BEISSBARTH
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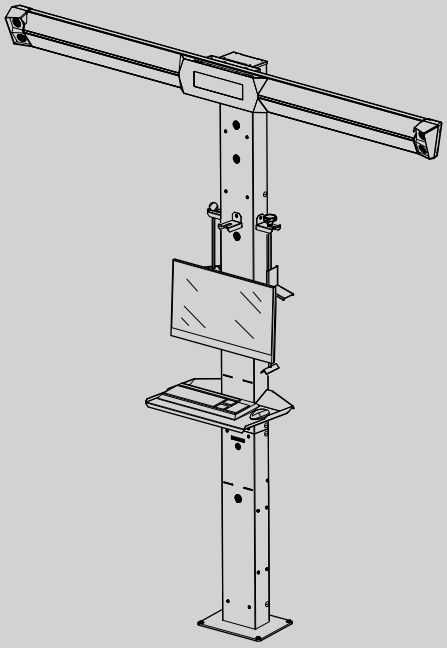

Q.Lign T.41
Q.Lign T.41 Kit

Achsmessgerät
Wheel Alignment

de	Planungsmappe	*Achsmessgerät*
en	Planning folder	*Wheel Aligment System*
es	Libro de planificación	*Alineador de ejes*
fr	Dossier de planification	*Système de contrôle de géométrie*
it	Cartelle di progettazione	*Sistema di controllo assetto*

en – Contents

1. Symbols used

1.1 In the documentation

1.1.1 Warning notices - Structure and meaning

Warning notices warn of dangers to the user or people in the vicinity. Warning notices also indicate the consequences of the hazard as well as preventive action. Warning notices have the following structure:

Warning symbol	**KEY WORD – Nature and source of hazard!** Consequences of hazard in the event of failure to observe action and information given. ➢ Hazard prevention action and information.

The key word indicates the likelihood of occurrence and the severity of the hazard in the event of non-observance:

Key word	Probability of occurrence	Severity of danger if instructions not observed
DANGER	**Immediate** impending **danger**	**Death** or **severe** injury
WARNING	**Possible** impending **danger**	**Death** or **severe** injury
CAUTION	Possible **dangerous situation**	**Minor** injury

1.1.2 Symbols in this documentation

Symbol	Designation	Explanation
!	Attention	Warns about possible property damage.
i	Information	Practical hints and other useful information.
1. 2.	Multi-step operation	Instruction consisting of several steps.
➢	One-step operation	Instruction consisting of one step.
⇨	Intermediate result	An instruction produces a visible intermediate result.
➜	Final result	There is a visible final result on completion of the instruction.

1.2 On the product

! Observe all warning notices on products and ensure they remain legible.

2. User information

2.1 Important notes

Important information on copyright, liability and warranty provisions, as well as on equipment users and company obligations, can be found in the separate manual "Important notes on and safety instructions for Beissbarth Wheel Test Equipment". These instructions must be carefully studied prior to start-up, connection and operation of the Q.Lign T.41 and must always be heeded.

2.2 Safety instructions

All the pertinent safety instructions can be found in the separate manual "Important notes on and safety instructions for Beissbarth Wheel Test Equipment". These instructions must be carefully studied prior to start-up, connection and operation of the Q.Lign T.41 and must always be heeded.

2.3 Validity

i These instructions applies to Q.Lign T.41 in conjunction with Beissbarth Wheel Test Equipment.

i Valid for all scissor lifts and 4-post lifts when they meet the requirements for correct wheel alignment.

3. General notes

3.1 Work environment

Limitation due to sunlight:
- Optical measuring systems do not work in direct sunlight.
- Direct and intense solar radiation on the mono camera and reference system may hamper an exact measurement of the Q.Lign T.41.
- Sunlight can restrict performance if, for example, the measurement bay has a glass enclosure. This problem can be solved by dimming the light in the measurement bay through use of a film.

3.2 Installation

The specifications given in the planning folder are minimum requirements designed to ensure correct assembly of the Q.Lign T.41. Any applicable local legislation, guidelines and standards must be observed when implementing the instructions!
Beissbarth A.T.S. GmbH will not accept liability for damage arising from failure to observe national regulations.

The following requirements for assembly and commissioning at the measurement bay must be satisfied before the Beissbarth service technician performs installation.

4. Measurement bay requirements

The permissible height difference must not be exceeded for the vehicle wheel support points on the measurement bay (turntables and sliding bases) in the transverse, longitudinal or diagonal directions.

Observe the allowed level for measuring and working height on lifts (example: 4-post lift).

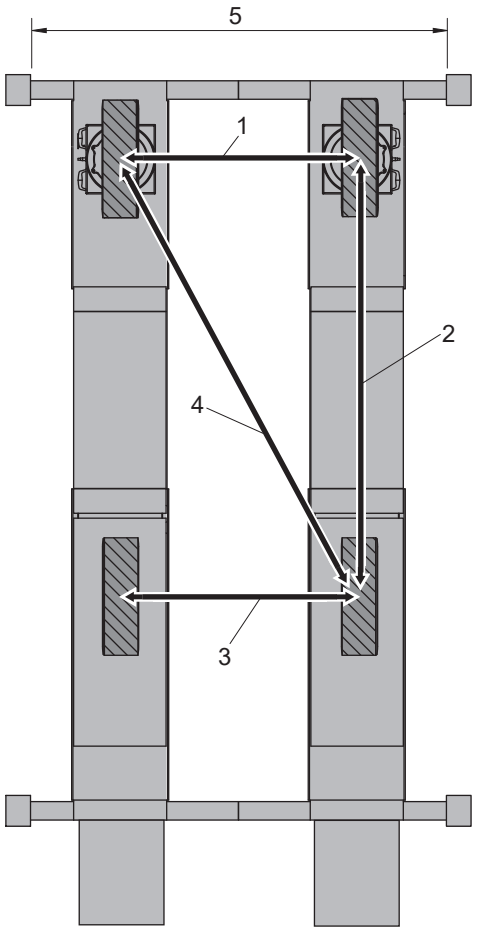

Fig. 1: Level of measurement bay

No.	Permissible height difference	Value [mm]
1	Transverse direction at front (left to right)	≤ 1
2	Longitudinal direction (front to rear)	≤ 2
3	Transverse direction at rear (left to right)	≤ 1
4	Diagonal direction (front / rear to left / right)	≤ 2
5	Recommended distance	> 2800

Tab. 1: Permissible height difference for wheel support points

Level checking must be performed by authorized service personnel using an optical leveling device. There must be a vehicle of average weight on the lift when checking.

If necessary, correct the height difference by shimming turntables and sliding bases.

5. Planning the Q.Lign T.41 measurement bay version

5.1 Dimensions and weights

5.1.1 Post-mounted T.41 version

Function	Specifications
X x Y x Z:	2595 x 2745 x 495 mm
Weight	approx. 70 kg

If wheel holders are attached to the column, a Z dimension of max. 644 mm must be taken into account.

