

PR 6201 Compression Column Type Load Cell

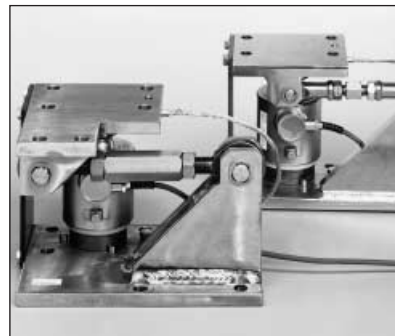
2 t ... 50 t
500 kg ... 300 t
500 kg ... 100 t

Type C3/C1.5
Type LA, D1/N
Type L

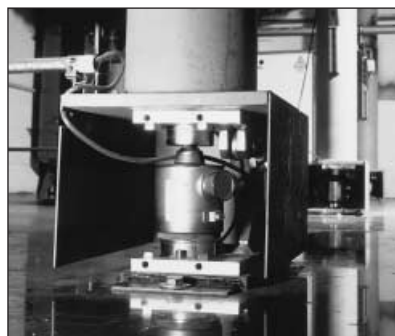
global weighing technologies



- Easy to install
- Stainless steel housing
- Hermetically sealed, to IP68 (can be submerged in water to a depth of 1.5m for 10.000 hrs.)
- CENELEC Ex-version available
- Wide temperature range
- Resistant against vibration
- Weights and Measures approval (acc. to OIML R60, NTEP)
- Easy corner adjustment by matched load cell outputs
- Best overvoltage protection
- 4 to 20 mA output signal as option (LA version)



Factory Mutual System





| Nominal Load E_{max} | Type | Order Codes | | | | | Packing Size mm | Weight | |
|---------------------------|--------------|-------------|------|-------|---------------------|-----------------|--------------------|---------|----------|
| | | Version | | | | | | net | shipping |
| 0.5 t | PR 6201/52.. | /..LA | /..L | /..D1 | /..D1E | 240 x 240 x 155 | 01.9 kg | 2.8 kg | |
| 1 t | PR 6201/13.. | /..LA | /..L | /..D1 | /..D1E | 240 x 240 x 155 | 01.9 kg | 2.8 kg | |
| 2 t | PR 6201/23.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 01.9 kg | 2.8 kg | |
| 3 t | PR 6201/33.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 02.0 kg | 2.9 kg | |
| 5 t | PR 6201/53.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 02.0 kg | 2.9 kg | |
| 10 t | PR 6201/14.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 02.5 kg | 3.4 kg | |
| 20 t | PR 6201/24.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 04.2 kg | 5.1 kg | |
| 30 t | PR 6201/34.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 04.6 kg | 5.5 kg | |
| 50 t | PR 6201/54.. | /..LA | /..L | /..D1 | /..C3 /..D1E /..C3E | 240 x 240 x 155 | 04.2 kg | 5.1 kg | |
| 100 t | PR 6201/15.. | /..LA | /..L | /..N | /..NE | 280 x 280 x 350 | 11.2 kg | 12.9 kg | |
| 200 t | PR 6201/25.. | /..LA | /..L | /..N | /..NE | 340 x 350 x 470 | 26.0 kg | 29.0 kg | |
| 300 t | PR 6201/35.. | / | / | /..N | /..NE | 340 x 350 x 470 | 26.0 kg | 29.0 kg | |

