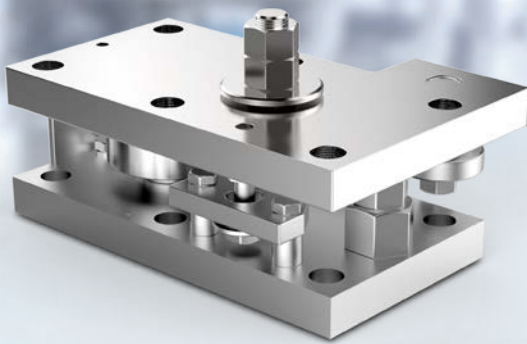


PR 6212 load cell

for maximum corrosion resistance



ⓘ PR 6212 load cell benefits

- Maximum corrosion resistance
- High-temperature version available for up to 180 °C
- Easy and failure-free installation using the PR 6012 mounting kit

ⓘ PR 6012 mounting kit benefits

- Integrated jack-up and dummy function
- Low installation height

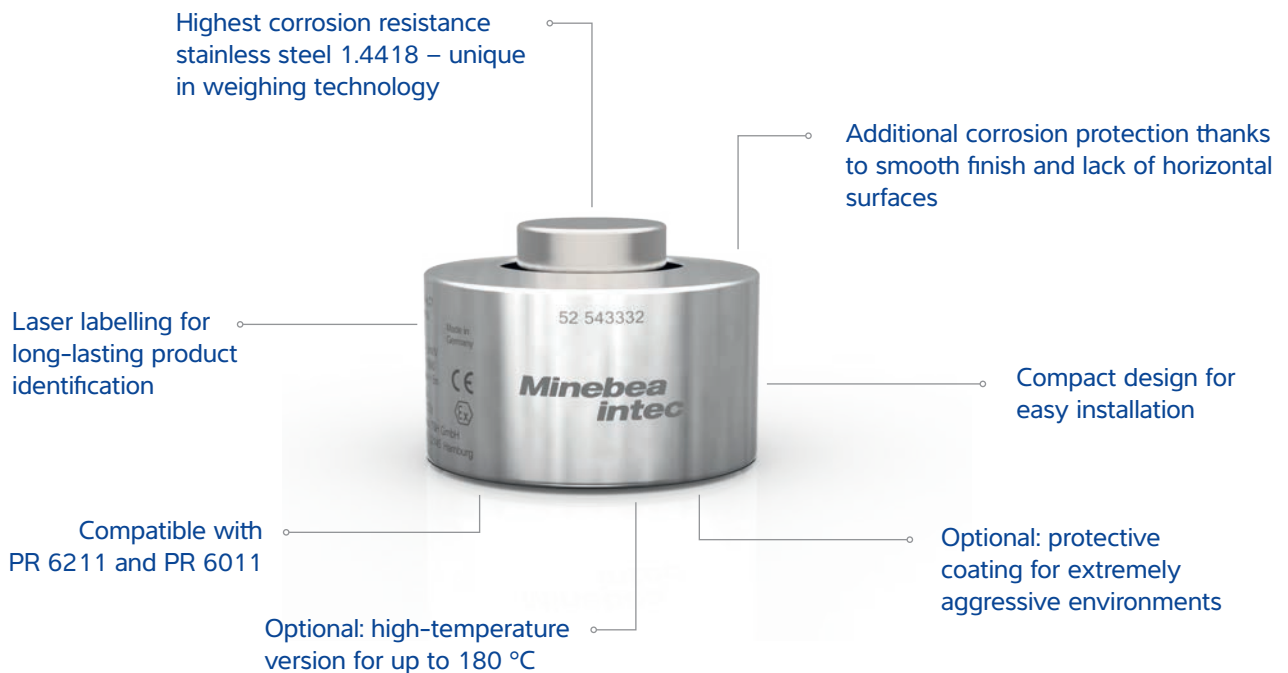
The PR 6212 load cell is a state-of-the-art product. This corrosion-resistant load cell has a compact design and also features high heat resistance. Its long product lifetime minimises downtime and ensures safer and more reliable processes in the chemical and steel industry.

