User's Manual for Universal Concentricity Gage

Model LP-330A

An ISO 9001 – certified manufacturing company

Liport-PMA

I. Product Overview

1. Application Scope

- Precision measurement of roundness, concentricity, circular runout and section difference for shaft parts;
- Precision measurement of outer circle and inner circle parameters for shaft parts;
- Precision measurement of multi-point parameters for shaft parts;
- Rapid measurement of outer circle, inner circle and section difference.

2. Product Features

- High precision: ≤0.002mm;
- High efficiency: Supports rapid measurement, significantly reducing detection time;
- User-friendly: Simple operation, suitable for various shaft part detection scenarios;
- Portability: Lightweight equipment, easy to carry and use on site;
- Easy maintenance: Simple daily maintenance procedures, reducing operation and maintenance costs;
- Environmental tolerance: Low requirements for operating environment, adaptable to complex workshop conditions;
- Customization: Can be specially customized according to part size or detection requirements.

II. Operating Instructions (Precautions)

1.Environmental Requirements:

The instrument should be placed in a dry and clean environment, avoiding direct sunlight and humid areas (such as open air, waterlogged places).

2.Transportation Protection:

This instrument is a precision device. It should be handled with care during transportation or movement, and severe impact or collision is strictly prohibited.

3.Cleaning Specifications:

When cleaning the rotating working shaft and guide wheels, use a clean soft cloth/cotton wool dipped in alcohol or special cleaning agent for wiping. Direct contact and friction with hands are prohibited.

4.Anti-rust Maintenance:

Regularly perform anti-rust and cleaning maintenance on the instrument to prevent acidic (corrosive) substances/liquids from contacting the instrument surface.

5.Horizontal Placement:

The instrument must be placed horizontally during measurement to avoid axial movement of the workpiece during measurement.

III. Usage Methods

1. Adjusting the Pressure Wheel Height

Adjust the height of the "pressure wheel" according to the size of the workpiece to be measured, ensuring that the pressure wheel presses the workpiece with appropriate pressure.

2. Workpiece Clamping

- Lift the pressure wheel via the "operating handle" and place the workpiece to be measured on the "rotating working shaft";
- Lower the pressure wheel and reset it to fix the workpiece.

3. Debugging the Bracket and Micrometer

- Adjust the height of the "bracket" and move it so that the measuring head of the micrometer (or dial gauge) touches the workpiece surface;
- Adjust the dial pointer to zero position.

4. Debugging the Lever Gauge

- Adjust the measuring head of the "lever gauge" to a suitable position on the workpiece and make contact with the surface;
- Adjust the dial pointer to **zero position**.

5. Measurement and Reading

- Rotate the handwheel to drive the workpiece to rotate;
- Fine-tune the position of the measuring head according to measurement requirements, read the dial data, and complete the measurement.
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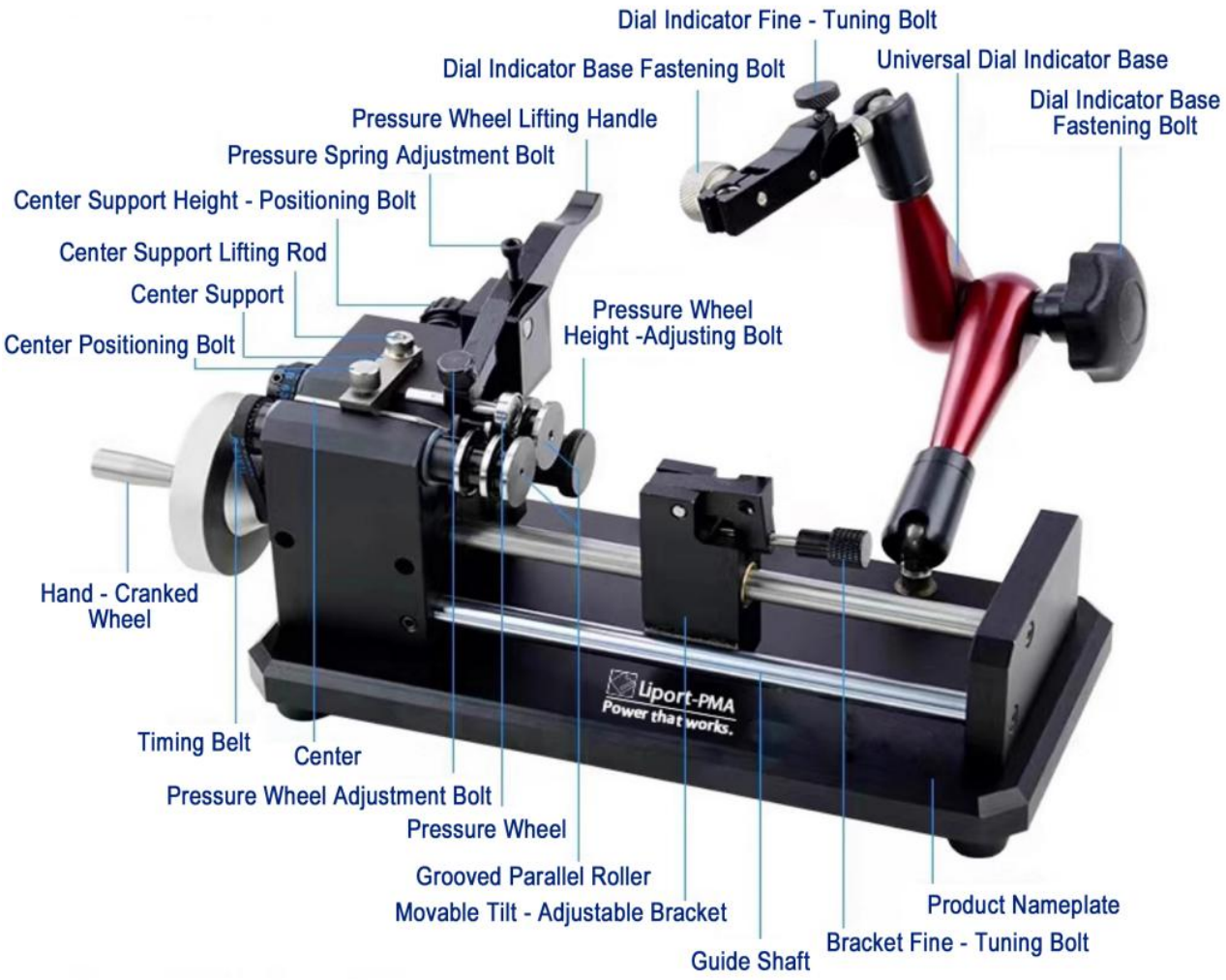


