

## Pre-assembled load cell units

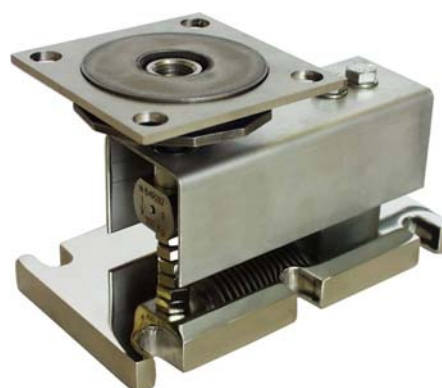
- for industrial scales with small and medium weighing ranges
- for industrial scales with low or high horizontal straining
- for hopper scales, weighing frames and silo or tank scales

### Load cell **LWE-B**

Nom. loads  
 20 ... 200 kg



- universally suited for all industrial scales with low horizontal straining e.g. hopper scales for liquids and bulk goods, weighing platforms and frames
- good horizontal stabilisation due to integrated metal rubber element
- easy assembly without additional construction
- flat design
- approved for verifiable commercial scales to EG, OIML and PTB
- also available in explosion-protected version (with ATEX approval)
- precision class 0.02 %



The shallow design permits exceptionally flat mounting. The corrosion-proof high-grade steel load cells are ideally suited for rugged environmental conditions.

Article number	Nominal load (kg)	Dimensions (WxHxD) mm	Weight (kg)	Connection lead (m)
LWEB0.020.000	20	90 x 102.5 x 170	3.2	3
LWEB0.050.000	50			
LWEB0.100.000	100			
LWEB0.200.000	200			

Article number	Designation	Description
LWEB0.000.010	Weld plate	for LWE-B
LWEPB.003.000	Dummy bearing unit	for nominal loads 0.5 to 3 t, not for verifiable scales
LWEPB.010.000	Dummy bearing unit	for nominal loads up to 10 t, not for verifiable scales
LWEPB.030.000	Dummy bearing unit	for nominal loads up to 30 t, not for verifiable scales
LWEPB.050.000	Dummy bearing unit	for nominal loads up to 50 t, not for verifiable scales

Precision: composite error 0.018 % (in relation to the load cell nominal load)

### Features

- compact, pre-assembled units with versatile implementation options in industrial scale construction
- ideally suited for high precision requirements, even in unfavourable environmental conditions
- Standardised electrical connection data

## LWE-B technical data

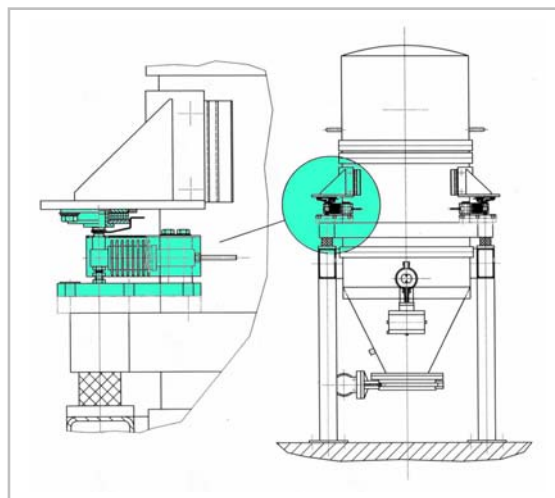
- Nominal temperature -10 to +40°C
- Service temperature -20 to +70°C
- Storage temperature -50 to +85°C
  
- Used load (for nominal loads up to 30 t) 150 %
- Overload stop loadable up to 1000 kg
- Integrated overload protection activates at 120 %
  
- Supply voltage 10 to 30 V
- Characteristic value 2 mV/V
- Input / output resistance approx. 360 W
- Connection lead 6 x 0.22 mm<sup>2</sup>
  
- Main body made of steel ST37, ST52, galvanized,  
Neoprene synthetic rubber
- Load cell made of rustproof high grade steel,  
welded hermetically tight  
protection class IP 67

See separate LWE-B dimension sheets /manuals for further technical data and mounting specifications.

## Parallel connection of several LWE-Bs

Any number of LWE-Bs per scale may be connected in parallel, without exceeding the nominal load of each individual load cell unit. Connection is performed in a terminal box in the vicinity of the scale with an unchanged characteristic value (2mV/V).

