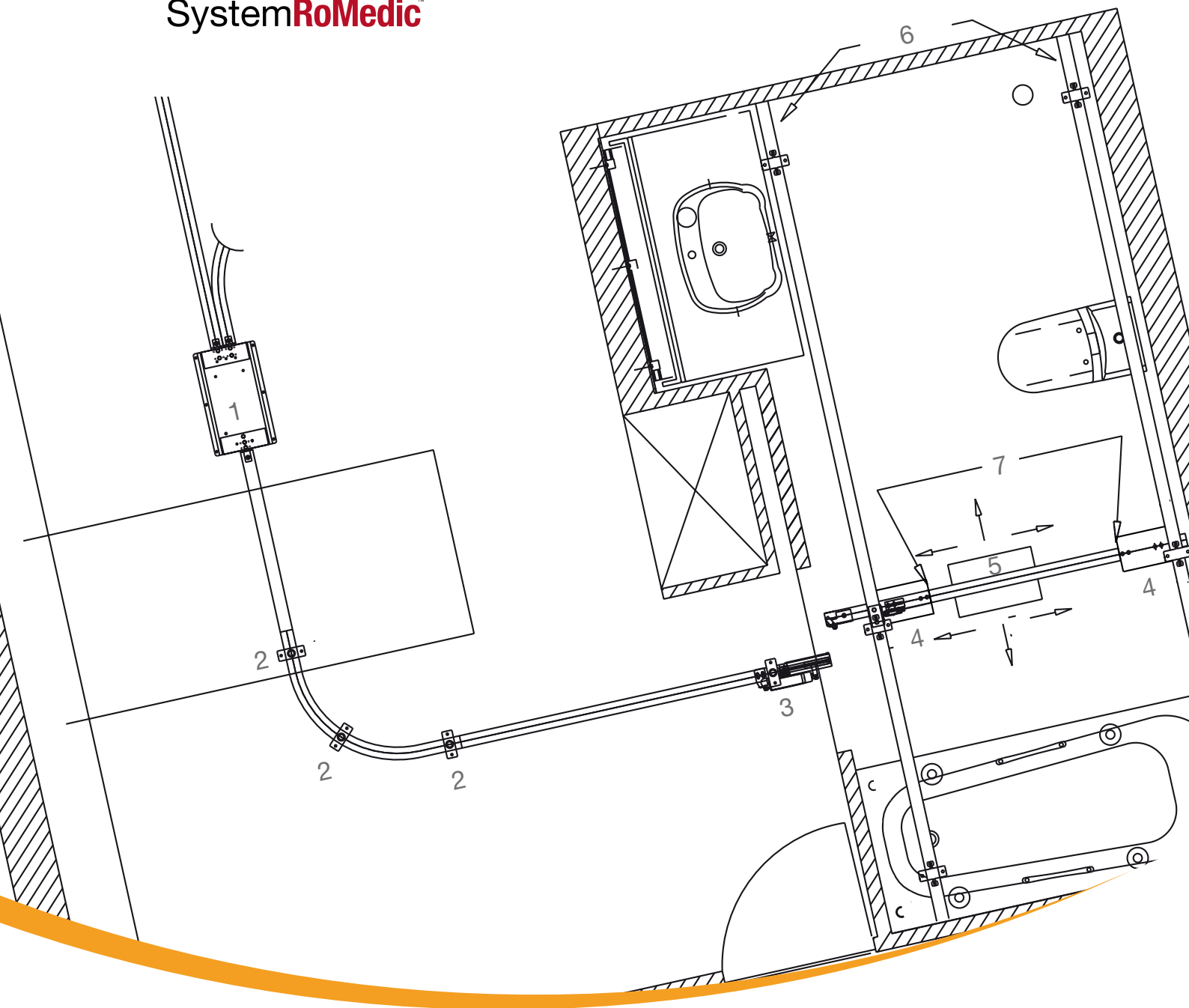


MilkyWay

SystemRoMedic™



Handbook

Instructions for design and installation
June 2014

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1: Introduction

A stationary lifting solution, consisting of a ceiling lift unit mounted either on a permanently installed rail system or on a freestanding lift stand, is an ergonomically ideal alternative that eliminates manual lifting and allows the caregiver to always choose the optimal working stance. Furthermore, the lift system is always in place, it requires a minimum of floor space and it is very easy to manoeuvre. Another advantage is that the system provides a large lifting area and the possibility of both low and very high lifting.

Handicare's SystemRoMedic™ MilkyWay is a complete, ingeniously simple and safe rail system for permanent installation on the ceiling and/or on the walls. Each MilkyWay rail system is individually designed, in close cooperation with the customer, allowing for adaptation to specific conditions and for meeting of specific requirements. Together with an optional choice of ceiling lift unit and the appropriate lifting accessories, MilkyWay offers unlimited possibilities for design and adaptation of the perfect stationary lifting solution for all settings, rooms and lifting needs.

Material and surface coating

- Powder-coated aluminium (straight rails and rail curves)
- Powder-coated steel (fixtures; brackets and pendants)
- Stainless steel available on request (recommended when used in harsh environments such as swimming pools)

All powder-coated MilkyWay parts are white (RAL 9010).

At an additional charge, they can also be supplied in various other colours or with a bare metal finish.



CE All MilkyWay products are CE-marked.

Customized design

Each MilkyWay rail system is individually designed in close cooperation with the customer. Scaled drawings show the completed system and its function within the room(s).

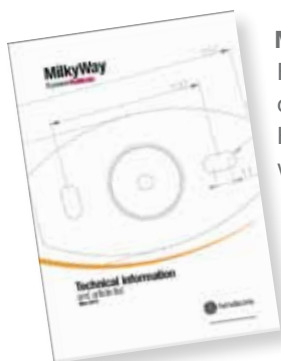
Easy to install

MilkyWay offers flexibility in every detail. This allows for a comprehensive range of alternative system designs as well as for easy installation.



MilkyWay rail systems must be designed, assembled, installed and inspected by qualified and authorized personnel and in accordance with the "MilkyWay Installation check list" and other instructions issued by Handicare AB.

MilkyWay has been designed to meet the highest safety standards. The rail system should be inspected and assessed for safety at least once per year.



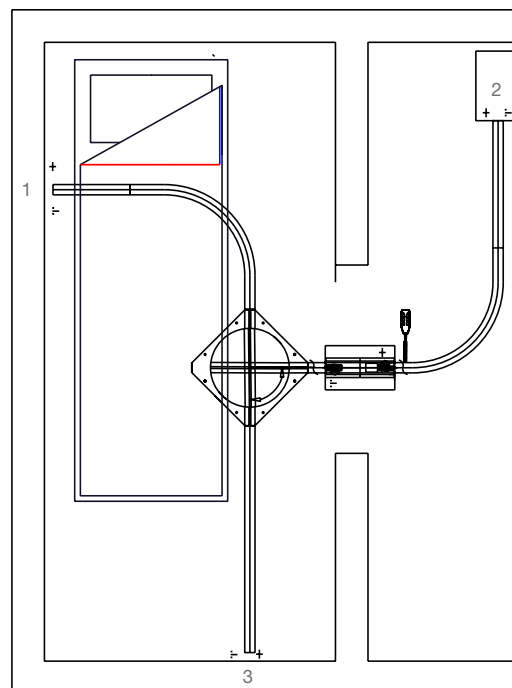
More information

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document or contact your local Handicare and SystemRoMedic™ partner. All contact details can be found on our website, www.handicare.com.

1.1: Definitions

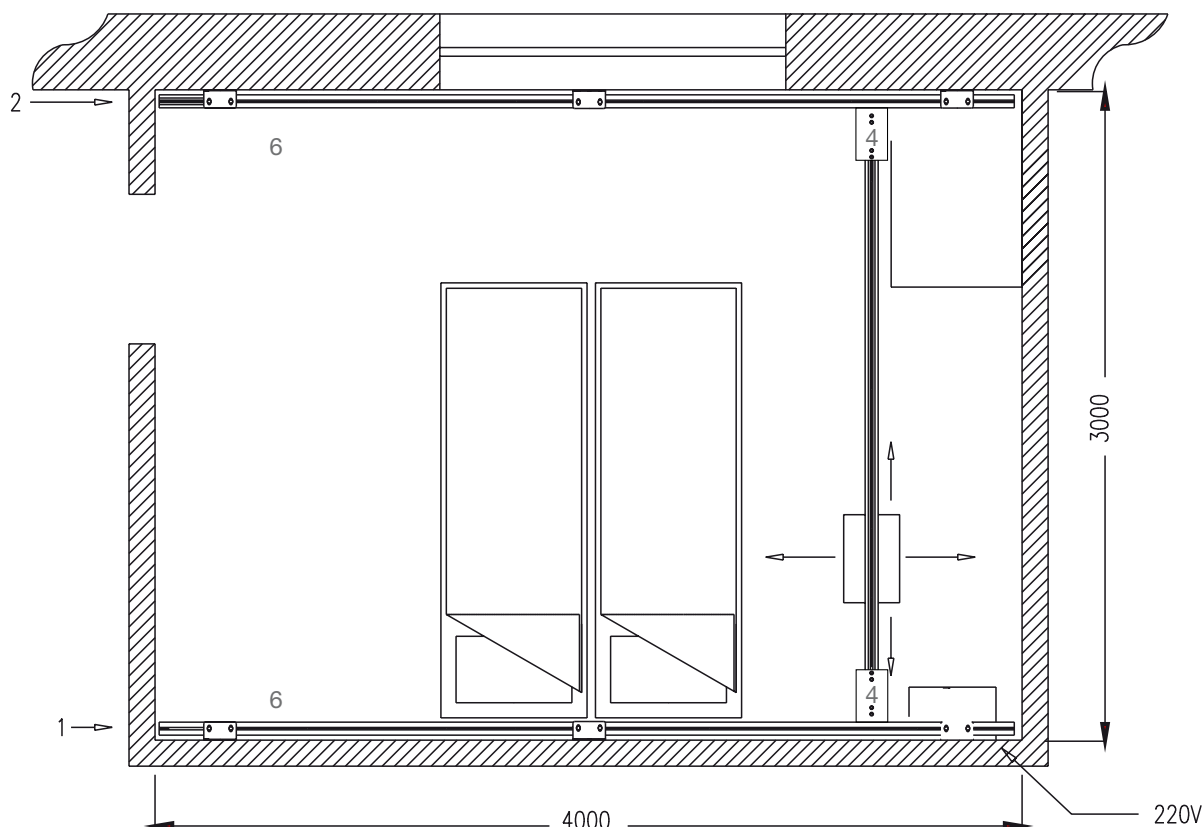
Basic rail systems

A basic rail system consists of one or more straight rails, with or without curves and switches for increased room coverage, flexibility and utility.

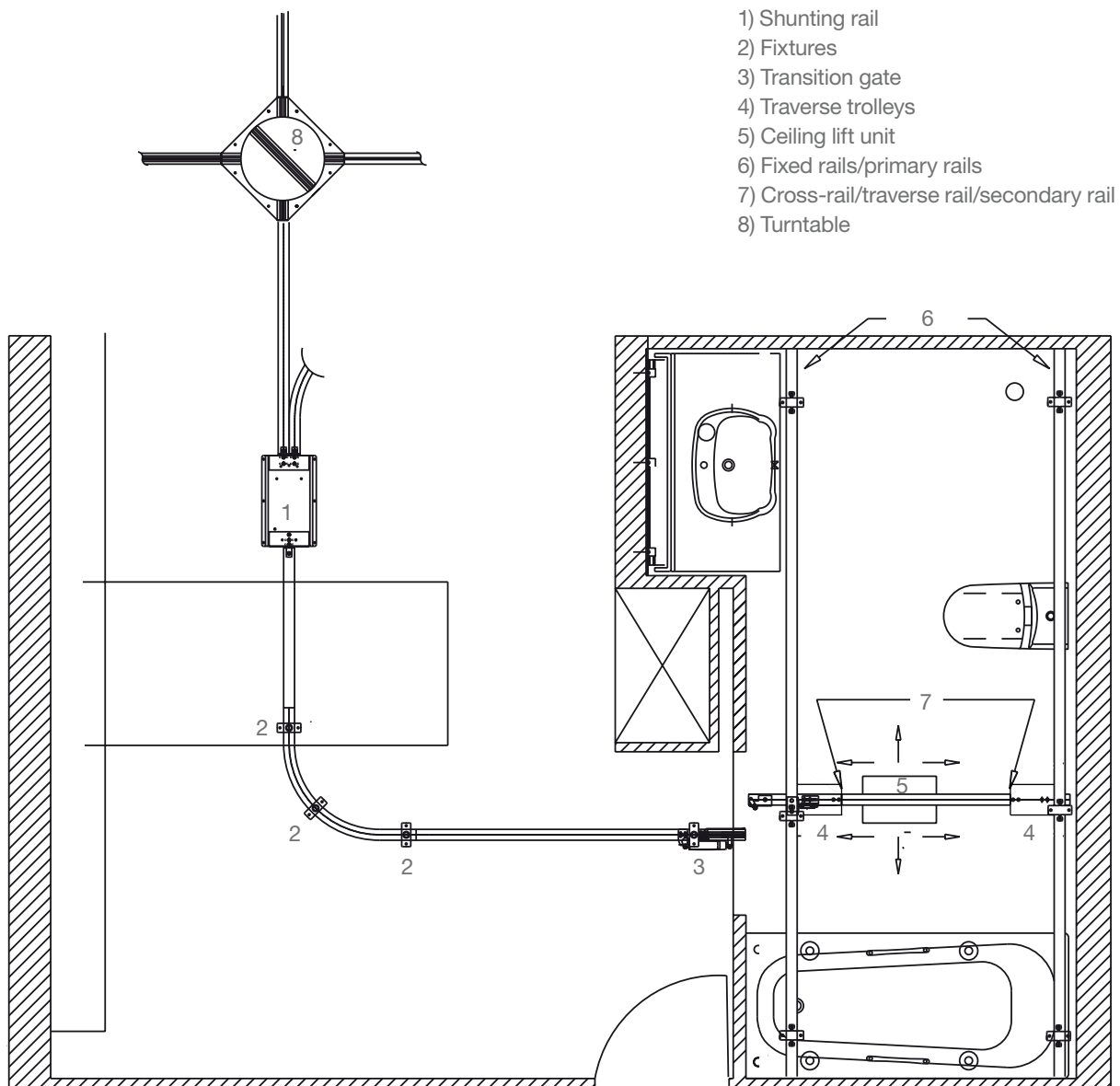


Rail systems with full room coverage - (x-y)/traverse systems

A rail system with full room coverage consists of a pair of fixed (primary) rails (6) and one or two (secondary) cross-rails/traverse rails. Each cross-rail is mounted on a pair of traverse trolleys (4) and can travel sideways in the fixed rails along the total width of the lift system. This rail system allows the ceiling lift unit, which is mounted on a cross-rail, to travel in all directions and be used anywhere in the room. Two rail systems with full room coverage can be connected by means of transition gates.



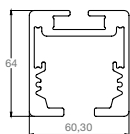
A basic rail system and a rail system with full room coverage, (x-y) system, can also be connected by means of transition gates (3).



1.2: Straight rails

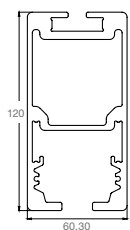
MilkyWay straight rails are available in three different rail profiles and in several lengths. All MilkyWay rails are prepared for in-rail charging. For more information about available MilkyWay straight rails; article numbers and technical data, please consult the “MilkyWay Technical information” document.

Each rail profile offers its own unique performance



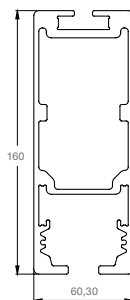
Art. No. 50400262-276

Rail 64 is the standard straight rail. It can be used in basic rail systems, with or without curves and switches. It is used in most applications installed using ceiling brackets and/or pendants. Rail 64 can be supported with a bolt-on rail for higher rigidity, see 4.2: Supported cross-rails.



Art. No. 50400277-294

Rail 120 features a higher profile and is therefore more rigid. It is used in applications with a longer free span between attachment points. Rail 120 is often used as a secondary rail in a (x-y)/traverse system or as a long single rail in a basic rail system.

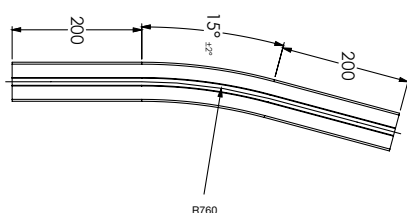


Art. No. 50400295-299

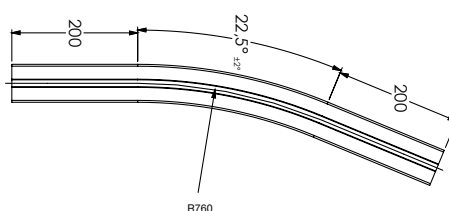
Rail 160 features the highest profile and rigidity. It is used in applications with a free span of up to 7000 mm between attachment points, usually in large rooms with vertical supports. Rail 160 can also be used as a secondary rail in large (x-y)/traverse systems.

1.3: Rail curves

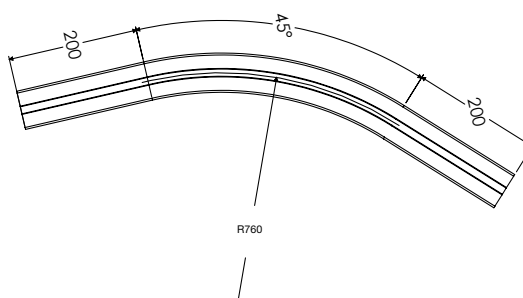
MilkyWay includes rail curves in 15°, 22.5°, 45° and 90° variants. The curves are available in one rail profile: 64 x 60 mm. All MilkyWay rail curves are prepared for in-rail charging. For more information about available MilkyWay rail curves; article numbers and technical data, please consult the “MilkyWay Technical information” document.



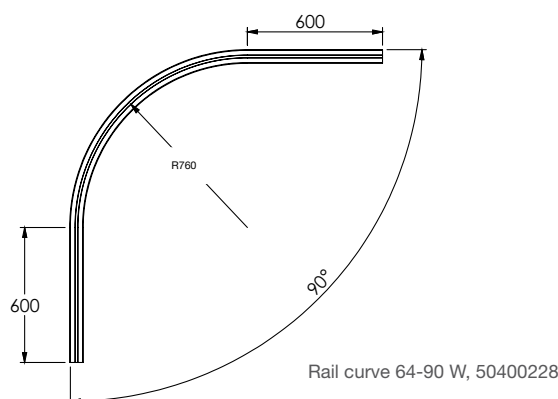
Rail curve 64-15 W, 50400232



Rail curve 64-22.5 W, 50400231



Rail curve 64-45 W, 50400227



Rail curve 64-90 W, 50400228

1.4: Installation methods

MilkyWay offers several different alternatives for installation of straight rails and rail curves on the ceiling. Depending on factors such as ceiling height, material and structure, different ceiling brackets and/or pendants can be used. MilkyWay also features several alternatives for wall-mounting of free bearing rail systems.



Regardless of which installation method is used, the completed installation must always comply with the requirements for safety. It is also essential for the performance that deflection of the rails is avoided, see 2: Important information.

1.4.1: Installation on the ceiling

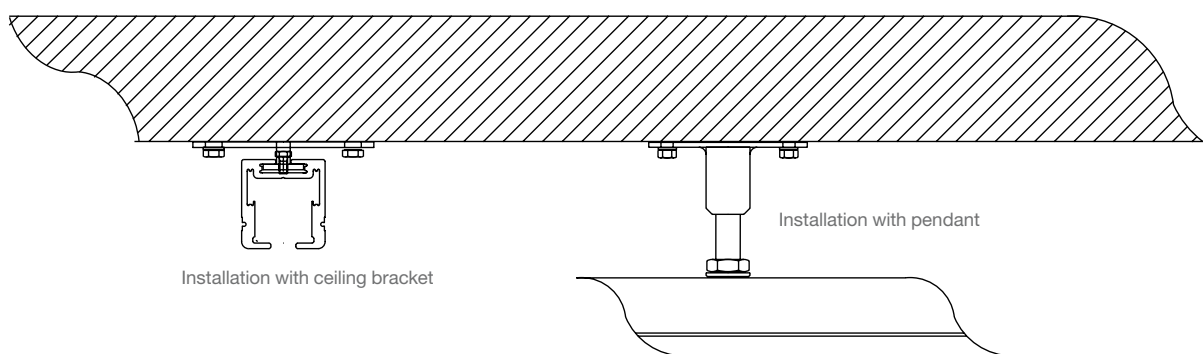
Ceiling brackets

Ceiling brackets are available in several models. The choice depends, among other factors, on the structure and material of the ceiling. Ceiling brackets feature different build-in dimensions and are installed with one or two fixings. Ceiling brackets can be easily installed on concrete, flush with the surface, and adjusted from the rail. For more information about MilkyWay ceiling brackets, see 8: Ceiling fixtures - brackets and pendants.

Pendants

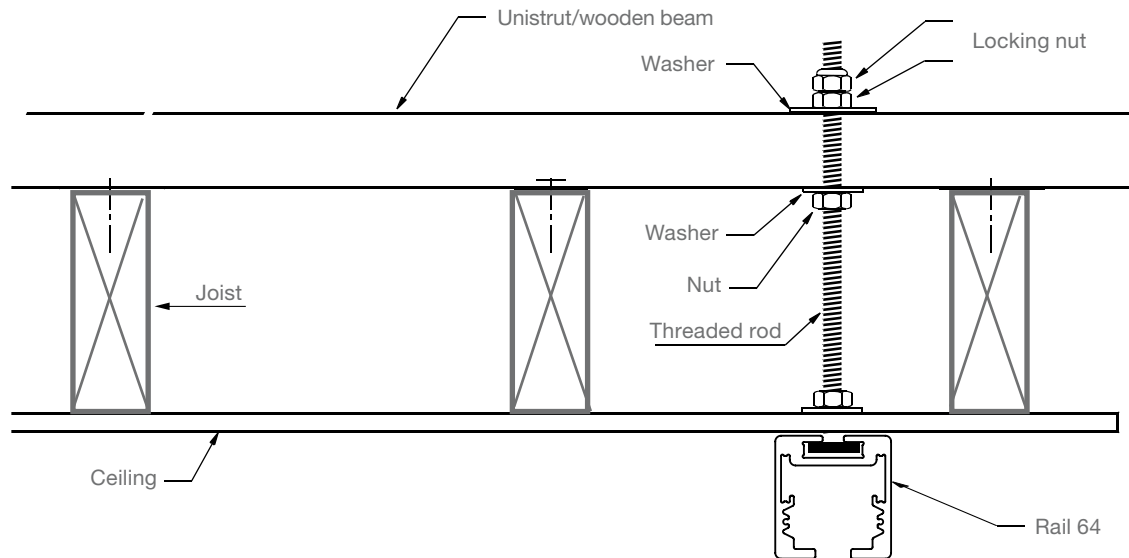
Pendants enable installation of a rail system onto a high ceiling, while still allowing for the correct distance between rail and floor (2300 mm). Pendants are available in several models and variants. All pendants are very stable and easy to install. They are also, either steplessly or with fixed intervals, variable in length to enable correct height adjustment. This feature facilitates both design and installation of the system. It also enables adaptation to the room and the lifting needs at hand.

For more information about MilkyWay pendants, see 8: Ceiling fixtures - brackets and pendants.



Threaded rod support kit

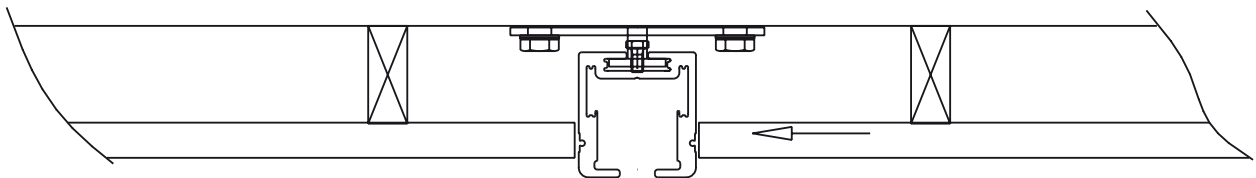
The threaded rod support kit is used when the rail system needs to be installed under joists. The fixing point is in a beam (e.g. a steel channel or a 100 x 100 mm wooden beam) resting on a minimum of three joists. For more information about MilkyWay Threaded rod support kit, see 8: Ceiling fixtures - brackets and pendants.



For more information about all available MilkyWay ceiling fixtures; article numbers and technical data, please consult the "MilkyWay Technical information" document.

1.4.2: Concealed rails

In some applications, the rail system can be concealed by an inner ceiling. A concealed rail system can also be installed in preparation for subsequent installation of ceiling lift units and, in a new building, the fixed rails of a rail system with full room coverage can be installed in preparation for later installation of cross-rails. In these cases, the inner ceiling must be prepared with installation hatches.

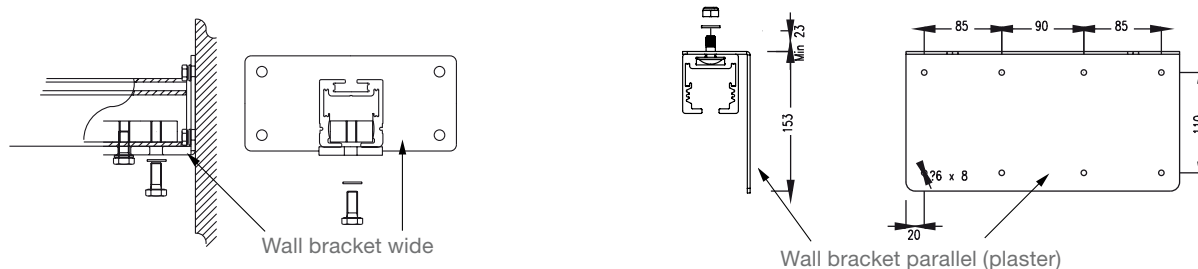


All fixtures must be securely installed with double self-locking nuts. Install the entire rail system and carry out the final safety tests before mounting the inner ceiling.

1.4.3: Installation on the walls

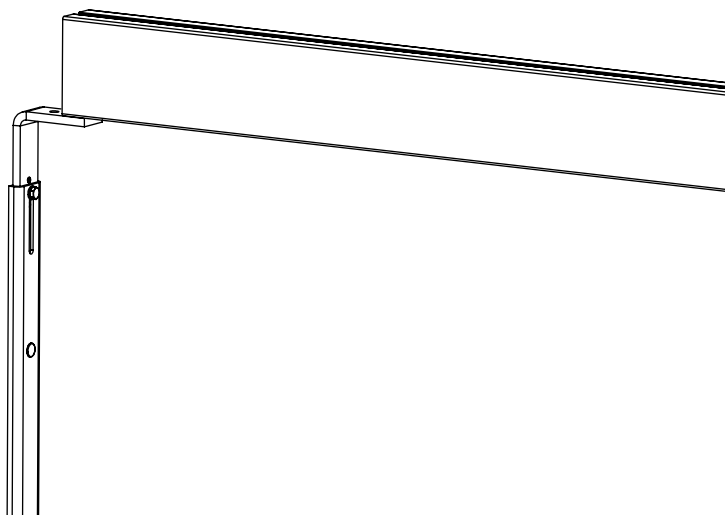
Wall brackets

For free bearing installations, the end of the rails can be attached to the wall using wall brackets. Wall brackets are available in several models, see 9: Wall fixtures - brackets and vertical supports. The choice depends, among other factors, on the wall structure and material.