Corrosion resistance and precision for demanding applications

- ⓘ Stainless steel 1.4418, unique in weighing technology, ensures **maximum corrosion resistance**. The PR 6212 is **also available with protective coating** for use in extremely aggressive environments.
- ⓘ The compact design **ensures a low system height** and allows for easy retrofitting of weighing technology.
- ⓘ The perfectly coordinated combination of the PR 6212 load cell and PR 6012 mounting kit meets all precision and handling requirements. The **inverted installation** provides additional corrosion protection for the load cell and is **simple and failure-free**.

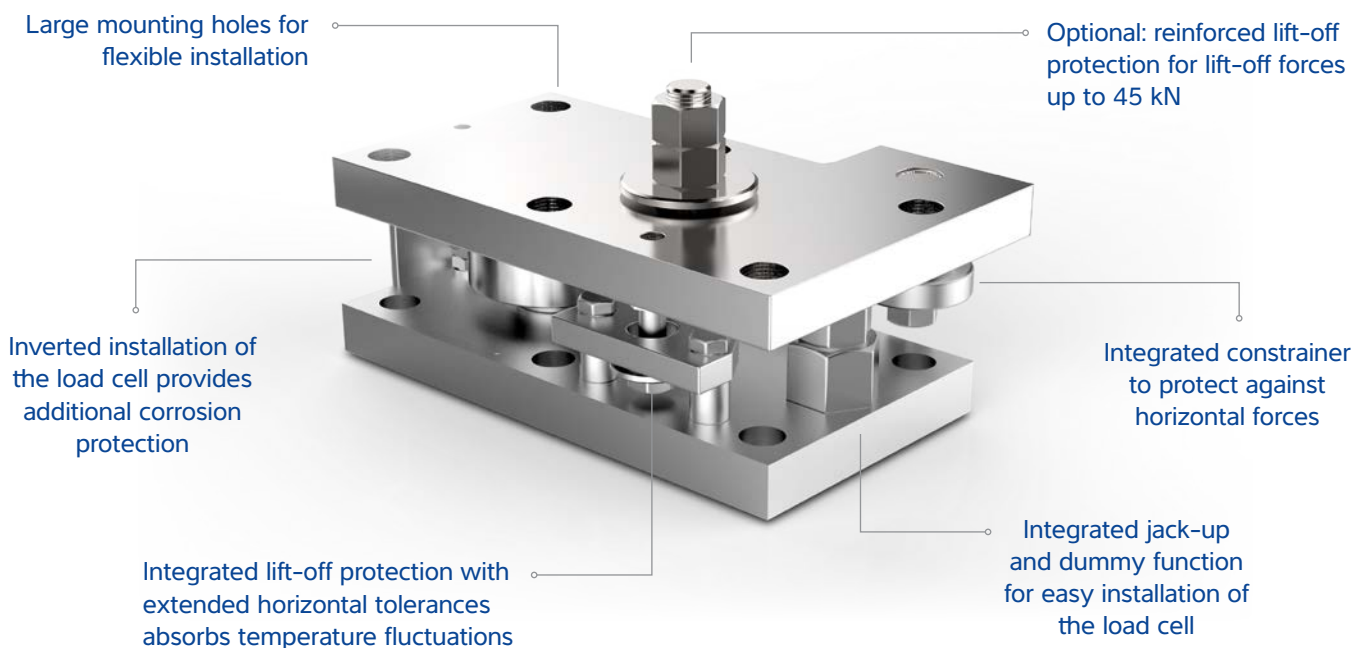
Less corrosion, more cost-efficiency

The combination of the PR 6212 load cell and PR 6012 mounting kit makes quick and easy installation possible and facilitates consistently reliable and precise measurement results in the chemical and steel industry.



Combined for reliable installation: PR 6212 and PR 6012 as a complete solution

The PR 6212 load cell is not only fully compatible with all mounting kits from the PR 6012 range but also with the previous PR 6011 range. The innovative complete solution ensures failure-free and efficient installation. Thanks to the integrated jack-up function there is no need for external lifting devices and even a load cell dummy is no longer required.