## Mounting example LWE-B



## Load cell unit **LWE-P**

**Nom. loads**  
**0.5 ... 50 t**



- **universal suitability for all industrial scales with low horizontal stressing, e.g. for hopper scales for liquids and bulk goods, agitator tank scales, weighing platforms and frames, outdoor silos (not wind-stressed or with insignificant wind forces)**
- **for incoming goods and loading as well as blending charge systems**
- **good horizontal stabilisation due to integrated metal rubber element**
- **easy assembly without additional construction, flat design**
- **approved for verifiable commercial scales according to EG, OIML and PTB**
- **precision class 0.02 % (0.08 %)**



The flat design permits exceptionally shallow installation. The corrosion-proof high grade steel load cells are ideally suited to rugged environmental conditions.

Article number	Nominal load (t)	Dimensions (WxHxD) mm	Version	Weight (kg)	Connection lead (m)
LWEP1.000.500	0.5	90 x 70 x 90	LWE-P1 resolution 1000 d	1.9	3
LWEP1.001.000	1			1.9	3
LWEP1.002.000	2			2.3	6
LWEP1.003.000	3			2.3	6
LWEP1.010.000	10			160 x 138 x 160	12
LWEP1.030.000-01	30	245 x 176 x 245	LWE-P3 resolution 3000 d	38	16 (10)
LWEP1.050.000	50	245 x 176 x 245		46	16 (10)
LWEP3.000.500-01	0,5	90 x 70 x 90		1.9	3
LWEP3.001.000-01	1			1.9	3
LWEP3.002.000-01	2			2.3	6
LWEP3.003.000-01	3		2.3	6	
LWEP3.010.000-01	10		160 x 138 x 160	12	10
LWEP3.030.000-01	30	245 x 176 x 245	LWE-P3 resolution 3000 d	38	16 (10)
LWEP3.050.000-01	50	245 x 190 x 245		46	16 (10)

Precision: composite error LWE-P1 0.080 % - LWE-P3 0.018 % (in relation to the load cell nominal load)

## Features

- compact, pre-assembled units with versatile implementation options in the industrial scale construction sector
- ideally suited for high precision requirements, even in unfavourable environmental conditions
- standardised electrical connection data

## Technical data

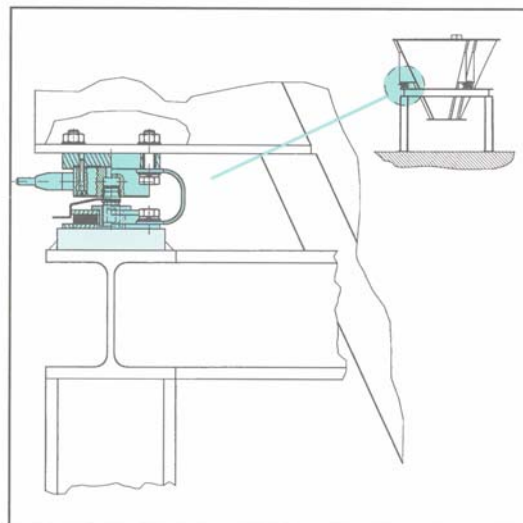
- Nominal temperature -10 to +40°C
- Service temperature -10 to +70°C
- Storage temperature -50 to +95°C
  
- Smallest weighing range 15 % (in relation to the nominal load)
- Used load (for nominal loads up to 30 t) 150 %
- Overload protection (for nominal loads up to 3 t) > 150 %
  
- Supply voltage 10 to 30 V
- Characteristic value 2 mV/V
- Input / output resistance approx. 1 kΩ
- Connection lead 6 x 0.22 mm<sup>2</sup>
  
- Main body made of steel ST37, ST52, galvanized,  
Neoprene synthetic rubber
- Load cell made of rustproof high grade steel,  
welded hermetically tight  
protection class IP 68

See separate LWE-P dimension sheets /manuals for further technical data and mounting specifications.

### Parallel connection of several LWE-Ps

Any number of LWE-Bs per scale may be connected in parallel, without exceeding the nominal load of each individual load cell unit. Connection is performed in a terminal box in the vicinity of the scale with an unchanged characteristic value (2mV/V).

### Mounting example LWE-P



## Load cell unit **LWE-PL**

Nom. loads  
0.5 ... 100 t



- **universal suitability for all industrial scales with high horizontal straining e.g. outdoor silos or tanks (wind stressed), mixers, agitator tanks etc. with relatively large drives and change in gravity due to mixed goods movements**
- **for incoming goods and loading as well as blending mixed loads**
- **high horizontal load capacity due to integrated, variable guiding systems**
- **computer interface for transparency in the goods management**
- **easy assembly without additional constructions**
- **approved for verifiable commercial scales to EG, OIML and PTB**
- **precision class 0.02 %**



The flat design permits exceptionally shallow installation. The corrosion-proof high grade steel load cells are ideally suited to rugged environmental conditions.