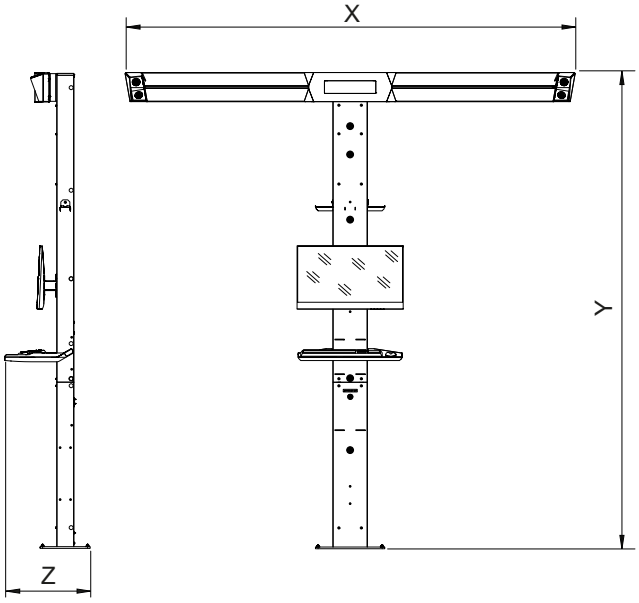

Fig. 2: Maximum overall dimensions

5.1.2 Wall-mounted T.41 Kit version

Wall mounting

Function	Specifications
X x Y x Z:	2595 x 170 x 210 mm
Weight	approx. 18 kg

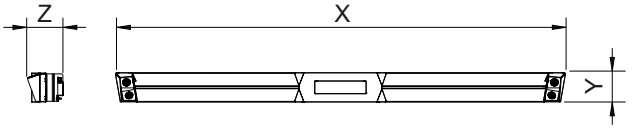

Fig. 3: Maximum overall dimensions

Wall mounting, extendable

Function	Specifications
X x Y x Z:	2595 x 280 x 665 mm
X x Y x Z1:	2595 x 280 x 1035 mm
Weight	approx. 26 kg

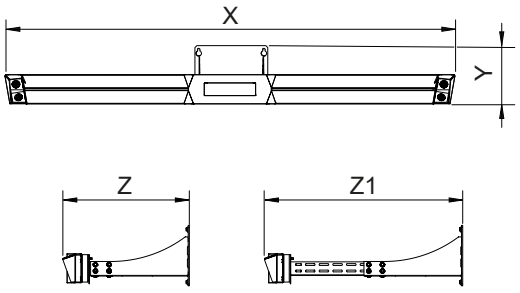

Fig. 4: Maximum overall dimensions

5.2 Electronic module

Function	Specifications
Input voltage range	100 - 240 V AC
Input frequency	50 - 60 Hz
Power	75 W

Use a suitable adapter if necessary.

5.3 Post-mounted T.41 version - existing components

The following components are part of the post-mounted version.

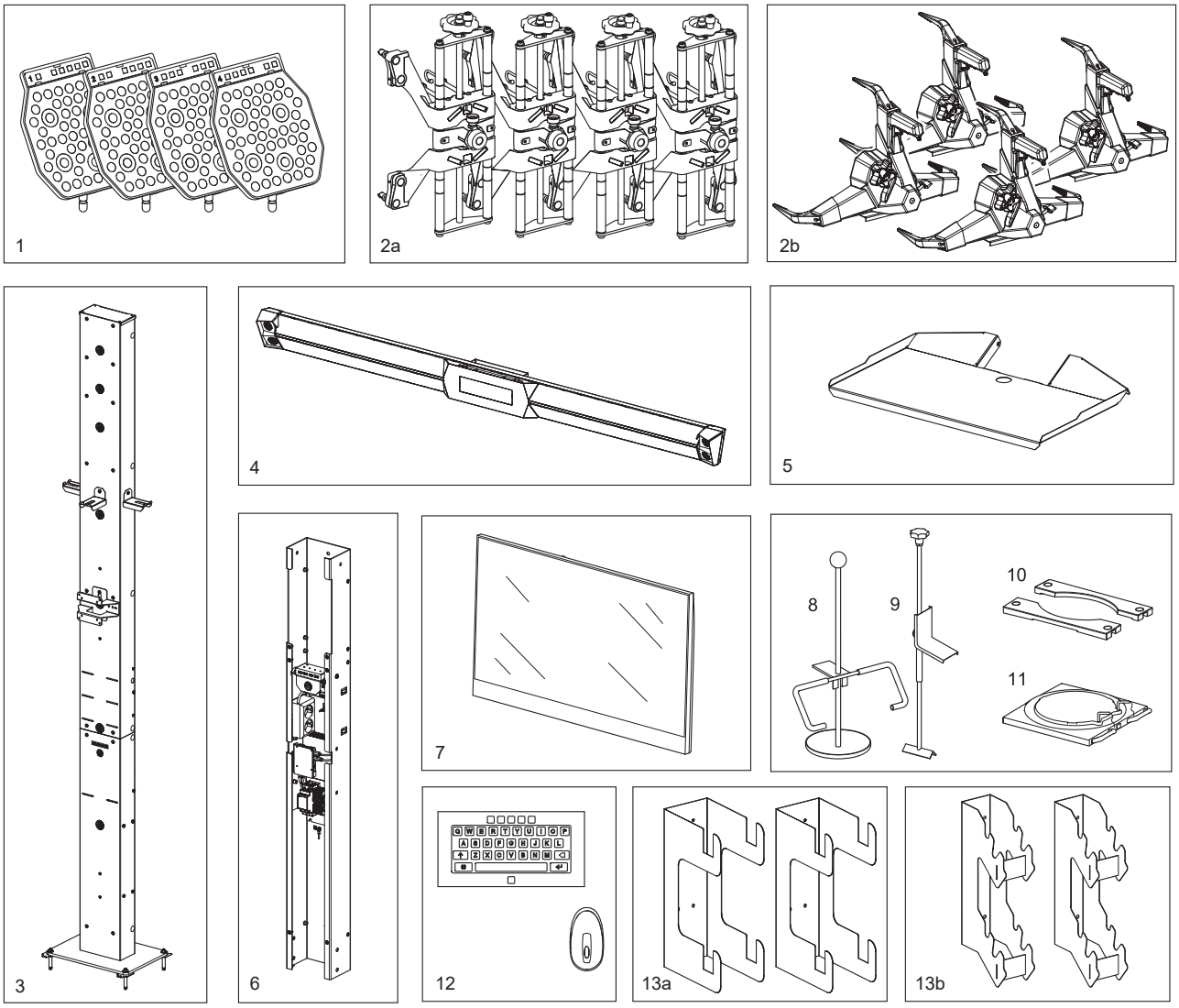

Fig. 5: Post mounting components

1 Measurement board (4 x)
2a Multi-Fit wheel clamp (4 x) [1)]
2b Q.Grip wheel clamp (4 x) [1)]
3 Post
4 Measuring beam
5 Shelf
6 Wireless module
7 27" Monitor
8 Steering wheel arrester
9 Brake clamp
10 Filler (4 x)
11 Turntable (2 x)
12 Mouse and keyboard
13a Mounting for wheel clamp Q.Grip (2 x) [1)]
13b Mounting for wheel clamp Multi-Fit (2 x) [1)]

[1)] *May be included in the delivery specification, depending on the version ordered*

5.4 Wall-mounted T.41 Kit version - existing components

The following components are part of the wall-mounted version.

