

## Universal Gauge

The **Bowers Universal Gauge's** ingenious modular format enables it to be quickly configured to suit almost any measuring challenge. Whether measuring internally or externally, the Universal's clever constant pressure device ensures accuracy and consistency of reading. The gauge's findings are displayed on its built in clear digital readout.

The unique modular construction of the Bowers Universal Gauge facilitates the fitting of a large variety of measuring contacts and adaptors, enabling countless measuring tasks to be completed with ease. Accessories for the measurement of threads, grooves, splines, gears, hole centres, and many others are available as standard, whilst special adaptations for more unusual applications can be quoted on request.

WiFi  
see p251 for wireless options

RS232



### Features

- Internal and external measurement
- Large measuring range possible 0 - 3000mm (0 - 118")
- Constant measuring force
- Digital or mechanical readout display
- Large range of accessories for standard measurement of threads, grooves, splines, diameters, lengths, shallow spigots and recess diameters etc
- Special anvil designs available P.O.A



### UNIVERSAL GAUGE

Code No.	Description	Price (£)
TGUDEMO	Universal Gauge Full Set	£3,148.00

## Universal Gauge Sets

### Universal Gauge (extension compatible version) standard features:

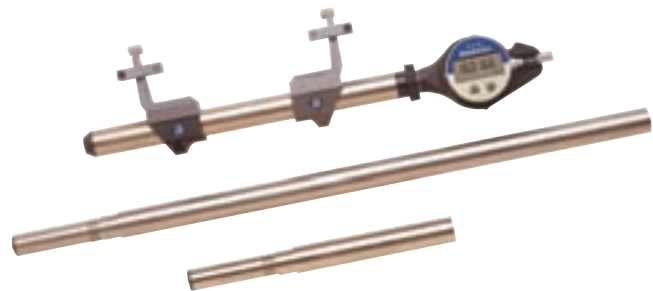
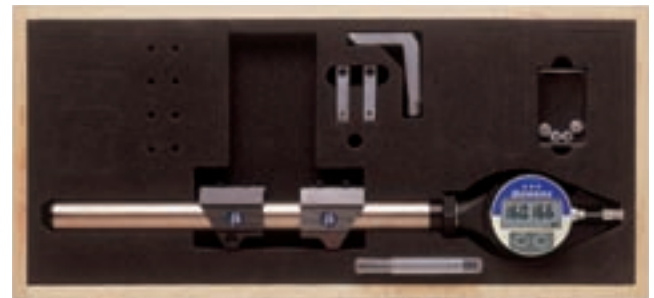
- Range 30 - 250mm internal / 0 - 215mm external 15mm anvil travel
- Constant measuring pressure
- Digital or mechanical readout
- 150mm and 500mm extensions available. Can be screwed together in multiples (up to maximum 3m recommended)
- Measuring table and supports available for conversion to bench gauge for the measurement of small components
- Covers approx 90% of all applications

WiFi

see p251 for wireless options

RS232

TGUDEMO2



### SET CONTENTS - STANDARD VERSION

Code No.	Description	Price (£)
TGUDEMO2	Set with box	£1,949.00
TGU1000	Universal Gauge - supplied boxed Compatible with Extensions	
TGUA001	Digital indicator with cowl	
TGUA003	Clamping inserts (each)	
TGUA005	Spherical contacts (each)	
TGUA006	Measuring arms 50mm (pair)	
TGUA010	Depth-stops (pair)	

### Universal Gauge (slide guideway version) standard features:

- Range 30 - 335mm internal / 0 - 300mm external 15mm anvil travel
- Slide guideway for rapid measuring contact alignment
- Constant measuring pressure
- Digital or mechanical readout
- Measuring table and supports available for conversion to bench gauge for the measurement of small components
- Covers approx 90% of all applications

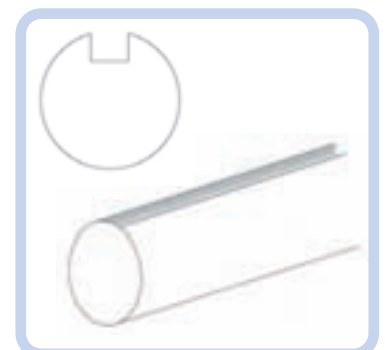
TGUGSET01



### SET CONTENTS - SLIDE GUIDEWAY VERSION

Code No.	Description	Price (£)
TGUGSET01	Slide Guideway version - Set	£1,992.00
TGU1000G	Universal Gauge - supplied boxed Not Compatible with Extensions	
TGUA001	Digital indicator with cowl	
TGUA003	Clamping inserts (each)	
TGUA005	Spherical contacts (each)	
TGUA006	Measuring arms 50mm (pair)	
TGUA010	Depth-stops (pair)	

