

# LEVER—TYPE DIAL TEST INDICATOR

## 1. PRECAUTIONS

In order to obtain the best possible performance and longest service life from the Dial Test Indicator, please read this user's manual carefully before operation.

## 2. WARRANTY

In the event that the Lever—type Dial Test Indicator should prove defective in workmanship or material, within one year from the date of original purchase for use, it will be repaired or replaced at our option, free of charge upon its prepaid return to us.

## 3. MEASUREMENT PRECAUTIONS

Observe the following precautions to minimize measurement errors.

(1) Angle of the contact point

(a) Set the contact point so that it is parallel with the workpiece surface to be measured (see—Fig. 1)

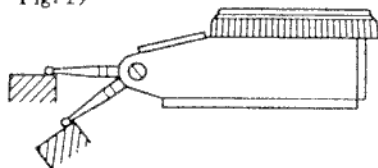


Fig. 1

(b) If the contact point is at an angle with the surface to be measured, as shown in Fig. 2, the following correction should be made to the readings.

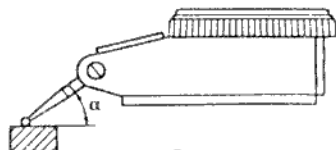


Fig. 2

True value = Reading  $\times$  Correction factor (k)

Angle (a)	Correction (K)
10°	0.98
20°	0.94
30°	0.86
40°	0.76
50°	0.64
60°	0.50

Example: Angle (a) is 30° and indicator reading is 0.05mm.

$$\text{True value} = 0.05 (\text{reading}) \times 0.86 (\text{correction factor, } k, \text{ for } 30^\circ) \\ = 0.043 \text{mm}$$

(2) Fixing the Test Indicator

To prevent measurement errors due to deflection, fix the Dial Test Indicator to a study stand. Make sure that it is securely fixed even when an optional stem with a dovetail groove or other clamp is used.

(3) Length of the contact point

The length of the contact point arm is specific to each indicator model. If the length is incorrect significant measurement errors will result. Always use the contact point designed for your Dial Test Indicator model.