### Features

- with PWE-PL load cell units scales may be produced to withstand maximum horizontal stresses
- ideally suited for high precision requirements, even in unfavourable environmental conditions
- standardised electrical connection data

### Parallel connection of several LWE-PLs

Any number of LWE-Bs per scale may be connected in parallel, without exceeding the nominal load of each individual load cell unit. Connection is performed in a terminal box in the vicinity of the scale with an unchanged characteristic value (2mV/V).

### Model variants

- Locating bearing: no horizontal degree of clearance
- Thrust bearing: 1 deg. of freedom
- Floating bearing: 2 deg. of freedom

Article number	Nominal load (t)	Version		Dimensions (mm) (WxHxD)	Weight (kg)	Connection lead (m)
LWPL1.000.500	0,5	Locating bear.	LWPL1 Resolution 1000 d	295 x 112 x 140	14	6
LWPL1.001.501		Thrust bearing				
LWPL1.000.502		Floating bear.				
LWPL1.001.000	Locating bear.					
LWPL1.001.001	Thrust bearing					
LWPL1.001.002	Floating bear.					
LWPL1.002.000	2	Locating bear.				
LWPL1.002.001		Thrust bearing				
LWPL1.002.002		Floating bear.				
LWPL1.003.000	3	Locating bear.				
LWPL1.003.001		Thrust bearing				
LWPL1.003.002		Floating bear.				
LWPL1.010.000	10	Locating bear.	LWPL3 Resolution 3000 d	400 x 184 x 200	50	10
LWPL1.010.001		Thrust bearing				
LWPL1.010.002		Floating bear.				
LWPL1.030.000-01	30	Locating bear.				
LWPL1.030.001-01		Thrust bearing				
LWPL1.030.002-01		Floating bear.				
LWPL1.050.000	50	Locating bear.				
LWPL1.050.001		Thrust bear.				
LWPL1.050.002		Floating bear.				
LWPL3.000.500-01	0,5	Locating bear.	LWPL3 Resolution 3000 d	295 x 112 x 140	14	6
LWPL3.000.501-01		Thrust bear.				
LWPL3.000.502-01		Floating bear.				
LWPL3.001.000-01	Locating bear.					
LWPL3.001.001-01	Thrust bear.					
LWPL3.001.002-01	Floating bear.					
LWPL3.002.000-01	2	Locating bear.				
LWPL3.002.001-01		Thrust bearing				
LWPL3.002.002-01		Floating bear.				
LWPL3.003.000-01	3	Locating bear.				
LWPL3.003.001-01		Thrust bearing				
LWPL3.003.002-01		Floating bear.				
LWPL3.010.000-01	10	Locating bear.				
LWPL3.010.001-01		Thrust bearing				
LWPL3.010.002-01		Floating bear.				
LWPL3.030.000-01	30	Locating bear.				
LWPL3.030.001-01		Thrust bearing				
LWPL3.030.002-01		Floating bear.				
LWPL3.050.000-01	50	Locating bear.				
LWPL3.050.001-01		Thrust bearing				
LWPL3.050.002-01		Floating bear.				
LWPL3.100.000	100	Locating bear.				
LWPL3.100.001		Thrust bearing				
LWPL3.100.002		Floating bear.				
				520 x 400 x 260	100	20

Precision: composite error LWE-PL1 and LWE-PL3 0.018 % (in relation to the load cell nominal load)

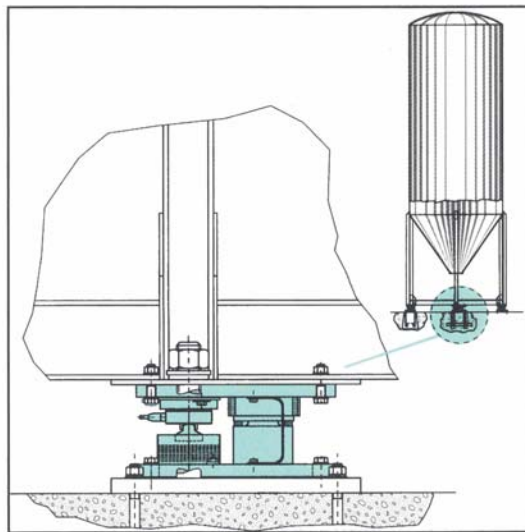
### Technical data

- Nominal temperature -10 to +40°C
- Service temperature -10 to +70°C
- Storage temperature -50 to +95°C
- Smallest weighing range 15 % (in relation to nominal load)
- Used load (for nominal loads up to 30 t) 150 %
- Overload protection (for nominal loads up to 3 t) > 150 %
- Supply voltage 10 to 30 V

- Characteristic value 2 mV/V
- Input / output resistance approx. 1 k $\Omega$
- Connection lead 6 x 0.22 mm<sup>2</sup>
  
- Main body made of Stahl ST37, galvanized,  
Neoprene synthetic rubber
- Load cell made of rustproof high grade steel,  
welded hermetically tight  
protection class IP 68

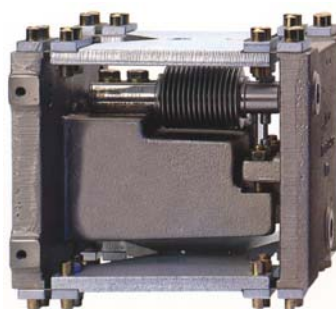
See separate LWE-PL dimension sheets /manuals for further technical data and mounting specifications.