Slide Guideway



## Universal Gauge and Accessories

### Standard Gauge

Code No	Price (£)
TGU 1000	£1,101.50

Measuring Range Internal:  
30 - 250mm (1.20 - 10.030")  
Measuring Range External:  
0 - 215mm (0 - 8.50")

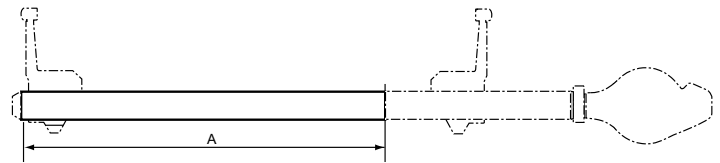
### Slide guideway version

Code No	Price (£)
TGU 1000G	£1,144.50

Measuring Range Internal:  
30 - 335mm (1.20 - 13.20")  
Measuring Range External:  
0 - 300mm (0 - 11.80")

### Extensions (for standard gauge only)

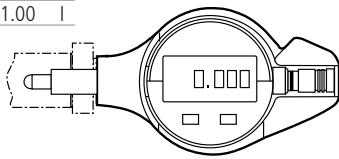
A	Code No	Range Internal	Range External	Price (£)
150mm	TGUA033	30 - 400mm (1.2 - 15.00")	0 - 365mm (0 - 14")	£98.50
500mm	TGUA032	30 - 750mm (1.2 - 29.00")	0 - 715mm (0 - 28.0")	£328.50



Intermediate and additional lengths can be made up by using 150 or 500mm extensions

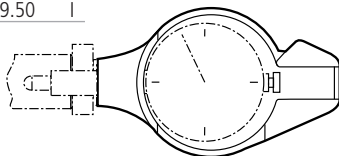
### Digital Indicator and Protective Shroud

Code No	Price (£)
TGUA 001	£481.00



### Protective Shroud for Dial/Digital Indicator

Code No	Price (£)
TGUA 002	£89.50

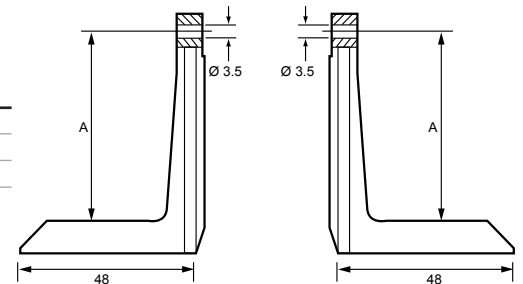


### Measuring Arms

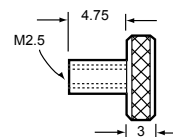
(reversible for inside/outside diameters)

A	Code No	Price (£)
50	TGUA 006	£181.50
75	TGUA 007	£193.00
100	TGUA 008	£222.50

(Price Per Pair)

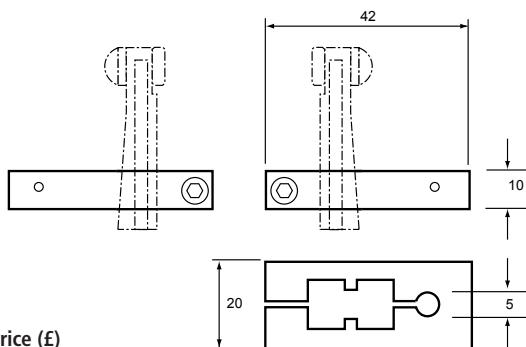


### Clamping Insert

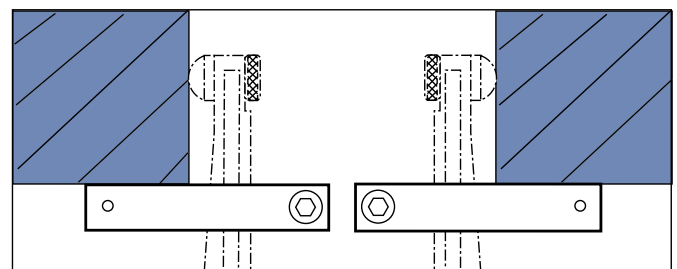


Code No	Price (£)
TGUA 003	£7.50   (each)

### Adjustable Depth Stops For Measuring Arms



Code No	Price (£)
TGUA 010	£142.00   (per pair)

