



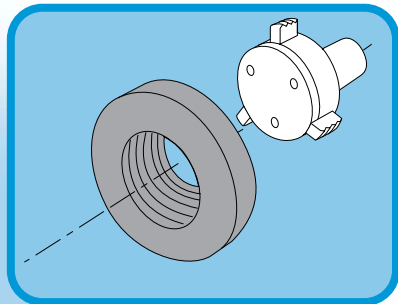
SPECIAL BORE MEASUREMENT

Although Bowers produce the most comprehensive series of bore gauges and internal measuring equipment available, not all applications can be covered by our standard instrument range. In line with our customer care ethos, Bowers have earned a reputation for manufacturing special heads for measuring non-standard applications. The following information illustrates some of the many difficult measuring problems easily solved by these special heads.



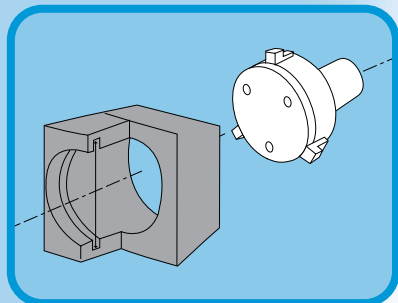
SCREW THREADS

To measure effective (functional) diameter, pitch diameter, major diameter, between M4-300mm./ No. 8 UN-12" diameter.



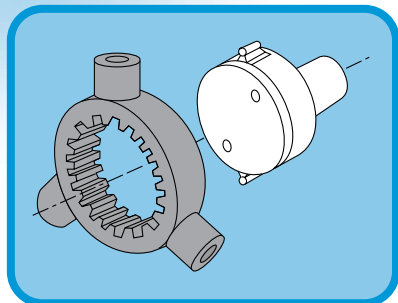
GROOVES

For sizes from 2mm-300mm diameter.



2-POINT SPLINE

2 and 3 point heads available. Anvils manufactured from tool steel. Between pin, major and minor diameter heads available. Diameters from 12-300mm diameter (1/2"-12").



For more information visit www.bowers.co.uk

SPECIAL BORE MEASUREMENT

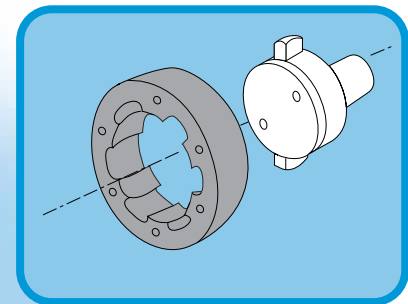
The following diagrams illustrate some of the many applications covered by Bowers specials. Customer quotations for gauges suitable for the measurement of other features can be supplied against a component drawing.



2-POINT SPHERICAL

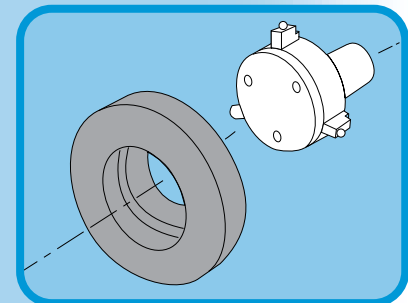


2 point available from 3-150mm. 3 point from 6-300mm diameter.



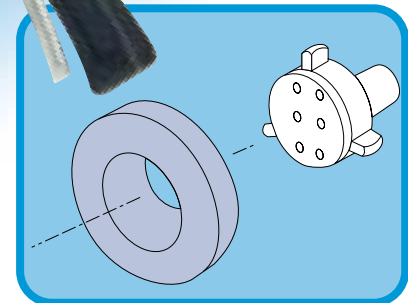
BALL SCREW THREADS

From Ø M10.



DEEP HOLE

Up to 2.5 metres deep with standard extensions. Pneumatic system available from 50mm diameter for depths of up to 15 metres.



