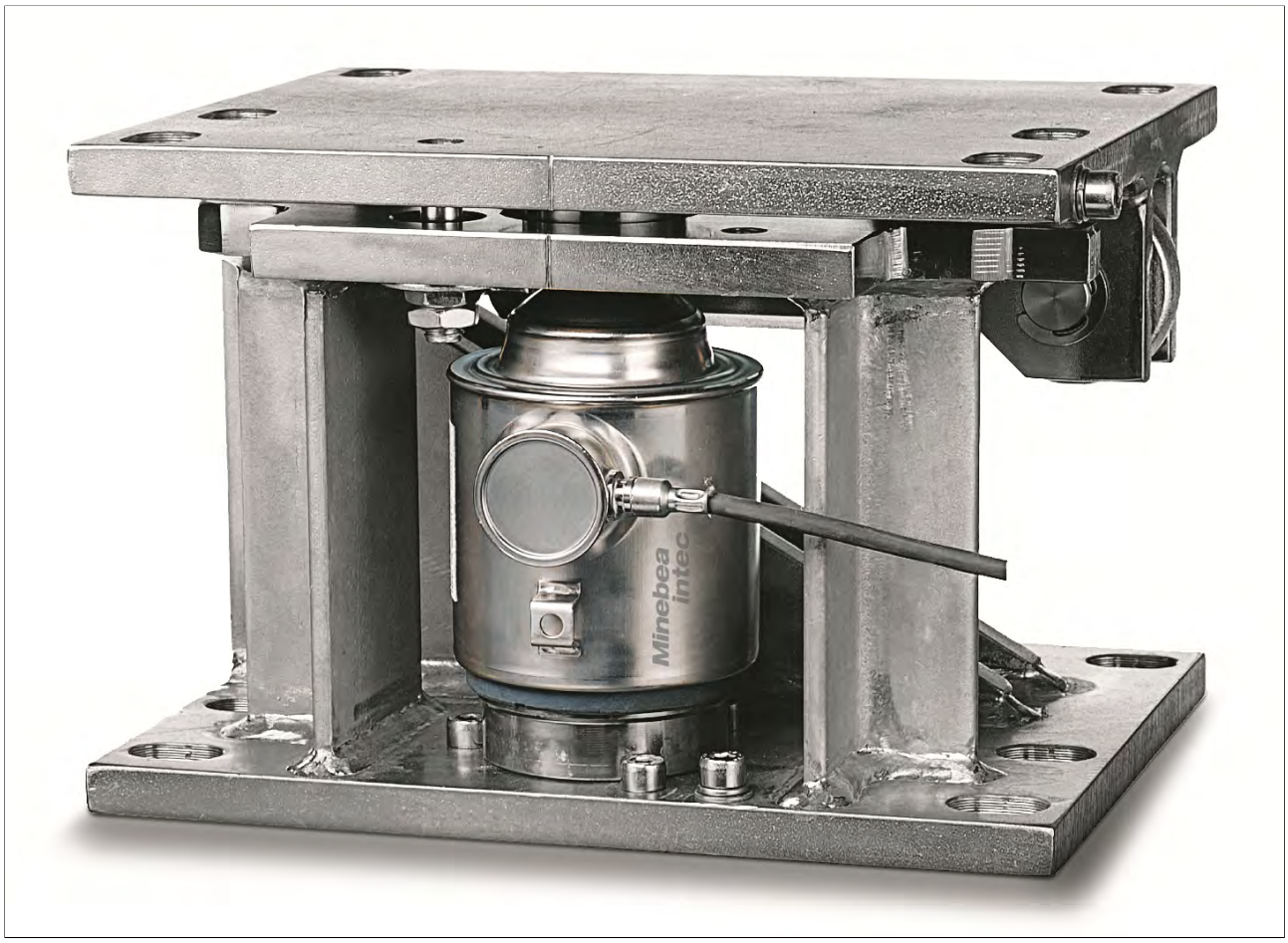
Minebea intec
The true measure

Installation Manual

Mounting kits PR 6001



Translation of the Original Installation Manual 9499 053 47600 Edition 5.8.0 02/01/2022

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Foreword

Must be followed!

Any information in this document is subject to change without notice and does not represent a commitment on the part of Minebea Intec unless legally prescribed. This product should only be operated/installed by trained and qualified personnel. In correspondence concerning this product, the type, name, and release number/serial number as well as all license numbers relating to the product have to be cited.

Note

Table of contents

1 Introduction

1.1 Read the manual

- Please read this manual carefully and completely before using the product.
- This manual is part of the product. Keep it in a safe and easily accessible location.

1.2 This is what operating instructions look like

1. - n. are placed before steps that must be done in sequence.

▶ is placed before a step.

▷ describes the result of a step.

1.3 This is what lists look like

- indicates an item in a list.

1.4 This is what menu items and softkeys look like

[ ] frame menu items and softkeys.

Example:

[Start]- [Applications]- [Excel]

1.5 This is what the safety instructions look like

Signal words indicate the severity of the danger involved when measures for preventing hazards are not followed.

⚠ DANGER

Warning of personal injury

DANGER indicates death or severe, irreversible personal injury which will occur if the corresponding safety measures are not observed.

▶ Take the corresponding safety precautions.

⚠ WARNING

Warning of hazardous area and/or personal injury

WARNING indicates that death or severe, irreversible injury may occur if appropriate safety measures are not observed.

▶ Take the corresponding safety precautions.

⚠ CAUTION

Warning of personal injury.

CAUTION indicates that minor, reversible injury may occur if appropriate safety measures are not observed.

▶ Take the corresponding safety precautions.

NOTICE

Warning of damage to property and/or the environment.

NOTICE indicates that damage to property and/or the environment may occur if appropriate safety measures are not observed.

▶ Take the corresponding safety precautions.

Note:

User tips, useful information, and notes.

1.6 Hotline

Phone: +49.40.67960.444

Fax: +49.40.67960.474

eMail: help@minebea-intec.com

2 Safety instructions

2.1 General notes

NOTICE

Warning of damage to property and/or the environment.

The product was in perfect condition with regard to safety features when it left the factory.

- To maintain this condition and to ensure safe operation, the user must follow the instructions and observe the warnings in this manual.

2.2 Intended use

The mounting kits PR 6001 are intended for weighing tasks, and must only be used as such.

The mounting kits PR 6001 are designed for installing the load cells PR 6201, PR 6203, PR 6204.

The dimensions of all mounting and structural components must be calculated so that sufficient overload capacity is ensured for all loads which may occur while taking the relevant standards into account. In particular, upright weighing objects must be safeguarded against the weighing installation turning over or being shifted, thus eliminating danger to people, animals, or goods even in the case of a break in a load cell or mounting element.

Installation and repair work must only be carried out by expert/qualified personnel.

The mounting kits reflect the state of the art. The manufacturer does not accept any liability for damage caused by third-party system components or due to incorrect use of the product.

2.3 Initial inspection

Check the contents of the consignment for completeness. Check the contents visually to determine whether any damage has occurred during transport. If there are grounds for rejection of the goods, a claim must be filed with the carrier immediately. The Minebea Intec sales or service organization must also be notified.

2.4 Before operational startup

NOTICE

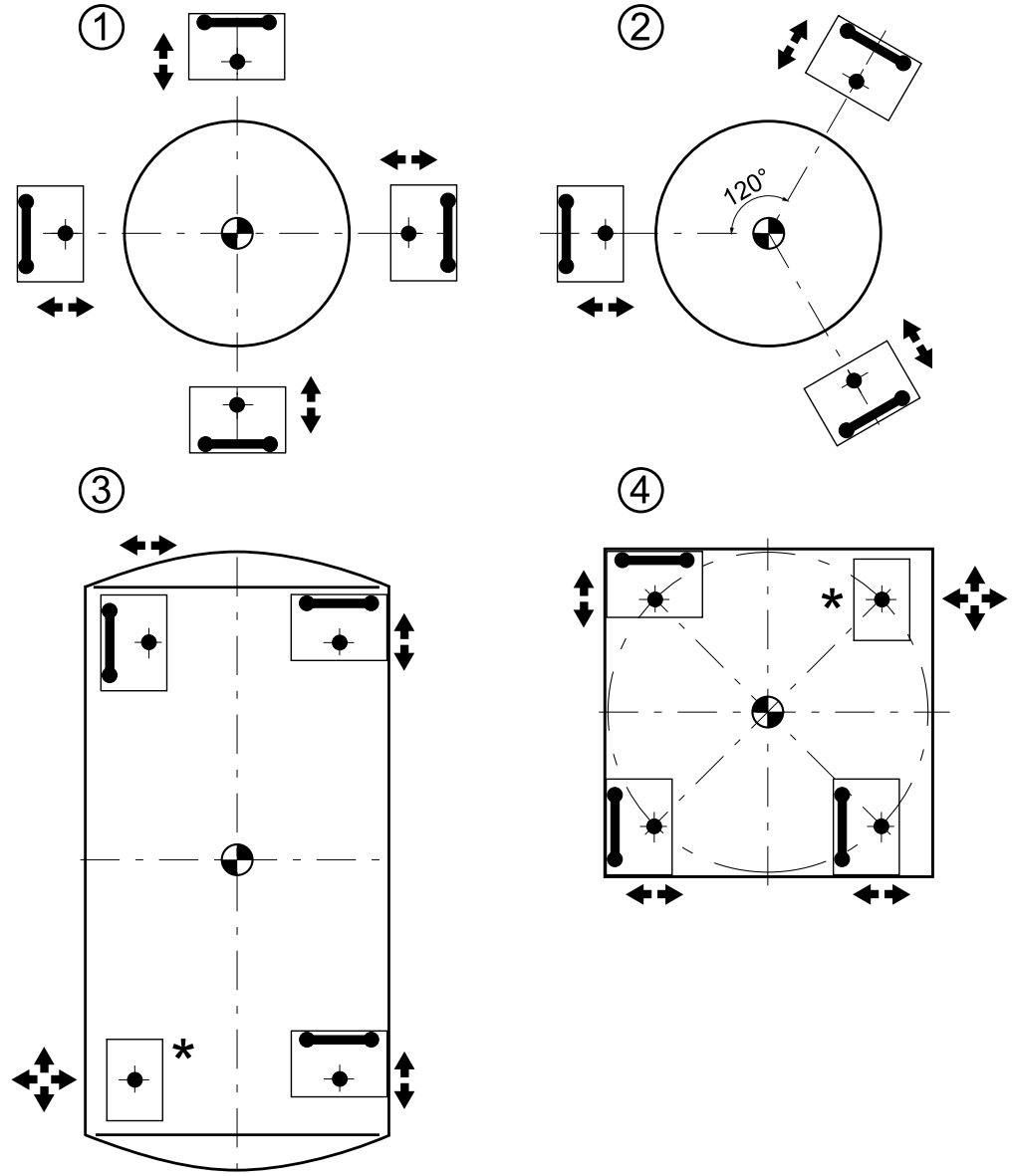
Perform visual inspection.

- Before operational startup as well as after storage or transport, inspect the mounting kit visually for signs of mechanical damage.

3 Recommendations for installation

3.1 Load cell and constrainer arrangement

Examples:



Key

*	Do not constrain this position.
	Constrainer
	Load application
	Possible direction of movement

- To ensure the required free moving space of the weighing facility, a maximum of 3 mounting kits with constrainer may be used to constrain a weighing object.

Round containers are the exception (image ① and ②). In this case, any number of constrainers can be installed, provided that they are tangentially aligned.

Special mounting kits are available for weighing points without constrainers. Alternatively, the constrainer can simply be removed.

With elastic constructions, it may be necessary to deviate from this recommendation in order to guarantee the weighing object has sufficient stability.

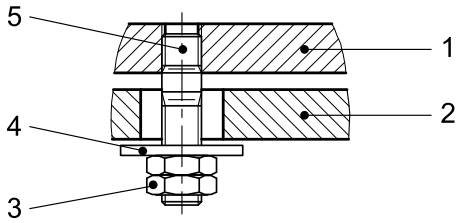
3.2 Mounting aid

Example: PR 6001/00

The auxiliary mounting plate (1) is intended to facilitate installation of the mounting kit and load cell.

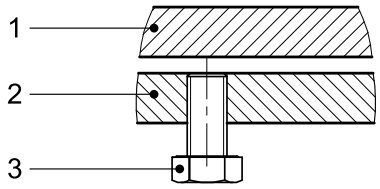
3.3 Internal lift-off protection and jack-up

Internal lift-off protection



No.	Description
1	Upper plate of the mounting kit
2	Upper plate of the portal support
3	Nut (2×)
4	Plate/washer
5	Screw

Jack-up



No.	Description
1	Upper plate of the mounting kit
2	Upper plate of the portal support
3	Screw

Note:

The jack-up is only included with mounting kits for load cells of up to 10 t.

The jack-up is installed between the upper plate of the mounting kit and the upper plate of the portal support and is intended to lift the empty vessel if the load cell is newly installed or a defective load cell is replaced.

Note:

The lift-off protection must be removed before using the jack-up.

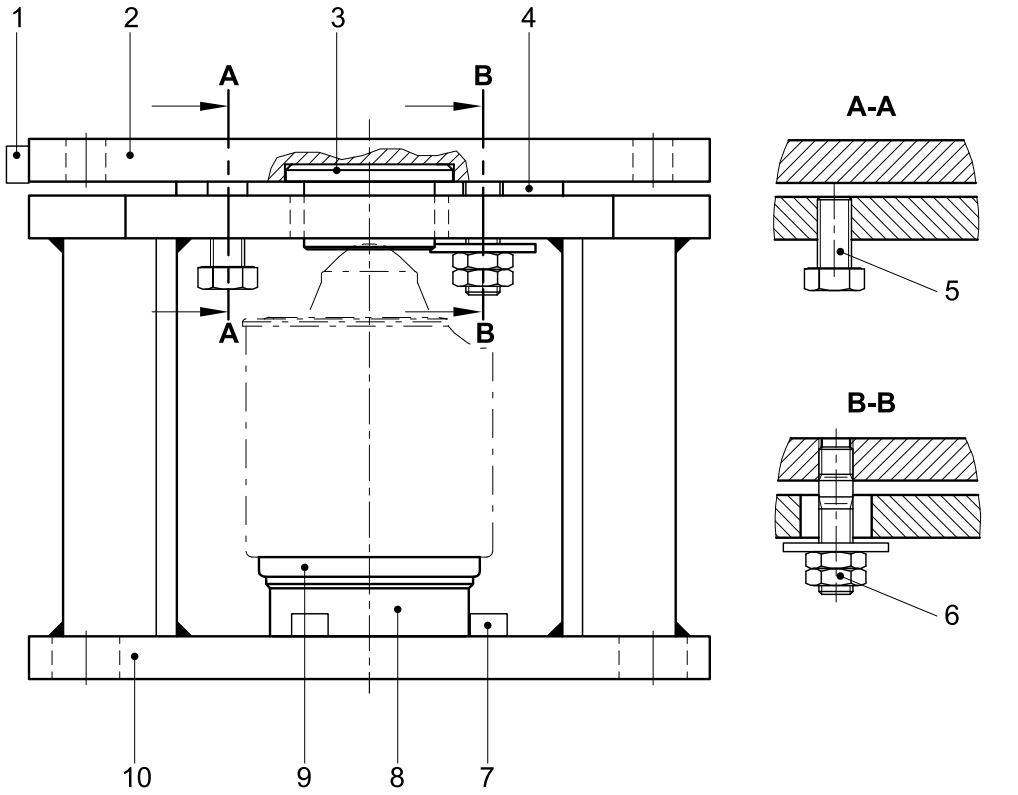
The mounting kits are equipped with an internal lift-off protection, i.e. no additional borings apart from the mounting holes in the vessel foot are required.

The lift-off protection is on the operator side (see Chapter 5.1.1) between the upper plate of the mounting kit and the upper plate of the portal support.

