can be adaptable for different measuring requirements.
- Imported long-life halogen tungsten lamps are adopted to satisfy the requirement of long-time uses of the projector.
- In high quality in its optical system, the objectives are clear in imaging and accurate in multiplying factors.
- With axial flow blower fans, the bilateral heat radiation can provide super-strong radiating power.

### Technical Parameters

Projection screen

Screen diameter (mm) : Φ300

Rotating range : 0° ~ 360°

resolution of the rotary angle : 1'

Accuracy of the rotary angle : 6'

### Objective

Magnification Power	10 ×	20 ×	50 ×	100 ×
Object Visual Field	Φ 30mm	Φ 15mm	Φ 6mm	Φ 3mm
Object Working Distance	75.201mm	69.599mm	44.4 mm	26.243
Errors of magnifying power	0.08%			

### Worktable

Size of worktable : ( 400 × 225 ) mm

worktable travel ( optional ) : X = 200mm Y = 100mm Z = 80mm

Resolution: 1 um



Accuracy of X and Y coordinate value:  $(3+L/75)$  um, of which,  
L=length of the work piece measured ( unit:mm )

Load weight of worktable : 5kg

### Illumination source

Transmission illumination 12V 100W Tungsten halogen lamp

Reflecting illumination 24V 150W Tungsten halogen lamp

### Outer dimensions of the instrument(mm)

L694 × W380 × H1065

**Operating environments:** Room temperature is  $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$  and the relative humidity does not exceed 60%.

**Instrument weight:** 180kg

# JT24

## φ 300 Digital Measuring Projector

### Characteristics

- ① This instrument is in conformity with the design of update molding, compact in structures and convenient for operations.
- ② The highlight and long-life halogen tungsten lamps are adopted for the lighting source, homogeneous in lighting.
- ③ Beautiful in its outward appearances, this instrument is of super-precision; casting aluminum is selected for the processing of worktables, light in weight.
- ④ In high quality in its optical system, the objectives are clear in imaging and accurate in multiplying factors.
- ⑤ The fiber transmission is adopted for the indirect lighting, which is small in dimensions, high in its brightness and convenient for uses.
- ⑥ The two high-and-low adjustable light intensities for transmission and indirect lightings can be adaptable for measuring requirements of different workpieces.

### Technical Parameters

#### Projection screen

Screen diameter: φ 300 mm

Rotation range: 0° ~ 360°

Resolution of the rotary angle: 1'

Accuracy of the rotary angle: 4'

#### Worktable

Worktable area: 326mm x 150mm

Range of X-coordinate: 0~200 (mm) Resolution: 0.001 (mm)

Range of Y-coordinate: 0~80 (mm) Resolution: 0.001 (mm)

Range of Z-coordinate (Focusing): 0~100 (mm)

Accuracy of the instrument:  $(3+L/75) \mu m$ , of which,

L = length of the work piece measured ( unit: mm)

Load capacity of the worktable: 5kg



#### Lighting source

Transmission lighting: 24V 150W Halogen tungsten lamp

Indirect lighting: 24V 150W Halogen tungsten lamp

#### Objective

Magnification Power	10 ×	20 ×	50 ×	100 ×
Object Visual Field	φ 30mm	φ 15mm	φ 6mm	φ 3mm
Object Working Distance	75.201mm	69.599mm	26.990 mm	26.243
Errors of magnifying power	0.08%			

**Operating environments:** Room temperature is 20°C ± 5°C and the relative humidity does not exceed 60%.

**Overall sizes of the instrument (mm):** L/746 × W/420 × H/980

**Mainframe weight:** 105 kg



# JT21A

## φ 350 Digital Measuring Projector

### Characteristics

- ① The inverted projector is in conformity with the human-based design and convenient for operation.
- ② Two-way radiation used for the axial blower can provide super-strong power for radiation.
- ③ Especially suitable for the comparative measurement detection of projection drawings, observation of the contour forms, etc..
- ④ The in-line type is adopted for the objective replacement, with much convenience in replacement.
- ⑤ This instrument equipped with multiple-function digital display meters is very convenient for the measurement of complicated parts.



