

## Type RC1 Load Cell



### Product Description

The type RC1 is a stainless steel rocker column load cell with complete hermetic sealing. It is a perfect fit for use in harsh industrial environments.

### Application

- Weighbridges, hoppers, tanks and silos

### Key Features

- Capacities from 250 kN to 900 kN (25.5 t to 91.8 t)
- Stainless steel construction
- Environmental Protection IP68 with complete hermetic sealing
- Self restoring design
- Calibration in mV/V/Ω

### Approvals

- OIML approval to C1 (Y = 4 667) and C3 (Y = 10 000)
- NTEP approval to 10 000 intervals, Class III L
- ATEX hazardous area approval for Zone 0, 1, 2, 20, 21 and 22
- FM hazardous area approval

### Packed Weight

■ Capacity (kN)	250	400	600	900
Weight (kg)	3.6	6.6	7.0	7.0

### Available Accessories

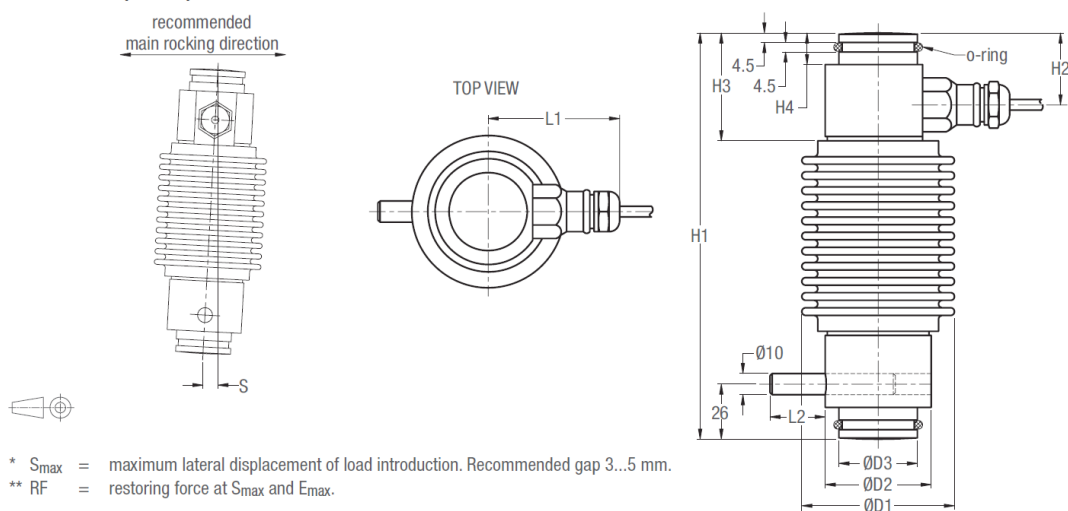
- Compatible range of application hardware
- Compatible range of electronics

### Specifications

Maximum capacity	(E <sub>max</sub> )	kN	250 / 400 / 600 / 900		
Metric equivalents (1 N=0.10197 kg)		t	25.5 / 40.8 / 61.2 / 91.8		
Accuracy class according to OIML R60			(GP)	C1	C3
Maximum number of verification intervals	(n <sub>LC</sub> )		n.a.	1 000	3 000
Minimum load cell verification interval	(v <sub>min</sub> )		n.a.	E <sub>max</sub> /4667	E <sub>max</sub> /10 000
Temp. effect on minimum dead load output	(TC <sub>0</sub> )	%*RO/10°C	± 0.0400	± 0.0280	± 0.0140
Temperature effect on sensitivity	(TC <sub>RO</sub> )	%*RO/10°C	± 0.0200	± 0.0160	± 0.0100
Combined error		%*RO	± 0.0500	± 0.0300	± 0.0200
Non-linearity		%*RO	± 0.0400	± 0.0300	± 0.0166
Hysteresis		%*RO	± 0.0400	± 0.0300	± 0.0166
Creep error (30 minutes) / DR		%*RO	± 0.0600	± 0.0490	± 0.0166
Rated Output	(RO)	mV/V	2 ± 0.1%		
Calibration in mV/V/Ω (A...I classified)		%	± 0.05 (± 0.005)		
Zero balance		%*RO	± 5		
Excitation voltage		V	5...15		
Input resistance	(R <sub>LC</sub> )	Ω	400 ± 15		
Output resistance	(R <sub>out</sub> )	Ω	351 ± 1		
Insulation resistance (100 V DC)		MΩ	≥ 5 000		
Safe load limit	(E <sub>lim</sub> )	%*E <sub>max</sub>	200		
Ultimate load		%*E <sub>max</sub>	300		
Compensated temperature range		°C	-10...+40		
Operating temperature range		°C	-40...+80 (ATEX -40...+60)		
Load cell material			stainless steel 17-4 PH (1.4548)		
Sealing			complete hermetic sealing; cable entry sealed by glass to metal header		
Protection according EN 60 529			IP68 (up to 2 m water depth) / IP69K		

The limits for Non-Linearity, Hysteresis, and TC<sub>RO</sub> are typical values.  
The sum of Non-linearity, Hysteresis and TC<sub>RO</sub> meets the requirements according to OIML R60 with p<sub>LC</sub>=0.7.

### Dimensions (in mm)



\* S<sub>max</sub> = maximum lateral displacement of load introduction. Recommended gap 3...5 mm.  
\*\* RF = restoring force at S<sub>max</sub> and E<sub>max</sub>.

Type	L1	L2	H1	H2	H3	H4	D1	D2	D3	S <sub>max</sub> *	RF**
RC1-250 kN	62	33	192	34	51	15	72	50	37	10.5	19 kN
RC1-400 kN	69	26	225	36	57	16	85	64	37	11	20 kN
RC1-600 kN	69	26	225	36	57	16	85	64	54.4	12.5	63 kN
RC1-900 kN	69	26	225	36	57	16	85	64	54.4	9	94 kN

### Wiring

- The load cell is provided with a shielded, 4 conductor cable (AWG 20). Cable jacket polyurethane
- Cable length:
  - 12 m for RC1-250 kN
  - 16 m for RC1-400 kN
  - 18 m for RC1-600 and 900 kN
- Cable diameter: 7.8 mm
- The shield is floating  
(On request the shield can be connected to the load cell body)