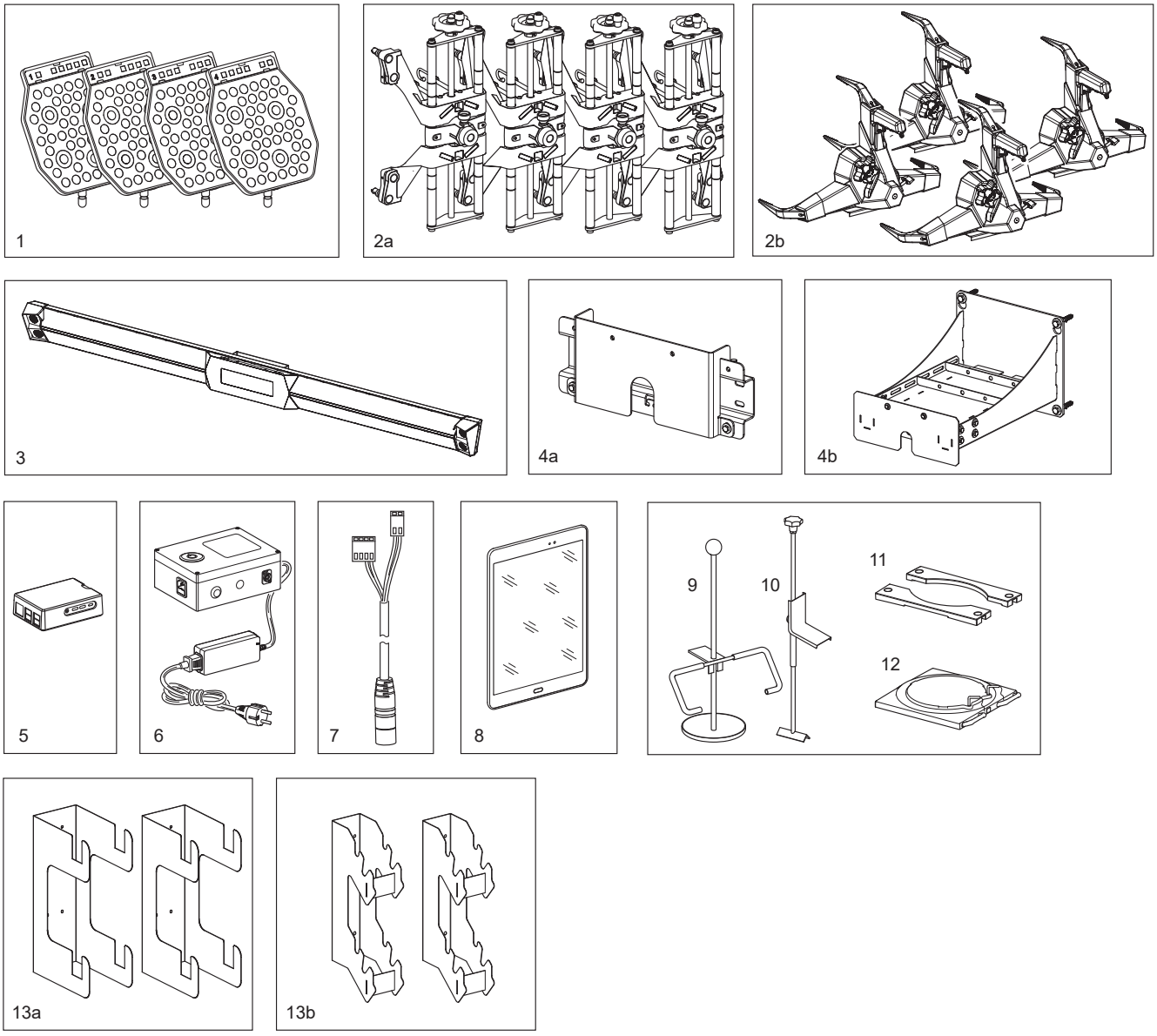

Fig. 6: Wall-mounted components

1 Measurement board (4 x)
2a Multi-Fit wheel clamp (4 x) [1)]
2b Q.Grip wheel clamp (4 x) [1)]
3 Measuring beam
4a Wall mounting [1)]
4b Wall mounting, extendable [1)]
5 Display module
6 Power supply for measuring beam
7 Connecting cable, measuring beam
8 Tablet [1)]
9 Steering wheel arrester
10 Brake clamp
11 Filler (4 x) [1)]
12 Turntable (2 x) [1)]
13a Mounting for wheel clamp Q.Grip (2 x) [1)]
13b Mounting for wheel clamp Multi-Fit (2 x) [1)]

[1)] May be included in the delivery specification, depending on the version ordered

5.5 Installation on lift platforms

5.5.1 Installation of post-mounted T.41 version

To measure vehicles with a short wheelbase, it is necessary to use turntables or short sliding plates at the rear axle.

The pictures are for illustrative purposes only. The wheel test equipment must be prepared and installed according to the dimensions indicated in the dimensional drawings and the installation instructions supplied with the product.

The configuration shown applies to installation on both a scissor lift and a 4-post lift.

The preparation of the power supply is the responsibility of the customer.

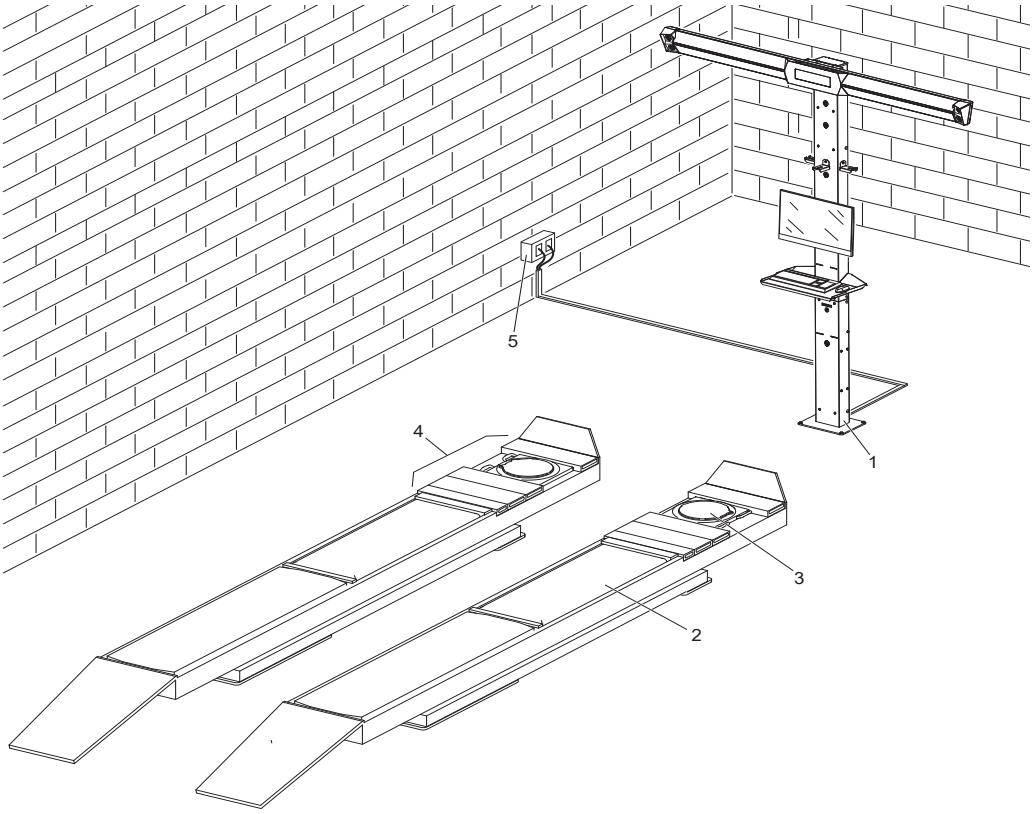

Fig. 7: Installation components

No.	Description	Comment
1	Q.Lign T.41 Wheel test equipment	• Post-mounted version. • Includes power cord with Schuko plug, length = 5 m, shelf, mouse, keyboard and monitor. • Q.Lign T.41 is available with different mountings for wheel clamps.
2	Scissor lift / 4-post lift	• Above-floor and floor-level installation variants are compatible with Q.Lign T.41. • During installation, the wheel test equipment can be set to allow wheel alignment on floor-level or elevated runway, but not for both variants at the same time.
3	Turntable	Position variable.
4	Roller bump for turntable	Recess for positioning the turntable.
5	Power supply	• On-site preparation: Connection option on socket. • Optional: On-site connection to a local area network (LAN). **The customer must provide a connection facility if it wants to enable functions related to data transmission to the Internet.**

Tab. 2: Overview of components

5.5.2 Installation of wall-mounted T.41 Kit version

To measure vehicles with a short wheelbase, it is necessary to use turntables or short sliding plates at the rear axle.