IV. Maintenance

1.Daily Cleaning:

- Remove fine dust with an air blow gun;
- For oil stains and fingerprints, use a clean gauze dipped in cleaning agent to wipe gently.

2.Disassembly Warning:
This instrument is a precision device. Do not disassemble it by yourself to avoid damaging precision or shortening service life.
3.Storage When Idle:
When not in use for a long time, it is necessary to:

- Cover with a dust cover for protection;
- Store in a dry environment to avoid rusting.

4.Regular Inspection:
It is recommended to conduct regular inspections monthly to ensure the accuracy and stable performance of the instrument.

V. Troubleshooting

Problem Phenomenon	Possible Causes	Solutions
Axial movement of workpiece during measurement	Unlevel workbench	Adjust the workbench to be horizontal
	Taper on the surface of the workpiece	Replace the workpiece
	Excessive sensor pressure	Fine-tune the sensor
	Dust/foreign objects on rotating shaft	Clean the rotating working shaft
Unsmooth rotation of working shaft	Foreign objects stuck in pulley	Clean the pulley
	Sticky substances/magnetism on workpiece surface	Clean the workpiece surface or replace the workpiece
Sliding table movement blocked	Foreign objects/debris on guide rails	Clean the guide rails
	Rusted guide rails	Conduct regular anti-rust inspections and apply anti-rust oil
Fine adjustment failure	Damaged threads of fine adjustment screw	Replace the fine adjustment screw
	Taper/foreign objects on workpiece surface	Replace the workpiece or clean the surface

Excessive shaking of instrument pointer	Loose/damaged screws of movable sensor fixture	Tighten or replace the screws
	Worn sensor	Replace the sensor
	Internal damage to the instrument	Replace the instrument

VI.Regular Product Lineup

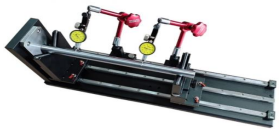
A

B

Code	Model Type	Part Diameter	Part Length	Accuracy	Indicator quantity	Roller-Styles	Description
700-LP-130		1mm-30mm (0.04"-1.18")	10mm-110mm (0.4"-4.33")	≤2μm	2	B	/
700-LP-130B		1mm-30mm (0.04"-1.18")	10mm-110mm (0.4"-4.33")	≤2μm	2	B	/
700-LP-330A		3mm-30mm (0.12"-1.18")	10mm-110mm (0.4"-4.33")	≤2μm	2	A	/
700-LP-330B		3mm-30mm (0.12"-1.18")	10mm-110mm (0.4"-4.33")	≤2μm	1	A	/
700-LP-20100		20mm-100mm (0.8"-4")	10mm-110mm (0.4"-4.33")	≤2μm	2	A	/
700-LP-0350		3mm-50mm (0.12"-2")	10mm-110mm (0.4"-4.33")	≤2μm	2	A	/
700-LP-330C		3mm-30mm (0.12"-1.18")	10mm-110mm (0.4"-4.33")	≤2μm	2	A	/

A

B

Code	Model Type	Part Diameter	Part Length	Accuracy	Indicator quantity	Roller-Styles	Description
700-LP-0350B		3mm-50mm (0.12"-2")	10mm-110mm (0.4"-4.33")	≤2μm	2	A	The indicator holder is rotatable
700-LP-150		1mm-50mm (0.04"-2")	10mm-300mm (0.4"-11.81")	≤2μm	2	B	/
700-LP-0150350		1mm-50mm (0.04"-2")	10mm-300mm (0.4"-11.81")	≤2μm	2	B	/
700-LP-1160300		1mm-160mm (0.04"-6.3")	1mm-300mm (0.04"-11.81")	≤2μm	2	/	/
700-LP-0350550		3mm-50mm (0.12"-2")	10mm-550mm (0.4"-21.65")	≤2μm	1	A	/
700-LP-12120600		12mm-120mm (0.47"-4.7")	30mm-600mm (1.18"-23.62")	≤2μm	2	/	V-shaped frame

If your part's dimensions and length are not available on this page, please don't hesitate to reach us. We have many concentricity gauge adjustments and customizations available. We can tailor to your needs!

Ⅶ. With optional motorized drive systems.

- Input： 100V~240V AC (alternating current), 50/60Hz frequency (supports global power grids).
- Output：12V DC (direct current), 5.0A stable output current.
- The motor speed supports forward and reverse rotation, and the speed can be adjusted in two gears (high and low).

The above is the complete instruction manual for the concentricity tester. Please read it carefully before operation. For special needs, please contact the manufacturer for customization.