Technical Data

| | | LA* | L | D1/N | C3 (-30t) | C3 (50t) | |
|----------------------------------|---|----------------|---|----------------------|----------------------------|-----------|----------------------------|
| Accuracy class | 500 kg – 50 t 100 t, 200 t, 300 t | 0.25 0.5 | 0.25 0.5 | 0.04 0.06 | 0.015 | 0.015 | % E_{max} % E_{max} |
| Minimum dead load | lowest limit of specified measuring range | E_{min} | | 0 | | | % E_{max} |
| Maximum capacity | highest limit of specified measuring range | E_{max} | | s. table | | | |
| Max. usable load | upper limit for measurements | E_u | | 200 | 150 | | % E_{max} |
| Destructive load | danger of mechanical destruction | E_d | | > 500 | 300 | | % E_{max} |
| Minimum LC verification interval | minimum load cell verification interval, $v_{min} = E_{max}/Y$ for $E_{max}=1000$ kg for $E_{max}=500$ kg | Y Y Y | | 5000 4000 2000 | 14000 | | |
| Rated output | relative output at nominal load | C_n | 16 mA | 1.0 | 1.0 | 1.0 | 2.0 mV/V |
| Tolerance on rated output | permissible deviation from rated output | d_c | < 1.0 | < 1.0 | < 0.25 | < 0.07 | < 0.07 % C_n |
| Zero output signal | load cell output signal under unloaded condition | S_{min} | 4 mA | < 2.0 | < 1.0 | < 1.0 | % C_n |
| Repeatability error | max. change in load cell output for repeated loading | ϵ_R | < 0.02 | < 0.02 | < 0.01 | < 0.005 | < 0.005 % C_n |
| Creep, during 30 min. | max. change in load cell output under nominal load | d_{cr} | < 0.05 | < 0.05 | < 0.03 | < 0.015 | < 0.015 % C_n |
| Non - Linearity | max. deviation from best straight line through zero 100 t, 200 t, 300 t | d_{lin} | < 0.25 | < 0.25 | < 0.03 | < 0.01 | < 0.01 % C_n |
| Hysteresis | max. difference in load cell output when loading from zero to nominal load and unloading back to zero for 200 t, 300 t | d_{hy} | < 0.25 | < 0.25 | < 0.04 | < 0.015 | < 0.015 % C_n |
| Temperature effect on S_{min} | max. change of $S_{min}/10K \Delta T$ over B_T referred to C_n 100 t, 200 t, 300 t | $TK_{S_{min}}$ | < 0.15 | < 0.15 | < 0.028 | < 0.01 | < 0.01 % $C_n/10K$ |
| Temperature effect on C | max. change of C /10K ΔT over B_T referred to C_n | TK_c | < 0.2 | < 0.2 | < 0.06 | < 0.01 | < 0.01 % $C_n/10K$ |
| Input impedance | between supply terminals | R_{IC} | - | 650 + 50 | | 650 ± 6 | Ω |
| Output impedance | between measuring terminals | R_0 | - | 610 ± 3 | 610 ± 1 | 610 ± 0.5 | Ω |
| Insulation impedance | between measuring circuit and housing at 100V _{DC} | R_{IS} | - | | >5000 x 10 ⁶ | | Ω |
| Insulation voltage | between circuit and housing, PR 6201/..E only | - | | | 500 | | V |
| Recommended supply voltage | to hold the specified performance | B_u | 20 ... 28 | | 4 ... 24 | | V |
| Max. supply voltage | permissible for continuous operation without damage | U_{max} | 28 | | 32 | | V |
| Nominal ambient temp. range | to hold the specified performance | B_T | | | -10 ... +55 | | °C |
| Usable ambient temp. range | permissible for continuous operation without damage | B_{Tu} | -30...+55 | | -30 ... +95 | | °C |
| Storage temperature range | Transportation and storage | B_{Tl} | -4...+70 | | -40 ... +95 | | °C |
| Permissible eccentricity | permissible displacement from nominal load line | S_{ex} | | | 10 | | mm |
| Vibration resistance | resistance against oscillation (IEC 68-2-6 Fe) | - | | | 20 g, 100 h, 10 ... 150 Hz | | |
| Air pressure effect | influence of ambient air pressure on S_{min} | $PK_{S_{min}}$ | | | 250 | | g/kPa |
| Nominal deflection | max. elastic deformation under nominal load | s_{nom} | bis 30 t < 0.3 / 50 t < 0.4 / 100 t < 1.0 / 200 t < 1.6 / 300 t < 2.4mm | | | | |

Definitions acc. to VDI / VDE 2637

* Data for LA version are typical values. The technical data given here serve only as a product description and must not be interpreted as guaranteed characteristics in the legal sense.