4 Specifications

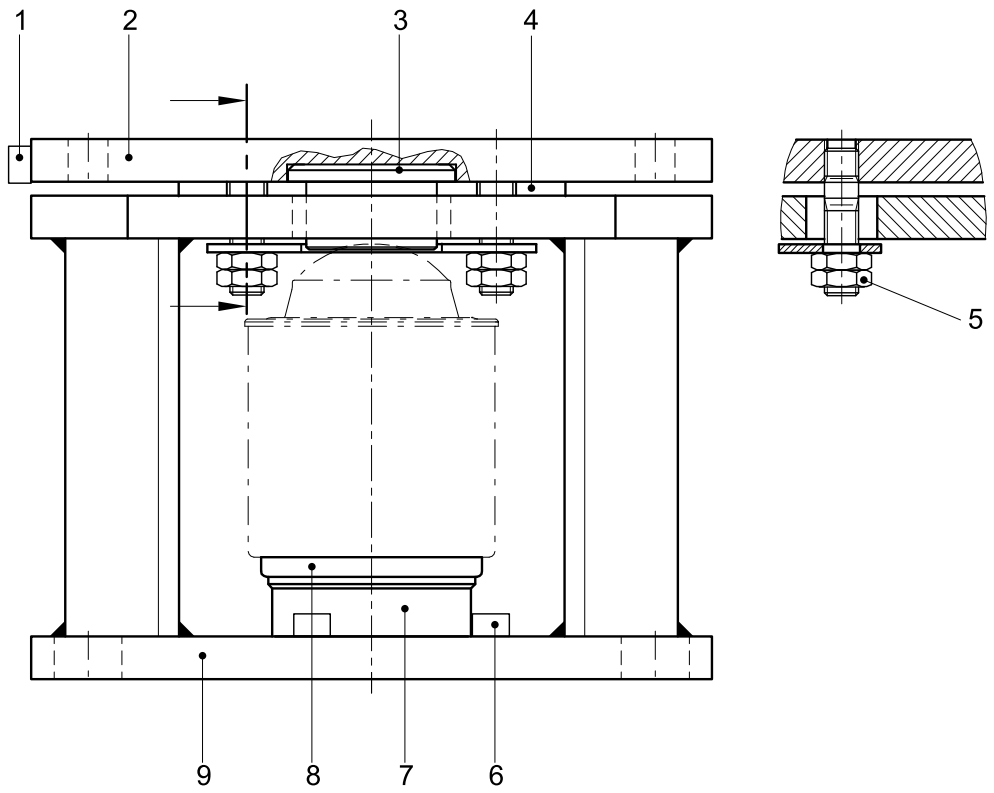
4.1 Equipment supplied

4.1.1 Mounting kit PR 6001/00



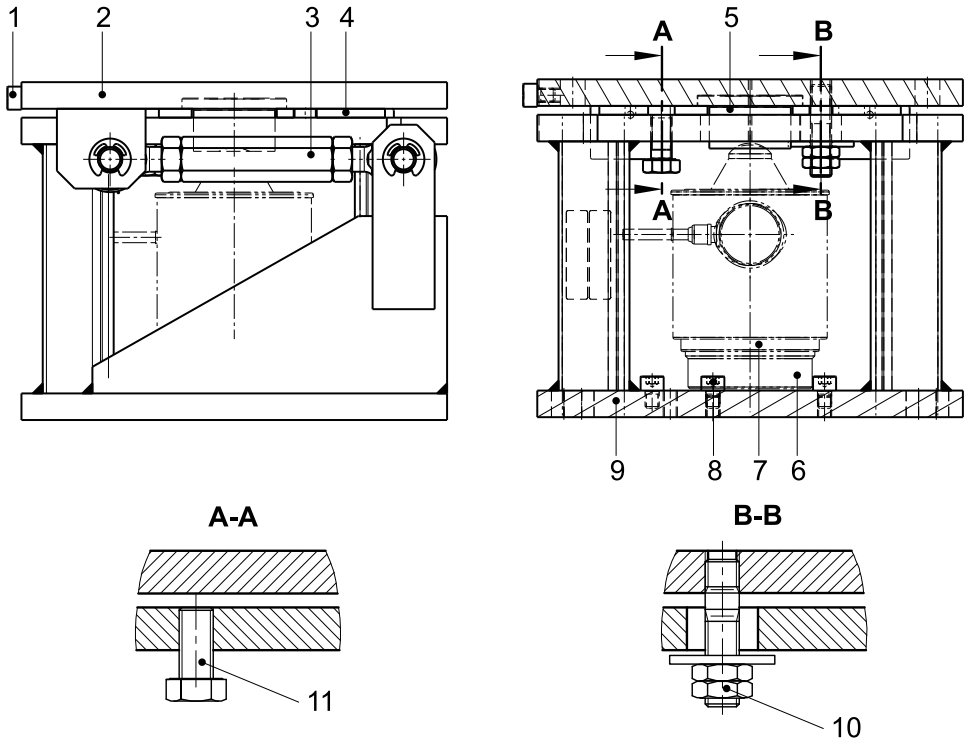
No.	Description
1	Screw (2×), spring washer (2×) and washer (2×) for the equipotential bonding cable (supplied with the load cell)
2	Upper plate
3	Upper load disc
4	Auxiliary mounting plate
5	Jack-up
6	Lift-off protection
7	Centering device (3× screw)
8	Lower load disc (only for PR 6001/00S)
9	Supporting ring (only for PR 6001/00S)
10	Portal support
The following items are not shown:	
11	Special tool
12	Quick guide

4.1.2 Mounting kits PR 6001/01, ../02, ../03



No.	Description
1	Screw (2×), spring washer (2×) and washer (2×) for the equipotential bonding cable (supplied with the load cell)
2	Upper plate
3	Upper load disc
4	Auxiliary mounting plate
5	Lift-off protection
6	Centering device (3× screw)
7	Lower load disc (only for PR 6001/0xS)
8	Supporting ring (only for PR 6001/0xS)
9	Portal support
The following items are not shown:	
10	Special tool
11	Quick guide

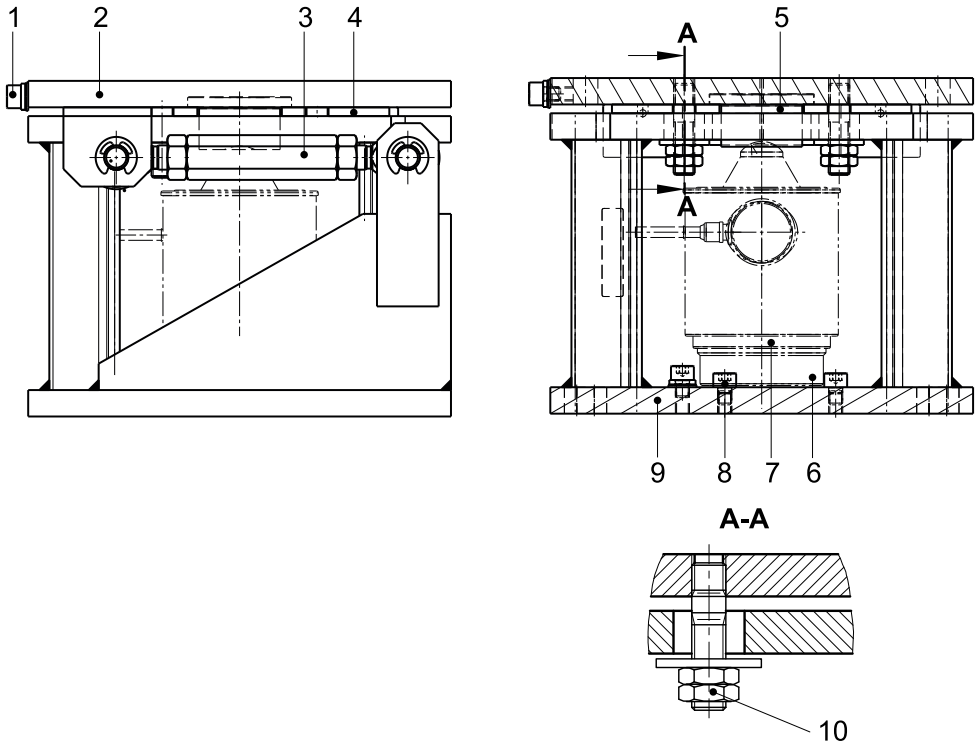
4.1.3 Maxi FLEXLOCK mounting kit PR 6001/10



The side view is shown without the constrainer.

No.	Description
1	Screw (2×), spring washer (2×) and washer (2×) for the equipotential bonding cable (supplied with the load cell)
2	Upper plate
3	Constrainer with joint head (2×), screwed joint, nut (2×), bolt (2×) and locking washer (4×)
4	Auxiliary mounting plate
5	Upper load disc
6	Lower load disc (only for PR 6001/10S)
7	Supporting ring (only for PR 6001/10S)
8	Centering device (3× screw)
9	Portal support
10	Lift-off protection
11	Jack-up
The following items are not shown:	
12	Special tool
13	Quick guide

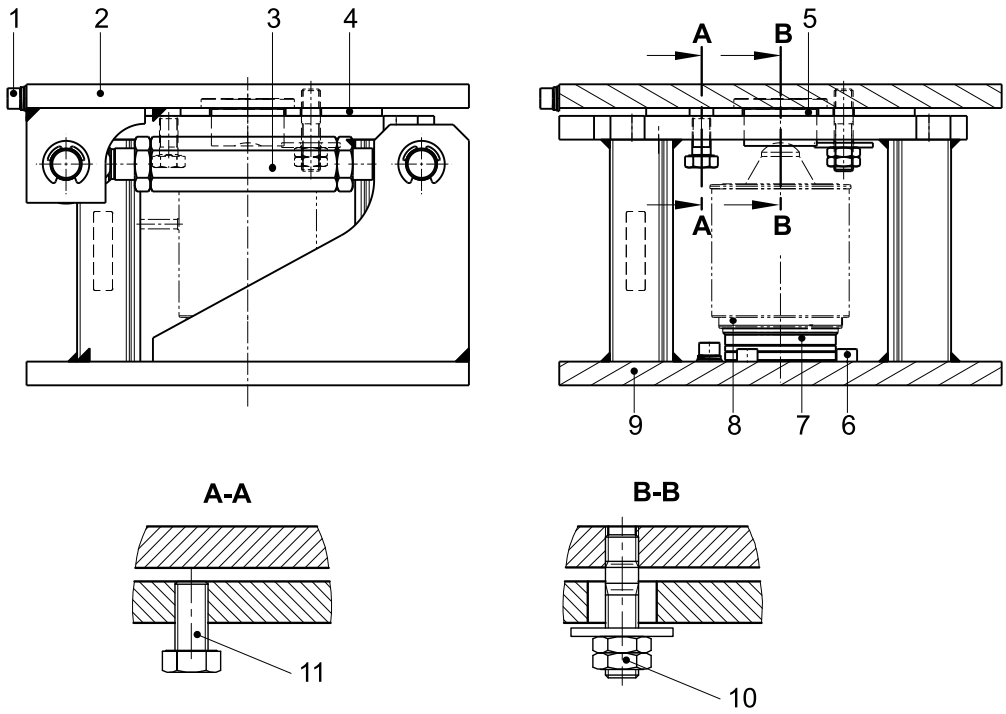
4.1.4 Maxi FLEXLOCK mounting kit PR 6001/11



The side view is shown without the constrainer.

No.	Description
1	Screw (2×), spring washer (2×) and washer (2×) for the equipotential bonding cable (supplied with the load cell)
2	Upper plate
3	Constrainer with joint head (2×), screwed joint, nut (2×), bolt (2×) and locking washer (4×)
4	Auxiliary mounting plate
5	Upper load disc
6	Lower load disc (only for PR 6001/11S)
7	Supporting ring (only for PR 6001/11S)
8	Centering device (3× screw)
9	Portal support
10	Lift-off protection
The following items are not shown:	
11	Special tool
12	Quick guide

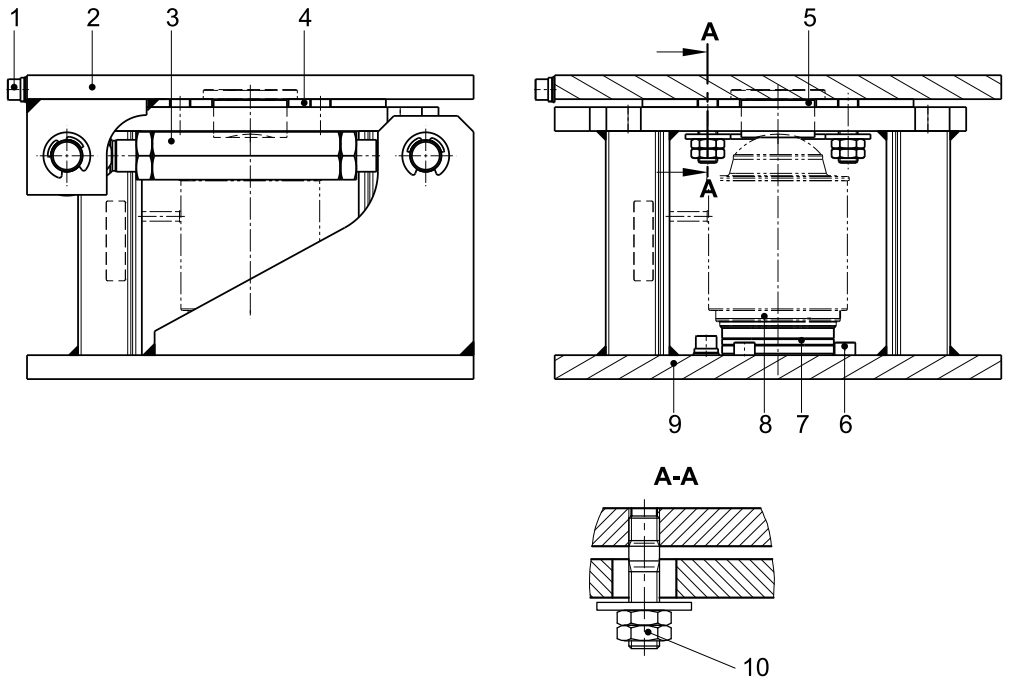
4.1.5 Maxi FLEXLOCK mounting kit PR 6001/20



The side view is shown without the constrainer.

