



INNOVA[®]

CARE CONCEPTS



**SPECIFIERS
GUIDE TO
OVERHEAD
HOIST
SYSTEMS**

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All images are for illustrations purposes only.

IN
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/Welcome

WELCOME TO THE INNOVA CARE CONCEPTS GUIDE TO OVERHEAD TRACKING HOIST SYSTEMS.

Every year we are involved in hundreds of healthcare projects throughout the UK, dealing with architects, structural engineers, construction companies, healthcare professionals, and of course, the clients themselves. In this booklet we have tried to relay how to keep the needs of all these groups in mind, cut through the jargon, explain what can and can't be done, and provide a starting point for specifying healthcare environments.

Whilst this booklet provides a range of valuable information, it should be noted that nothing is a substitute for the knowledge, experience, and advice of a Healthcare Equipment Consultant. Innova technical support staff are happy to assist you wherever necessary, by attending meetings, carrying out a site survey, looking over plans, or discussing your project through on the phone or online.

ENHANCING QUALITY OF LIFE
THROUGH INNOVATION



/Different types of hoist units

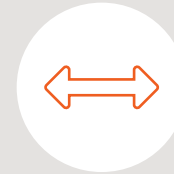
PERMANENTLY ATTACHED HOIST UNITS

These hoists are permanently attached to a ceiling track, and have a spreader bar coming down from the unit for lifting the patient. These are typically used in single patient environments or high dependency areas where the use of a hoist is frequent.



PORTABLE HOIST UNITS

These are relatively lightweight hoists that can be detached from the track or a wall or floor frame, and moved between different locations. Generally the whole hoist unit with the spreader bar lifts up and down from the track. This type of overhead hoist unit is useful in care environments where the same unit could be used in several different locations. One additional advantage to consider is that the unit can simply be replaced or taken down if a repair is needed.



MANUAL TRAVERSE

This requires the carer to move the person, in the sling, along the track. The design of the wheels on the hoist motor trolley makes this easy to do. Benefits include:

- The carer is able to control the speed at which the person is moved along the track
- Manual traversing tends to produce a smoother start and stop than powered traversing
- It can be easier to position a person precisely
- It is less expensive than powered traverse
- The hoist self-centralises directly above the patient when hoisting up and down.

POWERED TRAVERSE

This enables the person to move along the track independently or the carer to move him/her using the handset with minimum effort. It's important to bear in mind that this is very difficult to operate with an X-Y system.



BARIATRIC HOIST UNITS

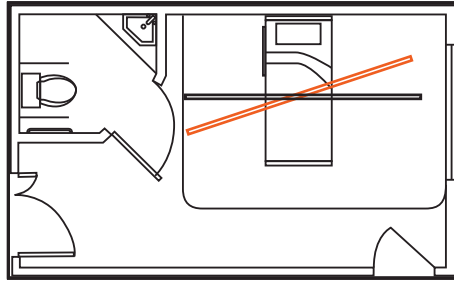
Hoists can be installed with anything up to a weight limit of 78 stone. If hoists are required for bariatric clients, a number of additional considerations need to be accounted for such as: structural requirements, size of room, width of doorway, often powered traverse needed, different spreader bar options, etc.

Dual Hoist
is Available

/Room Layouts

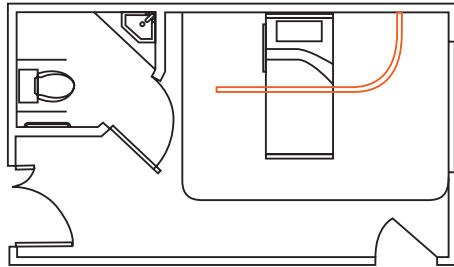
1. STRAIGHT MONORAIL

A single rail, typically running perpendicular to the bed, provides coverage from bed to chair. Limited in coverage, repositioning options and flexibility of furniture location. Where required, the rail can be put on an angle to access a more suitable transfer area.



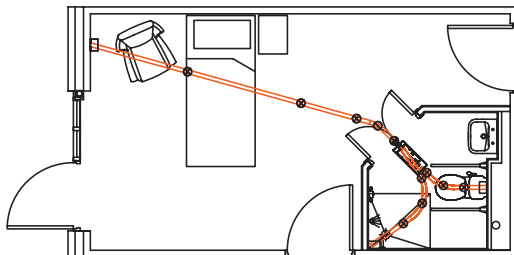
2. STRAIGHT MONORAIL WITH CURVE

A single rail with additional 90° curve provides the same clinical effectiveness as a straight monorail with the curved portion offering a more suitable charging/docking station in many cases. It is also possible to incorporate at this point a cupboard in which the hoist can return to charge in. This offers a more aesthetically pleasing solution which hides the hoist unit when it is not in use.



3. STRAIGHT MONORAIL & CURVE WITH TRACK SWITCH IN EN-SUITE

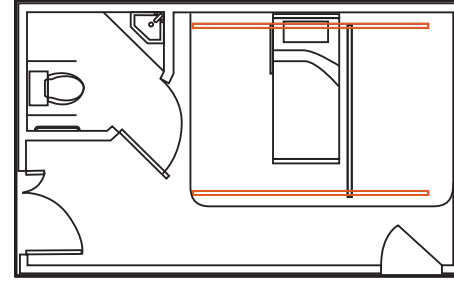
As above but also offers the flexibility of being able to hoist straight from the bed or chair through to the en-suite and change direction to either the shower or toilet.



TRACK & UNIT CONFIGURATION

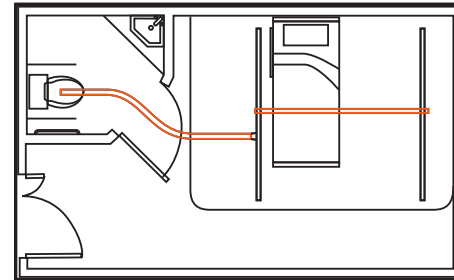
4. X-Y SYSTEM

A three piece system with two parallel fixed rails and a perpendicular moving traverse rail permitting coverage under the entire X-Y system. Advantages include: optimal flexibility (the hoist unit can be moved backward and forward and side to side), full coverage of the bed, easy transfer to chair and pick up from the floor. Furniture location can also be altered with no impact on transfer capability. Also known as an 'H' frame system.



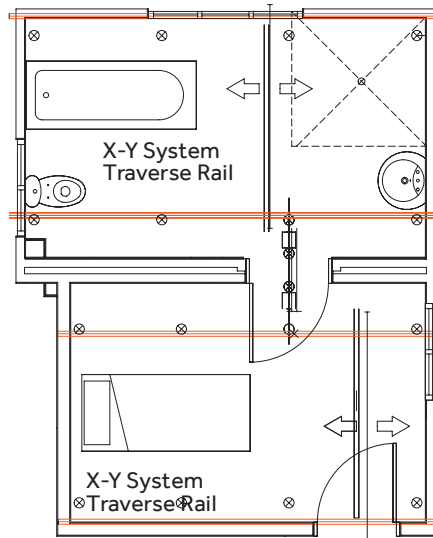
5. X-Y SYSTEM WITH TRANSIT COUPLING CONNECTION INTO EN-SUITE

The room covering X-Y system allows for complete coverage beneath the X-Y rail system. Access can be gained to an adjacent room with use of a transit coupling allowing the caregiver to take the client directly from bed/ chair to a position in the adjacent room. The X-Y system offers flexibility with respect to furniture location and offers improved clinical effectiveness, particularly for repositioning a client in bed. Door openings will require modification to accommodate the rail and hoist travel.



6. X-Y CONNECTION TO X-Y USING A DOUBLE TRANSIT COUPLING

The room covering X-Y system allows for complete coverage beneath the X-Y rail system in two or more rooms. Connections can then be made between the rooms using a double transit coupling. This offers the optimal coverage in both rooms as well as the quickest and smoothest room to room transfers. This is most commonly used in a bedroom and bathroom/en-suite situation.



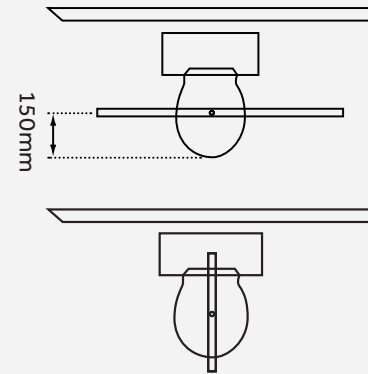
/Important Dimensions & Pick Up Points

Before installing a rail system, it is important that Innova Care Concepts trained personnel carry out a pre-installation check of the room(s).

During this check the assessor will gather information on the ceiling structure, the wall structure and the floor structure to determine how the track system is to be mounted within the room. Following this, they will decide, along with the caregiver and client, the level of hoist coverage required within the room. When defining this, an assessment of the individual(s) is required, taking into account the client's individual requirements.

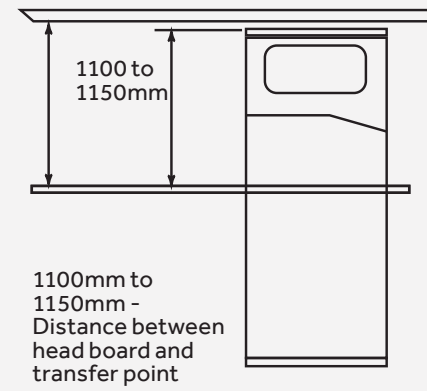
TRACK & UNIT CONFIGURATION

The following placement of typical lifting places may be used as recommended guidelines:



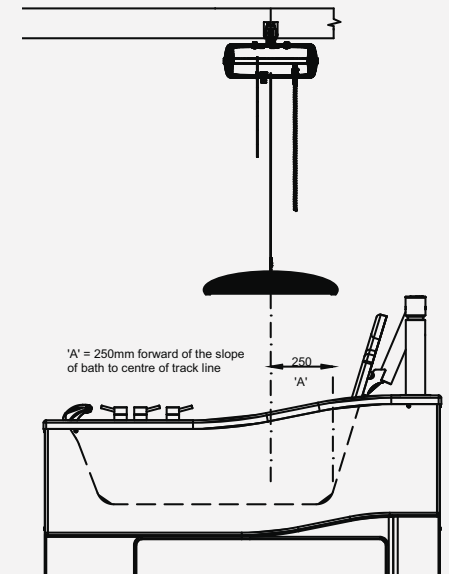
TRANSFERRING ONTO A W.C.

The pick up point should be central to the toilet aperture, and approximately 150mm away from the front of the toilet pan. Please note that this measurement does differ, depending on the situation and the client needs.



1100mm to 1150mm - Distance between head board and transfer point

TRANSFERRING IN AND OUT OF BED

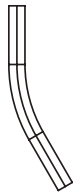


TRANSFERRING IN AND OUT OF A BATH

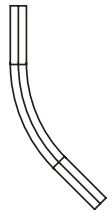
/Profile & Curve Detail for Airglide360® Track



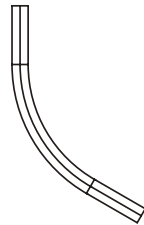
15 Degree
Curve



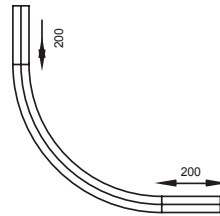
30 Degree
Curve



45 Degree
Curve



60 Degree
Curve

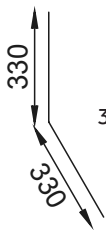


90 Degree
Curve

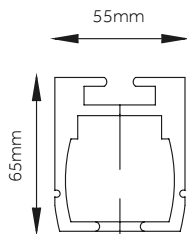
SPECIFICATIONS:

The radius of all curves is 480 mm.