### Mounting example LWE-PL



## Load cell unit **LWE-W**

- universal suitability for industrial scales with small to medium weighing ranges, e.g. filling and bagging scales, hopper scales of all kinds, proportioning and agitator scales
- easy console mounting with excellent all-round accessibility
- compact integration of all necessary technical weighing elements
- top long term stability
- approved for verifiable commercial scales according to EG, OIML and PTB
- precision class 0.02 %



**Nom. loads**  
 20 ... 200 kg



All function elements of a scale are optimally united in this compact unit. Additional sophisticated guiding constructions are not necessary. As only one LWE-W is required for a scale and frame structures have also been dispensed with, an exceptionally good degree of space is gained for planning proportioning apparatus and units.

Article number	Nom. load (kg)	Version	Dimensions mm (WxHxD)	Weight (kg)	Connection cable (m)
LWEWD.020.000	20	with oil damper	194 x 237 x 185	16.5	3
LWEWD.050.000	50				
LWEWD.100.000	100				
LWEWD.200.000	200				
LWEW0.020.000	20	without oil damper	194 x 180 x 185	16.5	3
LWEW0.050.000	50				
LWEW0.100.000	100				
LWEW0.200.000	200				

Article number	Designation	Description
LWEWD.900.110	Damper oil P1	Low viscosity (1 L)
LWEWD.900.120	Damper oil P5	Medium viscosity (1 L)
LWEWD.900.130	Damper oil P6	High viscosity (1 L)

Precision: composite error 0.018 % (in relation to the load cell nominal load)

### Features

- Designed for bending and distortion-resistant one-point console assembly
- The all-over parallel guided load cell system permits depositing of the load at a different gravitational point
- Torques and forces influencing the horizontal are kept away from the measuring system and are channelled directly to the securing plate at the console side
- Dual-action overload stops and walkover cover protect the measuring-sensitive weighing system

### Technical data **LWE-W**

- Nominal temperature -10 to +40°C

## Product overview - Load cell units

### No. 610c

Status 08/2006

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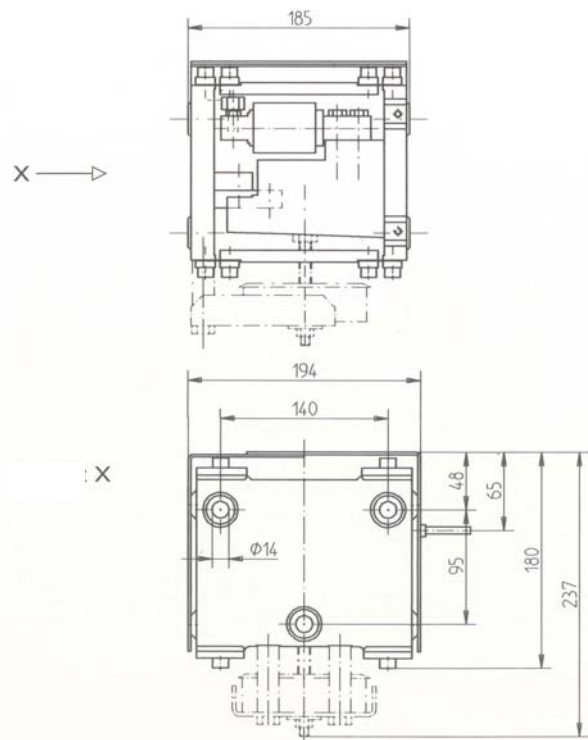
- |                             |  |   |
|-----------------------------|--|---|
| • Service temperature       | -30 to +70°C   |   |
| • Storage temperature       | -50 to +85°C   |   |
| • Smallest weighing range   | 20 %   | } in relation to the<br>load cell<br>nominal load |
| • Used load                 | 150 %  |   |
| • Overload protection       | 300 %  |   |
| • Supply voltage            | 12 to 18 V   |   |
| • Characteristic value      | 2 mV/V   |   |
| • Input / output resistance | 350 Ω  |   |
| • Main body made of         | steel nickel-plated  |   |
| • Load cell made of         | rustproof high grade steel,<br>welded hermetically tight<br>protection class IP 67 |   |

See separate LWE-W dimension sheets /manuals for further technical data and mounting specifications.

