



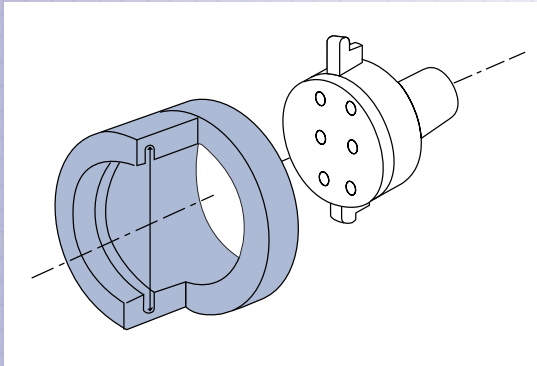
Bowers Special Applications

2 Point Special Measuring Heads

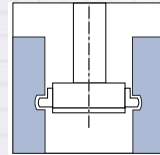
Groove Measuring Heads

- Available as 2 or 3 point head.
- Various anvil forms available.
- Full EDM manufacturing for anvil forms.
- Diameters from 6-300mm.
- XT extended range for tight entry size vs. groove size.

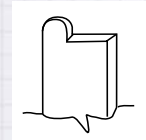
Application View



Plan View



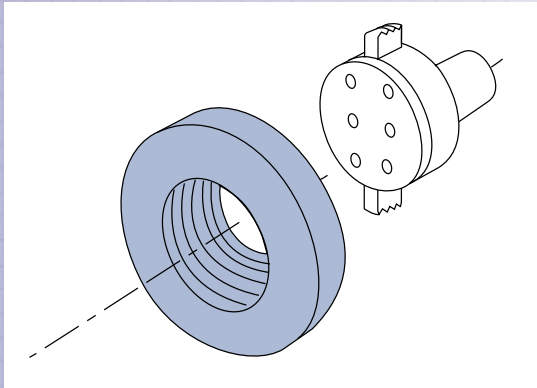
Sample Profile



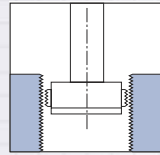
Thread Measuring Heads

- Available as 2 or 3 point head.
- Any thread form can be made: Ansi, ISO, Whitworth, ACME, JIS, Buttress and Pipe.
- Various anvil forms available.
- Full EDM manufacturing for anvil forms.
- Diameters from 6-300mm.

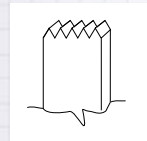
Application View



Plan View



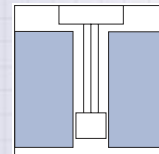
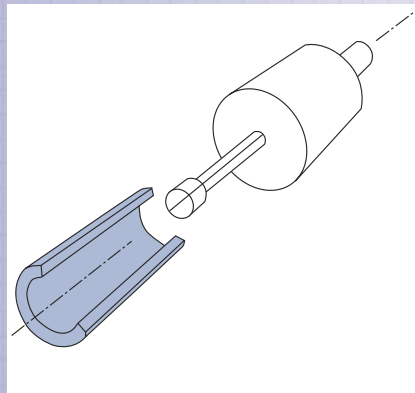
Sample Profile



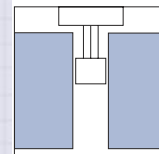
Special Length - Small Diameter

- Can be supplied in diameters from 2 – 6mm.
- Not available in 3 point.
- Depth dependent on diameter.
- Split cylinder or split ball form.
- Spherical contacts available.
- Excellent for small - deep bore applications.

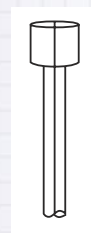
Application View



Plan View



Sample Profile





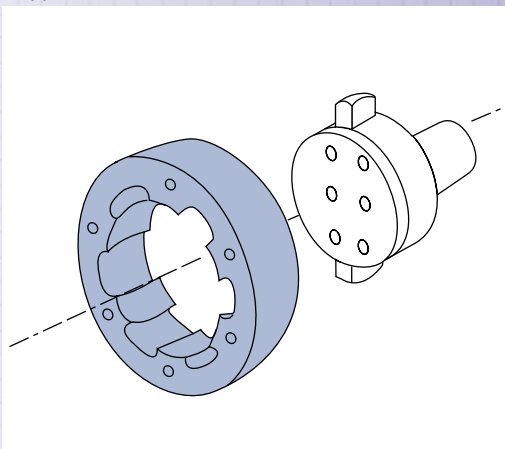
Bowers Special Applications

2 and 3 Point Special Measuring Heads

Spherical Radius

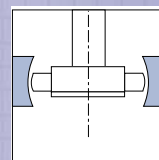
- Can be supplied as a 2 point for ovality or 3 point contact.
- Available from 6-300mm.
- Spherical anvil radius provides repetitive measurements in deep bore and large bore measuring.
- No need to rock the anvils for TDC size or measuring within 12 degrees off center.