Vertical support

Vertical support is an alternative fixture for wall-mounting of free bearing rail systems, see 9: Wall fixtures - brackets and vertical supports. When there are doubts about the load bearing capacity of the wall, vertical supports should be chosen. Before installation, the condition of the floor must be determined in order to decide if the floor can carry the extra point load created by the vertical supports.



For more information about all available MilkyWay wall fixtures; article numbers and technical data, please consult the "MilkyWay Technical information" document.

1.5: Power supply

MilkyWay rail systems can be powered in many different ways. All models of RiseBasic and RiseAtlas, except the high humidity and SmartPark special versions, feature easy and convenient hand control charging as standard. The charging station for these ceiling lift units are integrated in a small and discreet holder and parking place for the hand control. The hand control holder with charging station is easily installed on the wall, in convenient proximity of the ceiling lift unit's parking place.

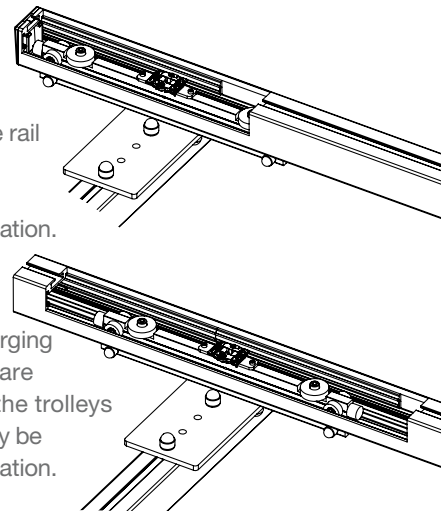
The lift units can also be charged either anywhere in the entire rail system (in-rail charging) or at the end of the primary and/or secondary rails (end point charging).

Basic rail systems - options for charging

- A:** End point charging. Use the charger and the charging connectors for the rail supplied with the ceiling lift unit. Read the user manual before installation.
- B:** In-rail charging. Use the charger supplied with the ceiling lift unit. Conductor rail and insulator, which are available as accessories, are required. Carbon sliders mounted on top of the lift unit are used for power transfer. Read the user manual before installation.

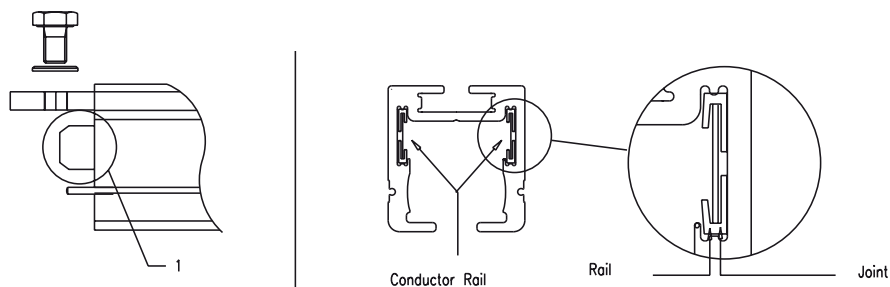
(x-y)/traverse systems - options for charging

- A:** End point charging. Use the charger and the charging connectors for the rail supplied with the ceiling lift unit. Traverse trolleys designed for end point charging are required. An extension cable for the traverse trolley may be required depending on the overhang. Read the user manual before installation.
- B:** In-rail charging. Use the charger and the charging connectors for the rail supplied with the ceiling lift unit. Traverse trolleys designed for in-rail charging and conductor rail and insulator, for both primary and secondary rails, are required. Carbon sliders mounted on top of the lift unit and in one of the trolleys are used for power transfer. An extension cable for the traverse trolley may be required depending on the overhang. Read the user manual before installation.



1.5.1: In-rail charging with conductor rail and insulator

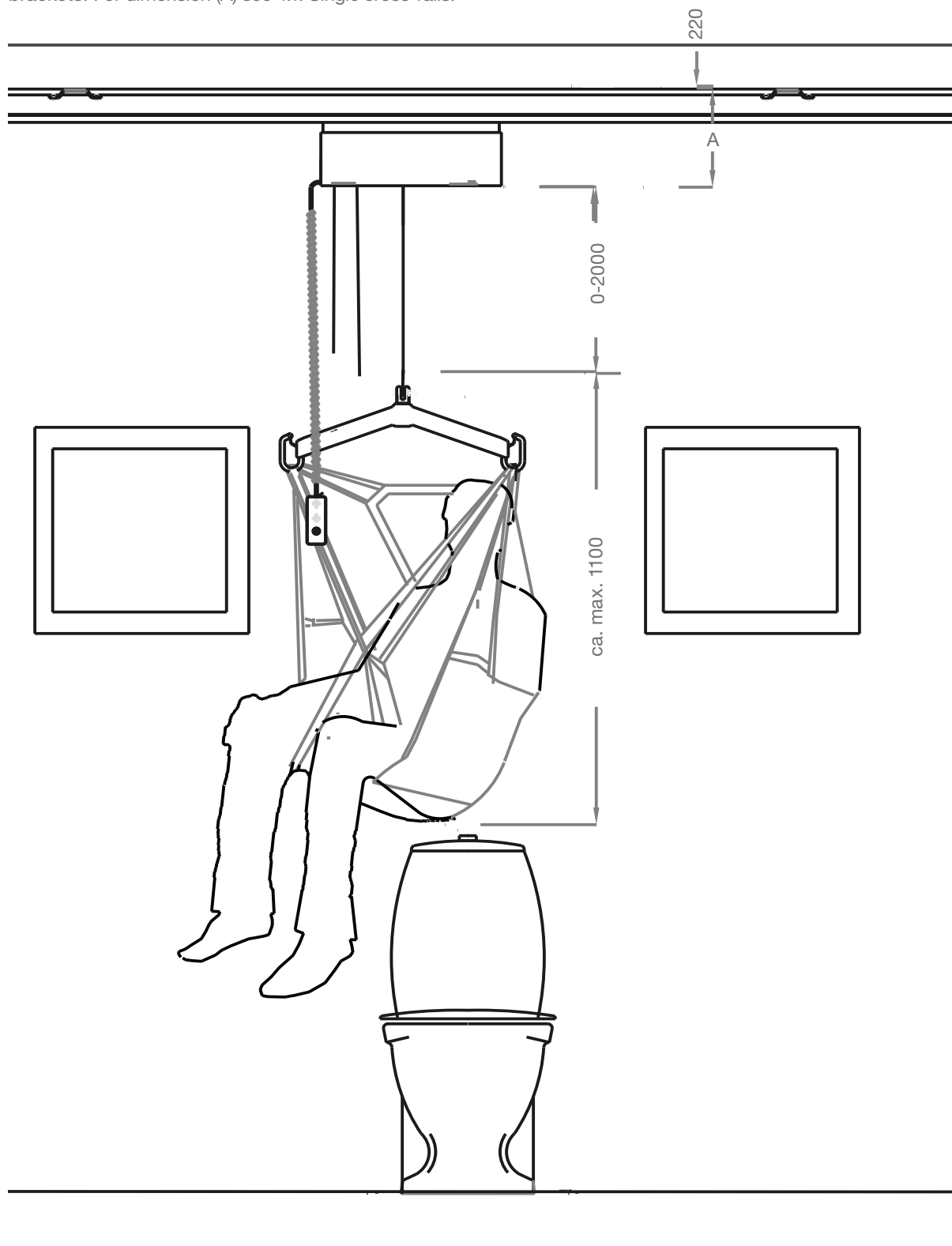
MilkyWay conductor rail and insulator are available in several lengths and are supplied in pairs, see 10.4: Installation equipment. If several lengths need to be joined, the conductor rails must be connected by means of a brass joint.



For more information; article numbers and technical data, please consult the "MilkyWay Technical information" document.

1.6: Installation heights

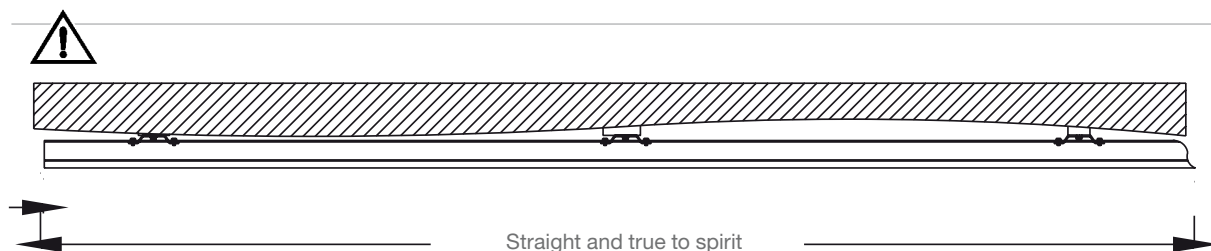
The height of the rails above floor level can be critical in some applications. Below are indicated some basic dimensions close to "worst case". The person shown is 1900 mm tall, and the lifting sling is size XL. The dimensions may vary a lot. The rail shown is the rail with the lowest profile, Rail 64, installed with ceiling brackets. For dimension (A) see 4.1: Single cross-rails.



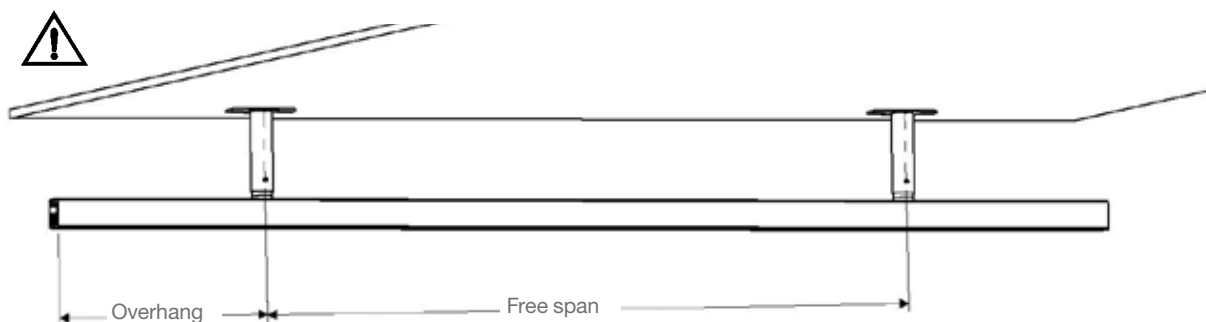
2: Important information

2.1: General instructions for installation of rails

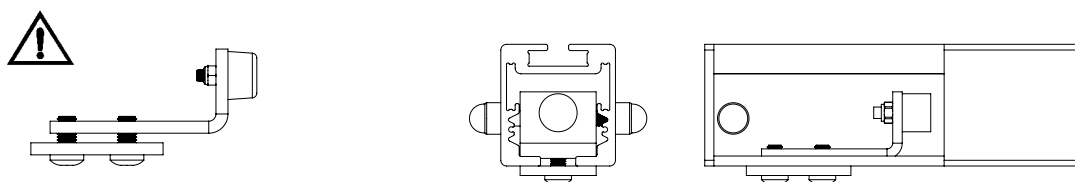
All rails, including primary and secondary rails in a (x-y)/traverse system, must be installed horizontally. The ceiling or floor alone is not accurate enough as a reference to horizontal. True to spirit level is required.



The rails must be installed horizontally. In case of uneven surfaces, the mounting base must be straightened out by means of washers, blocks, shims or similar.



The rails must be installed observing maximum free span and overhang limits. It is also essential for the performance that deflection of the rails is avoided. The deflection for a fully loaded system must be less than 5 mm per running meter. Reduce the distance between fixing points to achieve this. For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.



The ends of all rails must be fitted with endstops. If there is a risk that the endstop may fall out, the endstop must be installed with secure screws.



The inside of the rails must be completely clean after installing. Even small filings or borings can affect the performance, making traversing uneven.

2.2: Safety



MilkyWay rail systems must be designed, assembled, installed and inspected by qualified and authorized personnel according to instructions issued by Handicare AB. Only fixing elements approved by Handicare AB and suitable for the specific installation may be used.

Regional regulations, as well as the intended applications for different installations, may vary significantly. Before deciding on how to install the rails, it is important to determine the condition of both the ceiling, the walls and the floor.

Specific fixings for installation of the rails are not included and general recommendations cannot be made. All decisions on fixings and anchorage for a specific rail system must be made by the installer or the constructional engineer in charge. Should fixings be supplied, the installer is responsible for evaluation of their suitability for the application at hand.

Minimum requirements on ceilings

Apart from the required static strength, each attachment point in the ceiling construction must be rated to withstand a load of at least 2 times the rated load of the entire rail system. The construction of the ceiling must not be critically damaged by the ceiling lift unit being driven into the endstops. This can only be calculated by an engineer and/or the owner of the building. For more information; see 2.3: Point load recommendations.

Minimum requirements on walls

Apart from the required static strength, the walls must be rated to withstand a load of at least 2 times the rated load of the entire rail system. The construction of the walls must not be critically damaged by the ceiling lift unit being driven into the endstops. This can only be calculated by an engineer and/or the owner of the building.



Testing the rail system

All ceiling lift systems must be weight tested immediately after completion of the installation. Use of a lift system to lift and/or transfer any person prior to certification by weight testing is strictly prohibited. For more information; see 7: Weight testing procedure.



Safe working load

Different products on the same ceiling lift system (ceiling lift unit, sling bar, lifting sling, scales and other lifting accessories) may have different allowed safe working loads. The lowest allowed safe working load always determines the safe working load of the entire assembled system. Always check the safe working load for the ceiling lift unit and all lifting accessories before use. Contact your local Handicare and SystemRoMedic™ partner if you have any questions.

2.3: Point load recommendations

The load upon each attachment point (ceiling bracket/pendant) is considered “point load.”

The structure of building must be able to support the load imposed upon it at each attachment point.

Installation of a MilkyWay ceiling lift system requires that the existing structure, to which the rail system is attached, is able to withstand the loads imposed upon it by the ceiling lift system. Performance of structural check is the responsibility of others.

MilkyWay requires a two (2) times safety rating. Maximum point load for each support attachment point is based upon the maximum lifting capacity of the ceiling lift unit plus the estimated weight of ceiling lift equipment at support attachment point multiplied by a safety factor of two (2).

Standard system consists of a basic rail system or (x-y)/traverse system utilizing 1 ceiling lift unit.

Bariatric system consists of a basic rail system or (x-y)/traverse system utilizing 2 ceiling lift units.

Maximum lifting capacity: standard system

Standard system 230 – Maximum capacity – **230 kg / 507 lbs**

Standard system 285 – Maximum capacity – **285 kg / 625 lbs**

Maximum lifting capacity: bariatric system

Bariatric system 460 – Maximum capacity – **460 kg / 1014 lbs**

Bariatric system 570 – Maximum capacity – **570 kg / 1256 lbs**

Estimated weight of the ceiling lift system equipment (lift motor, rails, pendant/ceiling bracket, traverse carrier, etc.) at each support location for standard system is **27 kg / 59 lbs**.

Estimated weight of the ceiling lift system equipment (lift motors, rails, pendant/ceiling bracket, traverse carrier, etc.) at each support location for bariatric system is **45 kg / 99 lbs**.

Standard systems:

230 kg / 507 lbs:

$230 \text{ kg} + 27 \text{ kg} = \mathbf{257 \text{ kg} / 566 \text{ lbs}}$ working point load

$257 \text{ kg} \times 2 = \mathbf{514 \text{ kg} / 1133 \text{ lbs}}$ maximum point load

285 kg / 630 lbs:

$285 \text{ kg} + 27 \text{ kg} = \mathbf{312 \text{ kg} / 687 \text{ lbs}}$ working point load

$312 \text{ kg} \times 2 = \mathbf{624 \text{ kg} / 1375 \text{ lbs}}$ maximum point load

Bariatric systems:

230 kg / 507 lbs:

$(230 \text{ kg} \times 2) + 45 \text{ kg} = \mathbf{505 \text{ kg} / 1113 \text{ lbs}}$ working point load

$505 \text{ kg} \times 2 = \mathbf{1010 \text{ kg} / 2226 \text{ lbs}}$ maximum point load

285 kg / 630 lbs:

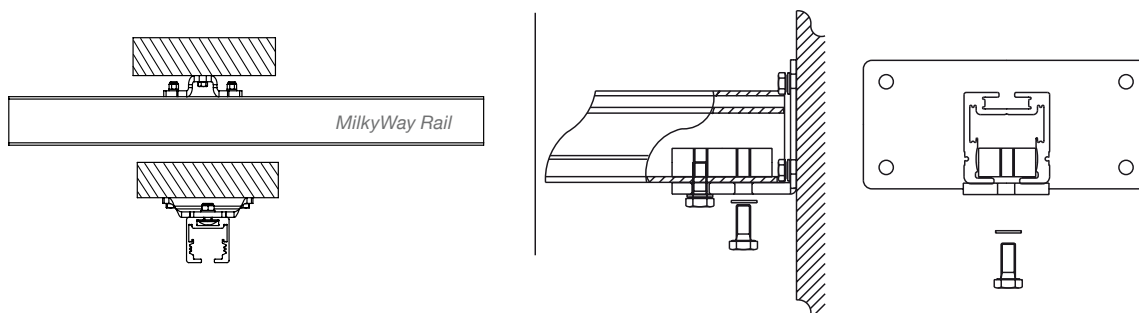
$(285 \text{ kg} \times 2) + 45 \text{ kg} = \mathbf{615 \text{ kg} / 1355 \text{ lbs}}$ working point load

$615 \text{ kg} \times 2 = \mathbf{1230 \text{ kg} / 2711 \text{ lbs}}$ maximum point load

3: Basic rail systems

3.1: Installation of rails

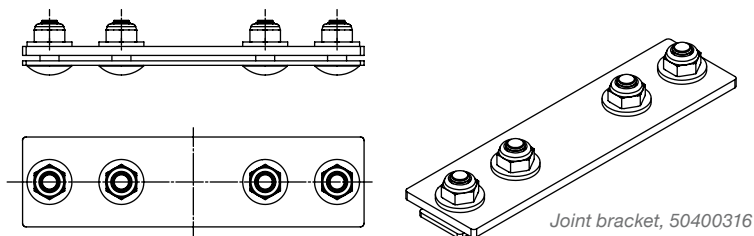
Basic rail systems are normally installed on the ceiling or on the walls, see 1.4: Installation methods.



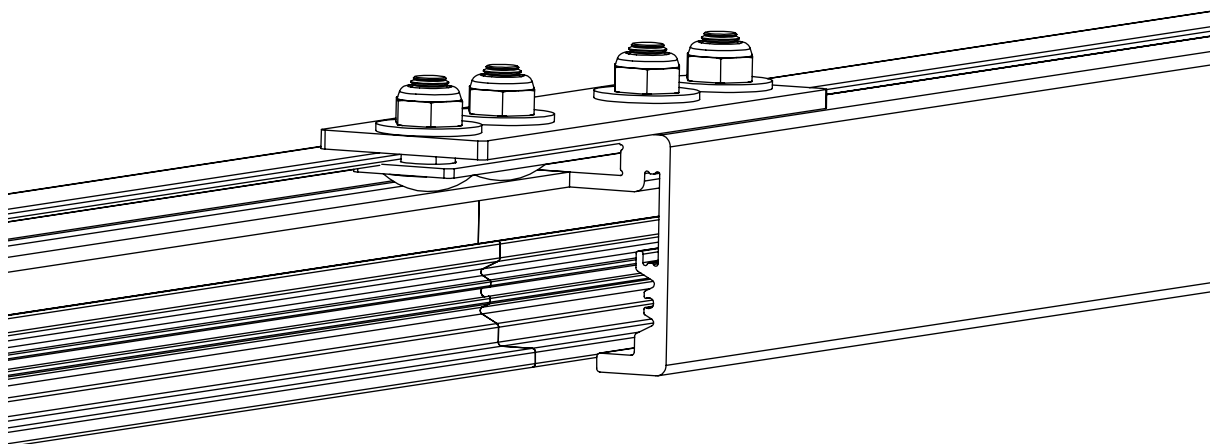
NB! For basic rail systems connected to (x-y)/traverse systems, see 4.4.4: Heights, systems with transition gates.

3.2: Connecting rails and rail curves

Two or more straight rails and/or rail curves can be connected to each other to create a rail featuring the required length and direction. Joint bracket provides a convenient solution for secure connection, see 10.4: Installation equipment.



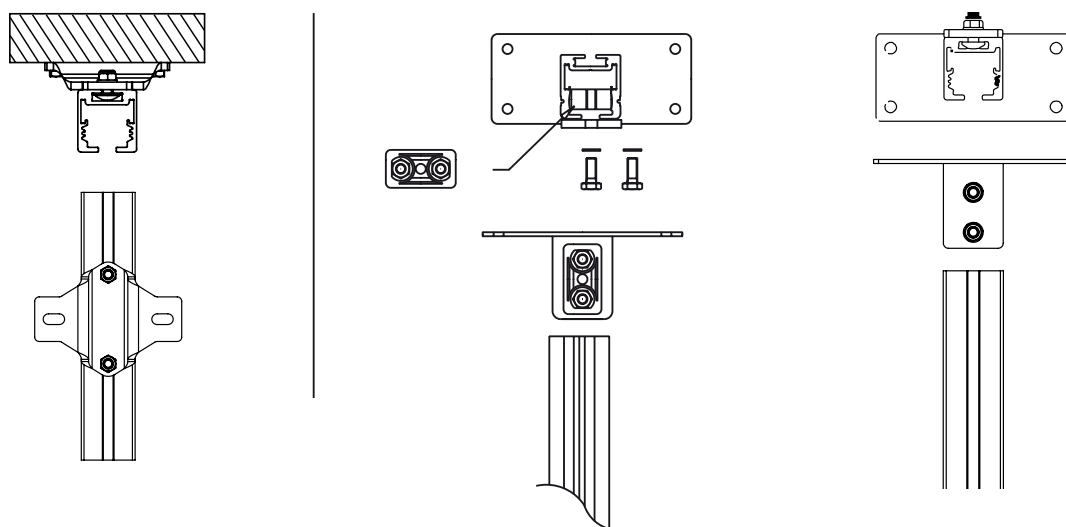
When installing shorter rail systems, the rail system can, to an advantage, be assembled on the floor. Thereafter, the rail system is lifted up to the ceiling as one unit. The conductor rails for power supply can be inserted in full length in the pre-assembled rail system.



3.3: Installation of a straight rail, example

Ceiling lifts are often used for transfers to and from bed, wheelchair and toilet. A basic rail system with a short straight rail of 2500 mm can be the right solution for these situations. In the below installation example, regular ceiling/wall brackets and 2.5 kN fixings are selected.

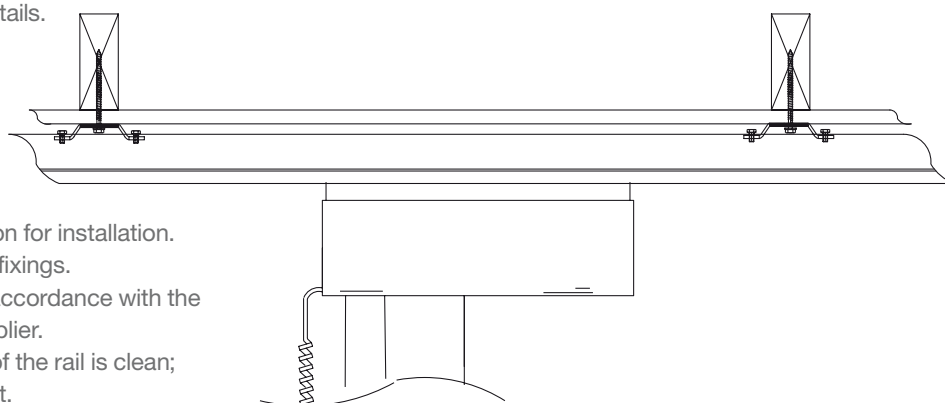
- 1) Select starting point (lowest point).
- 2) Decide where to mount the charger or transformer.
- 3) Decide orientation.



- 4) Install the brackets and endstops in the rails. If ceiling fixtures are used, the overhang must not exceed the specified distance. Wall brackets are located at the rail ends. If possible - as it is the case with concrete ceilings - the remaining brackets must be evenly distributed. If the ceiling is constructed around joists, the brackets are normally fixed to the feet of the joists.



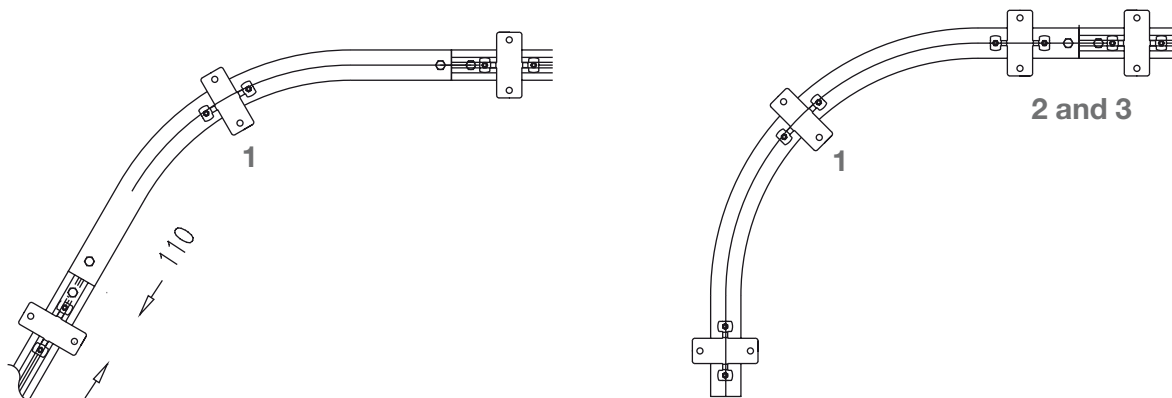
For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.



- 5) Lift up the rail in position for installation.
- 6) Mark out the holes for fixings.
- 7) Prepare the fixings in accordance with the instructions of the supplier.
- 8) Check that the inside of the rail is clean; no filings or borings left.
- 9) Install the rail on the wall or ceiling.
NB! In some systems, it is not possible to insert the lift module after lifting up the rail.
- 10) Check that the rail is straight and horizontal.
- 11) Insert the lift module (if not done before lifting the rail).
- 12) Mount the endstops at the rail ends.
- 13) Connect the cables (see 6: Connecting to power supply) and check that they are connected correctly.
- 14) Plug in the hand control and check the functions.
- 15) Perform a final test of all functions including weight testing, see 7: Weight testing procedure.

3.4: Installation of rail curves, example

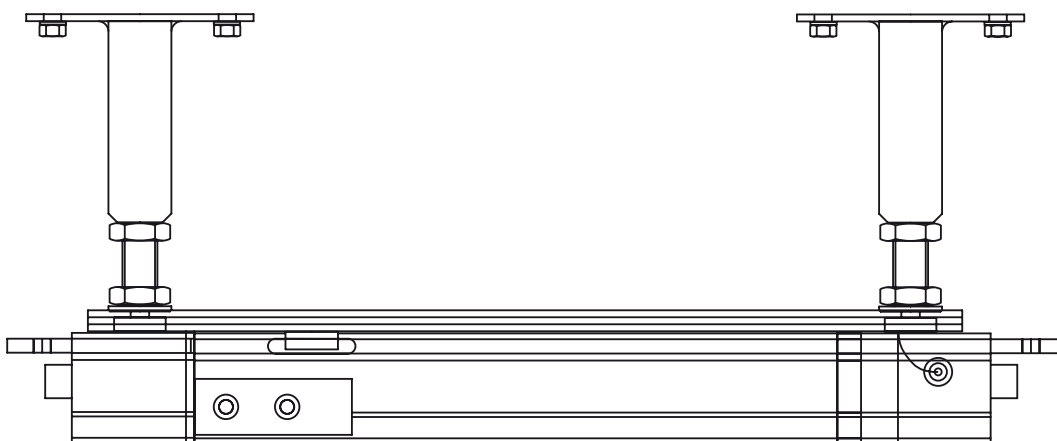
All curves must be installed by means of a fixture in the midpoint (1) of the centerline. Curves of 15, 22.5, 45 or 90 degrees must have the two remaining fixtures close to the rail joint - in the curve (2) or in the straight rail (3). Closest possible distance is 110 mm from mounting hole to rail joint.