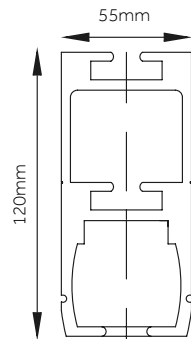
Curve	Leg Length
15 deg.	263mm
30 deg.	330mm
45 deg.	395mm
60 deg.	477mm
90 deg.	477mm



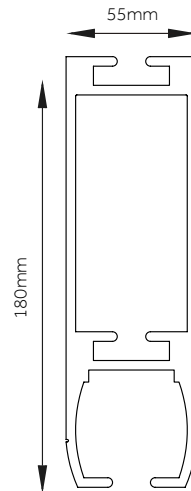
Example
30 Degree
Curve



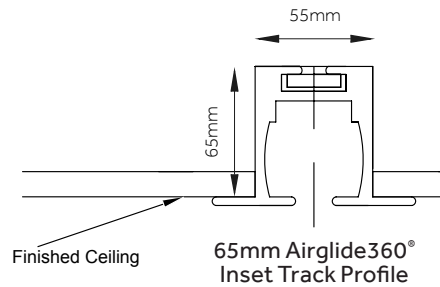
65mm
Airglide360®
Track Profile



120mm
Airglide360®
Track Profile



180mm
Airglide360®
Track Profile



65mm Airglide360®
Inset Track Profile

/Installation Options & Load Bearing Requirements

It's obvious that every building is constructed in different ways and with various materials. These factors dictate how the overhead tracking for the hoist system is to be fixed.

The two most frequent methods of installation are using either ceiling or wall fixing depending on the structure of the building.



KEY POINTS:

- Minimum number of 3 fixings per rail regardless of how short it is
- Distance between fixings is determined by the weight limit of the hoist unit

/Load & Fixings Detail for Airglide360® Track

STRUCTURAL CALCULATIONS

For load bearing calculations, allow 1.5 times the capacity of the weight limit of the hoist, eg. AirRise275® would require $275 \times 1.5 = 412\text{kg}$ allowance for loading at any 1 point of the track system.

All structural calculations should be checked by a qualified structural engineer.

TRACK FIXING REQUIREMENTS:

HOIST WEIGHT LIMIT	TRACK PROFILE SIZE		
	65mm	120mm	180mm
200kg	2m between fixings	4m between fixings	6m between fixings
275kg	1.5m between fixings	3m between fixings	5m between fixings
350kg	1m between fixings	2m between fixings	4m between fixings
500kg	0.5m between fixings	1m between fixings	2.5m between fixings

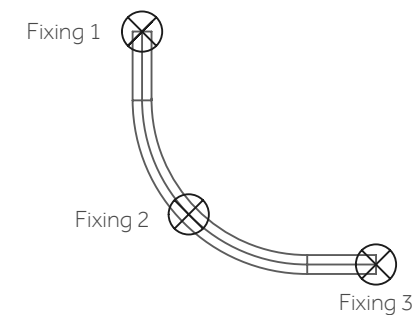
X-Y - TRAVERSE RAIL REQUIREMENTS

- Maximum span up to 150kg using 65mm profile is 2.8 metres.
- If distance between parallels is greater than or equal to 2.9 metres, U-profile has to be used.
- 3.5 metres between parallels with 150kg weight is maximum distance between parallels when using 3 metre U-profile.
- For loads above 150kg, a high profile traverse rail with a heavy duty traverse trolley is recommended as bending in the rail causes malfunction of transit coupling.
- If span between parallels is larger than 4 metres, an additional parallel rail is advised.

TRACK & UNIT CONFIGURATION

CURVES

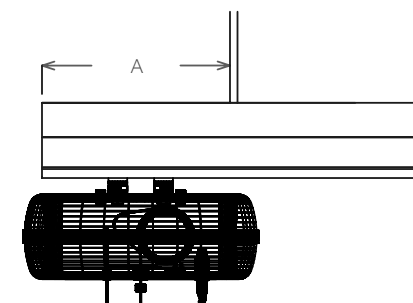
Any type of curve should be fixed on 3 points, at the beginning and end of the curve and in the middle of the curve. For connecting to a straight rail or other curve, a connection plate is required to be placed in the upper part of the rail profile.



TRACK END OVERHANG ALLOWANCES

Distance from last fixture point or parallel to end of track (Dimension A).

- If 65mm profile then 200mm maximum overhang.
- If 120mm profile then 350mm maximum overhang.



/Important Measurements

There are three types of track profile in the AirGlide360 range, the small 65mm high profile, the 120mm profile, the larger 180mm profile, and the inset profile.

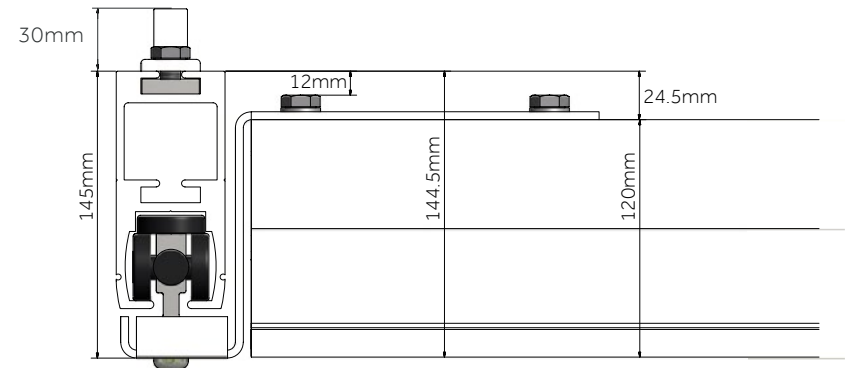
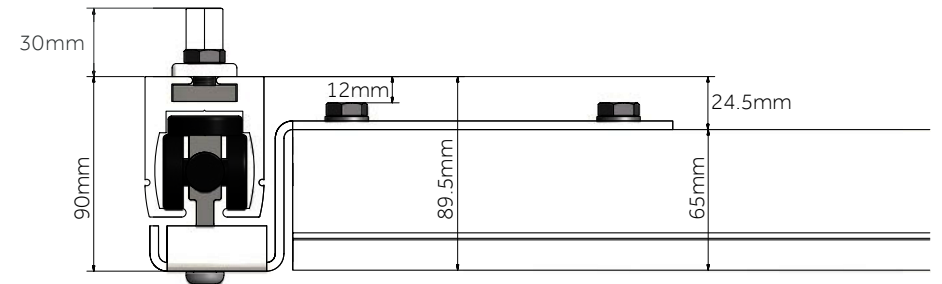
When a track is ceiling mounted, the small profile rail is normally used to maintain maximum lifting height. If a full room covering X-Y system is being installed, the traversing rail may need to be a large profile rail depending on the distance between the parallel rails.

The inset profile is also 65mm deep but this sits within the ceiling and so only the underside of the track is visible. This gives a neat and aesthetically pleasing finish as well as being good for infection control.

It is important to remember when installing inset X-Y systems that the top of the traversing rail is just 25mm below the finished ceiling. This means that anything mounted to or within the ceiling cannot protrude more than 25mm into the room otherwise it will clash with the traversing rail.

X-Y WITH TRAVERSE BETWEEN HUNG

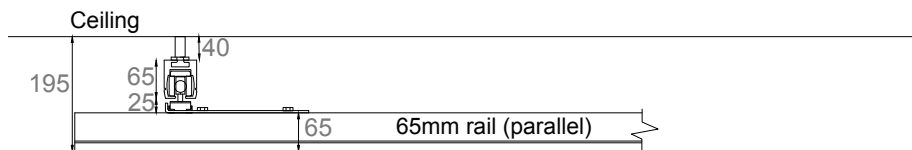
A traverse rail mounted between the parallel rails is an aesthetically pleasing solution as the rail is installed close to the ceiling and takes up the minimum amount of space in the room.



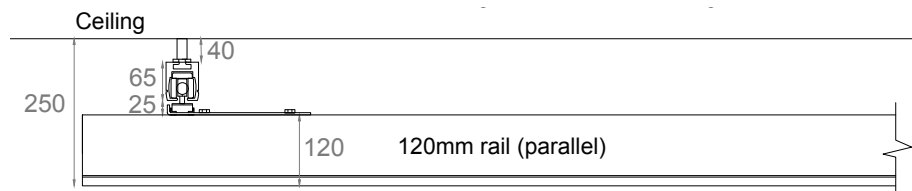
X-Y WITH TRAVERSE UNDERHUNG

This is the standard option and is required when track is connecting from room to room using a transit coupling.

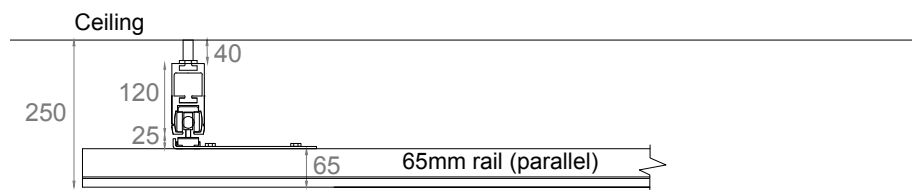
Small Parallel - Small Traverse - Below Hung



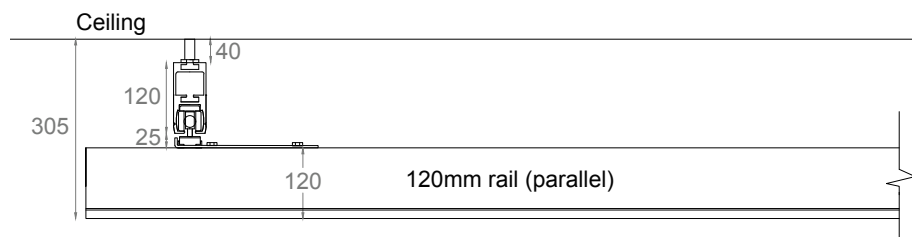
Small Parallel - Large Traverse - Below Hung



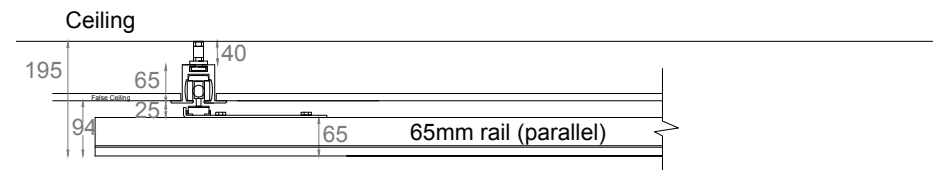
Large Parallel - Small Traverse - Below Hung



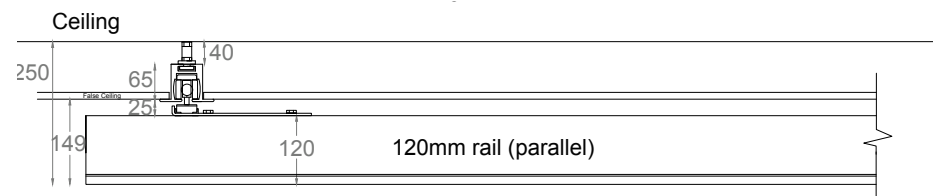
Large Parallel - Large Traverse - Below Hung



Inset Profile - Small Traverse



Inset Profile - Large Traverse



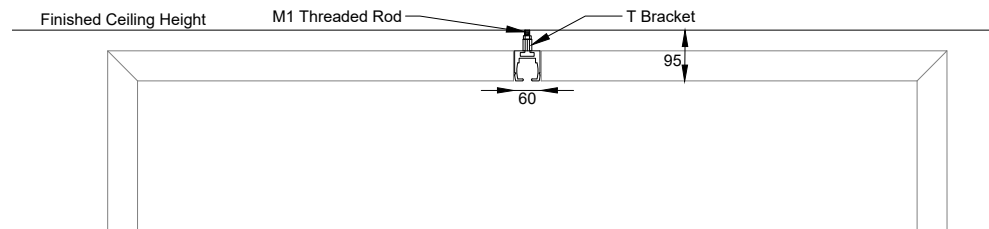
/Doorway Header Details

One of the most common issues with ceiling track hoist systems is the detail used when the hoist passes between rooms. This can either be from one X-Y system to another or just a mono-rail passing from bedroom to en-suite.