The pictures are for illustrative purposes only. The wheel test equipment must be prepared and installed according to the dimensions indicated in the dimensional drawings and the installation instructions supplied with the product.

The configuration shown applies to installation on both a scissor lift and a 4-post lift.

The preparation of the power supply is the responsibility of the customer.

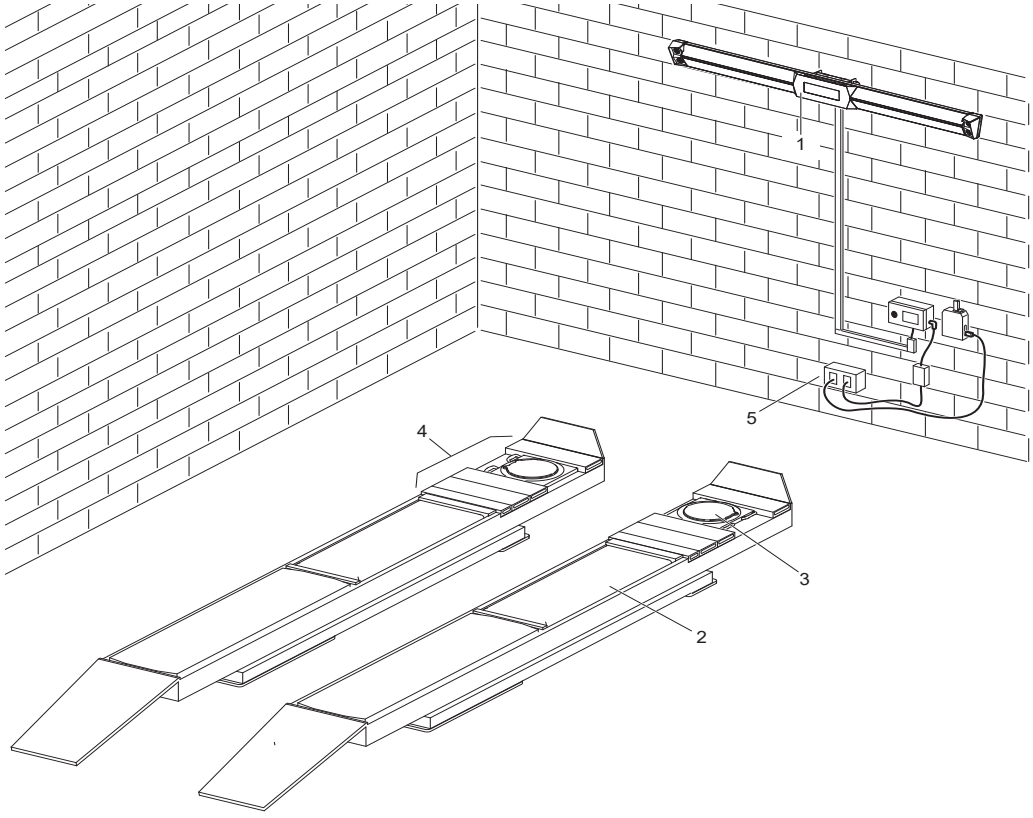

Fig. 8: Installation components

No.	Description	Comment
1	Q.Lign T.41 Kit Wheel test equipment	• Kit version for wall mounting. • Including display module, power supply for measuring beam, power cable and connection cable for measuring beam. • Q.Lign T.41 Kit is available with different mountings for wheel clamps.
2	Scissor lift / 4-post lift	• Above-floor and floor-level installation variants are compatible with Q.Lign T.41 Kit. • During installation, the wheel test equipment can be set to allow wheel alignment on floor-level or elevated runway, but not for both variants at the same time.
3	Turntable	Position variable.
4	Roller bump for turntable	Recess for positioning the turntable.
5	Power supply	• On-site preparation: Connection option on socket. • Optional: On-site connection to a local area network (LAN). **The customer must provide a connection facility if it wants to enable functions related to data transmission to the Internet.**

Tab. 3: Overview of components

5.6 Installation diagram for pit

5.6.1 Installation of post-mounted T.41 version

To measure vehicles with a short wheelbase, it is necessary to use turntables or short sliding plates at the rear axle.

The pictures are for illustrative purposes only. The wheel test equipment must be prepared and installed according to the dimensions indicated in the dimensional drawings and the installation instructions supplied with the product.

The preparation of the power supply is the responsibility of the customer.

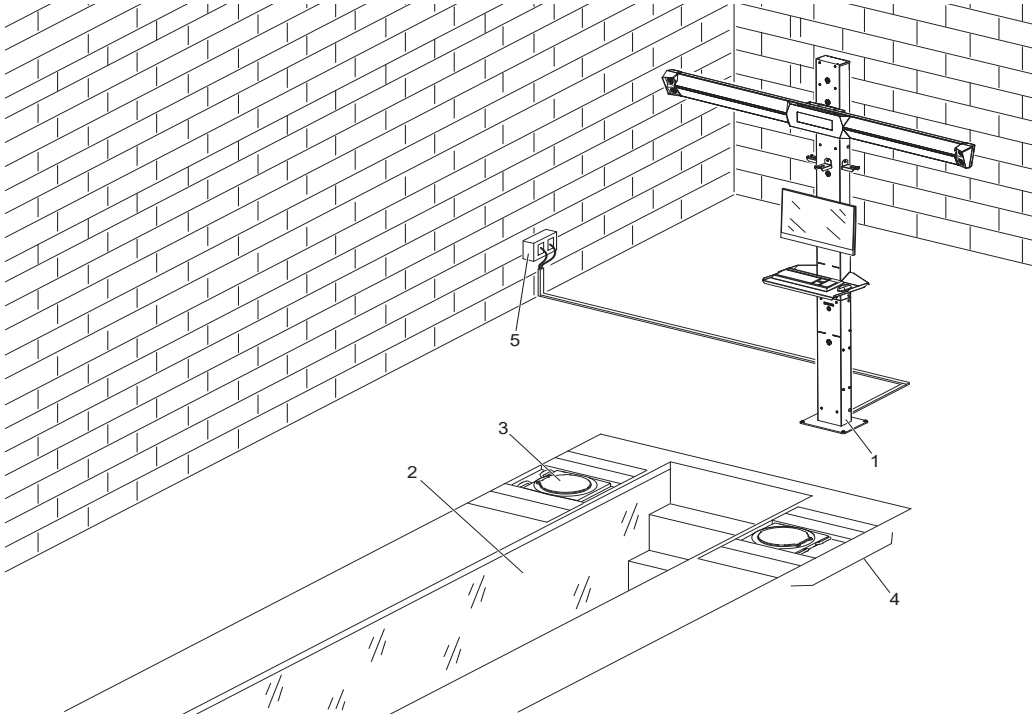

Fig. 9: Installation of components

No.	Description	Comment
1	Q.Lign T.41 Wheel test equipment	• Post-mounted version. • Includes power cord with Schuko plug, length = 5 m, shelf, mouse, keyboard and monitor. • Q.Lign T.41 is available with different mountings for wheel clamps.
2	Pit	-
3	Turntable	Fixed position.
4	Roller bump for turntable	Recess for positioning the turntable.
5	Power supply	• On-site preparation: Connection option on socket. • Optional: On-site connection to a local area network (LAN). **The customer must provide a connection facility if it wants to enable functions related to data transmission to the Internet.**

Tab. 4: Overview of components

5.6.2 Installation of wall-mounted T.41 Kit version

To measure vehicles with a short wheelbase, it is necessary to use turntables or short sliding plates at the rear axle.