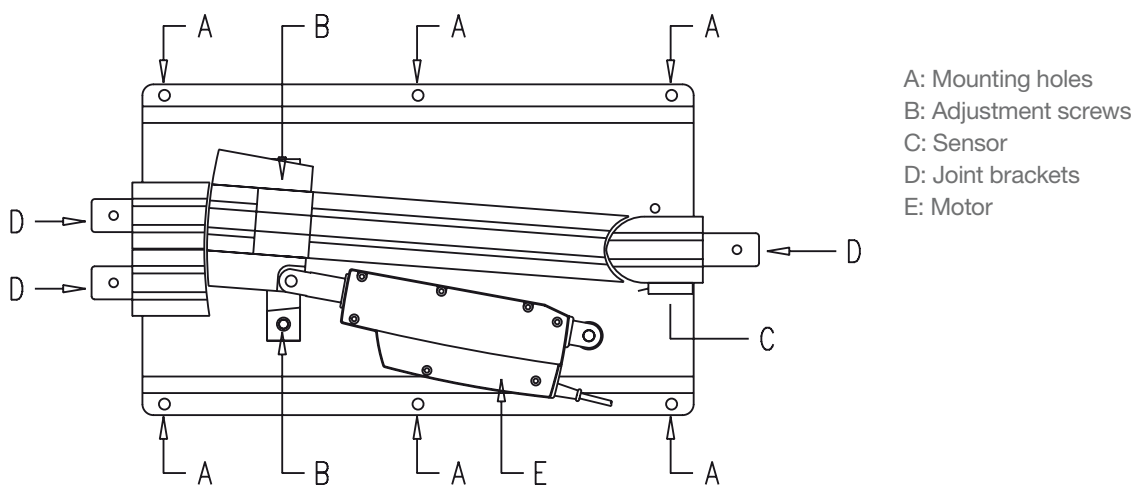
Combinations of straight rails and rail curves can, to an advantage, be assembled on the floor and thereafter installed as one unit. This method significantly facilitates marking out the location of fixtures. Furthermore, it allows for the conductor rail to be inserted in full length.

3.5: Shunting rail, 50400141-142 (only for Reda)

MilkyWay shunting rail switches between two very short pieces of straight rail. The desired curve (15, 22.5, 45 or 90 degrees) can be mounted subsequently. The switch is electrically operated and features built-in rectification. Therefore, polarity is not an issue for the switch motor. Polarity is determined by the requirements of the lift module.



The switch can be installed directly on the ceiling using the 6 mounting holes (A). If the rails are lowered from the ceiling - as is the case when the switch is connected to a traverse system - adjustable pendants can be used as fixtures.



Safety

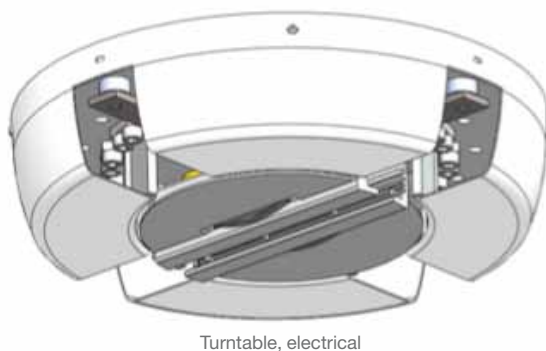
The switch is secured against unintended switching while the lift has passed the switch by means of the sensor (C), detecting a magneto on the lift module. During installation, the switch (C) may be reversed to the opposite position. This can be corrected by passing a magneto close to the switch.

The lift module cannot run out of the rail, due to checkblocks mounted at the sides of the rail switching.

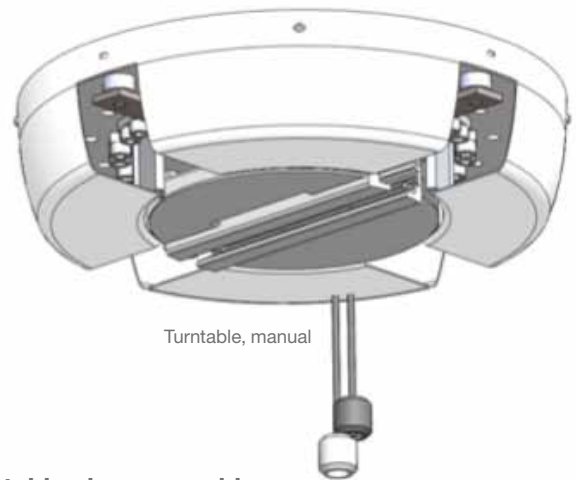
For more information about all available MilkyWay shunting rails; article numbers and technical data, please consult the "MilkyWay Technical information" document.

3.6: Turntable, 50400233-234

The turntable is ideal for situations where intersections are required in a rail system or when a rail turn, which the standard rail curves cannot accommodate, is required (for example a curve with a very small turning radius). It is available in two models; one electrical, powered by a motor and one manual, powered by pulling a rope. The turntable provides ultimate flexibility in various lifting and transfer situations demanding a wide range of locations or requiring specialized options. Whether used in a multi-user institutional environment or in a private residential setting, the turntable provides fixed ceiling rail take-off points that will meet the requirements. For more information about all available MilkyWay turntables; article numbers and technical data, please consult the "MilkyWay Technical information" document.



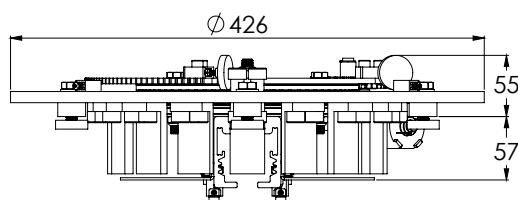
Turntable, electrical



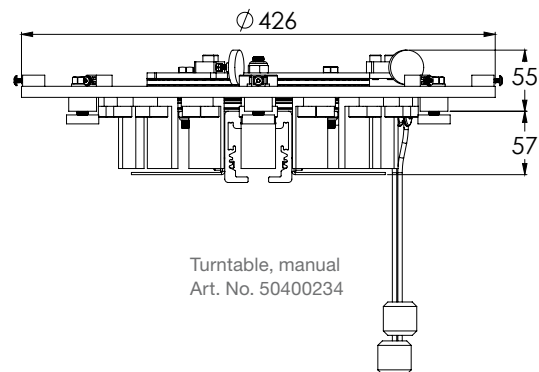
Turntable, manual

When selecting the location and position of the turntable please consider:

- That a clear space can be maintained around the turntable, lift unit and rail.
- That it may be necessary to modify the ceiling to make room for the center bearing.
- That the system preferably can be mounted with pendants.



Turntable, electrical, Art. No. 50400233



Turntable, manual
Art. No. 50400234

Before installation:

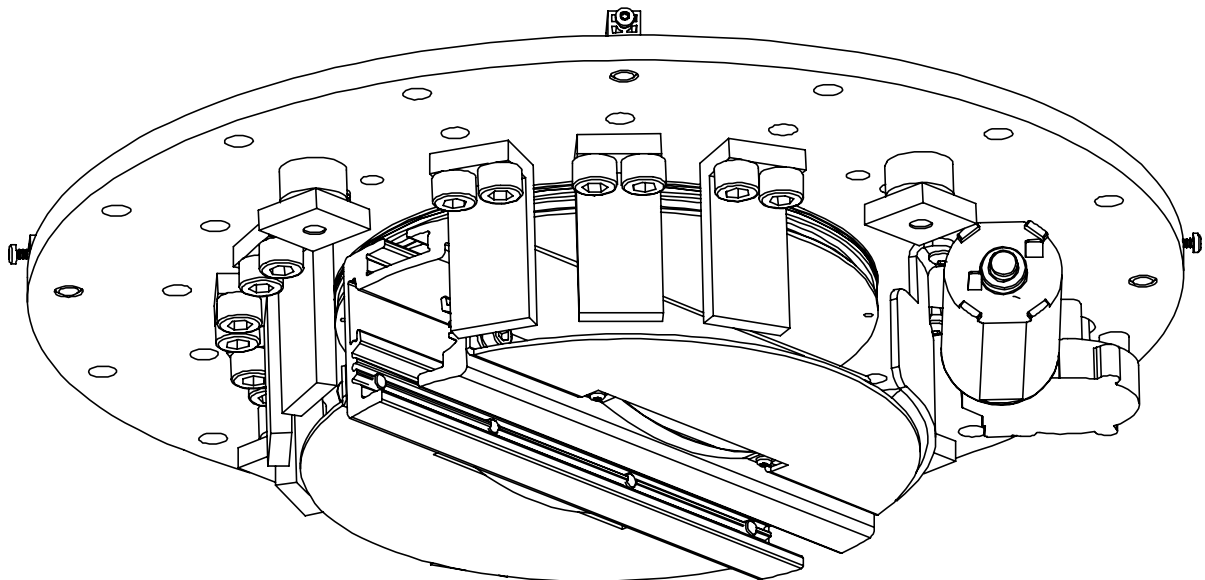
- Before installing the turntable, make sure that the rail exit directions are correct. For instructions on how to change them, see 3.6.1: Changing rail exit direction.
- Before installing the electrical version of the turntable, the contact strips must be checked. There are different strips for Reda and RiseAtlas lift units. The turntable is supplied preset for RiseAtlas. For information about conversion to Reda lift unit, see 6.5.1: Internal wiring diagram. This is not necessary with the manual turntable.

3.6.1 Changing rail exit direction

The turntables have 13 possible exit directions spread evenly around 270 degrees in steps of 22.5 degrees. Depending on how the turntable is installed, however, it is possible to achieve exits in all directions. Upon delivery, the turntable is assembled with 4 exits with 90 degrees between each, see picture 3.6.3: Parts list and function.

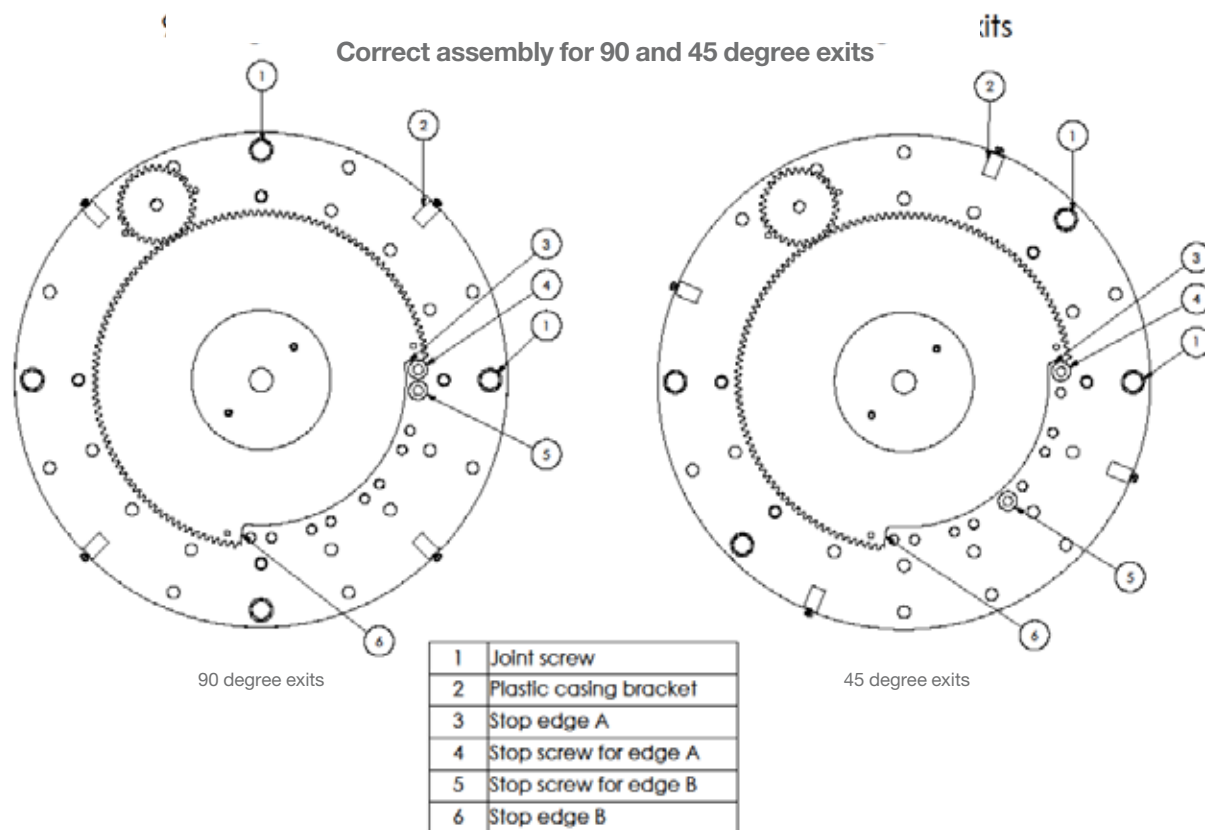
If other exit directions are desired, the endstop for the new direction must be removed and the undesired directions must be blocked with endstops. The joint plates must also be be positioned at the new openings. An assembly for 45 degree exit solutions (without plastic casing) is shown in the below picture.

Note that for this setup all the plastic casing brackets must be moved one step in the outer hole circle since they utilize the same holes as the joint screws.



After this, the two endstop screws which are mounted on top of the turn plate must be positioned correctly in relation to the exit directions. These two screws function as stops for the rotation of the rail and are, upon delivery, positioned for 90 degree exits. For other directions, these must be positioned in the correct holes to enable the rotating rails to stop in the correct directions.

Note that it may be necessary to remove the endstop screws mounted from the bottom of the turntable in order to be able to do this. The correct assembly for 90 degree exits and for 45 degree exits are shown on the next page.

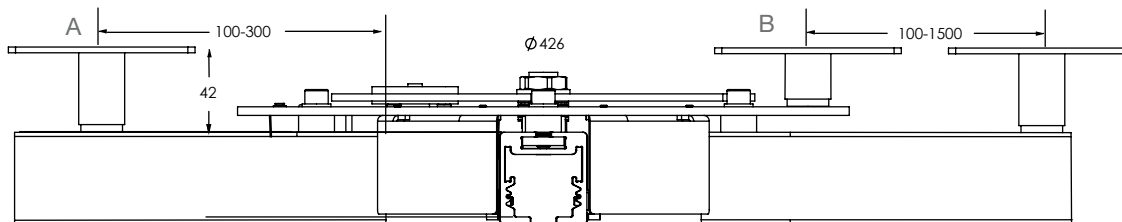


Please note that three possible exit directions are blocked by the electric motor (electrical version) and the rope pulleys (manual version). It is still possible to access 360 degrees exits by installing the turntable to the ceiling in the appropriate direction.

3.6.2: Installation, example

The turntable can be supported in a variety of ways. To prevent the rail-plate from twisting during load, the turntable must always be fixed at each incoming rail and at a minimum of four evenly distributed points.

- 1) Mark the central point where the unit is to be installed. This is usually done using either a template or the base plate itself or by using a chalk-line to mark the ceiling to form a cross.
- 2) The turntable can be installed directly to pendants or other fixtures, or it could be installed to the rails. The distance from the turntable to the first fixture must be maximum 300 mm and minimum 100 mm if it is only supported at the rails (A). If the turntable is also fixed to the ceiling, the distance to the first fixture can be up to 1500 mm (B).



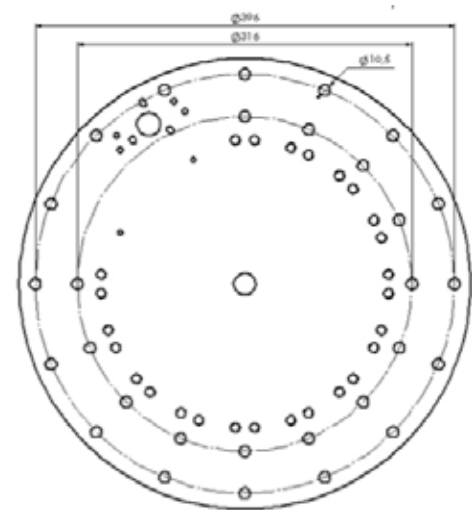
- 3) If the turntable is not lowered from the ceiling with attachments by a minimum of 59 mm, it is necessary to remove from the ceiling a circle of material around the centre point approximately 430 mm in diameter and to a depth equal to the mentioned lowering distance. This is to enable the bearing on the top of the turntable to be recessed into the ceiling. Ceiling distances to achieve the desired lowering is included in the turntable kit and may be used if desired.

- 4) When installation method has been decided, the turntable or a template can be used to mark the fixing holes on the ceiling.

The outer hole circle with 10.5 mm holes should be used to lock the joint plate to the incoming rail. The inner hole circle should be used to mount the turntable to the ceiling.

To accurately position the turntable on the ceiling, the pencil marks that were made earlier should be visible through the holes in the turntable plate. Once all four marks are visible, they should be drilled.

- 5) Secure the turntable to the ceiling with appropriate fixings (four or more M10 bolts or anchors).

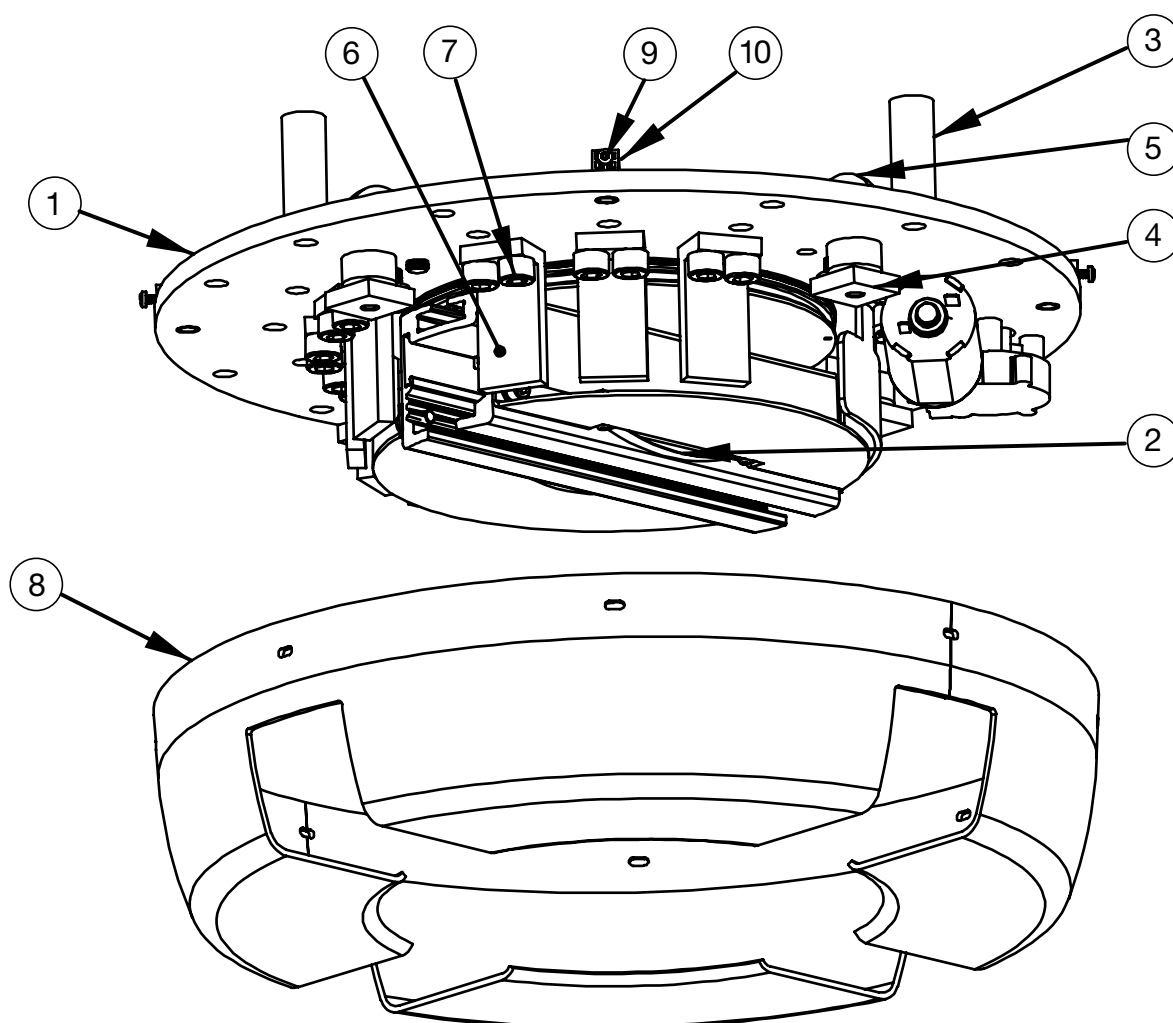


When mounting the turntable, it is important to keep the turntable level. If the ceiling/joists are misaligned in some way, it may be necessary to introduce shims under the turntable base plate.

Do not completely tighten the fixings until the turntable is completely level. After securing, check that the turntable is level.

3.6.3: Parts list and function

- 1: Turntable
- 2: Contact strip kit for motor
- 3: Ceiling distance x4
- 4: Joint plate x4
- 5: Joint screws x4
- 6: Endstop x13
- 7: Endstop screws x26
- 8: Plastic casing
- 9: Plastic casing screw x4
- 10: Plastic casing bracket x4



4: Rail systems with full room coverage - (x-y)/traverse systems

4.1: Single cross-rails

In a rail system with full room coverage, the cross-rail/secondary rail can be mounted either under the trolley (see examples A+C hereunder), or on top of the trolley (B). Suspended cross-rails result in higher constructional height. On the other hand, they allow the ceiling lift unit to traverse closer to the wall. They also make room for lamps etc. mounted on the ceiling. When connecting a rail system with full room coverage with a basic rail system, the cross-rails are always suspended under the trolley.

Basic dimensions and construction, examples

Regular wall fixtures (as shown below A+B) can be mounted at the desired height above floor level: up to 30 mm below the ceiling. The measures on the drawing are minimum distances. The measures without brackets refer to systems using wall brackets.

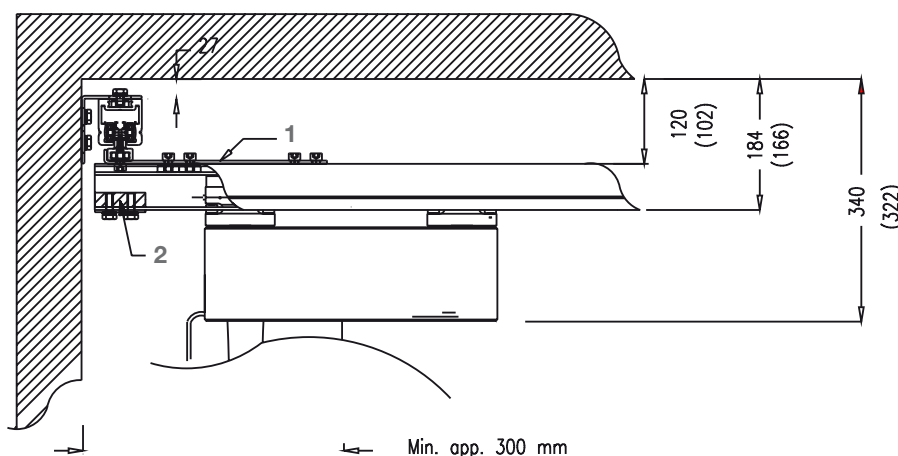
Ceiling fixtures provide a lower constructional height. The distance from the upper part of the rail to the ceiling is 15 mm, see C. The measures in brackets refer to standard ceiling brackets on the fixed rails.

A:

Rail 64,
cross-rail mounted
under the trolley.

The rail is fastened by
means of coach bolts
and locking nuts (1).

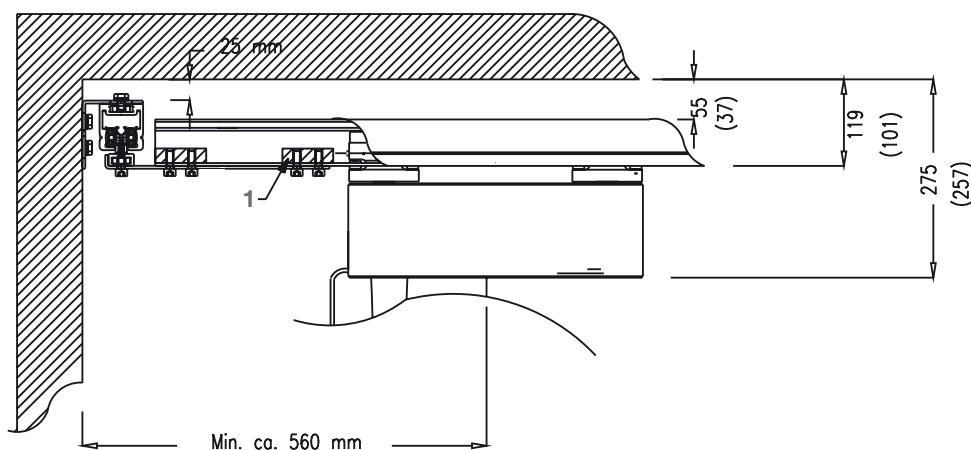
NB! Endstops must be
installed at the end of
all rails (2).



B:

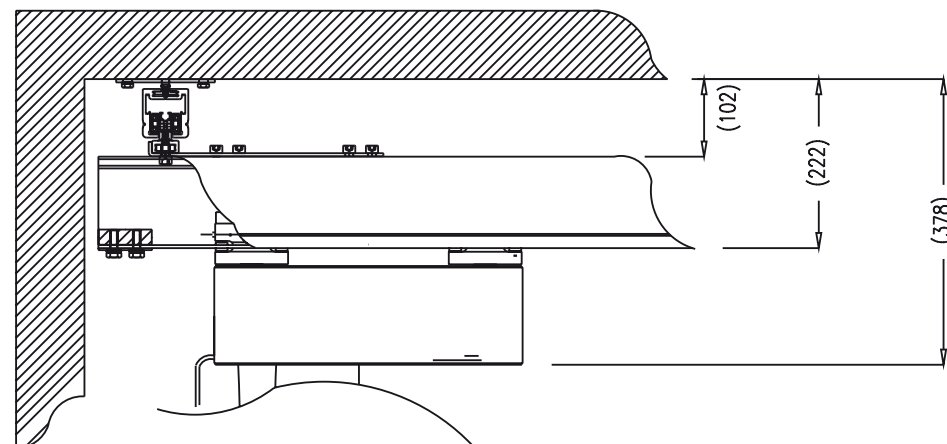
Rail 64,
cross-rail mounted
on top of the trolley.

When the rail is
mounted on top of the
trolley, endstops must
be installed close to
the motor (1).



Examples A and B show applications with Rail 64. If a longer free span is required, the more rigid Rail 120 can be used. Rail 120 or Rail 160 are most often used for cross-rails in rail systems with full room coverage.

C:
Rail 120, cross-rail
mounted under the
trolley.