### Technical Parameters

#### Projection screen

Screen diameter: φ 350 mm

Rotation range: 0° ~ 360°

Resolution of the rotary angle: 1'

Accuracy of the rotary angle: 4'

#### Objective

Magnification Power	5 ×	10 ×	20 ×	50 ×
Object Visual Field	φ 70mm	φ 35mm	φ 17.5mm	φ 7mm
Object Working Distance	163.m	89mm	76 mm	60 mm
Errors of magnifying power	0.08%			

#### Worktable

Worktable area: 380mm × 230mm

Range of X-coordinate: 200 (mm)

Range of Y-coordinate: 100 (mm)

Resolution: 0.001 (mm)

Range of Z-coordinate: 0~100 (mm) (Focusing)

Accuracy of the instrument: (3+L/75) μ m, of which, L = length of the workpiece measured ( unit: mm)

Load capacity of the worktable: 5kg

#### Lighting source

Transmission lighting: 12V 100W Halogen tungsten lamp

Vertical Reflection lighting: 12V 100W Halogen tungsten lamp

#### Oblique reflection lighting:

24V 100W Halogen tungsten lamp (only use on 5 × lens)

**Overall sizes of the instrument (mm):** 854 × 480 × 1401

**Mainframe weight:** 138kg

# JT26

## φ 400 Digital Measuring Projector

### Characteristics

- The product structures are strong in commonality, this instrument is beautiful in its outward appearances and convenient for operations.
- Imported V-type straight-line slide-way is adopted for the hoisting driving of the worktable, light and comfortable in driving.
- The two high-and-low adjustable light intensities for transmission and indirect lightings can be adaptable for measuring requirements of different workpieces.
- In high quality in its optical system, the objectives are clear in imaging and accurate in multiplying factors.
- The fiber transmission is adopted for the indirect lighting, which is small in dimensions, high in its brightness and convenient for uses.
- bigger screen size, horizontal light system, easy to measure the work piece with axis..
- This instrument is of super-precision, with stable and reliable performances.



### Technical Parameters

#### Projection screen

Screen diameter: φ 400 mm

Rotation range: 0° ~ 360°

Resolution of the rotary angle: 1'

Accuracy of the rotary angle: 4'

#### Worktable

Worktable area: 450mm × 150mm

Range of X-coordinate: 0~250 (mm) Resolution: 0.001 (mm)

Range of Y-coordinate: 0~80 (mm) (Focusing)

Range of Z-coordinate: 0~150 (mm) Resolution: 0.001 (mm)

Accuracy of the instrument:  $(3+L/75) \mu m$ , of which, L = length of the workpiece measured ( unit: mm)

Load capacity of the worktable: 5kg

#### Objective

Magnification Power	10 ×	20 ×	50 ×	100 ×
Object Visual Field	φ 35mm	φ 17.5mm	φ 7mm	φ 3.5mm
Object Working Distance	88mm	81mm	54 mm	45 mm
Errors of magnifying power	0.08%			

#### Lighting source

Transmission lighting: 24V 150W Halogen tungsten lamp

Reflecting lighting: 24V 150W Halogen tungsten lamp ( with reflection cup )

#### Ambient environment of the instrument service

Room temperature: 20°C ± 5°C

Relative humidity: Not more than 60%

**Overall sizes of the instrument (mm):** 687 × 443 × 942

**Mainframe weight:** 150 kg

#### Remarks on the Power Source

Rated voltage for the instrument is 220V/110V

Frequency: 50HZ/60HZ

# JT36

## φ 600 Vertical Projector

### Characteristics

- ❶ The projection screen is mounted by vertical ways, which is convenience for user's observation.
- ❷ The two high-and-low adjustable light intensities for transmission and indirect lightings can be adaptable for measuring requirements of different workpieces.
- ❸ In high quality in its optical system, the objectives are clear in imaging and accurate in multiplying factors.



### Technical Parameters

Screen diameter (mm) : Φ600

Rotating range : 0° ~ 360°

Resolution of the rotary angle: 1'

Accuracy of the rotary angle : 6'

### Worktable ( Three Optional )

Type	Small	Large
Worktable area (mm)	350 × 240	450 × 286
Range of X-coordinate (mm)	0~200	0~300
Range of Y-coordinate (mm)	0~100	0~200
Z-shaft(Focusing)mm	80	
Load capacity of the worktable (kg)	10	5

Measuring range ( mm ) :

X-coordinate 300, Resolution 0.001

Y-coordinate 200, Resolution 0.001

Z-shaft ( Focusing ) : 80

Accuracy of the instrument: (4+40L) μm, of which, L = length of the workpiece measured ( unit: m)

### Objective

Magnification Power	10 ×	20 ×	50 ×	100 ×
Object Visual Field	φ 120mm	φ 60mm	φ 30mm	φ 6mm
Object Working Distance	102mm	135mm	87mm	49mm
Errors of magnifying power	0.08%			

### Lighting source :

Transmission lighting : 12V 150W Halogen tungsten lamp

Reflecting lighting : 12V 150W Halogen tungsten lamp

**Overall sizes of the instrument (mm):** 1420 × 1300 × 1940

**Mainframe weight :** 550kg

**Room temperature :** 20° C ± 5° C

Relative humidity : Not more than 60%

# JT5A/B/E

## Φ 800 Horizontal Projector

### Characteristics

- Horizontal light system, suitable for the measurement of work piece on production line
- Worktable has a larger moving range and strong bearing capacity, suitable for measurement of large-sized parts.
- The deflection of worktable is  $\pm 15^\circ$ , convenient for measuring helical parts.
- The two high-and-low adjustable light intensities for transmission and indirect lightings can be adaptable for measuring requirements of different workpieces.
- Large area of projection screen can display the comparison indications of various large-sized complex parts in one time, with higher measurement efficiency.
- JT5A is equipped with digital display box to make data processing.
- JT5B is equipped with computer, 2-coordinate measurement software and hand controller, achieving the power operated measurement.
- JT5E is equipped with CNC automatic controller, achieving full-auto control measurement and data processing.