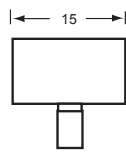
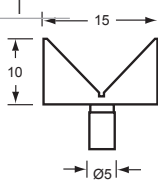


## Universal Gauge

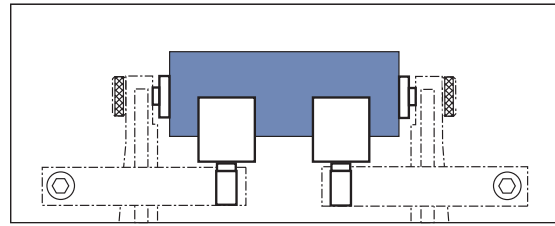
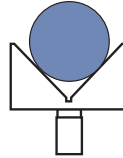
### Vee Support For Length Measurement

Code No	Price (£)
TGUA 022	£147.00

(Price per pair)



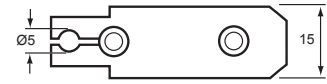
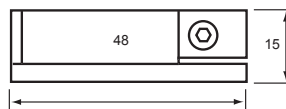
Model No  
TGUA 022



### Mounting Attachments For Use With The Following Anvils

Code No	Price (£)
TGUA 009	£195.50

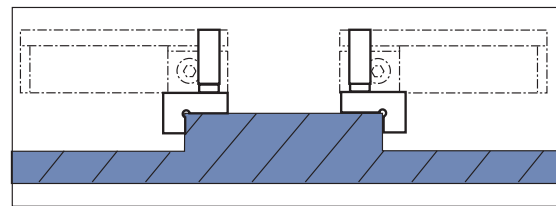
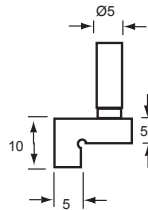
(Price per pair)



### Shoulder Anvils Flat Outside Spigot Diameter

Code No	Price (£)
TGUA 011	£186.00

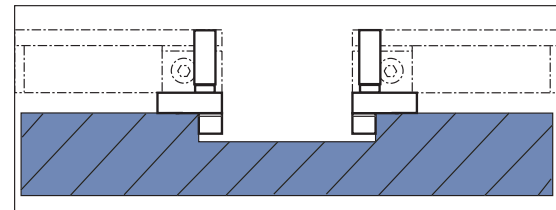
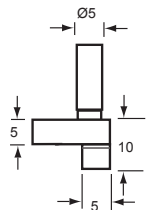
(Price per pair)



### Semi-Cylindrical Anvils For Inside Register Diameters

Code No	Price (£)
TGUA 012	£186.00

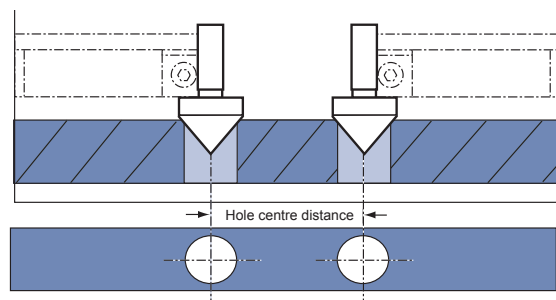
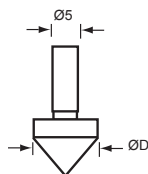
(Price per pair)



### Cone Anvils For Measuring Hole Centre Distance

Code No	Diameter 'D'	Price (£)
TGUA 019	13	£155.50
TGUA 020	25	£172.00
TGUA 021	50	£217.50

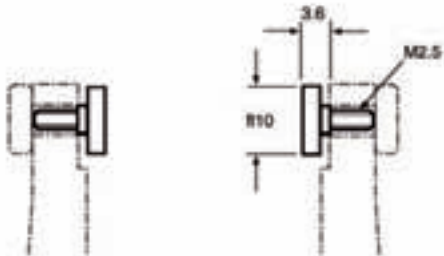
(Price per Pair)