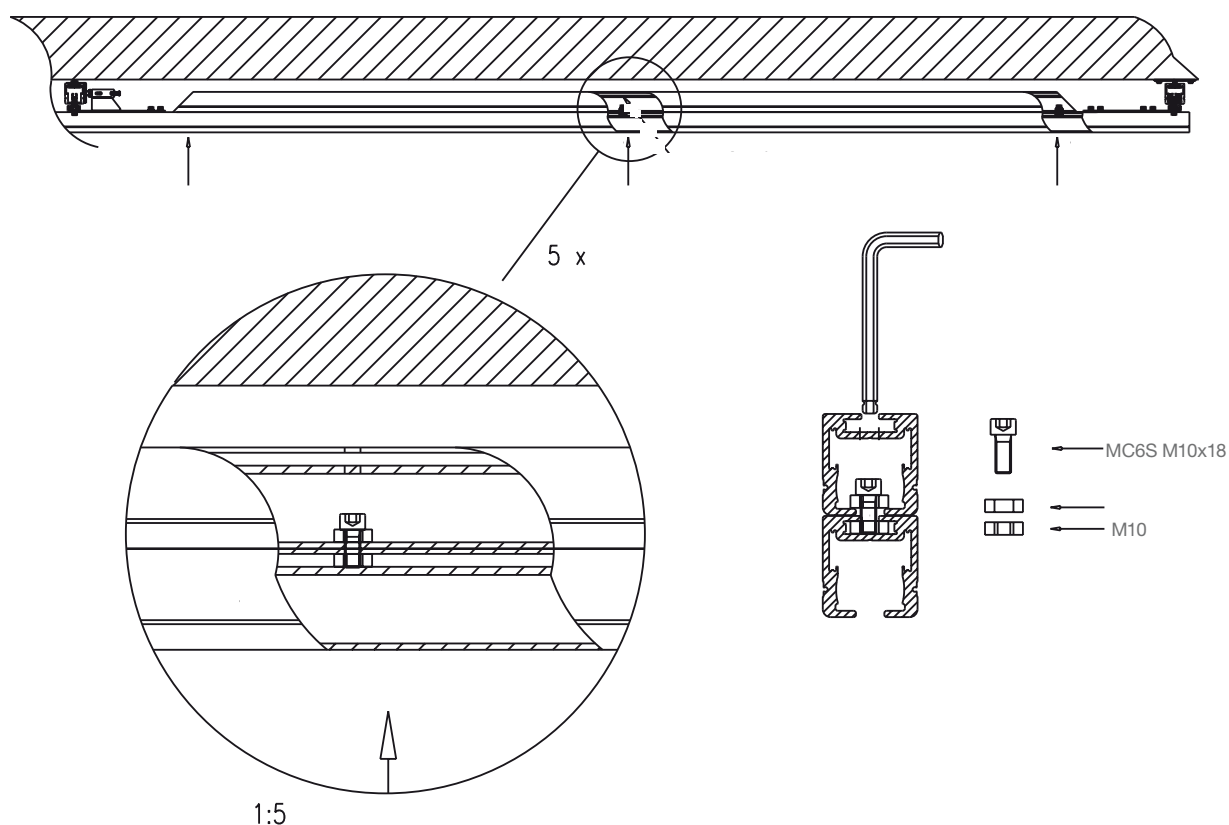


NB!

Remember lamps, ventilation holes, air gratings and the like when planning a ceiling lift system.

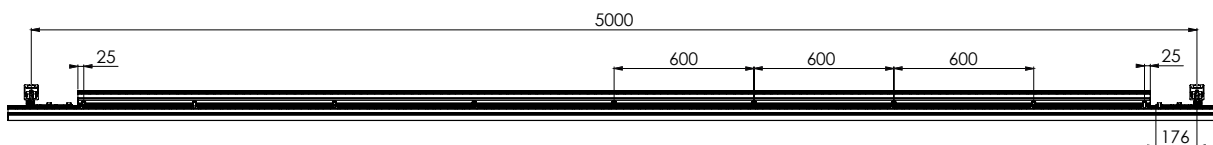
4.2: Supported cross-rails

If a rail system with full room coverage is connected to a basic rail system and if the length of the cross-rail exceeds 3000 mm, it is most appropriate to support the rail with a bolt-on rail.



The bolt on rail is fixed with screws placed as pictured above. Normally the holes are placed 600 mm from each other and the maximum length of the traverse rail is 5000 mm.

- 1) Drill 10 mm holes with 600 mm interval according to the picture.
- 2) Mount the screw, nut and washer.
- 3) Tighten with 30 Nm.



4.3: Installation of a rail system with full room coverage, example

A standard installation in a bedroom is used as an example.

- 1) Measure the room and make a small sectional sketch, also showing obliquity of the room. Small obliquities can be compensated for by the fixtures.

Wall bracket parallel, 50400121, see 9.4.

The rail can be offset up to 20 mm.

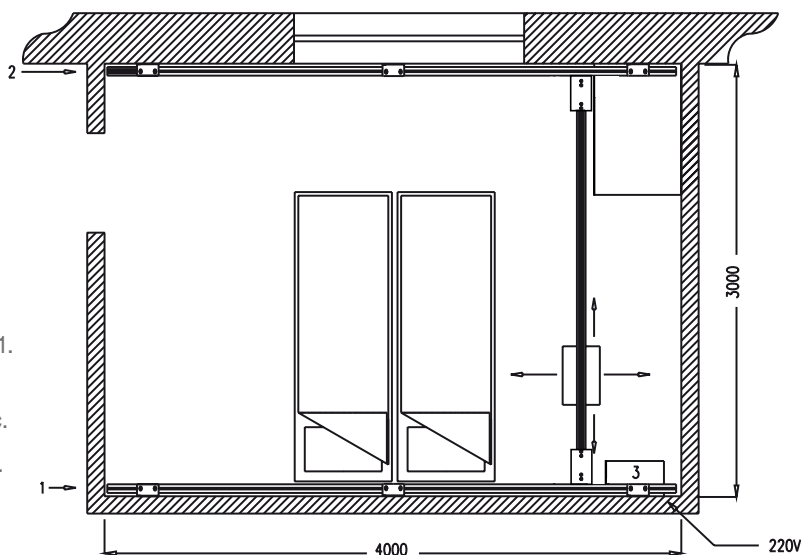
Ceiling bracket standard, 50400319, see 8.1.

Check the intended centres of suspension.

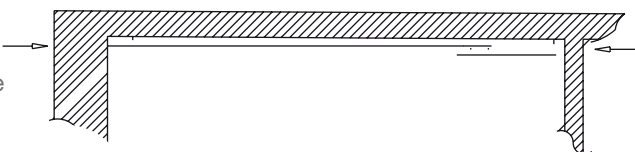
Ensure that the cross-rails clears lamps etc.

Free heights, see 4.1, examples A, B and C.

See also 1.4: Installation methods and 3.3: Installation of a straight rail, example.



- 2) Select the starting point. If the ceiling is untrue, select the lowest point as the starting position.
NB! When a rail system with full room coverage is connected to a basic rail system, the transition gate must be selected as starting point.
- 3) In this example, the charger is located in the corner (3) and the rail closest to the charger is the conducting rail. Mount the conductor rails (red plastics with alloy or steel conductor), see 1.5: Power supply and 6.3: Conducting cables.
- 4) Select orientation of the lift unit, see 5: Accessories - ceiling lift units and read the user manual.
- 5) Mount the fixtures, 50400319 or 50400121, loosely, 100-500 mm from the end of the rail. Mount the wall fixtures, eg. 50400120, at the end of rails, see 8: Ceiling fixtures, 9: Wall fixtures, 10: Accessories and installation equipment.
- 6) Hold the wall brackets against the wall.
NB! 25 mm clearance to ceiling is required for the bolts. Hold the rail level, true to spirit, and mark the bolt holes.
- 7) When using wall fixtures: Mark out the mounting for the opposite rail. Spirit level with laserlight or the like can be used, as it is very important that the cross-rail is completely level.
- 8) Drill the holes for rail 1. If wall fixtures are used, mount them to the wall.

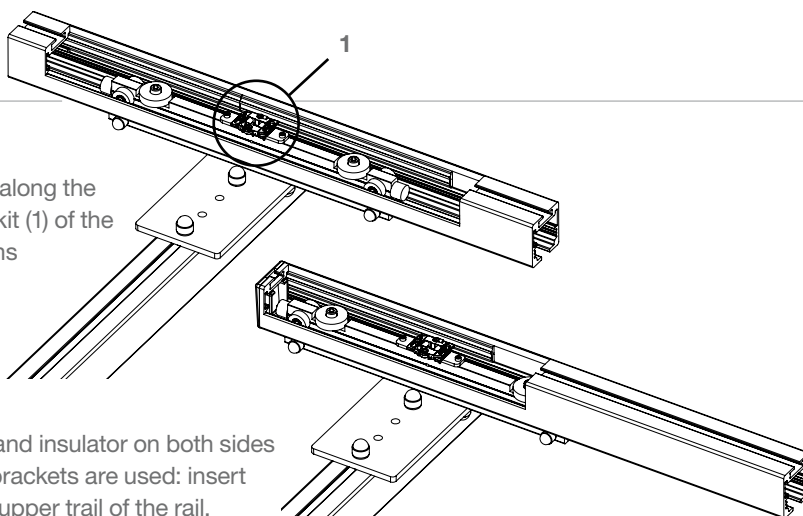


9a) In-rail charging:

Insert conductor rail and insulator along the length of the rail. On the charging kit (1) of the traverse trolley, remove the two pins reducing the stroke of the springs.

9b) End point charging:

Insert the included conductor rail and insulator on both sides and in each end of the rail. If wall brackets are used: insert coach bolts with washers into the upper trail of the rail.



10) Lift up the rail.

11) Mount the rail to the wall/ceiling.

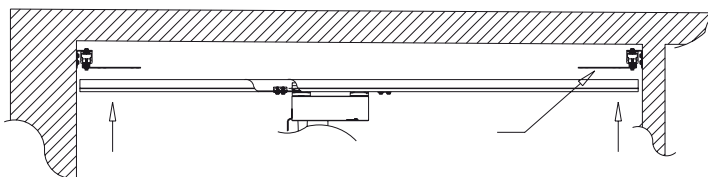
12) Insert the conductor rail into the cross-rail (if not done from factory). Mount the two short wires later to be connected to the carbon slider of the trolley. For details see 6.4: Rail systems with full room coverage.

13) If wall brackets: mount the brackets for rail 2. Mount the rail with trolley, endstops etc. Do not fasten the topbolts too much, as rail 2 is to be aligned after mounting the cross-rail. If ceiling brackets: it is important to check that the rails are completely parallel before fastening the bolts of rail 2.

14) Insert the ceiling lift unit into the cross-rail.

For details, see 5: Accessories - ceiling lift units and read the user manual.

NB! Press the carbon slider in before inserting. Mount the endstops close on each side of the lift unit to secure it while lifting the cross-rail.

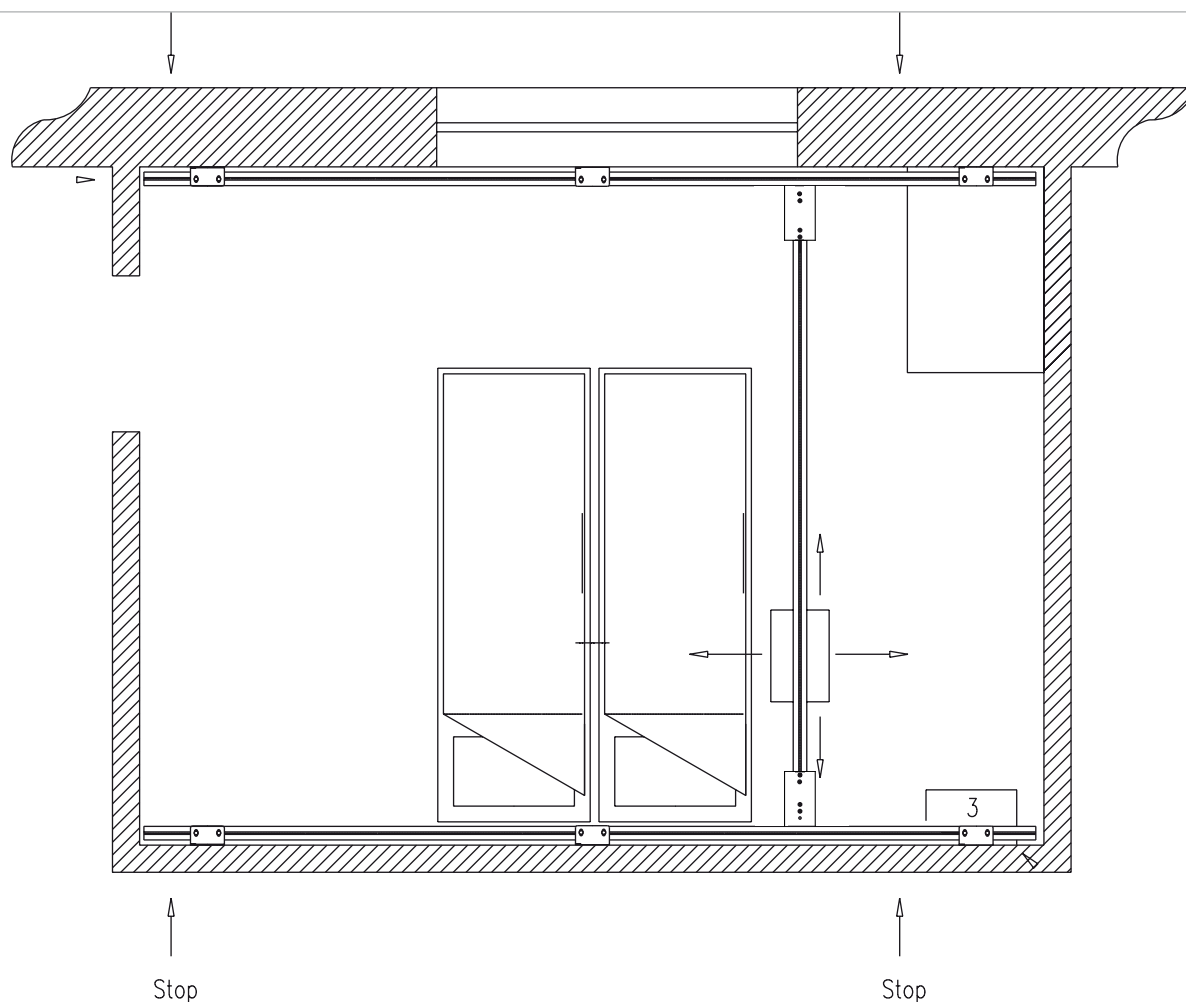


15) Mount the rail to the trolleys. One trolley must have slackened screws.

NB! While mounting the cross-rail, it is very important to support the conductor trolley (the trolley with the carbon sliders) as the carbon sliders will be damaged if the trolley is forced into an angle. When lifting up a single cross-rail, it is an advantage if the trolleys are not directly opposite.

16) Move the endstops of the fixed rails to their correct positions, normally at the rail ends. Make a test run of the cross-rail, one trolley fastened and one with slackened screws, to ensure that rail 1 and 2 are parallel. If so, fasten the bolts of rail 2.

- 17) Make additional test runs with the cross-rail. Observe the trolleys closely from the end. If the runs are not smooth and without friction, alignment of the fixed rails must be checked again.



- 18) Move the endstop of the cross-rail to the desired positions, not necessarily to the end of the rail. Limitations in the movement can be an advantage e.g. to avoid colliding with cupboards or the like.
NB! It is important that the endstops of the trolleys are mounted exactly opposite to enable the trolleys to stop simultaneously.

- 19) Tighten all nuts and bolts.

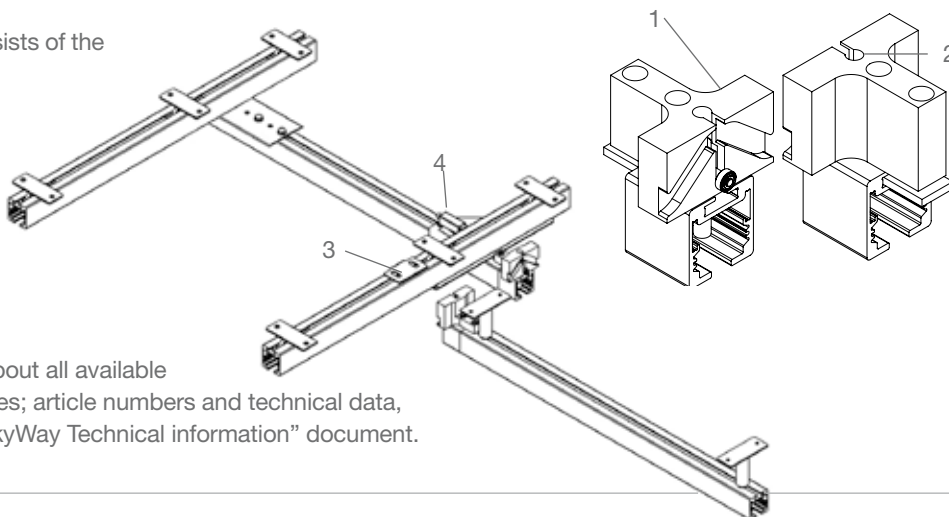
- 20) Perform a final test of all functions including weight testing, see 7: Weight testing procedure.

- 21) Instruct the user and/or attendant on how to use the system.

4.4: Transition gate, 50400226 / 50400237-238

The transition gate consists of the following parts:

- 1) Gate (big)
- 2) Gate (small)
- 3) Adjustable stop plate
- 4) Ball screw



For more information about all available MilkyWay transition gates; article numbers and technical data, please consult the "MilkyWay Technical information" document.

4.4.1: Connecting a basic rail system with an (x-y)/traverse system

A transition gate connects a rail system with full room coverage to a basic rail system allowing a ceiling lift unit to travel between the two rail systems. Two transition gates may be combined to connect two rail systems with full room coverage. The transition gate will only open when the two rails are properly aligned and locked together.

NB! When mounting systems including transitions gates, it is normally an advantage to mount the transition gate first.

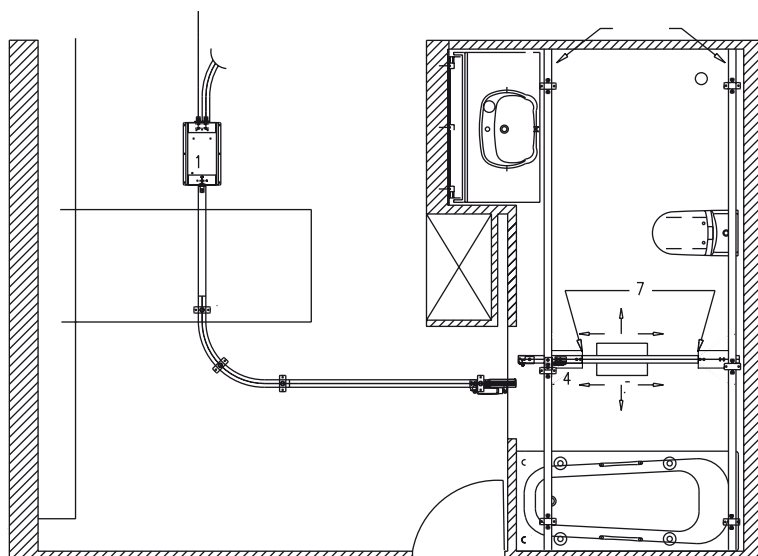
The transition gate has two blocks; one mounted to the secondary rail of the (x-y)/traverse system and the other mounted to the fixed rail.

- 1) To eliminate movement between the blocks, the fixed rail must be supported from the ceiling close to the block, maximum distance 125 mm.

- 2) To eliminate movement from the (x-y)/traverse system, the primary rail must be supported in the middle of the blocks. The overhang on the secondary rail must be as short as possible. This distance cannot be altered (except for minor adjustment) after installation.

When aligned, the ends of the rails must have less than 2 mm gap between them. This means that the fixed rail must be positioned in its

brackets appropriately. It is recommended that no more than 125 mm of rail is unsupported beyond the last bracket.



Planning: Track references

The quality and stability of the fixed rail is paramount for the smooth operation of this system. It is therefore advisable to have the second bracket from the end of the fixed rail positioned a maximum of 1000 mm from the first bracket.

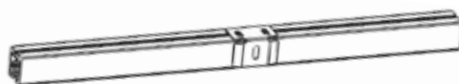
4.4.2: Installation, example

1) Install the two systems; the (x-y) system and the basic rail system.

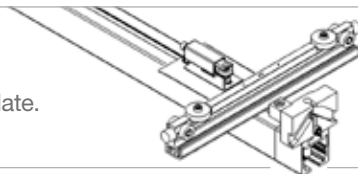


- The overhang on the secondary rail is not allowed to exceed 200 mm from the center of the parallel rail. If a longer overhang is used there is a risk for bending the rail.
- The distance between the secondary rail and the fixed rail of the basic rail system must be 1-2 mm.

a) Before mounting the primary rails on the (x-y) system; insert clasp nuts for the adjustable stop plate into the rail that faces the fixed rail of the basic rail system.

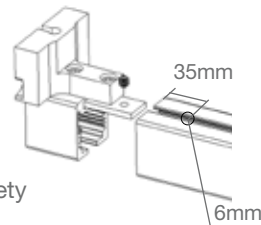


b) Mount the ball screw on one of the traverse trolleys. Place the trolley in the same primary rails as the adjustable stop plate.

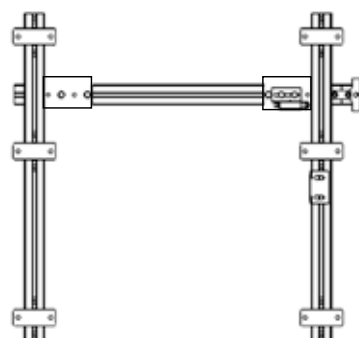


c) Before mounting the secondary rail on the (x-y) system; install the gate (small) on the end of the secondary rail. Drill a safety hole through the rail using the hole in the gate (small) as a guide. Make sure that there is a gap between the gate (small) and the secondary rail after the safety screw has been mounted.

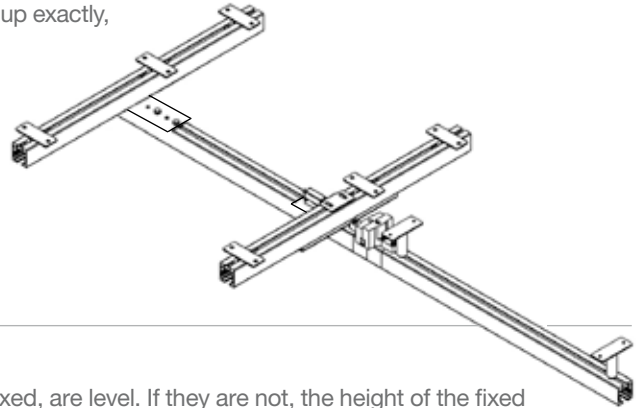
d) Before mounting the fixed rail of the basic rail system; install the gate (big) on the end of the fixed rail. Drill a safety hole through the rail using the hole in the gate (big) as a guide. Make sure that there is a gap between the gate (big) and the fixed rail after the safety screw has been mounted.



2) Mount the secondary rail onto the trolley sets in the (x-y) system.



- 3) Move the secondary rail so the ball screw clicks onto the adjustable stop plate. If the two rails; the secondary and the fixed rail of the basic rail system, do not line up exactly, slide the adjustable stop plate until they do.



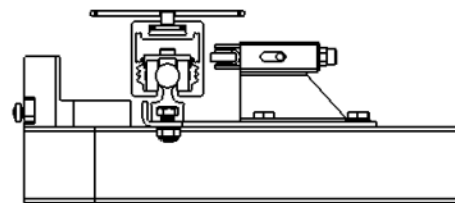
- 4) Check that the heights of the rails, secondary and fixed, are level. If they are not, the height of the fixed rail needs to be adjusted through its fixings.

- 5) Tighten the adjustable stop plate with the screws. Apply pressure on the ball screw and tighten the screws.

- 6) Setting the ball screw and adjustable stop plate:

The ball screw tension will require setting to give the appropriate amount of force to open and close the gate. The adjustable stop plate must be set exactly in line with fixed rail.

The adjustable stop plate can be accessed for adjustment from the top of the primary rail. The ball screw is accessed from the top of the traverse trolley. Loosen the screw and move the ball. Make sure the screw is properly secured after adjustment.

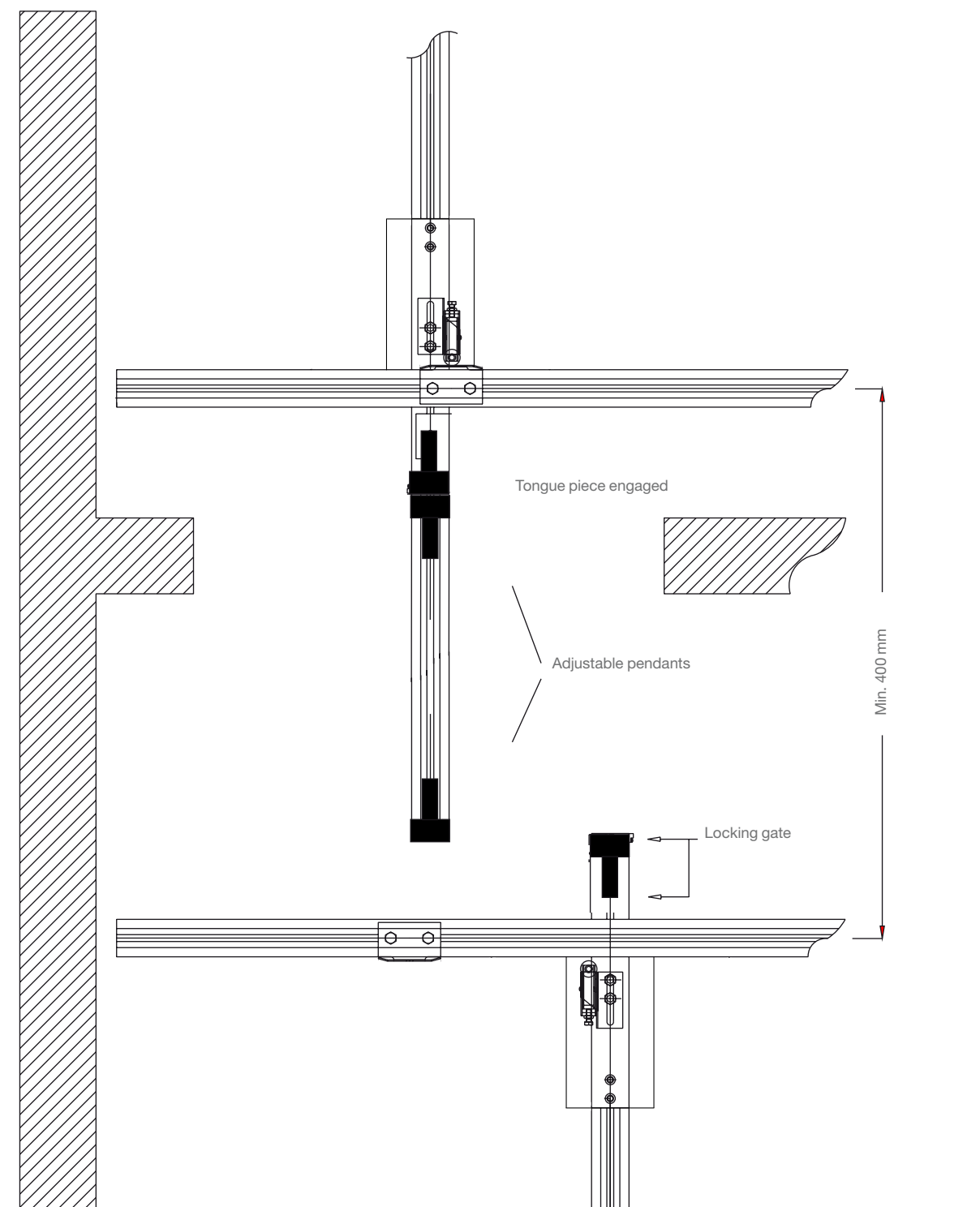


- 7) Perform a final test of all functions including weight testing, see 7: Weight testing procedure.