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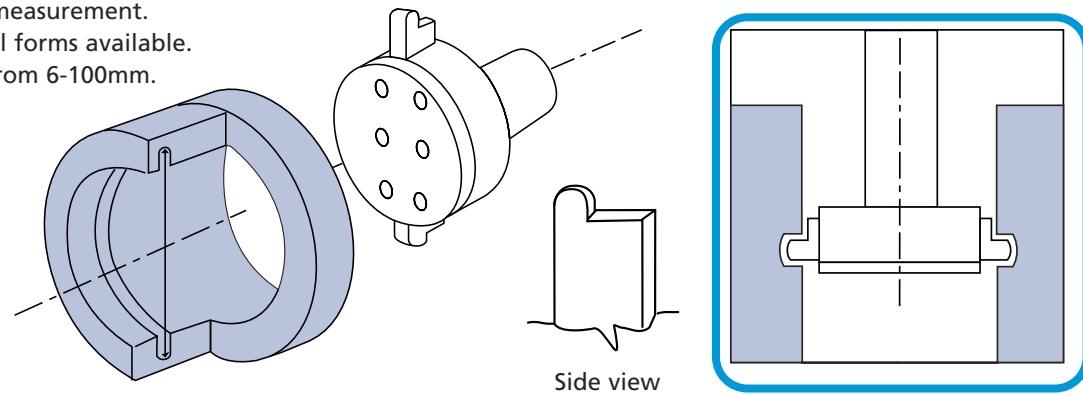
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2 AND 3 POINT

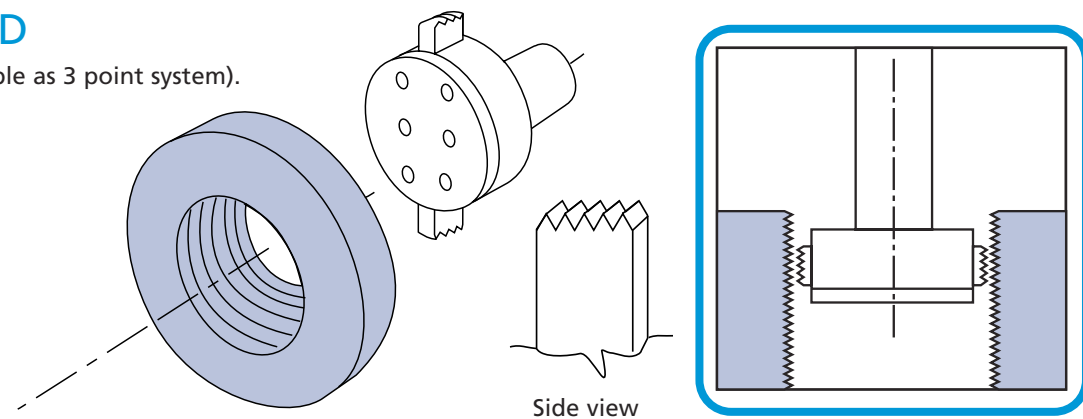
GROOVE

For ovality measurement.
Various anvil forms available.
Diameters from 6-100mm.



