

Imagine...

no boundaries





Patient Lifting Solutions B.V.

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Introduction

From a single track to complete ward-covering tracking systems, PLS can offer a solution for every ceiling, in every environment. Our dedicated engineers were able to combine design, innovative technology and reliability with as result the most comfortable Ceiling Hoist System in the world. Using the PLS SENSOR-MOTION technology, all components like turntables, switches and couplings are extremely easy to operate. No buttons, cords or contacts, only sensors.

This booklet provides the main technical specifications of our Hoists and tracking system. This is however not a substitute for the knowledge of our technical team, please do not hesitate to consult our technical staff, we are always happy to share our knowledge and assist where necessary.

Marcel van den Brandt

General Manager



100% ease of use

All components of the PLS rail system are equipped with the unique Sensor-Motion technology. Because of this technology components like our Turntable, Track Switch and Coupling are extremely easy to operate. No wall switches or rail contacts but smart sensors detecting the hoist and activate a motion to change direction or connect segments of track. Effectively this means not only more comfort, also more attention for the patient instead of operating a track system.



1

① PLS HOIST UNITS

Robust and reliable.
From 200kg up to 500kg

More information on page 6

2

② PLS SPREADER BAR OPTIONS

Loops or clips, two or four points.

More information on page 10

3

③ PLS HOIST TRACK

The backbone of our system

More information on page 14

4

④ PLS TRACK COMPONENTS

Cordless, Buttonless, and Effortless.

More information on page 14

Information in this brochure

More information on:

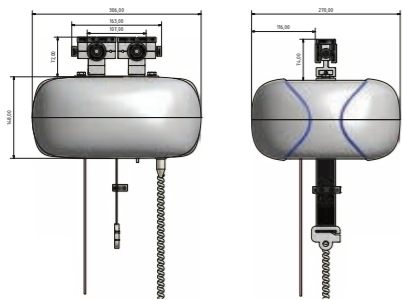
Room layout examples 12

Our own production 23

① PLS Hoist Units



AR-200



Technical specifications

Function	Patient moving and handling
Capacity (swl)	200 kg
Dimensions	306x270x148 mm
Weight	10 kg
Power	Battery charged, 24 V 2,9 Ah
Lifting Tape	35x2400 mm
Lifting velocity	35-70 mm/sec
Lifts per charge	>40 @120 kg
Charging	By handset on magnetic wall-charger
Charging time	8 Hours
Unique features	Advanced battery protection system Auto stand-by No power consumption in stand-by



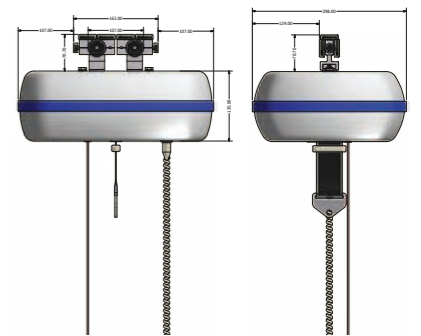
*The AR-200 is also available as a detachable version.



AR-260

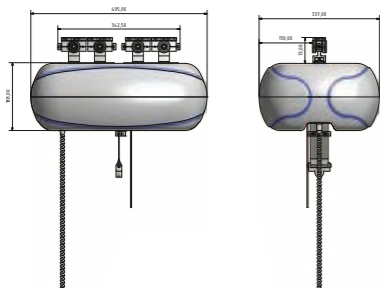
Technical specifications

Function	Patient moving and handling, heavy duty
Capacity (swl)	260 kg
Dimensions	377x298x135 mm
Weight	14 kg
Power	Battery charged, 24 V 5 Ah
Lifting Tape	50x2400 mm
Lifting velocity	35-70 mm/sec
Lifts per charge	>50 @150 kg
Charging	By handset on magnetic wall-charger
Charging time	8 Hours
Unique features	Advanced battery protection system Auto stand-by No power consumption in stand-by





AR-500



Technical specifications

Function	Bariatric Patient moving and handling
Capacity (swl)	500 kg
Dimensions	495x337x188 mm
Weight	22 kg
Power	Battery charged, 24 V 10 Ah
Lifting Tape	50x2400 mm
Lifting velocity	50-70 mm/sec
Lifts per charge	>60 @500 kg
Charging	By handset on magnetic wall-charger
Charging time	8-14 Hours
Unique features	Advanced battery protection system Auto stand-by No power consumption in stand-by

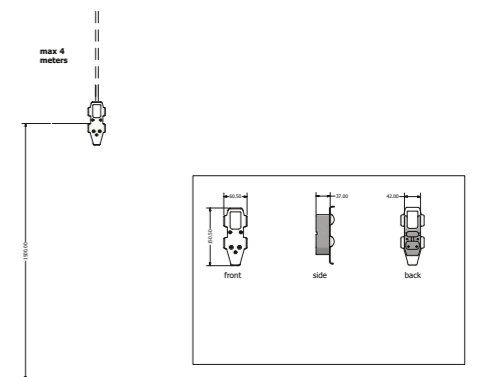


Wall-chargers 5011 and 5022

WALL-CHARGER OPTION: Charging the hoist is easy, as it just charges by putting the handset onto the magnetic wall-charger.

