

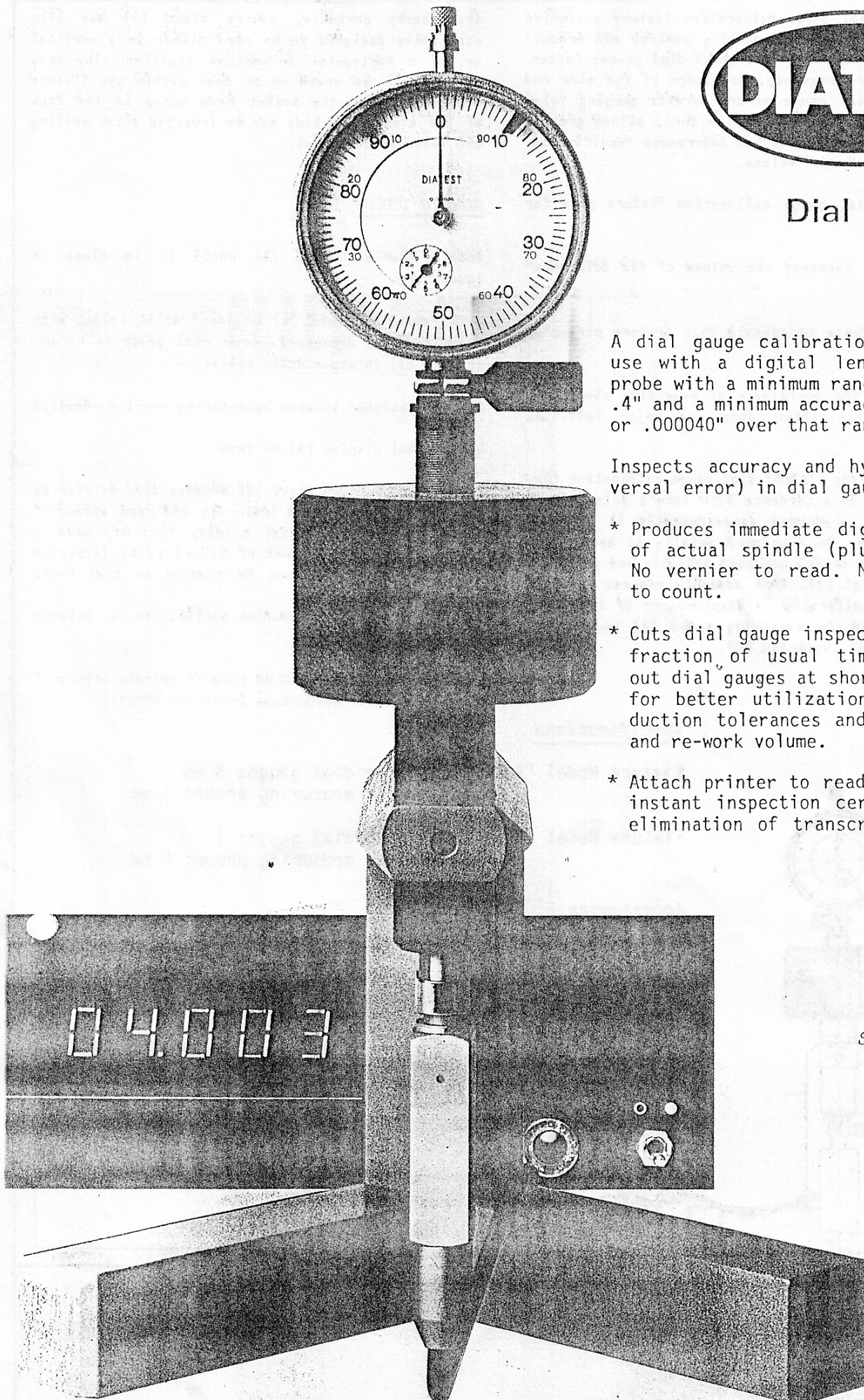


Dial Indicator Tester

A dial gauge calibration fixture for use with a digital length measuring probe with a minimum range of 10 mm or .4" and a minimum accuracy of 0.001 mm or .000040" over that range.

Inspects accuracy and hysteresis (reversal error) in dial gauges.

