

## S-Type Stainless Steel Load Cell

### FEATURES

- Capacity range: 500–5000 kg
- Stainless steel construction
- Sealed by welding to IP68
- S-type design for use in tension and compression
- OIML approved to 3000d (500–5000 kg)
- NTEP approved to 5000d (500–5000 kg)
- Choice of mounting threads metric or unified systems
- 6-Wire cable (sense circuit)
- **Optional**
  - Ex ia IIC T6-ATEX hazardous area approval
  - Class I, II, III Division 1 – FM hazardous area approval
  - IECEx approval available



### APPLICATIONS

- Hopper (tank Weighing)
- Hybrid scales
- Belt weighing
- Lever arm conversions
- Material testing machines
- Vibrations filling equipment
- Dynamometers

### DESCRIPTION

The Model 620 is a stainless steel S-type load cell. Its welded sealing combined with high accuracy, make this load cell ideally suited for a wide range of applications of process weighing and force measurements.



Approvals include OIML C3 (3000d); NTEP 3000d single and NTEP 5000d multiple.

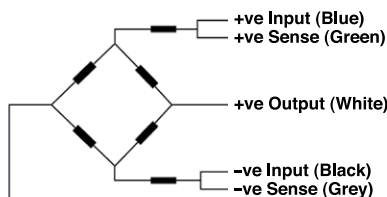
Also available are versions approved for hazardous areas—ATEX II 1 GD Ex ia T6 for Europe and FM I, II, III Division 1 for the USA.

The six-wire cable includes two sense wires that compensate for changes in lead resistance due to temperature changes and cable extension.

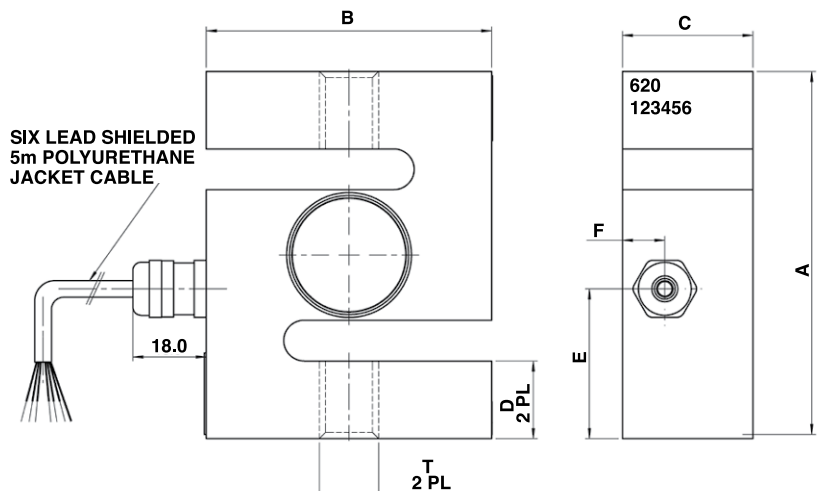
The Model 620 offers a choice of bolt threads in metric or unified systems; see table below.

### OUTLINE DIMENSIONS in millimeters

Wiring Schematic Diagram



| Thread Type "T" by Capacity |            |            |
|-----------------------------|------------|------------|
| Capacity                    | Metric     | Unified    |
| 500 kg                      | M12 x 1.75 | 1/2-20 UNF |
| 1000 kg                     | M16 x 2.0  | 1/2-20 UNF |
| 2000 kg                     | M16 x 2.0  | 3/4-16 UNF |
| 5000 kg                     | M24 x 2.0  | 1 - 12 UNF |



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Optional rod end bearings for use with all VPG Transducers S-type load cells are available—consult the sales office.

| Capacity           | A   | B   | C  | D  | E    | F    |
|--------------------|-----|-----|----|----|------|------|
| 500, 1000, 2000 kg | 90  | 70  | 32 | 19 | 36.6 | 10.4 |
| 5000 kg            | 120 | 100 | 45 | 26 | 60   | 13.8 |

| <b>SPECIFICATIONS</b>                        |                       |              |        |           |                            |  |
|--|-----------------------|--------------|--------|-----------|----------------------------|--|
| <b>PARAMETER</b>                             | <b>VALUE</b>          |              |        |           | <b>UNIT</b>                |  |
| <b>Rated capacity—R.C. (E<sub>max</sub>)</b> | 500, 1000, 2000, 5000 |              |        |           | kg                         |  |
| <b>NTEP/OIML</b>                             | NTEP                  | Non-Approved | C2/50  | C3/50     |                            |  |
| <b>Maximum no. of intervals (n)</b>          | Class III             | 1000         | 2000*  | OIML 3000 |                            |  |
| <b>Y = E<sub>max</sub>/V<sub>min</sub></b>   | 5000                  | 2000         | 4000   | 6000      |                            |  |
| <b>Rated output—R.O.</b>                     | 2.0                   |              |        |           | mV/V                       |  |
| <b>Rated output tolerance</b>                | 0.002                 |              |        |           | ±mV/V                      |  |
| <b>Zero balance</b>                          | 0.04                  | 0.06         | 0.04   | 0.04      | ±mV/V                      |  |
| <b>Total error (per OIML R60)</b>            | 0.0200                | 0.0500       | 0.0300 | 0.0200    | ±% of R.O.                 |  |
| <b>Zero return, 30 min.</b>                  | 0.010                 | 0.0500       | 0.0250 | 0.0170    | ±% of applied load         |  |
| <b>Temperature effect on zero</b>            | 0.00112<br>(0.00062)  | 0.0070       | 0.0035 | 0.0023    | ±% of R.O./°C (°F)         |  |
| <b>Temperature effect on output</b>          | 0.0018<br>(0.0010)    | 0.0400       | 0.0014 | 0.0012    | ±% of applied load/°C (°F) |  |
| <b>Temperature range, compensated</b>        | -10 to +40            |              |        |           | °C                         |  |
| <b>Temperature range, safe</b>               | -30 to +90            |              |        |           | °C                         |  |
| <b>Maximum safe static overload</b>          | 150                   |              |        |           | % of R.C.                  |  |
| <b>Excitation, recommended</b>               | 10                    |              |        |           | VDC or VAC RMS             |  |
| <b>Excitation, maximum</b>                   | 15                    |              |        |           | VDC or VAC RMS             |  |
| <b>Input impedance</b>                       | 400±20                |              |        |           | Ω                          |  |
| <b>Output impedance</b>                      | 350±3                 |              |        |           | Ω                          |  |
| <b>Insulation resistance</b>                 | >1000                 | >2000        | >2000  | >2000     | MΩ                         |  |
| <b>Construction</b>                          | Stainless steel       |              |        |           |                            |  |
| <b>Environmental protection</b>              | IP68                  |              |        |           |                            |  |

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