



Stainless Steel Polished-Rod Load Cell

The stainless steel polished-rod load cell from Weatherford accurately measures tensile force on the polished rod to enhance rod pump system loading and performance. This load cell uses the latest sensor technology and is uniquely constructed to ensure accuracy and durability in harsh oilfield environments.

Calibrated in accordance with National Institute of Standards and Technology (NIST) criteria, each sensor is thoroughly tested to meet performance specifications. The sensor housing is constructed of 300-series stainless steel and is hermetically sealed (nitrogen gas-filled), making it impervious to salt spray and H₂S. It is the only hermetically sealed polished-rod load cell on the market, and is also protected with a lightning suppression circuit. The sensor's rugged construction minimizes the adverse effects of impact loading and ensures long-term stability.

This load cell may be ordered in various connector styles, load capacities, and output sensitivities, allowing it to be used as a direct replacement for load cells used with existing controllers.



Features, Advantages and Benefits

- The load cell is hermetically sealed and nitrogen gas-filled, making it impervious to H₂S and salt spray, to ensure long-term stability.
- The low-cost load cell is available in various connector styles and load capacities, allowing its use as a direct replacement for previously installed polished rod load cells.
- The instrument's rugged stainless steel housing protects the sensor in harsh oilfield environments.
- Field-proven sensor technology, enhanced with temperature compensation, ensures accurate load measurement in extreme conditions.
- The unit's lightning suppression circuit provides investment protection against high-voltage current surges.



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Specifications

Rated capacity (lb/kg)	10,000, 15,000, 30,000, 50,000 4,536, 6,804, 13,608, 22,680
Overload safe (full scale)	2.0
Output full scale (mV/V \pm 0.5%)	1.5 or 2.0
Bridge resistance	
Input (ohms \pm 5%)	800
Output (ohms \pm 1%)	700
Maximum excitation voltage (AC or DC)	20 V
Maximum non-linearity (full scale)	<0.03%
Maximum hysteresis (full scale)	<0.03%
Maximum repeatability (full scale)	<0.02%
Zero offset (full scale)	\pm 1%
Operating temperature range ($^{\circ}$ F/ $^{\circ}$ C)	-70 $^{\circ}$ to 190 $^{\circ}$ -57 $^{\circ}$ to 88 $^{\circ}$
Temperature span	
Zero (at 100 $^{\circ}$ F/38 $^{\circ}$ C)	\pm 0.2%
Output to (at 100 $^{\circ}$ F/38 $^{\circ}$ C)	\pm 0.15%
Insulation resistance (meg ohms)	>500
Material	300-series stainless steel
Hermetical seal text	1.8 x 10 ⁻¹⁰ ATM
Certified calibration	NIST-traceable

Part Number	Description
PC8500-584-00	10,000 lb capacity*
PC8500-585-00	15,000 lb capacity*
PC8500-581-00, JDE 449555	30,000 lb capacity*
PC8500-582-00, JDE 449560	50,000 lb capacity*

* 2.0-mV/V output sensitivity, and standard 6-pin Molex connector