



Safe Patient Handling & Mobility

Design and Planning Guide



MAKING MOBILITY SAFER FOR PATIENTS AND CAREGIVERS

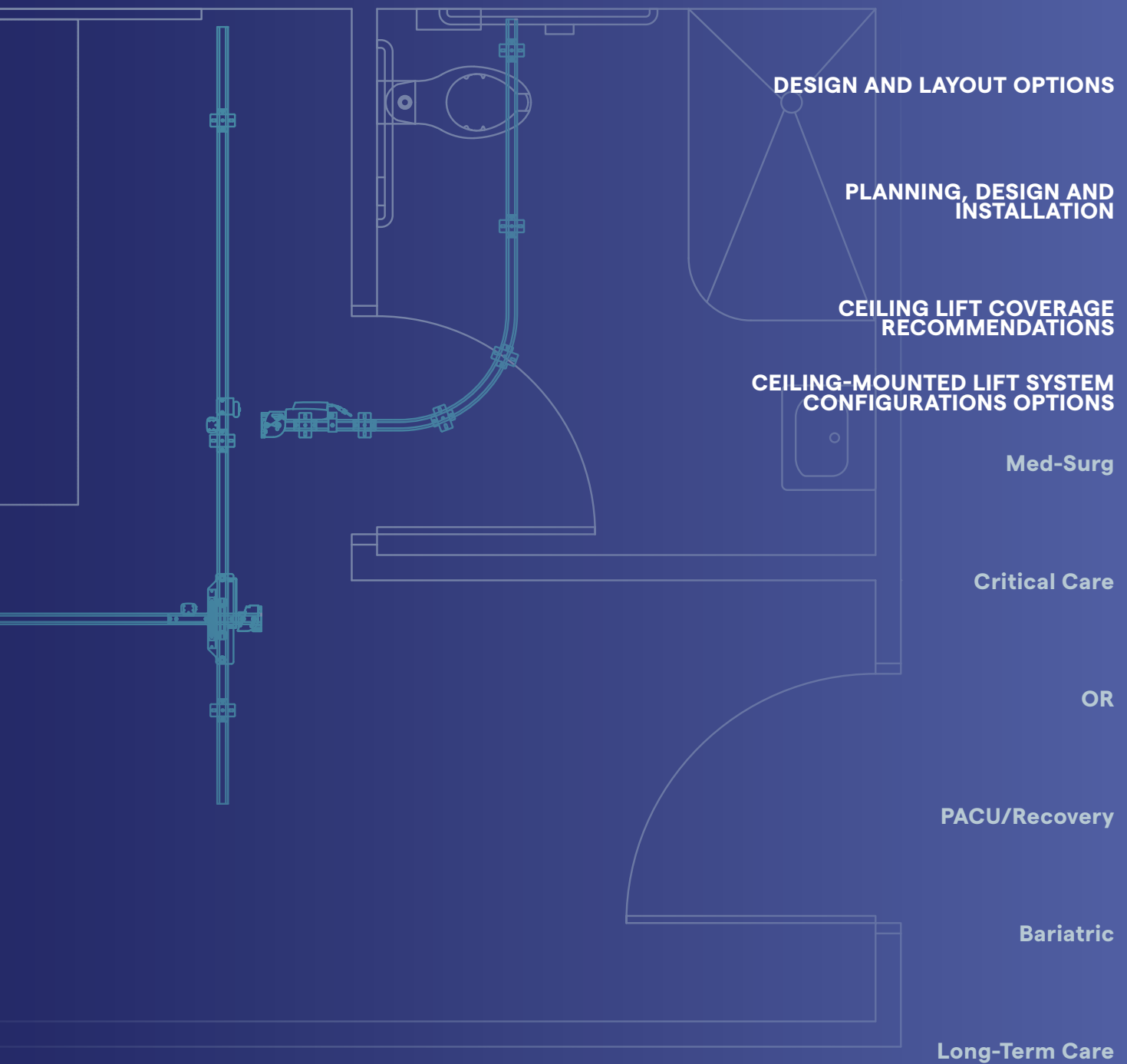
Lifting, Repositioning,
Transferring, Transporting

THESE ARE ALL ESSENTIAL PATIENT-HANDLING
TASKS CAREGIVERS LIKE YOU PERFORM EVERY DAY.
BUT WITHOUT PROPER SUPPORT, THEY ARE ALSO POTENTIAL
SAFETY RISKS.

AT HILLROM, OUR GOAL FOR SAFE PATIENT HANDLING AND MOBILITY IS TWO-FOLD:

- Safely help patients get moving earlier and often
- Reduce the risk of injury for caregivers by helping them avoid high-risk patient handling tasks

To do this, we partner with healthcare providers, architects, and construction contractors around the world to plan and design custom lifting environments to help make every step safer. Our extensive portfolio of overhead, mobile and sit-to-stand lifts — along with 300+ accessories — is designed for care environments from pediatric to bariatric, and from critical care to rehabilitation.



**OVERHEAD SYSTEM
COMPONENTS**

**SLING AND LIFTING
ACCESSORIES**

SUPPORT

**Because we believe mobility and safety
should go hand in hand. And we want to
help you improve both.**

A photograph showing a healthcare team in a clinical setting. A female nurse in blue scrubs stands on the left, looking at a patient. The patient is an elderly woman with short grey hair, wearing a patterned hospital gown and a bright green overhead lift harness. A male doctor in a white lab coat stands on the right, leaning over and adjusting the harness. The background is a bright, modern clinical room with large windows.

