

RC1 compression load cell



product description

The RC1 is the original compression column load cell designed for applications in truck scales and Process Weighing systems. Constructed from stainless steel and environmentally protected via complete welding the RC1 has been proven to be a robust solution where high capacity and high accuracy is required in industrial weighing applications.

applications

Truck scales, high capacity scales, silo weighing systems.

key features

All stainless-steel construction

Hermetically sealed to IP68

Self-restoring column design

Capacities from 250kN to 900kN (25.5t to 91.8t)

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
zones 0, 1, 2, 20, 21 and 22

FM hazardous area approval

accessories

Compatible range of application
hardware

Compatible range of electronics



RoHS
compliant



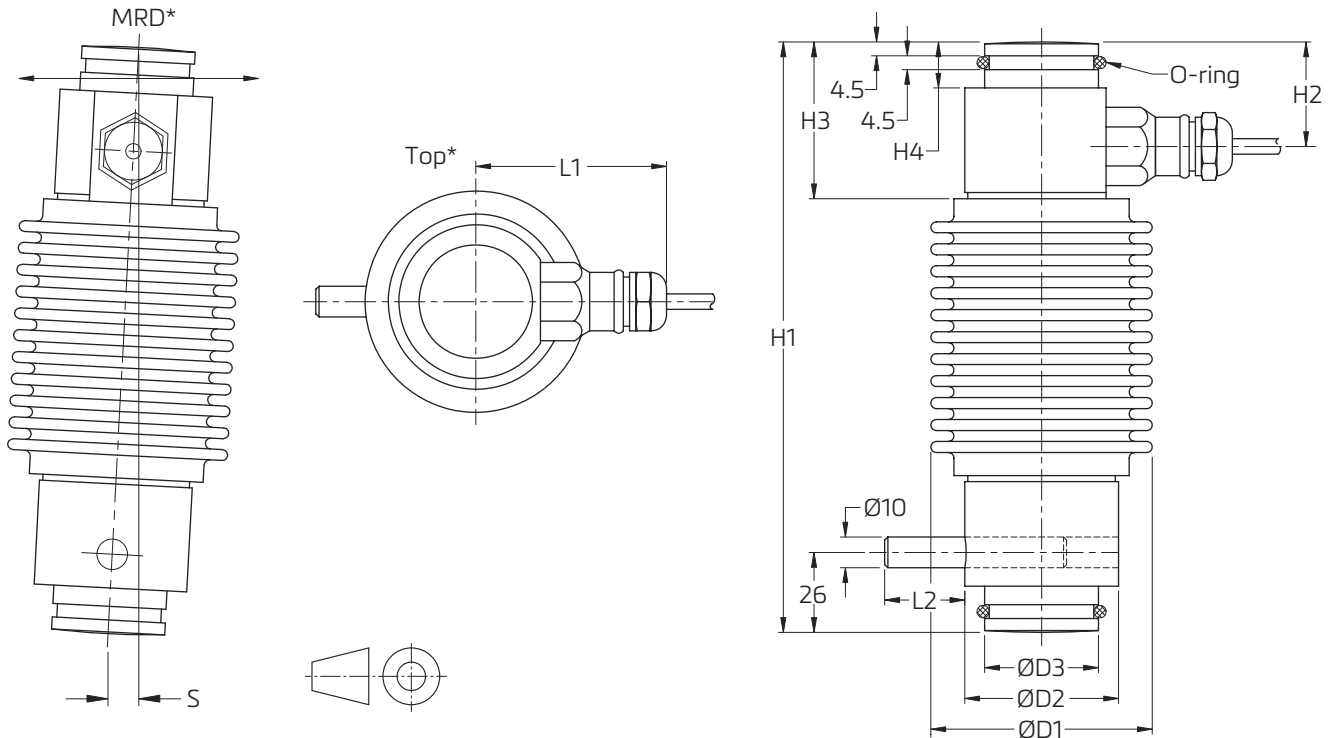
specifications

Maximum capacity (E_{max})	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_{LC})		n.V.	1,000	3,000
Minimum load cell verification interval (v_{min})		n.V.	$E_{max} / 4,667$	$E_{max} / 10,000$
Temp. effect on minimum dead load output (TC_0)	%*RO/10°C	± 0.0400	± 0.0280	± 0.0140
Temperature effect on sensitivity (TC_{RO})	%*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)	%*RO	± 0.05 (± 0.005)		
Zero balance	%*RO	± 5		
Excitation voltage	V	5...15		
Input resistance (R_{LC})	Ω	400 ± 15		
Output resistance (R_{out})	Ω	351 ± 1		
Insulation resistance (100 V DC)	MΩ	≥ 5,000		
Safe load limit (E_{lim})	%* E_{max}	200		
Ultimate load	%* E_{max}	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		
Packet weight	kg	3.6 (250kN), 6.6 (400kN), 7.0 (600kN, 900kN)		

The limits for Non-Linearity, Hysteresis, and TC_{RO} are typical values.

The sum of Non-linearity, Hysteresis and TC_{RO} meets the requirements according to OIML R60 with $p_{LC}=0.7$.

product dimensions (mm)



Type (kN)	L1	L2	H1	H2	H3	H4	D1	D2	D3	S _{max} *	RF**
RC1-250	62	33	192	34	51	15	72	50	37	10.5	19 kN
RC1-400	69	26	225	36	57	16	85	64	37	11	20 kN
RC1-600	69	26	225	36	57	16	85	64	54.4	12.5	63 kN

* S_{max} - maximum lateral displacement of load introduction. Recommended gap 3...5 mm.

** RF - restoring force at S_{max} and E_{max}.

MRD* - recommended main rocking direction

Top* - top view

wiring

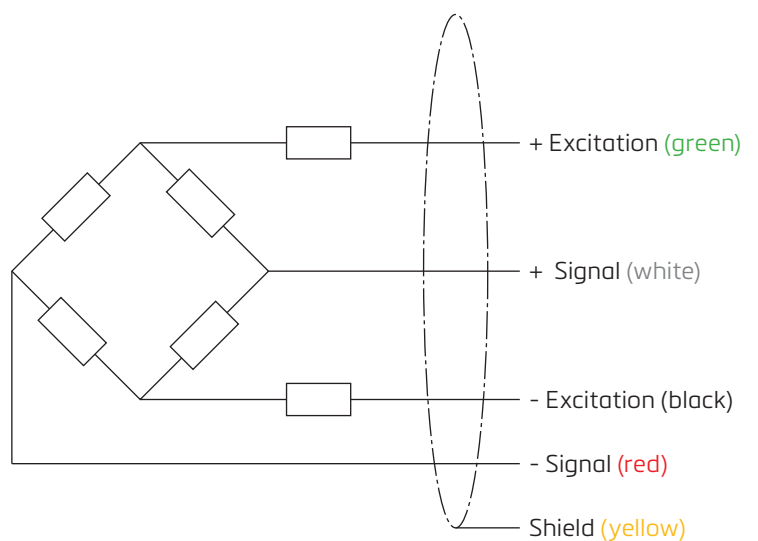
The load cell is provided with a shielded, 4 conductor cable (AWG 20).

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)



Specifications and dimensions are subject to change without notice.