

Hydraulic Load Cells Models 830 · 833 · 844

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testing equipment for quality management

ERICHSEN
since 1910

Simple

Compact

Sturdy

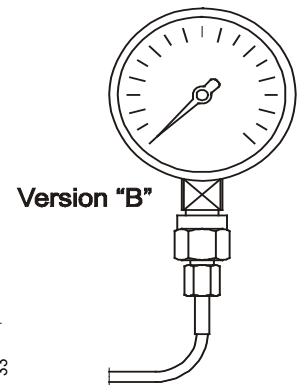
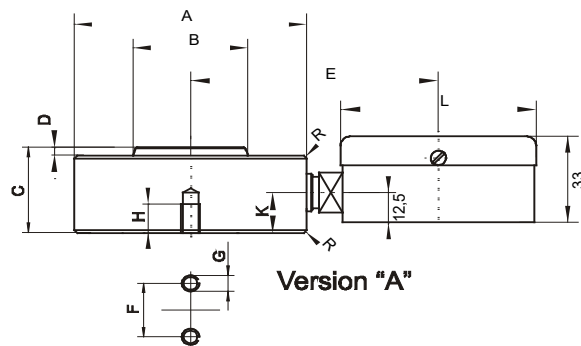
Hydraulic Load Cells

Design and function

ERICHSEN hydraulic load cells provide a simple and economical method of measuring forces. The technique is based on the hydraulic transmission of forces which act on the piston of the force transducer. This hydraulic pressure is immediately indicated on a display unit with a scale in Newton.

Hydraulic load cells are mainly used in static applications. The increased force time (referred to the rated load) should remain constant for at least 1 second. Continuous rapid changes in force may destroy the pressure gauge. It can however be protected against shock loads arising when the load is applied or removed by means of appropriate throttles. All load cells are made of stainless steel.

Compact Load Cell 830



Technical Data	Model 830													
	250 N	400 N	630 N	1 kN	1,6 kN	2,5 kN	4 kN	6,3 kN	10 kN	16 kN	25 kN	40 kN	63 kN	100 kN
scaling	5 N	10 N	10 N	20 N	50 N	50 N	100 N	100 N	200 N	500 N	500 N	1 kN	1 kN	2 kN
Weight [kg]	1,0												1,5	
realizable length of pressure hose [m]	-	0,63					1,5							
realizable length of capillary tube [m]	-	0,5					2,5							
A [mm]	76												92	
B [mm]	35												56	
C [mm]	30												32	
D [mm]	3												3	
E [mm]	80												88	
F [mm]	55												75	
G [mm]	M6												M8	
H [mm]	10												12	
K [mm]	14												14	
L [mm]	63												63	
R [mm]	R2													
Number of borinas	2. offset by 180°													

In the basic "A" version the display unit is connected directly to the load cell.

In the advanced "B" version the measuring instrument is connected to the pressure gauge by a high pressure hose or a capillary tube.

The display unit is fitted with a maximum reading pointer and measures 63 mm in diameter on all gauges.

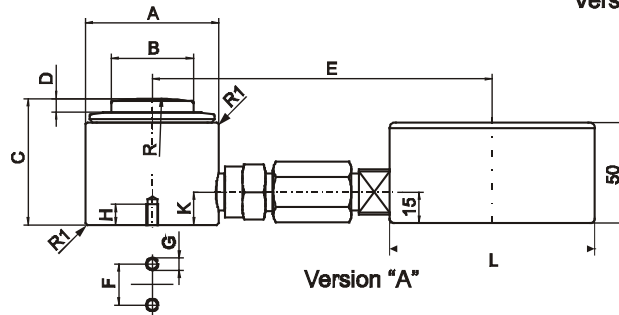
A protective rubber cap is also obtainable as a special accessory.

Fields of application

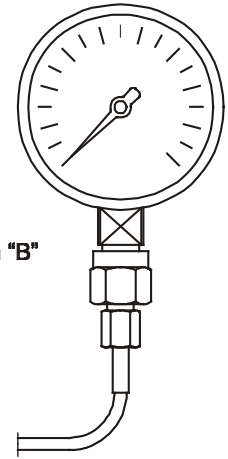
Compact load cells are ideal for maintenance and adjustment work. This particular series has been designed primarily for carrying out occasional force checks rather than for continuous loading.

Their compact dimensions make these instruments extremely versatile. By using the appropriate accessories the measured value can also be shown on a remote display. The readings can be transmitted to the PHYSIMETER® 906 USB by way of a pressure transducer.