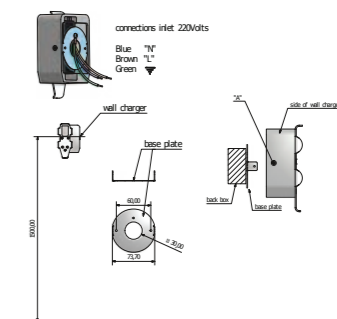
Details installation wall-charger 5011

- 1500 mm above floor
- empty conduit in (19 mm) in wall, exit behind wall-charger
- empty conduit leads to where mascot (5013) is connected to 220 V (for example above ceiling)
- maximum length: 4 meters



Details installation wall-charger 5022

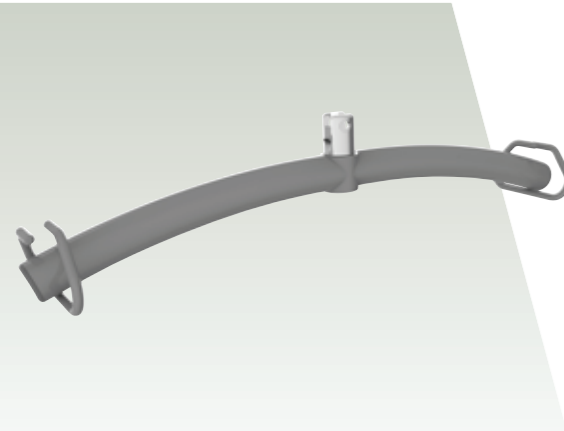
- To be back box with 220 Volt supply directly behind wall-charger
- Base plate is fixed to back box then charger onto base plate with 2 screws ("A")



② Spreader bar options

Two point loop spreaderbar

The standard 2 point loop spreader bar, simple and easy to use with loop-fixing slings. New model will be available in 2016, features a quick release option.



Four point manual spreader bar

The new 4 point manual spreader bar comes in a wide design with more free space for the patient. It is to be used with clip fixings and features a handle to manually adjust the patient.



Four point electric spreader bar

The new 4 point Electric spreader bar comes in a wide design, and is the ultimate spreader bar for hospitals and other care environments who use clip-fixing slings. Controlled by the hoist's handset, the electric movement is smooth and comfortable for the patient.



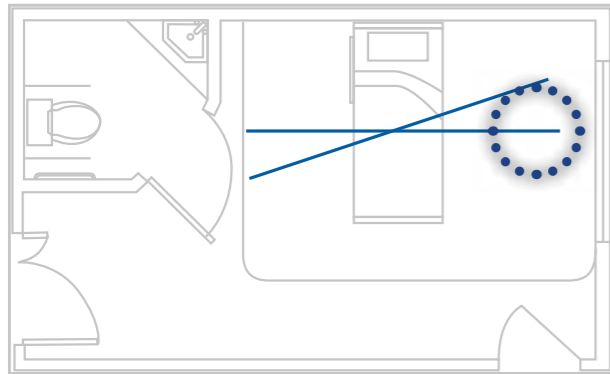
Scale

All spreader bar options can be used in conjunction with a digital weighing scale. Capacity: 0-300 kg.



Room layout examples

Some examples just to explain the diversity of options to use our track system. With our track, combined with our components like Coupling, Turntable and Switch we can offer the smoothest and most comfortable overhead hoist transfer in the world.



Straight Monorail

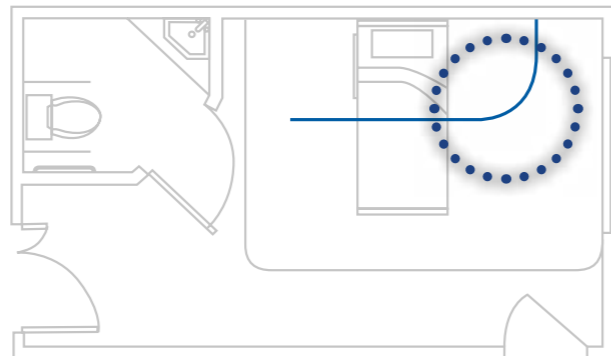
A single rail, running straight to the bed or at an angle. Limited in coverage, repositioning options and flexibility of furniture location.