Load cell technical specifications

Optionally available with protective coating for especially aggressive environments and as a high-temperature version

| PR 6212 technical data | | | | | |
|--|---|--------------------|---|---|------------------------|
| Parameter | Description | Abbr. | PR 6212/.. LT ⁴⁾ (high-temperature load cell) | PR 6212/.. C1 ¹⁾ PR 6212/.. C1E ²⁾ PR 6212/.. C1-L ³⁾ (load cell with protective coating) | Unit |
| Accuracy class | | | 0,25 | 0,04 | % E _{max} |
| Minimum dead load | lowest limit of specified measuring range | E _{min} | 0 | 0 | % E _{max} |
| Maximum capacity | highest limit of specified measuring range | E _{max} | 0,5; 1; 2; 3; 5 | 0,5; 1; 2; 3; 5; 10 | t |
| Safe load limit | upper limit of measurements | E _{lim} | 150 | 150 | % E _{max} |
| Destructive load | danger of mechanical destruction | E _d | >300 | >300 | % E _{max} |
| Minimum LC verification | minimum load cell scale interval, v _{min} = E _{max} /Y | Y | - | 5000 | |
| Rated output | relative output at maximum capacity | C _n | 2 | 2 | mV/V |
| Tolerance on rated output | permissible deviation from rated output C _n | d _c | <1,5 | <0,25 | % C _n |
| Zero output signal | load cell output signal under unloaded condition | S _{min} | 0...2 | 0...2 | % C _n |
| Reproducibility | max. change in load cell output for repeated loading | ε _R | <0,1 | <0,01 | % C _n |
| Creep | max. change of output signal at E _{max} during 30 minutes | d _{cr} | <0,1 | <0,035 | % C _n |
| Linearity deviation | deviation from best straight line through zero | d _{lin} | <0,25 | <0,03 | % C _n |
| Hysteresis | max. difference in LC output between loading and unloading | d _{hy} | <0,25 | <0,035 | % C _n |
| Temperature effect on S _{min} | max. change of S _{min} per 10 K over BT referred to C _n | TK _{Smin} | <0,1 | <0,028 | % C _n /10 K |
| Temperature effect on C | max. change of C per 10 K over B _T referred to C _n | TK _C | <0,07 | <0,02 | % C _n /10 K |
| Input impedance | between supply terminals | R _{LC} | 1200 ±200 | 650 ±6 | Ω |
| Output impedance | between measuring terminals | R ₀ | 1200 ±6 | 610 ±1 | Ω |
| Insulation impedance | between measuring circuit and housing at 100 V _{DC} | R _{IS} | >5000 | >5000 | M Ω |
| Insulation voltage | between circuit and housing (PR 6212/..E only) | | - | 500 | V |
| Recommended supply voltage | to hold the specified performance | B _u | 4...24 | 4...24 | V |
| Max. supply voltage | permissible for continuous operation without damage | U _{max} | 32 | 32 | V |
| | PR 6212/..E | U _{max} | - | 25 | V |
| Nominal ambient temp. range | to hold the specified performance | B _T | -10...+155 | -10...+40 | °C |
| Service temperature range | permissible for continuous operation without damage | B _{Tu} | -30...+180 | -30...+95 | °C |
| Storage temperature range | without electrical and mechanical stress | B _{Ti} | -40...+180 | -40...+95 | °C |
| Permissible inclination | permissible inclination whilst maintaining the specified measurement accuracy | | 1 | 1 | angle in ° |
| Vibration resistance | resistance against oscillations (IEC 60068-2-6-Fc) | | 20 g, 100 h, 10...150 Hz | 20 g, 100 h, 10...150 Hz | |
| Ambient pressure impact | influence of ambient air pressure on S _{min} | PK _{Smin} | ≤70 | ≤60 | g/kPa |
| Nominal deflection | elastic deformation under maximum capacity | S _{nom} | <0,2 | <0,2 | mm |
| Material (sensor) | | | 1.4542 (DIN EN 10088-3) | 1.4418 (DIN EN 10088-3) | |
| Protection class | | | IP68 + IP69 | | |
| Cables | | | robust, flexible, shielded, length: 5 m | | |
| | | | PR 6212/.. LT PFA, colour: red, Ø 6 mm, 4 x 0,382 mm ² | PR 6212/.. C1 TPE, colour: grey, Ø 5 mm, 4 x 0,355 mm ² PR 6212/C1E TPE, colour: blue, Ø 5 mm, 4 x 0,382 mm | |
| Bending radius | | | fixed installation ≥50 mm, flexible installation ≥150 mm | | |