Load Cell 833



Version "B"



Technical Data	Model 833											
	2,5 kN	4 kN	6,3 kN	10 kN	16 kN	25 kN	40 kN	63 kN	100 kN	160 kN	250 kN	400 kN
scaling	50 N	100 N	100 N	200 N	250 N	0.5 kN	1 kN	1 kN	2 kN	2,5 kN	5 kN	10 kN
Weight [kg]	2,3									9,6		
realizable length of pressure hose [m]	0,63	1,5										
realizable length of capillary tube [m]	1	4			10							
A [mm]	65									125		
B [mm]	40									66		
C [mm]	70									105		
D [mm]	5									13		
E [mm]	166									195		
F [mm]	48									90		
G [mm]	M6									M8		
H [mm]	9									12		
K [mm]	16									18		
L [mm]	100									100		
R [mm]	160									400		
R1 [mm]	R2											
Number of borings	2, offset by 180°											

The display unit of the basic "A" version is attached directly to the load cell by way of a screwed connection.

In the advanced "B" version the measuring instrument is connected to the pressure gauge by a high pressure hose or a capillary tube.

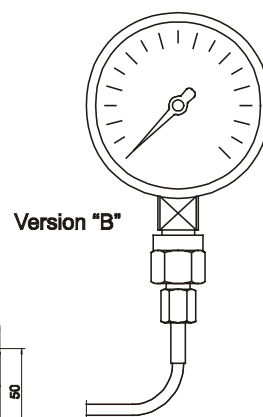
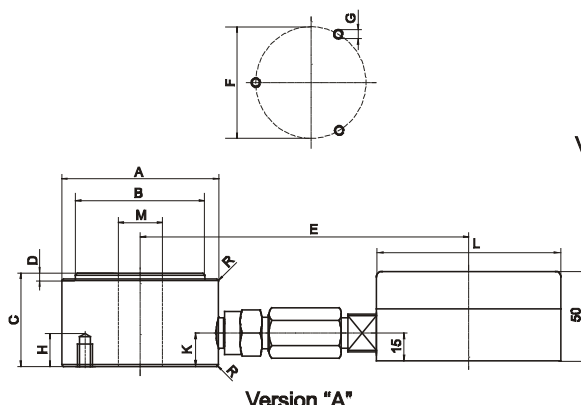
Fields of application

The load cells in the Model 833 series are designed specifically for continuous use and can be fitted into machines, installations and systems of all kinds.

A significant feature of this series is the accurate dial gauge with zero offset compensation and large diameter (100 mm). By using the appropriate accessories, the measured value can also be shown on a remote display. The readings can be transmitted to the PHYSIMETER® 906 USB by way of a pressure transducer.

Model	830	833	844
Measuring uncertainty	$\leq \pm 2 \%$	$\leq \pm 1,5 \%$	$\leq \pm 2 \%$
Calibrated at ... (loaded plane-parallel, centrically, without side forces)	$(23 \pm 2) ^\circ\text{C}$	$(23 \pm 2) ^\circ\text{C}$	$(23 \pm 2) ^\circ\text{C}$
Overload protection	-	on request	on request
Temperature range	0 – 50 °C	0 – 50 °C	0 – 50 °C

Ring-type Load Cell 844



Technical Data	Model 844/I			Model 844/II			Model 844/III	Model 844/IV
	2,5 kN 4 kN 6,3 kN	10 kN 16 kN 25 kN 40 kN	63 kN 100 kN 160 kN	4 kN 6,3 kN 10 kN 16 kN	25 kN 40 kN 63 kN 100 kN	160 kN 250 kN 400 kN	1 MN	1 MN
scaling	50 N 100 N 100 N	200 N 250 N 0.5 kN 1 kN	1 kN 2 kN 2.5 kN	100 N 100 N 200 N 250 N	0,5 kN 1 kN 1 kN 2 kN	2,5 kN 5 kN 10 kN	20 kN	20 kN
Weight [kg]	2,6			4,8			15	25
realizable length of pressure hose [m]	1,5			1,5			1,5	1,5
realizable length of capillary tube [m]	4	10		4	10		10	10
A [mm]	86			122			192	240
B [mm]	68			106			172	210
C [mm]	50			55			65	85
D [mm]	3			3			3	3
E [mm]	180			198			218	257
F [mm]	60			85			150	--
G [mm]	M8			M10			M12	--
H [mm]	12			15			23	--
K [mm]	18			18			22	18
M [mm]	24			40			68	68
L [mm]	100			100			100	100
R [mm]	R2							
Number of borinas	3. offset by120°							--

In the basic "A" version the display unit is attached to the load cell by way of a screwed connection.

In the advanced "B" version the measuring instrument is connected to the pressure gauge by a high pressure hose or a capillary tube.

Subject to technical modifications.
TBE 830/833/844 – X2025

Fields of application

Load cells in the 844 series are suitable wherever a shaft needs to be fitted through the measuring device. These instruments are specifically designed as a permanent monitoring facility for axial and bearing forces. They are equipped with a high-accuracy dial gauge which has a large diameter (100 mm) and a zero offset compensation. By using the appropriate accessories, the measured value can also be shown on a remote display. The readings can be transmitted to the PHYSIMETER® 906 USB by way of a pressure transducer.