[More information on page 14](#)

Straight track with Curve

A straight track with curve, enlarges the coverage and also provides a more suitable place to charge the hoist's batteries when not in use.

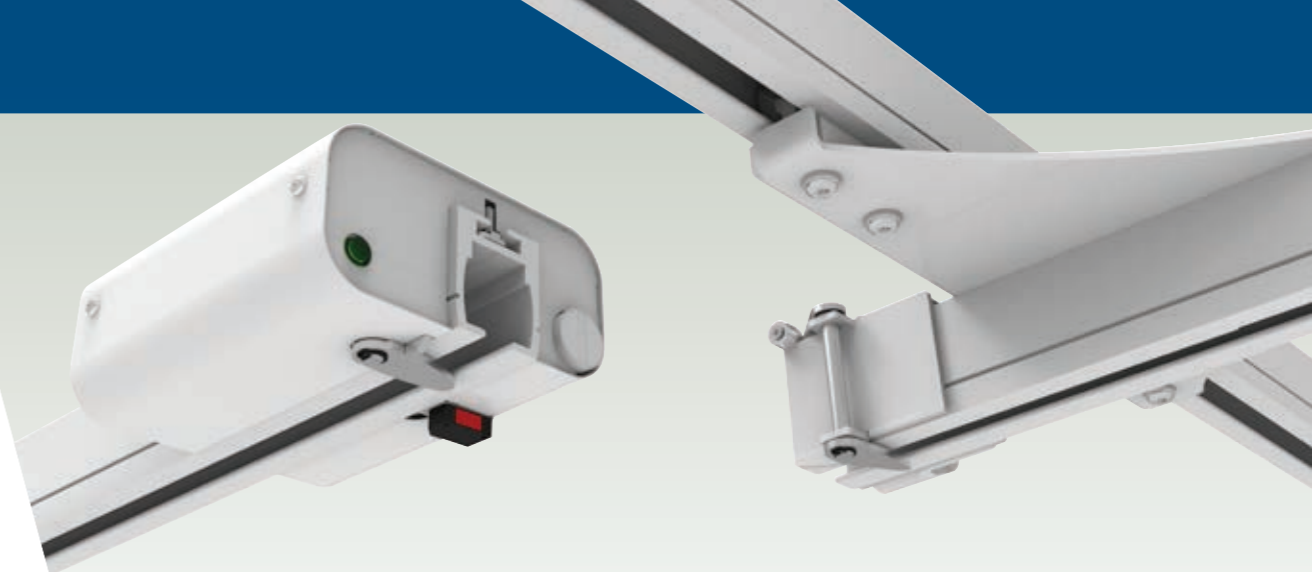
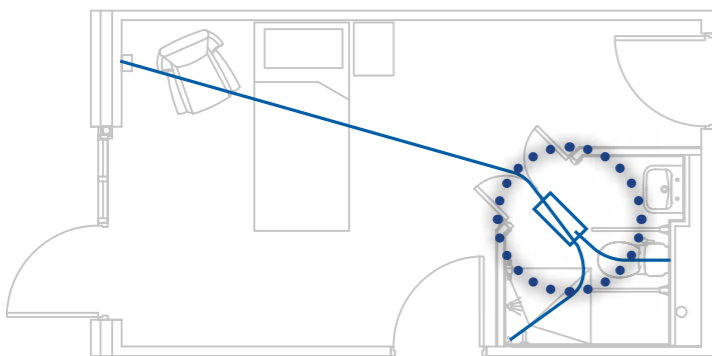
[More information on page 16](#)



Straight track with Curves and Switch

A combination of curves and track switch can be used in various combinations.