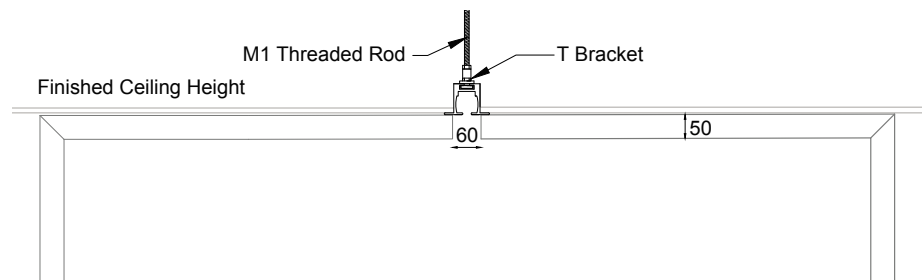
Our recommendation is that wherever possible full height doors should be used so that the hoist track passes through at the same height as the underside of the doorframe. This prevents the need for large cut outs in the wall above the door frame which look ugly, badly designed and allows noises and odours to pass between rooms.

The below drawings show various ways of achieving this depending on the track layout:

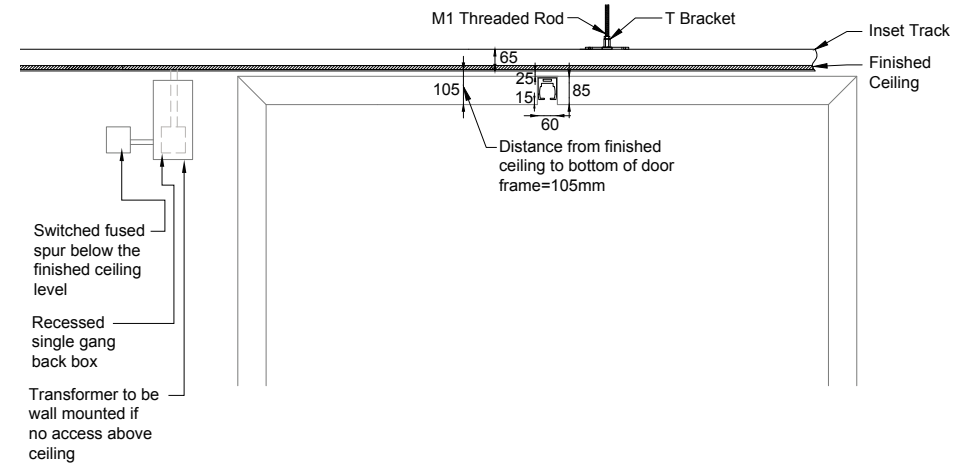
BELOW HUNG MONORAIL THROUGH DOORWAY



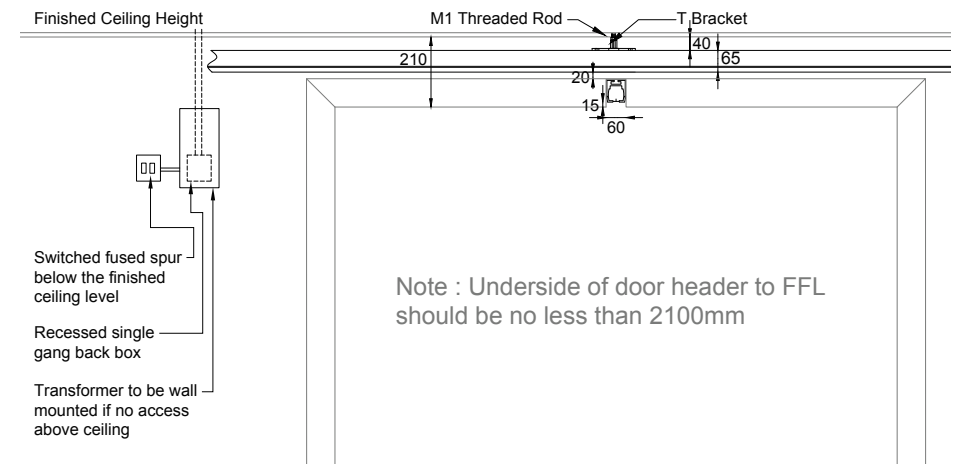
INSET MONORAIL THROUGH DOORWAY



INSET MOUNT TRACK WITH TRANSIT COUPLING THROUGH DOORWAY



BELOW MOUNT TRACK WITH TRANSIT COUPLING THROUGH DOORWAY



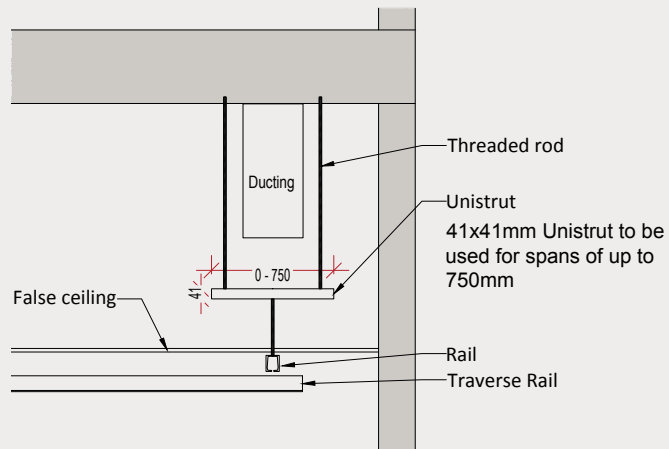
/Ceiling Mount

Ceiling fixing is the most common and preferable method of fastening a patient tracking system. This is because a small profile rail can be used to maintain lifting height whilst giving a less obtrusive appearance.

There are many different ways to ceiling mount the AirGlide360 track system depending on the structure of the room and the various constraints such as mechanical and electrical services. The below sections demonstrate the main ceiling mount methods in detail.

i OBSTRUCTIONS TO FIXING ABOVE CEILINGS

If there is pipework or any other obstacles which obstruct the installation, then these should be bridged using metal unistrut or timber supports.

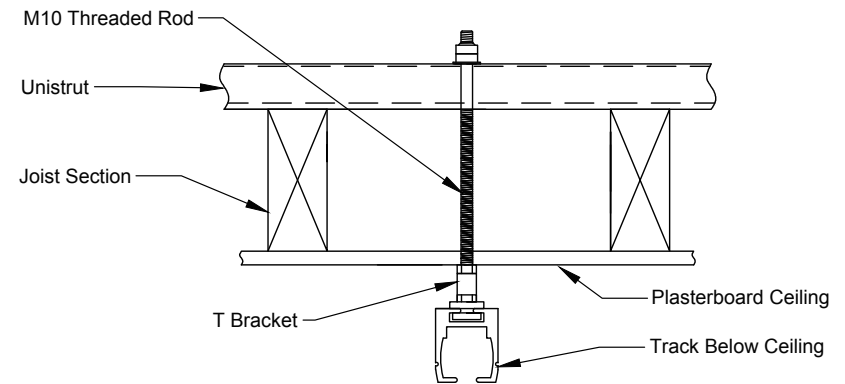


Fixing to Timber

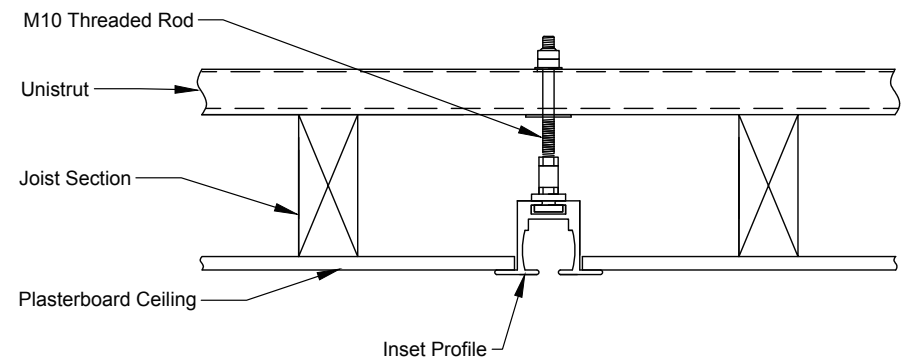
TIMBER CEILING JOISTS

The easiest way to support a track system when working with timber joists, is to span metal channel above the timber joists and use threaded bar to support the track from the metal channel.

When the track is positioned below the ceiling, it doesn't make any difference whether the track is running in line with the timber joists or perpendicular to the joists.

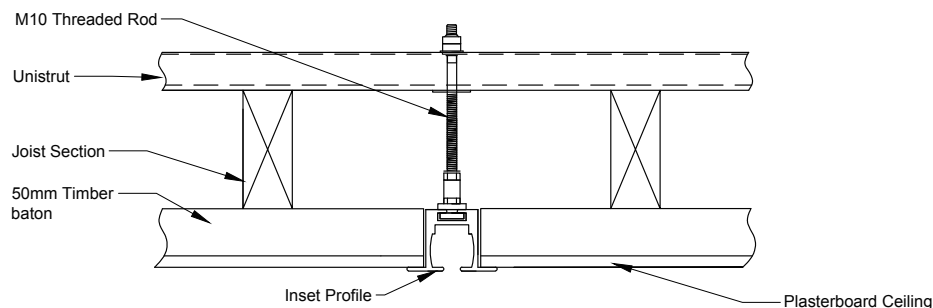


Above: Below Ceiling Mount Timber Fixing



Above: Inset Ceiling Mount Between Joist Fixing

If the track is inset to the ceiling, unless it is just a single straight rail with no curves and no connections to another room, it will be necessary to use 50mm timber batons to pack the ceiling down to the inset profile.



Above: Inset Track Mount - Below Ceiling Joist Fixing

The method of spanning metal channel above the timber joists, will only work if there is a roof space above the timber joists.

If it isn't possible to span metal channel above the joists due to the fact that there is a room above or it's a flat roof structure, then the best method is to fasten metal channel in between the timber joists as shown in the timber 'I' beam section. This method can be utilised with both inset and below mounted track.