- * Produces immediate digital read-out of actual spindle (plunger) travel. No vernier to read. No graduations to count.
- * Cuts dial gauge inspection to small fraction of usual time. Now check out dial gauges at shorter intervals for better utilization of job production tolerances and reduce scrap and re-work volume.
- * Attach printer to read-out unit for instant inspection certificates and elimination of transcription errors



SPECIFICATIONS
OVERLEAF

The DIATEST dial gauge calibration fixture satisfies an increasing demand by quality control and production engineers for ways to inspect dial gauges faster and in greater frequency. Knowledge of the size and position of dial gauge errors permits gauging tolerances to be narrowed which, in turn, allows greater utilization of job production tolerances resulting in an increase in "pass" volume.

The DIATEST dial gauge calibration fixture pays for itself....

- * It helps to increase the volume of "in tolerance" work.
- * It is so simple to operate that trainee personnel can use it.
- * It augments the usefulness of expensive electronic equipment that often does not enjoy full-time employment.

The design of the DIATEST dial gauge calibration fixture is fully in accordance with Abbe's principle. A hardened plug, supported concentrically in the body of the fixture, is displaced axially by means of a special-purpose thread and ball assembly and actuated by knurled wheel (2). This assembly ensures absolute proportional uniformity of displacement of the spindles (plungers) in measuring probe (4) and in the dial gauge being inspected (1).

The easily portable, sturdy stand (3) has been especially designed to be used either in a vertical or in a horizontal inspection position. The body portion can be moved up or down within the fixture after loosening the socket head screw in the face of the stand. The body may be inverted after pulling off lower split collet.

HOW TO USE:-

Rotate knurled wheel (2) until it is close to lower stop.

Lock measuring probe (4) in lower split collet with spindle fully depressed. Lock dial gauge to be inspected (1) in upper split collet.

Set dial pointer to zero by rotating knurled wheel(2)

Set digital display (5) to zero.

By rotating knurled wheel (2) advance dial pointer by amount of travel to be inspected and read amount of actual travel on digital display (5). Or, advance digital display by amount of travel to be inspected and compare this reading to reading on dial face.

Enter reading into inspection certificate, or actuate printer (6), if fitted.

Check on inward and then on outward spindle (plunger) displacement for hysteresis (reversal error).

Specifications

Fixture Model "A": Collet for dial gauge: 8 mm
Collet for measuring probe: 8 mm

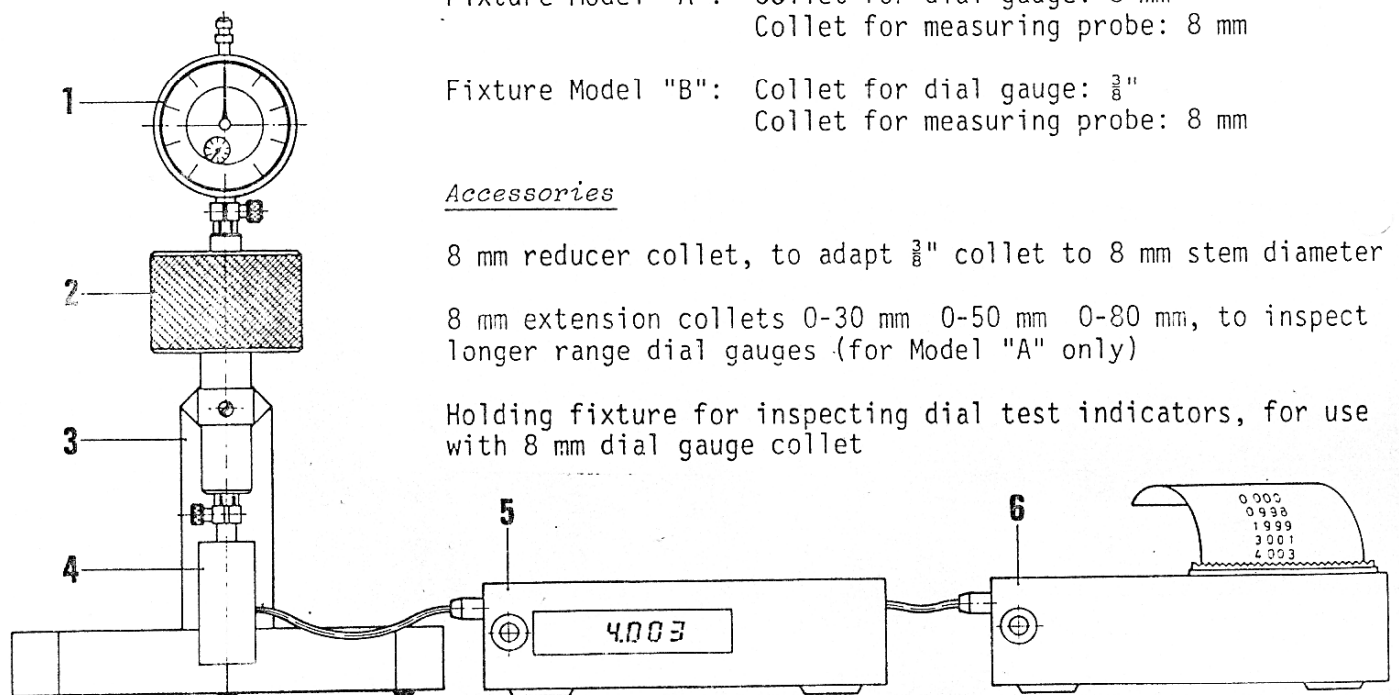
Fixture Model "B": Collet for dial gauge: $\frac{3}{8}$ "
Collet for measuring probe: 8 mm