No.	Description
1	Screw (2×), spring washer (2×) and washer (2×) for the equipotential bonding cable (supplied with the load cell)
2	Upper plate
3	Constrainer with joint head (2×), screwed joint, nut (2×), bolt (2×) and locking washer (4×)
4	Auxiliary mounting plate
5	Upper load disc
6	Centering device (3× screw)
7	Lower load disc (only for PR 6001/20S)
8	Supporting ring (only for PR 6001/20S)
9	Portal support
10	Lift-off protection
11	Jack-up
The following items are not shown:	
12	Special tool
13	Quick guide

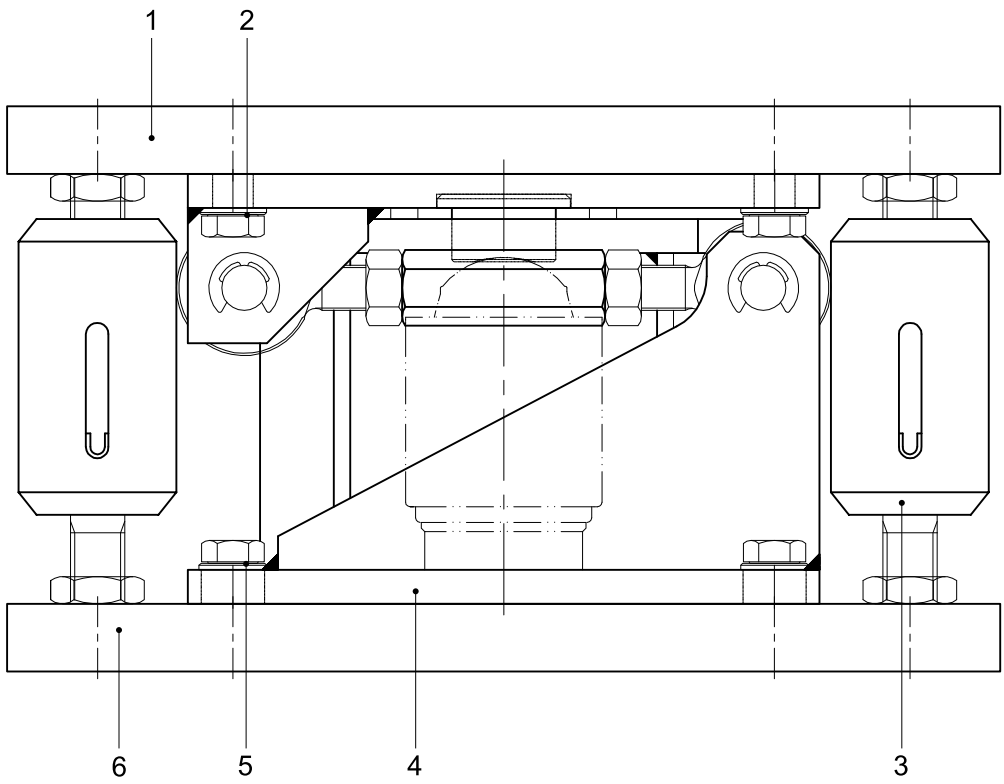
4.1.6 Maxi FLEXLOCK mounting kit PR 6001/21



The side view is shown without the constrainer.

No.	Description
1	Screw (2×), spring washer (2×) and washer (2×) for the equipotential bonding cable (supplied with the load cell)
2	Upper plate
3	Constrainer with joint head (2×), screwed joint, nut (2×), bolt (2×) and locking washer (4×)
4	Auxiliary mounting plate
5	Upper load disc
6	Centering device (3× screw)
7	Lower load disc (only for PR 6001/21S)
8	Supporting ring (only for PR 6001/21S)
9	Portal support
10	Lift-off protection
The following items are not shown:	
11	Special tool
12	Quick guide

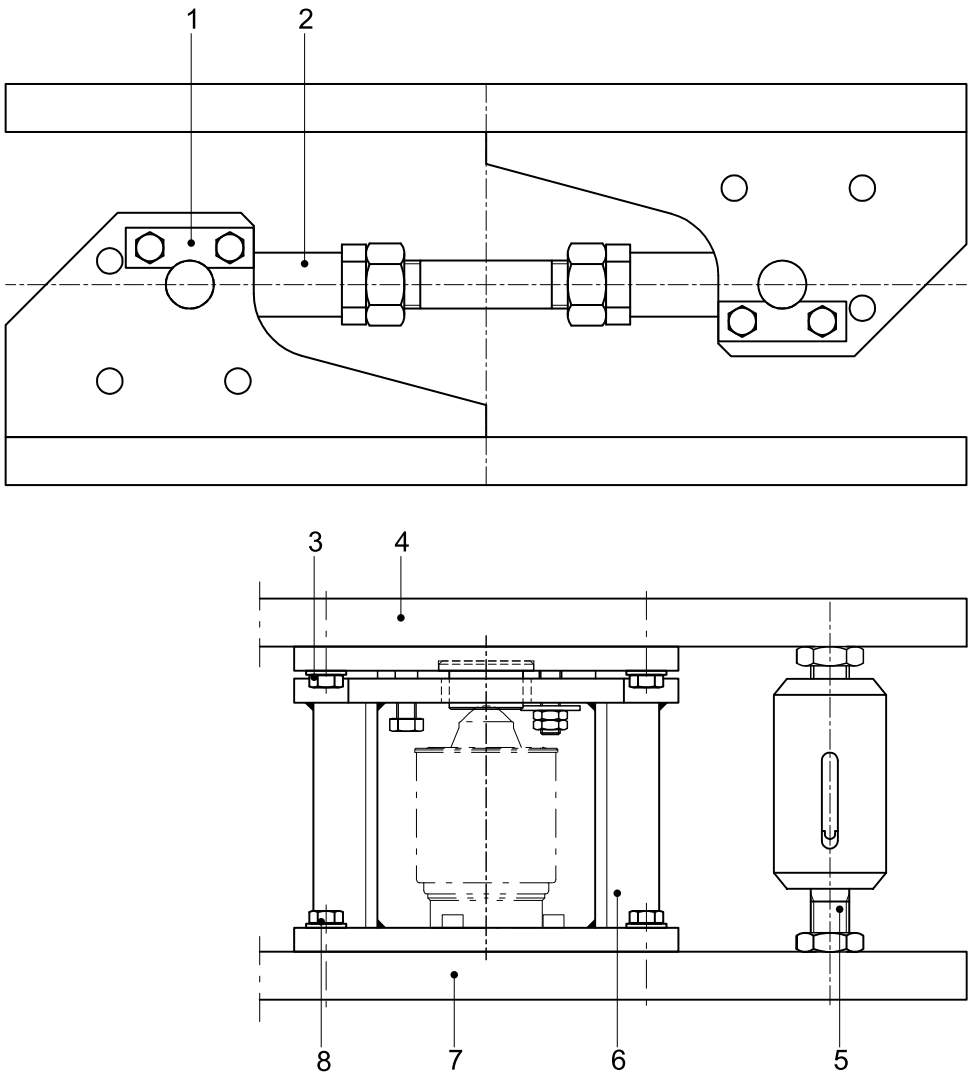
4.1.7 Maxi FLEXLOCK mounting kit PR 6001/26N



No.	Description
1	Upper plate
2	Screw (6×), washer (6×)
3	Lift-off protection M24
4	PR 6001/21N (see Chapter 4.1.6)
5	Screw (6×), washer (6×)
6	Lower plate
7	Quick guide (not shown)

4.1.8 High load mounting kit PR 6001/30N, ../31N, ../32N, ../33N

Example: PR 6001/30N



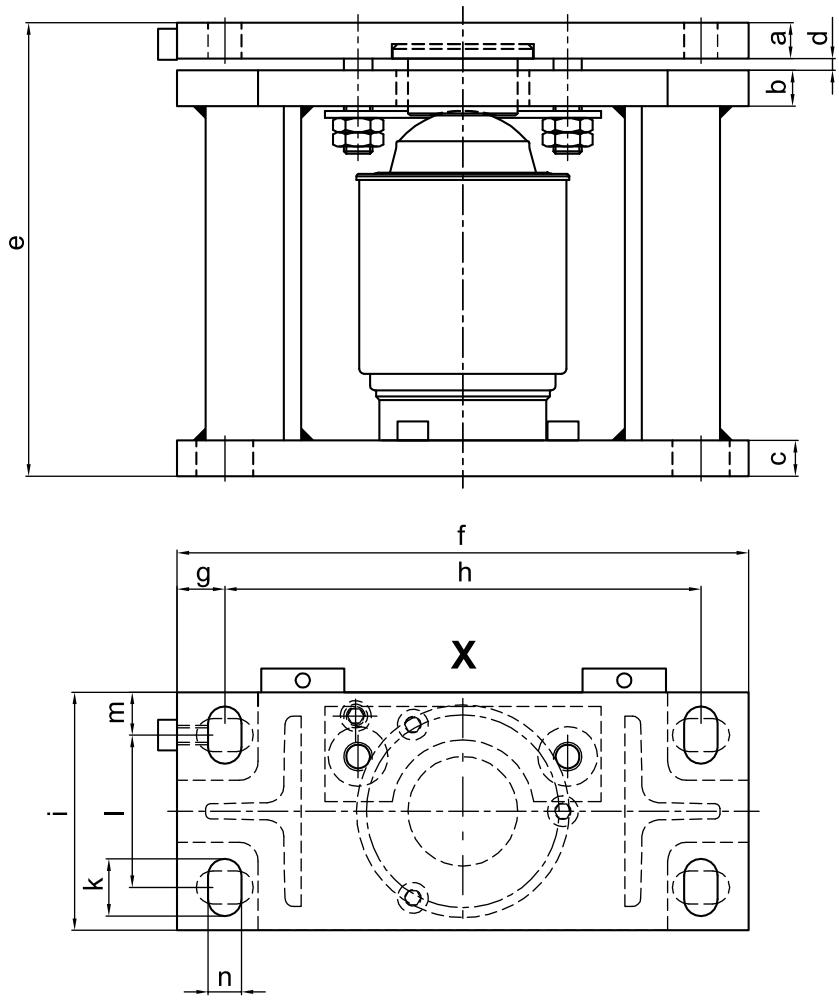
The front view is shown without PR 6001/0xN and without the lift-off protection.
The side view is shown without the constrainer.

No.	Description
1	Axle clamp (2×)
2	Constrainer with joint head (2×), screwed joint, nut (2×), bolt (2×)
3	Screw (4×), washer (4×)
4	Upper plate
5	Lift-off protection M24 (2×)
6	PR 6001/30N: Mounting kit PR 6001/00N (see Chapter 4.1.1) PR 6001/31N: Mounting kit PR 6001/01N (see Chapter 4.1.2) PR 6001/32N: Mounting kit PR 6001/02N (see Chapter 4.1.2) PR 6001/33N: Mounting kit PR 6001/03N (see Chapter 4.1.2)
7	Lower plate

No.	Description
8	Screw (4×), washer (4×)
The following items are not shown:	
9	Special tool
10	Quick guide

4.2 Dimensions

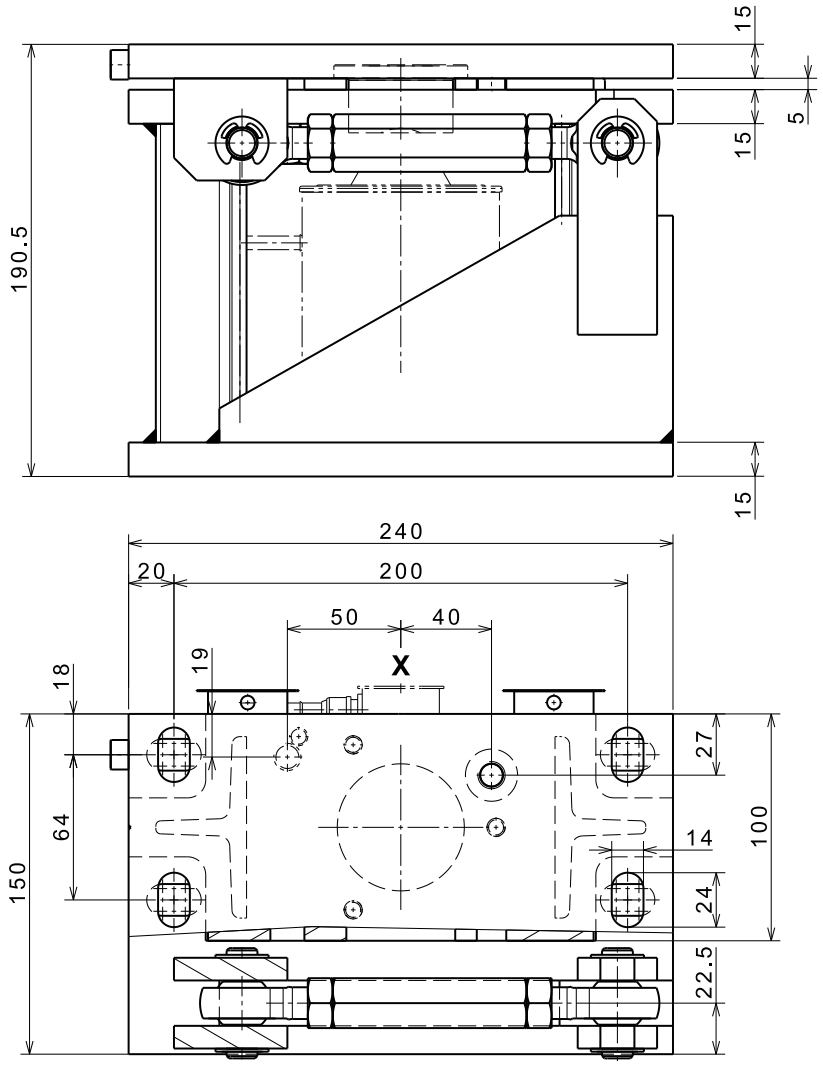
Mounting kits PR 6001/00...03



All dimensions in mm.
X = operator side

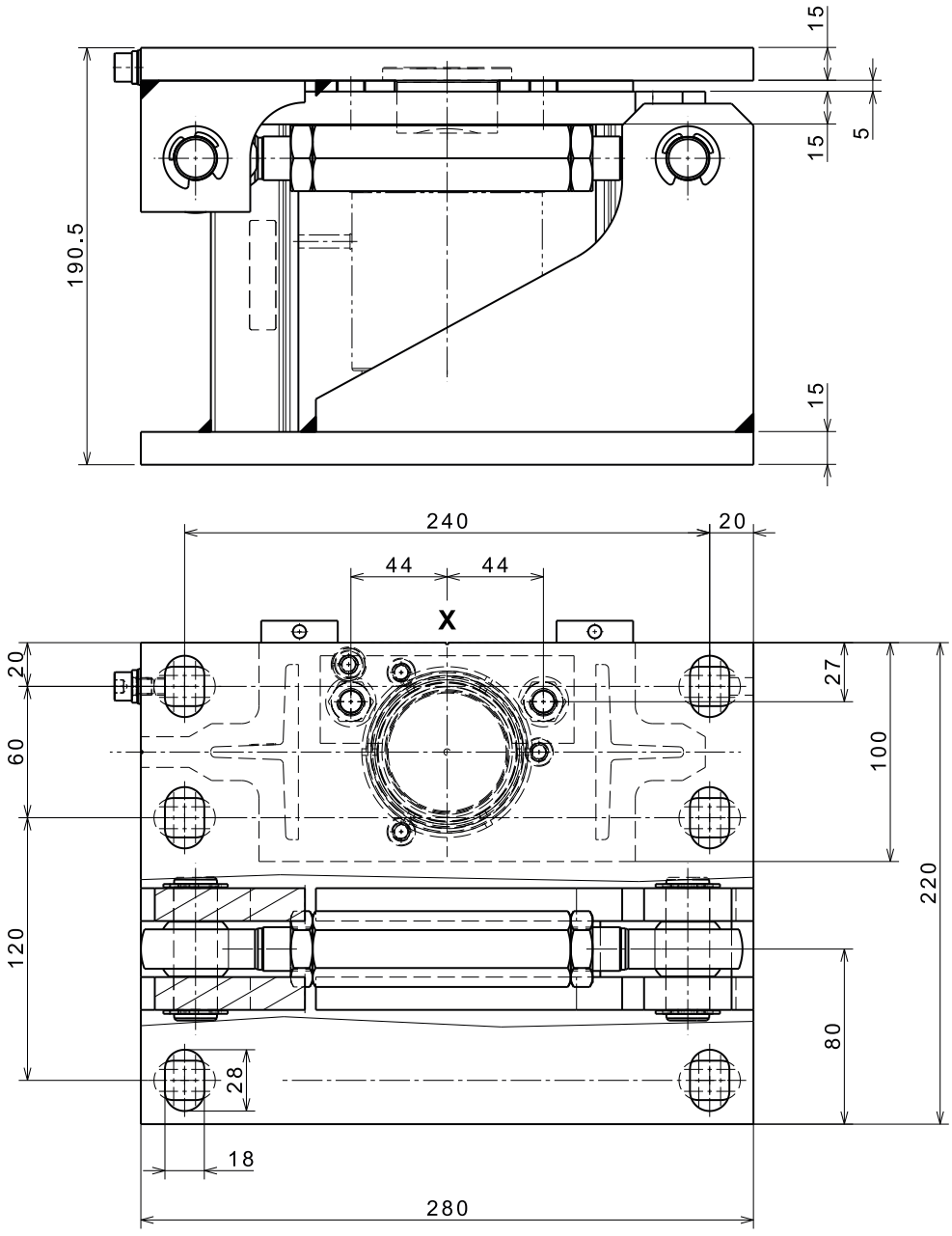
Mounting kit	a	b	c	d	e	f	g	h	i	k	l	m	n
PR 6001/00	15	15	15	5	190.5	240	20	200	100	24	64	18	14
PR 6001/01	15	15	15	5	190.5	240	20	200	100	24	64	18	14
PR 6001/02	30	20	30	8	290	300	23	254	130	32	84	23	18
PR 6001/03	40	20	40	10	385	370	30	310	180	40	120	30	22