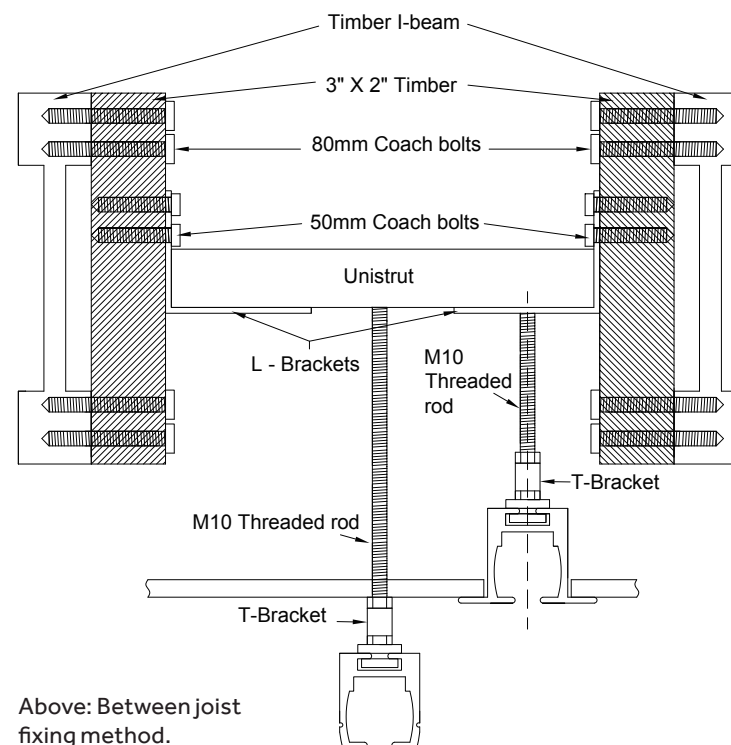
TIMBER 'I' BEAM JOISTS

Many buildings are not constructed using a timber frame design as they are quick to construct and most of the construction can be done off site. These buildings will often have timber 'I' beams or Pozzi joists between floors rather than the traditional concrete soffits.

INSTALLATION METHODS

It's important when hoist tracks are to be fastened to these structures that the manufacturer of the timber joists is included in the discussions around the fixing method as different companies create their joists in different ways. One of the most critical points to understand from the timber frame manufacturer is which part of the joists can take additional down loading. Many timber joists are designed to support a compression loading where load is applied from the top but if significant load is applied to the bottom cord, it will pull the joist apart.

Below is one method of fastening to timber 'I' beam sections. This includes fastening a timber support to the sides of the joist, fastening metal channel between and then using threaded bar to support the track. This can be utilised with both inset and below mounted track.



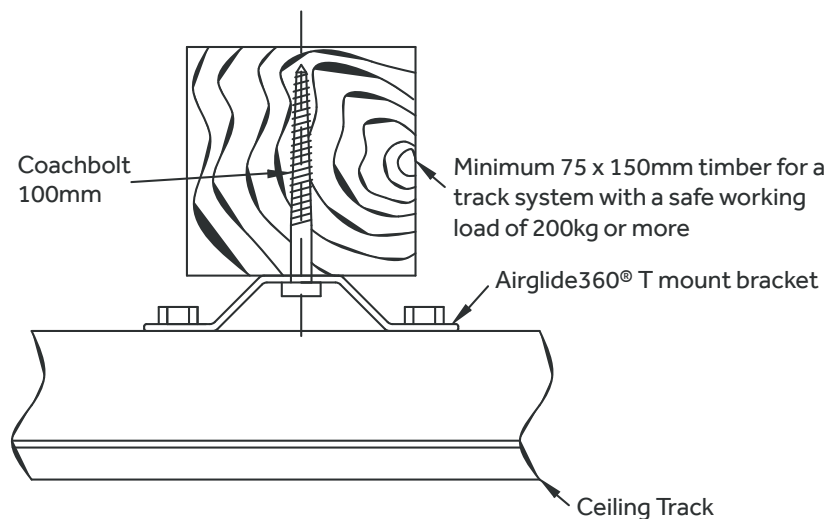
Above: Between joist fixing method.

FIXING DIRECTLY INTO WOODEN JOISTS

In some situations it is possible to fasten the ceiling track directly to timber joists dependent on the size and strength of the joists and the loading which the track is going to take.

Track should never be fixed directly to timber joists if the joists are less than 100mm x 100mm for a hoist system with a safe working load of 200kg or more, or 50mm x 100mm for a 100kg safe working load. Suitability of the joists should be assessed by competent and trained personal.

Doubling up joists by attaching additional joists to the side of existing joists is not acceptable for a direct screw fixing. It is essential when fixing directly to the joists that they are one solid section of timber.



INSTALLATION METHODS

Fixing to Concrete

The type of fixing used when fastening into concrete structures will depend on the type of the concrete soffit design.

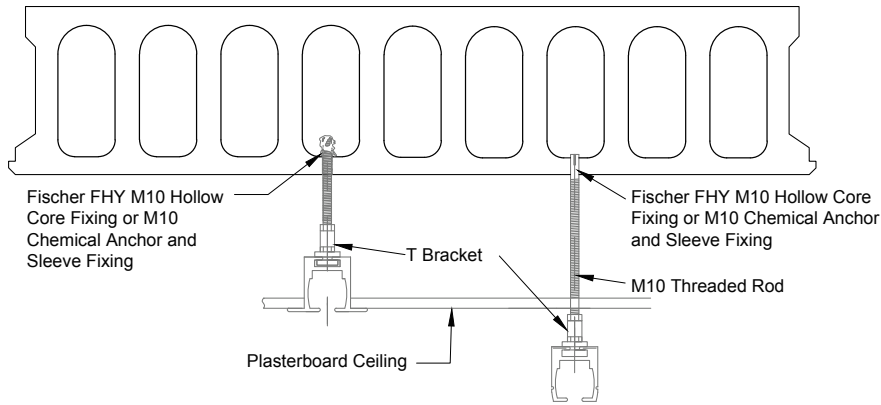
Some examples are shown below for the following designs:

- Hollow core slab
- Reinforced concrete slab
- Profiled concrete slab
- Beam and block

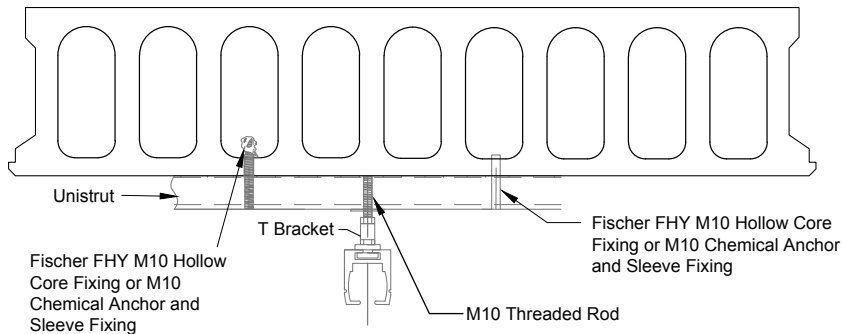
HOLLOW CORE SLABS

When fastening to hollow core slabs, there are two methods possible. The first is to fasten the threaded rod directly into the hollow core, this can be done using either an expanding hollow core anchor or a chemical fixing with an expanding sleeve which sits inside the hollow core. This is acceptable for lower weight limit track systems.

In some instances, such as when bariatric units are being used, it won't be possible to achieve the required loadings from a single fixing into the hollow core. In this case metal channel should be fastened to the underside of the hollow core plank, using hollow core anchors or chemical fixings, and then the threaded rod should be attached to the centre of the metal channel. This then distributes the load across the two fixings and gives a higher load capacity.



Above: Single core fixing method



Above: Multiple core fixing method

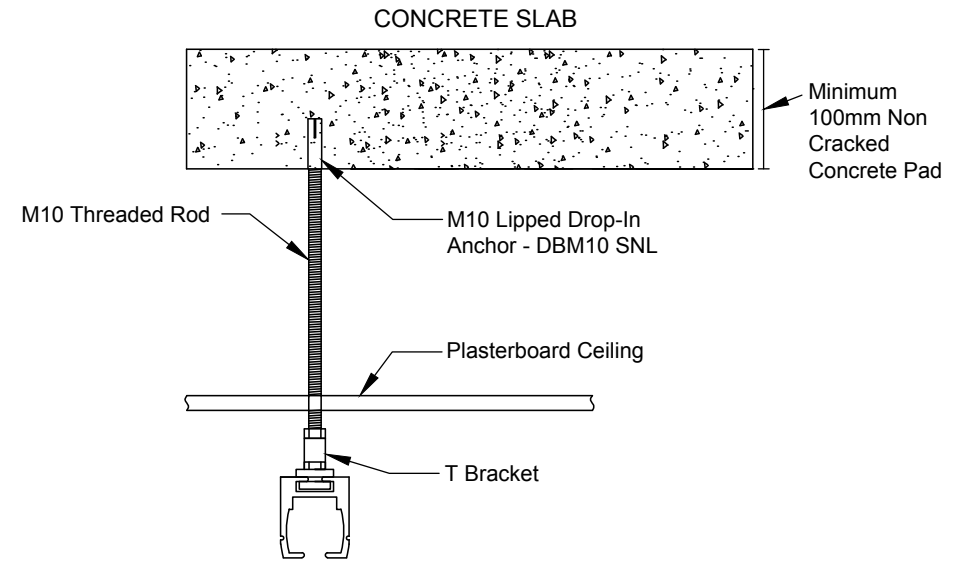
CONCRETE SLAB

The fixing method when working with a concrete slab is generally the same across all types of slab including pre-cast, in-situ, pre-tensioned and reinforced slab.

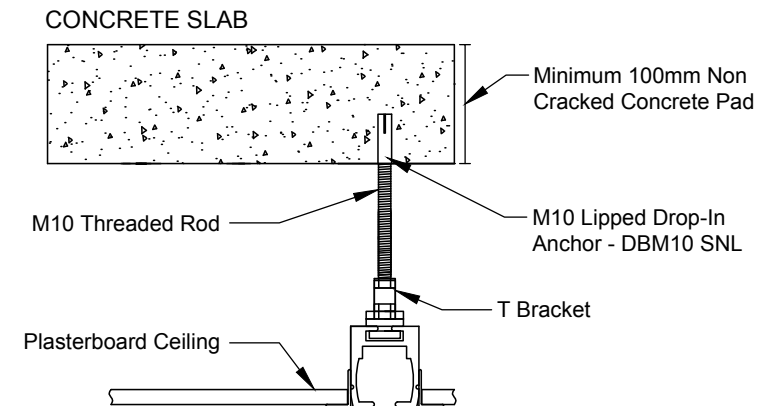
As with the hollow core slab, depending on the loading required the threaded bar is either fixed directly into the concrete using a 'knock in' concrete anchor fixing or the load is spread between two fixings using metal channel fastened in the same way.