#### Mounting example LWE-W Hopper scale for chemical products



#### Dimensions

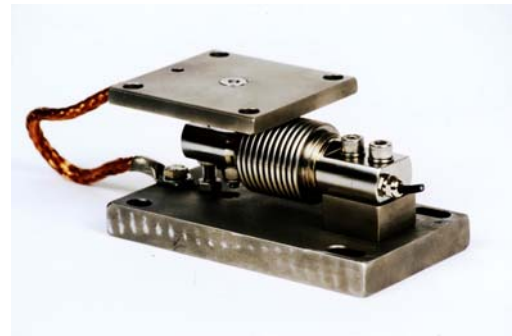


## Load cell unit GPA-NF

Nom. loads  
50 ... 200 kg



- universal suitability for industrial scales with low horizontal straining e.g. hopper scales for liquids and bulk goods, weighing platforms and frames
- easy assembly w/o additional construction
- flat design
- approved for verifiable commercial scales according to EG, OIML



The flat design permits exceptionally shallow installation. The corrosion-proof high grade steel load cells are ideally suited to rugged environmental conditions.

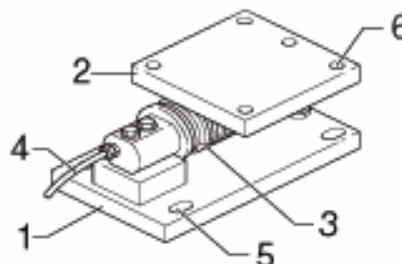
Article number	Nom. load (Kg)	Version	Resolution	Weight (kg)	Connection cable (m)
LWGPA.050.001	50	h/g steel, non-verifiable	up to 4000 d	4.15	3
LWGPA.050.002	50	h/g steel, verifiable	max. 3000 d		
LWGPA.100.001	100	h/g steel, non-verifiable	up to 4000 d		
LWGPA.100.002	100	h/g steel, verifiable	max. 3000 d		
LWGPA.200.001	200	h/g steel, non-verifiable	up to 4000 d		
LWGPA.200.002	200	h/g steel, verifiable	max. 3000 d		

### Technical data

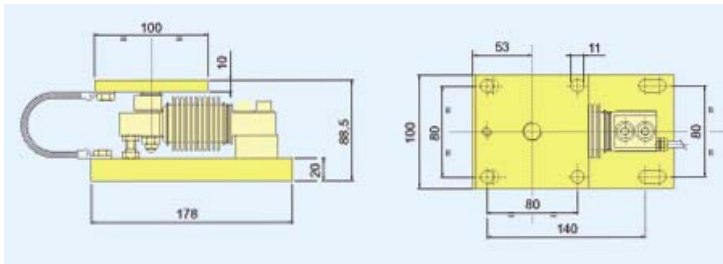
- Nominal temperature -10 to +40°C
- Service temperature -20 to +80°C
- Storage temperature -40 to +80°C
- Equipped with a bi-directional ring load cell with welded concertina walls
- Protection class IP 67
- Smallest weighing range 2.5 kg
- Used load (for nominal loads up to 200 t) 150 %
- Overload protection (for nom. loads up to 200 t) 300 %

### Design GPA-NF

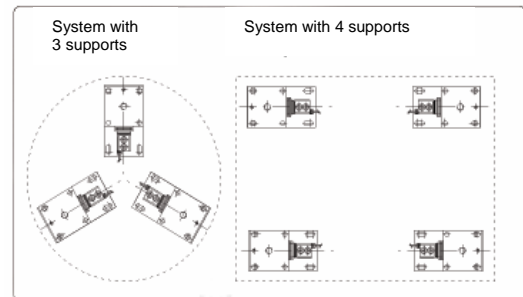
- 1) Bottom plate
- 2) Top plate
- 3) Load cell
- 4) Connection cable
- 5 + 6) Securing systems



