
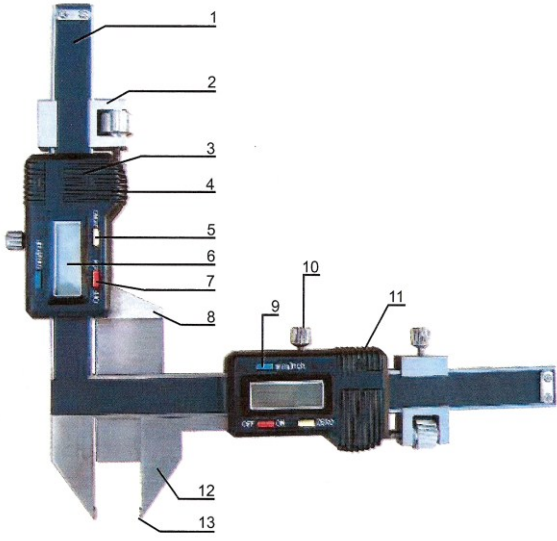


Electronic Gear Tooth Caliper

	<p>Gear Tooth Caliper for measuring the chordal thickness of gear teeth at the pitch diameter line Suitable for gear modules from 1 – 30 Tungsten Carbide measuring tips Resolution: 0.01mm / 0.0005” Repeatability: 0.01mm / 0.0005” Individual serial numbers Power: 1 x Silver oxide battery SR44 - 1.55v Operating temperature: 5 - 40°C Relative humidity: Maximum 80% Warranty: 1 year</p>
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Packed Weight and Dimensions

Code	Description	Weight g	W mm	H mm	L mm
49-400-126	Electronic Gear Tooth Caliper 150mm / 6”	427	148	23	209

	<ol style="list-style-type: none"> 1 Caliper Beam 2 Fine Adjustment Carriage 3 Battery Location 4 Battery Cover 5 Zero Set Button 6 LCD Display 7 On/Off Button 8 Depth Setting Blade 9 in/mm Conversion Button 10 Locking Screw 11 Data Output: (not supported) 12 Thickness Measuring Blades 13 Tungsten Carbide Measuring Tips
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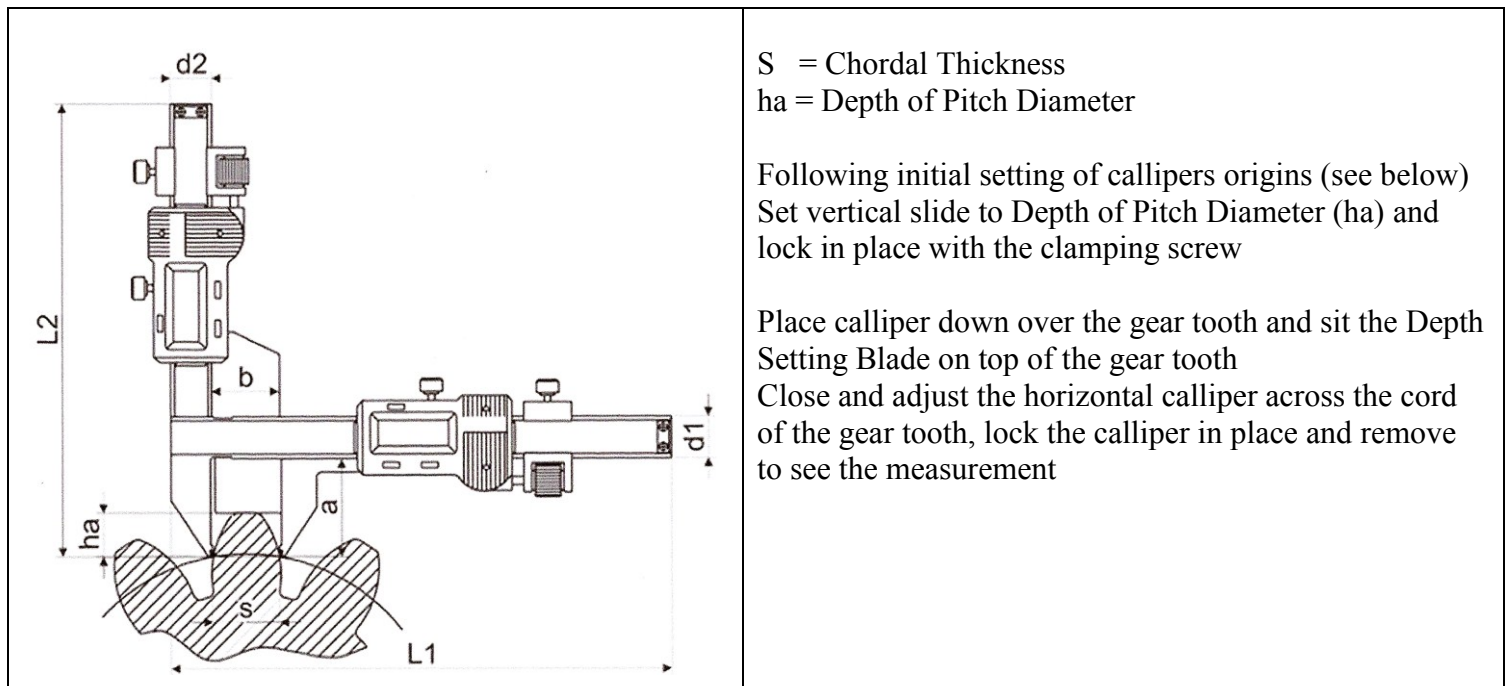
Code	Range	Resolution	Repeatability	Accuracy
49-400-126	M1 - 30	0.01mm / 0.0005”	0.01mm / 0.0005”	±0.03mm (≤ 100mm)