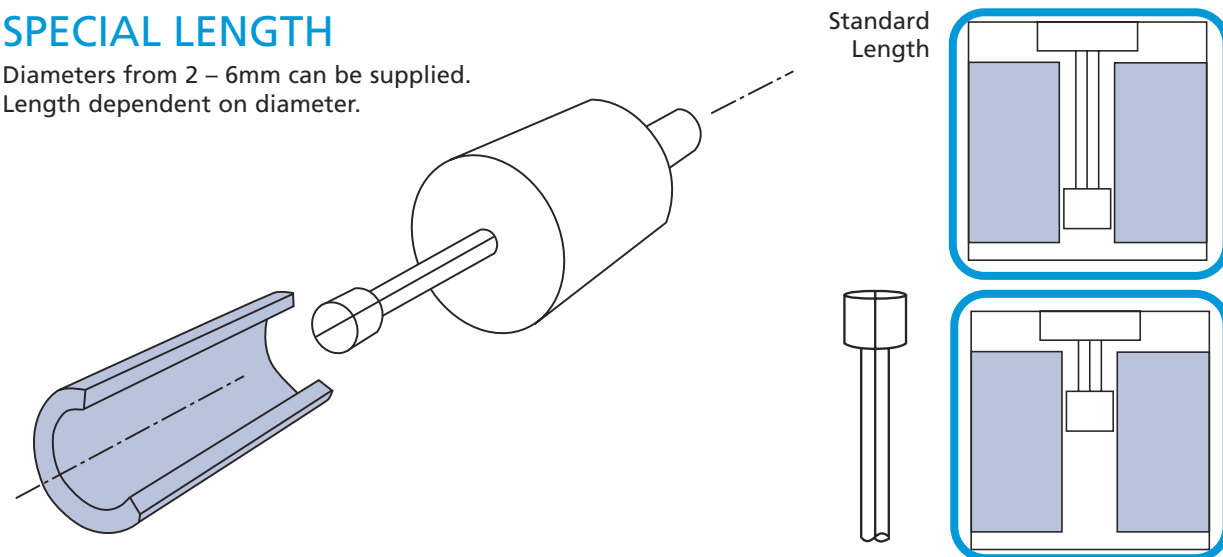
THREAD

(Also available as 3 point system).



SPECIAL LENGTH

Diameters from 2 – 6mm can be supplied.
Length dependent on diameter.