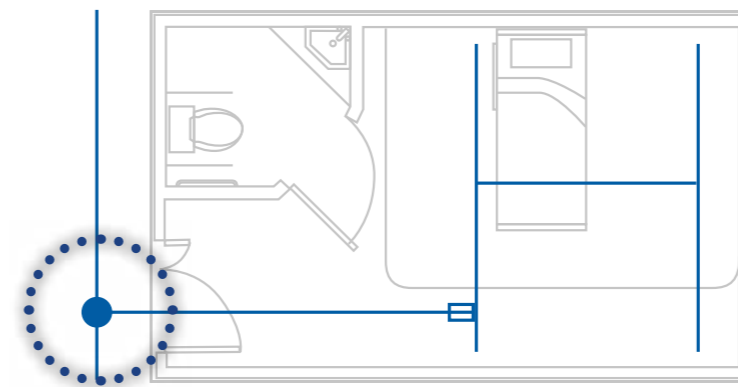
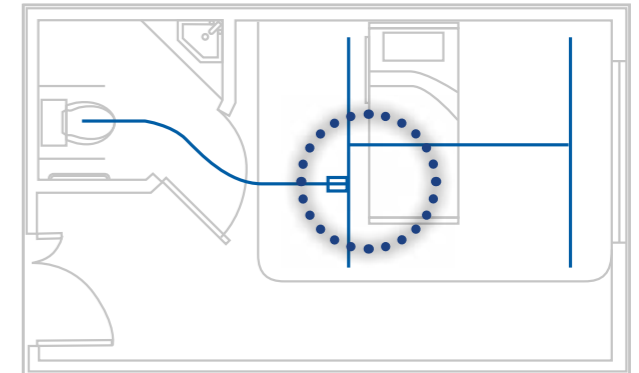
[More information on page 21](#)



XY System

An XY system is to provide an unlimited number of lifting places within a room, enabling a person to be lifted from practically anywhere within the four walls, can also be combined with a Coupling to be able to connect the traverse rail to a fixed rail. This will allow the Hoist to leave the XY system. This way, an XY system can also be connected to another XY system.

[More information on page 22](#)



Rail connected to Turntable

Leaving the room entering the hallway, a turntable allows for a change of direction. The turntable is available in a three or four way version.

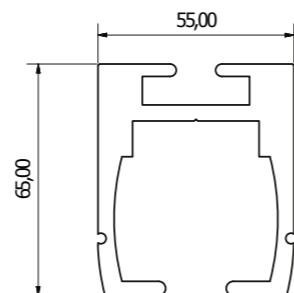
[More information on page 20](#)

3 Rail profiles and curves

With the PLS Rail Profiles, the smoothest and most comfortable hoist tracking systems can be created. The three main profiles, combined with the newest technologies, make the hoist glide smoothly from one place to the next.

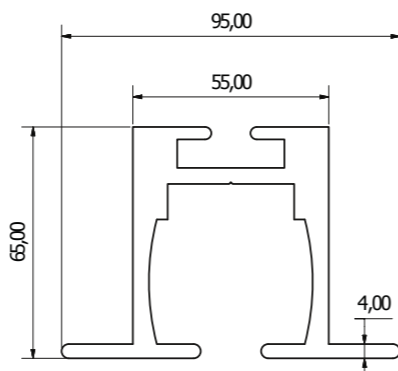
A Profile

The standard Rail Profile, the backbone of PLS Hoist Tracking. This profile is also available in various curves (page 16). The standard colour is RAL 9010, optional all RAL colours are available. Standard lengths: 4100 and 6100 mm.



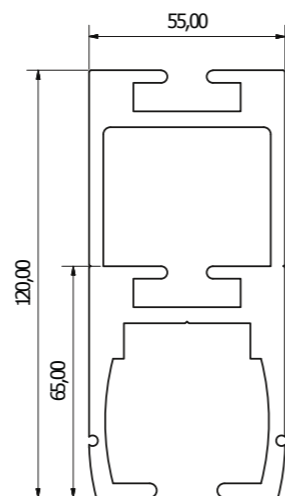
B Profile

The B profile allows the Hoist Track to be embedded into the ceiling. This profile is also available in two standard curves, 45 and 90 degrees. Other curves are optional. The standard colour is RAL 9010, optional all RAL colours are available. Standard lengths: 4100 and 6100 mm.



C Profile

The C profile is a higher, stronger profile. This profile allows spans up to six meters. The standard colour is RAL 9010, optional all RAL colours are available. Standard lengths: 4100 and 6100 mm.



Load and fixings detail

Weight limit of hoist	A profile	C profile
150 kg	2.8 m between fixings	6 m between fixings
200 kg	2,0 m between fixings	4 m between fixings
260 kg	1,5 m between fixings	3 m between fixings
500 kg	1,0 m between fixings	2 m between fixings

XY Traverse rail requirements

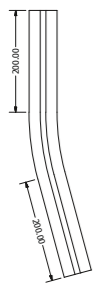
- Maximum span up to 150 kg using 55 mm profile is 2,8 m.
- If distance between parallels is greater than or equal to 2,8 m, a 2500 mm U-profile* has to be used.
- If distance between parallels is greater than or equal to 3,5 m, a 3000 mm U-profile* has to be used.
- For loads above 150 kg a high profile traverse rail with a heavy duty traverse trolley is recommended as bending in the rail causes malfunction of transit coupling.
- If span between parallels is larger than 4 m an additional parallel rail is advised.