- 8) Instruct the user and/or attendant on how to use the system.

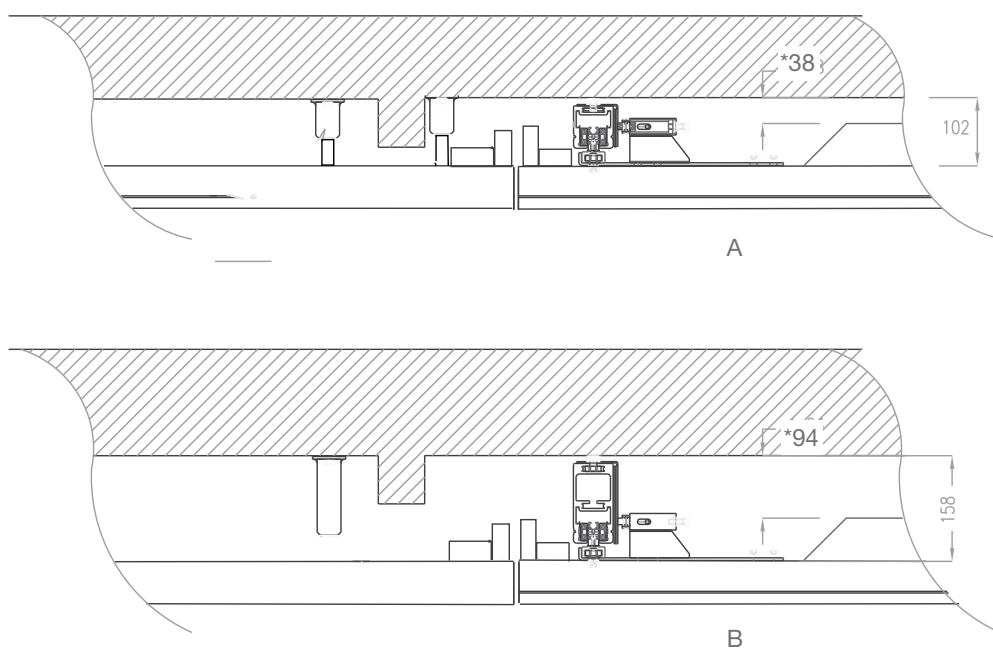
4.4.3: Transition gates between two systems with full room coverage

Transition gates between two systems with full room coverage consist of two individual transition gates mounted as shown on a short single rail. The fixed rails can normally not be wall mounted. Ceiling bracket standard 50400319 or wall brackets types 50400120 or 50400119 can be used. The transition gate is fixed to the ceiling using adjustable ceiling pendant, for example types 50400164 or 50400165.



4.4.4: Heights, systems with transition gates

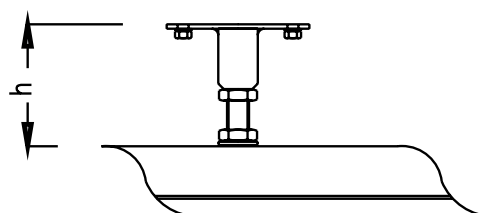
A single transition gate connected to an (x-y)/traverse system must be lowered to level with the cross-rail. This is done by means of pendants 50400164 or 50400165. 504000164 is normally used when the fixed rail is Rail 64 (A) and 50400165 is normally used when the fixed rail is Rail 120 or Rail 160 (B).



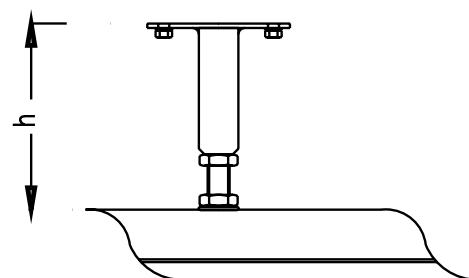
* Free height over the cross-rail, if supported with a bolt-on rail, see 4.2: Supported cross-rails.

In both examples, the fixed rail is fixed to the ceiling by means of a ceiling bracket, 50400319, not shown here. Wall brackets cannot be used to fix this rail near the transition gate, as a minimum distance of 125 mm is required to the wall (A).

The pendants (50400164 or 50400165) are adjustable, see ranges below.



h min.: 115 mm
h norm.: 122 mm
h max.: 135 mm

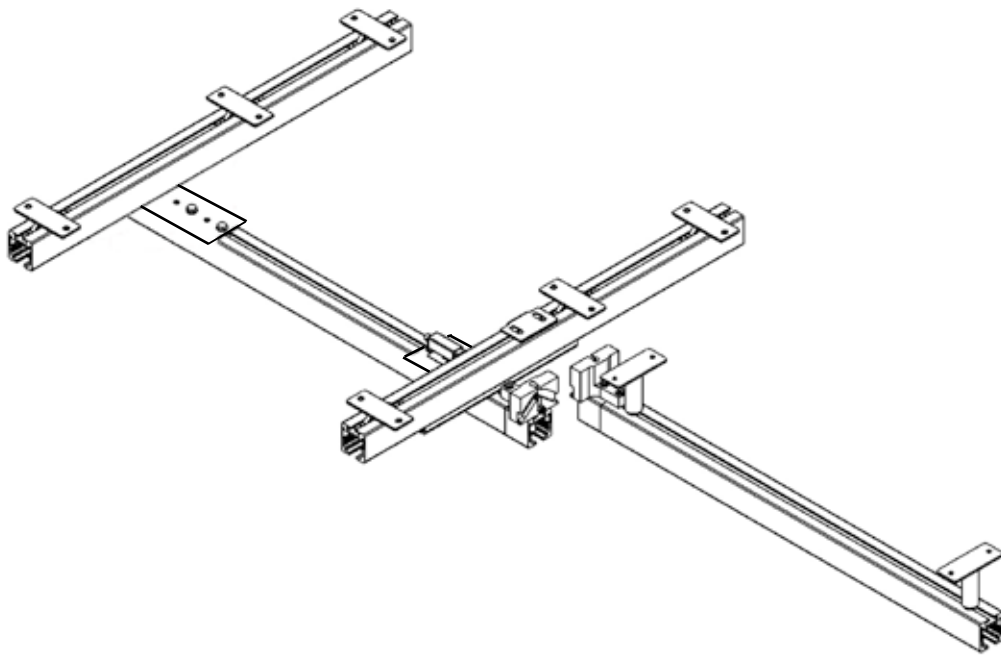


h min.: 160 mm
h norm.: 168 mm
h max.: 180 mm

4.4.5: Testing of safety devices

After installation, a safety test must be performed before the installation test is done.

- 1) Check that the locking part in the transition gate can easily move up and down.
- 2) Without load, move the secondary rail both ways through the transition gate.
- 3) With maximum load, move the secondary rail both ways through the transition gate.
- 4) Ensure that the lift unit can only move from the secondary rail when the connection is safe.



5: Accessories - Ceiling lift units

MilkyWay is a complete rail system which, together with an optional choice of ceiling lift unit and the appropriate lifting accessories, can provide a stationary lifting solution adapted for any setting, room and lifting requirements. Handicare's SystemRoMedic™ range includes a wide selection of ceiling lift units for all lifting situations and user needs.

5.1: Ceiling lift units

RiseBasic

RiseBasic is modern stationary ceiling lift unit featuring many functions that maximize comfort and security during lifting, both for the user and for the caregiver. RiseBasic is available in two models; RiseBasic300M, with a lifting capacity of 138 kg/300 lbs, and RiseBasic440M, with a lifting capacity of 200 kg/440 lbs. Both models are manually transferred along the rail and can be used on all types of rails, both permanent rail systems and portable, freestanding lift stands. RiseBasic is supplied with hand control and charger.

The sling bar is ordered separately.



RiseAtlas

RiseAtlas is a safe and easy-to-use stationary ceiling lift unit available in several models and variants with different lifting capacity and with or without built-in transfer motor and other features and functionalities. RiseAtlas450 has a lifting capacity of 205 kg/450 lbs while RiseAtlas625 can lift users weighing up to 285 kg/625 lbs. Both are available with manual or with powered transfer in the rail. All models and variants of RiseAtlas can be used on all types of rails, both on permanently installed rail systems and on portable, freestanding lift stands. RiseAtlas is supplied with hand control and charger. The sling bar is ordered separately.



RisePorto300/450

RisePorto is one of the smallest and lightest portable ceiling lift units available on the market. At the same time, it is both strong and safe. The design and features of RisePorto make it the perfect assistive device for home care, institutional care and other forms of residential care, but

RisePorto actually functions equally well in all settings. In small rooms, where space is limited, RisePorto is a perfect solution.

RisePorto provides secure, comfortable and individually adapted lifting of users weighing up to 140 kg/300 lbs (RisePorto300) and 205 kg/450 lbs (RisePorto450) respectively. RisePorto is supplied with hand control and charger. The trolley is ordered separately.



Reda

Reda is a ceiling lift unit that combines new design with well-thought-out and proven construction and functionality. Reda can be used on all types of rails, in all settings and in all types of rooms. It is very easy to manoeuvre and its low-noise smooth operation and many safety features provide for maximum comfort and security. Reda has a lifting capacity of 230 kg/505 lbs and is supplied complete with sling bar and hand control.



5.2: Mounting the ceiling lift unit in the rail

Handicare's SystemRoMedic™ range includes a wide selection of ceiling lift units available in several models and variants with different lifting capacity, features and functionalities. MilkyWay rail systems can be used with all Handicare ceiling lift units.

Each ceiling lift unit is supplied with a user manual covering, among other things, "Mounting":

Mounting

- Unpacking and check
- Transport and storage
- Installing the lift unit
- Assembly of charger unit
- Using QuickTrolleySystem
- Different rail systems
- Final inspection

The exact content of each user manual is depending on the ceiling lift model.



Always read the manual

Always read the manual before mounting the ceiling lift unit in the rail.

Always read the manuals for all assistive devices used during a transfer.
Keep the manuals where they are accessible to all users of the product.



The user/attendant must be a trained professional with thorough understanding of the equipment and lifting of disabled persons.



Under no circumstances may the lift unit be used by persons who have not received instructions on the operation of the lift unit.

6: Connecting to power supply

Power supply

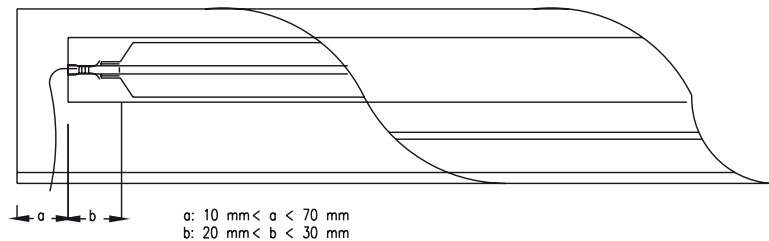
MilkyWay rail systems can be powered in many different ways, see 1.5: Power supply.

6.1: End point charging/ in-rail charging

One type of charger is available. Use the charger supplied with the lift unit and read the user manual.

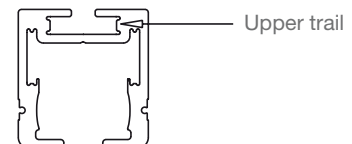
6.2: Connecting the conductor rails

The terminals must be fitted to the end of the conductor rails as shown in the figure. Cut the conductor to fit the terminal. Distances (a) and (b) must be observed.



6.3: Conducting cables

In systems including switches, the cables for the cross-rail must be conducted along the rail. It can be concealed in the upper trail of the rail.



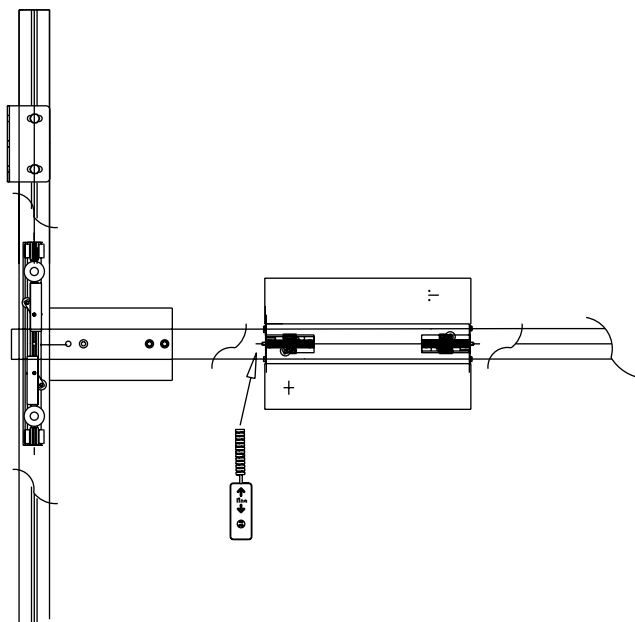
6.4: Rail systems with full room coverage

6.4.1: In-rail charging

A standard (x-y)/traverse system is shown to the right.

Polarity according to the figure.

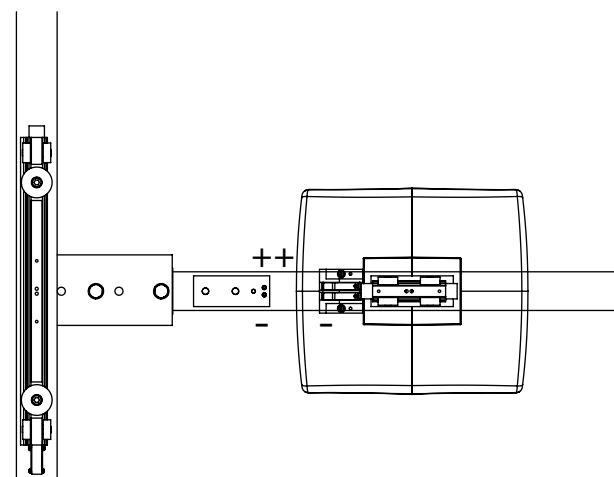
The cables are guided through the hole (A), through the back rail and down to cableeye (B), see 6.2: Connecting the conductor rails.



6.4.2: End point charging

A standard (x-y)/traverse system is shown to the right.

Polarity according to the figure.



6.4.3: Connecting to charger point

The plug-in must be fitted to the contact for the end point station at the end of the rails.

6.5: Turntable, electrical

6.5.1: Internal wiring diagram

The print board of the turntable features built-in rectification. Therefore, polarity is not an issue for the power supply of the board.

This chapter describes, step by step, how to adjust Turntable, electrical, 4-point (50400233) from its standard execution into the execution which functions with the following lift units:

- 50100039 RiseBasic300M
- 50100040 RiseBasic440M
- 50100024 Reda, in-rail charging for Turntable
- 50100027 Reda, end-point charging for Turntable

- 1) Start by removing the self tapping screw (T10) which holds the ring cable shoe (incl. cable) and the sheet metal plate in place (fig. 1). Leave the cable with the ring cable shoe hanging. Please note that the cable is not visible in the illustrations in this chapter.

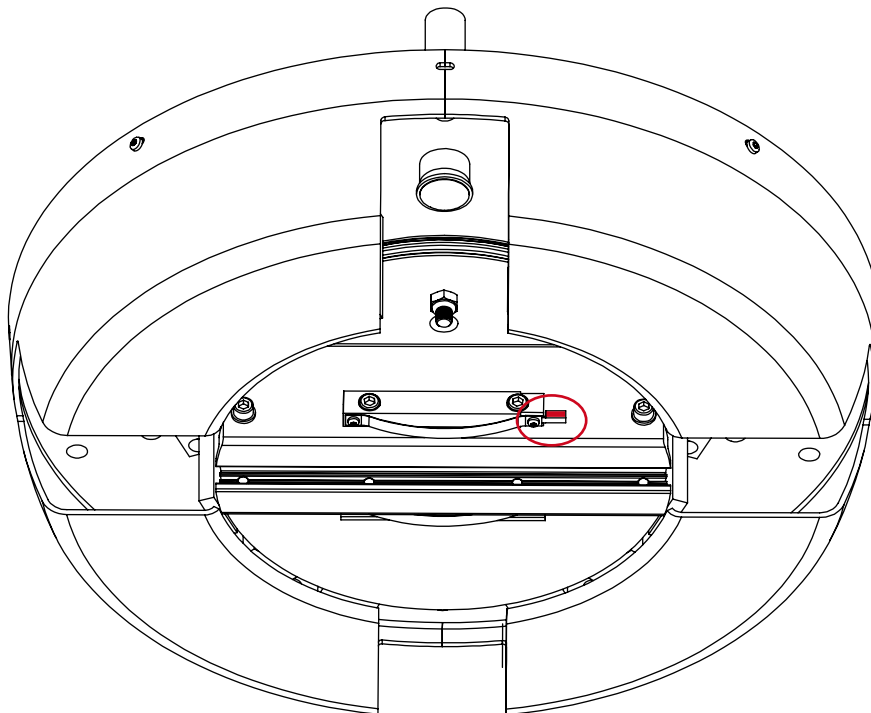


figure 1

- 2) Remove both hex bolts (HK5) which attach the plastic part to the rail (fig. 2). Keep the bolts.

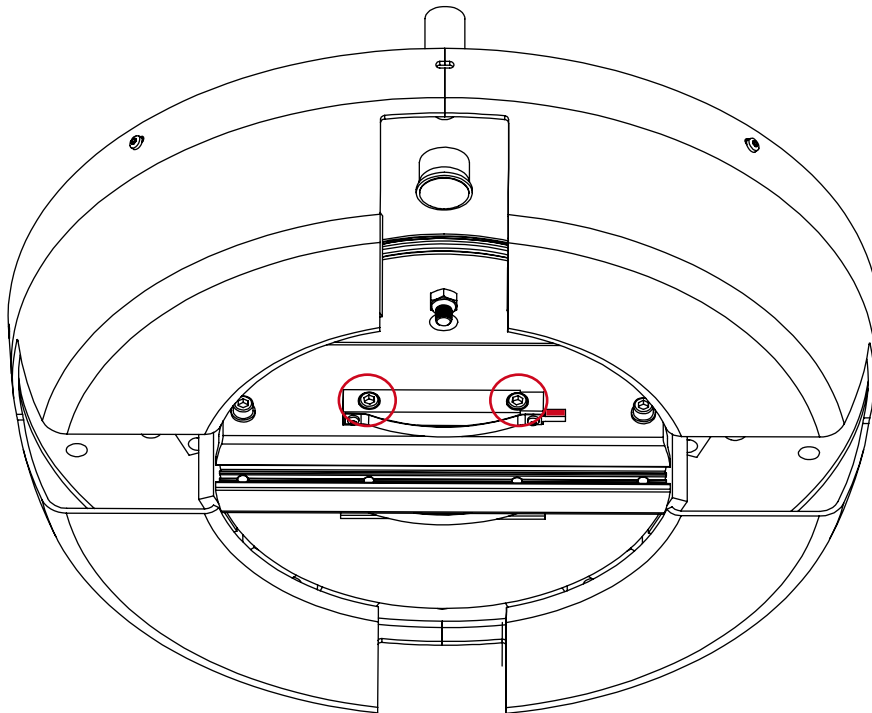


figure 2

- 3) Remove the plastic piece, incl. sheet metal plate (fig. 3).

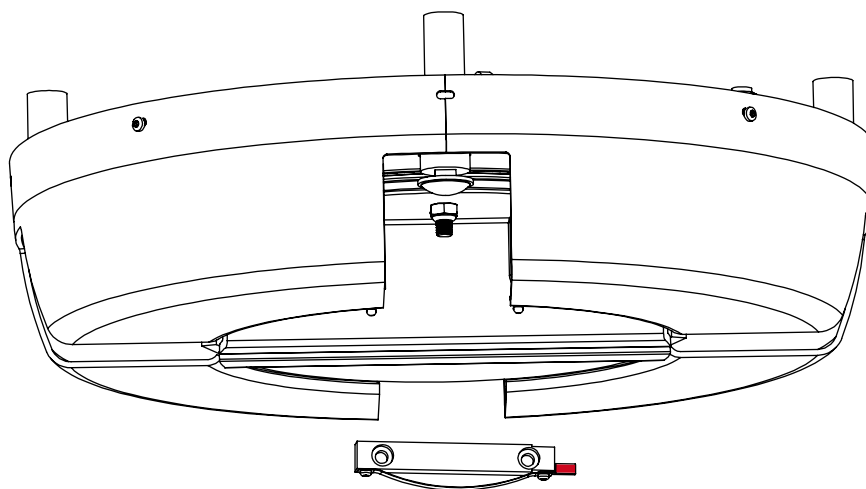


figure 3

- 4) On the plastic piece that will be attached, remove the self tapping screw (T10) which holds the sheet metal plate on the side without the thin plastic frame and use it to attach the ring cable shoe (incl. cable) and the sheet metal plate that was released in *step 1*, as seen in fig. 4.

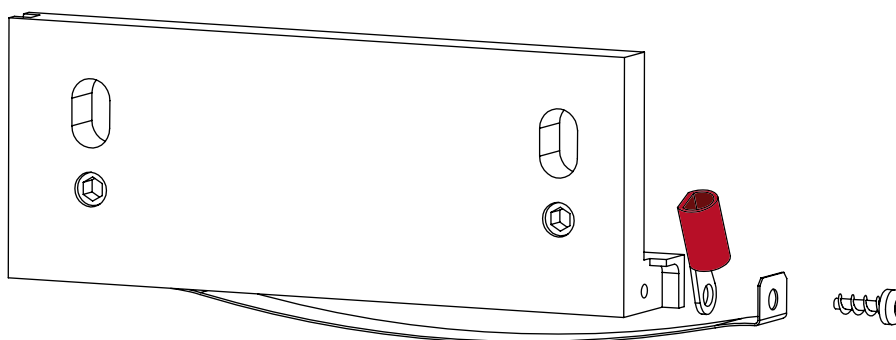


figure 4

- 5) Attach the plastic part using the bolts (HK5) and holes from *step 2*, making sure that the cable goes smoothly through the slot between the cover plate and the plastic piece.

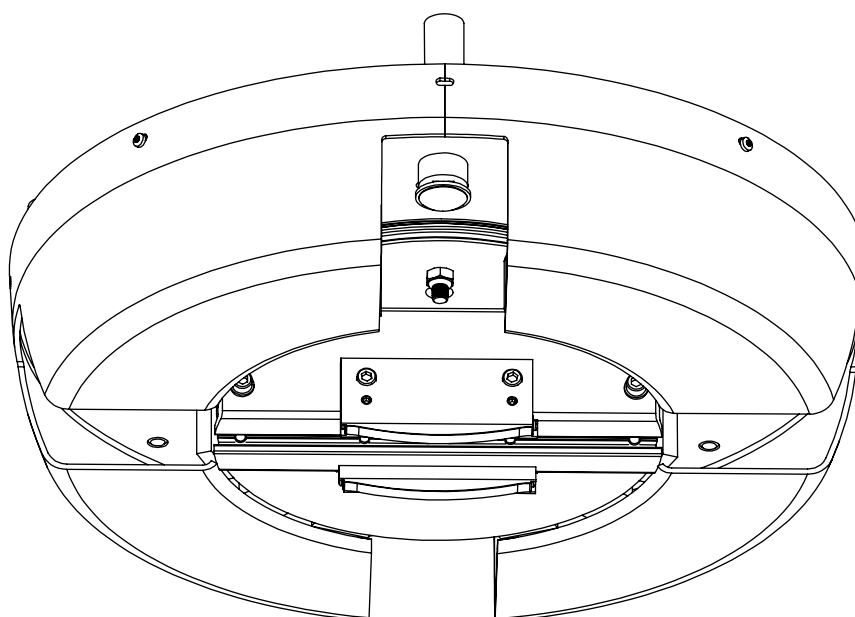


figure 5

- 5) Follow steps 1-5 for charging the plastic piece on the other side of the rail to complete the adjustment, making the turntable ready to use.

7: Weight testing procedure

Weight testing ensures adequate attachment of ceiling lift system to the support structure and performance of all operating parts. By utilizing weight equal to or greater than the maximum capacity of the lift motor, testing replicates maximum stress to the system under normal operating conditions.

The certified installer is responsible for weight testing each system immediately after installation is completed.

Procedure:

All SystemRoMedic™ ceiling lift systems are required to be weight tested immediately after the completion of installation. The use of ceiling lift system to lift and/or transfer of any person is strictly prohibited prior to certification by weight testing.

1. The ceiling lift system must be completely installed prior to weight testing.
2. Ensure that all attachment anchors and support system attachment hardware has been tightened to specified torque rating. Inspect all rail mounting hardware and traverse carriers for loose bolts.
3. The system is to be weight tested with a minimum of at least the rated lift motor maximum capacity. (i.e. RiseAtlas max. cap. is 285 kg / 625 lbs - minimum weight utilized is 285 kg / 625 lbs)
4. The motor installed in the system is utilized to lift the weight.
5. The weight must be clearly identified. The use of a scale between lift motor strap and sling bar attachment is strongly suggested.
6. The weight must be lifted so as not to come in contact with the floor at any point during the system test. A minimum of 50 mm clearance is suggested.
7. For systems utilizing ceiling mounted supports, the weight must be placed directly beneath each support for a minimum of 5 minutes to ensure all attachment anchorage is tested. For systems utilizing wall mounted supports, the weight must be placed as close as possible to the attachment point. If an obstruction hinders movement of the weight (i.e. toilet, etc.), the weight must be placed as close as possible to attachment point.
8. If an issue is discovered during the weight testing such as incorrect or loose attachments, the weight testing is to cease, issue is to be corrected, and the system is to be completely retested.
9. The weight test form is to be signed by the inspector as a proof of completed inspection. The customer representative who witnesses the inspection is requested to sign the weight test form as well as proof of acceptance of the system.

By signing this form I acknowledge that I have read this form and I am fully aware of Handicare's policy regarding weight testing of ceiling lift systems.

