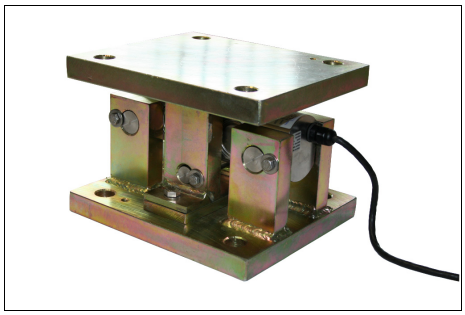
# DSL
# Double-ended shear beam load cell

PRECIA MOLEN™
WORLDWIDE WEIGHING



## Application

- Weighing of high-capacity hoppers and tanks.
- Especially suitable for weighing vessels that are agitated or subject to major thermal expansion.
- Mechanical assembly for great fidelity even in harsh environments.

## Presentation

The DSL is a double-ended shear beam load cell made of a stainless steel body, hermetically sealed by means of welding, ensuring a high level of protection.

The double-ended shear beam design makes it especially impervious to lateral forces.

Its Class C3 compliance* allows for accurate weighing in industrial environments.

Available in EX version for potentially explosive atmospheres.

## Available Models

| Type | Capacity (Nc) | Minimum division | Maximum load | Safe load limit |
|---|---|---|---|---|
| DSL 5 t | 5 t | 0,5 kg | 7,5 t | 10 t |
| DSL 10 t | 10 t | 1 kg | 15 t | 20 t |
| DSL 20 t | 20 t | 2 kg | 30 t | 40 t |
| DSL 30 t | 30 t | 3 kg | 45 t | 60 t |
| DSL 50 t | 50 t | 5 kg | 75 t | 100 t |
| DSL 75 t | 75 t | 7,5 kg | 112,5 t | 150 t |
| DSL 100 t | 100 t | 10 kg | 150 t | 200 t |

### Certification

Compliant with the ATEX European Directive on equipment and protective systems intended for use in potentially explosive atmospheres as well as IECEx standards.

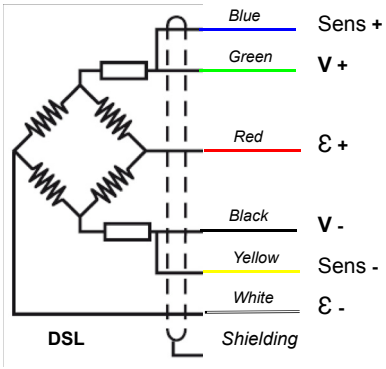
### Option

Ex version for use in potentially explosive areas.

- Zones 0 and 1 : Protection ia
- Zone 2 : Protection ia or nA
- Zones 20, 21 : Protection ta or ia
- Zone 22 Protection tc or ia

** From 5 to 20 t*

## Wiring




- Shielded PVC 6-wire cable
  - Length ..... 12 m
  - External diameter ..... 6 mm

## Technical Data

### Features

| Type | | Available Models | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DSL | | 5 t | 10 t | 20 t | 30 t | 50 t | 75 t | 100 t |
| Accuracy class | | C3 | | | NT | | | |
| Max. number of intervals | nLC | 3000 | | | | | | |
| Temperature compensation | | -10° .. +40° C | | | | | | |
| Temperature range | | -30° .. +70° C<br>-20° .. +60° C (in Ex zone) | | | | | | |
| Max. deflection. (at nominal capacity) | | 0,6 ...1 mm | | | | | | |
| Nominal sensitivity | Cn | 2 mV / V ± 0,1 % | | | | | | |
| Nominal supply voltage | | 10 V | | | | | | |
| Max. supply voltage | | 15 V | | | | | | |
| Input impedance | | 800 Ω ± 30 Ω | | | | | | |
| Output impedance | | 700 Ω ± 3 Ω | | | | | | |
| Isolation resistance | | > 5000 MΩ | | | | | | |
| Protection rating | | IP 68 | | | | | | |
| Load cell packaging | | 320 x 225 x 150 mm | | | 470 x 240 x 210 mm | | | |
| | | 4 kg | | | 8 kg | | 15 kg | |
| Mount packaging | | 250 x 250 x 200 mm | | | 400 x 320 x 270 mm | | | |
| | | 18 kg | | | 35 kg | | 85 kg | |