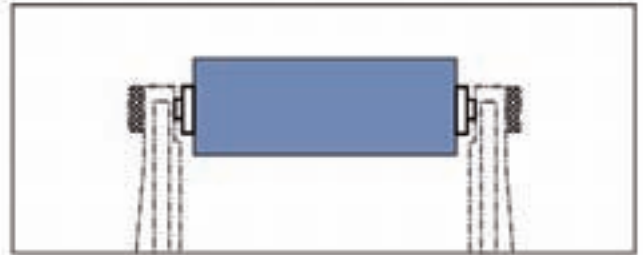
## Universal Gauge

### CONTACTS FOR USE WITH MEASURING ARMS

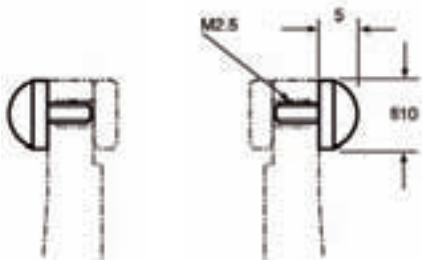
#### Flat for Outside Diameter/Length



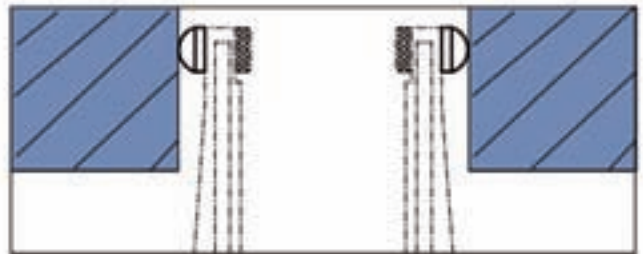
Code No	Price (£)
TGUA 004	£21.00   Each



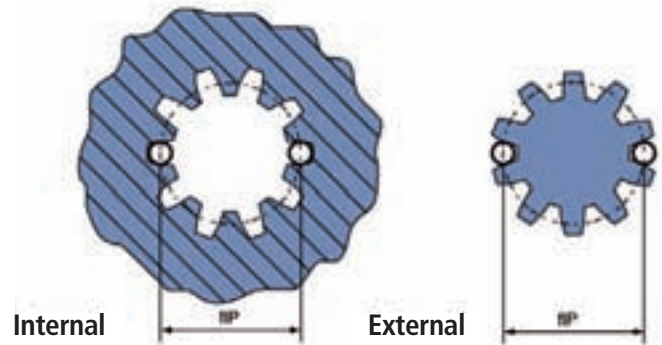
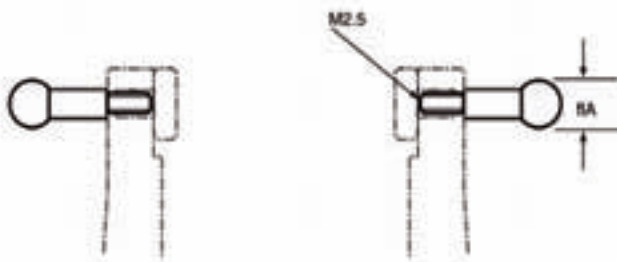
#### Spherical for Inside Diameters



