

Type RC3 Load Cell



Flintec load cells are designed to meet the most stringent accuracy requirements. Certifications have been obtained from Weights & Measures Authorities, worldwide.

RC3 rocker column load cells are available in the capacities 7.5 t to 50 t and include Accuracy Classifications GP, C1, C3, C4, and C3 MI 8 according to OIML R 60; NTEP $n_{max}=10000$.

They offer total stainless steel construction and complete hermetic sealing, making them suitable for use in the toughest industrial environments.

This load cell design in combination with a low cost self aligning rocker assembly unites excellent load introduction with a low profile outline.

The Flintec calibration technique (in mV/V/Ω) eliminates time consuming corner calibration in multiple load cell systems.

The RC3 is available for use in hazardous areas zone 1, 2 (gas) and 21, 22 (dust) according to EEx ia IIC T6...T4 T130°C ATEX.

Important Features

- Capacities: 7,5 t to 50 t.
- High accuracy.
- Total stainless steel construction.
- Complete hermetic sealing.
- Protection IP 68.
- High input resistance: 1100 Ω.
- Calibration in mV/V/Ω.
- Easy cable replacement.
- Complete range of loading hardware available.
- Factory mutual approved.

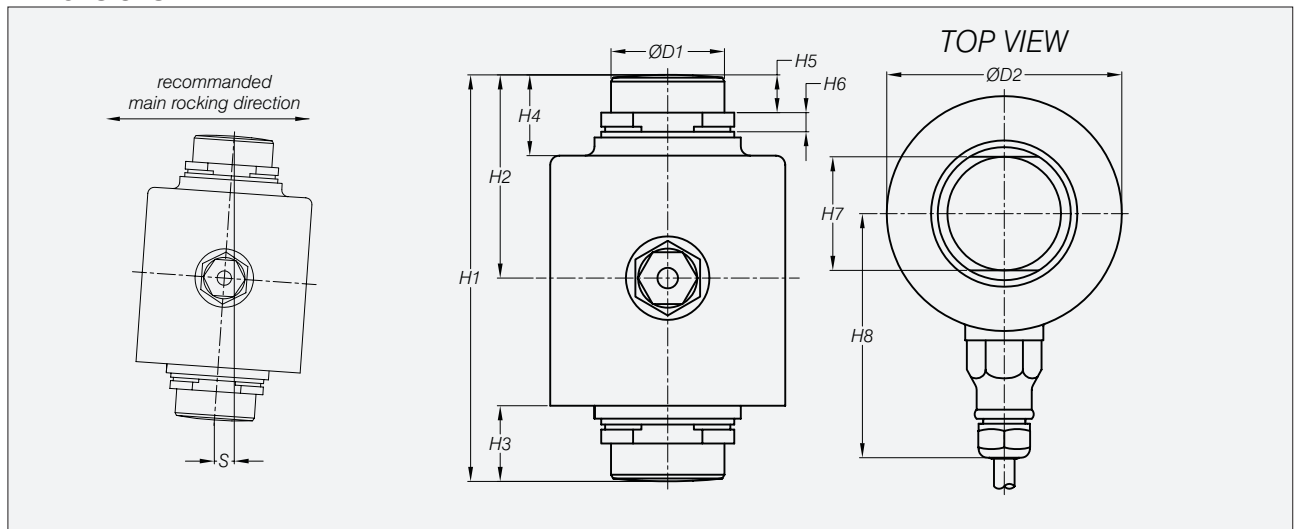
Options

- Ex-version zone 1, 2, 21 and 22 ATEX..
- Integrated surge arrestors (4x).

RC3 Specifications

Maximum capacity (=E _{max})	t	7.5 / 15 / 22.5 30 / 40 / 50	30 / 40 / 50			
Rated Output (=RO)	mV/V	2 ± 0.1%				
Calibration in mV/V/Ω (A...I classified)	%RO	≤ ± 0.05 (≤ ± 0.005)				
Accuracy class according to OIML R 60		(GP)	C1	C3	C4	C3 MI 8
Maximum number of verification intervals (n)		n.a.	1000	3000	4000	3000
Minimum load cell verification interval (v _{min})		n.a.	E _{max} /5000	E _{max} /13000		E _{max} /15000
Combined error	%RO	≤ ± 0.040	≤ ± 0.030	≤ ± 0.020	≤ ± 0.018	≤ ± 0.015
Creep error (30 minutes)	%RO	≤ ± 0.060	≤ ± 0.049	≤ ± 0.024	≤ ± 0.018	≤ ± 0.009
Temperature effect on minimum dead load output	%RO/°C	≤ ± 0.0040	≤ ± 0.0028	≤ ± 0.0011	≤ ± 0.0011	≤ ± 0.0009
Temperature effect on sensitivity	%/°C	≤ ± 0.0020	≤ ± 0.0016	≤ ± 0.0011	≤ ± 0.0008	≤ ± 0.0011
Excitation voltage	V	5...15				
Zero balance	%RO	≤ ± 1.0				
Input resistance	Ω	1150 ± 10				
Output resistance	Ω	1000 ± 1				
Insulation resistance	MΩ	≥ 5000				
Compensated temperature range	°C	-10... +40				
Operating temperature range	°C	-40... +80				
Safe load limit	%E _{max}	200				
Ultimate load	%E _{max}	300				
Load cell material		stainless steel 17-4 PH (1.4548)				
Sealing		complete hermetic sealing; cable entry sealed by glass to metal header				
Protection according DIN 40.050		IP 68				

Dimensions



Type	H1	H2	H3	H4	H5	H6	H7	H8	D1	D2	S _{max} *	RF**
RC3-7.5 t	89	44	17	23	11	6	28	75	28	65	7.5	13 kN
RC3-15 t	89	44	17	23	11	6	28	75	28	65	7.5	26 kN
RC3-22.5 t	89	44	17	23	11	6	28	75	28	65	5.5	40 kN
RC3-30 t	140	70	26	28	13	6.5	39	84	39	81	13.5	40 kN
RC3-40 t	150	75	31	33	13	11.7	39	84	39	81	12	53 kN
RC3-50 t	178	89	32	34	17	8.5	44	94	44	99	12.5	63 kN

* S_{max} = maximum lateral displacement of load introduction. Recommended gap 2...3 mm for 7.5...22.5 t, 3...5 mm for 30...50 t.
 ** RF = restoring force at S_{max} and E_{max}.

All dimensions in mm. Dimensions and specifications are subject to change without notice.

Wiring

- The load cell is provided with a shielded, 4 conductor cable.
- Cable length: 12 m for 7.5 to 22.5 t,
18 m for 30 to 50 t.
- Cable diameter: 5 mm for 7.5 to 22.5 t,
7.8 mm for 30 to 50 t.
- The shield is floating.