Restoring force

For each mm of movement, that the top of the load cell shifts from the vertical axis, a horizontal restoring force of 0.5% of the vertical applied load is generated.

Load cell housing construction

Deep draw pulled housing, membrane and measuring element hermetically sealed, welded, filled with inert gas.

Material-No.: 304 S15 (B.S.)
1.4301 (DIN 17 440)

Protection

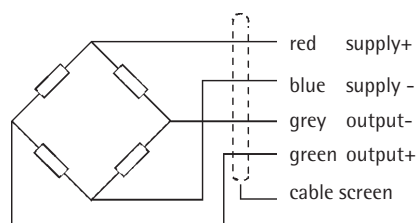
IP68, IEC 529 (equivalent to NEMA 6). The load cell can be submerged in water to a depth of 1.5m for 10,000 hours.

Certificate of conformity

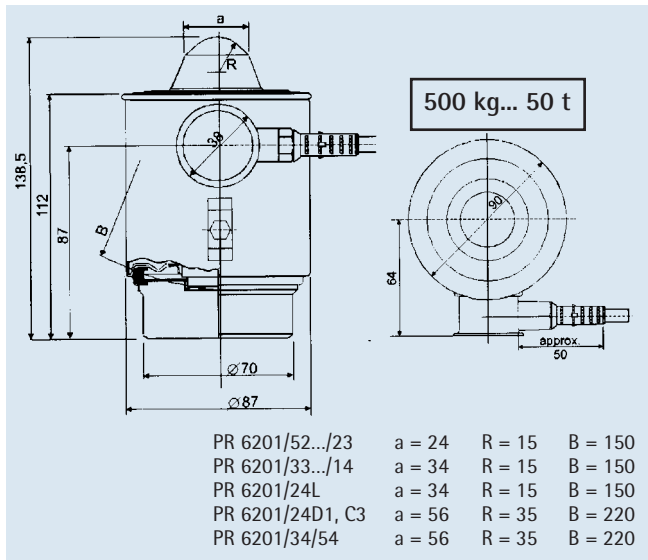
Range of recognition: PR6201/..E
Feature: EEx ib IIC T6
Registration number: PTB Nr. Ex-92.C.2137

Cable

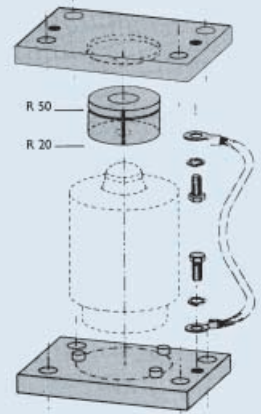
robust, flexible, screened
TPE Thermopl. Elastomer
for PR 6201/..E
diameter: 5 mm, wires 4x 0.35mm²
length up to 10t: 5 m
from 20t: 12 m
bending radius
fixed installation: 50mm
with repeated bending: 150mm



| | |
|---------------------|-----------|
| 20 ... 28V GND | |
| GND | supply+ |
| 2...10 mA | 4...20 mA |
| For LA version only | |