INSTALLATION METHODS

CONCRETE PAD FIXING - BELOW CEILING MOUNT

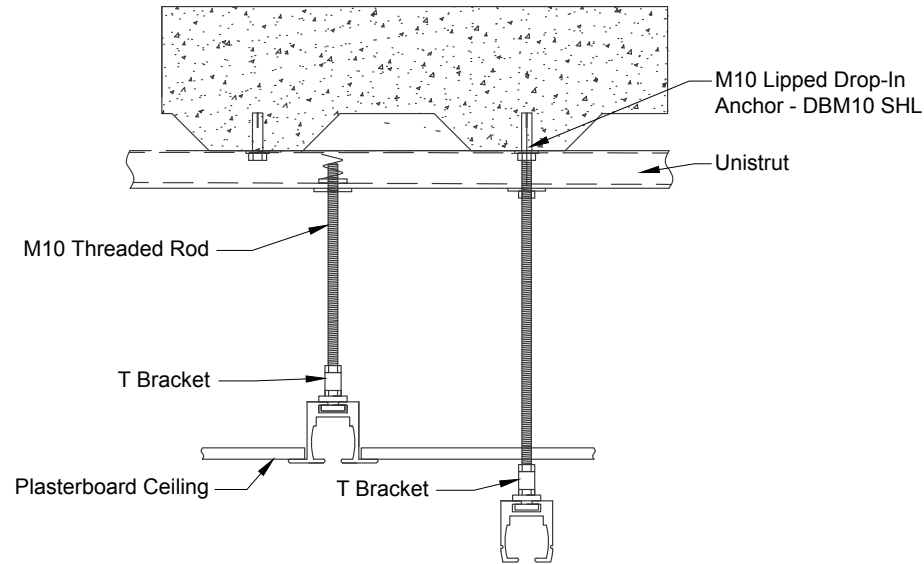


CONCRETE PAD FIXING - INSET MOUNT



PROFILED CONCRETE SLAB

Due to the uneven underside of profiled concrete slab, it is always easiest to fasten metal channel to the slab first and then drop the threaded bar from that to the track.

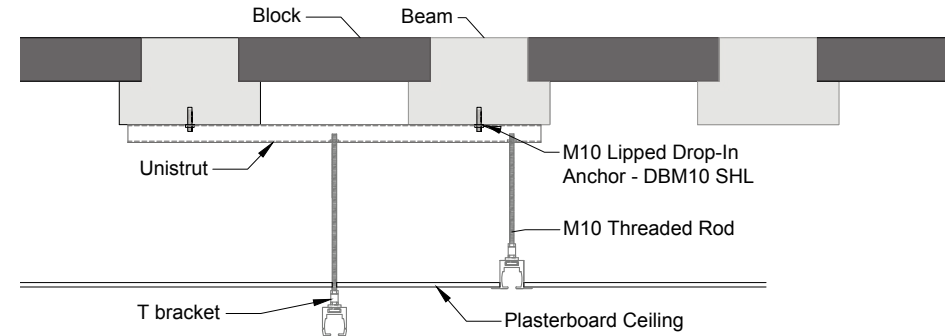


BEAM AND BLOCK

Every beam and block system is slightly different and so it's important to involve the manufacturer in the discussions when choosing the fixing method for a beam and block construction. The typical method is to fasten metal channel on the underside of the beams, spanning at least 2 beams, and then drop the threaded rod from the channel to the track.

INSTALLATION METHODS

Alternatively, it is possible to cast concrete pads between the beams in the place of the blocks in the areas where fixings are required if it's not possible to fasten into the beams.



Fixing to Steel

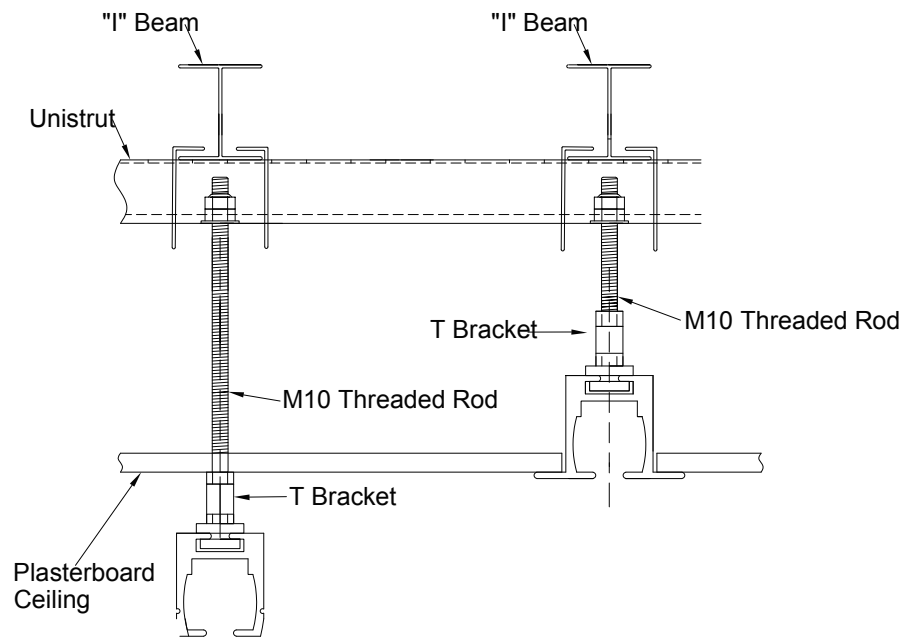
In some instances it's necessary to fasten to structural steelwork to support the ceiling track. This is often due to very high structural soffits, retro fitting hoists into an older building or fastening hoists into the top storey of a steel frame building. It is possible to support hoist track from most steel beam designs apart from 'C' and 'Z' section purlins. This is because they are constructed from very thin, often a maximum of 3mm, tin and are only designed to support lightweight loads of metal roof sheeting.

Some examples are shown for the following designs:

- 'I' Beam (UB Section)
- Box Section

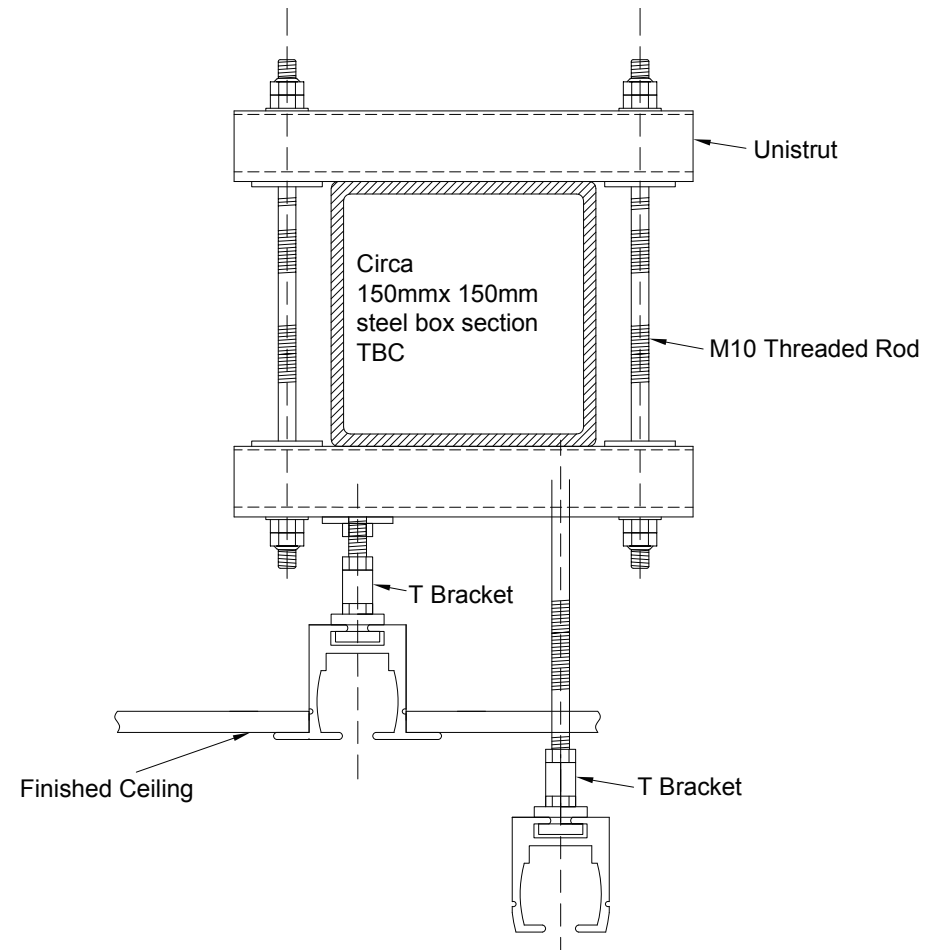
'I' BEAM OR UB SECTION

There are 2 ways of fastening to an I beam steel section. The flange of the 'I' beam can either be drilled through and the threaded rod can be supported directly off the flange or, as drilling the flange is time consuming, metal channel can be positioned below or on top of the 'I' beam using clamps and the threaded bar can be dropped from that. The former is generally only used when the fixing is on display, ie above a hydrotherapy pool, as it looks neater.



STEEL BOX SECTION

When fastening to a steel box section, metal channel is fastened to the top and the bottom and clamped together using threaded bar either side. A threaded bar is then fastened to the bottom channel and dropped to the height of the track.



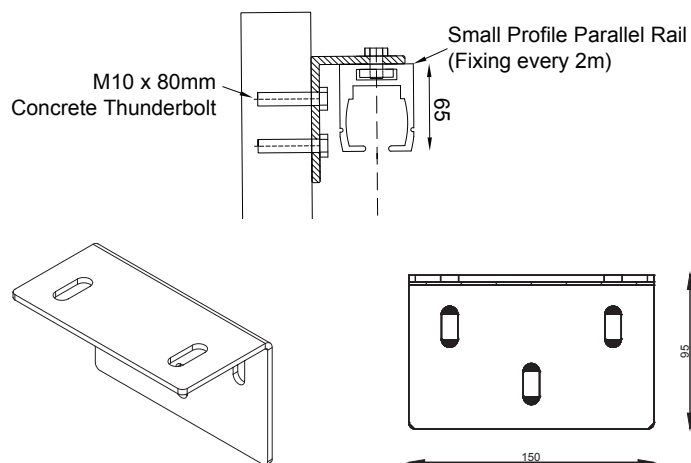
/Wall Fixings

In some instances, it just isn't possible or cost effective to support the track from the ceiling structure. This is often because the structure isn't accessible, or it isn't capable of supporting the necessary loadings. In these instances, it is often possible to support the track using wall fixings. There are a number of different wall fixing methods including the following:

- Side wall mount
- End wall mount
- Wall support post

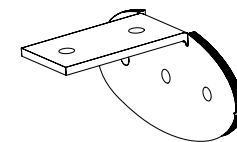
SIDE WALL MOUNT FIXTURE

This method of fixing may be used where fixing to the ceiling and the end wall of the parallel rails is not possible. To achieve this fixing, the walls must be parallel and there must be a minimum of 2m between fixings when using small profile rail or 4m if large profile. This method is only for use when fixing parallel rails of an X-Y system and cannot be used to fix a monorail. It is also an option to use this method when the maximum lifting height is needed and end wall mount would mean large profile track.



END WALL MOUNT FIXTURE

This fixing method can be used to fix small or large profile rail from wall to wall. However a small profile rail limits the distance between walls (see page 12).