Code No	Price (£)
TGUA 005	£11.50   Each



#### Ball Anvils for Measurement of the Pitch Diameter (P) on Internal or External Gears/Splines



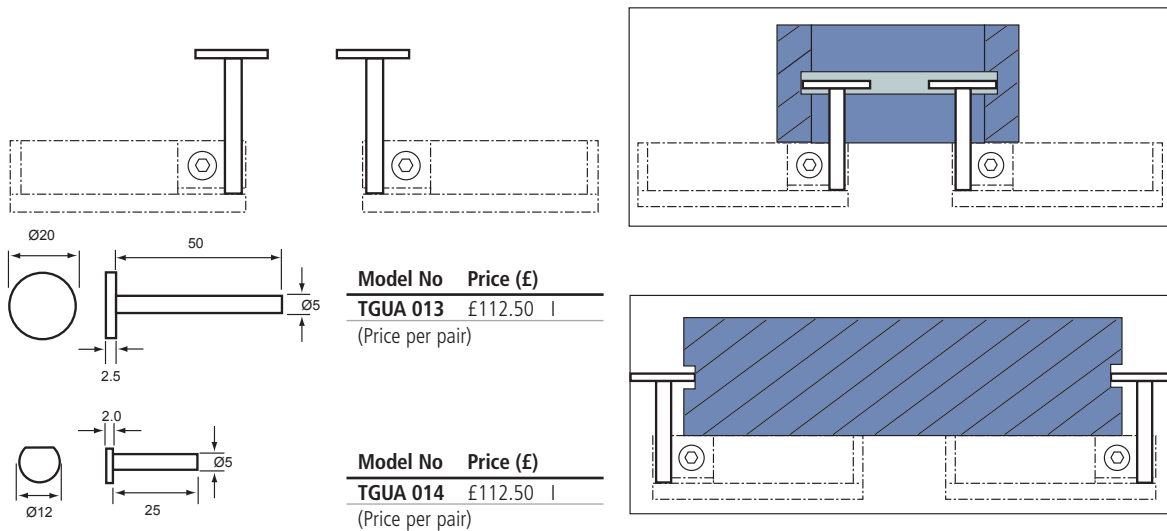
Module	Nominal Ball Dia 'A'	Code No.	Price (£)	DP	Nominal Ball Dia 'A'	Code No.	Price (£)
0.6	1.0	TGUA 100	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	40	0.043	TGUA 150	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
0.7	1.25	TGUA 101	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	36	0.049	TGUA 151	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
0.9	1.5	TGUA 102	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	32	0.054	TGUA 152	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
1.0	1.75	TGUA 103	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	24	0.071	TGUA 153	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
1.25	2.0	TGUA 104	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	20	0.089	TGUA 154	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
1.5	2.5	TGUA 105	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	16	0.108	TGUA 155	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
1.75	3.0	TGUA 106	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	12	0.144	TGUA 156	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
2.0	3.5	TGUA 107	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	10	0.177	TGUA 157	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
2.5	4.0	TGUA 108	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	8	0.216	TGUA 158	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
2.75	4.5	TGUA 109	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	6	0.295	TGUA 159	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
3.0	5.0	TGUA 110	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	5	0.354	TGUA 160	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
3.25	5.5	TGUA 111	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices	4	0.394	TGUA 161	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices
3.5	6.0	TGUA 112	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices				
4.0	7.00	TGUA 113	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices				
5.0	9.00	TGUA 114	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices				
6.0	10.00	TGUA 115	Visit <a href="http://bowers.co.uk">bowers.co.uk</a> for latest prices				

Special ball diameters available on request

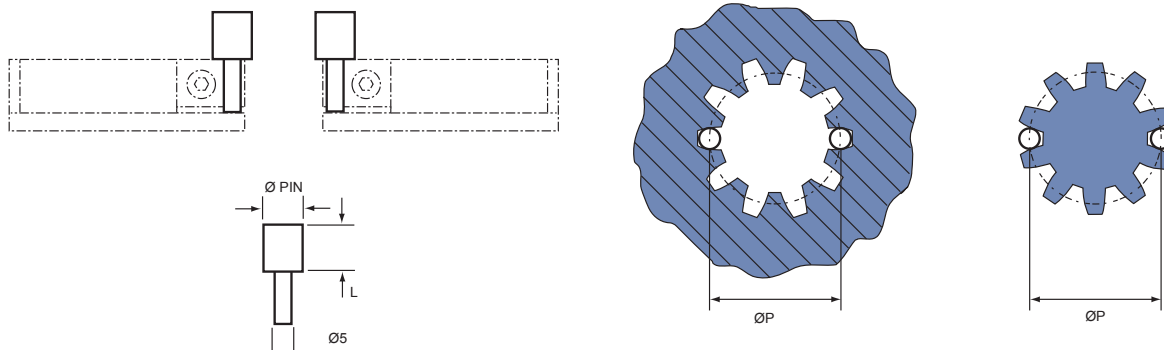
## Universal Gauge

Although extremely comprehensive, the collection of Universal Gauge accessories cannot cover every measuring application. If your particular gauging need is not catered for within our standard range, specialised adaptors, contact points, etc can be quoted from a customer supplied component drawing.