Maxi FLEXLOCK mounting kits PR 6001/10, ../11



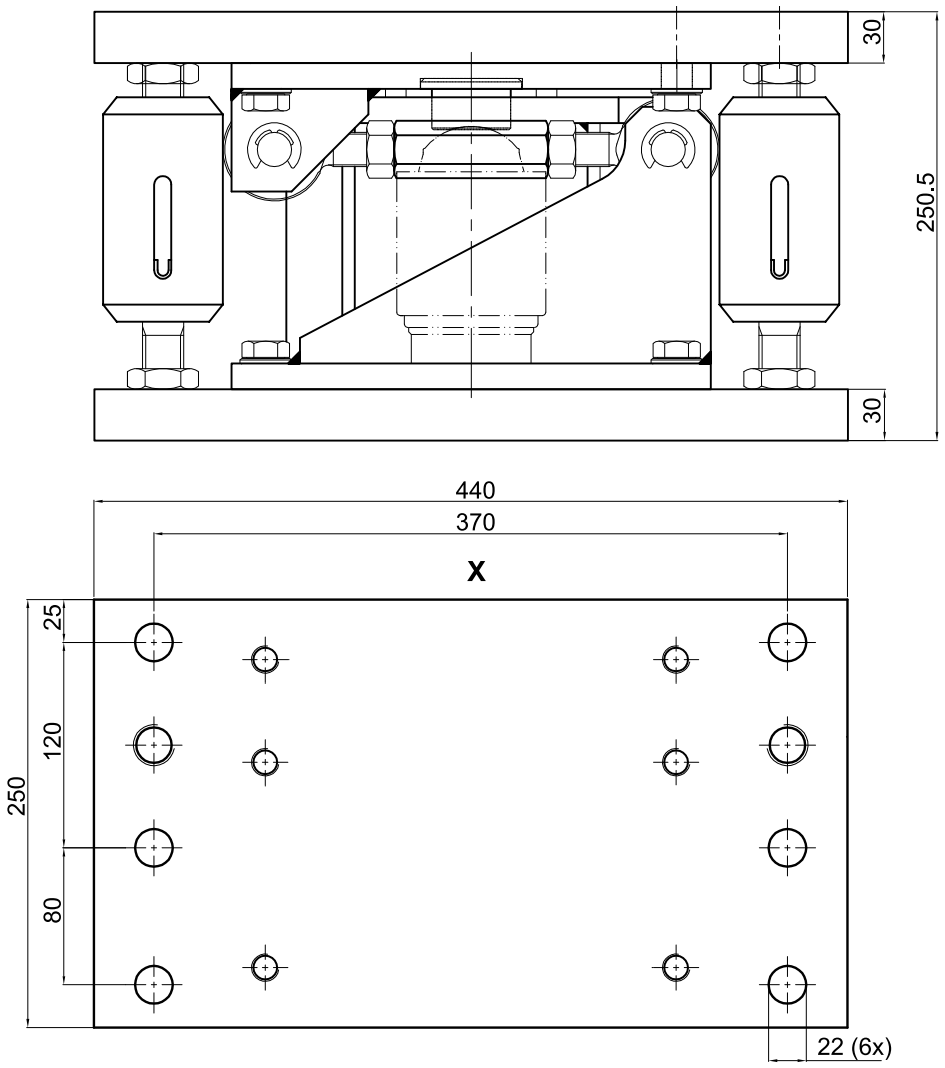
All dimensions in mm.
X = operator side

Maxi FLEXLOCK mounting kits PR 6001/20, ../21



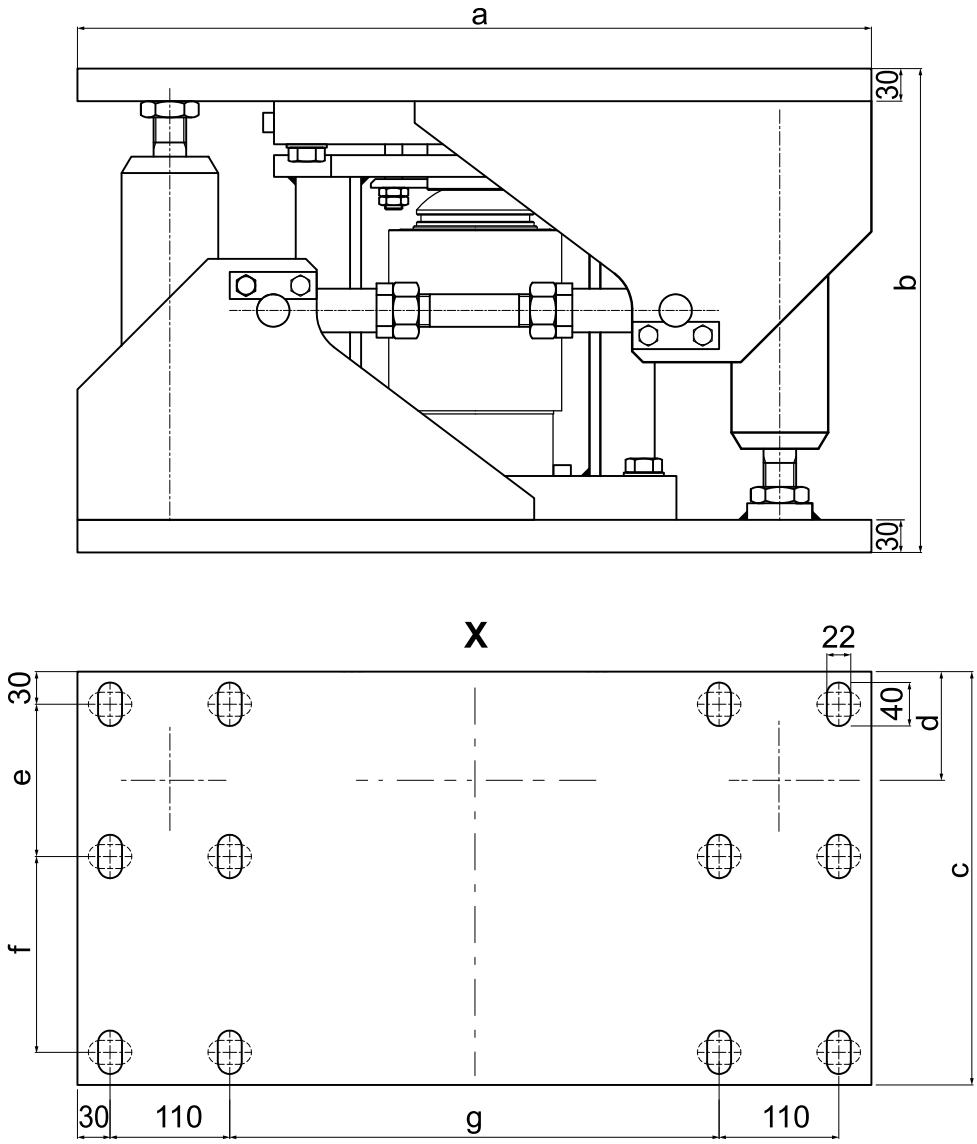
All dimensions in mm.
X = operator side

Maxi FLEXLOCK mounting kit PR 6001/26N



All dimensions in mm.
X = operator side

Maxi FLEXLOCK mounting kits PR 6001/30N...33N



All dimensions in mm.
X = operator side

Mounting kit	a	b	c	d	e	f	g
PR 6001/30	600	250.5	320	60	70	190	320
PR 6001/31	600	250.5	320	60	70	190	320
PR 6001/32	660	350	340	78	95	180	380
PR 6001/33	730	445	380	100	140	180	450

4.3 Technical data

Mounting kits PR 6001/00, ../01, ../02, ../03

	PR 6001/ 00N	PR 6001/ 00S	PR 6001/ 01N	PR 6001/ 01S	PR 6001/ 02N	PR 6001/ 03N
Max. capacity of LC*	500 kg...10 t		20...75 t		100 t	200 t, 300 t
Perm. horizontal force	max. 10 kN		max. 10 kN		max. 14 kN	max. 17 kN
Horizontal destructive force	>20 kN		>20 kN		>28 kN	>34 kN
Perm. lifting force	max. 20 kN		max. 30 kN		max. 40 kN	max. 50 kN
Perm. vertical load without LC*	max. 25 t		max. 25 t		max. 38 t	max. 54 t
Perm. jack-up load	max. 1.5 t		...		...	
Perm. horizontal displacement	max. ±5 mm		max. ±5 mm		max. ±5 mm	
Perm. temperature range	-40 °C...+100 °C		-40 °C...+100 °C		-40 °C...+100 °C	
Material	**	***	**	***	**	
Net weight	9.7 kg		9.7 kg		28 kg	65 kg

* LC = load cell
** Steel galvanized, chromated and sealed (RoHS compliant)
*** Stainless steel 1.4301 acc. to DIN EN 10088-3

Maxi FLEXLOCK mounting kits PR 6001/10, ../11

	PR 6001/10N	PR 6001/10S	PR 6001/11N	PR 6001/11S
Max. capacity of LC*	500 kg...10 t		20...75 t	
Perm. horizontal force	max. 25 kN		max. 25 kN	
Horizontal destructive force	>45 kN	>39 kN	>45 kN	>39 kN
Perm. lifting force	max. 20 kN		max. 30 kN	
Perm. vertical load without LC*	max. 25 t		max. 25 t	
Perm. horizontal displacement	max. ±5 mm		max. ±5 mm	
Perm. temperature range	-40 °C...+100 °C		-40 °C...+100 °C	
Material	**	***	**	***
Net weight	16.7 kg		16.7 kg	

* LC = load cell
** Steel galvanized, chromated and sealed (RoHS compliant)
*** Stainless steel 1.4301 acc. to DIN EN 10088-3

Maxi FLEXLOCK mounting kits PR 6001/20, ../21

	PR 6001/20N	PR 6001/20S	PR 6001/21N	PR 6001/21S
Max. capacity of LC*	500 kg...10 t		20...75 t	
Perm. horizontal force	max. 50 kN		max. 50 kN	
Horizontal destructive force	>100 kN		>100 kN	
Perm. lifting force	max. 20 kN		max. 30 kN	
Perm. vertical load without LC*	max. 25 t		max. 38 t	max. 54 t
Perm. horizontal displacement	max. ±5 mm		max. ±5 mm	
Perm. temperature range	-40 °C...+100 °C		-40 °C...+100 °C	
Material	**	***	**	***
Net weight	25.8 kg		25.8 kg	

* LC = load cell
** Steel galvanized, chromated and sealed (RoHS compliant)
*** Stainless steel 1.4301 acc. to DIN EN 10088-3

Maxi FLEXLOCK mounting kit PR 6001/26N

Max. capacity of load cell	20...75 t
Permissible horizontal force	max. 50 kN
Horizontal destructive force	>100 kN
Permissible lifting force	max. 180 kN
Lifting destructive force	>250 kN
Permissible vertical load without load cell	max. 25 t
Permissible horizontal displacement	max. ±5 mm
Permissible temperature range	-40 °C...+100 °C
Material	Steel galvanized, chromated and sealed (RoHS compliant)
Net weight	76 kg

High load mounting kit PR 6001/30N, ../31N, ../32N, ../33N

	PR 6001/30N	PR 6001/31N	PR 6001/32N	PR 6001/33N
Max. capacity of LC*	500 kg...10 t	20...75 t	100 t	200 t, 300 t
Perm. horizontal force	max. 200 kN		max. 200 kN	
Horizontal destructive force	>236 kN		>236 kN	
Perm. lifting force	max. 180 kN		max. 250 kN	
Lifting destructive force	>250 kN		>400 kN	
Perm. vertical load without LC*	max. 25 t		max. 25 t	
Perm. jack-up load	max. 1.5 t	...	...	
Perm. horizontal displacement	max. ±5 mm		max. ±5 mm	
Perm. temperature range	-40 °C...+100 °C		-40 °C...+100 °C	
Material	**	**	**	**
Net weight	163 kg	163 kg	224 kg	318 kg

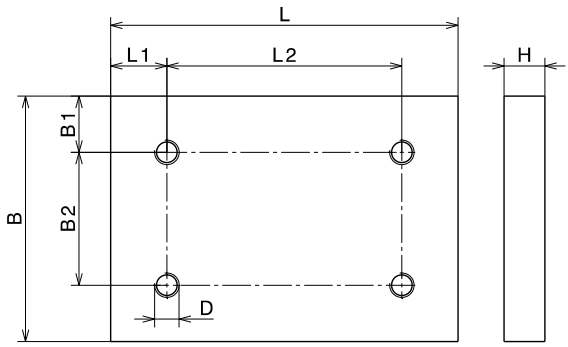
* LC = load cell
** Steel galvanized, chromated and sealed (RoHS compliant)

4.4 Weld-on plates

Weld-on plate sets are available as accessories for the mounting kits

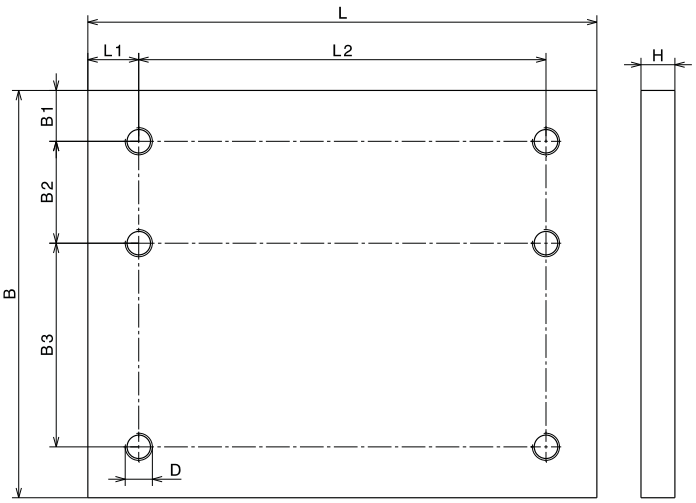
The kits include one upper weld-on plate, one lower weld-on plate and the necessary screws and washers.

Weld-on plates PR 6001/90, ../91, ../96, ../98



All dimensions in mm.