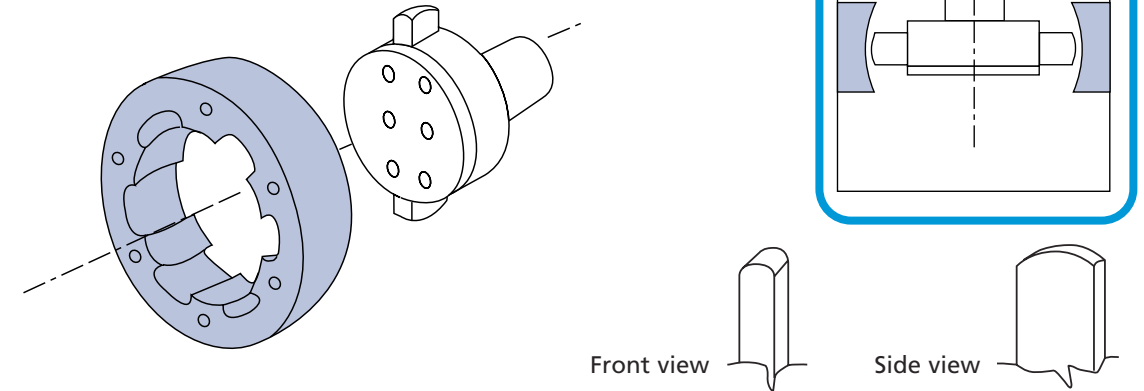


SPECIAL BORE MEASUREMENT

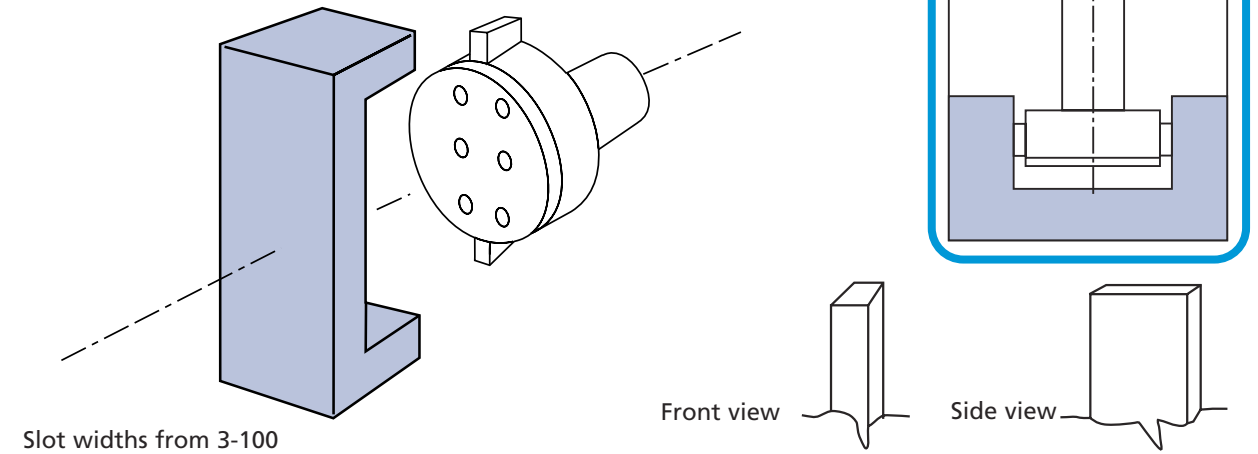
2 AND 3 POINT

SPHERICAL RADIUS

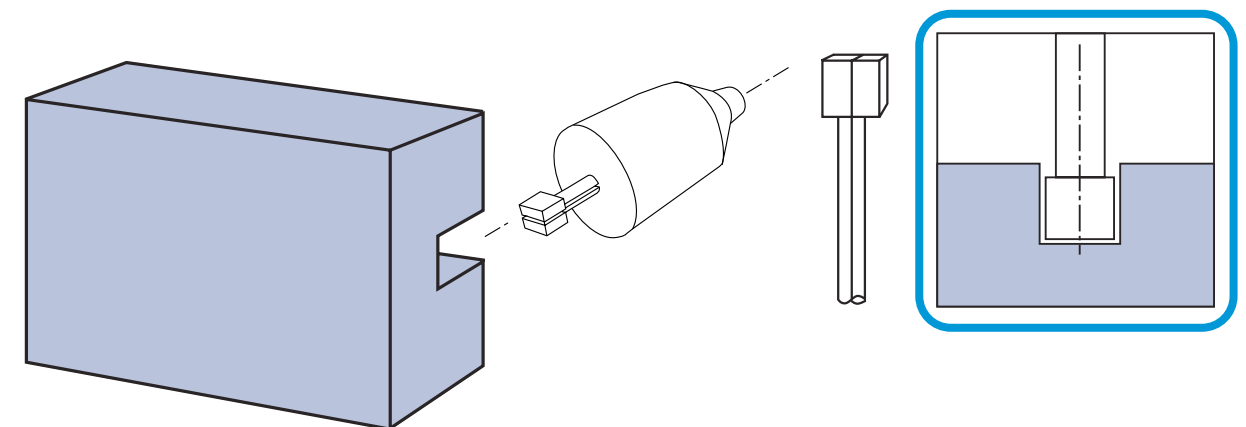
Can be supplied as a 2 point for ovality or
3 point contact. Available from 6-300mm.



SLOT WIDTH (LARGE)



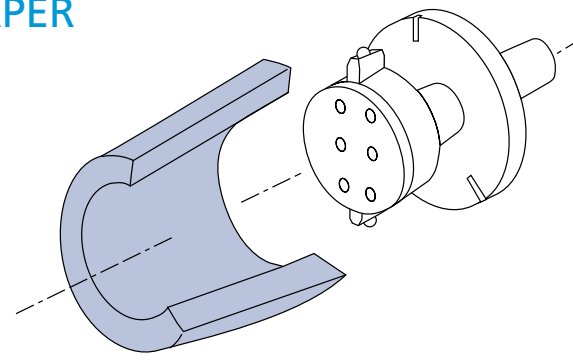
SLOT WIDTH (SMALL)



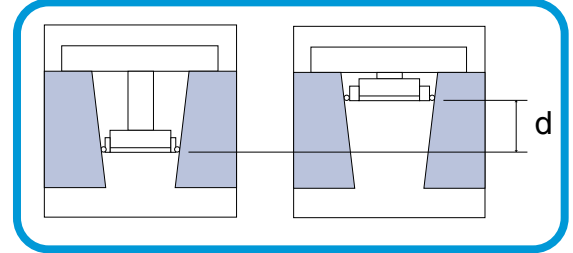


SPECIAL BORE MEASUREMENT

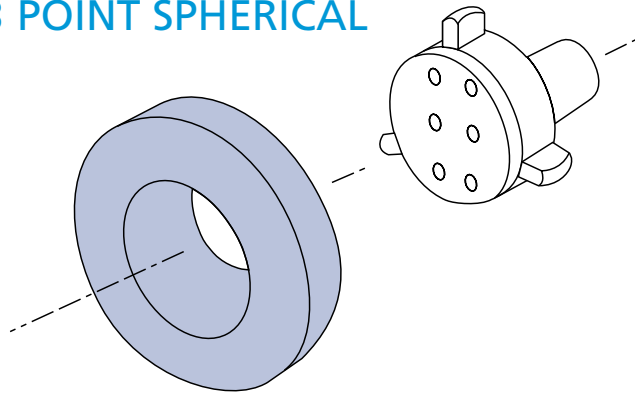
TAPER



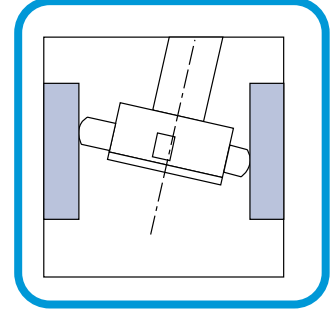
Set using distance 'd' between two heads. Point contact on bore using carbide balls. 3 point also available.