### DISC Anvils for measuring Groove Diameter



### Cylindrical measuring pins for internal and external gear measurement



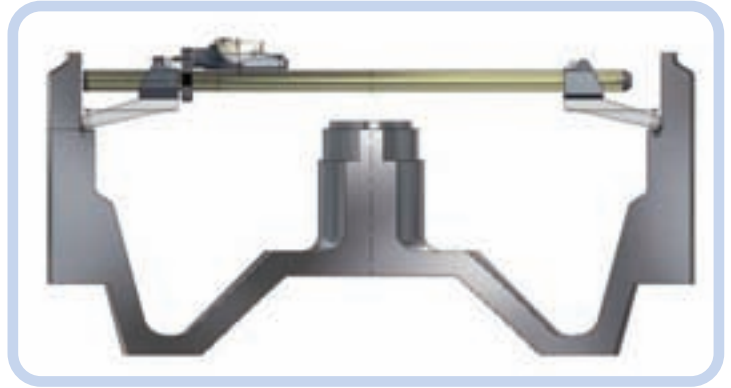
#### TECHNICAL SPECIFICATIONS

Module	Nominal Pin Dia	Length (L)	Code No.	Price (£)	Nominal DP	Pin Dia	Length (L)	Code No.	Price (£)
1.25	2.0	10 (0.4")	<b>TGUA 200</b>	Visit bowers.co.uk for latest prices	20	0.089	10 (0.4")	<b>TGUA 250</b>	Visit bowers.co.uk for latest prices
1.5	2.5	10 (0.4")	<b>TGUA 201</b>	Visit bowers.co.uk for latest prices	16	0.108	10 (0.4")	<b>TGUA 251</b>	Visit bowers.co.uk for latest prices
1.75	3.0	15 (0.6")	<b>TGUA 202</b>	Visit bowers.co.uk for latest prices	12	0.144	15 (0.6")	<b>TGUA 252</b>	Visit bowers.co.uk for latest prices
2.0	3.5	15 (0.6")	<b>TGUA 203</b>	Visit bowers.co.uk for latest prices	10	0.1777	20 (0.8")	<b>TGUA 253</b>	Visit bowers.co.uk for latest prices
2.5	4.0	15 (0.6")	<b>TGUA 204</b>	Visit bowers.co.uk for latest prices	8	0.216	20 (0.8")	<b>TGUA 254</b>	Visit bowers.co.uk for latest prices
2.75	4.5	20 (0.8")	<b>TGUA 205</b>	Visit bowers.co.uk for latest prices	6	0.295	25 (1.0")	<b>TGUA 255</b>	Visit bowers.co.uk for latest prices
3.0	5.0	20 (0.8")	<b>TGUA 206</b>	Visit bowers.co.uk for latest prices	5	0.354	25 (1.0")	<b>TGUA 256</b>	Visit bowers.co.uk for latest prices
3.25	5.5	20 (0.8")	<b>TGUA 207</b>	Visit bowers.co.uk for latest prices	4	0.394	25 (1.0")	<b>TGUA 257</b>	Visit bowers.co.uk for latest prices
3.5	6.0	20 (0.8")	<b>TGUA 208</b>	Visit bowers.co.uk for latest prices					
4.0	7.0	25 (1.0")	<b>TGUA 209</b>	Visit bowers.co.uk for latest prices					
5.0	9.0	25 (1.0")	<b>TGUA 210</b>	Visit bowers.co.uk for latest prices					

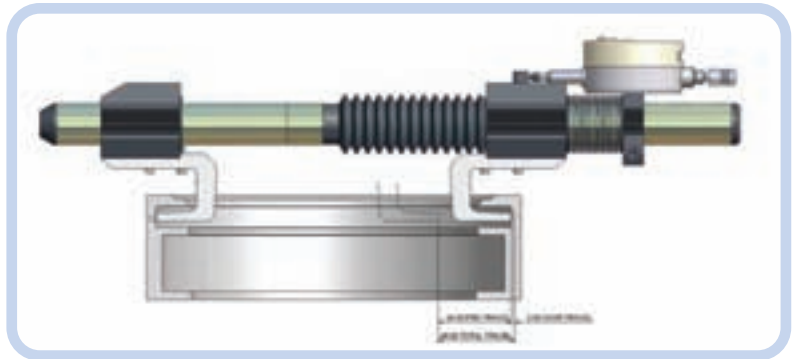
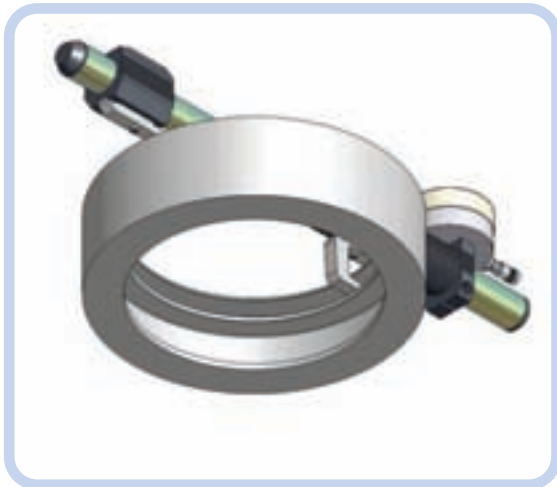
Other sizes available P.O.A

## Bowers Universal Gauge Specials

Universal Gauge incorporating on-board indicator and extra reach contact points.



Extended Travel Special Application Universal Gauge.



Special Universal Gauge measuring across large diameter component with central boss.