The pictures are for illustrative purposes only. The wheel test equipment must be prepared and installed according to the dimensional drawings and the installation instructions supplied with the product.

The preparation of the power supply is the responsibility of the customer.

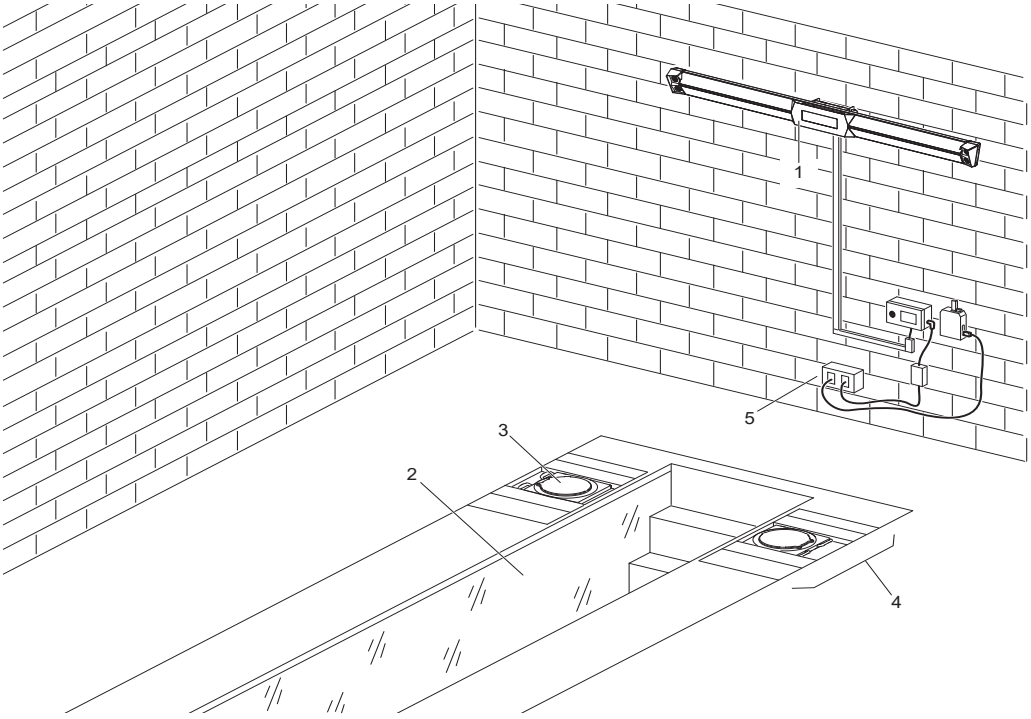

Fig. 10: Installation of components

No.	Description	Comment
1	Q.Lign T.41 Kit Wheel test equipment	• Kit version for wall mounting. • Including display module, power supply for measuring beam, power cable and connection cable for measuring beam. • Q.Lign T.41 Kit is available with different mountings for wheel clamps.
2	Pit	-
3	Turntable	Fixed position.
4	Roller bump for turntable	Recess for positioning the turntable.
5	Power supply	• On-site preparation: Connection option on socket. • Optional: On-site connection to a local area network (LAN). **The customer must provide a connection facility if it wants to enable functions related to data transmission to the Internet.**

Tab. 5: Overview of components

6. Positioning the wheel test equipment

Prerequisite: To perform a correct measurement (steering angle and setting required), the wheels of the front and rear axles are completely on the turntables and sliding bases.

The wheel test equipment must be positioned centrally to the lift.

Wheel test equipment position: In the case of fixed turntable position on the lift or at the pit, the installation must take into account which vehicles (wheelbases) the operator mainly measures.

If the distance from the center of the plates to the wall is more than 4100 mm, wall mounting is not possible. The post version must be used.

6.1 Post-mounted T.41 version

6.1.1 Post distance at above-floor lifts

The dimensional drawing shown applies to above-floor lifts (scissor lifts and 4-post lifts).

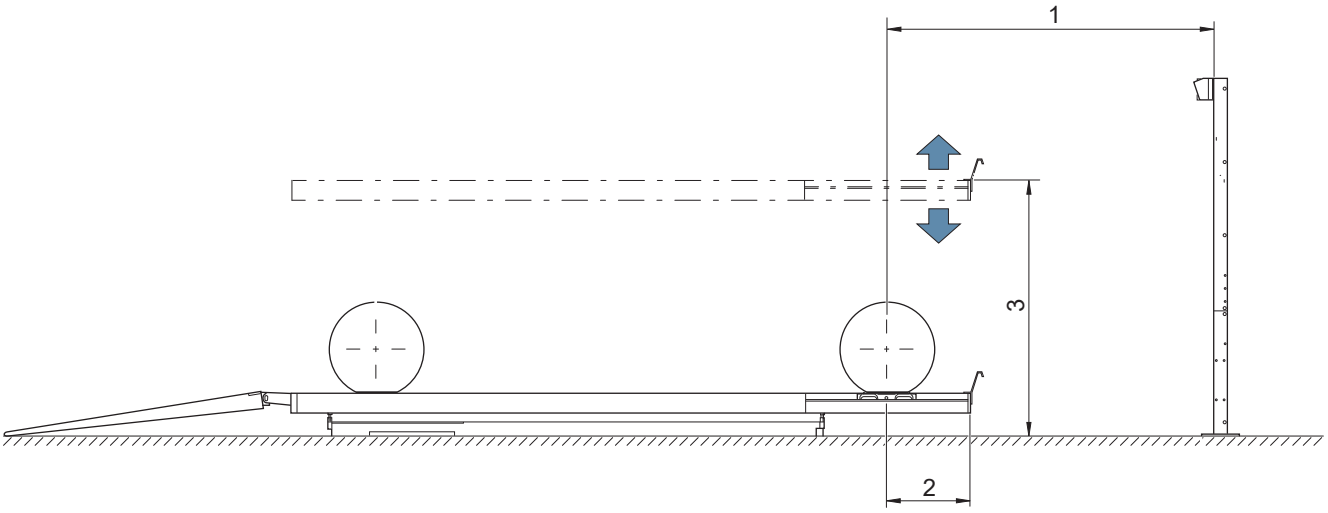

Fig. 11: Dimensions for installation on above-floor lifts

No.	Description	Value [mm]
1	Ideal distance from center of turntable to post	2390
	Minimum distance from center of turntable to post	1890
	Maximum distance from center of turntable to post	3390
2	Lift: Recommended distance from turntable to the fall protection	250
3	Maximum runway height above the floor	1800

Tab. 6: Overview of dimensions on above-floor lifts

6.1.2 Post distance at floor-level measuring bays

The dimensional drawing shown applies to floor-level lifts (scissor lifts and 4-post lifts) and pits.