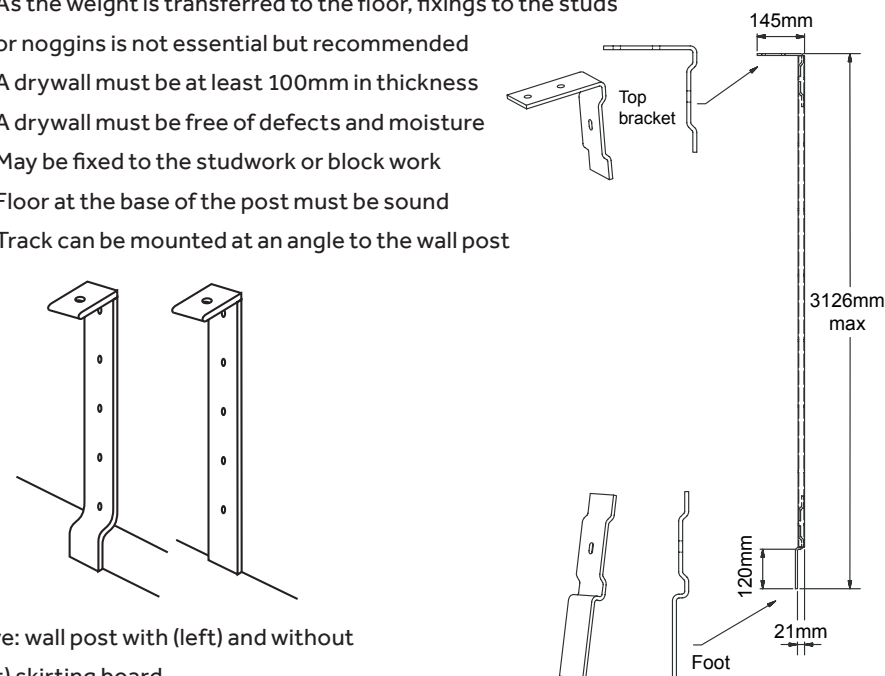


These wall brackets can also be used for lateral bracing.

WALL SUPPORT POST

The wall support post is designed to be used when the wall doesn't have sufficient strength to support a standard wall bracket. The wall post transfers the weight of the hoist and patient to the floor.

- The wall post can be supplied with or without a skirting offset section.
- As the weight is transferred to the floor, fixings to the studs or noggins is not essential but recommended
- A drywall must be at least 100mm in thickness
- A drywall must be free of defects and moisture
- May be fixed to the studwork or block work
- Floor at the base of the post must be sound
- Track can be mounted at an angle to the wall post



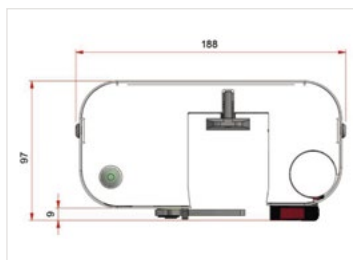
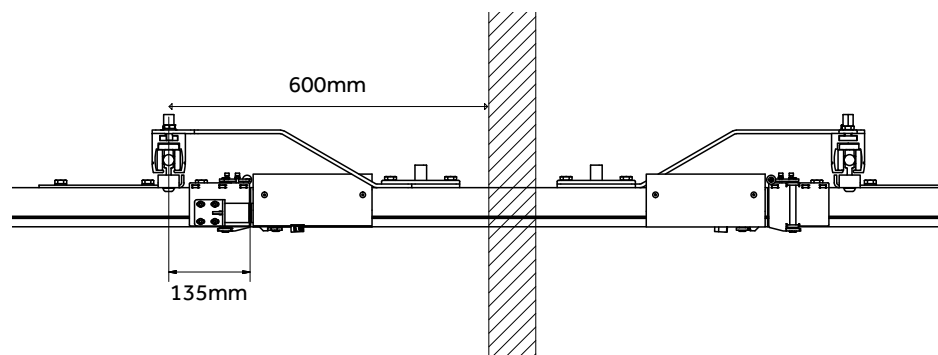
Above: wall post with (left) and without (right) skirting board

/Track Components & Options

1. Transit Coupling

The Airglide360° transit coupling is used to connect an X-Y system to a monorail or further X-Y system. This generally takes place through a doorway, and a typical scenario would be from a bedroom to a bathroom. Additional doorway drawings can be seen on pages 16 and 17.

Note: the minimum distance between the wall and the centre of the parallel is 600mm.

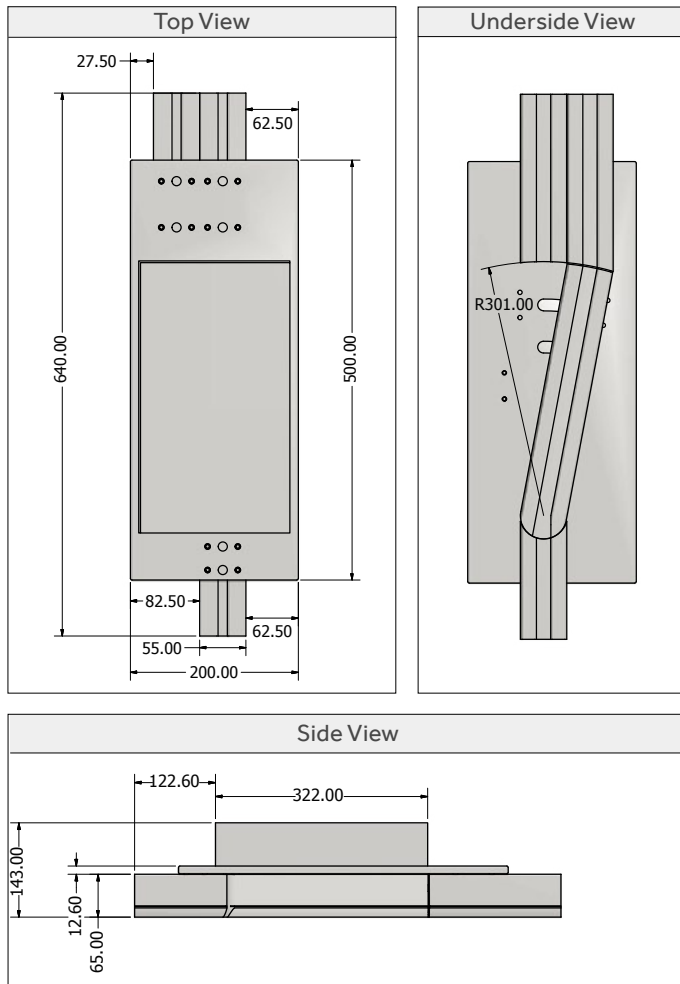


TECHNICAL DETAILS:

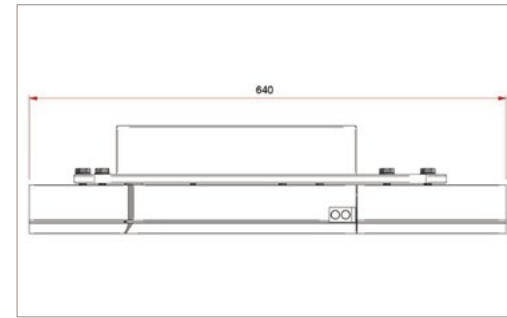
Usage:	Connects X-Y traverse rail to fixed rail system, or to another X-Y traverse rail.
Operation:	Sensor activated
Compatibility:	Airglide360° transit coupling must only be used in combination with Airglide360° rail profile
Weight and Materials:	4.7 kg. Aluminium and galvanised steel, standard powder-coated in ral. 9010.
Electrical Specification:	Power supply: 24V, max 3.5 A. Use only in combination with Innova° approved power supply. 13 Amp switched fuse spur required. Activation by Airglide360° sensor-matic technology.
Accessories / Additional Items:	Safety-lock (standard) INAG1032 Stabilizer (optional) INAG6009
Model Number:	Transit Coupling with proximity sensor INAG1025
Marking:	CE-marked as a part of the Airglide360° rail system, in accordance with EN: 10535:2006 / Directive 93/42/EEC

2. Track Switch

The Airglide360® track switch is used where a change in direction is required, often to facilitate access over a toilet and into a shower within a bathroom. A track switch must be ceiling mounted and can only be used with small profile (65mm) rail. It can be inset into the ceiling for great aesthetics, although a 300 x 300mm access hatch should be positioned beside the switch in this instance for maintenance purposes.



TRACK COMPONENTS & OPTIONS

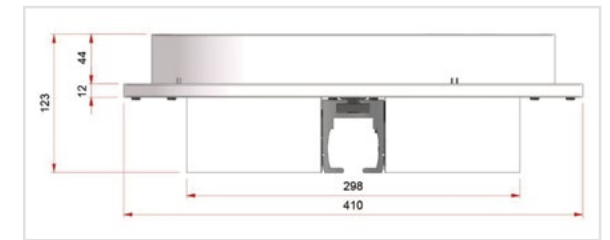
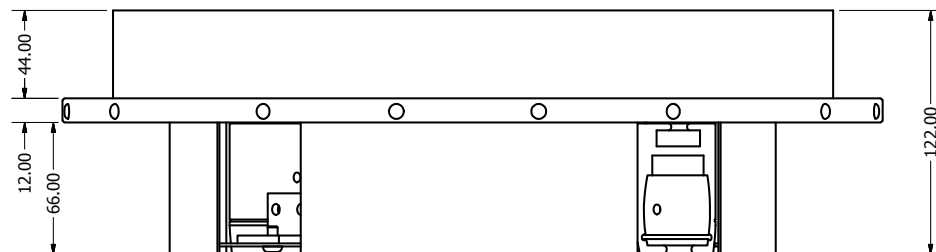
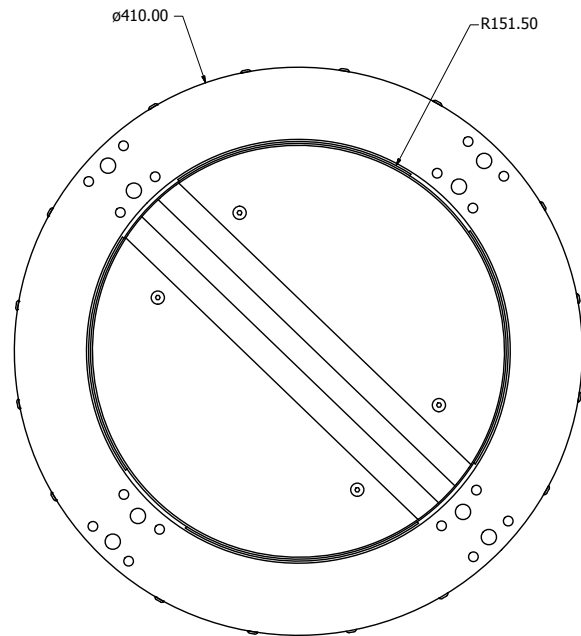


TECHNICAL DETAILS:

Usage:	To switch between two tracks. Available in left or right version.
Operation:	Sensor activated
Compatibility:	Airglide360® track switch must only be used in combination with Airglide360® rail profile
Weight and Materials:	8.2 kg. Aluminium and galvanised steel, standard powder-coated in ral. 9010.
Electrical Specification:	Power supply: 24V, max 3.5 A. Use only in combination with Innova® approved power supply. 13 Amp switched fuse spur required. Activation by Airglide360® sensor-matic technology.
Model Numbers:	Left: INAG1003 Right: INAG1004
Marking:	CE-marked as a part of the Airglide360® rail system, in accordance with EN: 10535:2006 / Directive 93/42/EEC

3. Turntable

The turntable allows for a change of direction in a confined space. The Airglide360® turntable is available as either a three or four way action. The turntable must be ceiling mounted in conjunction with small profile (65mm) rail and can be inset to the ceiling. It can be inset into the ceiling for great aesthetics, although a 300 x 300mm access hatch should be positioned beside the switch in this instance for maintenance purposes.