Code	Gear Measurement Range	Caliper Range Width	Caliper Range Depth
49-400-126	M1 - 30	45mm	28mm

Code	a mm	b mm	d1 & d2: mm	L1 mm	L2 mm
49-400-126	30.5	21	13	156	156.5

Electronic Gear Tooth Caliper

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S = Chordal Thickness
 ha = Depth of Pitch Diameter

Following initial setting of callipers origins (see below)
 Set vertical slide to Depth of Pitch Diameter (ha) and
 lock in place with the clamping screw

Place calliper down over the gear tooth and sit the Depth
 Setting Blade on top of the gear tooth
 Close and adjust the horizontal calliper across the cord
 of the gear tooth, lock the calliper in place and remove
 to see the measurement

OPERATING INSTRUCTIONS

When using the Caliper for the first time or after a period of non-use, wipe the beam scale with a dry clean cloth to remove any condensation or oil deposits.

Prior to setting the caliper for measuring, first clean the measuring faces with a soft clean cloth or paper.
 Switch Caliper ON.

Select required measuring mode Inch / Metric.

Open the horizontal calliper anvils approximately 18 -20mm

Place the measuring tips onto a flat surface

Push vertical Depth Setting Blade down onto the flat surface

Set zero on the vertical calliper at this position

Push horizontal calliper anvils together and set to zero in this position

The calliper is now ready to set the vertical slide to the depth of the Pitch Diameter and then measure the chord thickness using the horizontal calliper (as above)

OPERATING CARE

Clean measuring faces with dry soft cloth

Keep away from strong magnetic fields

Prevent ingress of oil / liquids into electronics

Remove battery if instrument is not used for a long period of time

Do not disassemble or drop the instrument

Do not mark instrument by engraving, etching or any other permanent marking method, as this will invalidate the warranty

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FAULT FINDING

Fault	Cause	Action
Display flashes	Battery voltage below 1.45volts	Replace battery
Display frozen	Circuit overload	Remove battery and replace after 4 minutes
Accuracy below specification but within +/- 0.1mm	Dirt in sensor	Remove slider cover assembly, clean face of sensor with dry clean compressed air (5kg/cm2)
No display	Poor battery contact Dead battery	Remove battery and carefully adjust battery contacts, replace battery. Replace battery.

Useful Information

FOR DETERMINING THE DIMENSIONS OF GEARS BY METRIC PITCH

Module is the pitch diameter in millimetres divided by the number of teeth in the gear.
Pitch diameter in millimetres is the Module multiplied by the number of teeth in the gear.

M = Module.
D' = The pitch diameter of gear in millimetres.
D = The whole diameter of gear in millimetres.
N = The number of teeth in gear.
D' = The working depth of teeth.
t = Thickness of teeth on pitch line.
f = Amount added to depth for clearance.

$$M = \frac{D'}{N} \text{ or } \frac{D}{N+2}$$

$$D' = NM$$

$$D = (N + 2) M$$

$$N = \frac{D'}{M} \text{ or } \frac{D}{M} - 2$$

$$D' = 2M$$

$$t = 1.5708M$$

$$f = \frac{1.5708M}{10} = 0.157M$$

The Module is equal to the addendum, measured in millimetres and parts of millimetres.