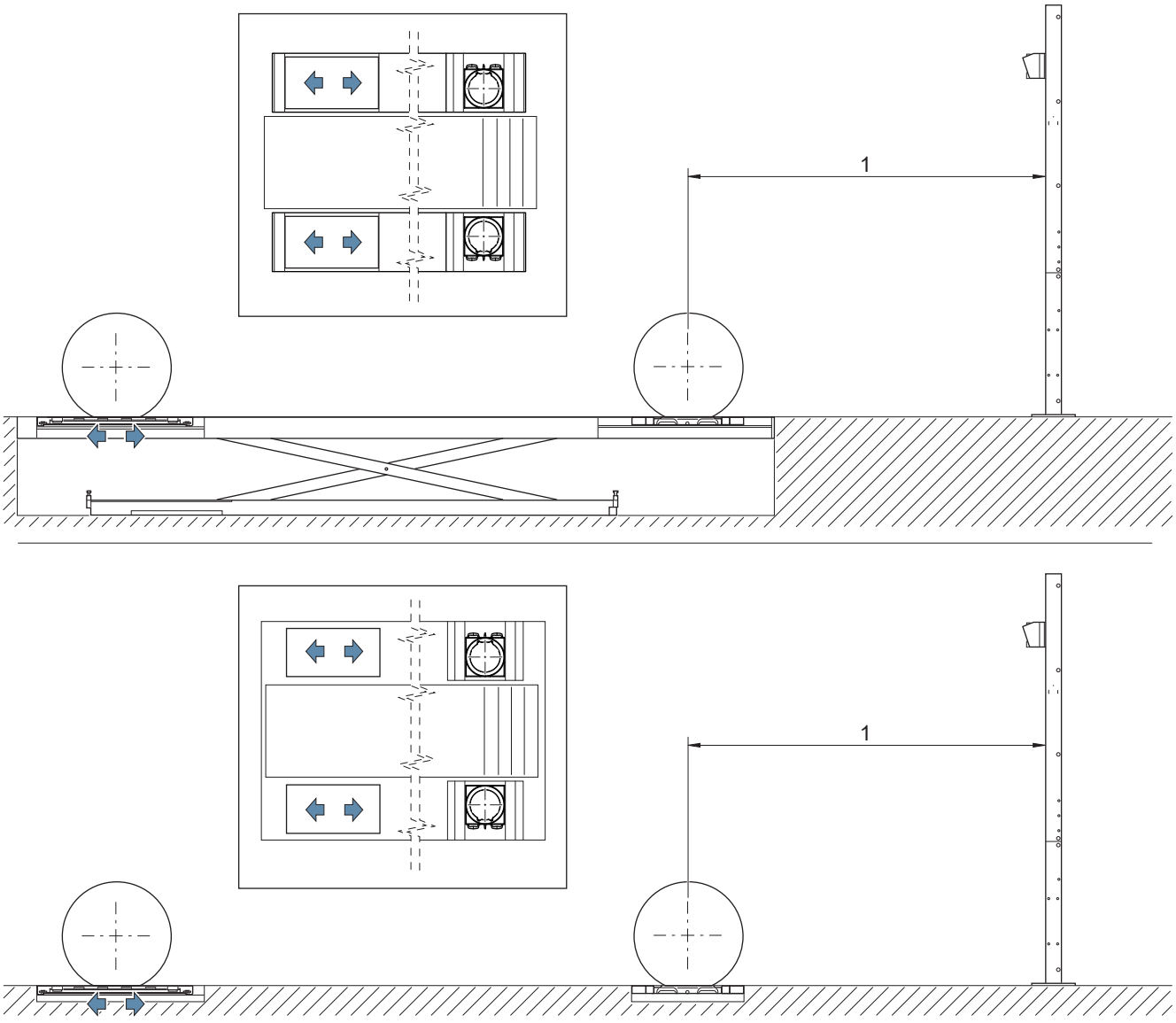

Fig. 12: Overview of dimensions for floor-level lifts and pits

No.	Description	Value [mm]
1	Ideal distance from center of turntable to post	2390
	Minimum distance from center of turntable to post	1890
	Maximum distance from center of turntable to post	3390

Tab. 7: Overview of dimensions

6.1.3 Height position of the measuring beam

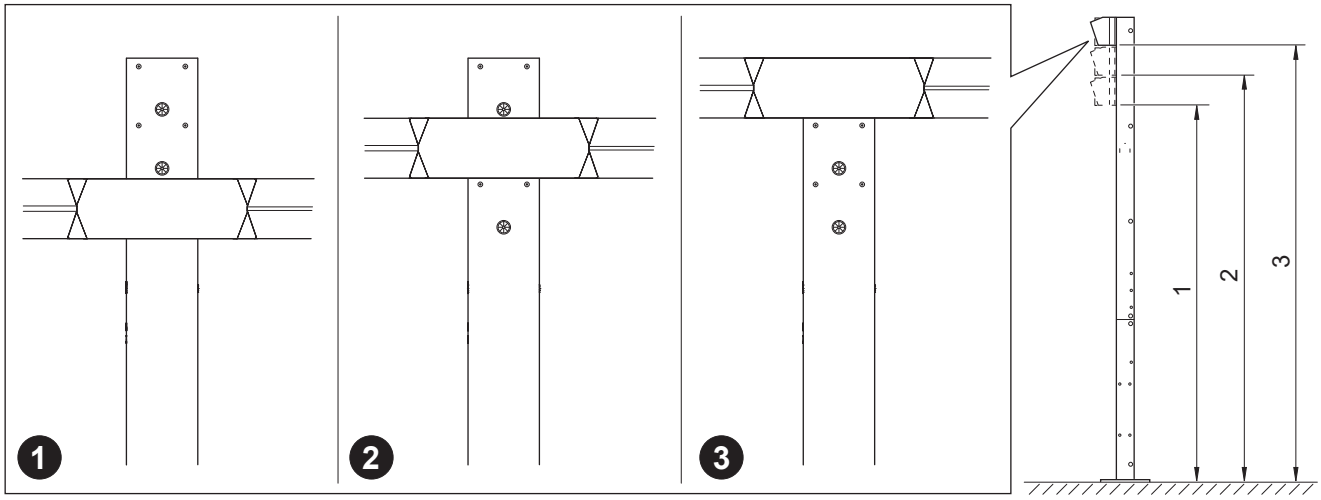

Fig. 13: Overview of height position of the measuring beam

No.	Description
1	Height position of the measuring beam for floor-level lifts.
2	Height position of the measuring beam for lifts with runway height < 1800 mm above floor.
3	Height position of the measuring beam for lifts with runway height ≥ 1800 mm above floor

Tab. 8: Overview of height position for measuring beam

6.2 Wall-mounted T.41 Kit version

6.2.1 Positioning the measuring beam on above-ground platforms

The dimensional drawing shown applies to above-floor lifts (scissor lifts and 4-post lifts).

