

# MULTI-INDICATORS

## OPERATION AND CARE MANUAL

To take full advantage of Multi-indicators, read this manual thoroughly before using it. After reading, retain this manual for future reference. Specifications of Multi-indicators and the information in this manual are subject to change without notice.

### Introduction

1. While measuring the radius of arc, measuring it using "R" gages commonly, but application range of "R" gages is limited, because it only measures standard radius of arc, and getting data from comparison measurement, so can't get accurate data of workpiece. Multi-indicators can measure random radius of arc, apply for measurement radius of arc and plastic mould manufacturing.

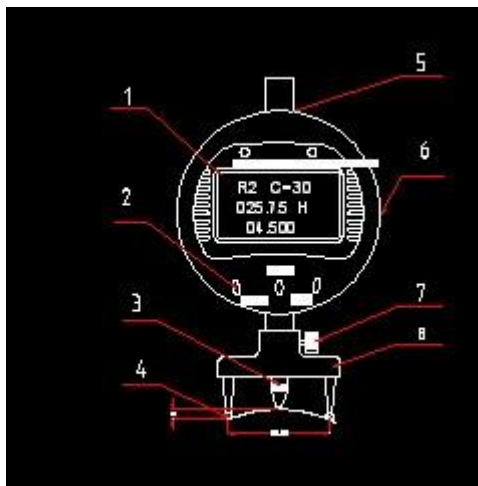
2. Multi-indicators have five different length measuring jaws, for choose corresponding measuring jaws, while measuring arc face.

3. Multi-functions

- 1) Application as indicators
- 2) Outside measurement
- 3) Inside measurement
- 4) Depth measurement
- 5) Step measurement

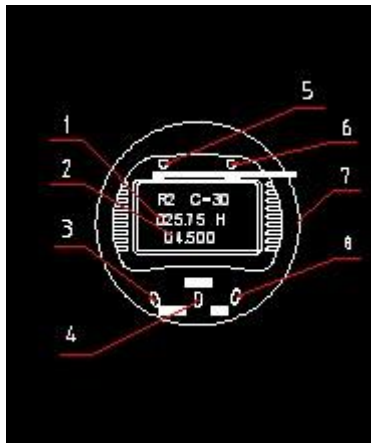
### Nomenclature

Measuring Jaws



1. The LCD
2. The control panel
3. Measuring spindle
4. Spherical measuring head
5. Data output
6. Battery lid
7. Clamping bolts
8. The base

The panel



1. Display radius of arc
2. Display length, while measuring arc, display chord data
3. Data hold
4. Inch/Metric changeover
5. Measuring jaws changeover
6. Functions changeover
7. Data output
8. Zero set and Power off

## OPERATIONS

**Power on** Short pressing key: ZERO/ON/OFF

**Zeroset** Short pressing key: ZERO/ON/OFF, can zeroset at any locations. Before inside measurement and outside measurement, make three spindles lie a same plane, then pressing key: ZERO/ON/OFF.

**Inch, Metric** Pressing key: UNIT, can inch/metric changeover.

**Data hold and release** Pressing key:HOLD,the LCD will display “H”,instrument hold data.

**Functions changeover** Pressing key:MODE,can select measuring functions:inner arc,outer arc,length,depth,step.When first row of the LCD display “R1”,the instrument enter inner arc measurement.When first row of the LCD display “R2”,the instrument enter outer arc measurement.Third row of the LCD display:length,depth,step.

Note: “R1” and “R2” can auto-changeover.

**Replace Jaws** Select suitable measuring jaws according to workpiece size.Measuring jaws specifications:10,20,30,60,100,after replace measuring jaws,press key:C,make the LCD display number=measuring jaws size.Example:If select 30 measuring jaws,then the LCD should display “C=30” .

## Measuring operations

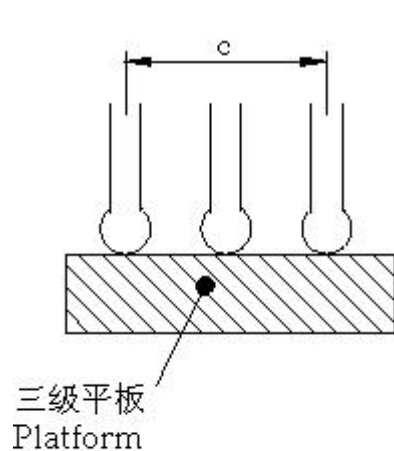
Inside arc the best measuring range

C=10	R=5 --> 13MM
C=20	R=11--> 30MM
C=30	R=22-->100MM
C=60	R=94-->260MM
C=100	R=255-->700MM

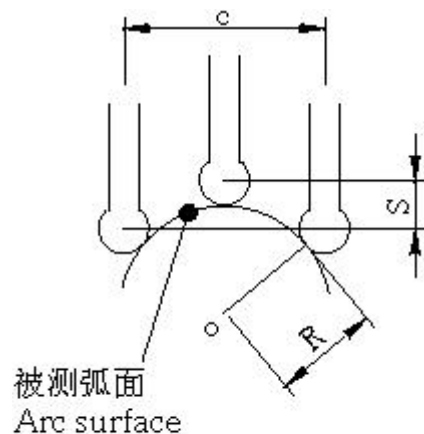
Outside arc the best measuring range

C=10	R=6.5 --> 15MM
C=20	R=14--> 30MM
C=30	R=27-->100MM
C=60	R=94-->260MM
C=100	R=255-->700MM

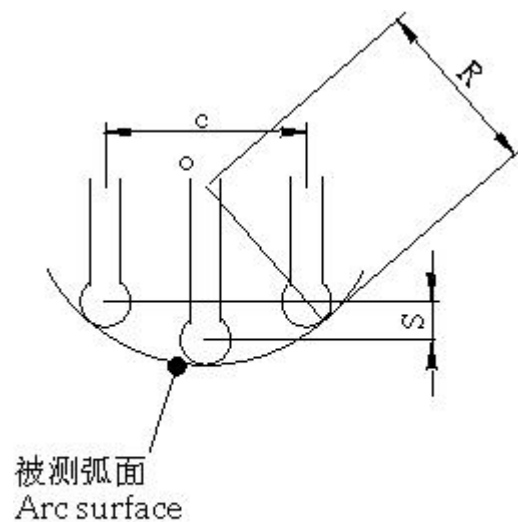
**Power off** long pressing key:ZERO/ON/OFF,or auto power off after several minutes.



清零 Zero set



测外圆弧半径 Inside arc



测内圆弧半径 Outside arc

C:Jaws center distance

S:Spindle linear distance

R:The radius of arc

## Technical specifications

Measuring range:linear 0-13mm,

Radius:5-9999.9mm

Linear deviation:  $\Delta S \leq 0.02\text{mm}$

Radius deviation:  $\Delta R \leq (0.02 / 2)R$

Power:3V Li battery(CR2032)

Workable temp: $0 \pm 40^\circ\text{C}$

Storage temp:  $-20^\circ\text{C} \pm 60^\circ\text{C}$

Humidity:comparatively  $\leq 80\%$

## Trouble shooting

Falure	Possible situation	Corrective measures
Digits flash rapidly	Battery power low	Replace new battery
The display is locked	Circuit problem	Remove battery,and install in after 30 seconds
Nothing appears on the LCD	1.Battery has poor contact 2.The voltage is low	1.Let circuit short circuit 2. Replace new battery