Application View

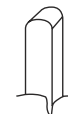


Sample Profile

Plan View



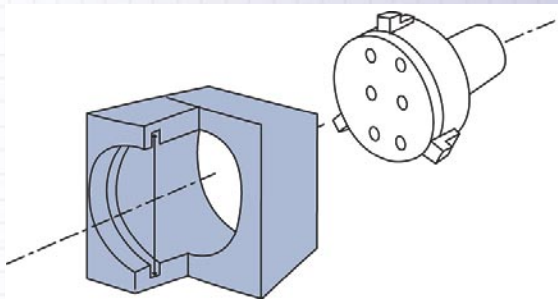
front



side



Groove measuring heads



Oil Seal

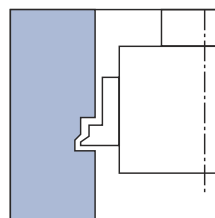
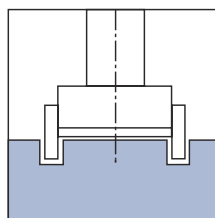
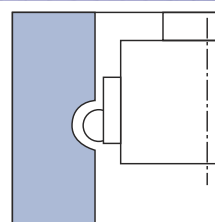
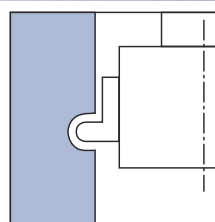
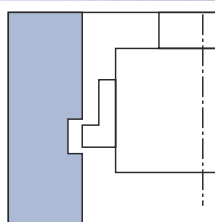


'O' Ring

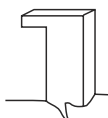


Ball Race

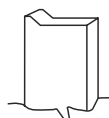
- Available as 2 or 3 point head.
- Various anvil forms available.
- Full EDM manufacturing for anvil forms. Nearly any shape or size can be accommodated
- Diameters from 2-300mm.
- XT extended range for tight entry size vs groove size.



We can produce any special groove anvil form per your requirements!



Annular



Special Forms



Bowers

Fred V. Fowler Company, Inc.

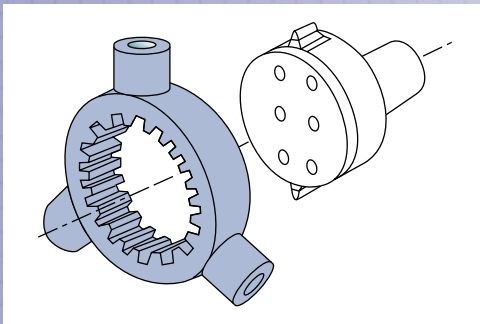


Bowers Special Applications

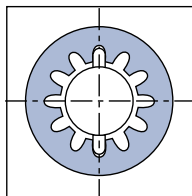
Splines (odd and even number of teeth)

2 and 3 point Internal Spline heads

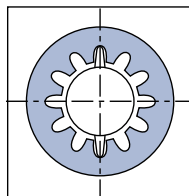
Application View



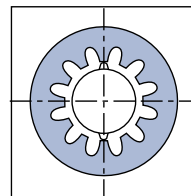
Plan View



Pitch Diameter



Major Diameter



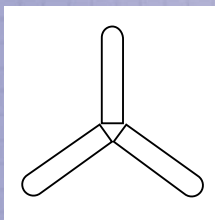
Minor Diameter

2 and 3 point heads machined to suit particular spline. Pitch, Major and Minor diameter heads fitted with EDM formed anvils.

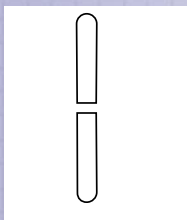
Particularly suited for measuring all types of internal splines. We can supply odd or even tooth, raked, offset, angled and vertical splines. We can supply heads in 2 and 3 point configuration, with ball style or pin style anvils. Specialty tapered spline heads, used in the automotive and aircraft industries can also be supplied.

Sizes available from 8-300mm diameter.

API gaging and other oil industry specific gages can also be supplied upon request.