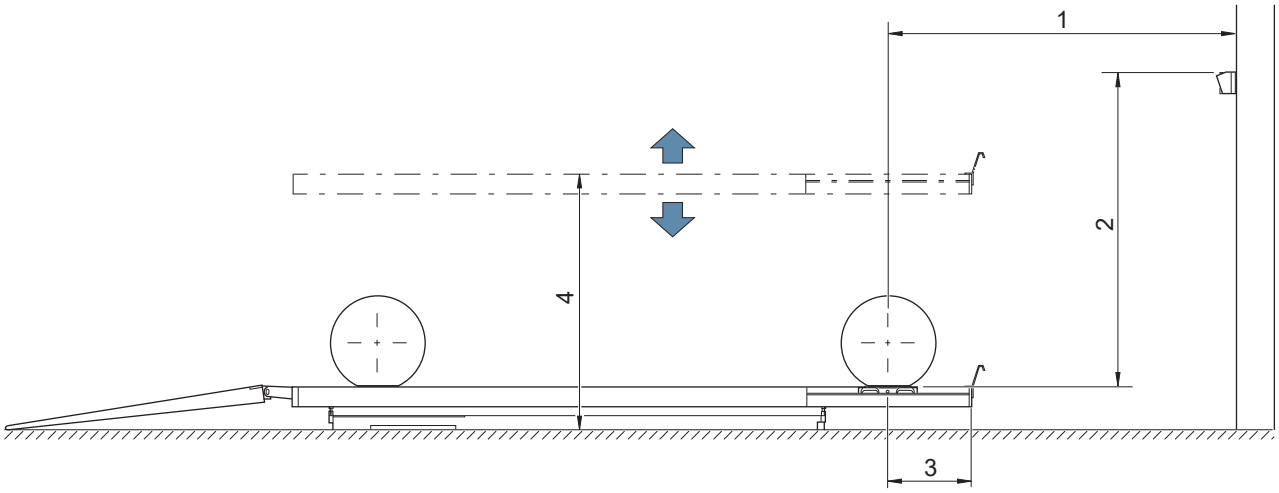

Fig. 14: Dimensions for installation on above-floor lifts

No.	Description	Value [mm]
1	Ideal distance from center of turntable to wall	2440
	Minimum distance from center of turntable to wall	1900
	Maximum distance from center of turntable to wall	3300
2	Height of measuring beam to runway	2410
3	Lift: Recommended distance from turntable to the fall protection	250
4	Maximum runway height above the floor	1800

Tab. 9: Overview of dimensions

The figure below shows the application area of the extendable wall mounting. The extendable wall mounting bracket is recommended at a distance of 3000 mm to 4100 mm from the center of the plate to the wall.

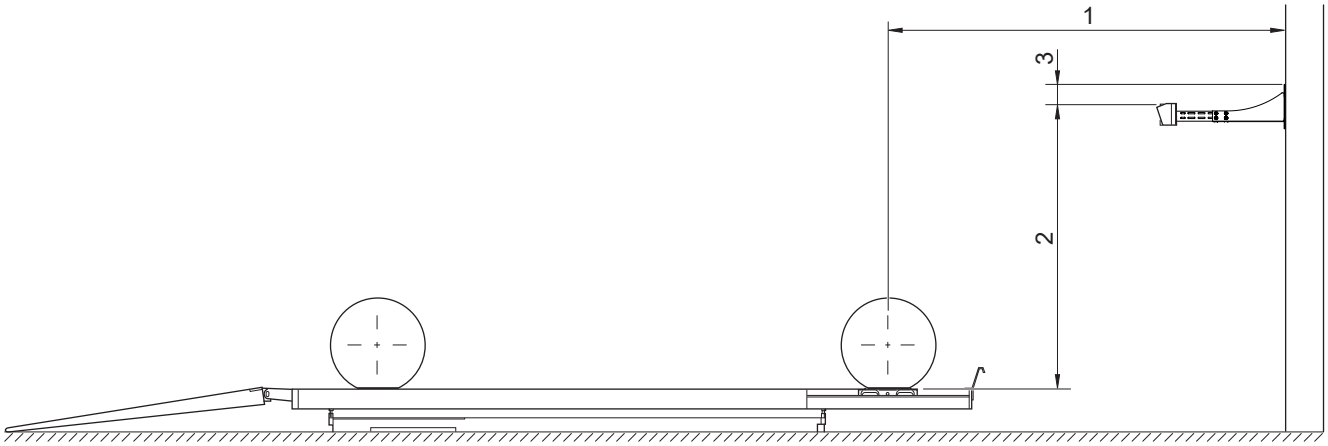

Fig. 15: Application area of the extendable wall mounting

No.	Description	Value [mm]
1	Minimum distance from center of turntable to wall	3000
	Maximum distance from center of turntable to wall	4100
2	Height of measuring beam to runway	2410
3	Distance from the measuring beam to the top of the bracket	150

Tab. 10: Overview of dimensions

6.2.2 Positioning the measuring beam on floor-level measurement bays

The dimensional drawing shown applies to floor-level lifts (scissor lifts and 4-post lifts) and pits.

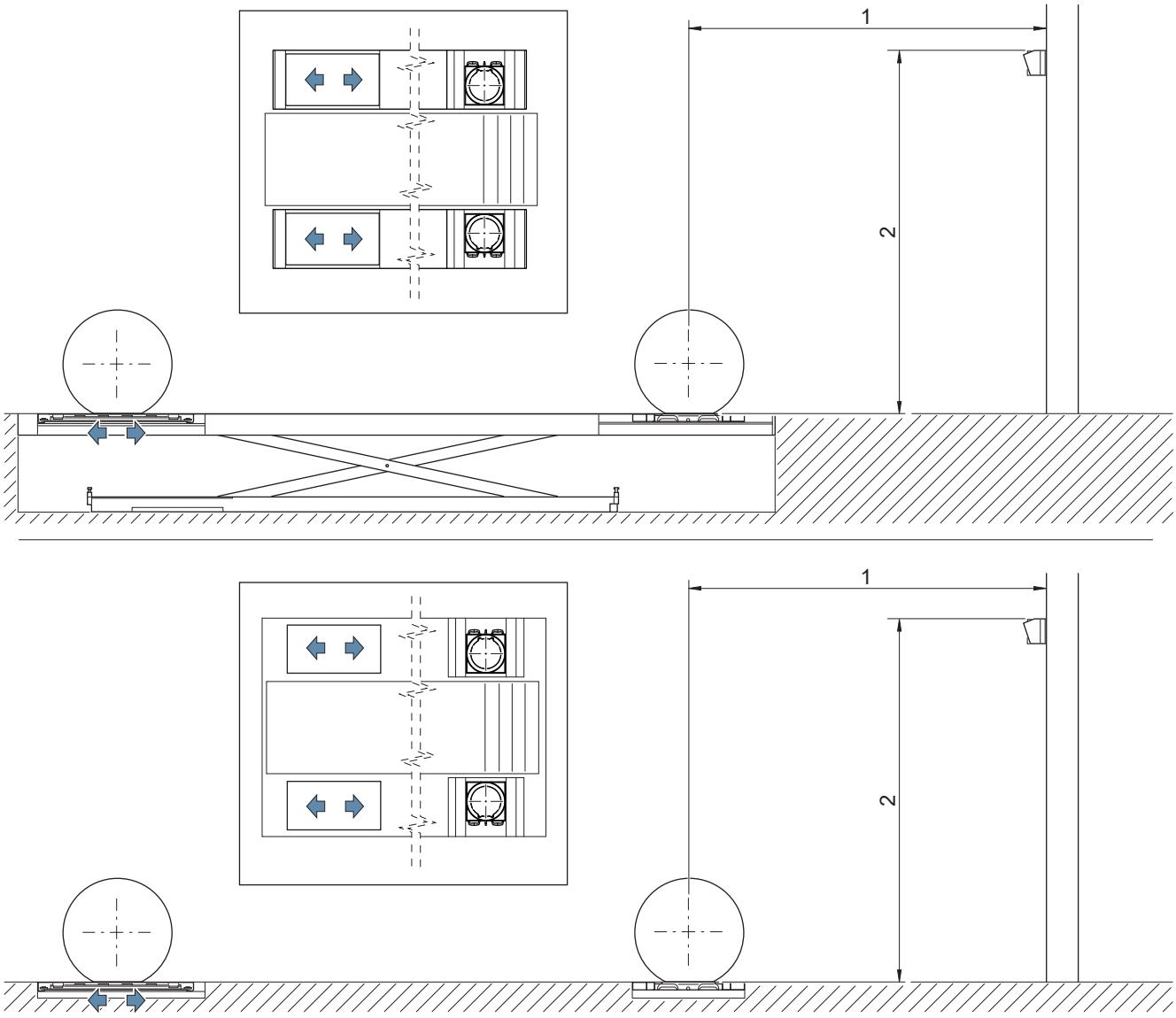

Fig. 16: Overview of dimensions for floor-level lifts and pits

No.	Description	Value [mm]
1	Ideal distance from center of turntable to wall	2440
	Minimum distance from center of turntable to wall	1900
	Maximum distance from center of turntable to wall	3300
2	Height of measuring beam to runway	2410