Weld-on plate PR 6001/92



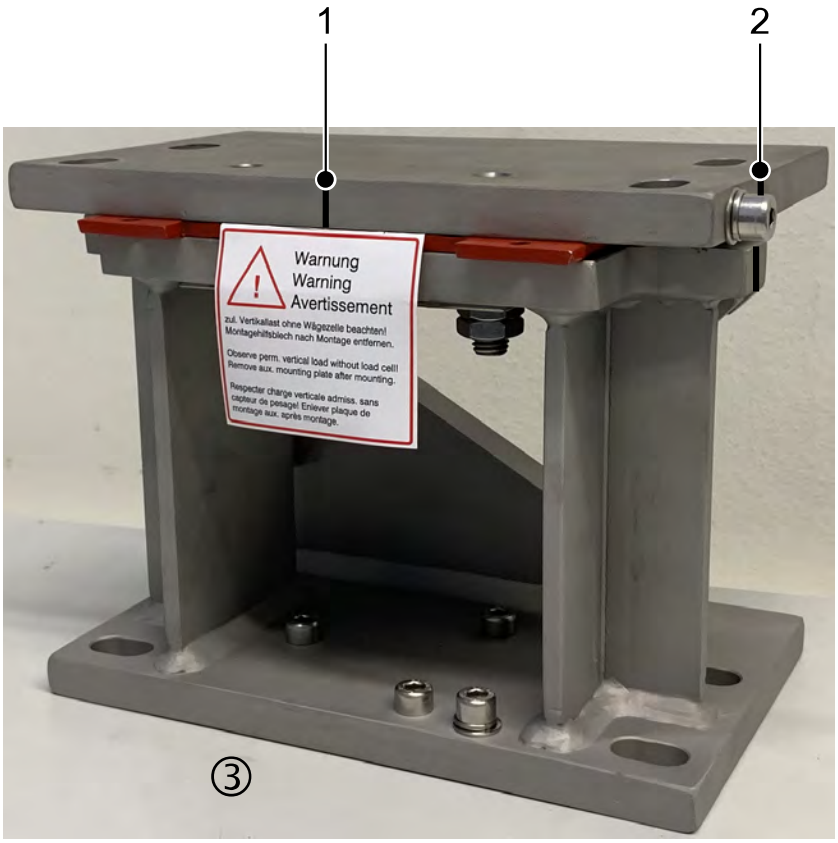
All dimensions in mm.

Weld-on plate	B	B1	B2	B3	D	H	L	L1	L2	Weight
PR 6001/90N for PR 6001/00N, ../01N	120	28	64	...	M12	20	260	30	200	9.8 kg
PR 6001/90S for PR 6001/00S, ../01S	120	28	64	...	M12	20	260	30	200	9.8 kg
PR 6001/91N for PR 6001/10N, ../11N	170	28	64	...	M12	20	260	30	200	13.9 kg
PR 6001/91S for PR 6001/10S, ../11S	170	28	64	...	M12	20	260	30	200	13.9 kg
PR 6001/92N for PR 6001/20N, ../21N	240	30	60	120	M16	20	300	30	240	22.6 kg
PR 6001/92S for PR 6001/20N, ../21N	240	30	60	120	M16	20	300	30	240	22.6 kg
PR 6001/96N for PR 6001/02N	150	33	84	...	M16	30	320	33	254	22.6 kg
PR 6001/98N for PR 6001/03N	200	40	120	...	M20	40	390	40	310	49.0 kg

5 Installation

5.1 Prior to mounting

5.1.1 Operator side of the mounting kit



1	Marks at the front side
2	Marks at the right side
③	Operator side for installation

The mounting kit is installed so that the operator side is easily accessible (it will normally face outward).

The load cell, the internal lift-off protection and also the auxiliary mounting plate are accessible from the operator side.

Note:

The auxiliary mounting plate itself ensures the correct height during installation.

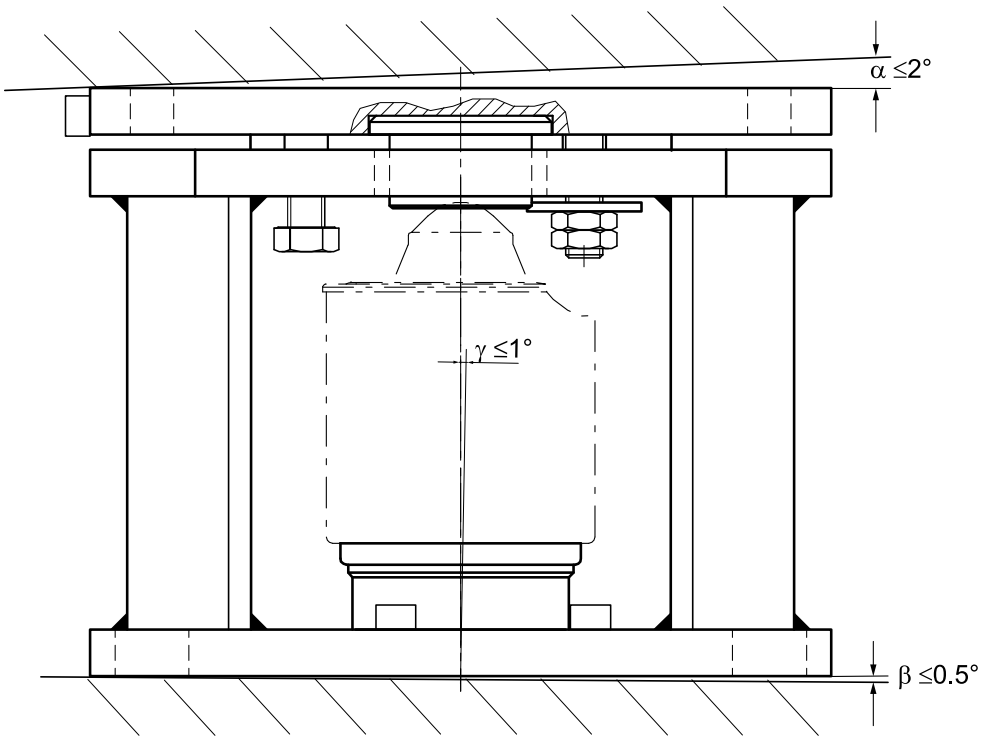
The markings on the face and on the right side of the mounting kit allow for the correct orientation of the mounting kit:

The load disc is exactly in the middle when the respective markings line up above the others.

5.1.2 Preparing the foundation/substructure

- The foundation for the mounting kit must be horizontal (use spirit level), flat, and rigid for the intended loads.
- The load distribution on the available load cells must be as even as possible to prevent overload of the individual load cells.
- The substructure foundations/supporting surfaces for the mounting kits should be at the same level, and the supporting surfaces of the weighing object (e.g. vessel feet) must be arranged in parallel.
- If soft filler layers (e.g. made from rubber or plastic material) are used between the mounting kit and vessel/or between the mounting kit and substructure for vibration dampening or for temperature insulation, a load compensating plate must be provided between this soft filler layer and the mounting kit to ensure even load application into the mounting kit.

  The design of the insulation and compensation plates depends on the respective application.



The maximum permissible inclination must be strictly observed in order to keep the impact on the measuring accuracy to a minimum (see figure).

5.2 Tightening torques

A washer must be positioned between the screw head and the plate.

The corresponding tightening torques are given in the following table.

Mounting kit	Thread	Washer	Tightening torque
PR 6001/00N, ../01N, ../10N, ../11N	M12-8.8	13×24×2.5	85 Nm
PR 6001/00S, ../01S, ../10S, ../11S	M12-A2-70	13×24×2.5	60 Nm
PR 6001/02N, ../20N, ../21N, ../11N	M16-8.8	17×30×3	210 Nm
PR 6001/20S, ../21S	M16-A2-70	17×30×3	150 Nm
PR 6001/03N, ../26N, ../30N, ../31N, ../32N, ../33N	M20-8.8	21×37×4	425 Nm

5.3 Assembly

5.3.1 Safety instructions

⚠ WARNING

The vessel may turn over during mounting.

Securing the vessel against tipping is imperative.

▶ Use an appropriate lifting jack.

⚠ WARNING

Warning of hazardous area and/or personal injury

The locking washers of the constrainers may only be used once.

▶ Insert new washers in case they have been damaged or removed. Spare parts, see Chapter 8.1.

NOTICE

Welding or lightning strike current flowing through the cell can damage it.

All electrical welding on the weighing system must be finished before mounting the load cells.

▶ When installing the load cell, immediately bypass the load cell with a flexible copper strap (included in the load cell equipment).

During any additional electrical welding work near the load cell:

- Disconnect the load cell cables.
- Bypass the load cell using the flexible copper strap.
- Make sure that the grounding clamp of the welding set is fitted as closely as possible to the welding joint.

5.3.2 Installing the mounting kit and inserting the load cell

Note:

Screw mounting of the upper and lower plates is described below.

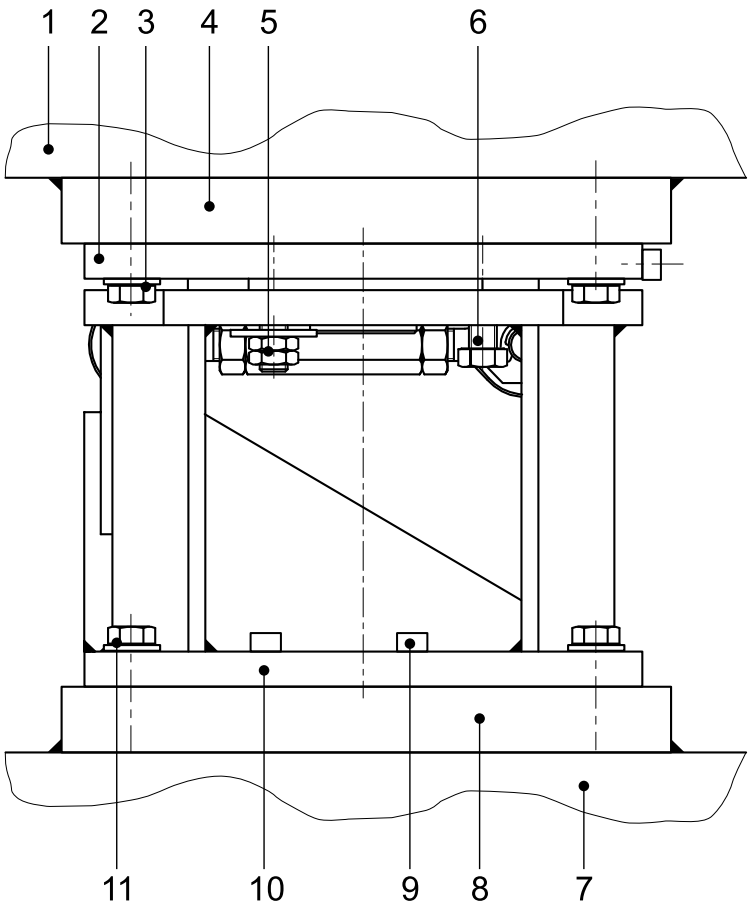
The work steps must be carried out on all points of contact (e.g. vessel) of the weighing object.

Requirements:

- All threaded holes for the lower plate are available in the foundation/substructure (see Chapter 4.2).
- All threaded holes for the upper plate are available in the vessel bracket/vessel foot (see Chapter 4.2).

5.3.2.1 PR 6001/00, ../10, ../20

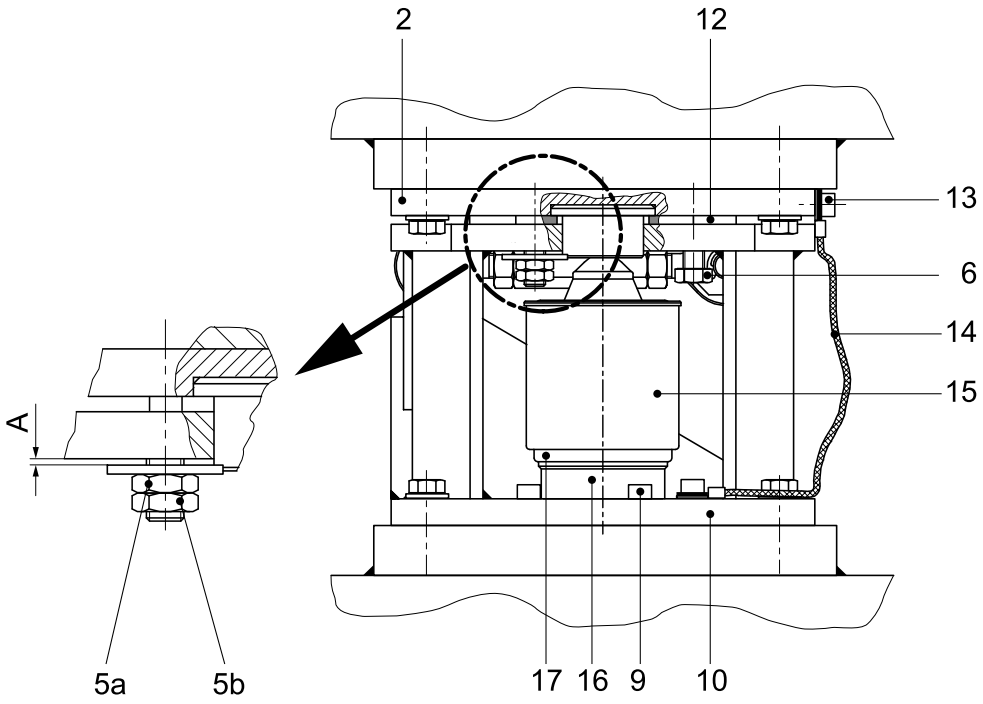
Example: PR 6001/10



Procedure:

1. Place the mounting kit on the foundation (7)/the lower weld-on plate (8) and lightly tighten the screws (11).
2. Place the weighing object (1), possibly also with upper weld-on plate (4), on the mounting kit and position it above the long holes; the adjustment notches (front and right) must align (see figure in Chapter 5.1.1).

3. Tighten the screws (3) of the upper plate (2) and the screws (11) of the lower plate (10) of the portal support. It is essential to observe the property classes and tightening torques of the screws and the property classes of the washers (refer to Chapter 5.2).
4. Loosen the nuts (5) of the internal lift-off protection and turn it to the end of the threads of the pin screw.
5. Remove one screw (9) from the lower plate (10) of the portal support (where the load cell is inserted).
6. Lift the weighing object (1) approx. 5 mm using the jack-up (6) or an appropriate lifting device.

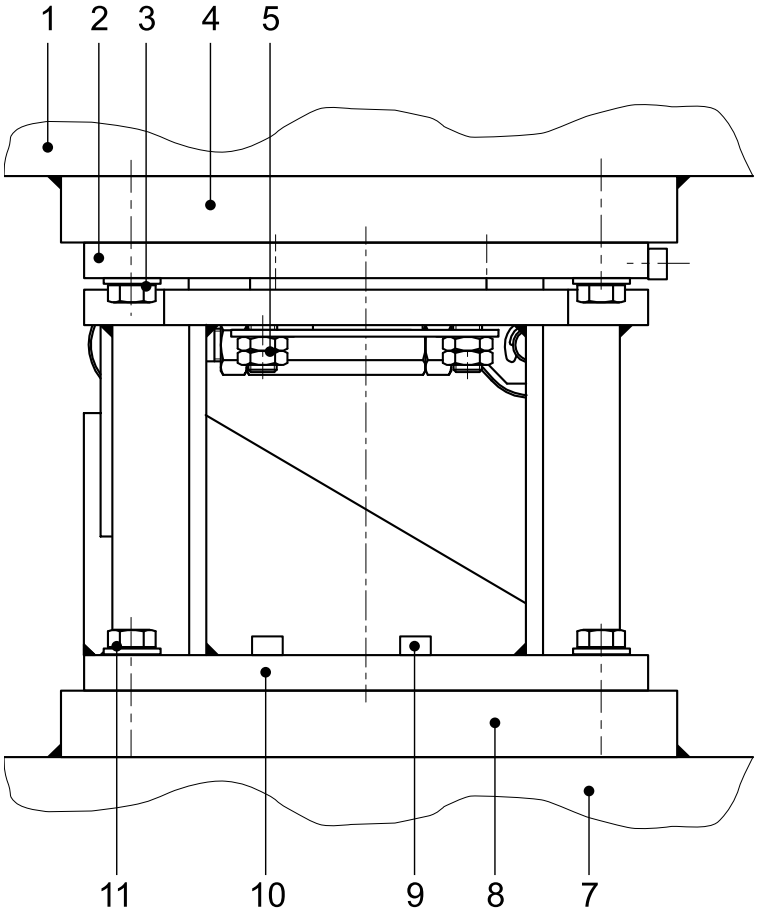


The detailed view of the lift-off protection is shown without the auxiliary mounting plate.