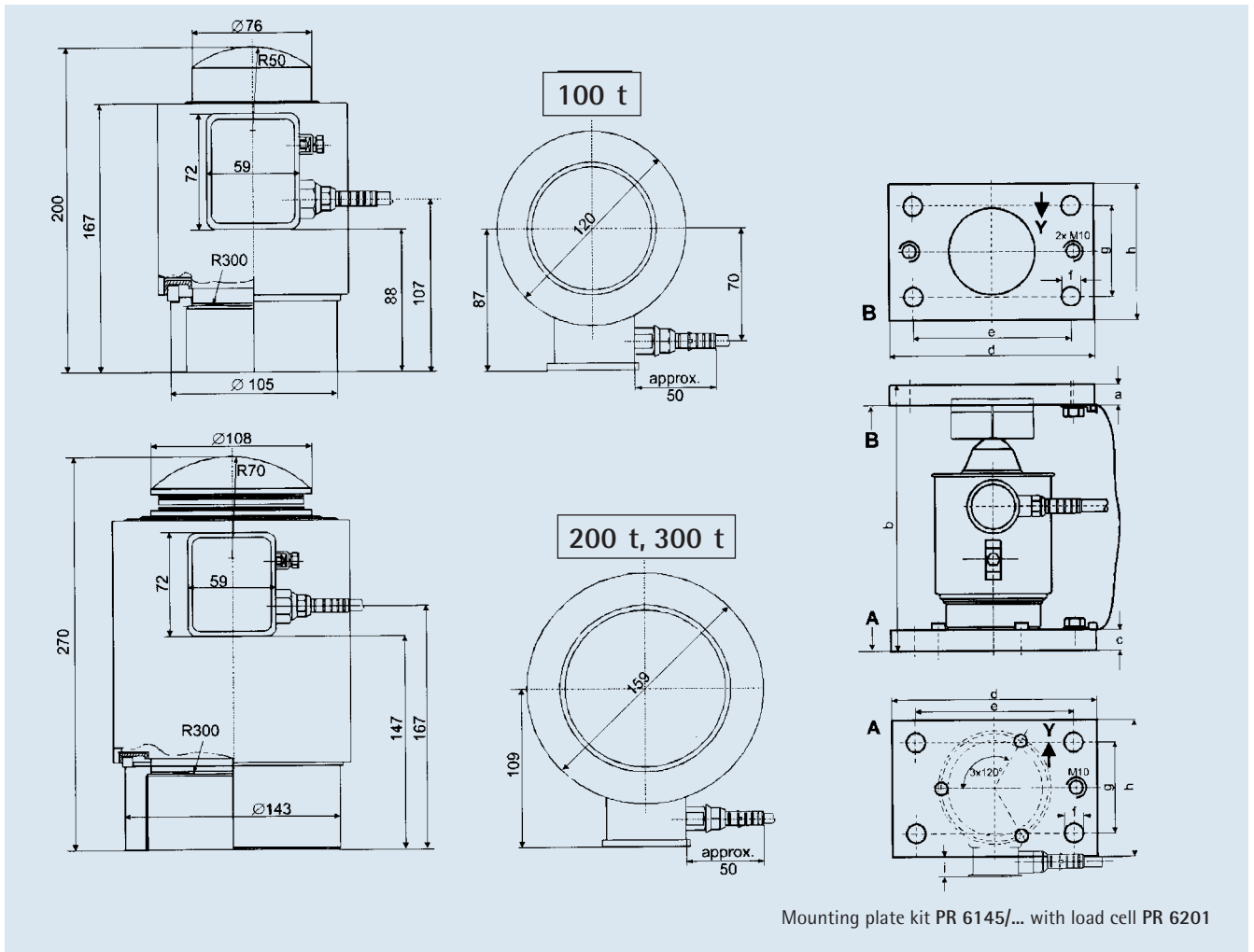


For load cells 2 t ... 20 t L use smaller indent (R20), for 20 t D1, 20 t C3, 30 t and 50 t use larger indent (R50), on top of loadcells

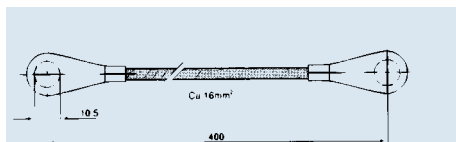


Mounting plate kits:

PR 6145/00N in galvanized steel yellow chromated surface.
 PR 6145/00S in stainless steel, BS 304 S15, 1.4301 DIN 17440.
 If PR 6145/00S is used with 20t D1, 20t C3, 30t or 50t, you have to order PR 6143/54S separately!



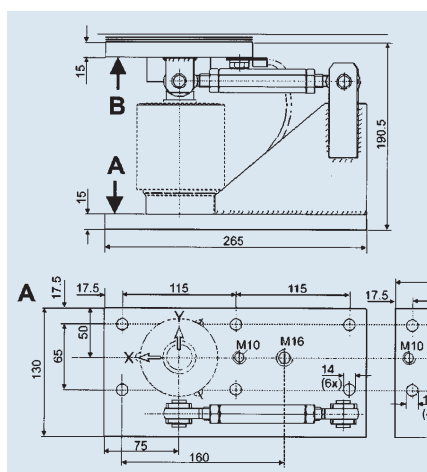
Mounting plate kit PR 6145/... with load cell PR 6201



Flexible copper strap supplied with each load cell.