3 POINT SPHERICAL

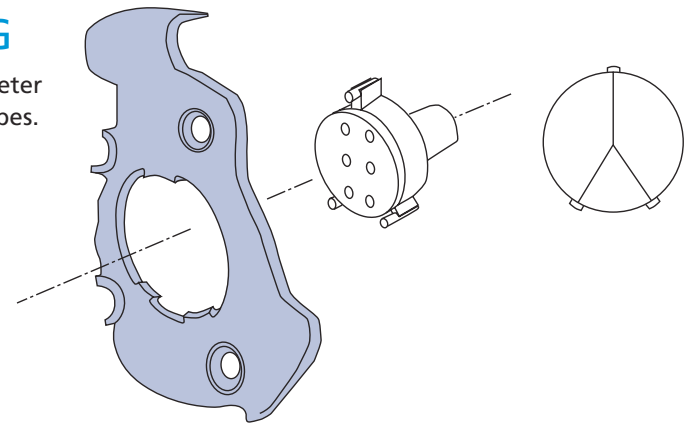


Gives good repeatability even when out of line with bore centre. Available from 3-300mm diameter on digital systems.



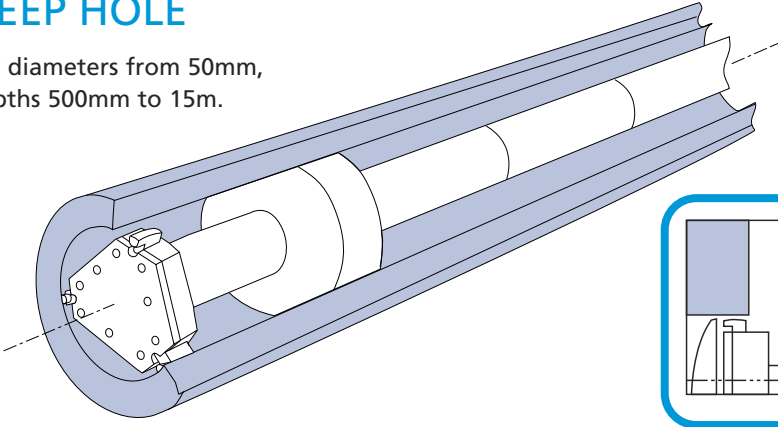
IRREGULAR SPACING

Available between 16-300mm diameter to measure between odd spaced lobes.

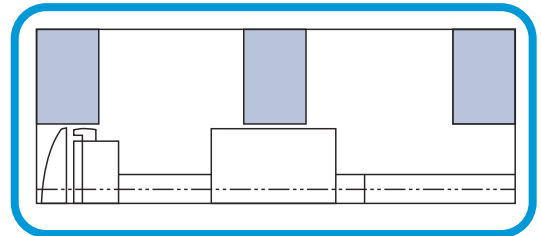


DEEP HOLE

For diameters from 50mm, depths 500mm to 15m.



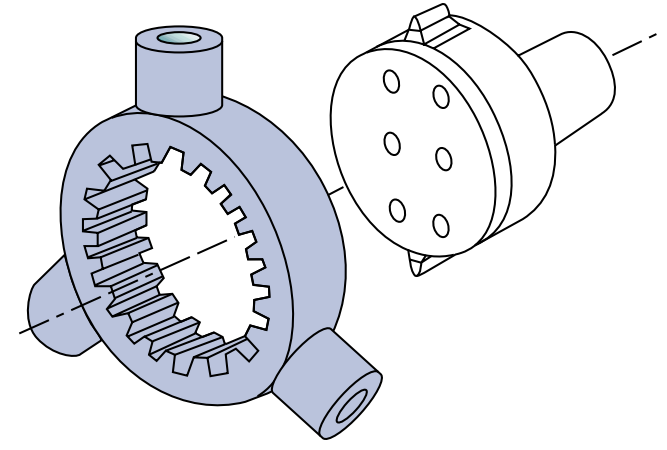
Can be fitted with spacer to allow segments to be measured.



