

STEEL PIN GAUGE FOR GEAR MEASUREMENT OP SERIES



Available from 1pc. Must-have item for gear wheel measurement.

SUB-ZERO (Cryogenic hardened) TREATMENT
 ※ 2,700mm or over

Master for calibration using length measuring machine ▶ Master Gauge P55	Rust prevention ▶ Zerust Film for Steel P380
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How To Measure

■ For inside diameter

■ For outside diameter

Over-pin diameter is measured by measuring the diameter after placing two pin gauges in opposite grooves of the gear as shown above

USE

- For quick and accurate over-pin diameter measurement of internal and external gears (magnetize the pin for easy handling)

FEATURES

- OP series gauge is for measuring over pin diameter of gears and involute splines. Each module is a set of two pins each for measuring external gear over-pin-diameter, and internal gear over-pin-diameter.
- Individual pin gauges are also available
- Custom made pin gauges are available upon request

To determine proper pin gauge, please note the following

- 1) For inside diameter or outside diameter
- 2) Module or diametrical pitch
- 3) Number of teeth
- 4) Pressure angle
- 5) Profile shift coefficient
- 6) Torsion angle

SPECIFICATIONS

Dimensional deviation (V and U)	0.90mm~10.00mm: ±1 μm 10.01mm~20.00mm: ±1.5μm
Out of Roundness (μm)	0.90mm~10.00mm: 1 μm 10.01mm~20.00mm: 1.5μm
Diameter Inequality (μm)	0.90mm~10.00mm: 2 μm 10.01mm~20.00mm: 3 μm
Length	50mm
Hardness	0.90mm~ 2.69mm: Over HV720 2.70mm~20.00mm: Over HV650

※ 5mm from each edge is not precision guaranteed

OP-1

Module (mm)	Inner dia. (hole) pin diameter (V) × groove height (V _i) (mm)	Outer (axis) pin diameter (U) (mm)
0.5	1.00 × 0.84	0.90
1.0	2.00 × 1.68	1.80
1.25	2.50 × 2.10 2.40 × 2.00 ※ 1	2.25 —
1.667	3.333 × 2.80	3.00
2.5	5.00 × 4.26	4.50
5.0	10.00 × 8.40	9.00
10.0	20.00 × 16.80	18.00

※ 1 Module 1.25 is used for tooth 8 · 12

OP-2

Module (mm)	Inner dia. (hole) pin diameter (V) × groove height (V _i) (mm)	Outer (axis) pin diameter (U) (mm)
0.75	1.50 × 1.20 —	1.35 1.40 ※ 2
1.5	3.00 × 2.52	2.70
2.0	4.00 × 3.36	3.60
3.0	6.00 × 5.04 ※ 1	5.40
3.75	7.50 × 6.30 —	6.75 7.00 ※ 3
4.5	9.00 × 7.56	8.10
6.0	12.00 × 10.08	10.80
7.5	15.00 × 12.60	13.50

※ 2 Module 0.75 is used for tooth 6 · 7 · 8 · 9 · 10 · 11

※ 3 Module 3.75 is used for tooth 6 · 7 · 8 · 9 · 10 · 11

OP-3

This is combination set of OP-1 and OP-2



BLOCK GAUGE

PIN GAUGE

PIN VISE

PIN GAUGE ACCESSORIES

RING GAUGE

PLUG GAUGE

LIMIT GAUGE

THICKNESS GAUGE

TAPER GAUGE

WELDING GAUGE

OTHER GAUGES