¹⁾ C1 = load cell with C1 measurement accuracy | ²⁾ C1-L = load cell with C1 measurement accuracy and special protective coating

³⁾ C1E = load cell with C1 accuracy for Ex applications | ⁴⁾ LT = high-temperature version

Mounting kit technical specifications

| PR 6012 technical data | | | | | | | | | |
|---------------------------------------|---------------------------|---|---|-----------------|---------------------|--|--------------------------------------|----------------------------------|--|
| Maximum capacity of PR 6212 load cell | Mounting kit/ accessories | Material | Description/comments | Mounting screws | Installation height | Max. permissible horizontal force (kN) | Max. permissible lift-off force (kN) | Maximum permissible eccentricity | Max. permissible vertical load without load cell |
| 500kg - 10t | PR 6012/01 N, S | Steel S235, stainless steel 1.4301 (AISI 304) | Mini FLEX | M8 | 80 mm | / | / | +/- 4 mm | / |
| | PR 6012/31 N, S | | Mini FLEXLOCK | M8 | 80 mm | 5 | / | +/- 4 mm | / |
| | PR 6012/41 N, S | | Mini FLEXLOCK; reinforced constrainer | M12 | 80 mm | 20 | / | +/- 4 mm | / |
| 500kg - 10t | PR 6012/02 N, S | Steel S235, stainless steel 1.4301 (AISI 304) | Maxi FLEX | M8 | 80 mm | / | 10 | +/- 4 mm | 5 t |
| | PR 6012/32 N, S | | Maxi FLEXLOCK | M8 | 80 mm | 5 | 10 | +/- 4 mm | 5 t |
| | PR 6012/42 N, S | | Maxi FLEXLOCK; reinforced constrainer | M12 | 80 mm | 20 | 10 | +/- 4 mm | 5 t |
| | PR 6012/53 S | Stainless steel A2-70 | Optional extension of lift-off protection (M12) for PR 6012/31 and PR 6012/32 | / | / | / | 25 | - | / |
| | PR 6012/54 S | | Optional extension of lift-off protection (M16) for PR 6012/41 and PR 6012/42 | / | / | / | 45 | - | / |
| | PR 6012/63 S | Steel S235, stainless steel 1.4301 (AISI 304) | Pivot for PR 6212/ 500 kg - 10 t | M8 | 80 mm | / | / | / | / |

Ordering information

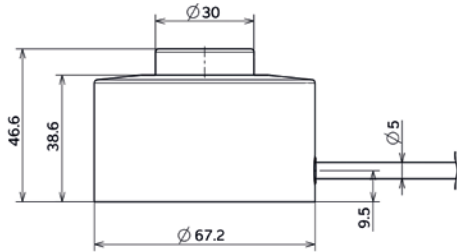
| PR 6212 load cell | | | | | |
|---------------------|--------------|------------------|--------------|-------------------|--------------|
| Type | Order number | Type | Order number | Type | Order number |
| PR 6212/500 kg C1 | 940521201150 | PR 6212/2 t C1 | 940521201220 | PR 6212/5 t C1 | 940521201250 |
| PR 6212/500 kg C1E | 940561201150 | PR 6212/2 t C1E | 940561201220 | PR 6212/5 t C1E | 940561201250 |
| PR 6212/500 kg C1-L | 940581201150 | PR 6212/2 t C1-L | 940581201220 | PR 6212/5 t C1-L | 940581201250 |
| PR 6212/500 kg LT | 940541201150 | PR 6212/2 t LT | 940541201220 | PR 6212/5 t LT | 940541201250 |
| PR 6212/1 t C1 | 940521201210 | PR 6212/3 t C1 | 940521201230 | PR 6212/10 t C1 | 940521201310 |
| PR 6212/1 t C1E | 940561201210 | PR 6212/3 t C1E | 940561201230 | PR 6212/10 t C1E | 940561201310 |
| PR 6212/1 t C1-L | 940581201210 | PR 6212/3 t C1-L | 940581201230 | PR 6212/10 t C1-L | 940581201310 |
| PR 6212/1 t LT | 940541201210 | PR 6212/3 t LT | 940541201230 | | |