Signature

Date

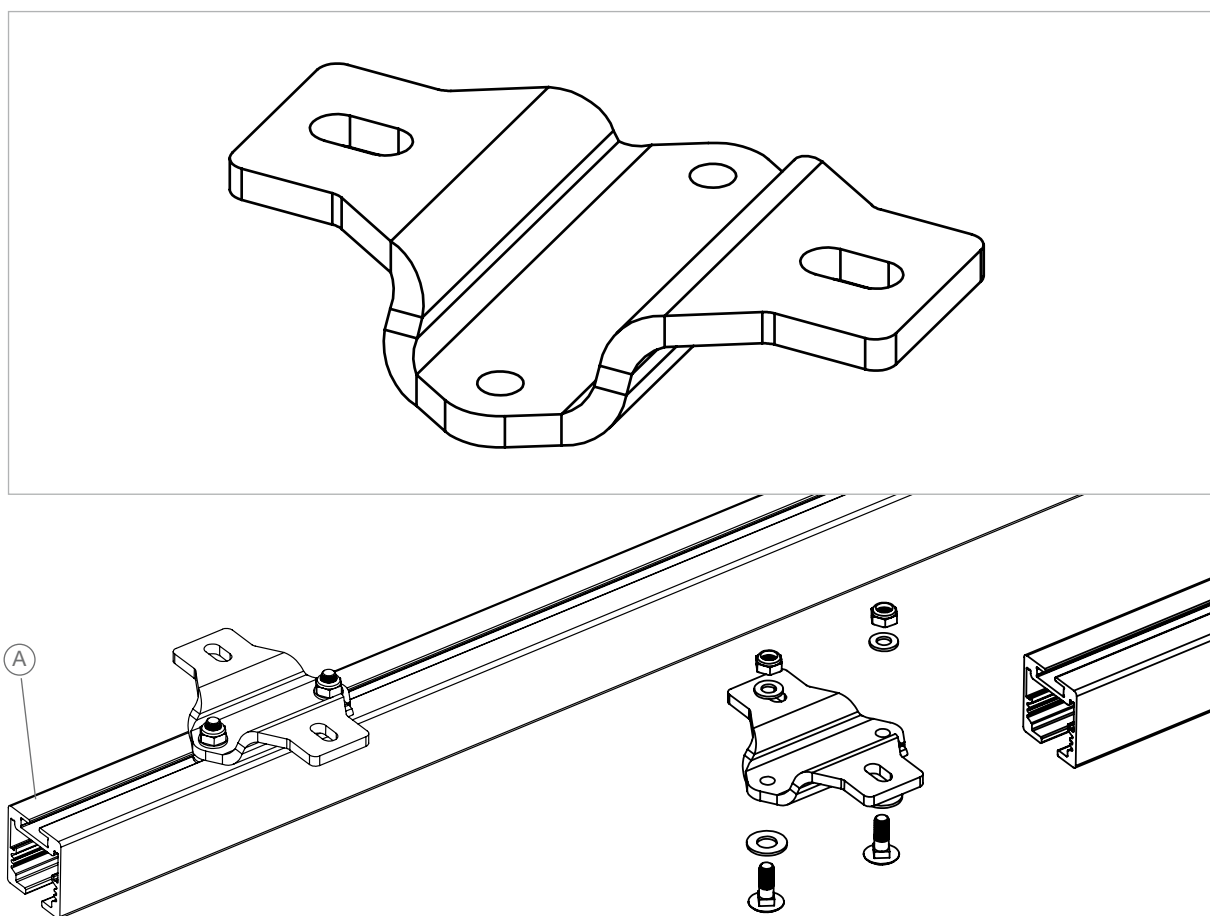
Print

8: Ceiling fixtures - brackets and pendants

8.1: Ceiling bracket standard, 50400319

Application: Basic rail systems and rail systems with full room coverage.

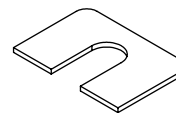
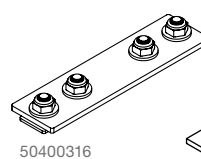
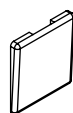
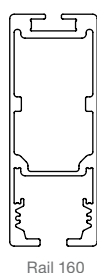
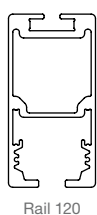
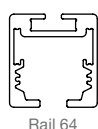
Recommended: First mark out a line for the holes using laser technique or chalk line. Measure all fixings at the same time. It is important that the drilled holes are on a straight line.



- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

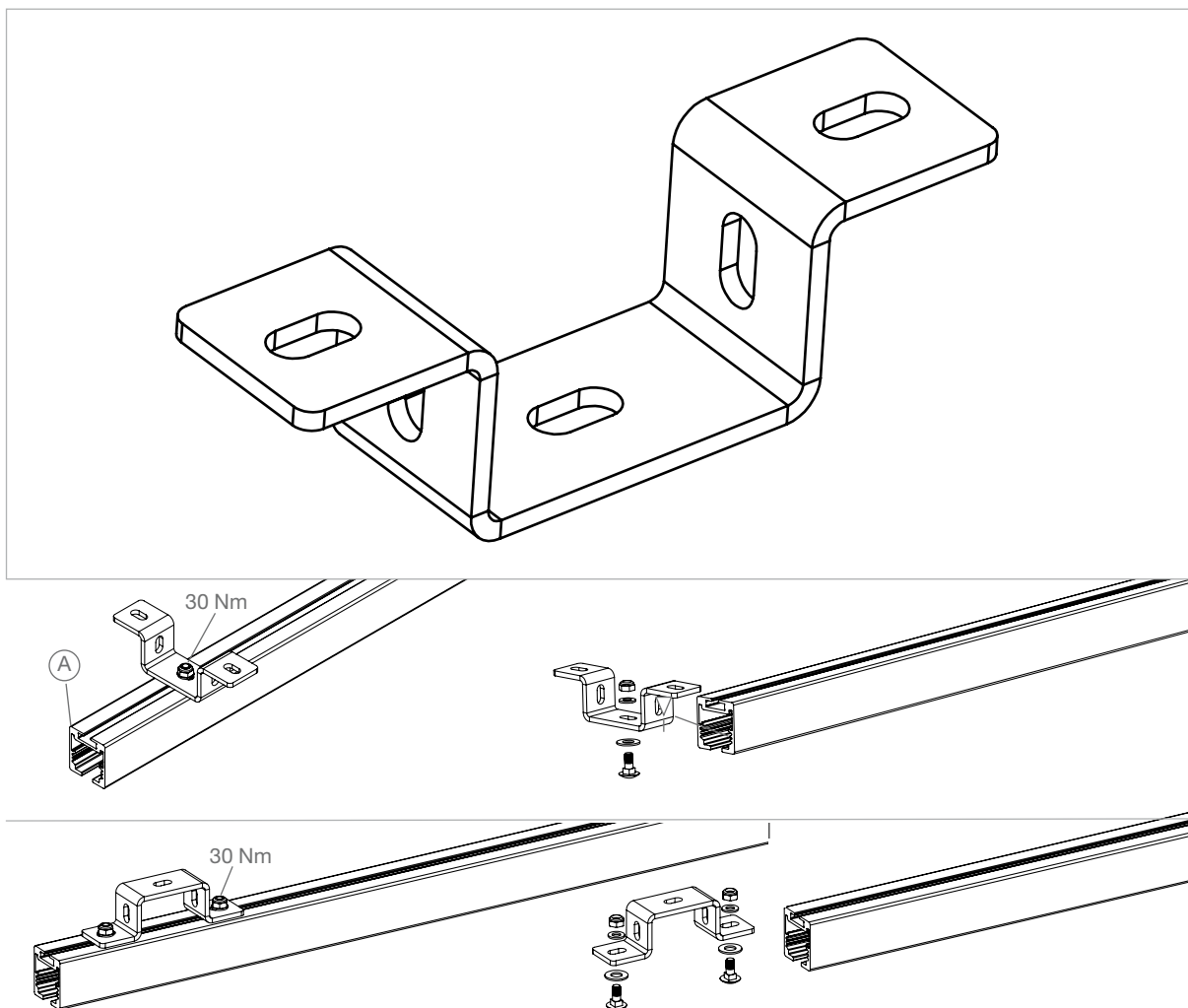
For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



8.2: Universal bracket 55, 50400039

Application: Basic rail systems and rail systems with full room coverage.

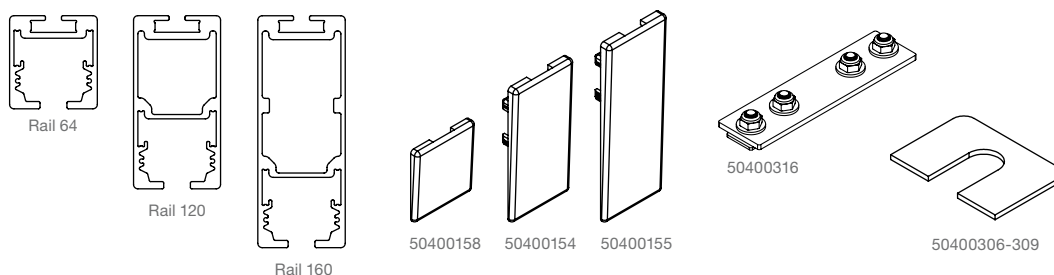
The name universal is a lead to how this bracket can be used. There are many different options for installation of this bracket. It can be installed as a ceiling bracket or a pendant. The description below shows the use under normal conditions.



- A For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

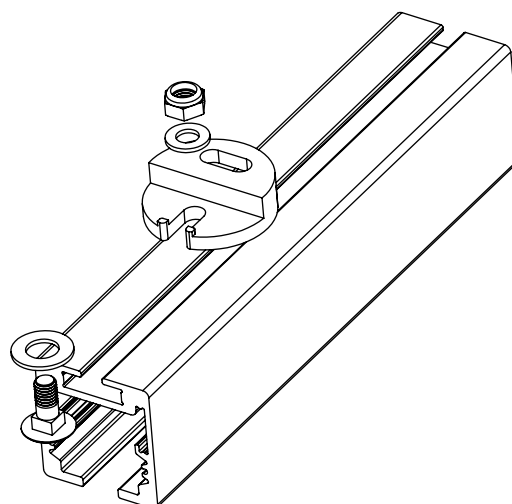
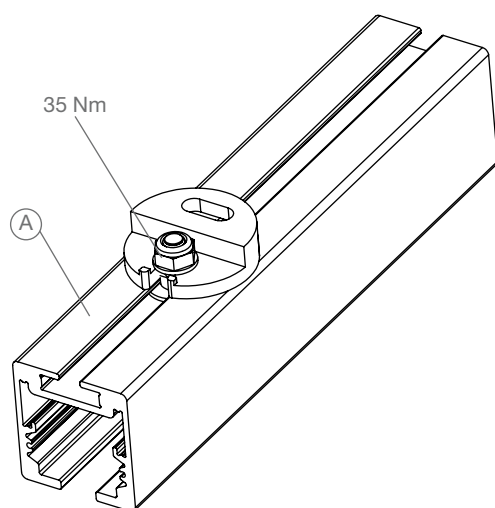
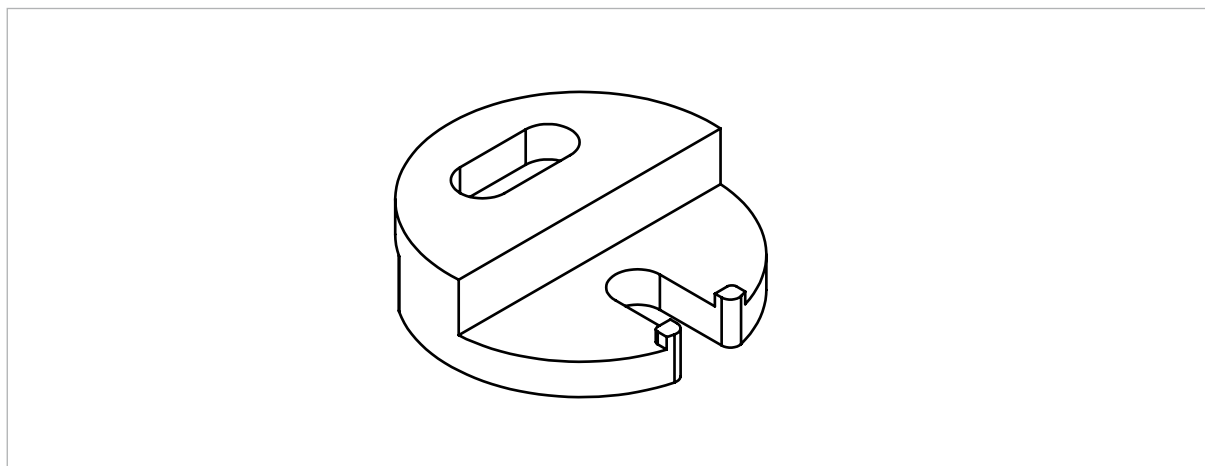
For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



8.3: Ceiling bracket quick, 50400236

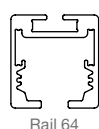
Application: Basic rail systems and rail systems with full room coverage.



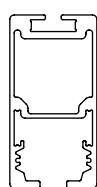
- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

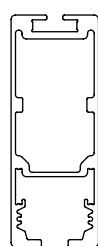
For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



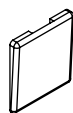
Rail 64



Rail 120



Rail 160



50400158



50400154



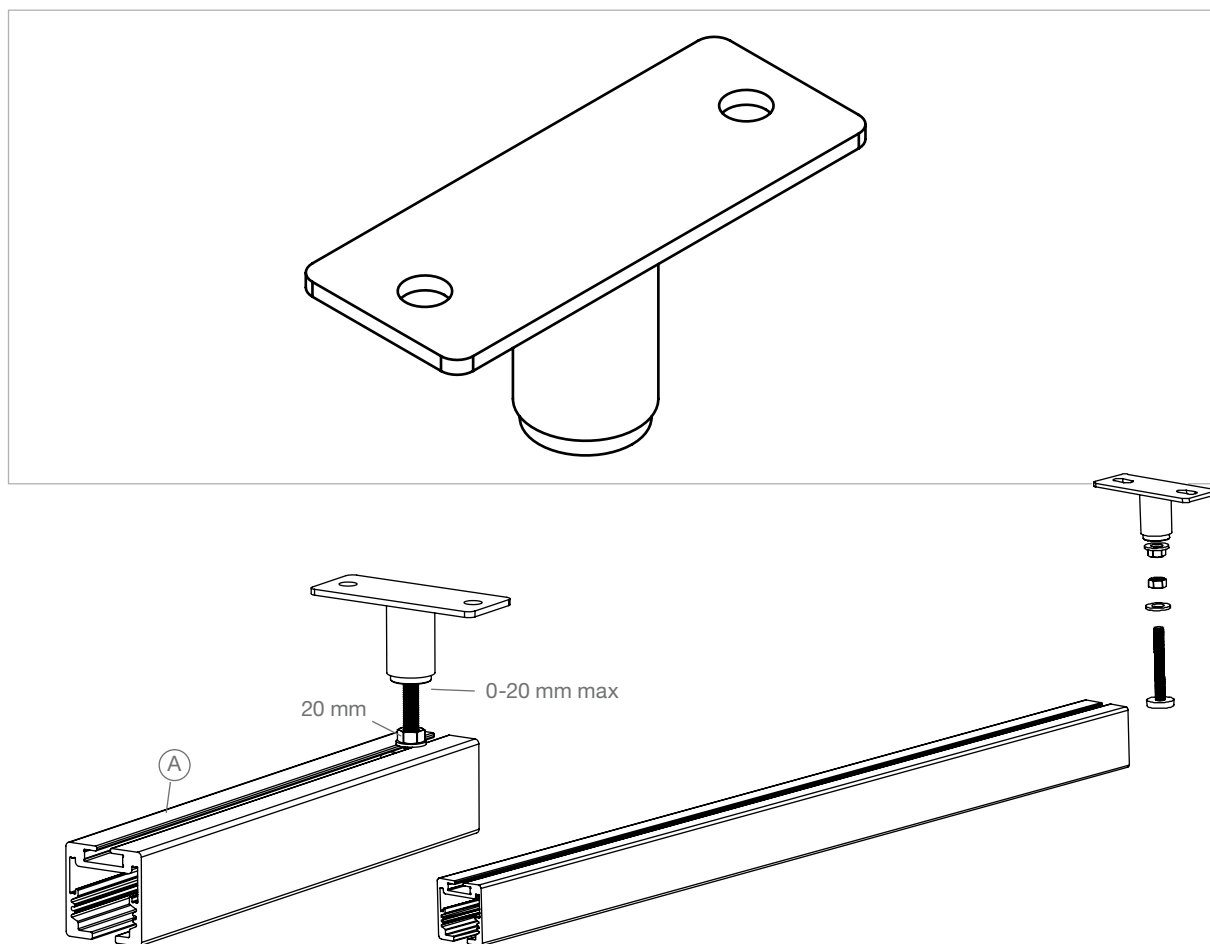
50400155



50400310-312

8.4: Pendant F, 50400163-165

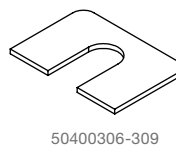
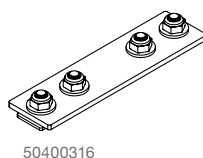
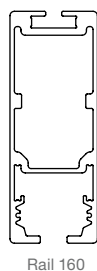
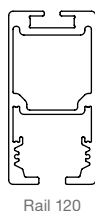
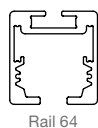
Application: Normally for basic rail systems connected to rail systems with full room coverage. The pendant is mainly used in rooms with a ceiling slightly higher than normal to bring the system down to a normal height.



- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

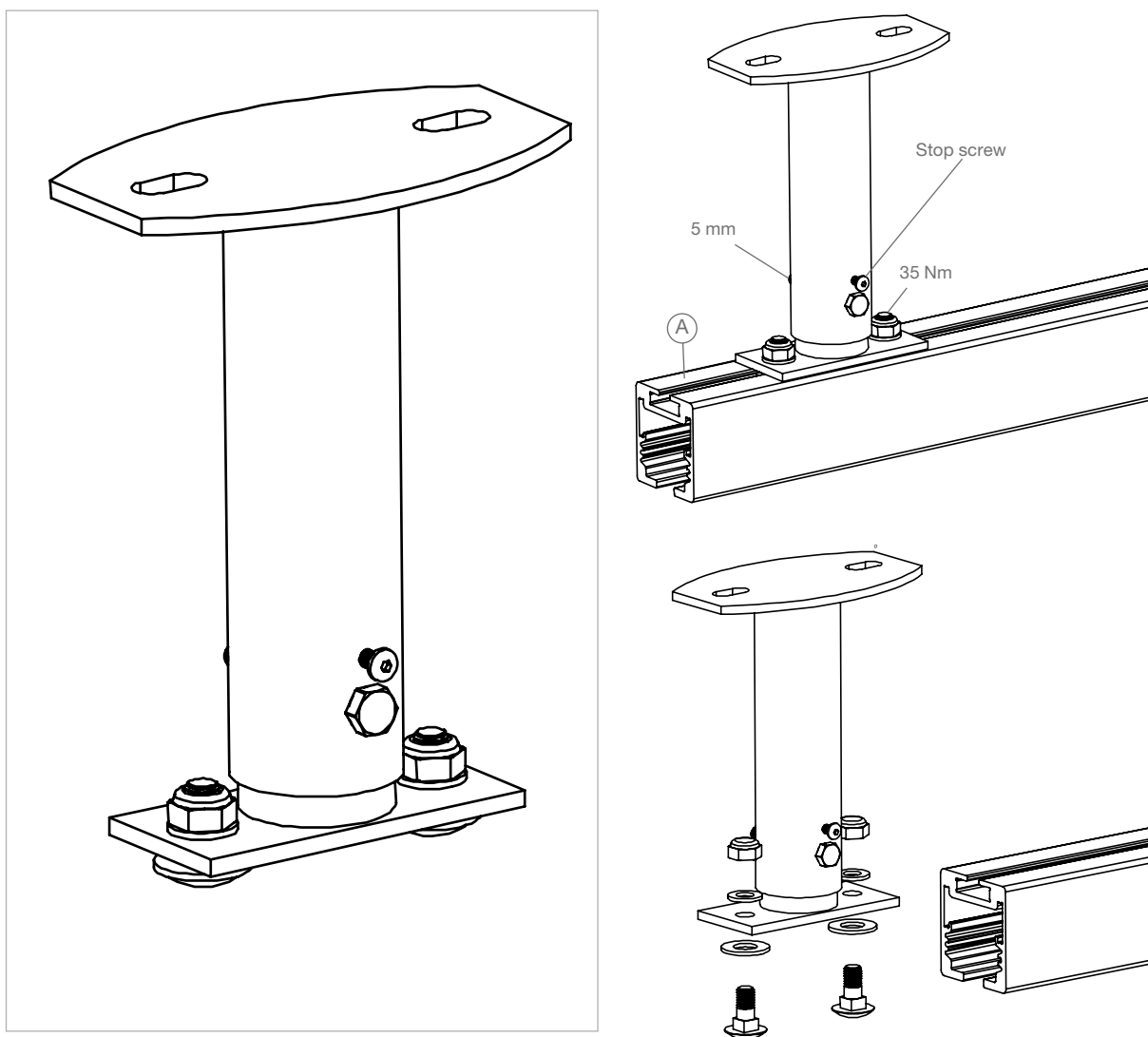
For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



8.5: Pendant R, 50400078-082

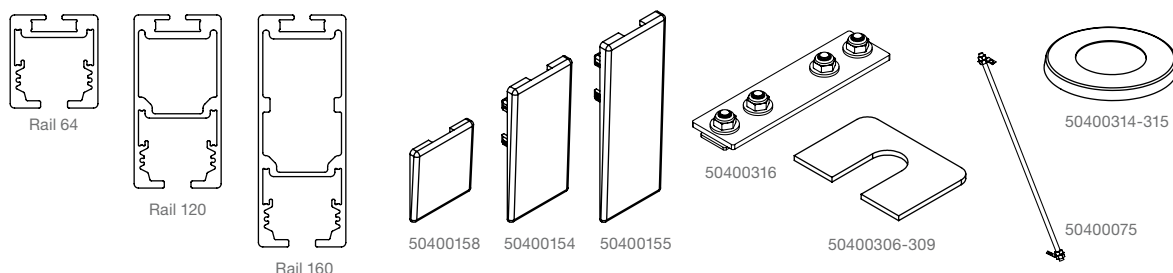
Application: Normally for basic rail systems connected to rail systems with full room coverage. The pendant is mainly used in rooms with high ceilings to bring the system down to a normal height. Used when the pendant is visible. Temporary stop screw may only be used for securing the pendant in the desired position while drilling the hole for the permanent fixing feature.



(A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

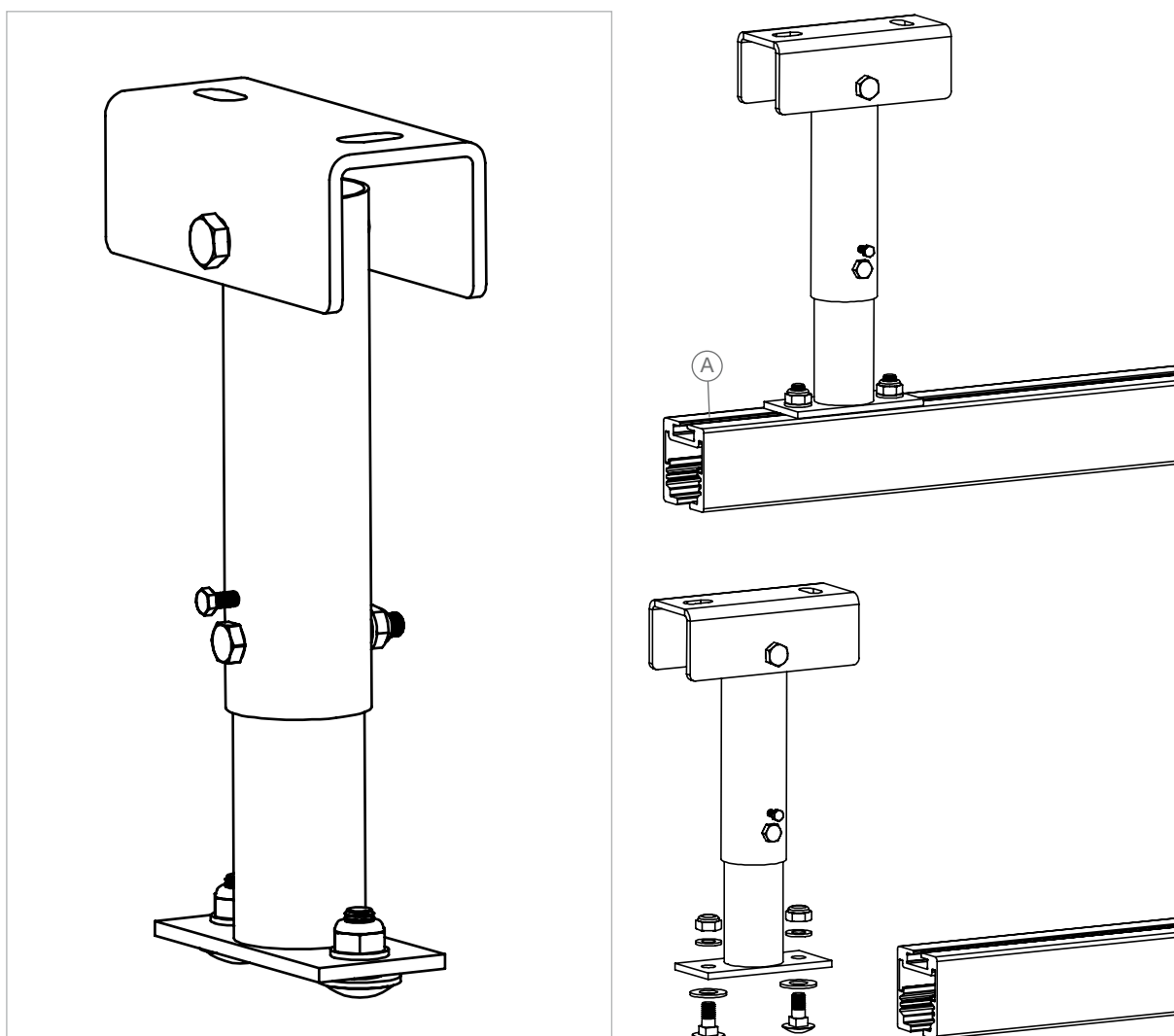
For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



8.6: Pendant angled, 50400301-305

Application: Normally for basic rail systems connected to rail systems with full room coverage. The pendant is mainly used in rooms with angled ceilings or for installing rails to angled joists.

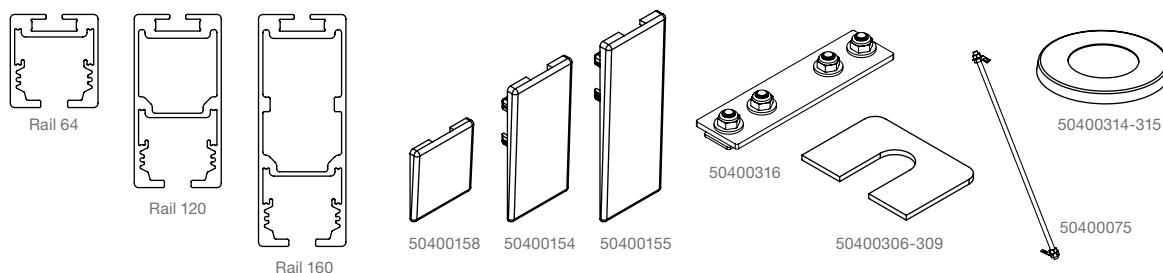
Temporary stop screw may only be used for securing the pendant in the desired position while drilling the hole for the permanent screw.