### Technical Parameters

#### Projection screen

Projection screen:  $\Phi 800$  mm

Rotation range : $360^\circ$

Rotation division value of projection screen:  $1^\circ$

Resolution of the rotary angle:  $1'$

#### Worktable

Worktable area: 630mm  $\times$  200mm

Measuring range

Longitudinal direction: 300mm

Vertical direction: 200mm

Transverse direction: 80mm

Resolution: 0.001mm



Light transmission size of plane worktable ( mm ) : 300  $\times$  200

Light transmission size of circular worktable ( mm ) :  $\Phi 90$

Rotation:  $\pm 15^\circ$

Accuracy of the instrument:  $(4+L/50) \mu m$ , of which, L=length of the workpiece measured (unit: mm)

load capacity of the worktable: 50kg

#### Tailstock rack

Maximum diameter gripped:  $\Phi 200$ mm

Maximum length gripped : 300mm

#### Lighting source

Transmission lighting: 24V 250W Halogen tungsten lamp

Reflecting lighting: 16V 150W Incandescent lamp

#### Objective

Magnification Power	10 $\times$	20 $\times$	25 $\times$	50 $\times$
Object Visual Field	$\Phi 80$ mm	$\Phi 40$ mm	$\Phi 16$ mm	$\Phi 8$ mm
Object Working Distance	206mm	123.5mm	85mm	78mm

Overall sizes of the instrument (mm) : 2130  $\times$  1800  $\times$  1950

Mainframe weight: 1900kg



# JT7A/B/E

## Φ 1200 Horizontal Projector

### Characteristics

- Imported Philip long-life halogen tungsten lamp is used to meet the requirement of long use time.
- Worktable has a larger moving range and strong bearing capacity, suitable for measurement of large-sized parts.
- Large area of projection screen can display the comparison indications of various large-sized complex parts in one time, with higher measurement efficiency.
- High-precision objective turntable is convenient for converting multiplying power and accurate in orientation.
- The deflection of worktable is  $\pm 15^\circ$ , convenient for measuring helical parts.
- Advanced raster sensor digital display technology and data processing system can achieve little error and high efficiency.

model	configuration
JT7-A	digital display box
JT7-B	computer, PCI card, hand controller 2-coordinate measurement software
JT7-E	Renishaw metal encoder, CNC automatic controller



### Technical Parameters

#### Projection screen

Projection screen:  $\phi 1200$  mm

Rotation range :  $360^\circ$

Rotation division value of projection screen:  $1^\circ$

Resolution of the rotary angle:  $1'$

#### Worktable

Worktable area:  $800\text{mm} \times 230\text{mm}$

Measuring range

Longitudinal direction:  $300\text{mm}$

Vertical direction:  $200\text{mm}$

Transverse direction:  $60\text{mm}$

Resolution:  $0.001\text{mm}$

Light transmission size of vertical square worktable:  $310 \times 205$

Light transmission size of vertical circular worktable:  $\phi 130$

stage deflection angle:  $\pm 15^\circ$

Accuracy of the instrument:  $(4+L/50) \mu\text{m}$ , of which, L=length of the workpiece measured (unit: mm)

load capacity of the worktable:  $100\text{kg}$

#### Objective

Magnification Power	10 ×	20 ×	50 ×	100 ×
Object Visual Field	$\phi 120\text{mm}$	$\phi 60\text{mm}$	$\phi 24\text{mm}$	$\phi 12\text{mm}$
Object Working Distance	$300\text{mm}$	$195\text{mm}$	$120\text{mm}$	$50\text{mm}$

#### optic axis of lens

Maximum distance from stage:  $255\text{mm}$

Minimum distance from stage:  $55\text{mm}$

#### Tailstock

Maximum diameter gripped:  $\phi 300\text{mm}$

Maximum length gripped:  $450\text{mm}$

#### Lighting source

Transmission lighting:  $24\text{V } 250\text{W}$  Halogen tungsten lamp

Reflecting lighting:  $16\text{V } 150\text{W}$  Incandescent lamp

**Overall sizes of the instrument (mm) :**  $3500 \times 2320 \times 2250$

**Mainframe weight:**  $4000\text{kg}$

# JT35A/B/E

## Φ 1500 Horizontal Projector

### Characteristics

- High-precision objective turntable is convenient for converting multiplying power and accurate in orientation.
- Worktable has a larger moving range and strong bearing capacity, suitable for measurement of large-sized parts.
- The deflection of worktable is  $\pm 15^\circ$ , convenient for measuring helical parts.
- Advanced raster sensor digital display technology and data processing system can achieve little error and high efficiency.
- square workstage, rotary workstage available to satisfy different work piece measuring requirement.
- special coating process used on the reflective mirror, better performance of the dustproof and easy to clean.
- SLR lens optical path design, less energy loss during transmission, better quality of the image on the screen.