| PR 6012 mounting kit | | |
|---|---|--------------|
| Mounting kits without integrated constrainer | | |
| Type | Description | Order number |
| PR 6012/01 N | Mini FLEX mounting kit for PR 6212/500 kg - 10 t | 940536012011 |
| PR 6012/01 S | Mini FLEX mounting kit for PR 6212/500 kg - 10 t, stainless steel | 940536012012 |
| Mounting kits with integrated constrainer | | |
| Type | Description | Order number |
| PR 6012/31 N | Mini FLEXLOCK mounting kit for PR 6212/500 kg - 10 t | 940536012311 |
| PR 6012/31 S | Mini FLEXLOCK mounting kit for PR 6212/500 kg - 10 t, stainless steel | 940536012312 |
| PR 6012/41 N | Mini FLEXLOCK mounting kit for PR 6212/500 kg - 10 t | 940536012411 |
| PR 6012/41 S | Mini FLEXLOCK mounting kit for PR 6212/500 kg - 10 t, stainless steel | 940536012412 |
| Mounting kit with additional functions and without integrated constrainer | | |
| Type | Description | Order number |
| PR 6012/02 N | Maxi FLEX mounting kit for PR 6212/500 kg - 10 t | 940536012021 |
| PR 6012/02 S | Maxi FLEX mounting kit for PR 6212/500 kg - 10 t, stainless steel | 940536012022 |
| Mounting kit with additional functions and integrated constrainer | | |
| Type | Description | Order number |
| PR 6012/32 N | Maxi FLEXLOCK mounting kit for PR 6212/500 kg - 10 t | 940536012321 |
| PR 6012/32 S | Maxi FLEXLOCK mounting kit for PR 6212/500 kg - 10 t, stainless steel | 940536012322 |
| PR 6012/42 N | Maxi FLEXLOCK mounting kit for PR 6212/500 kg - 10 t | 940536012421 |
| PR 6012/42 S | Maxi FLEXLOCK mounting kit for PR 6212/500 kg - 10 t, stainless steel | 940536012422 |
| PR 6012/53 S | Optional extension of lift-off protection (M12) for PR 6012/31 and PR 6012/32 | 940536012532 |
| PR 6012/54 S | Optional extension of lift-off protection (M16) for PR 6012/41 and PR 6012/42 | 940536012542 |
| PR 6012/63 S | Pivot for PR 6212/500 kg - 10 t | 940536012632 |

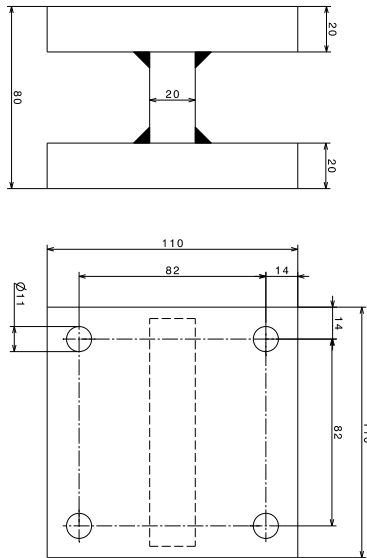
PR 6012/X1 mounting kit dimensional drawings

The PR 6012/X1 mounting kit was developed for use in the toughest conditions. The inverted installation of the load cell combined with the special high-quality material of the mounting kit make a complete solution capable of withstanding chemically aggressive, corrosive environments. The measurement results are also not affected by temperature fluctuations thanks to large lateral tolerances and the integrated horizontal constrainer. What's more, the mounting kit was designed to be especially easy and reliable to install.