* For bigger spans a U-profile is available to put over the traverse rail. Two standard lengths: 2500 mm and 3000 mm.



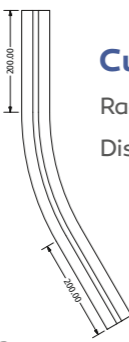
PLS A-profile curves

In many cases the curves are an essential element of hoist tracking. The curves allow a hoist to follow every desired path. Our curves have a small radius of just 480 mm and are available in various degrees as standard, with the option of custom-made curves should this be required.



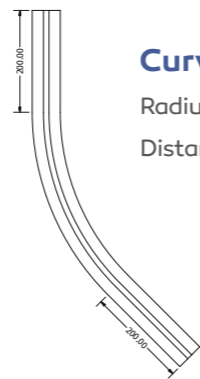
Curve 15°

Radius: 480 mm
Distance: 263 mm



Curve 30°

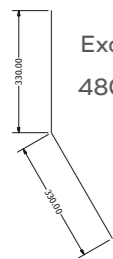
Radius: 480 mm
Distance: 330 mm



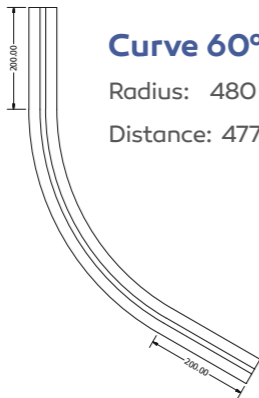
Curve 45°

Radius: 480 mm
Distance: 395 mm

Radius of all curves 480mm

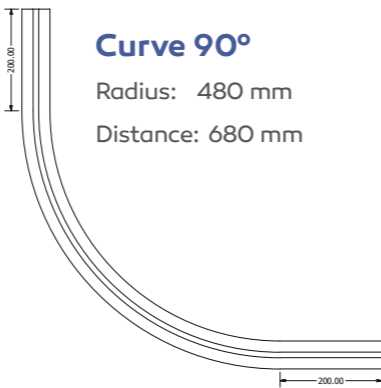


Example radius all curves:
480 mm 30° curve



Curve 60°

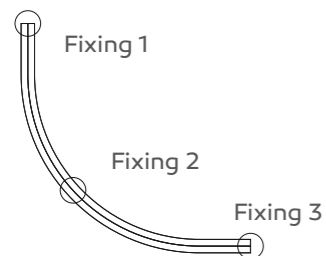
Radius: 480 mm
Distance: 477 mm



Curve 90°

Radius: 480 mm
Distance: 680 mm

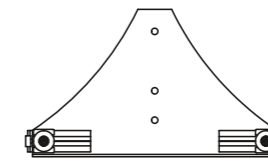
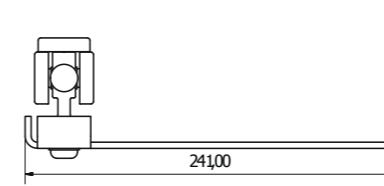
Fixings



Traverse trolleys

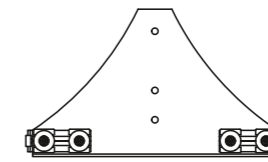
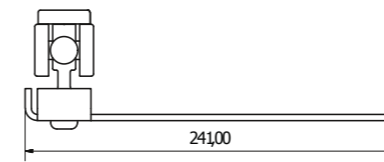
An XY system is to provide an unlimited number of lifting places within a room, enabling a person to be lifted from practically anywhere within the four walls. This is achieved by installing two parallel tracks on each side of the room, either on the ceiling or on opposite walls.

A moving section of track then runs at 90° to the parallel rails, the traverse rail. The components that allow the Traverse rail to slide up and down the parallel tracks, are the Traverse Trolleys.



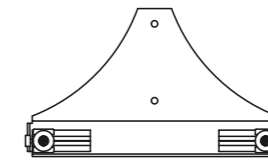
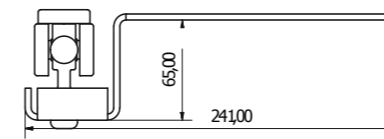
Standard Traverse trolley (1010)

Suitable for A profile.



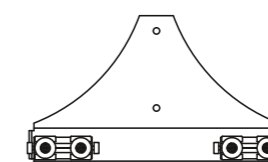
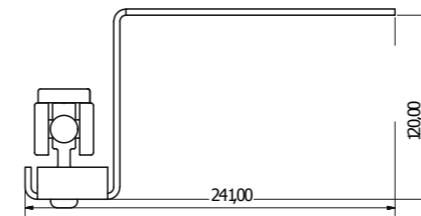
HD Traverse trolley (1012)

Suitable for C profile and heavy loads.