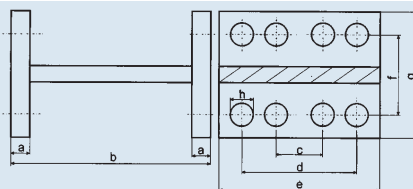
All dimensions in mm

| Type | Nominal Load | a | b | c | d | e | f | g | h | i |
|------------|----------------|----|-------|----|-----|-----|----|-----|-----|----|
| PR 6145/00 | 0.5 t ... 50 t | 15 | 190.5 | 15 | 150 | 115 | 14 | 65 | 100 | 18 |
| PR 6145/08 | 100 t | 30 | 290 | 30 | 180 | 145 | 18 | 95 | 130 | 18 |
| PR 6145/10 | 200 t, 300 t | 40 | 385 | 40 | 220 | 185 | 24 | 135 | 180 | 14 |

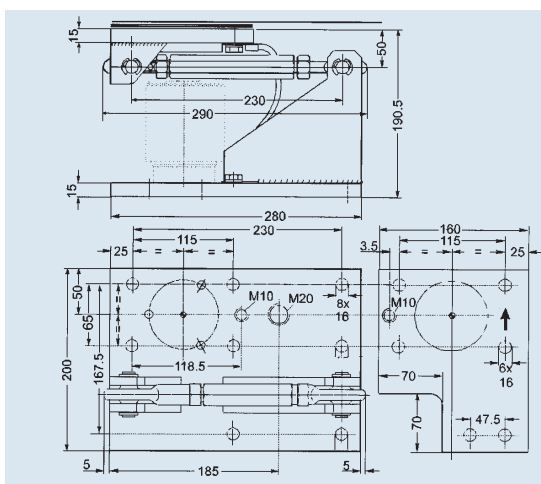


PR 6143/00 "Mini Flexlock" with load cell PR 6201 (suitable for side forces up to 25 kN)

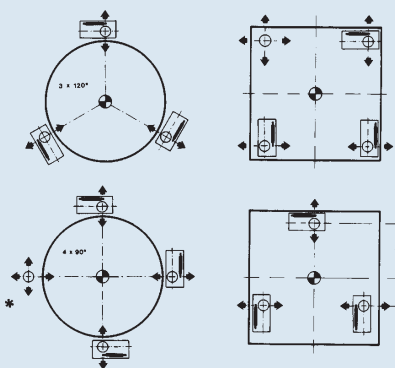
| Type | Dimensions in mm | | | | | | | |
|------------|------------------|-------|-----|-----|-----|-----|-----|---------|
| | a | b | c | d | e | f | g | h |
| PR 6101/53 | 15 | 190.5 | - | 115 | 150 | 65 | 100 | 14 (4x) |
| PR 6101/24 | 15 | 190.5 | - | 115 | 150 | 65 | 100 | 14 (4x) |
| PR 6101/54 | 15 | 190.5 | 115 | 199 | 250 | 65 | 100 | 14 (8x) |
| PR 6101/15 | 30 | 290 | 49 | 145 | 300 | 95 | 130 | 18 (8x) |
| PR 6101/25 | 40 | 385 | 185 | 375 | 450 | 135 | 180 | 24 (8x) |



PR 6101/... Pivots
Order Number please refer to the further options table



PR 6143/10 "Mini Flexlock" with load cell PR 6201 (suitable for side forces up to 50 kN)



Location of load cell and constrainers (examples)
*) This weighing point must not be constrained, use mounting plate kit PR 6145/00