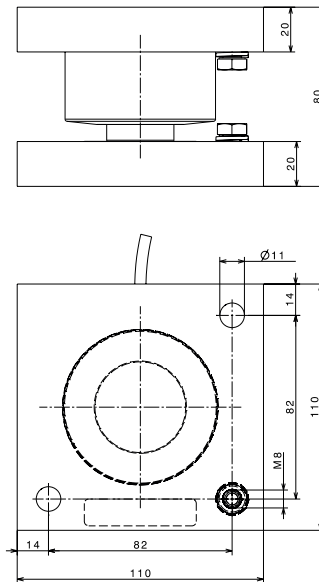
PR 6212



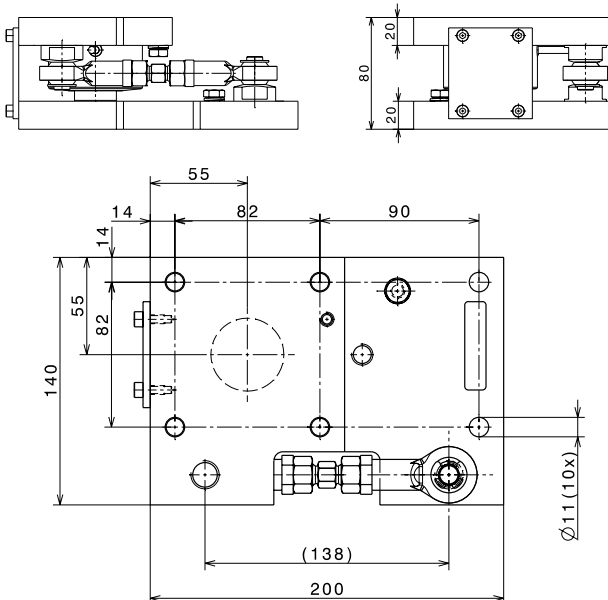
PR 6012/63 S



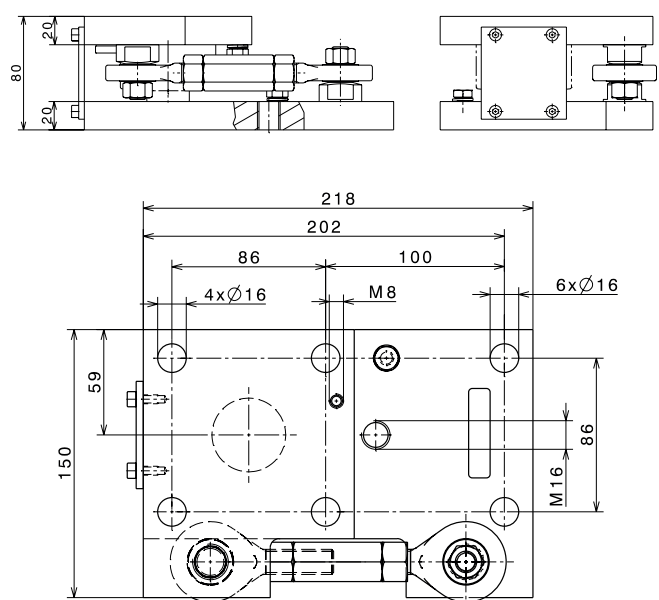
PR 6012/01 N, S



PR 6012/31 N, S



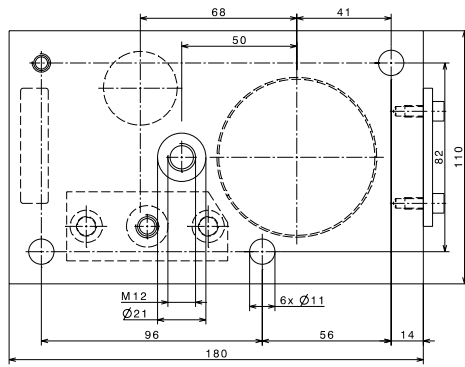
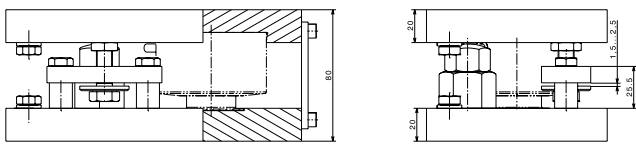
PR 6012/41 N, S



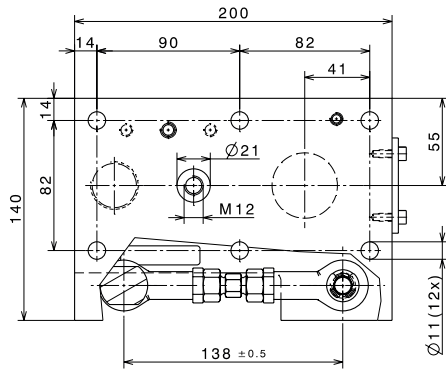
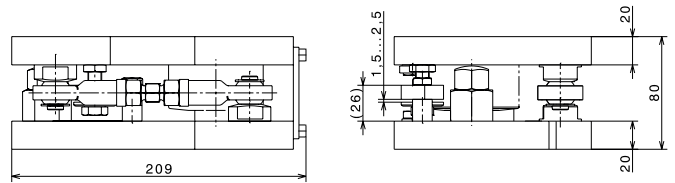
PR 6012/X2 mounting kit dimensional drawings

