



FLF209

Donut Loadcell

Standard Ranges 100, 200 and 400tonne (1000 to 4000kN)

- Hardened stainless steel body
- Very high structural load limit
- Standard 2 year warranty
- Tensile applications are 'fail-safe'
- Flying lead or connector option



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 MESS- UND SENSORTECHNIK

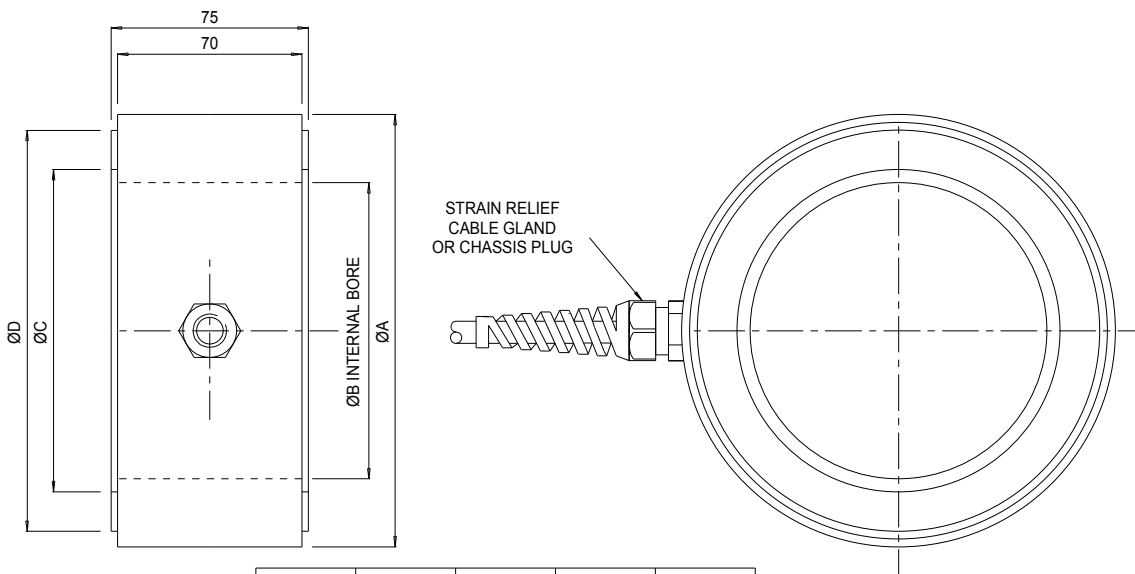
Geometry: Axial strain cylinder in a sealed case, with raised end load bearing faces and hole right through. For use in compression or in fail-safe tensile applications.

The FLF209 is ideally suited to engineering force measurements including through centre safety testing of cables, rods and bolts.

It is designed for easy installation, usually between two flat faces bearing on its loading rings, either unattached or with retaining spigots positioned in the centre hole. Alternatively tensile load transfer can be achieved via a tie rod assembly through the centre hole.

In this way the loadcell can indirectly measure tensile loads in a "fail-safe" mode.

We are happy to design variants of this loadcell to meet your specific requirements. Please consult our engineering department.



RANGE	ØA	ØB	ØC	ØD
100 tonne	170	113	123	153
200 tonne	170	113	113	158
400 tonne	270	175	175	235

■ Specifications

Parameter	Value	Unit
Non-linearity - Terminal	±1.0	% RL
Hysteresis	±1.0	% RL
Creep - 20 minutes	±0.1	% AL
Repeatability	±0.02	% RL
Rated output - Nominal	1.2	mV/V
Zero load output	±4	% RL
Temperature effect on rated output per °C	±0.005	% AL
Temperature effect on zero load output per °C	±0.03	% RL
Temperature range - Compensated	-10 to +50	°C
Temperature range - Safe	-10 to +80	°C
Excitation voltage - Recommended	10	V
Excitation voltage - Maximum	10	V
Bridge resistance	350	Ω
Insulation resistance - Minimum at 50Vdc	500	MΩ
Overload - Safe	50	% RL
Overload - Ultimate	400	% RL
Sealing	IP65	
Weight - Nominal (excluding cable)	7 to 9	kg

All standard ranges are manufactured in stainless steel.

Structural stiffness – Nominal					
Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)	Range (kN)	Stiffness (N/m)
1000	4.0×10^{10}	2000	8.0×10^{10}	4000	1.6×10^{11}

■ Notes

- AL = Applied load.
- RL = Rated load.
- Temperature coefficients apply over the compensated range.
- The load must be applied directly through the central loading axis.

■ Connections

The loadcell is fitted with 2 metres of PVC insulated 4 core screened cable type 16-2-4C or a 4 pin Binder 723 series chassis plug.

Excitation + = Red or pin 1 Signal + = Yellow or pin 3 Screen = Orange
 Excitation - = Blue or pin 2 Signal - = Green or pin 4

The screen is not connected to the loadcell body.

■ Ordering code

See the loadcell ordering code sheet for more details. Add range in the required units.	
FLF209CFR0H0	Compression, IP65, unrationalised
Change the F to a P for the connector version.	

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