3 Point anvil position

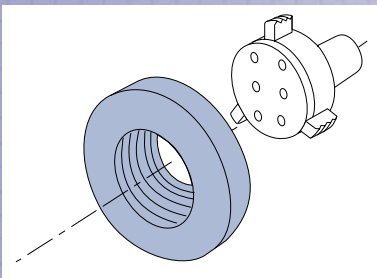


2 Point anvil position

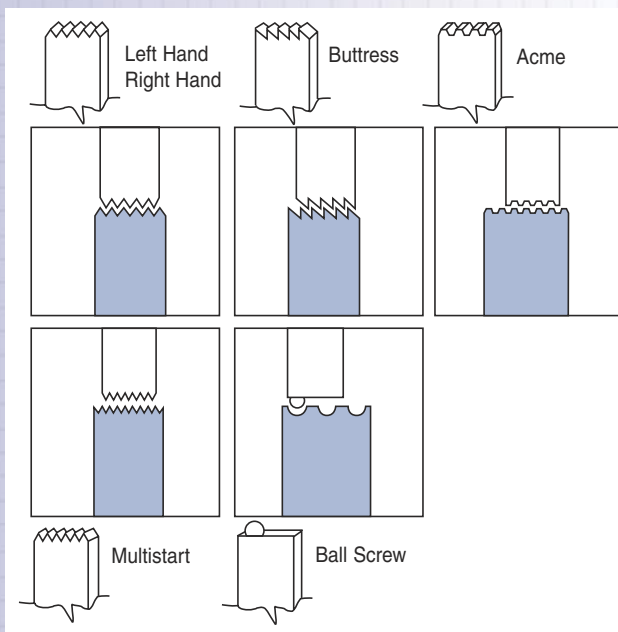
Screw Thread Measuring Heads

Internal Thread

Application View



- To measure effective (functional) diameter, pitch diameter, major diameter, between M4-300mm and 8 UN-12" diameter.
- Available for the following types of thread form: UN (UNF, UNC, UNJ, UNS) Metric, Acme, Whitworth, Buttress, BSP, BA, BSF, PG, Standard Pitches, LH.
- Other forms and sizes also available upon request.



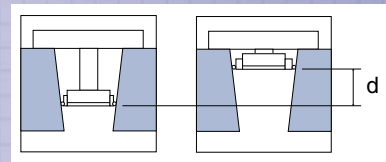


Bowers Special Applications

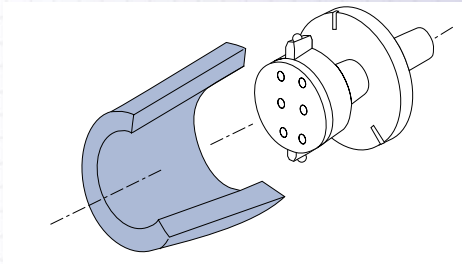
Taper

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

Plan View



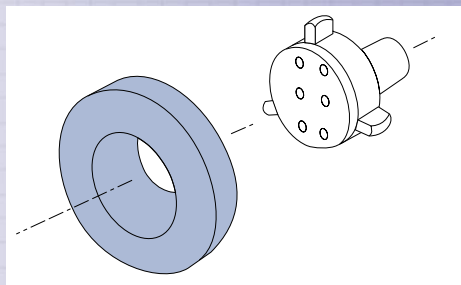
Application View



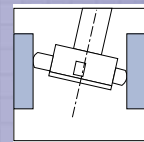
3 Point Spherical

- Gives good repeatability even when out of line with bore center. Available from 3-300mm diameter on digital systems.
- The spherical anvil gives the gage operator chance to be off axial center by up to 15 degrees, and still have a correct reading on the display
- Normally used with a stop collar or depth stop device, the spherical anvils also allow minimum contact between the gage and workpiece.

Application View



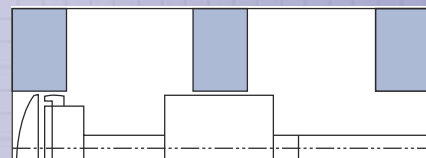
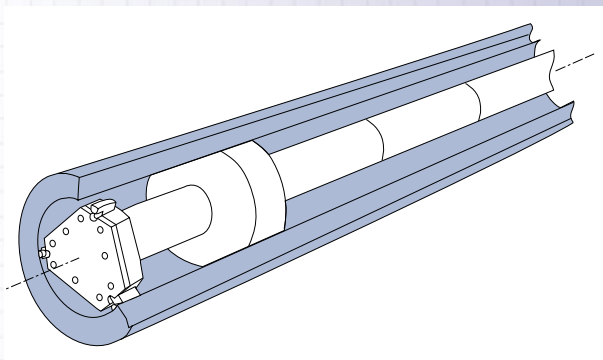
Plan View



Bowers

Deep Hole Gaging

Application View



Can be fitted with spacers to allow segments to be measured throughout the depth of the bore.

For diameters from 20 mm to 200mm, depths 500mm to 15m. Deep bore gages are used in everything from oil well drill applications, large bore gun barrel measurement and nuclear fuel rods.