In addition to the features of the PR 6012/X1 the PR 6012/X2 mounting kit range also has extensive additional functions that make installation and operation of the weighing technology easier. The integrated jack-up function eliminates the need for external lifting devices, while the integrated dummy function makes easy installation possible – without damaging the sensitive load cell. Lift-off protection up to 45 kN effectively prevents the vessel from tipping.

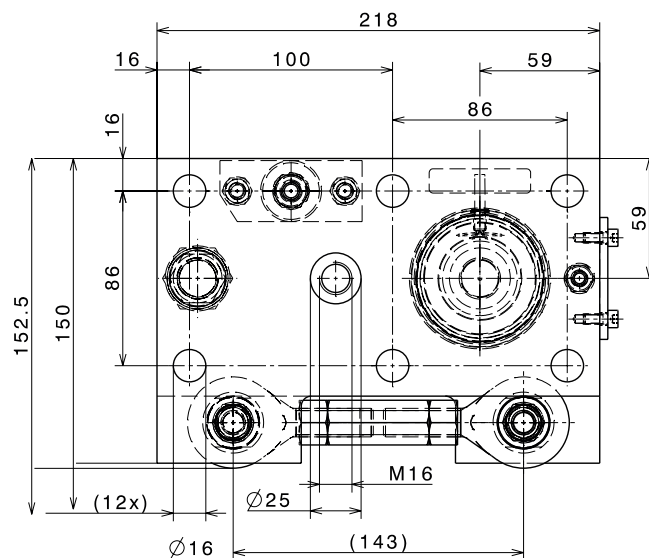
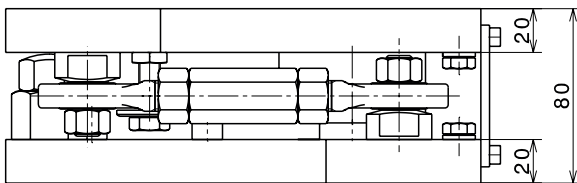
PR 6012/02 N, S



PR 6012/32 N, S



PR 6012/42 N, S



Approvals

Scope of validity:

PR 6212/... C1E (500 kg ... 10 t)

| Certificates for the load cell | | | |
|--------------------------------|--|--|-------------------------------|
| Zone | Labeling | Certificate number | for |
| 0 and 1 | II 1G Ex ia IIC T6 Ga Ex ia IIC T6 Ga | BVS 16 ATEX E 005 IECEX BVS 16.0005 | PR 6212/..E only |
| 2 | II 3G Ex nA IIC T6 Gc | Certificate manufacturer | all PR 6212 except LT version |
| 22 | II 3D Ex tc IIIC T85 °C Dc | Certificate manufacturer | all PR 6212 except LT version |
| | IS / I,II,III / 1 / ABCDEFG / T4A Ta= -30 °C to 70 °C; T5 Ta= -30 °C to 55 °C - 4012 101 5688; Entity NI / I,II,III / 2 / ABCDEFG / T4A Ta= -30 °C to 70 °C; T5 Ta= -30 °C to 55 °C - 4012 101 5688; NIFW | FM - Original project ID: 3001200 | all PR 6212 except LT version |
| | IS / I,II,III / 1 / ABCDEFG / T4A Ta= -30 °C to 70 °C; T5 Ta= -30 °C to 55 °C - 4012 101 5688; Entity NI / I / 2 / ABCD / T4A Ta= -30 °C to 70 °C; T5 Ta= -30 °C to 55 °C - 4012 101 5688; NIFW DIP / II,III / 2 / EFG / T4A Ta= -30 °C to 70 °C; T5 Ta= -30 °C to 55 °C - 4012 101 5688; NIFW | FM - Canada project ID: 3053046 | all PR 6212 except LT version |

The technical data given are intended solely as a product description and should not be conceived as guaranteed properties in the legal sense.

Specifications subject to change without notice.

Date 11/2016

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