(A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

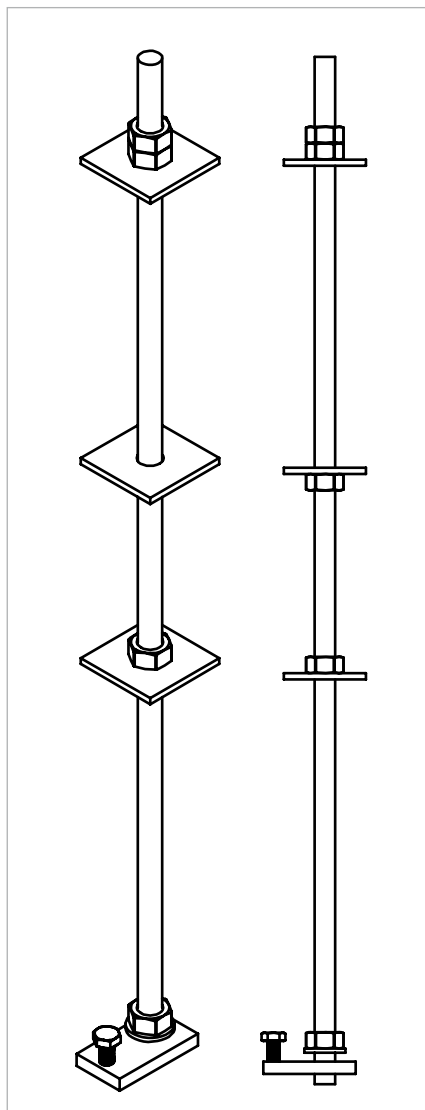
For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



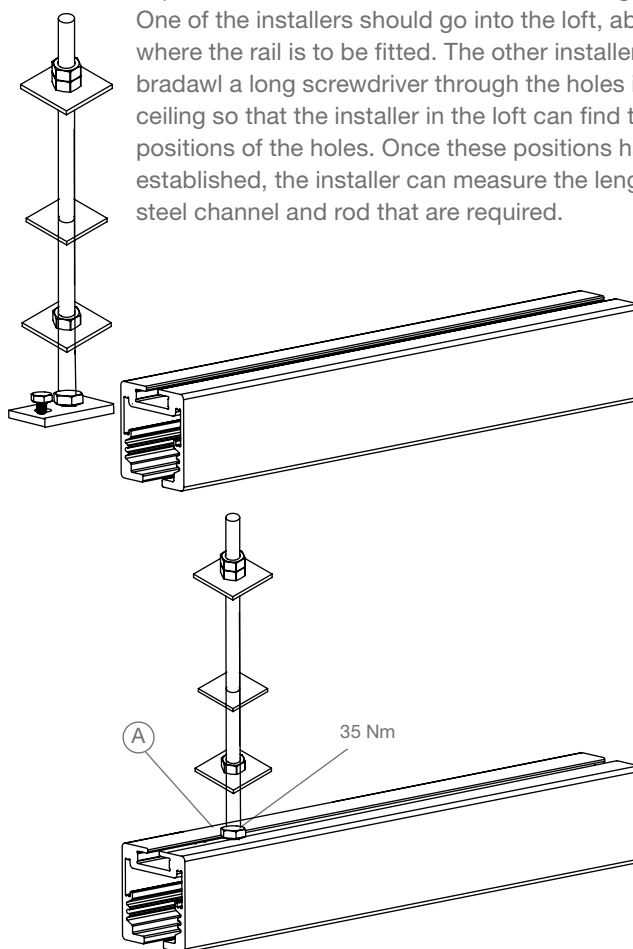
8.7: Threaded rod support kit, 50400192

Application: Normally for basic rail systems connected to rail systems with full room coverage. This fixture is mainly used in rooms with high ceilings to bring the system down to a normal height. The product is mounted through a steel/wood beam resting on joists and is concealed by the inner ceiling, see 1.4: Installation methods.



This process usually requires two installers,

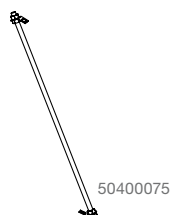
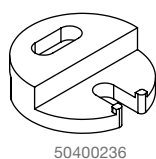
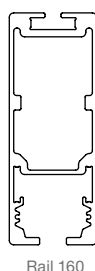
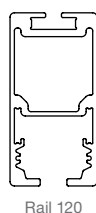
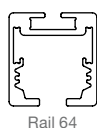
but it can be carried out by a single installer if necessary. First mark out a line for the holes using laser technique or chalk line. Measure all fixings at the same time. It is important that the drilled holes are on a straight line. One of the installers should go into the loft, above where the rail is to be fitted. The other installer should bradawl a long screwdriver through the holes in the ceiling so that the installer in the loft can find the positions of the holes. Once these positions have been established, the installer can measure the lengths of steel channel and rod that are required.



- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



8.8: Side support kit, 50400075

Application: Side support for Pendant R in basic rail systems and/or rail systems with full room coverage.

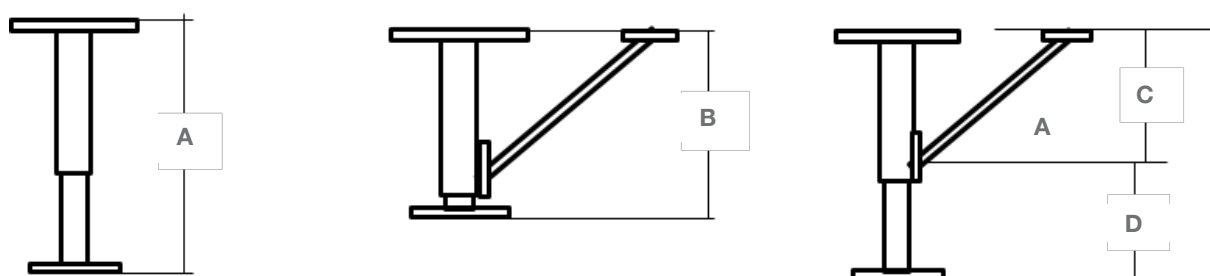
Side supports should be mounted to the first and the last pendant and, in between those, to every third pendant positioned perpendicular to the rail in a basic rail system and to both primary rails in a rail system with full room coverage. One side support should be mounted to the first or last pendant positioned parallel to the rail in a basic rail system and to the primary rails in a rail system with full room coverage.

A: Length of pendant < 500 mm: No need for side supports.

B: Length of pendant > 500: Side supports are required.

C: Length of pendant > 500: Side supports are required.

D: Length of inner pendant to side support < 500 mm, (31.6 > 59.0 inch.): No need for side supports.



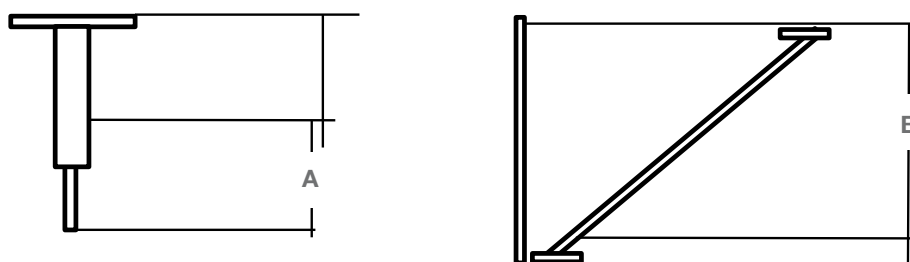
Application: Side support for threaded rod mounted into Pendant F or ceiling in basic rail systems and/or rail systems with full room coverage.

Side supports should be mounted to the first and the last threaded rod and, in between those to every third rod positioned perpendicular to the rail in a basic rail system and to both primary rails in a rail system with full room coverage. One side support should be mounted to the first or last rod positioned parallel to the rail in a basic rail system and to the primary rails in a rail system with full room coverage.

A: Length of threaded rod into Pendant F < 100 mm: No need for side supports.
Maximum length for threaded rod to Pendant (F) is: 100mm.

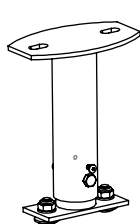
B: Length of threaded rod >100mm: Side supports are required.

NB! The side support must be attached to the rail.

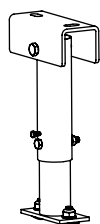


For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical Information" document.



50400078-082



50400301-305

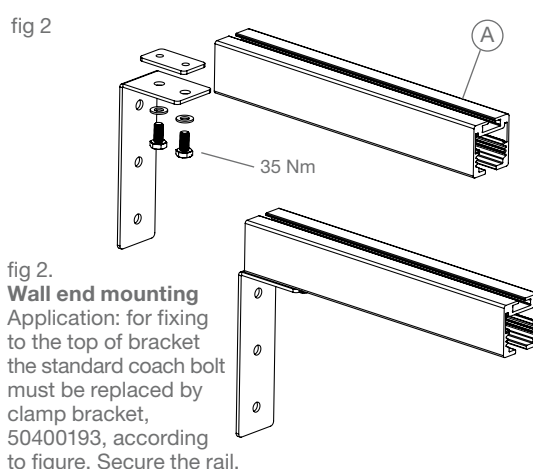
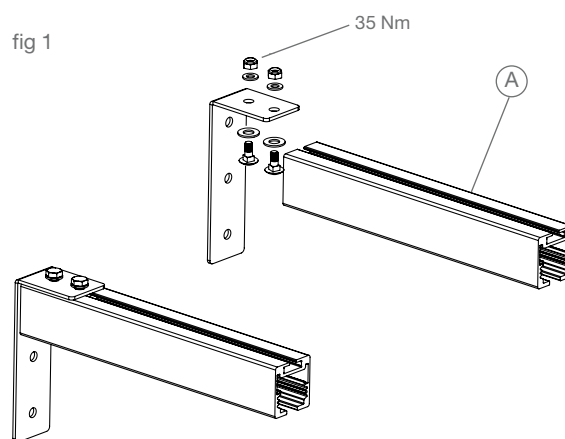
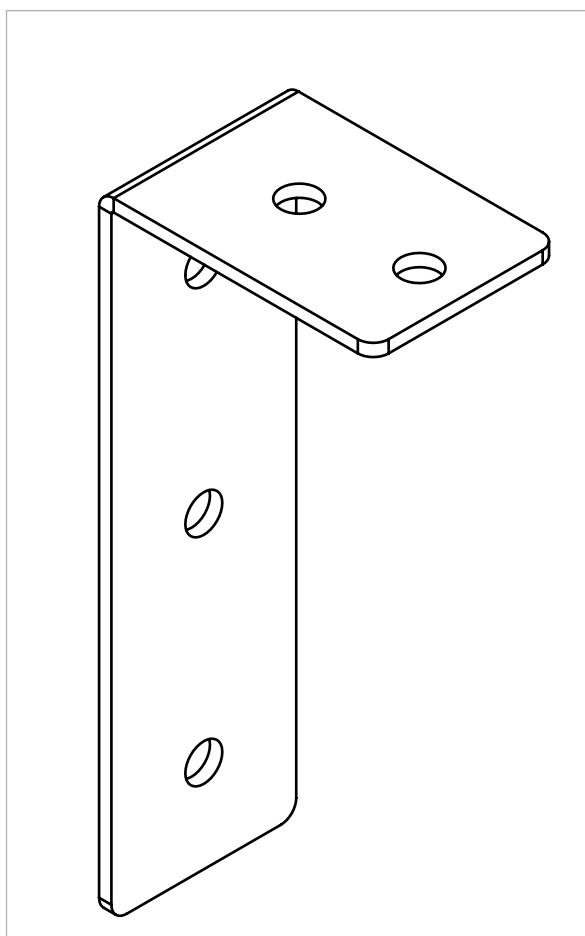


50400192

9: Wall fixtures - brackets and vertical supports

9.1: Wall bracket small, 50400119

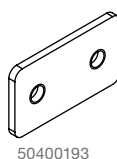
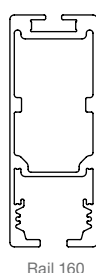
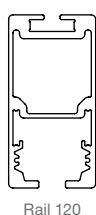
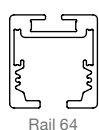
Application: Basic rail systems and rail systems with full room coverage. Often used for fixed rails in whole room systems in smaller rooms. This wall bracket can be mounted in two different ways, see below. It is supplied with two coach bolts, washers and locking nuts for installation.



- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



9.2: Wall bracket wide, 50400120

Application: Basic rail systems and rail systems with full room coverage. For fixing to wall.

Often used for fixed rails in whole room systems in smaller rooms. This wall bracket can be mounted in two different ways, see below. It is supplied with two coach bolts, washers and locking nuts for installation. If the rails need to be mounted in an angle, the installation must be done as shown in fig 3.

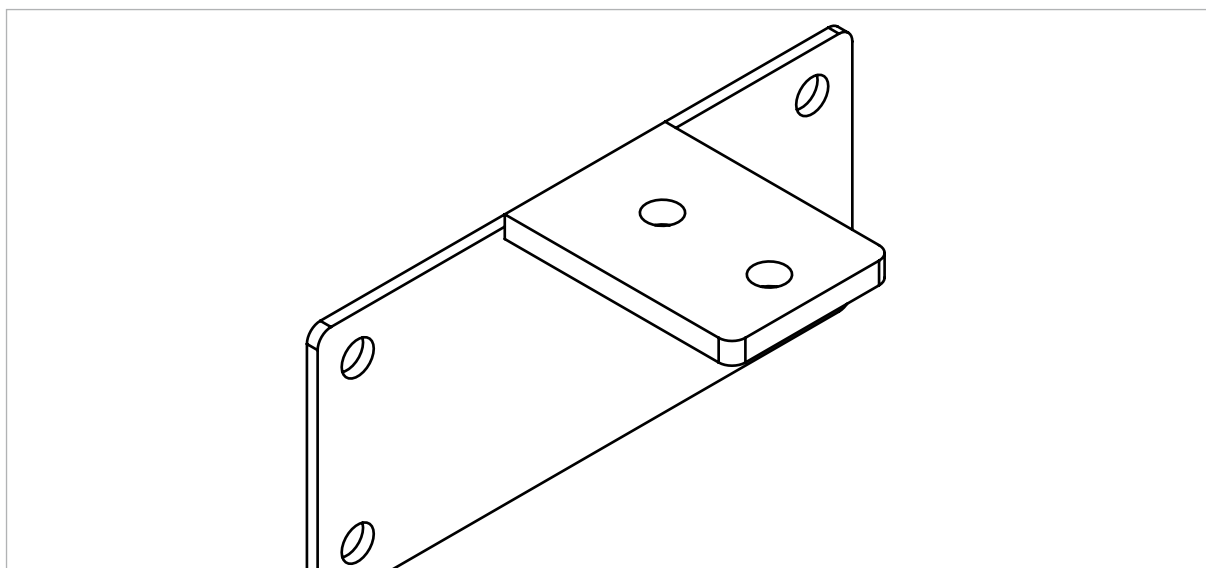


fig 1

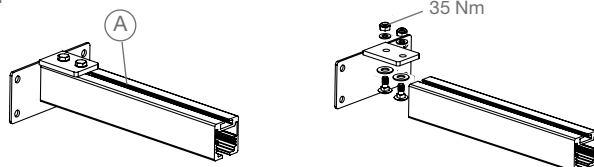
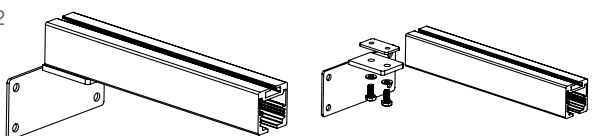


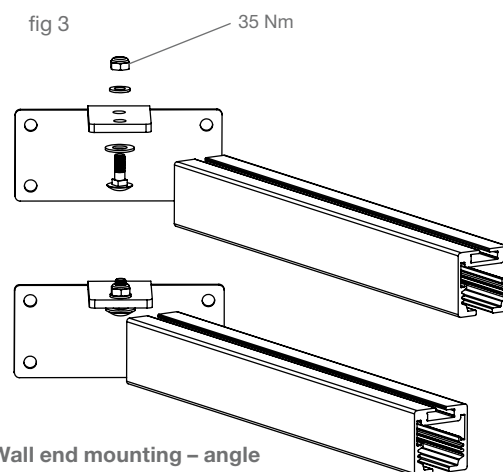
fig 2



Wall end mounting

Application: for fixing to the top of bracket the standard coach bolt must be replaced by clamp bracket, 50400193, according to figure. Secure the rail.

fig 3

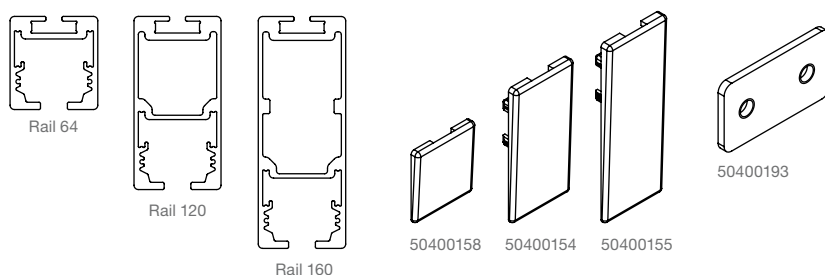


Wall end mounting – angle

- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



9.3: Wall bracket (plaster), 50400159

Application: Basic rail systems and rail systems with full room coverage. This wall bracket is used for mounting the end of the rail to the wall, where a larger number of anchors and a larger face plate is required. It is supplied with two coach bolts, washers and locking nuts for installation. The shown mounting can be used on high quality plasterboard walls provided that the fitter uses the correct anchors, see also 1.4.3: Installation on the walls.

Minimum requirements are:

- Rigid connection between wall and ceiling.
- Double layer plasterboard bonded.

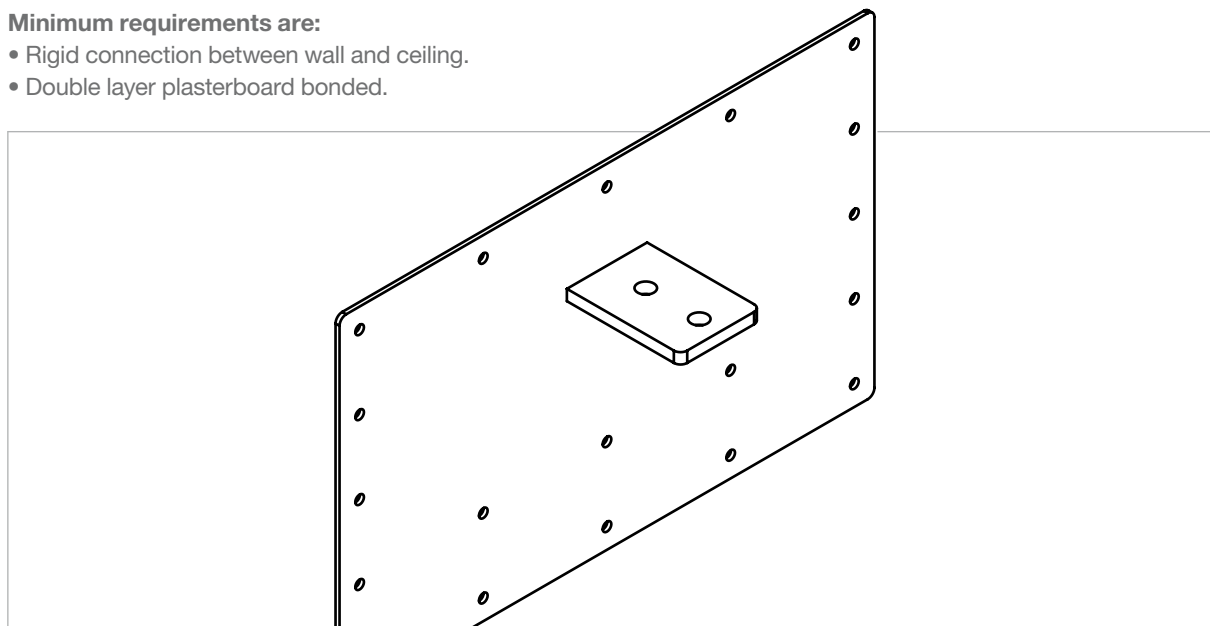


fig 1

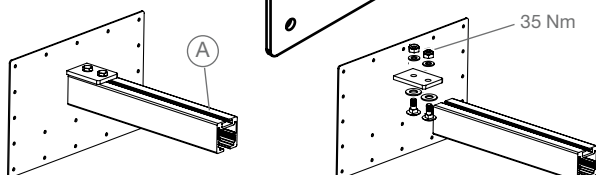
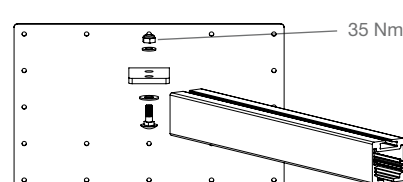
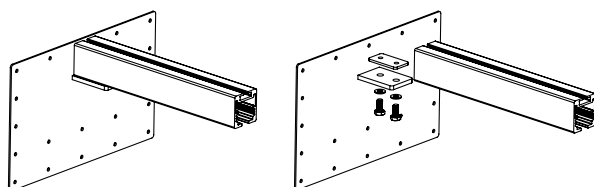


fig 3



Application: for fixing to the top of bracket the standard coach bolt must be replaced by clamp bracket, 50400193, according to figure. Secure the rail.

fig 2

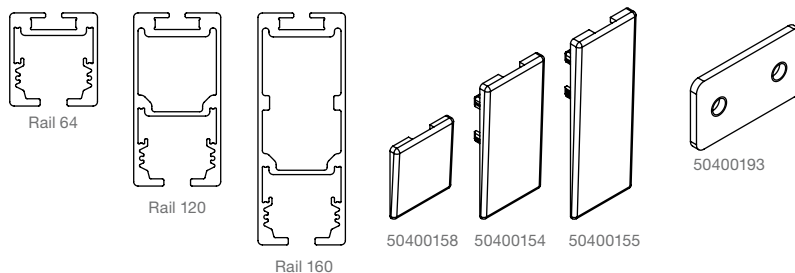


Wall end mounting - angle

(A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

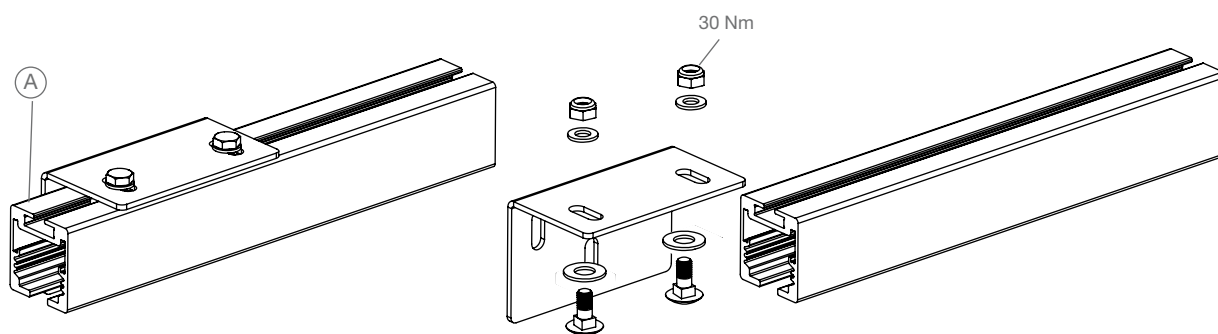
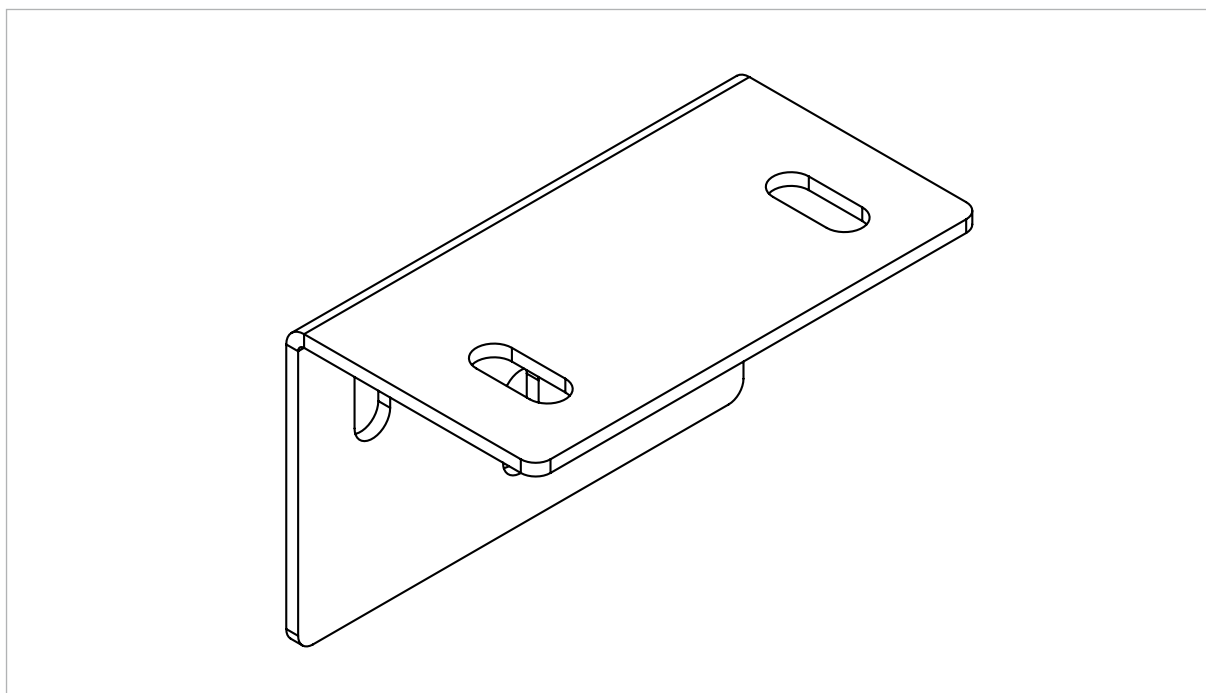
For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



9.4: Wall bracket parallel, 50400121

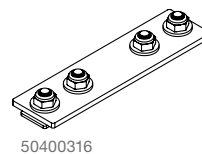
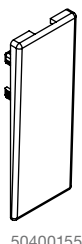
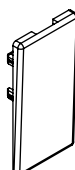
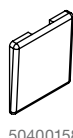
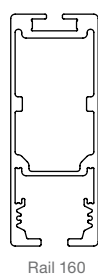
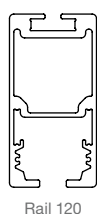
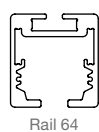
Application: Basic rail systems and rail systems with full room coverage. For fixing to wall.



- A** For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



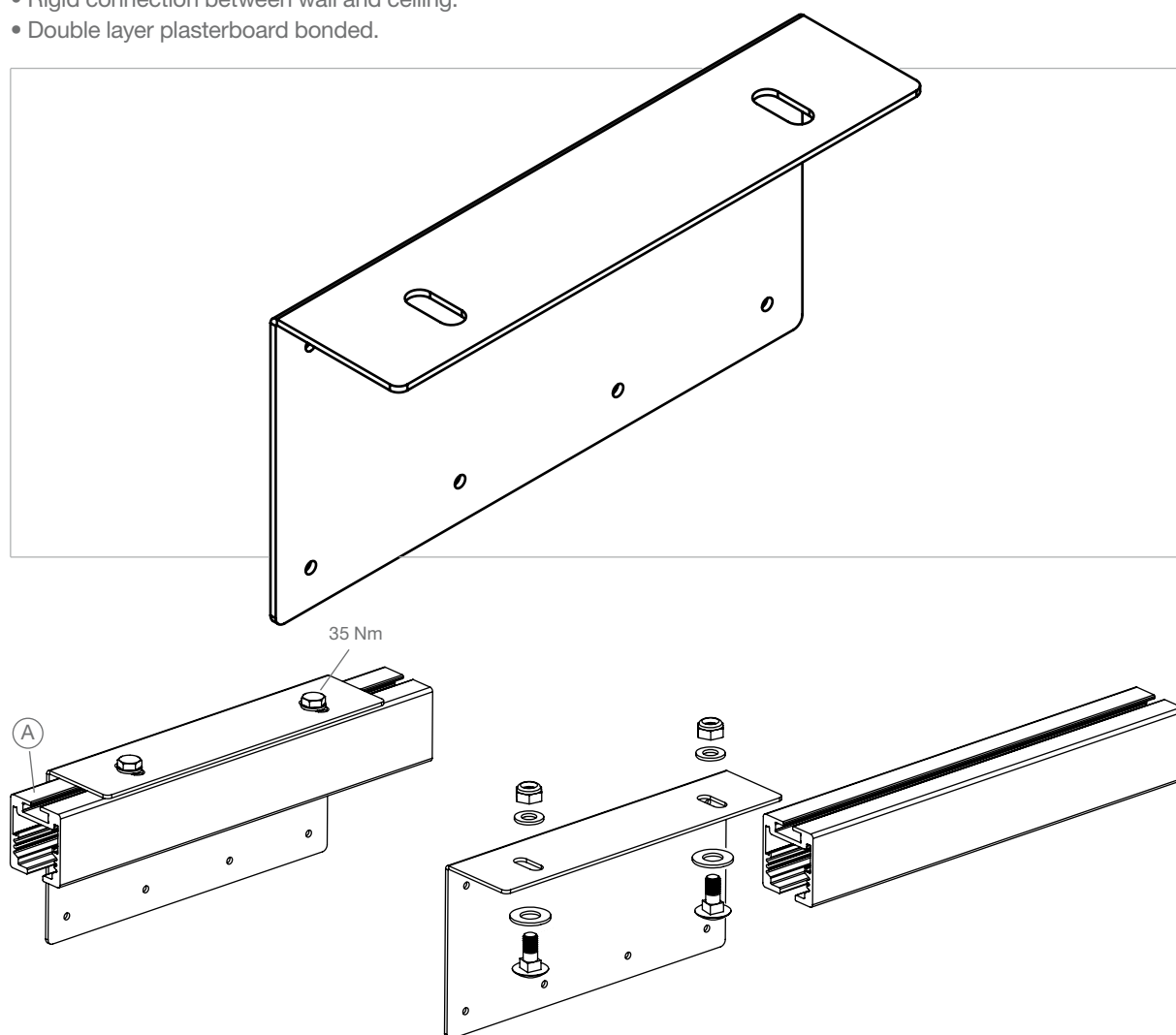
9.5: Wall bracket parallel (plaster), 50400160

Application: Rail systems with full room coverage. For plasterboard walls.