Tab. 11: Overview of dimensions

The figure below shows the application area of the extendable wall mounting. The extendable wall mounting bracket is recommended at a distance of 3000 mm to 4100 mm from the center of the plate to the wall.

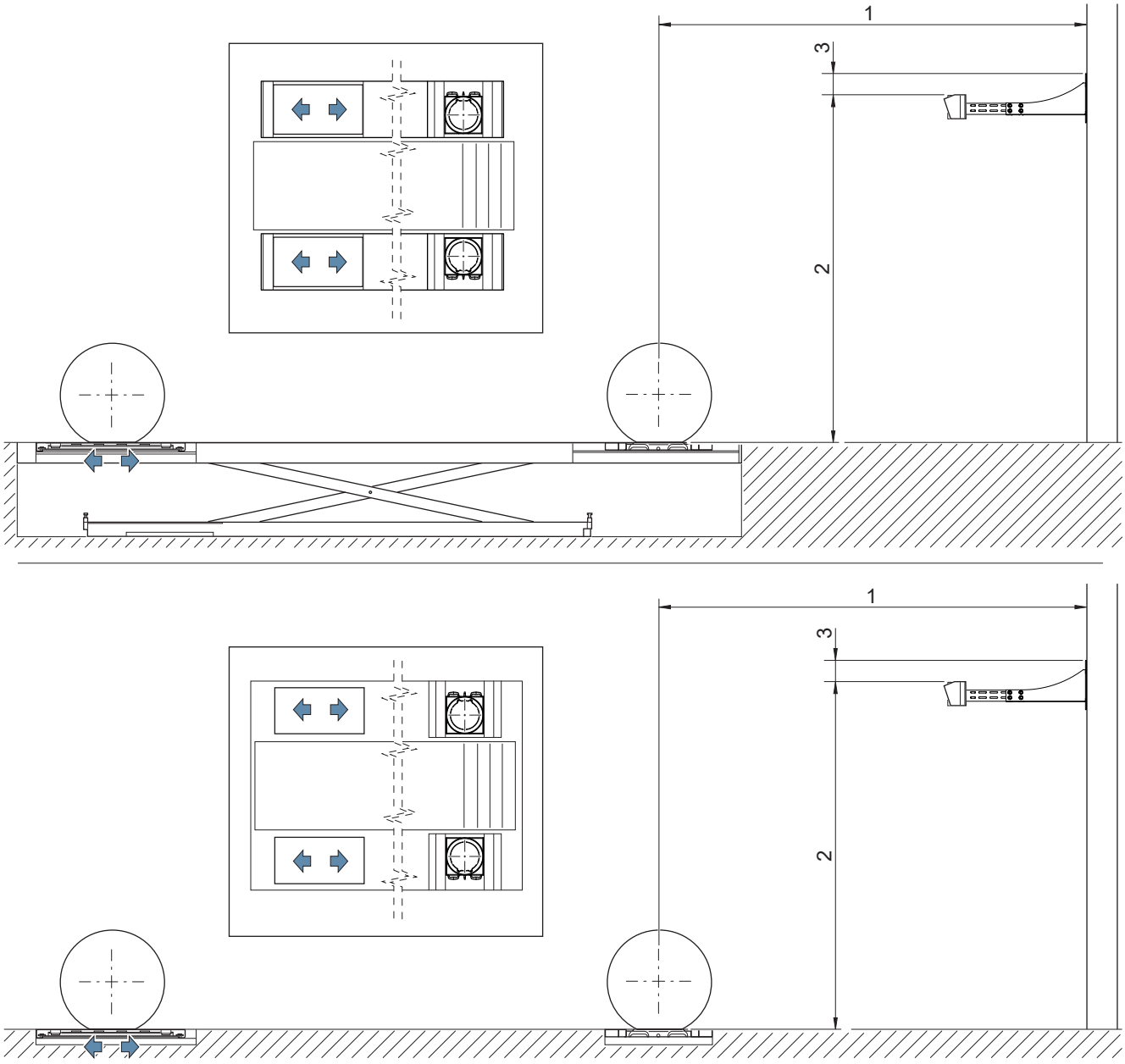

Fig. 17: Application area of the extendable wall mounting

No.	Description	Value [mm]
1	Minimum distance from center of turntable to wall	3000
	Maximum distance from center of turntable to wall	4100
2	Height of measuring beam to runway	2410
3	Distance from the measuring beam to the top of the bracket	150

Tab. 12: Overview of dimensions

7. Floor-mounted - Post-mounted T.41 version

7.1 Foundation/subfloor

The properties of the concrete and floor must be checked prior to installation.

The subfloor must comply with the general guidelines for the subsoil.

Specifications	Designation, value
Min. foundation thickness:	140 mm
Min. concrete quality:	C 20/25

Tab. 13: Floor properties

7.2 Installing the base plate

No masonry work is required for the installation of the base plate.

The main dimensions as well as hole spacing of the base plate are listed below.

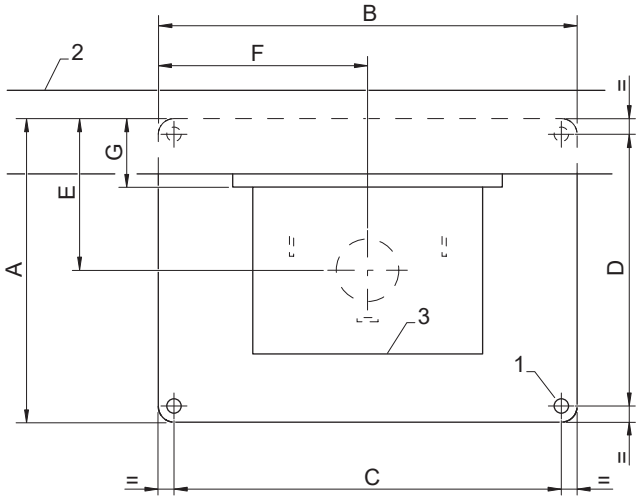

Fig. 18: Base plate

1 Holes Ø14 mm (4 x) for fixing the base plate to the floor
2 Front side (measuring beam)
3 Back (post)

Dimensions	Value [mm]
A	290
B	400
C	370
D	260
E	145
F	200
G	96

Tab. 14: Main dimensions of the base plate

Ihr Händler vor Ort:
Local distributor:

Beissbarth Automotive
Testing Solutions GmbH
Friedrichshafener Str. 602
82205 Gilching
Germany

Tel. +49-89-149 01-0

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