7. Clean the load cell base on the lower plate (10) of the portal support.
8. Apply sufficient grease to the contact surfaces of the load cell/load discs.
9. Set and position load cell (15) with lower load disc (16) and supporting ring (17).
10. Re-screw in the screw (9) and tighten it with accompanying wrench.
11. Remove the auxiliary mounting plate (12).
12. Set the weighing object down on the mounting kit using the jack-up (6) or an appropriate lifting device.
13. Check the correct position of the adjustment notches, readjust if necessary (see work step 2).
14. Set a distance (A) of 2 mm with this one nut (5a).
15. Lock the lift-off protection with the other nut (5b).
16. Fasten the one end of the equipotential bonding cable (14) (supplied with the load cell) on the upper plate (2) and the other end on the lower plate (10) of the portal support with screw (13), spring washer and washer.

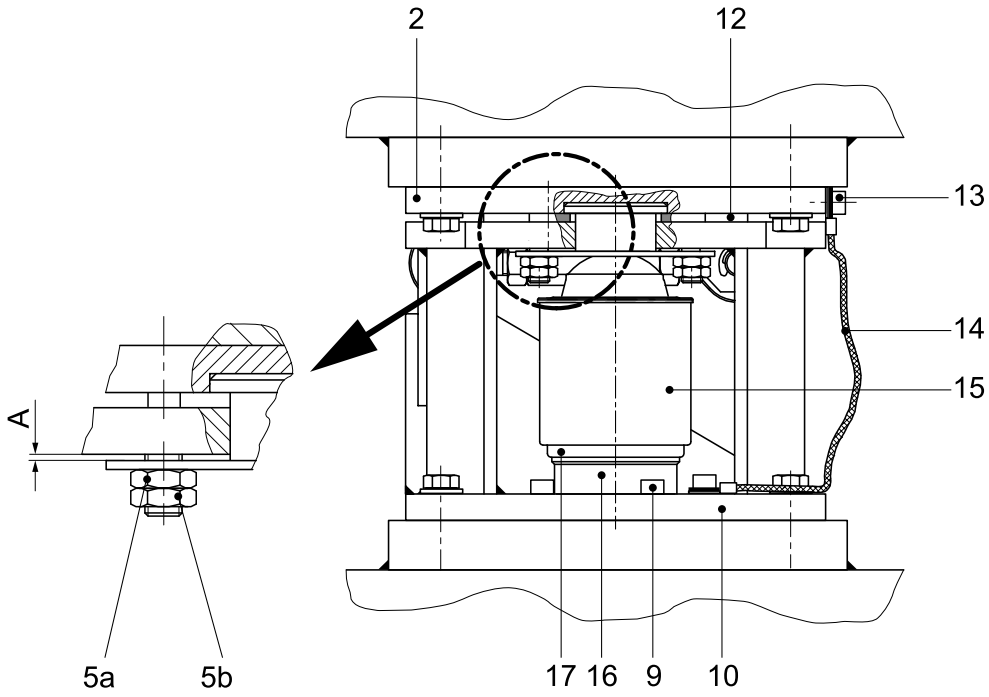
5.3.2.2 PR 6001/01, ../02, ../03, ../11, ../21

Example: PR 6001/11



Procedure:

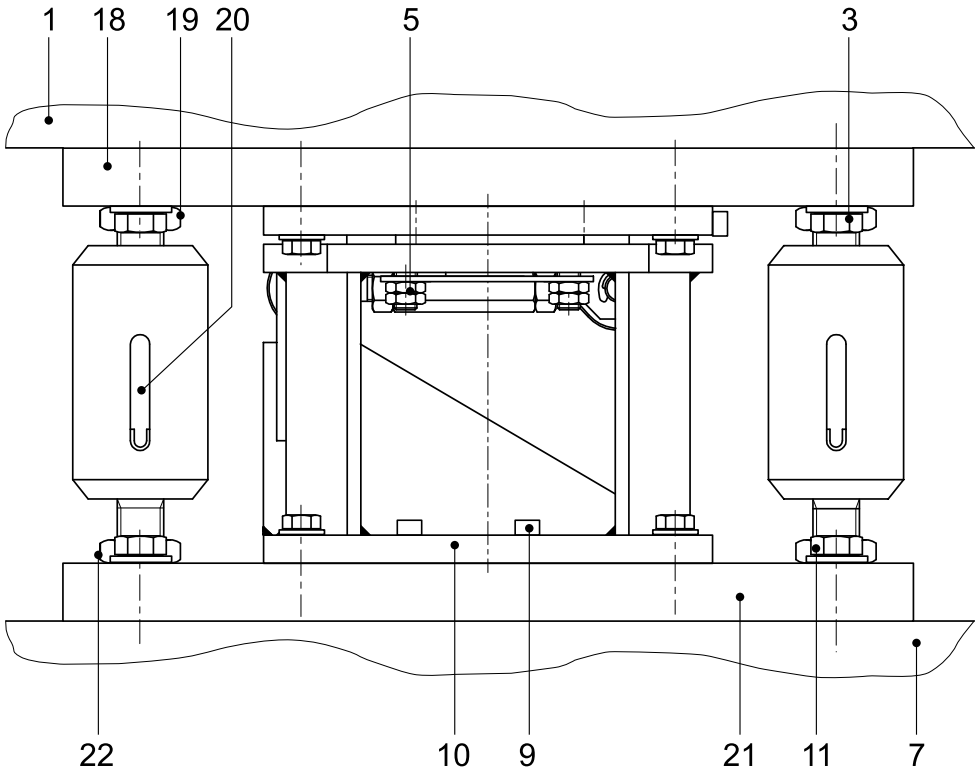
1. Place the mounting kit on the foundation (7)/the lower weld-on plate (8) and lightly tighten the screws (11).
2. Place the weighing object (1), possibly also with upper weld-on plate (4), on the mounting kit and position it above the long holes; the adjustment notches (front and right) must align (see figure in Chapter 5.1.1).
3. Tighten the screws (3) of the upper plate (2) and the screws (11) of the lower plate (10) of the portal support. It is essential to observe the property classes and tightening torques of the screws and the property classes of the washers (refer to Chapter 5.2).
4. Loosen the nuts (5) of the internal lift-off protection and turn it to the end of the threads of the pin screw.
5. Remove one screw (9) from the lower plate (10) of the portal support (where the load cell is inserted).
6. Lift the weighing object (1) approx. 5 mm using an appropriate lifting device.



The detailed view of the lift-off protection is shown without the auxiliary mounting plate.

7. Clean the load cell base on the lower plate (10) of the portal support.
8. Apply sufficient grease to the contact surfaces of the load cell/load discs.
9. Set and position load cell (15) with lower load disc (16) and supporting ring (17).
10. Re-screw in the screw (9) and tighten it with accompanying wrench.
11. Remove the auxiliary mounting plate (12).
12. Set the weighing object down on the mounting kit using an appropriate lifting device.
13. Check the correct position of the adjustment notches, readjust if necessary (see work step 2).
14. Set a distance (A) of 2 mm with this one nut (5a).
15. Lock the lift-off protection with the other nut (5b).
16. Fasten the one end of the equipotential bonding cable (14) (supplied with the load cell) on the upper plate (2) and the other end on the lower plate (10) of the portal support with screw (13), spring washer and washer.

5.3.2.3 PR 6001/26N



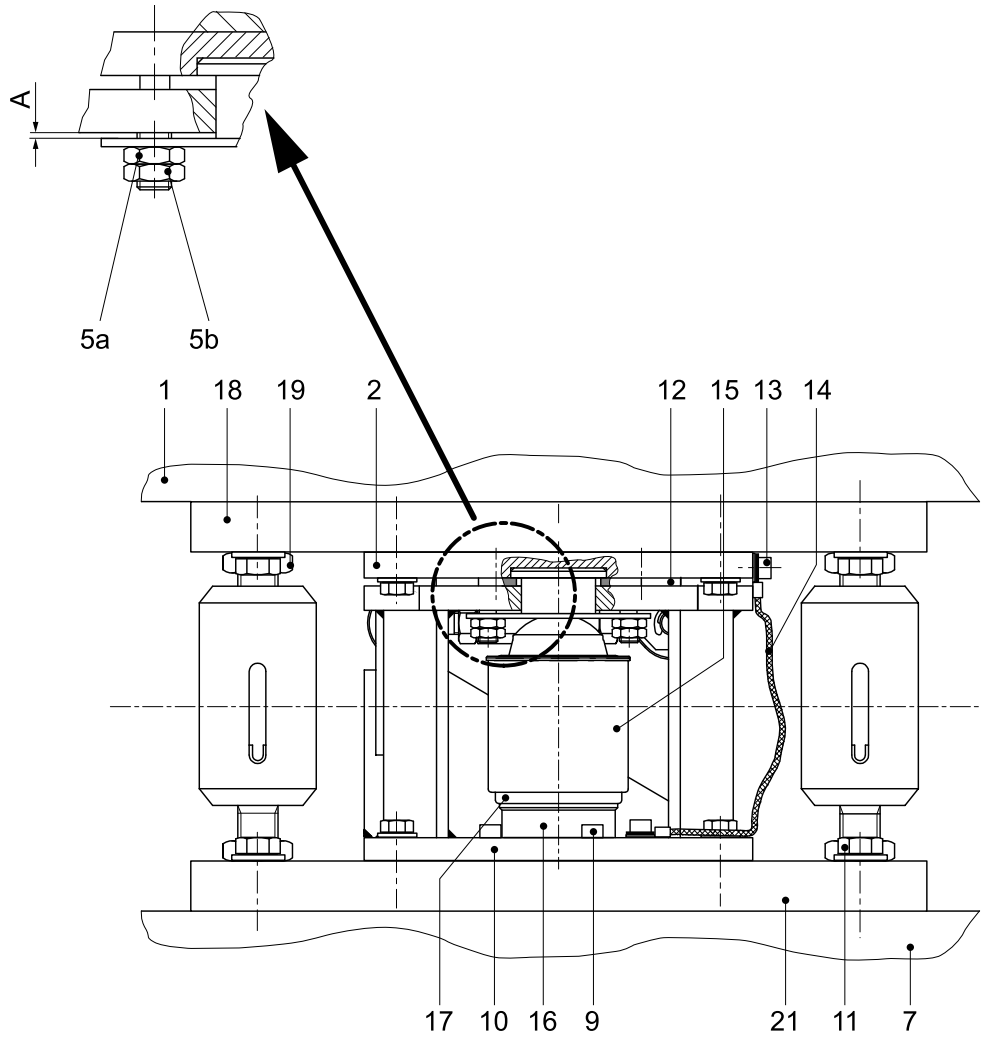
Procedure:

Note:

The distance required for the lift-off protection function is prescribed by the mounting, but it can also be set later by loosening the nut (22).

To do that, insert the screwdriver into the slit (20) of the lift-off protection and loosen the nut.

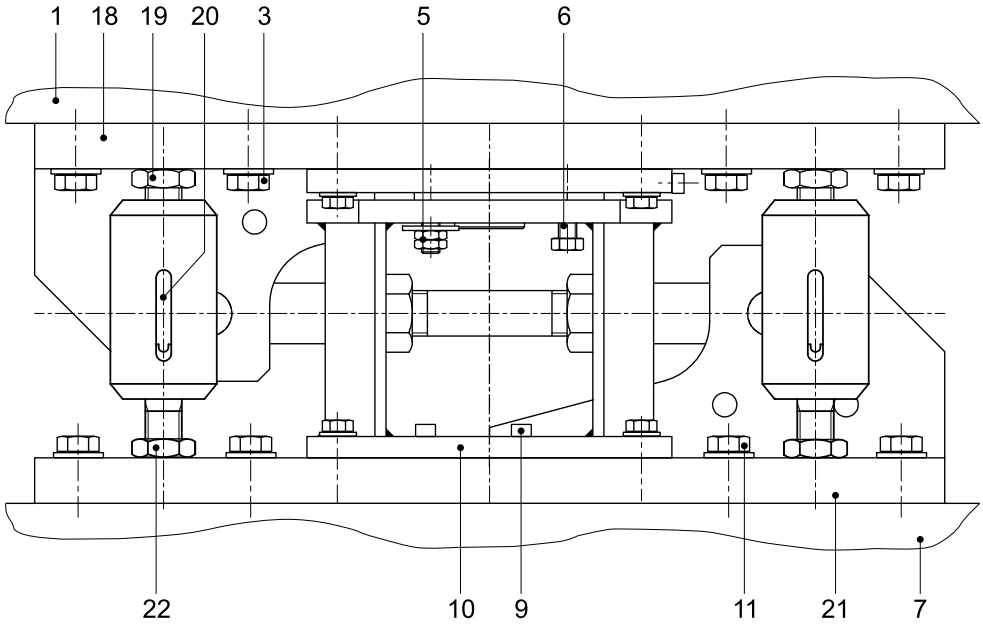
1. Place the mounting kit on the foundation (7) and lightly tighten the screws (11).
2. Place the weighing object (1) on the mounting kit and position it above the drilled holes; the adjustment notches (front and right) must align (see figure in Chapter 5.1.1).
3. Tighten the screws (3) of the upper plate (18) and the screws (11) of the lower plate (21). It is essential to observe the property classes and tightening torques of the screws and the property classes of the washers (refer to Chapter 5.2).
4. Loosen the nuts (5) of the internal lift-off protection and turn it to the end of the threads of the pin screw.
5. Loosen the screw with the nut (19) and screw it out at least 5 mm.
6. Remove one screw (9) from the lower plate (10) of the portal support (where the load cell is inserted).
7. Lift the weighing object (1) approx. 5 mm using an appropriate lifting device.



The detailed view of the lift-off protection is shown without the auxiliary mounting plate.

8. Clean the load cell base on the lower plate (10) of the portal support.
9. Apply sufficient grease to the contact surfaces of the load cell/load discs.
10. Set and position load cell (15) with lower load disc (16) and supporting ring (17).
11. Re-screw in the screw (9) and tighten it with accompanying wrench.
12. Remove the auxiliary mounting plate (12).
13. Set the weighing object down on the mounting kit using an appropriate lifting device.
14. Check the correct position of the adjustment notches, readjust if necessary (see work step 2).
15. Set a distance (A) of 3 mm with this one nut (5a).
16. Lock the lift-off protection with the other nut (5b).
17. Lock the screw using the nut (19).
18. Fasten the one end of the equipotential bonding cable (14) (supplied with the load cell) on the upper plate (2) and the other end on the lower plate (10) of the portal support with screw (13), spring washer and washer.