65 mm high Traverse trolley (1011)

Suitable for A profile, between hung.



120 mm high Traverse trolley (1120)

Suitable for C profile, between hung.



Doorway Header

In almost every case it is possible to cross a doorway, using the A profile. Also a fireproof solution is available to block heat and smoke for 30 or 60 minutes, in case of fire.



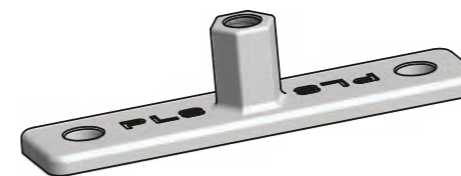
PLS curtain system

Privacy curtains and overhead hoist track both get in the way of each other, this is a particular problem for hospital wards where both lifting assistance and privacy for patients is required.

The PLS curtain system resolves this issue, enabling XY systems and hoist units to work in harmony with the privacy curtains.

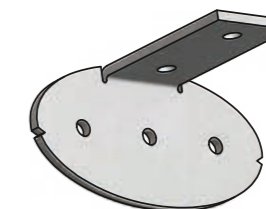
Track fixings*

A reliable fixation of the tacking system is a high priority. PLS provides a wide range of standard brackets and fixings, however we are always happy to design a custom solution when required.



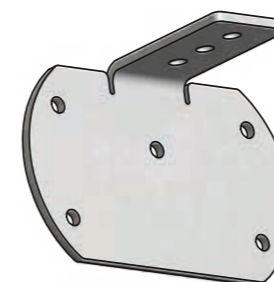
T-mount 6001

Standard bracket for fixing track onto ceiling.



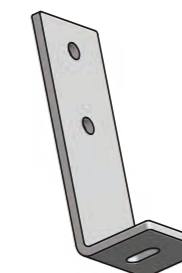
Wall bracket standard 6003

For fixing the standard A profile onto a wall, up to a 45° angle.



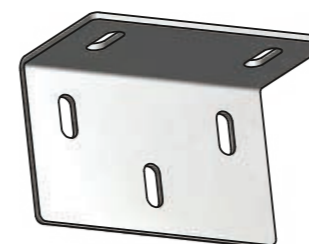
Wall Bracket Heavy Duty 6005

For fixing the C profile onto a wall, up to a 60° angle.



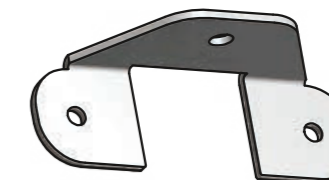
Beam Bracket 6006

For fixing an A,B, or C profile onto the side of a wooden or metal beam.



Parallel Bracket 6008

For parallel wall-fixing of an A, B, or C profile.