TECHNICAL DETAILS:

Usage:	To change direction in tight spaces, or to connect two perpendicular tracks. Available in 3-or-4-way version.
Operation:	Sensor activated
Compatibility:	Airglide360® turntable must only be used in combination with Airglide360® rail profile
Weight and Materials:	9.2 kg. Aluminium and galvanised steel, standard powder-coated in RAL 9010.
Electrical Specification:	Power supply: 24V, max 3.5 A. Use only in combination with Innova® approved power supply. 13 Amp switched fuse spur required. Activation by Airglide360® sensor-matic technology.
Model Numbers:	3-way: INAG1001 4-way: INAG1002
Marking:	CE-marked as a part of the Airglide360® rail system, in accordance with EN: 10535:2006 / Directive 93/42/EEC

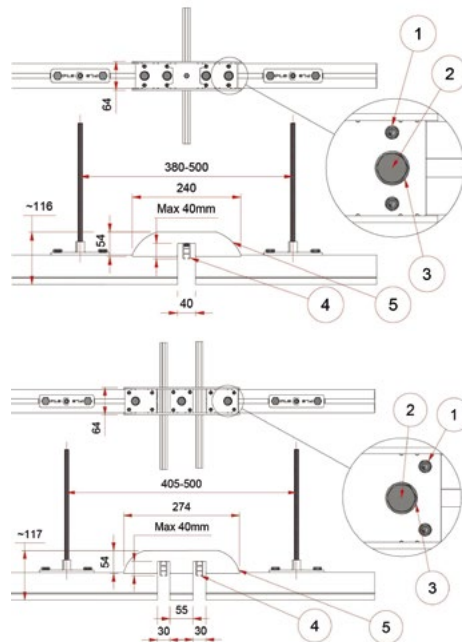
4. Inset Track



All the AirGlide360® track and components including track curves, the transit coupling, turntable and track switch can be inset into the ceiling. This method of installation vastly increases the aesthetics of the room in which it is installed as well as improving infection control.

5. AirGlide® Curtain Bridge - Single & Double

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

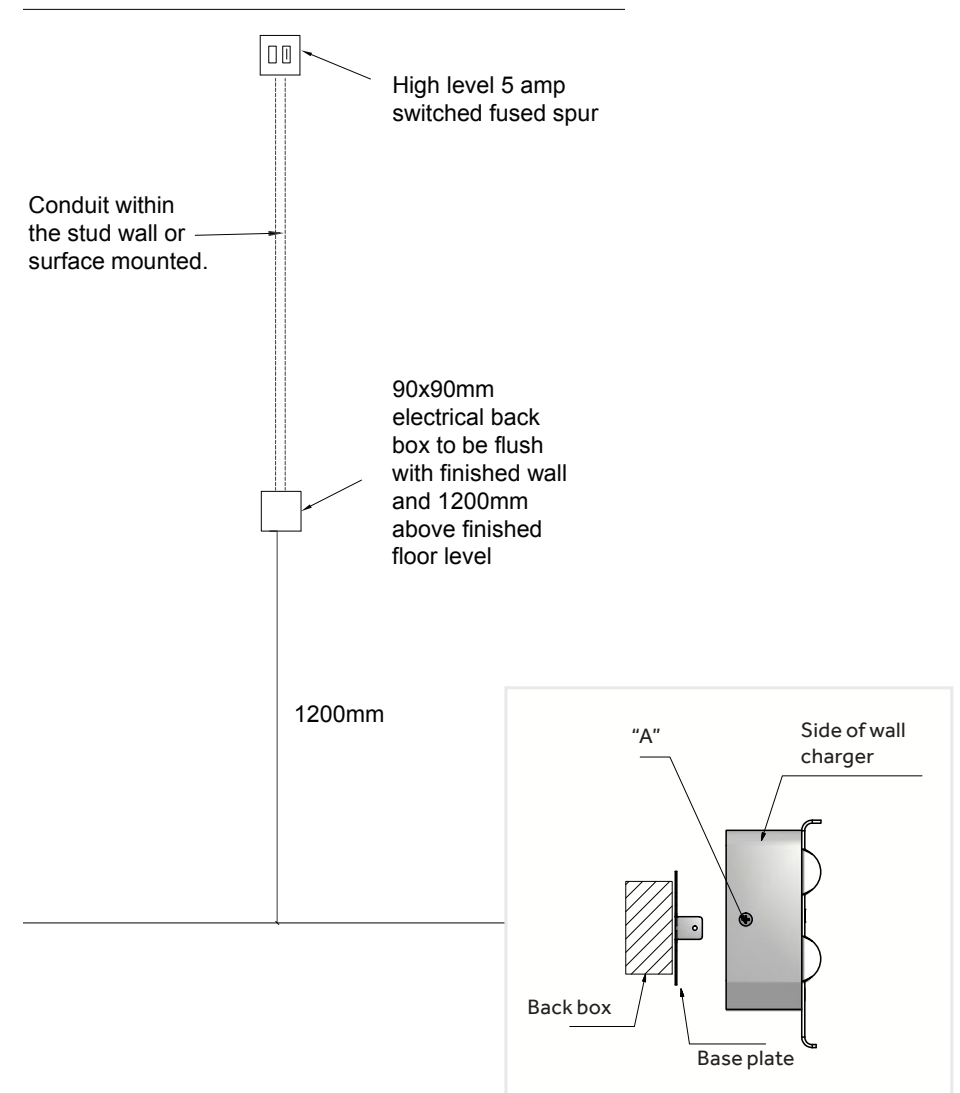


New AirGlide®
Curtain Hopper
Coming Soon

TRACK COMPONENTS & OPTIONS

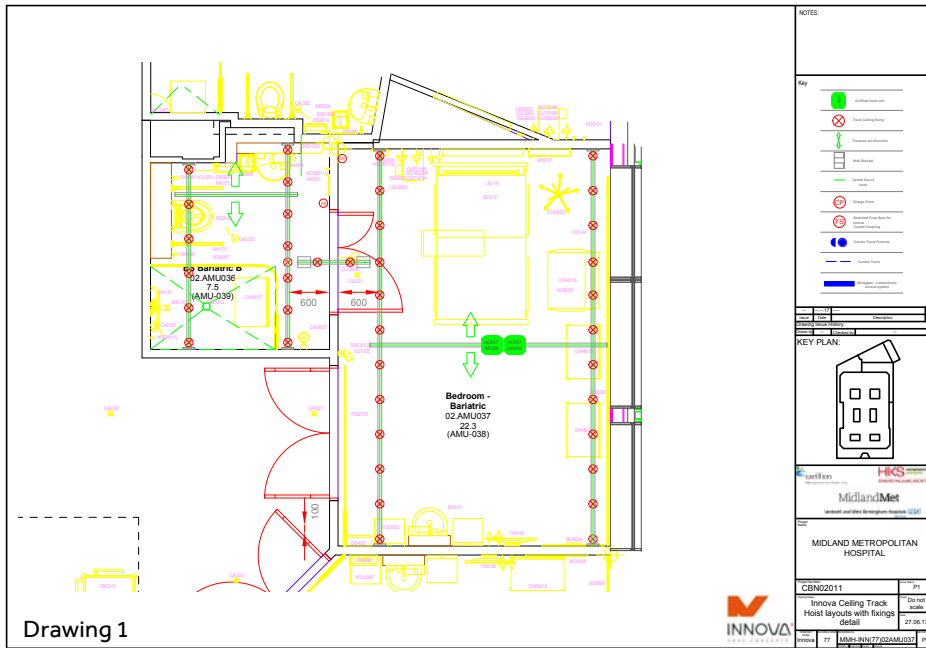
6. Hoist Charger

The Innova® AirRise® hoist units charge through the handset. A switched fuse spur is required at ceiling height, with conduit inside the wall down to a backbox at 1200mm from the floor. The wall charger shown on the right is fitted directly in front of a single electrical backbox.



/Sample Drawings

As part of our service, we provide detailed layout and fixing methods for every project we are involved in. Our design team can work in both 2D CAD and 3D BIM and the files for all of our products can be downloaded from our website. Below are some examples of layout drawings for projects we've worked on in the past.



Drawing 1

Drawing 1 details:

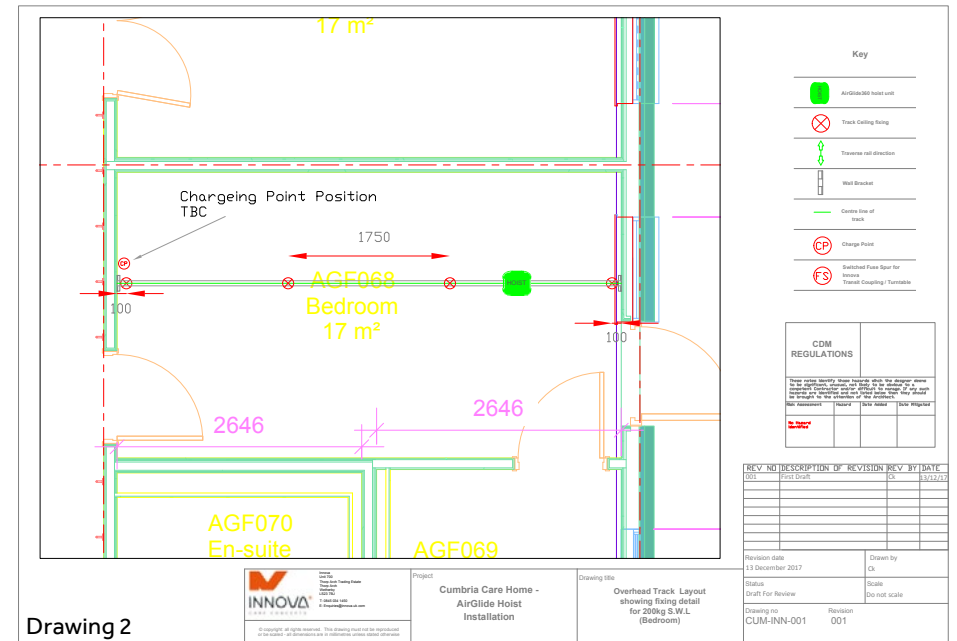
- X-Y to X-Y track system for large new build hospital project
- Double coupling required in the doorway
- Hoist unit to be dual 500kg hoist unit
- Fixings required every 750mm
- Clash detection required above the ceiling to prevent clashes with M&E services

Drawing 2 details:

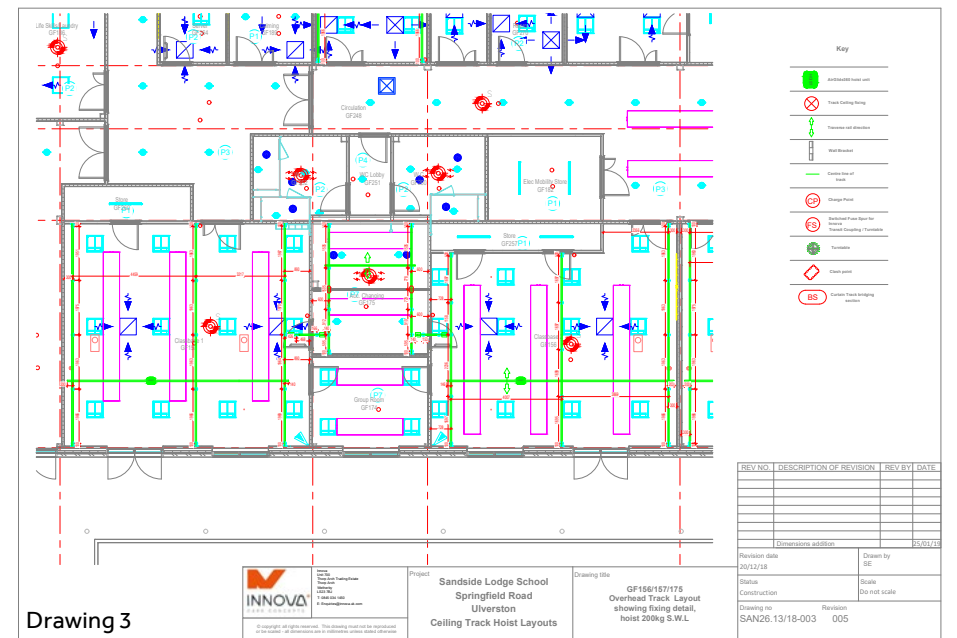
- Mono rail system designed for bed to chair transfers only
- New build residential care home with mono rails in every room for future proofing
- 200kg weight limit unit so max distance 2m between fixings but fixings spaced so that they are equal for better aesthetics

Drawing 3 details:

- New build school project
- 3 No. linked X-Y systems to transfer between classrooms and hygiene rooms
- 1 No. 200kg hoist provided in each classroom to link to hygiene room with double coupling
- Curtain bridges in the hygiene room for privacy curtains
- Fixings every 2m
- Heavy M&E presence so fixings coordinated to prevent clashing with lights, radiant panels etc



Drawing 2



Drawing 3

/Other Considerations

There are a number of things to consider when specifying an overhead ceiling track hoist. This is particularly important if an X-Y system is installed, as the following needs to be kept in mind:

- Under hanging lights
- Position of things such as alarm pull cords
- Curtains and ward screens - ceiling mounted options not viable
- If wall mounted, long lengths of track may be required - is it possible to get them into the room?