**Dimensions & drill holes GPA-NF**

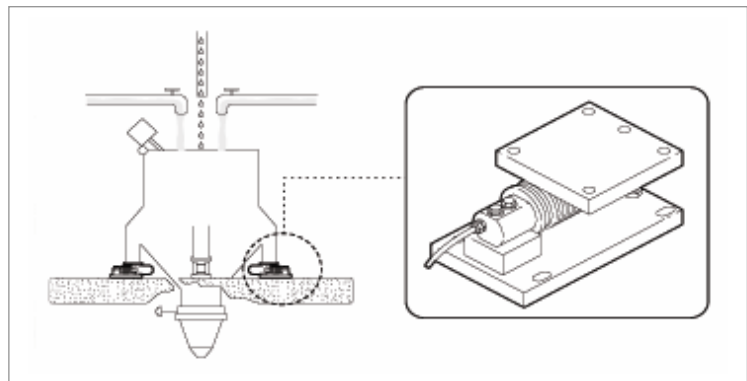


**Assembly diagram GPA-NF**



Bottom plate: 4 drill holes for screws  $\varnothing$  11 mm

**Mounting example GPA-NF**



**Load cell unit GPA-NT**

Nom. loads  
 500 ... 2000 kg



- universal suitability for industrial scales with medium horizontal straining, e.g. hopper scales for liquid and bulk goods, agitator tank scales, weighing platforms and frames, outdoor silos
- easy assembly without additional construction, flat design
- approved for verifiable commercial scales according to EG, OIML



The flat design permits exceptionally shallow installation. The corrosion-proof high grade steel load cells are ideally suited to rugged environmental conditions.

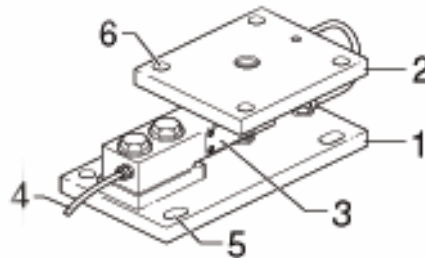
Article number	Nom. load (kg)	Version	Resolution	Weight (kg)	Connection cable (m)
LWGPA.500.001	500	h/g steel non-verifiable	up to 4000 d	5.2	5
LWGPA.500.002	500	h/g steel verifiable	max. 3000 d		
LWGPA.001.001	1000	h/g steel non-verifiable	up to 4000 d		
LWGPA.001.002	1000	h/g steel verifiable	max. 3000 d		
LWGPA.002.001	2000	h/g steel non-verifiable	up to 4000 d		
LWGPA.002.002	2000	h/g steel verifiable	max. 3000 d		

**Technical data**

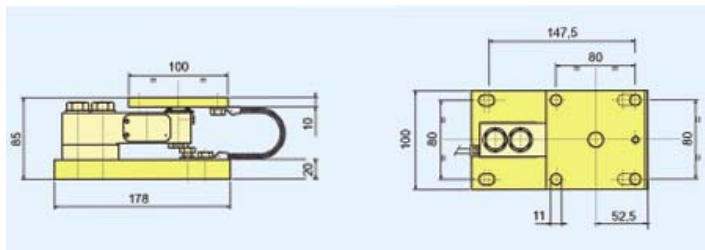
- Nominal temperature -10 to +40°C
- Service temperature -30 to +70°C
- Storage temperature -40 to +80°C
  
- Equipped with a high grade steel load cell
- Protection class IP 67
  
- Smallest weighing range 0.5 % (in relation to nom. load)
- Used load 150 % (in relation to nom. load)
- Overload protection 300 % (in relation to nom. load)

**Design GPA-NT**

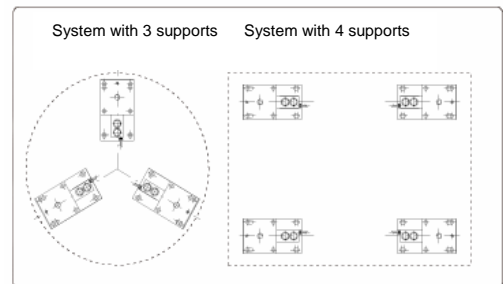
- 1) Bottom plate
- 2) Top plate
- 3) Load cell
- 4) Connection cable
- 5 + 6) Securing systems