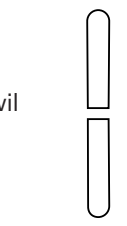
For more information visit www.bowers.co.uk

SPECIAL SPLINE MEASUREMENT

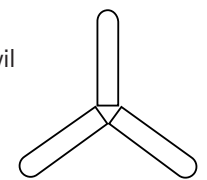
INTERNAL SPLINES



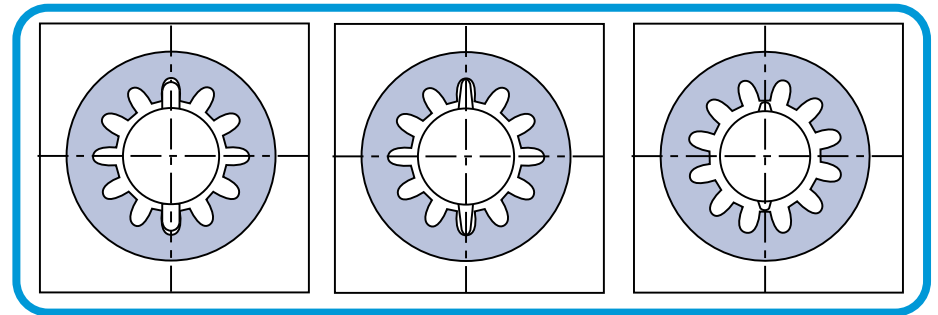
2 Point anvil position



3 Point anvil position



3 point heads machined to suit particular spline. Pitch diameter heads fitted with precision formed anvils. Sizes available from 8-300mm diameter.

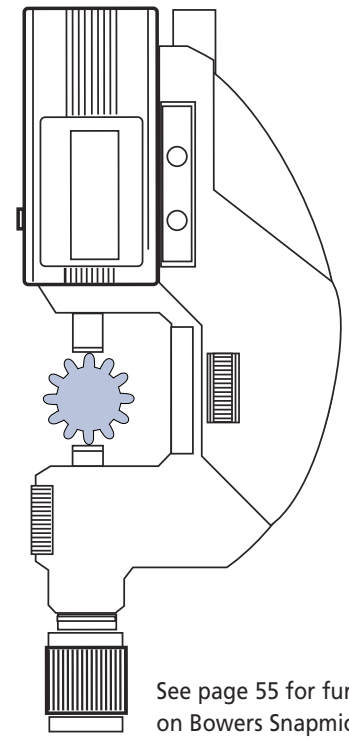


Pitch Diameter

Major Diameter

Minor Diameter

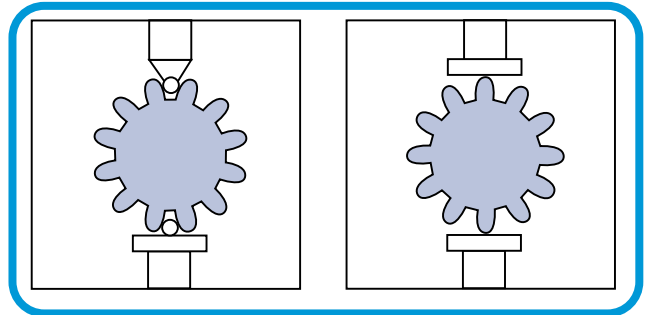
EXTERNAL SPLINES



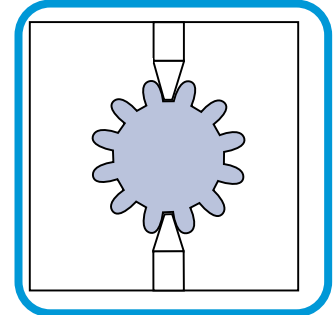
Pitch diameter frames fitted with 2 ball contact.

Pitch Diameter

Major Diameter



Minor Diameter



See page 55 for further information on Bowers Snapmic.

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