model	configuration
JT35-A	digital display box
JT35-B	computer, PCI card, hand controller 2-coordinate measurement software
JT35-E	Renishaw metal encoder, CNC automatic controller



### Technical Parameters

#### Projection screen

Projection screen:  $\Phi 1500$  mm

Rotation range :360°

Rotation division value of projection screen: 1°

Resolution of the rotary angle: 1'

#### Worktable

Worktable area: 800mm × 230mm

Measuring range

Longitudinal direction: 400mm

Vertical direction: 250mm

Transverse direction: 150mm

Resolution: 0.001mm

Light transmission size of vertical square worktable: 560 × 255

Light transmission size of vertical circular worktable:  $\Phi 330$

stage deflection angle:  $\pm 15^\circ$

Accuracy of the instrument:  $(4+L/50) \mu m$ , of which, L=length of the workpiece measured (unit: mm)

load capacity of the worktable: 100kg

#### Objective

Magnification Power	10 ×	20 ×	50 ×
Object Visual Field	$\Phi 150mm$	$\Phi 75mm$	$\Phi 30mm$
Object Working Distance	300mm	195mm	120mm

#### optic axis of lens

Maximum distance from stage: 255mm

Minimum distance from stage: 55mm

#### Tailstock

Maximum diameter gripped:  $\Phi 400mm$

Maximum length gripped: 450mm

#### Lighting source

Transmission lighting: 24V 250W Halogen tungsten lamp

Reflecting lighting: 24V 150W Incandescent lamp

**Overall sizes of the instrument (mm) :** 4009 × 2905 × 2418

**Mainframe weight:** 6000kg

## Multi-Functional Digital Display Meter



- Multipoint acquisition can determine the straight line and the circular.
- Various geometric elements can be preset.
- Various geometric elements can be determined in the combination forms.
- Having the functions of coordinate rotation and motion of translation.
- The length of sensor or the angular value of the coder may be set in Z-axial.
- Having the translation function between the pole coordinate and the rectangular coordinate.
- Having the function of error correction.
- Having the function of RS232 output.
- Having the function of page output.
- Having the function of power failure memory.
- Various geometric elements can be stored and called.

### 2-D measuring software

**Acquisition functions:** Acquire dots, lines, circulars and arcs.

**Construction functions:** Construct the Line, the circular and the arc by acquired dots and calculate three parameters.

**Combined computing functions:**

The combination calculation between "dot" and "dot" gives their dot distance and midpoint coordinate;

The combination calculation between "dot and line" gives the distance between dot and line;

The combination calculation between "straight line and straight line for their crossing" gives their intersecting point coordinate and their included angle;

The combination calculation between "straight line and straight line for their centering" gives the central line information for the two lines;

The combination calculation between "circle and circle" gives the information of the crossing points and the center distance of the circle;

The combination calculation between "circle and straight line" gives the information of their crossing points and the distance from the center of the circle to the line.

#### Functions for the geometrical tolerance:

Measurement of the circularity between circular and arc;

Measurement of straightness;

Measurement of coaxial;

Measurement of symmetry;

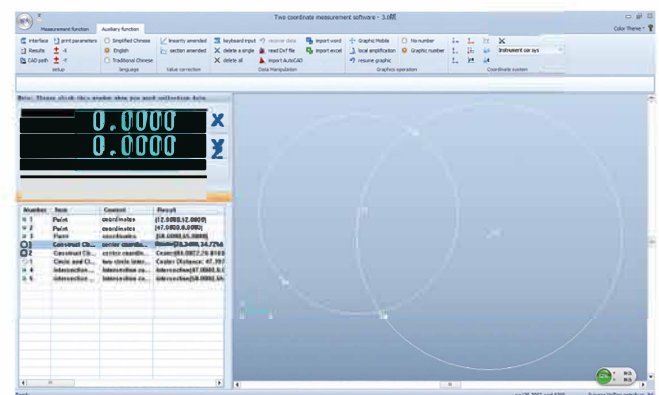
Measurement of displacement.

#### Exchange of the coordinate system:

The coordinate transition between the rectangular coordinate and the polar coordinate;

Establish the new coordinate and set the coordinate straight.

**Data output:** The data can be Outputting to AUTOCAD, EXCEL AND WORD .



## Accessories of Profile Projector