**Dimensions and drill holes GPA-NT**

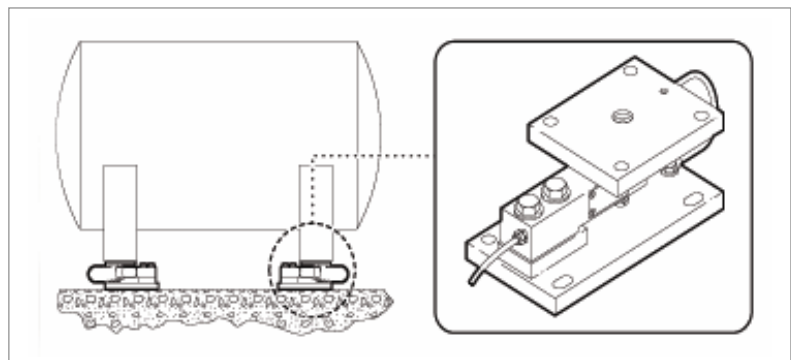


**Assembly diagram GPA-NT**



Bottom plate: 4 drill holes for screws Ø 11 mm

**Mounting example GPA-NT**



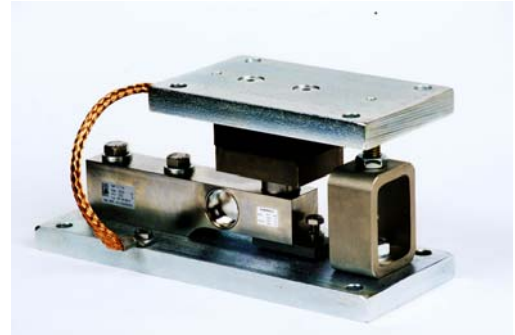
## Load cell unit GPA-T

Nom. loads  
 3000 ... 5000 kg



### Load cell with guiding system thus

- Universal suitability for industrial scales with high horizontal straining, e.g. outdoor silos or tanks
- Easy assembly without additional construction
- Flat design



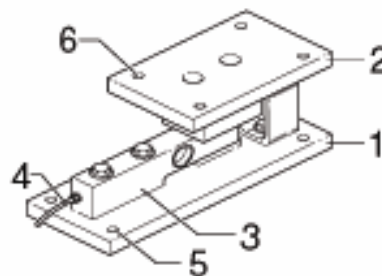
Article number	Nom. load (kg)	Version	Resolution	Weight (kg)	Connection cable (m)
LWGPA.003.001	3000	hot-dip galv. rubber bearing, non-verifiable	up to 4000 d	14.6	5
LWGPA.003.002	3000	hot-dip galv. rubber bearing, verifiable	max. 3000 d		
LWGPA.005.001	5000	hot-dip galv. rubber bearing, non-verifiable	up to 4000 d	24.2	5
LWGPA.005.002	5000	hot-dip galv. rubber bearing, verifiable	max. 3000 d		
LWGPA.000.010		option: high grade steel version GPA-T			

### Technical data

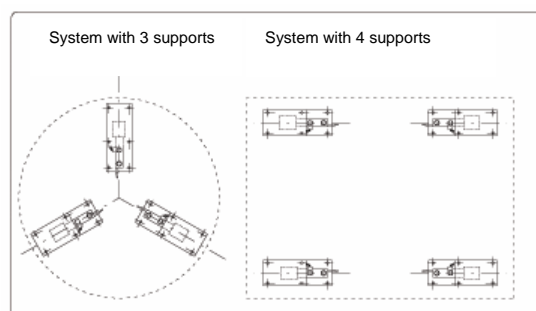
- Nominal temperature -10 to +40°C
- Service temperature -20 to +80°C
- Storage temperature -40 to +80°C
- Equipped with a high grade steel load cell
- Protection class IP 67
- Smallest weighing range 25 kg
- Used load (for nominal loads up to 5000 t) 150 %
- Overload protection (for nominal loads up to 5000 t) 300 %

### Design GPA-T

- 1) Bottom plate
- 2) Top plate
- 3) Load cell
- 4) Connection cable
- 5 + 6) Securing systems

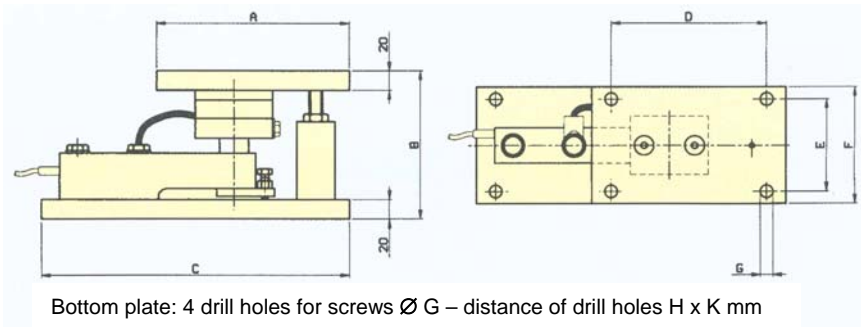


### Assembly diagram GPA-T



## Dimensions and drill holes

Model	Dimensions (mm)									
	A	B	C	D	E	F	G	H	K	
GPA-T 3000	200	152	320	160	95	120	11	280	95	
GPA-T 5000	220	187	360	180	130	160	13	320	130	



## Load cell unit GPA-C

Nom. loads  
5000 ... 50000 kg



- universal suitability for industrial scales with maximum horizontal straining, e.g. outdoor silos or tanks
- very low construction height
- rugged design