The shown mounting can be used on high quality plasterboard walls provided that the fitter uses the correct anchors.

Minimum requirements are:

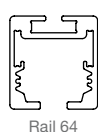
- Rigid connection between wall and ceiling.
- Double layer plasterboard bonded.



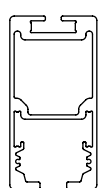
- (A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

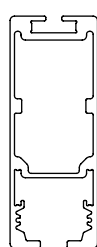
For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



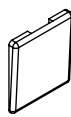
Rail 64



Rail 120



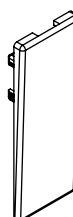
Rail 160



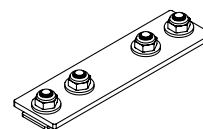
50400158



50400154



50400155



50400316

9.6: Vertical support adjustable, 50400190 / 50400242

Application: Basic rail systems and rail systems with full room coverage. For mounting the end of the rail to the wall. The shown mounting can be used on high quality plasterboard walls provided that the fitter uses the correct anchors.

Minimum requirements are:

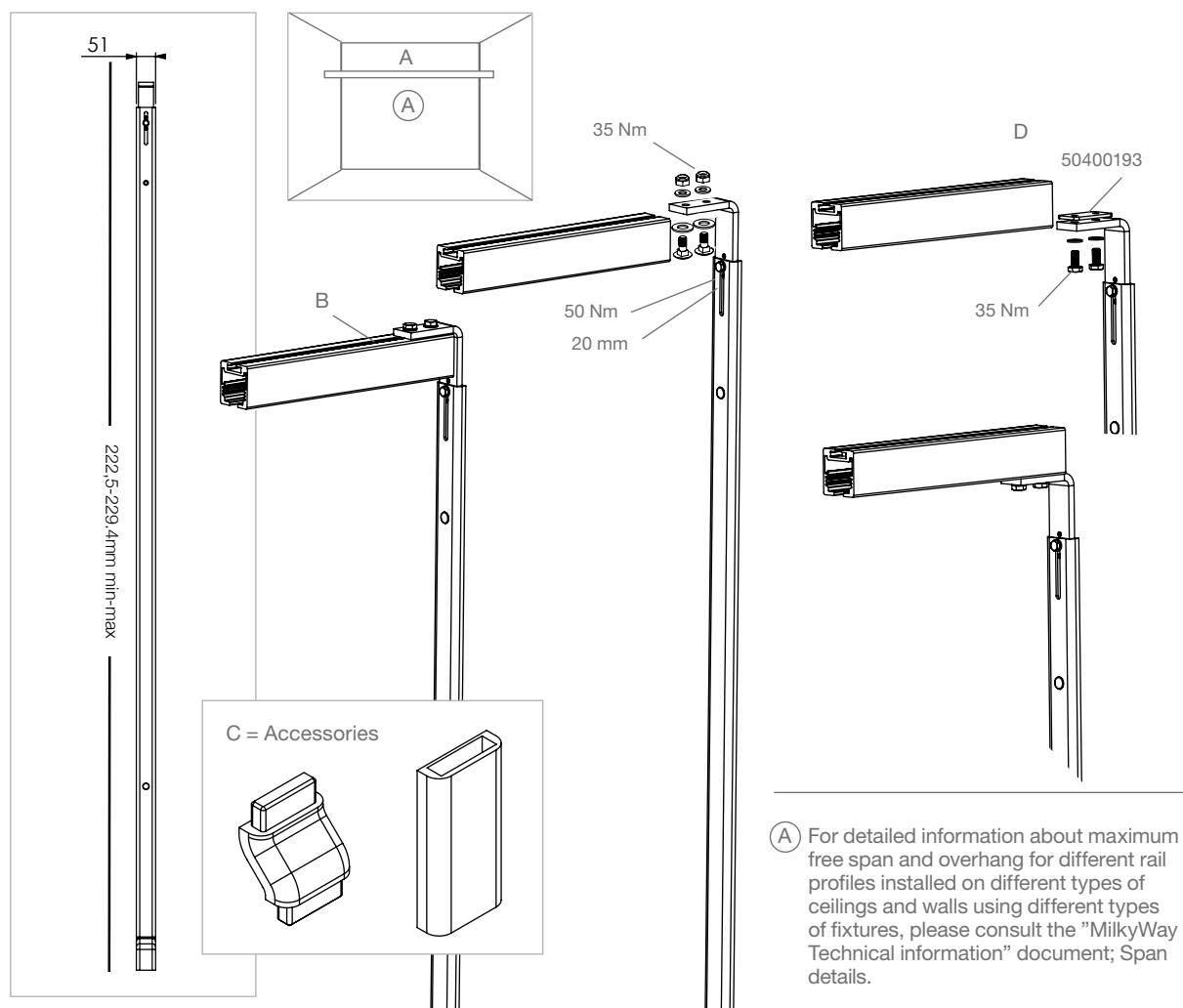
- Rigid connection between wall and ceiling.

A = Rail max. 60 mm shorter than the wall measure, min. 40 mm.

B = Bracket lowers the system by 6 mm.

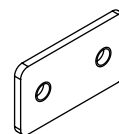
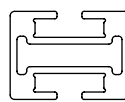
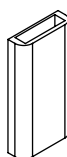
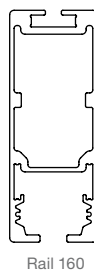
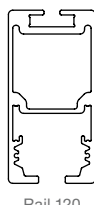
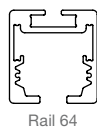
C = Vertical support adjustable kit (50400191) adds 135 mm to the height of the system

D = Rail mounted on top of the profile adds 10 mm to the top measure



For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



9.6.1: Vertical support adjustable, angled installation

Application: Basic rail systems and rail systems with full room coverage. For mounting in angle when the rail can not be perpendicular. The shown mounting can be used on high quality plasterboard walls provided that the fitter uses the correct anchors.

Minimum requirements are:

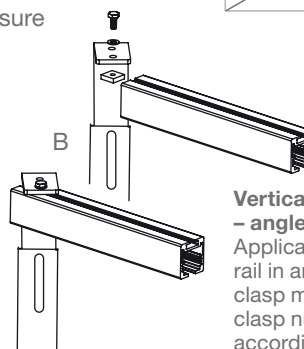
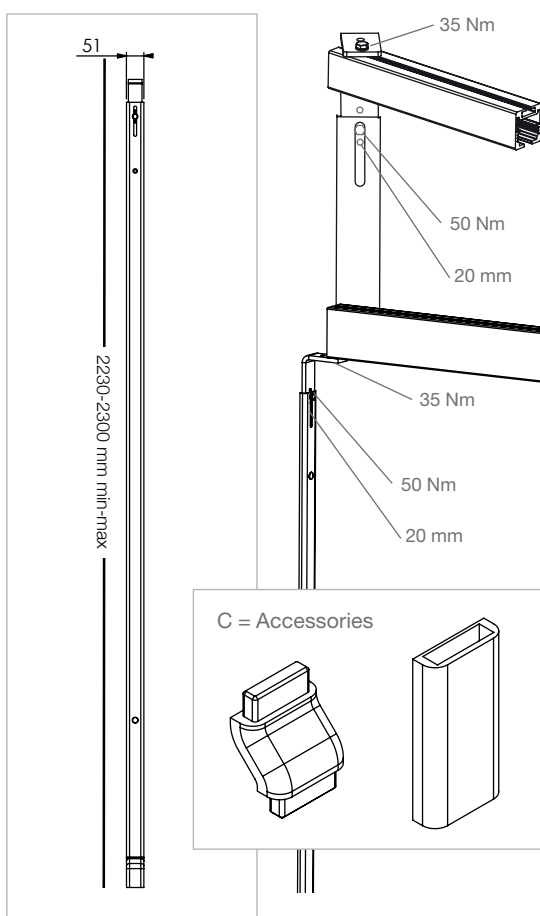
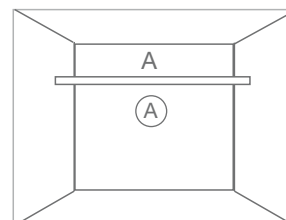
- Rigid connection between wall and ceiling.

A = Rail max. 60 mm shorter than the wall measure, min. 40 mm.

B = Bracket lowers the system by 6 mm.

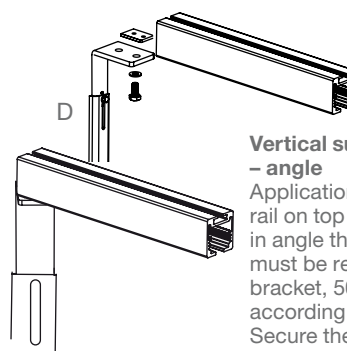
C = Vertical support adjustable kit (50400191) adds 135 mm to the height of the system

D = Rail mounted on top of the profile adds 10 mm to the top measure



Vertical support adjustable – angle

Application: for fixing to the rail in angle the standard clasp must be replaced by clasp nut 8 mm, 50400194, according to figure. Secure the rail.



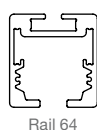
Vertical support adjustable – angle

Application: for fixing to the rail on top of the support and in angle the standard clasp must be replaced by clamp bracket, 50400193, according to figure. Secure the rail.

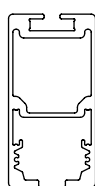
(A) For detailed information about maximum free span and overhang for different rail profiles installed on different types of ceilings and walls using different types of fixtures, please consult the "MilkyWay Technical information" document; Span details.

For use in combination with:

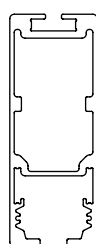
For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



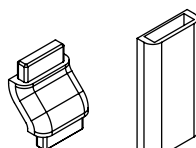
Rail 64



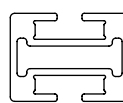
Rail 120



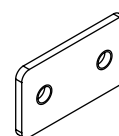
Rail 160



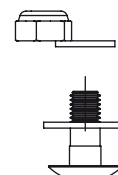
50400191



50400318



50400193

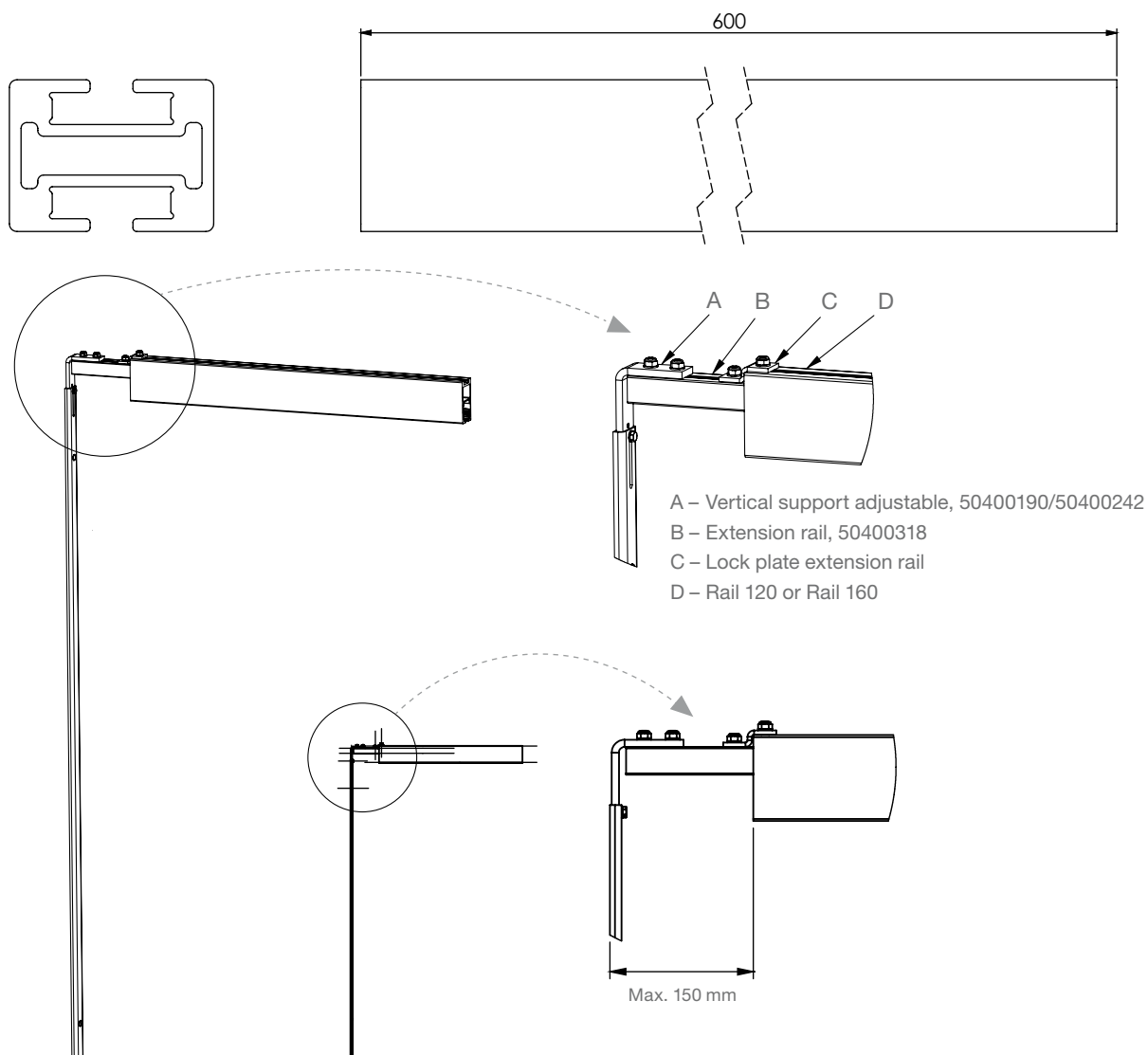


50400235

10: Accessories and installation equipment

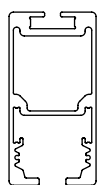
10.1: Extension rail, 50400318

Extension rail is used to bridge a gap of up to 300 mm from Vertical support adjustable (50400190/50400242) to the main rail.

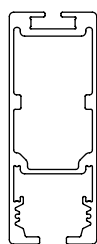


For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



Rail 120



Rail 160

10.2: Traverse trolley 3000 flex, 50400251

Application: Rail systems with full room coverage. Cross-rails may be installed either under or on top of the trolley.

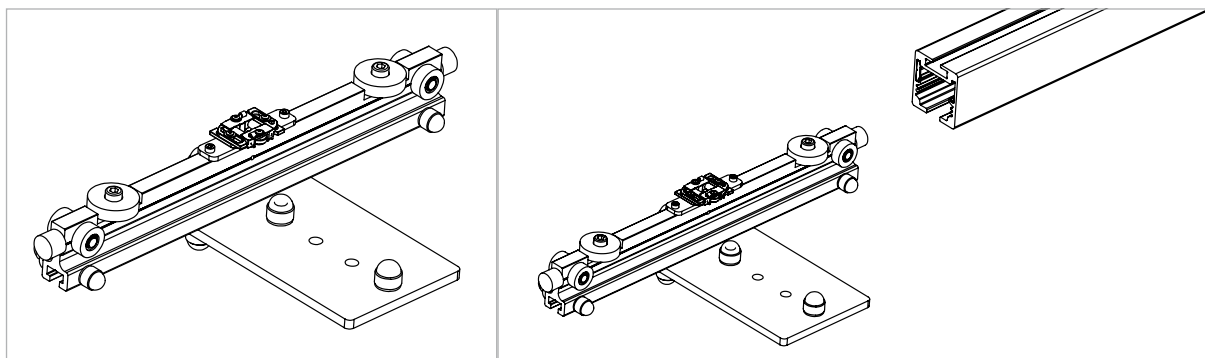


fig 1

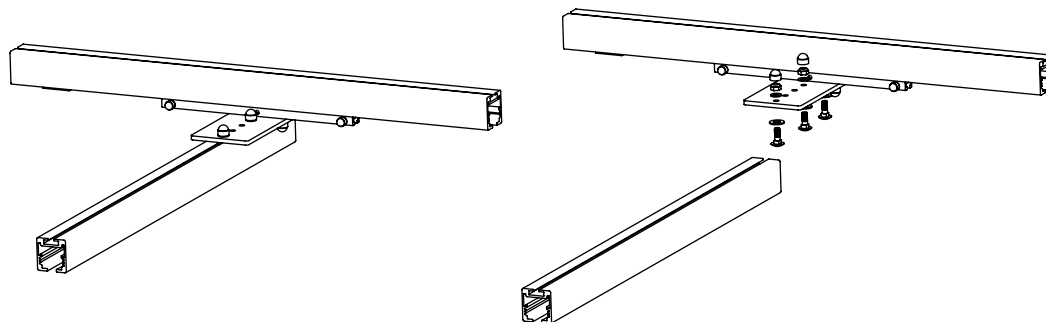
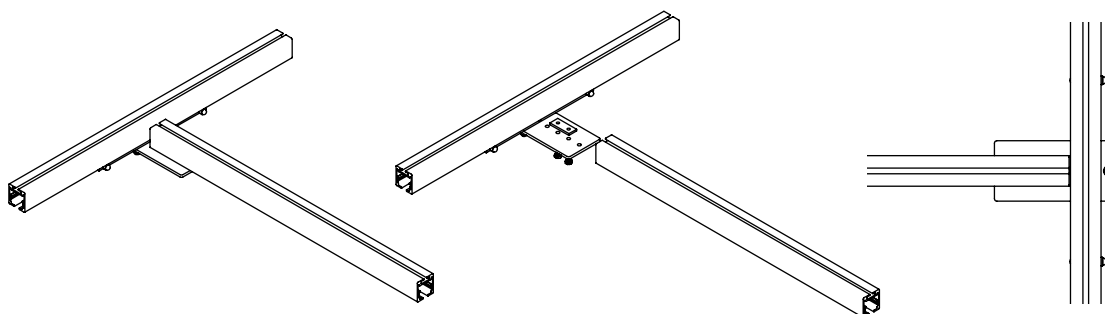


fig 2



Application: for fixing the rail on top of trolley the standard clasp must be replaced by clamp bracket, 50400193, according to figure. Secure the rail.

For use in combination with:

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



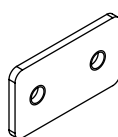
Rail 64



Rail 120



Rail 160



50400193

10.3: Traverse trolley 6500 flex, 50400252

Application: Rail systems with full room coverage. Cross-rails may be installed either under or on top of the trolley.

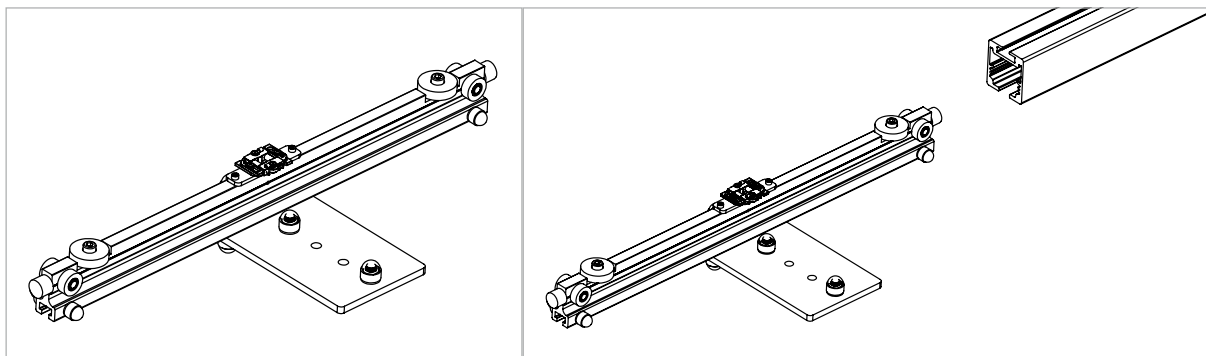


fig 1

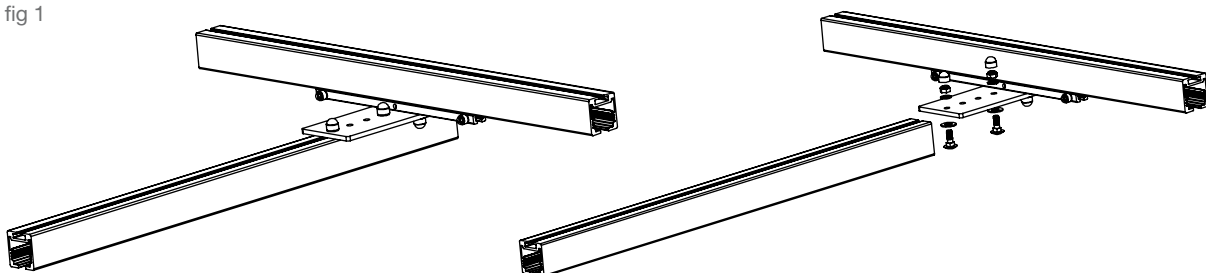
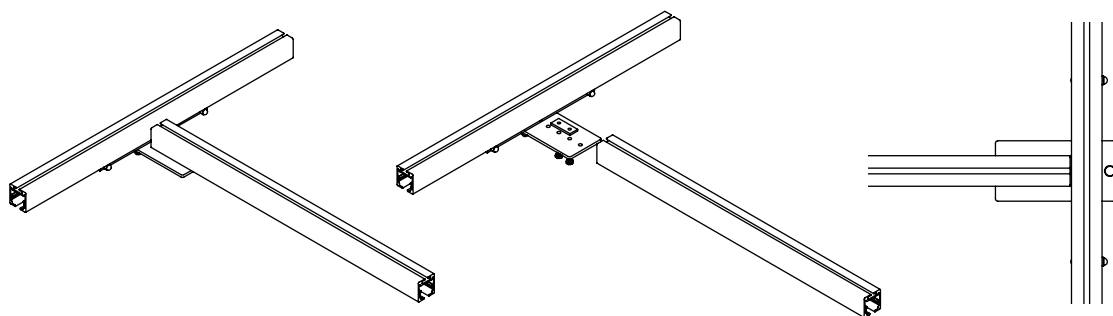


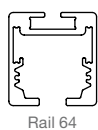
fig 2



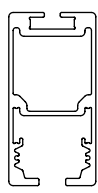
Application: for fixing the rail on top of trolley the standard clasp must be replaced by clamp bracket, 50400193, according to figure. Secure the rail.

For use in combination with:

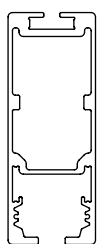
For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document.



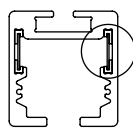
Rail 64



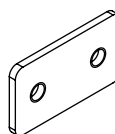
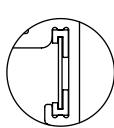
Rail 120



Rail 160



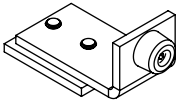
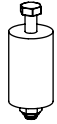
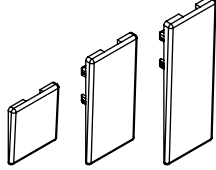
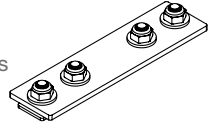
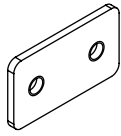
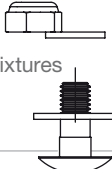
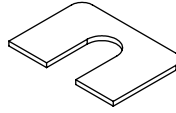
50400169-176

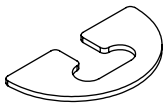
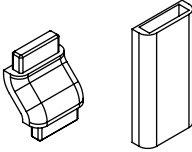
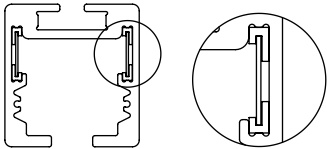


50400193

10.4: Installation equipment

For more information about MilkyWay; available parts, article numbers and technical data, please consult the “MilkyWay Technical information” document.

Art. No.	Product name	Description	
50400036	Endstop adjustable	For all MilkyWay rails	
50400026	Endstop bolt M8	M8 x 70 mm, for all MilkyWay rails	
50400027	Endstop bolt M8	M8 x 70 mm, with rubber bumper, for all MilkyWay rails	
504000158 504000154 504000155	End cap 64 End cap 120 End cap 160	White plastic, for Rail 64 White plastic, for Rail 120 White plastic, for Rail 160	
50400316	Joint bracket	For connecting of rails and/or rail curves, incl. fixings	
50400193	Clamp bracket kit	For mounting of rails on top of brackets and traverse trolleys, incl. fixings	
50400235	Coach bolt	2 pcs M10 x 30 mm incl. washers and nuts, for MilkyWay rail fixtures	
50400306 50400307 50400308 50400309	Shim 0.5 Shim 1.0 Shim 2.0 Shim 3.0	For Ceiling bracket standard, 50400319 and Universal bracket 55, 50400039	

Art. No.	Product name	Description	
50400310 50400311 50400312	Shim quick 0.5 Shim quick 1.0 Shim quick 2.0	For Ceiling bracket quick, 50400236	
50400075	Side support kit	For pendants	
50400313 50400314 50400315	Pendant cover 28-38 Pendant cover 40-50 Pendant cover 50	For all variants of Pendant F For all variants of Pendant R and Pendant angled Accessory for 50400313-314, for all variants of Pendant R and Pendant angled (ceiling-part)	
50400191	Vertical support adjustable kit	For Vertical support adjustable 50400190, 50400242. For wall with skirting boards, build-in dimension 135 mm/5.3".	
70200049	Extension cable traverse trolley	For traverse trolleys 50400251-252	
50400169 50400170 50400171 50400172 50400173 50400174 50400175 50400176	Conductor rail and insulator 2 Conductor rail and insulator 3 Conductor rail and insulator 4 Conductor rail and insulator 5 Conductor rail and insulator 6 Conductor rail and insulator 7 Conductor rail and insulator 8 Conductor rail and insulator 9	In-rail charging, 2000 mm In-rail charging, 3000 mm In-rail charging, 4000 mm In-rail charging, 5000 mm In-rail charging, 6000 mm In-rail charging, 7000 mm In-rail charging, 8000 mm In-rail charging, 9000 mm	



More information

For more information about MilkyWay; available parts, article numbers and technical data, please consult the "MilkyWay Technical information" document or contact your local Handicare and SystemRoMedic™ partner. All contact details can be found on our website, www.handicare.com.

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