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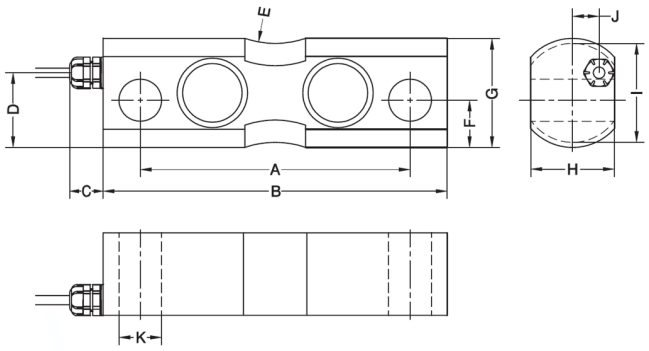
# Technical Data - Load Cell




## Mounting

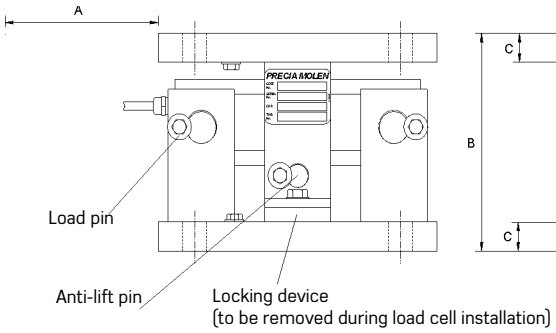
The anti-lift mount is supplied assembled, without load cell, and can be installed directly on the tank to be weighed without using a dummy load cell.

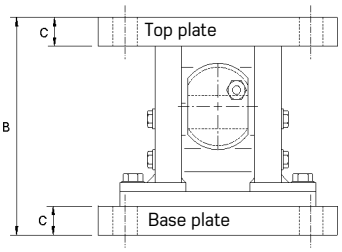
After installation, the load cell is inserted in its mount and the locking device is unlocked to bring the assembly into working position.

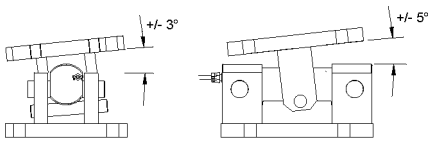
This device also allows the load cell to be changed quickly for maintenance purposes.

| Cn | A* | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5...20 t | 145 | 185 | 16 | 41 | 50 | 25,7 | 59.5 | 45 | 54 | 14 | 23 |
| 30...50 t | 220 | 285 | 16 | 48 | 50 | 29,7 | 74,5 | 60 | 65 | 22 | 30 |
| 75...100 t | 260 | 340 | 16 | 66 | 50 | 37,2 | 99,5 | 80 | 90 | 32 | 50 |

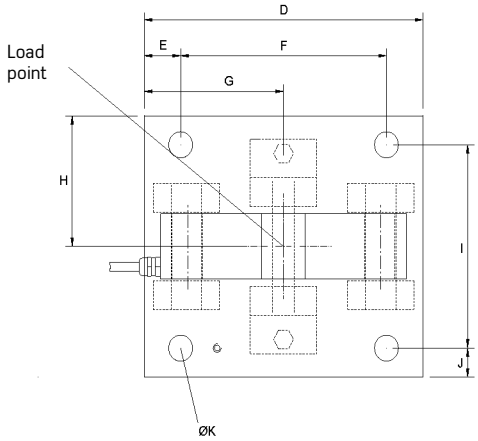
# Technical Data - Load Mount




Angular movement of the top plate




**A** : Minimum distance for fitting load cell.
**K** : 4 holes in the top and base plates.

**Note**: Complete protection against lifting is only provided when the load cell is fitted.

| Cn | A* | B | C | D | E | F | G | H | I | J | K | Max. transverse offset | Max. lifting force | Max. lateral force | Drawing n°. zinc-plated stainless steel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5...20 t | 250 | 150 | 20 | 210 | 27,5 | 155 | 105 | 90 | 140 | 20 | 18 | ±5 | 9000 kg | 4550 kg | 7057200<br>7057203 |
| 30...50 t | 300 | 195 | 25 | 300 | 62,5 | 175 | 150 | 110 | 175 | 22,5 | 22 | ±5 | 21000 kg | 8600 kg | 7057201<br>7057204 |
| 75...100 t | 350 | 255 | 30 | 370 | 75 | 220 | 185 | 150 | 220 | 40 | 26 | ±10 | 34000 kg | 12000 kg | 7057202<br>7057205 |

** All dimensions are in en mm.*





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