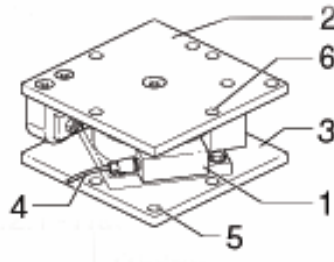
Article number	Nom. load (kg)	Version	Resolution	Weight (kg)	Connection cable (m)
LWGPA.000.050	5000	Compression load cell Protection class IP 67 Non-verifiable	up to 2000 d	16,9	10
LWGPA.000.100	10000			16,9	
LWGPA.000.200	20000			20,9	
LWGPA.000.500	50000			28,9	

## Technical data

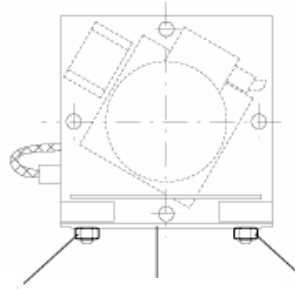
- Nominal temperature -10 to +40°C
- Service temperature -20 to +70°C
- Storage temperature -30 to +70°C
- Smallest weighing range 2.5 kg
- Used load 150 % (of nominal load)
- Overload protection 300 % (of nominal load)

### GPA-C design

- 1) Load cell
- 2) Top plate
- 3) Bottom plate
- 4) Connection cable
- 5 + 6) Securing systems



The GPA-C load cell unit is fitted with vibration restrictors and securing studs.



Self-locking screw nuts

vibration restrictor

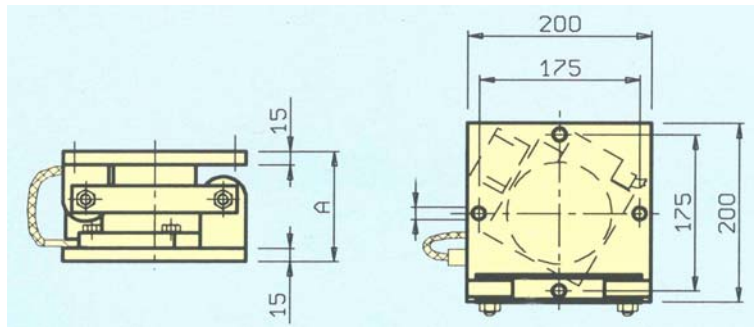
Self-locking screw nuts

### Dimensions and drill holes GPA-C

Model	Dimensions A (height) mm
GPA-C 5000	123
GPA-C 10000	123
GPA-C 20000	133
GPA-C 5000	141

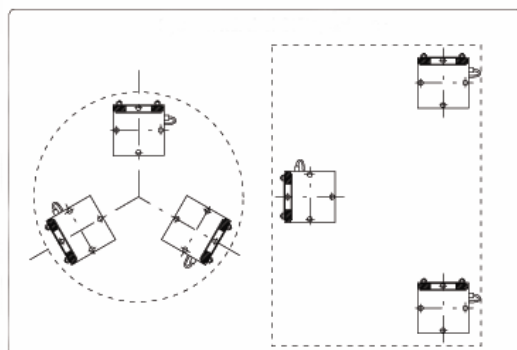
Upper and bottom plate:  
 4 drill holes for screws Ø 14 mm

Bottom plate: distance of drill holes as upper plate

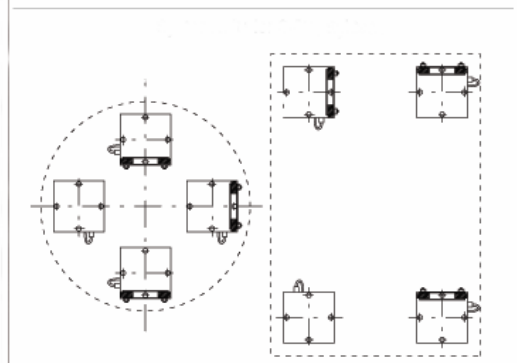


### Assembly diagram GPA-C

System with 3 supports



System with 4 supports



**Load cell unit GPA-MF**



**Nom. loads**  
**50 ... 200**  
**kg**



- **Conversion kit for mechanical scales**

Article number	Nom. load (kg)	Version	Resolution	Weight (kg)	Connection lead(m)
LWGPA.050.006	50	verifiable, with connection box	up to 3000 d	approx. 4	3
LWGPA.050.005	50	non-verifiable, w.connection box			
LWGPA.100.006	100	verifiable, with connection box			
LWGPA.100.005	100	non-verifiable, w.connection box			
LWGPA.200.006	200	verifiable, with connection box			
LWGPA.200.005	200	non-verifiable, w.connection box			

- High grade steel load cells, mechanical parts hot-dip galvanized
- With connection rings for inserting the load cell unit in the „pull lever“ of mechanical scales

**-Technical data subject to modification without notice-**

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**Product overview**

**Nr. 610c**

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