5.3.2.4 PR 6001/30N



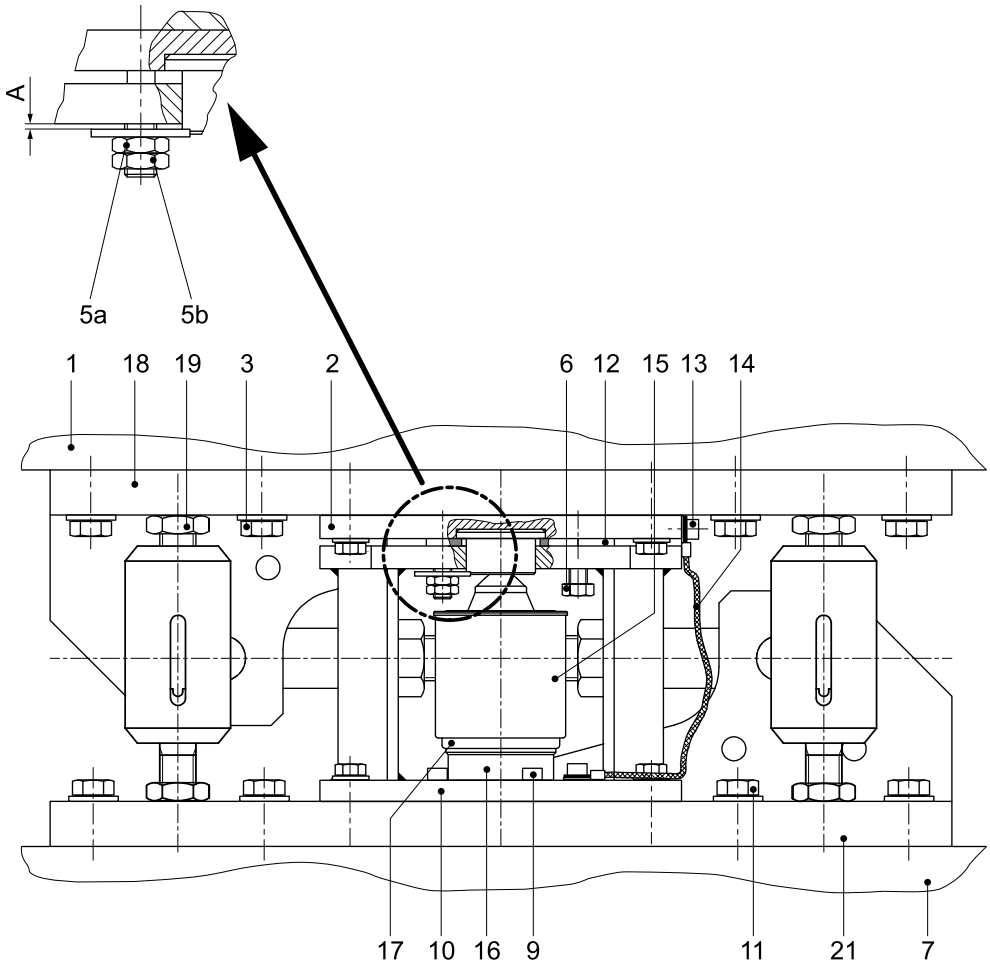
Procedure:

Note:

The distance required for the lift-off protection function is prescribed by the mounting, but it can also be set later by loosening the nut (22).

To do that, insert the screwdriver into the slit (20) of the lift-off protection and loosen the nut.

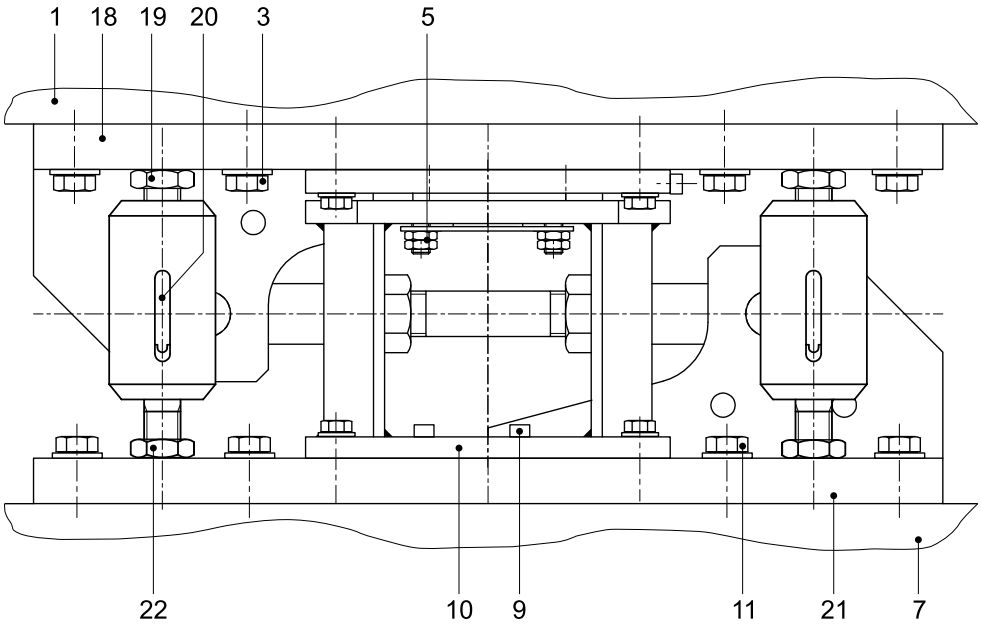
1. Place the mounting kit on the foundation (7) and lightly tighten the screws (11).
2. Place the weighing object (1) on the mounting kit and position it above the long holes; the adjustment notches (front and right) must align (see figure in Chapter 5.1.1).
3. Tighten the screws (3) of the upper plate (18) and the screws (11) of the lower plate (21). It is essential to observe the property classes and tightening torques of the screws and the property classes of the washers (refer to Chapter 5.2).
4. Loosen the nuts (5) of the internal lift-off protection and turn it to the end of the threads of the pin screw.
5. Loosen the screw with the nut (19) and screw it out at least 5 mm.
6. Remove one screw (9) from the lower plate (10) of the portal support (where the load cell is inserted).
7. Lift the weighing object (1) approx. 5 mm using the jack-up (6) or an appropriate lifting device.



The detailed view of the lift-off protection is shown without the auxiliary mounting plate.

8. Clean the load cell base on the lower plate (10) of the portal support.
9. Apply sufficient grease to the contact surfaces of the load cell/load discs.
10. Set and position load cell (15) with lower load disc (16) and supporting ring (17).
11. Re-screw in the screw (9) and tighten it with accompanying wrench.
12. Remove the auxiliary mounting plate (12).
13. Set the weighing object down on the mounting kit using the jack-up (6) or an appropriate lifting device.
14. Check the correct position of the adjustment notches, readjust if necessary (see work step 2).
15. Set a distance (A) of 3 mm with this one nut (5a).
16. Lock the lift-off protection with the other nut (5b).
17. Lock the screw using the nut (19).
18. Fasten the one end of the equipotential bonding cable (14) (supplied with the load cell) on the upper plate (2) and the other end on the lower plate (10) of the portal support with screw (13), spring washer and washer.

5.3.2.5 PR 6001/31N



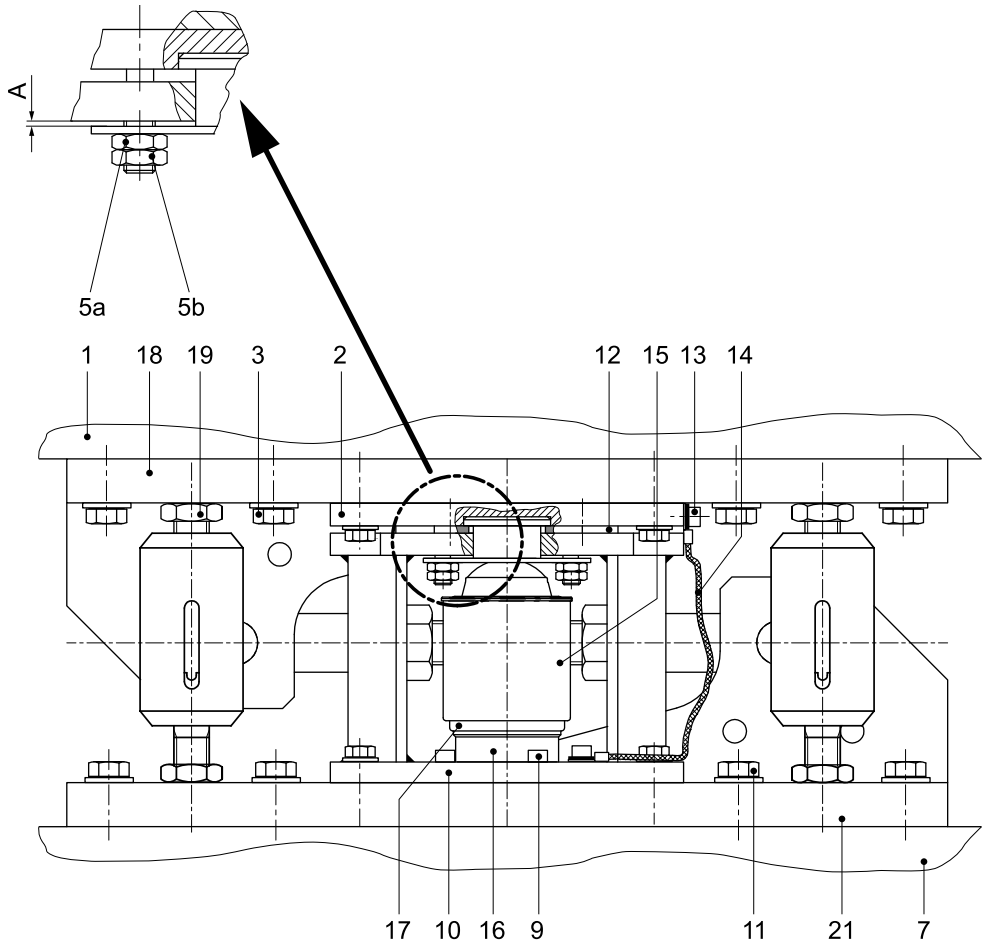
Procedure:

Note:

The distance required for the lift-off protection function is prescribed by the mounting, but it can also be set later by loosening the nut (22).

To do that, insert the screwdriver into the slit (20) of the lift-off protection and loosen the nut.

1. Place the mounting kit on the foundation (7) and lightly tighten the screws (11).
2. Place the weighing object (1) on the mounting kit and position it above the long holes; the adjustment notches (front and right) must align (see figure in Chapter 5.1.1).
3. Tighten the screws (3) of the upper plate (18) and the screws (11) of the lower plate (21). It is essential to observe the property classes and tightening torques of the screws and the property classes of the washers (refer to Chapter 5.2).
4. Loosen the nuts (5) of the internal lift-off protection and turn it to the end of the threads of the pin screw.
5. Loosen the screw with the nut (19) and screw it out at least 5 mm.
6. Remove one screw (9) from the lower plate (10) of the portal support (where the load cell is inserted).
7. Lift the weighing object (1) approx. 5 mm using an appropriate lifting device.

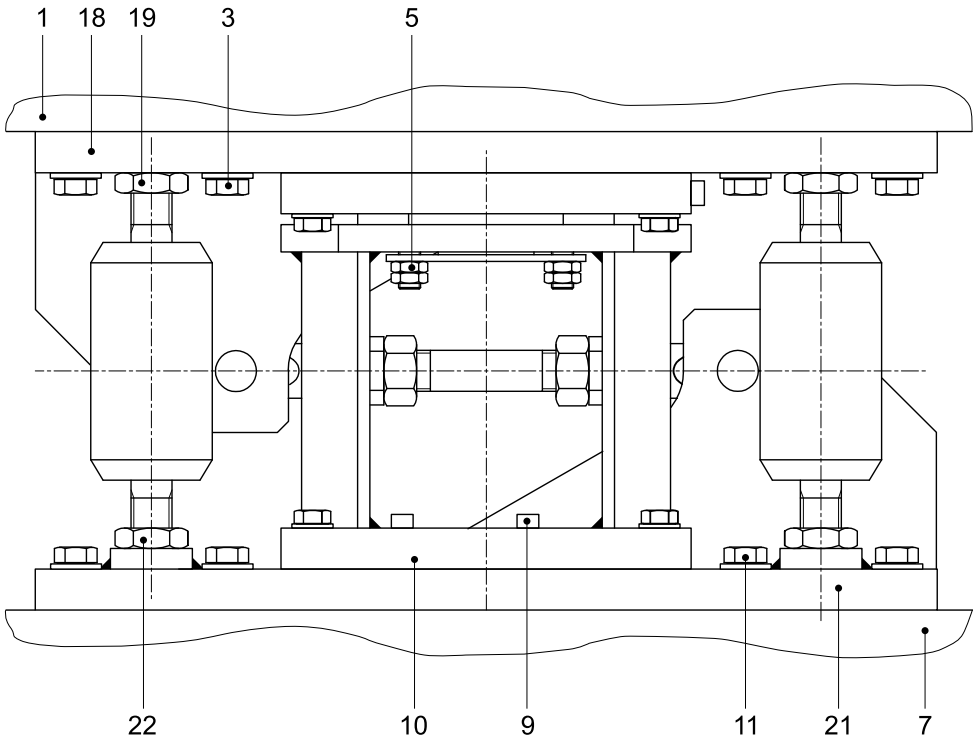


The detailed view of the lift-off protection is shown without the auxiliary mounting plate.

8. Clean the load cell base on the lower plate (10) of the portal support.
9. Apply sufficient grease to the contact surfaces of the load cell/load discs.
10. Set and position load cell (15) with lower load disc (16) and supporting ring (17).
11. Re-screw in the screw (9) and tighten it with accompanying wrench.
12. Remove the auxiliary mounting plate (12).
13. Set the weighing object down on the mounting kit using an appropriate lifting device.
14. Check the correct position of the adjustment notches, readjust if necessary (see work step 2).
15. Set a distance (A) of 3 mm with this one nut (5a).
16. Lock the lift-off protection with the other nut (5b).
17. Lock the screw using the nut (19).
18. Fasten the one end of the equipotential bonding cable (14) (supplied with the load cell) on the upper plate (2) and the other end on the lower plate (10) of the portal support with screw (13), spring washer and washer.

5.3.2.6 PR 6001/32N, ../33N

Example: PR 6001/32



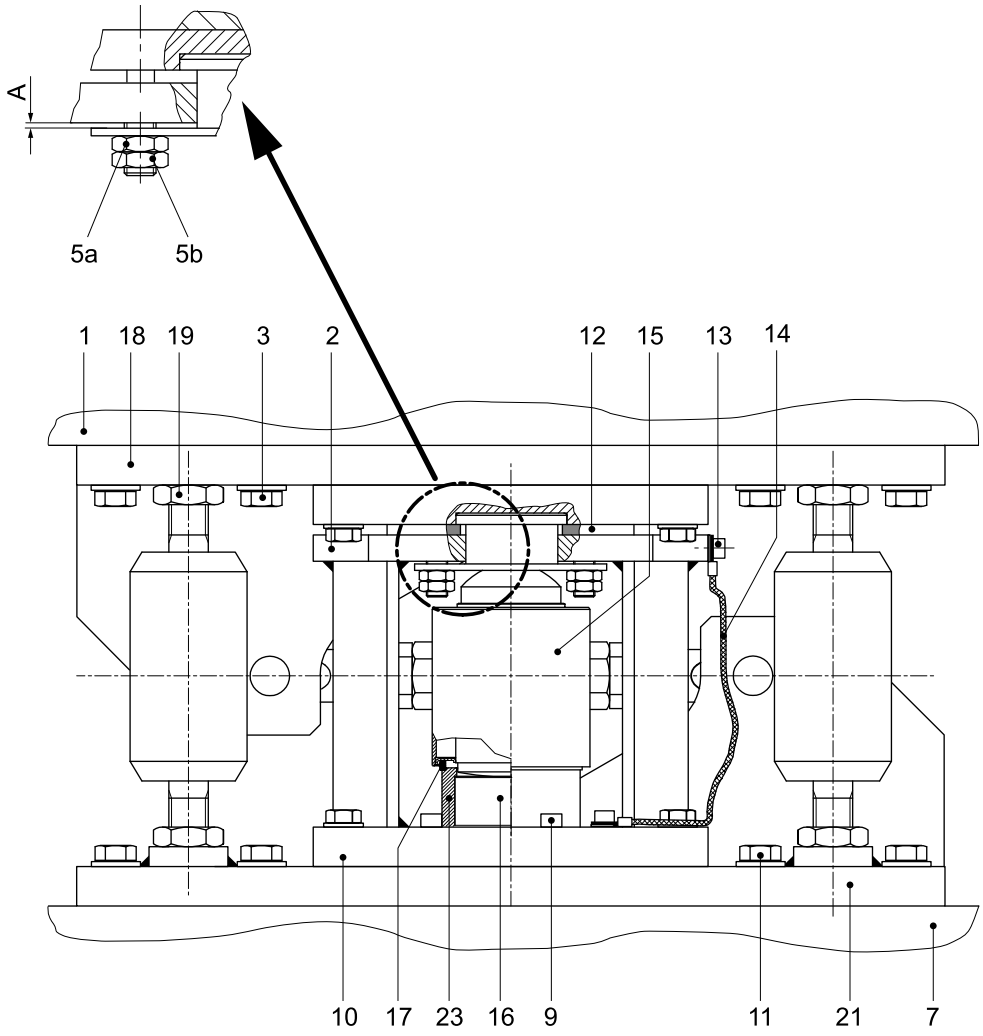
Procedure:

Note:

The distance required for the lift-off protection function is prescribed by the mounting.

