

# LOAD CELL for TIE ROD



Load cells find wide applications in the field of civil engineering. They are mainly employed to measure and control tension in cable and rock anchors, on walls, diaphragms and structural beams.

Load cells are generally made in 17-4 PH stainless steel and, depending on their specific use, they are manufactured in different shapes and sizes with different F.S. ranges up to a max. of 2500 KN load. Cells of different types and ranges may be supplied according to the Client's requirements.

They have a toroid shape with a strain-gauge using a full Wheatstone bridge transducer. Cells are supplied as standard with a special strain-gauge bridge transducer made of 4 active strain-gauges. They may be supplied with a strain-gauge bridge transducer with 8 active strain-gauges if required.

Another special application consists of four independent strain-gauges with two output cables, one for each bridge, for additional reliability. Should one of the two bridges be damaged, operations can still be carried out by the second bridge, thus resulting in uninterrupted accurate measurements.

The special transducer location and the particular cell geometry design allow reduced sensitivity to eccentric loads.

Electrical output signals allow easy remote automatic reading and data logging.

Cells may be supplied with a current/voltage converter, depending on the specific need, either inside or outside the cell, thus allowing the converter to be protected from spiking and increasing reliability.

The major advantages offered by the cells produced by AGISCO are as follows.

- ⇒ Reliability, accuracy, robustness and very good long term stability.
- ⇒ Quick response time.
- ⇒ Negligible temperature effect due to self-compensation if compared with hydraulic cells.
- ⇒ Thanks to the ability for remote reading these cells are suitable for inaccessible areas.
- ⇒ Current/voltage converters protect against spiking and allow use of cells even at a distance of more than 1000 m without affecting their accuracy.
- ⇒ Strain-gauge cells are not susceptible to malfunction due to hydraulic fluid leakage.
- ⇒ Measurements are not affected by eccentric loads.
- ⇒ The shielded connecting cable is highly robust against electrical and mechanical shocks.
- ⇒ Suitable for measurement of dynamic loads.

All types of AGISCO load cells offer a very high level of accuracy and reliability having been tested and used for many years in hundreds of different applications.

## TECHNICAL SPECIFICATIONS

### TIE ROD LOAD CELL

Load range	300 ÷ 2500 kN
Nominal sensitivity	1,5-2,0 mV/V +/- 0,1 %
Zero temperature coefficient	± 0,005 %F.S /°C
Total error	± 0,10 % F.S.
Repeatability	± 0,02 % F.S.
Input resistance	1400 ± 20 Ohm
Output resistance	1400 ± 5 Ohm
Insulation	> 2000 M Ohm
Power supply	2 ÷ 15 Vdc/ac
Temperature compensation	-10 ÷ +50°C
Safe overload	150 % F.S.
Maximum overload	> 300 % F.S.
Deformation under max load	0,4 mm
Level of protection	IP67
Material	Stainless steel

*Agisco reserve the right to change their products and specifications without notice*

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