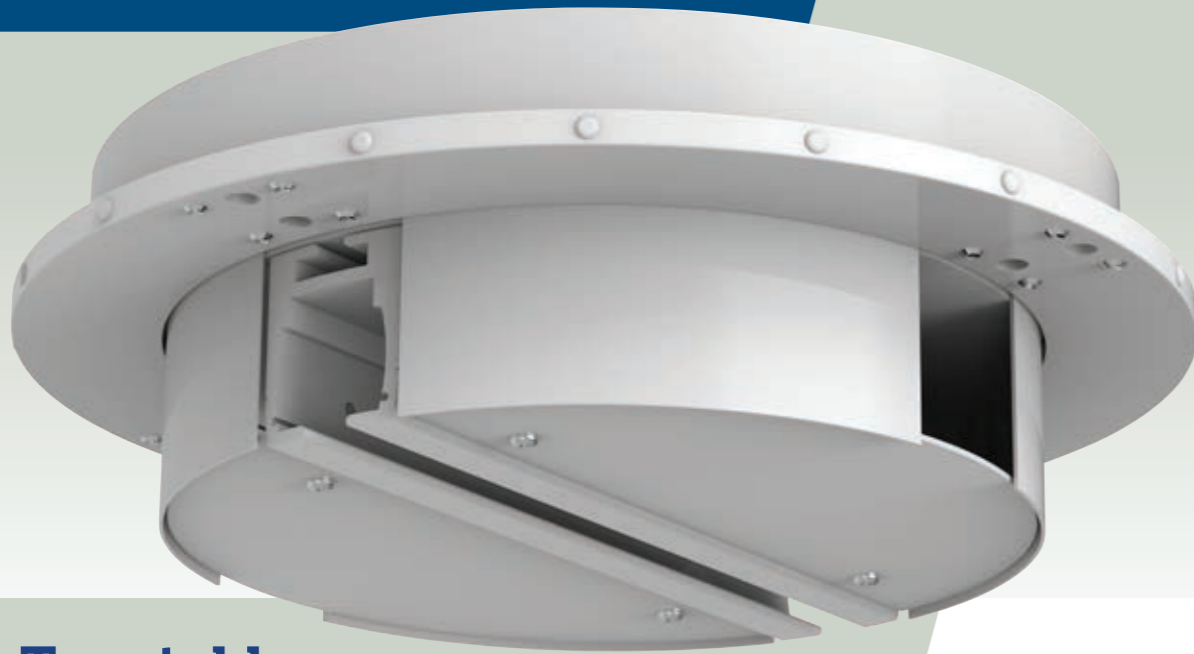
Doorway Bracket 6013

For stabilising the A profile in a doorway.

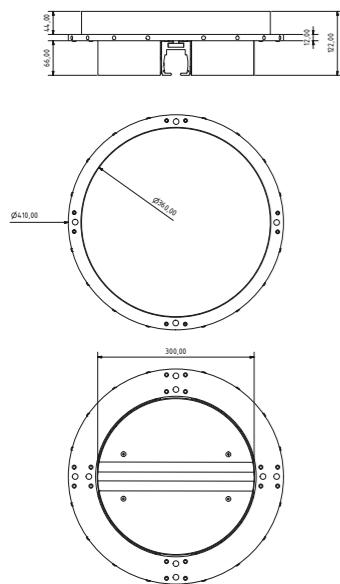
A wall post can be supplied with or without a skirting offset section. (nr. 6100)