Accessories

8 mm reducer collet, to adapt $\frac{3}{8}$ " collet to 8 mm stem diameter

8 mm extension collets 0-30 mm 0-50 mm 0-80 mm, to inspect longer range dial gauges (for Model "A" only)

Holding fixture for inspecting dial test indicators, for use with 8 mm dial gauge collet



Dial Indicator Tester

Testing range 30 mm

Order Code: MPG-30

The MPG-30 was developed for dial indicators with large travel. Combined with optional reducer collets, dial indicators can be checked to a travel of 80 mm. An additional unit enables checking of lever indicators.

The following values can be checked according to latest DIN-standard 878:

Deviation	f_e
Deviation in partial indicating range	f_t
Total deviation	f_{ges}
Measured value of hysteresis	f_u
Repeatability	f_w

General information

For read-out systems, incremental probes with display unit are normally used. Particularly suited is unit IKF30 with AE1 I from DIATEST or MT25 with ND200 from Heidenhain. Suitable software packages for statistical and graphical evaluation of measured values are DIALTEST or FEINMESS.

How to use:

Clamp indicating unit (1) and dial indicator (2) into MPG-30 (3) acc. to illustration. Set dial pointer to zero by rotating knurled wheel (4). Set digital display to zero. Then advance dial pointer by rotating knurled wheel (4) by amount of travel to be inspected and read amount of actual travel on digital display (1), see illustration (example):

Digital display 10.000

Actual travel 10.003

Back-ended computers and printers (7) help to prepare test certificates and graphical evaluation of measured values.

Construction and design

The construction of the MPG-30 is based on Abbe's principle. A hardened plug, supported concentrically in the body of the fixture (3), is displaced axially by means of a special-purpose thread and ball assembly and actuated by knurled wheel (4). This assembly ensures absolute proportional uniformity of displacement of the plungers in indicating unit (1) and in the dial indicator (2) being inspected.

The stand (5) is used for fixing the inspection device in both vertical and horizontal position.

The adjustable magnifying glass (6) enables precise clear reading of the dial indicator display.

Reducer collets

Reducer collets (8) allow checking of dial indicators with travel of 50 mm and 80 mm in two or three single steps.

For dial indicators 50 mm

Order Code: MPG-30-Z 50

For dial indicators 80 mm

Order Code: MPG-30-Z 80

Addition for lever indicators

For checking lever indicators a special attachment (9) is available, to allow checking of these dial indicators in both directions.

Order code: MPG-FH

Description

Dial Indicator Tester: travel 30 mm
Reducer collet for dial indicators 0 – 50 mm
Reducer collet for dial indicators 0 – 80 mm
Addition for test indicators

Order Code

MPG-30
MPG-30-Z 50
MPG-30-Z 80
MPG-FH