Further options

| | |
|------------------------------------|---|
| Stainless steel cable junction box | material 1.4404, for all industrial, intrinsically safe and W&M applications |
| Cable junction box | for all industrial, intrinsically safe and W & M applications |
| Plastic Cable junction box | for all industrial applications, max. eight load cells |
| Extension cable | for all applications |
| Extension cable | for all Ex applications |
| Loaddisk | normal version for 0.5 up to 50t |
| Stainless steel Loaddisk | material 1.4542 (DIN 17440) for 0.5 up to ,50 t |
| Stainless steel Bottomdisk | material 1.4542 (DIN 17440) for PR 6201 up to 20 t L nominal load |
| Stainless steel Bottomdisk | material 1.4542 (DIN 17440) for PR 6201 20 t D1, 20 t C3, 30 t or 50 t nominal load |
| steel plates to mount all PR 6201 | up to 50t nominal load |
| Stainless steel Mounting kit | material 1.4301, for 20t D1, 20t C3, 30t or 50t nominal load order PR 6143/54S separately |
| Mini Flexlock | mounting plate kit with built in constrainer up to 25 kN horizontal forces |
| Stainless steel Mini Flexlock | material 1.4301, up to 20 t nominal load and up to 25 kN horizontal forces |
| Flexlock | stronger version with built in constrainer up to 50 kN horizontal forces |
| Stainless steel Mini Flexlock | material 1.4301, up to 50 t nominal load and up to 50 kN horizontal forces |
| Mounting plate kit | suitable for 100 t load cells |
| Mounting plate kit | suitable for 200 t, 300 t load cells |
| Horizontal constrainers | withstands horizontal forces up to 200 kN |
| Table for the possible pivots | up to 5 t nominal load |

to use together with up to 20 t nominal load

PR 6201 load cell: up to 50 t nominal load

up to 100 t nominal load
up to 200 t nominal load

| Dimensions WxHxD | Type | Order Number |
|------------------|----------------|------------------|
| (200x160x100)mm | PR 6130/60S | 9405 361 30602 |
| (200x160x100)mm | PR 6130/60N | 9405 361 30604 |
| (200x120x 75)mm | PR 6130/08 | 9405 361 30081 |
| D=11mm | PR 6135 | 9405 361 35. . 2 |
| D=11mm | PR 6136 | 9405 361 36. . 1 |
| | PR 6143/50N | 9405 361 43501 |
| | PR 6143/50S | 9405 361 43502 |
| | PR 6143/24S | 9405 361 43242 |
| | 9405 361 43542 | Mounting kit |
| | PR 6145/00N | 9405 361 45001 |
| | PR 6145/00S | 9405 361 45002 |
| | PR 6143/00N | 9405 361 43001 |
| | PR 6143/00S | 9405 361 43002 |
| | PR 6143/10N | 9405 361 43101 |
| | PR 6143/10S | 9405 361 43102 |
| | PR 6145/08 | 9405 361 45081 |
| | PR 6145/10 | 9405 361 45101 |
| | PR 6152/02 | 9405 361 52021 |
| normal steel | PR 6101/53N | 9405 561 01531 |
| stainless steel | PR 6101/53S | 9405 561 01532 |
| normal steel | PR 6101/24N | 9405 561 01241 |
| stainless steel | PR 6101/24S | 9405 561 01242 |
| normal steel | PR 6101/54N | 9405 561 01541 |
| stainless steel | PR 6101/54S | 9405 561 01542 |
| normal steel | PR 6101/15N | 9405 561 01151 |
| normal steel | PR 6101/25N | 9405 561 01251 |

Autoryzowany przedstawiciel GWT GLOBAL Weighing Technology □

P.H.U. WEGA Andrzej Zubka □

80-299 Gdansk Osowa □

ul. Kasjopei 30A □

Dział handlowy Tel. (058) 554-52-29 □

Fax. (058) 522-90-05 □

e-mail: wega@gd.onet.pl □

http://www.phu-wega.pl



GWT Global Weighing Technologies GmbH

Meiendorfer Straße 205

D-22145 Hamburg, Germany

Tel. (+49) 40 679 60-303

Fax (+49) 40 679 60-383

www.global-weighing.com