Don't release the nut (22).

1. Place the mounting kit on the foundation (7) and lightly tighten the screws (11).
2. Place the weighing object (1) on the mounting kit and position it above the long holes; the adjustment notches (front and right) must align (see figure in Chapter 5.1.1).
3. Tighten the screws (3) of the upper plate (18) and the screws (11) of the lower plate (21). It is essential to observe the property classes and tightening torques of the screws and the property classes of the washers (refer to Chapter 5.2).
4. Loosen the nuts (5) of the internal lift-off protection and turn it to the end of the threads of the pin screw.
5. Loosen the screw with the nut (19) and screw it out at least 5 mm.
6. Remove one screw (9) from the lower plate (10) of the portal support (where the load cell is inserted).
7. Lift the weighing object (1) approx. 5 mm using an appropriate lifting device.



The detailed view of the lift-off protection is shown without the auxiliary mounting plate.

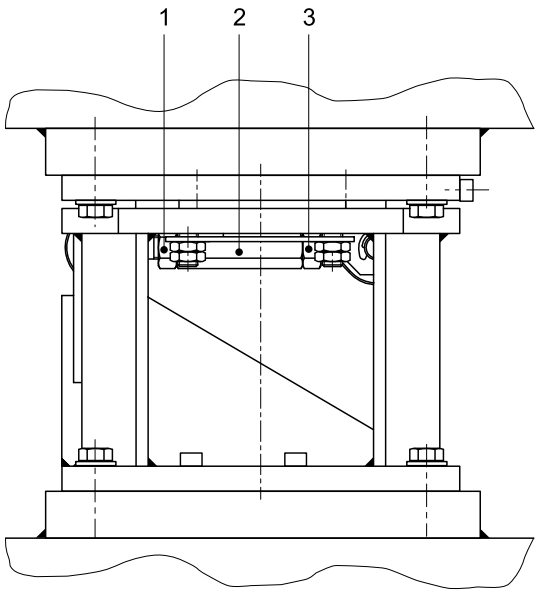
8. Clean the load cell base on the lower plate (10) of the portal support.
9. Apply sufficient grease to the contact surfaces of the load cell/load discs.
10. Set and position load cell (15) with lower load disc (16), ring (23) and supporting ring (17).
11. Re-screw in the screw (9) and tighten it with accompanying wrench.
12. Remove the auxiliary mounting plate (12).
13. Set the weighing object down on the mounting kit using an appropriate lifting device.
14. Check the correct position of the adjustment notches, readjust if necessary (see work step 2).
15. Set a distance (A) of 3 mm with this one nut (5a).
16. Lock the lift-off protection with the other nut (5b).
17. Lock the screw using the nut (19).
18. Fasten the one end of the equipotential bonding cable (14) (supplied with the load cell) on the upper plate (2) and the other end on the lower plate (10) of the portal support with screw (13), spring washer and washer.

5.4 Check mounting

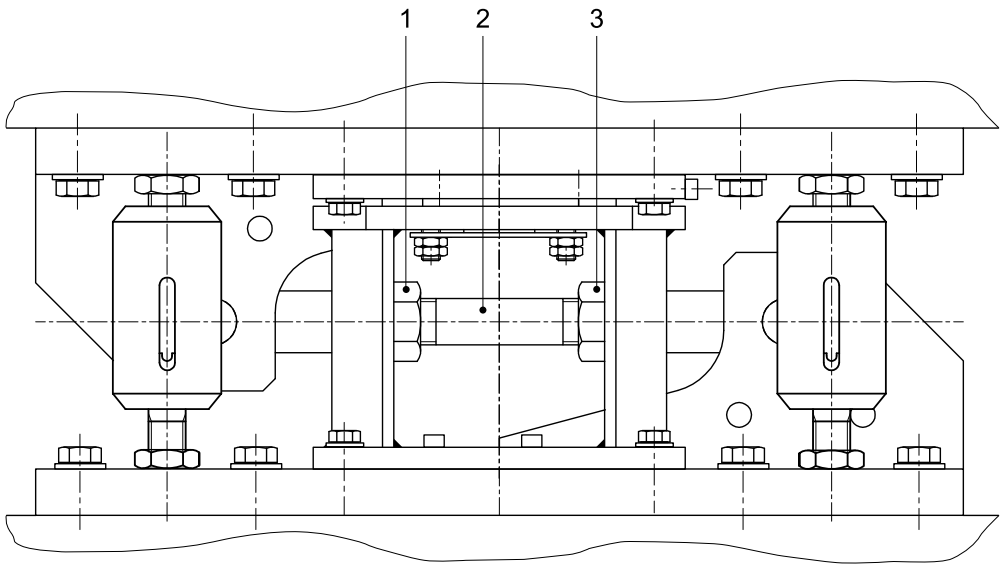
When all mounting kits have been installed, check them for proper mounting.

In particular, force shunts should be avoided.

Example: PR 6001/11



Example: PR 6001/31N



It is essential to check:

- whether the auxiliary mounting plate has been removed.
- whether the load cell has been inserted in the mounting kit vertically and without being canted.

  This is guaranteed by the correct position of the adjustment notches (see figure in Chapter 5.1.1
- whether the upper and lower plates are mounted in a horizontal position.

- whether free moving space and the required play for thermal expansion are provided.
- whether the constrainers have sufficient clearance; if necessary, loosen nuts (1 and 3), adjust using the screwed joint (2) and retighten the nuts.

The free moving space which is required for displacement of the measured object due to thermal expansion, vibration, etc. can be utilized without reducing the measuring accuracy only if the load cell and constraining unit have been installed exactly.

To avoid force shunts, all incoming and outgoing lines (hoses, pipes, cables) must be connected to the measured object with the greatest flexibility possible.

The entire load must be supported by the load cells!

6 Cleaning

The mounting kit is easy to clean. It can be spray-washed with water.

For this purpose, spray the water jet from top to bottom and around the mounting kit.

NOTICE

Some cleaning agents may not be compatible with the mounting kit material.

- When using cleaning agents, ensure that their compatibility with the mounting kit material has been tested and approved (see Chapter 4.3).

7 Disposal

If the packaging is no longer required, please take it to your local waste disposal facility and/or a reputable disposal company or collection point. The packaging largely consists of environmentally friendly materials which can be used as secondary raw materials.

It is not permitted—even for small businesses—to dispose of this product with the regular household waste or at collection points run by local public waste disposal companies.

EU legislation requires its Member States to collect electrical and electronic equipment and dispose of it separately from other unsorted municipal waste so that it can then be recycled.

Before disposing of or scrapping the product, any batteries should be removed and taken to a suitable collection point.

Please see our T&Cs for further information.

Service addresses for repairs are listed in the product information supplied with the product and on our website (www.minebea-intec.com).

We reserve the right not to accept products that are contaminated with hazardous substances (ABC contamination) for repair.

Should you have any further questions, please contact your local service representative or our service center.

Minebea Intec GmbH

Repair center

Meiendorfer Strasse 205 A

22145 Hamburg, Germany

Phone: +49.40.67960.666

service.HH@minebea-intec.com

8 Spare parts and accessories

8.1 Replacement parts

No.	Description	Max. capacity/perm. Horizontal force	Order no.
1	Upper load disc, high tensile steel	500 kg...10 t	5312 693 98106
2	Upper load disc, stainless steel	500 kg...10 t	5312 693 98096
3	Upper load disc, high tensile steel	20...75 t	5312 693 98116
4	Upper load disc, stainless steel	20...75 t	5312 693 98097
5	Upper load disc, high tensile steel	100 t	5312 693 98098
6	Upper load disc, high tensile steel	200 t, 300 t	5312 693 98099
7	Constrainer, high tensile steel	25 kN	
8	Constrainer, stainless steel	25 kN	
9	Constrainer, high tensile steel	50 kN	
10	Constrainer, stainless steel	50 kN	
11	Constrainer, high tensile steel	200 kN	
12	Flexible copper strap, 250 mm long		5312 321 28056
13	Flexible copper strap, 400 mm long		5312 321 28057
14	2× locking washer, 12 mm, DIN 6799 12-A2	for PR 6001/10, ../11	5312 530 78003
15	2× locking washer, 15 mm, DIN 6799 15-A2	for PR 6001/20, ../21, ../25	5312 530 78004

8.2 Accessories

8.2.1 Weld-on plates

We recommend using the following weld-on plates:

No.	Description	Nom. capacity	Order no.
1	Weld-on plate set PR 6001/90N (for PR 6001/00N, PR 6001/01N)	500 kg...10 t	9405 360 01901
2	Weld-on plate set PR 6001/90S (for PR 6001/00S, PR 6001/01S)	500 kg...10 t	9405 360 01902
3	Weld-on plate set PR 6001/91N (for PR 6001/10N, PR 6001/11N)	500 kg...10 t	9405 360 01911
4	Weld-on plate set PR 6001/91S (for PR 6001/10S, PR 6001/11S)	500 kg...10 t	9405 360 01912
5	Weld-on plate set PR 6001/92N (for PR 6001/20N, PR 6001/21N)	500 kg...10 t	9405 360 01921
6	Weld-on plate set PR 6001/92S (for PR 6001/20S, PR 6001/21S)	500 kg...10 t	9405 360 01922
7	Weld-on plate set PR 6001/96N (for PR 6001/02N)	100 t	9405 360 01961
8	Weld-on plate set PR 6001/98N (for PR 6001/03N)	200 t, 300 t	9405 360 01981

N = steel zinc plated, passivated and sealed (RoHS-compliant)

S = stainless steel

9 Certificates

Ser. no.	Description	Document no.	see Chapter
1	CE marking	CE-PR 6001	9.1
2	Declaration of Performance	001/2021	9.2
3	Conformity of the Factory Production Control	2451-CPR-EN1090-2014.2089.005	9.3

9.1 CE-PR 6001

European Standard EN 1090

Since July 2014, load-bearing parts made of steel have required EN 1090 certification to obtain general technical approval.

The standard applies in the following countries:

Belgium, Bulgaria, Denmark, Germany, Estonia, Finland, France, Greece, Ireland, Iceland, Italy, Croatia, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Austria, Poland, Portugal, Romania, Sweden, Switzerland, Slovakia, Slovenia, Spain, the Czech Republic, Hungary, the United Kingdom and Cyprus

CE

2451

Minebea Intec GmbH
Meiendorfer Strasse 205 A, 22145 Hamburg, Germany

14

2451-CPR-EN1090-2014.2089.004

EN1090-1+A1:2011

Mounting kit PR6001/xxN

Geometric tolerances: EN 1090-2

Supplementary tolerances: ISO 2768 – cL

Weldability:	Steel S235JR and S355J2 in accordance with EN 10025-2 as per component specification
Fire behavior:	Material classified in category A1
Durability:	galv. zinc coating, passivated and sealed in accordance with DIN EN ISO 19598

Load capacity characteristics:

Load capacity:	Measurement carried out in accordance with EN 1993-1
Manufacturing:	In accordance with component specification 940536001_ch1 and EN1090-2, design class EXC2

9.2 001/2021

Minebea intec

Declaration of Performance

in accordance with Annex III of regulation (EU) no 305/2011
(Building Products Regulation)

No 001/2021

1.	ID code of product type:	Mounting kit
2.	ID to identify the building product in accordance with article 11, paragraph 4:	PR 6001/xxN
3.	Intended use:	The mounting kit is used in combination with a PR 6201/PR 6203/PR 6204 load cell for container and silo weighing.
4.	Manufacturer in accordance with Article 11, Paragraph 5:	Minebea Intec GmbH Meiendorfer Strasse 205 A 22145 Hamburg, Germany
5.	System to evaluate and check the constancy of performance of the building product in accordance with Annex V:	System 2+
6.	The notified location:	DVS ZERT GmbH has carried out the first inspection of the plant and in-house production control, as well as continuous monitoring, assessment and evaluation of the in-house production control in accordance with system 2+ and issued the following: **Certification of Conformity for In-House Production Control**
	Harmonized standard:	**EN 1090-1:2009+A1:2011**
	Certificate number:	**2451-CPR-EN1090-2014.2089.004**
7.	Performance declaration:	

Essential features	Performance/classification
Geometric tolerances	EN 1090-2
Extended tolerances	ISO 2768 - cL
Weldability	Steel S235JR and S355J2 in accordance with EN 10025-2 as per component specification

Fracture toughness	S235JR: 27J at 20°C; S355J2: 27J at -20°C
Fire behavior	Material classified in category A1
Durability	galv. zinc coating, passivated and sealed in accordance with DIN EN ISO 19598
Load capacity	Measurement carried out in accordance with EN 1993-1
Manufacturing	In accordance with component specification 940536001xx1 and EN1090-2, execution class EXC2

8. The performance of the product in accordance with numbers 1 and 2 corresponds to the performance declaration in number 7. The manufacturer in accordance with number 4 is solely responsible for creating this performance declaration.

Signed for the manufacturer and on behalf of the manufacturer by:

Minebea Intec GmbH
Hamburg, June 21, 2021

Dr. Karl Christoph Sommer
Managing Director

Robert Fuchs
Responsible for in-house production control (according to DIN EN 1090)

PR 6001 Declaration of Performance 2/2

9.3 2451-CPR-EN1090-2014.2089.005

DVS ZERT

CERTIFICATE

Conformity of the Factory Production Control

2451-CPR-EN1090-2014.2089.005

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the following construction product:

Construction product	**Structural components and kits for steel structures to EXC2 according to EN 1090-2**
Intended use	for load-bearing structures in all types of buildings
CE - marking method	ZA.3.2 to ZA.3.5 acc. to EN 1090-1:2009+A1:2011
	produced by or for
Manufacturer	**Minebea Intec GmbH** **Meiendorfer Straße 205 A** **22145 Hamburg** **GERMANY**
Manufacturing plant Production facility of the manufacturer	HW-1
Confirmation	This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the harmonised standard **EN 1090-1:2009+A1:2011** under system 2+ are applied, and that the factory production control fulfills all the prescribed requirements stated therein.
Date of first issue	11.11.2014
Next Surveillance audit	10.11.2023
Period of validity	This certificate will remain valid as long as the test methods and/or the factory production control requirements included in the harmonised standard used to assess the performance of the declared characteristics do not change, and the product and the manufacturing conditions in the plant are not modified significantly.
Remarks	see reverse
Place and date of issue	Düsseldorf, 02.08.2021 Bullert

Dipl.-Ing. Gurschke
Head of certification body

DAkkS Deutsche Akkreditierungsstelle D-ZE-16083-01-00

DVS ZERT GmbH, Aachener Straße 172, 40223 Düsseldorf, GERMANY

Certificate number: 2451-CPR-EN1090-2014.2089.005

Remarks

The Notified Body - 2451 DVS ZERT GmbH has performed the initial inspection of the/of manufacturing plant(s) and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

General provisions

The conditions of the standard EN 1090-1:2009+A1:2011, from section B. 4.1 until including section B. 4.4, must be fulfilled.

The requirements of EN 1090-1:2009 + A1: 2011, section B. 4.3 are observed. These refer to the annual statements to be submitted in writing of the manufacturer to the Notified Body.

The General Terms and Conditions of the DVS ZERT GmbH apply in the currently valid version.

DVS ZERT GmbH, Aachener Straße 172, 40223 Düsseldorf, GERMANY

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Minebea intec
The true measure