**Weight tests are always required after installation, according the Hoisting specifications and regulations.*

④ Components

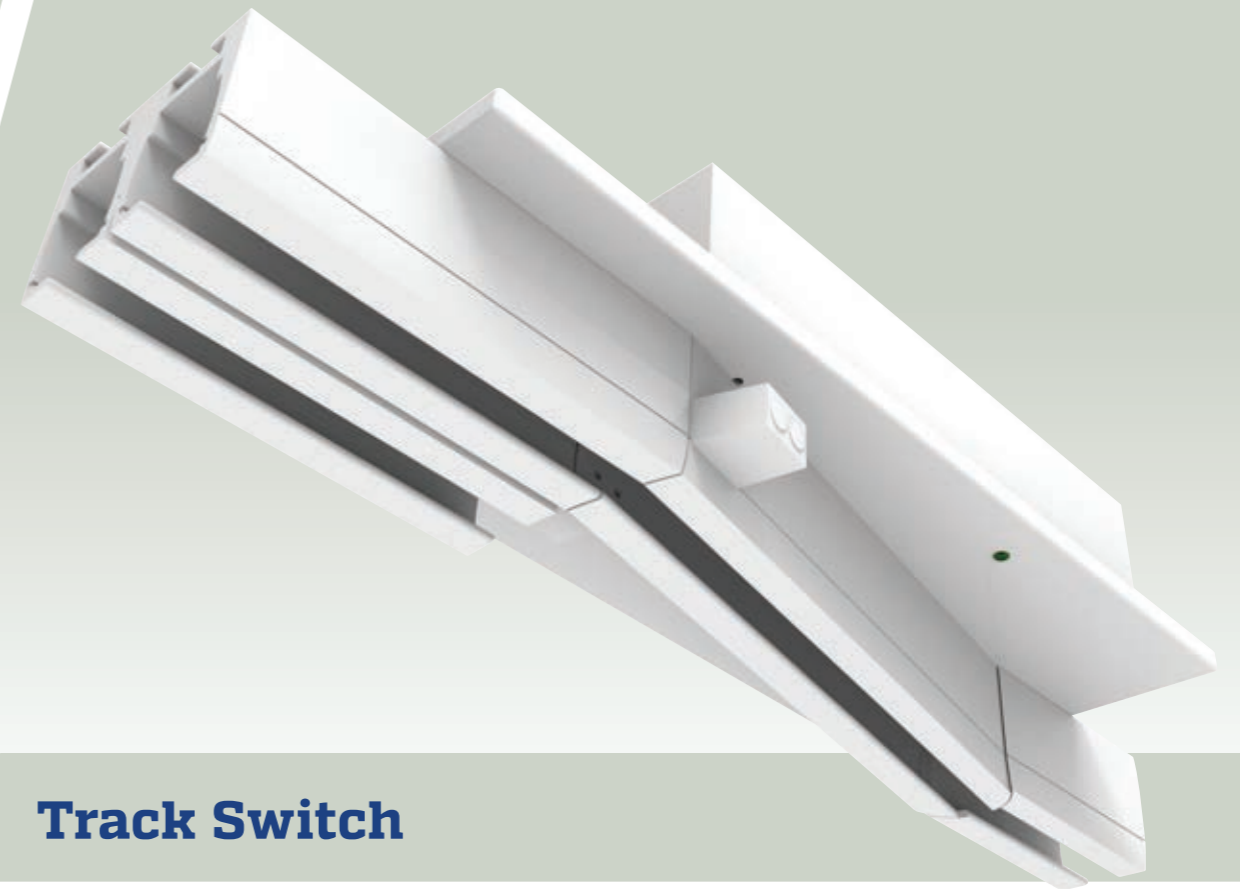


Turntable



Technical specifications

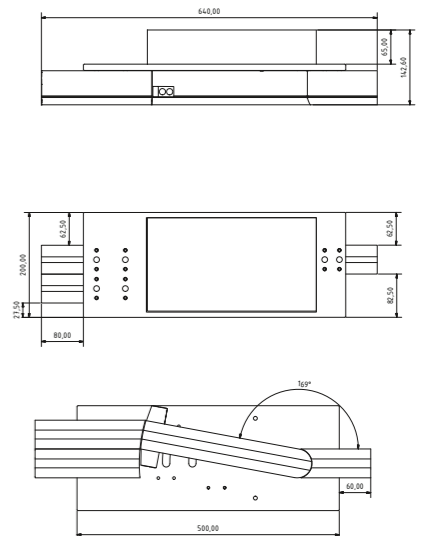
Usage	In crossing of standard railprofile. Available in 3- or 4-way version
Connecting rail	55x65 mm (1383)
Operation	Sensor-activated
Compatibility	PLS turntable must only be used in combination with PLS rail profile
Weight and materials	9,2 kg. Aluminium and galvanised steel, standard powder-coated in RAL 9010
Electrical specs	Power supply: 24 V, max 3,5 A. Use only in combination with PLS approved power supply. Activation by PLS Sensor-Motion technology
Model number	3-way 1001, 4-way 1002
Marking	CE-marked as a part of the PLS rail system. In accordance with: EN: 10535:2006 Directive 93/42/EEC



Track Switch

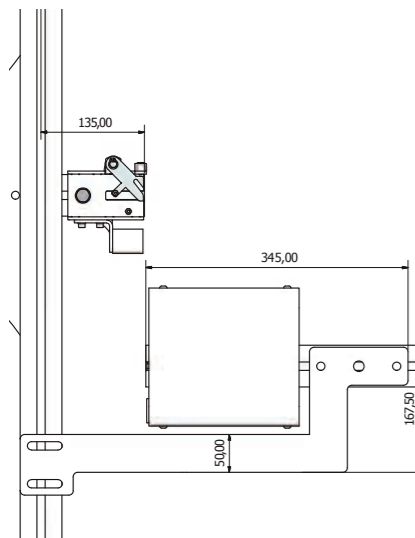
Technical specifications

Usage	As exit in corridor. Available in left or right version
Connecting rail	55x65 mm (1383)
Operation	Sensor-activated
Compatibility	PLS track-switch must only be used in combination with PLS rail profile
Weight and materials	8,2 kg. Aluminium, standard powder-coated in RAL 9010
Electrical specs	Power supply: 24 V, max 3,5 A. Use only in combination with PLS approved power supply. Activation by PLS Sensor-Motion technology
Model number	Left 1003, right 1004
Marking	CE-marked as a part of the PLS rail system. In accordance with: EN: 10535:2006 Directive 93/42/EEC





Coupling



Technical specifications

Usage	Connects traverse rail XY to solid rail system
Connecting rail	55x65 mm (1383) only 22,5 mm above track
Operation	Sensor-activated
Compatibility	PLS transit coupling must only be used in combination with PLS rail profile
Weight and materials	4,7 kg. Aluminium and galvanised steel, standard powder-coated in RAL 9010
Electrical specs	Power supply: 24 V, max 3,5 A Use only in combination with PLS approved power supply. Activation by PLS Sensor-Motion technology
Accessories	Safety-lock (standard) 1032 Stabilizer (optional) 6109/6110
Model number	1025
Marking	CE-marked as a part of the PLS rail system, In accordance with: EN: 10535:2006 Directive 93/42/EEC



Design and production under the same roof

Our technicians are closely involved in every detail of our production process, from design up to and including production. We also attach great value to the in-house production of our components. It gives us greater control over the quality of our products and means that we can guarantee you a longer service life.

Experience the quality of PLS for yourself. Let us help you find the right solution for your situation. We would be happy to tell you all about the variety of options!



Patient Lifting Solutions

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