Other things to bear in mind include:

- Weight and size of the client
- Potential user group - self hoisting or carers
- User mobility
- Single or multi-user environment
- Which locations does the hoist need to reach?
- How will the hoist be installed?

/FAQs

HOW IS A CEILING TRACK HOIST INSTALLED?

There are many different methods of installation dependent on the structure of the room the system is being installed into. These include systems being installed to the ceiling using unistrut spanning above timber joists, unistrut attached to concrete pad sections, wall mount with brackets attached to the walls, or even wall posts which transfer the weight of the system into the floor. Further detail of the different installation methods and when they are used can be found on pages 18 - 31 of this manual.

OTHER CONSIDERATIONS / FAQs

WHAT DISTANCE SHOULD THERE BE BETWEEN FIXINGS?

The distance between the fixings is dependent on the weight which the system is designed to take. More information on the different loading requirements and the recommended number of fixings is shown on page 10 of this guide.

CAN A HOIST BE USED IN HUMID AREAS SUCH AS SWIMMING POOLS?

Yes. However it is important that either Innova® or your Innova® dealer is informed when specifying the system to ensure that the correct fixings are used. Special coated PCB boards for the hoist unit are recommended, and infra-red handsets are available for some hoist units. The hoist unit or the handset should not be submerged in water. Current IEE guidelines must be adhered to in relation to the placing of electrical outputs.

HOW IS THE INSTALLATION WEIGHT TESTED?

Innova® recommend a weight test to 1.5 times the safe working load. This will be carried out by the team on completion of the installation. It will also be carried out each time the system is serviced.

WHAT ARE THE RECOMMENDED PICK-UP POINTS?

Recommended locations of the ceiling track in relation to the bed, toilet or bath are shown on page 7.

CAN ANYONE INSTALL AN INNOVA® CEILING HOIST SYSTEM?

No. Only engineers who have undertaken and passed a Innova® training course are able to install these systems. This is to ensure the finished installation is totally safe for the end user.

WHAT POWER SUPPLY IS REQUIRED?

All Innova® hoists require a power supply for charging. Components such as turntable, track switch and transit couplings also require power supplies. For more information on these requirements see pages 32 - 39.

/Overhead Hoist Alternatives

There may be some situations where other methods of patient hoisting may be more appropriate for the care environment. On the following pages we've provided information on some of these systems and products - if any further detail is required then please get in touch.

/The Integralift

The Integralift is a unique patient lifting solution that folds neatly away into fitted cabinets when not in use. Representing a welcome alternative to conventional fixed hoists, the Integralift provides what you need, but leaves you with the environment that you want – tasteful, uncluttered and welcoming.

For more information, visit our website at <https://innovauk.care/integralift>



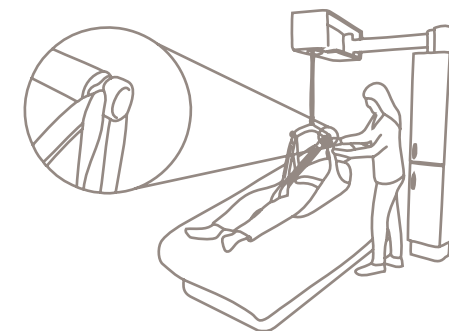
How the Integralift Works



1

ACTIVATE

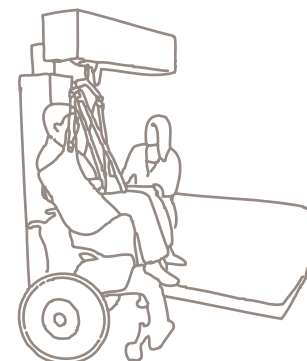
Open closet and pull out the lift.
Position the lift above the user.



2

PLACE THE SLING

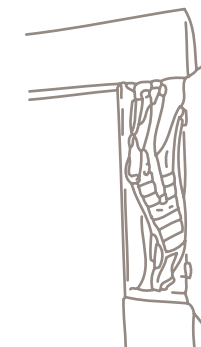
Position the sling under the user.
Hook the sling on the lifting bar.



3

THE TRANSFER

Lift and position the user over the chair.
Lower the user into the chair.



4

COMPLETED

Place the lifting bar and the remote in their designated places. Swing the lift back to its wall position. Put the sling back in the closet.

Integralift Configuration Options



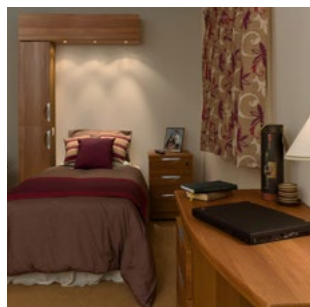
- 1** **SELECT YOUR POSITIONING**
Choose from left or right versions, depending on the layout of your room.



- 2** **SELECT YOUR MOUNTING OPTION**
Fix to block, brick, concrete, or timber with Floor to Ceiling Structure, Wall Mount Structure, Inside Wall Structure (ideal for new builds as the whole post is hidden behind the wall), Concrete Wall Structure, or Concrete Ceiling Structure options.



- 3** **SELECT YOUR CABINET DESIGN**
Choose from hundreds of aesthetic configurations - change your cabinet colour or wood design, add an extra upright cupboard on the other side of the bed, or even make it into a bookshelf or a full bed head unit incorporating medical gases and services!



- 4** **SELECT YOUR OPTIONS**
Different light fittings can be integrated in the top cupboard. Options such as integrated services including oxygen, lighting, laminate construction for infection control, and integrated drugs cabinets and wardrobes are also available.

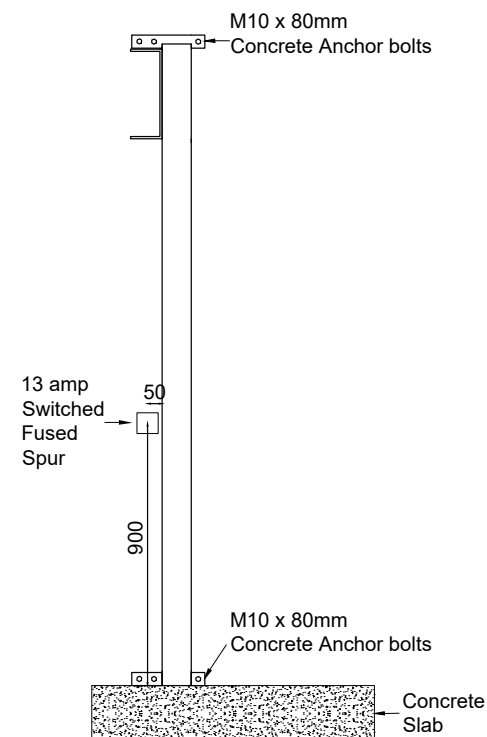
OVERHEAD HOIST ALTERNATIVES

Integralift Technical Details

There are 2 fixing methods for the Integralift, direct wall mount or a floor to ceiling mount. Due to the cantilever lifting mechanism, it's important to recognise the high loading requirement implied on the structure the post is fastened to and ensure that a structural engineer is involved in the choice of fixing method.

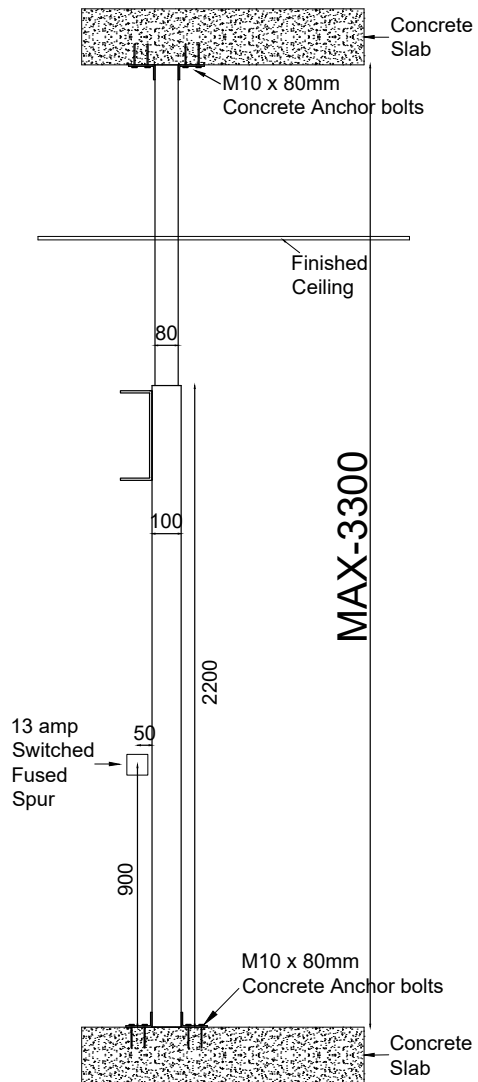
WALL MOUNT FIXING

When the Integralift is being installed in a room with solid, masonry walls, it is sometime possible to fasten the post of the hoist directly to the wall. In this case 7 No. 80mm concrete bolts will be used to attach the brackets of the post to the wall. fixing method.



FLOOR TO CEILING FIXING

If the wall structure the Integralift is being positioned on is not capable of support the required loadings, it is possible to fasten the post of the hoist to the floor and ceiling structures. This is possible with both timber joists, concrete soffits and structural steelwork.



OVERHEAD HOIST ALTERNATIVES

ELECTRICAL REQUIREMENTS

The Integralift hoist should be wired into a 13amp switched fused spur. This should be positioned as shown on the drawings on the previous pages.

TECHNICAL DETAILS:

Maximum load	230 kg
Battery	24 V DC, 4,5 Ah, sealed lead battery, 40 lifts
Battery charger	100-240 V AC, 40-60 Hz, max 1.3 A
Lifting speed	5 cm/sec
Lifting interval	1.8 m (vertically adjustable)
Diameter of action	3m
Soft start and soft stop	Yes
Emergency stop	Electrical
Emergency lowering	Electrical and mechanical
Protection class	IP 20 (IP43 with accessories)
Weight	95 kg





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