DESIGN AND LAYOUT OPTIONS

WE PUT CAREFUL CONSIDERATION INTO HOW OUR OVERHEAD LIFTS ARE INSTALLED, SO THEY ARE EASY TO USE WHENEVER YOU NEED THEM. IDEALLY, THIS MEANS COLLABORATING WITH ARCHITECTS, PLANNERS AND CLINICAL TEAMS IN THE INITIAL PLANNING STAGES.

In addition to technical specifications, consider the following questions when planning your lift environments:

- What is the desired clinical outcome?
- What is the acuity level?
- What is the degree of patient dependency?
- What patient sizes will you need to support?
- What types of patient transfer, repositioning and lifting will be needed?
- What are your local regulations and policies for safe lifting?
- Is the room a “wet area?”
- How can the system complement the room’s configuration and aesthetics?
- What other equipment will impact installation and use?
- What are the structural considerations (e.g., wall materials, obstacles, electrical source, mounting and installation)?
- What is your budget and expected return on investment?

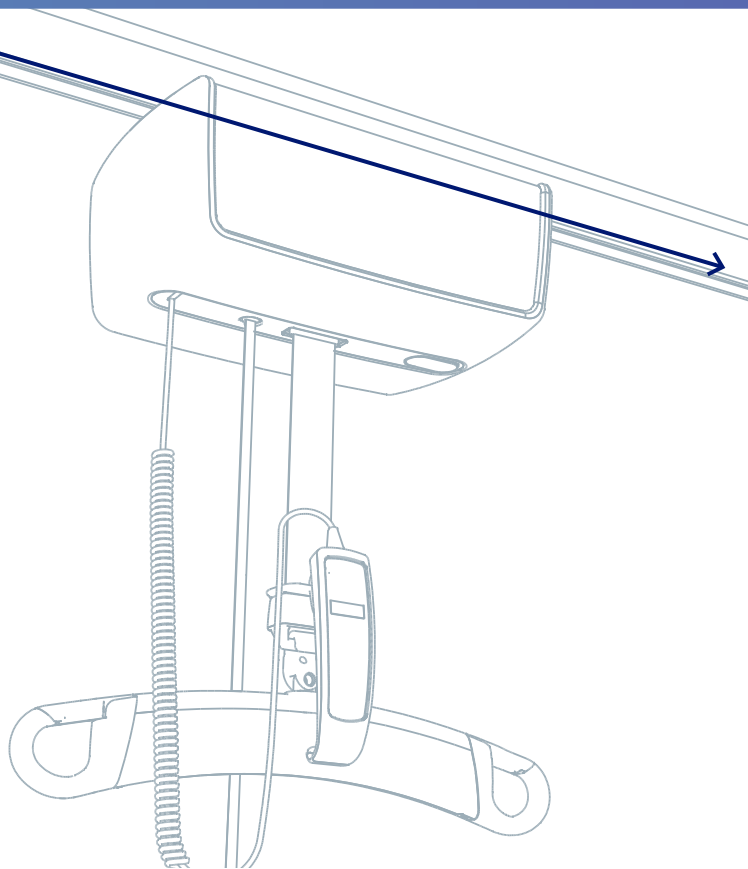
Once these questions are answered, it’s time to choose the right equipment for each room.

Ceiling lift systems are available with two main installation options:

1

Fixed Rail

A fixed rail installation is ideal when you want to move a patient between two fixed points, for example, from a bed to a toilet. The rail can be straight or curved, and be installed with unobtrusive support legs, which are attached to a nearby wall. Note that a curved rail always requires a ceiling installation. In many care settings, a fixed rail is a simple, efficient and economic choice.



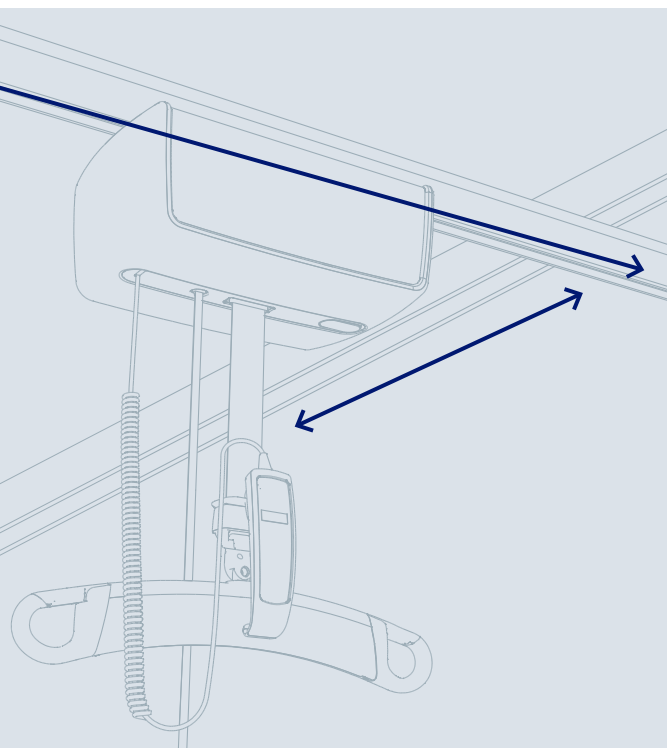
2

Traverse System

A traverse system consists of a movable rail mounted on two fixed rails. It is often the most versatile solution, as it provides a greater freedom for lifting and movement versus a fixed rail system.

- Provides complete full room coverage.
- Provides flexible placement around ceiling fixtures/lighting.
- Offers a variety of docking locations when not in use.

It is possible to connect the traverse rails with switches, enabling transfers between different rooms. Another advantage is that the lift automatically centers itself when lifting. The traverse system offers a greater ease-of-use and flexibility for patient care.



PLANNING, DESIGN AND INSTALLATION

1

Planning phase considerations

- The type of rooms that are targeted for ceiling lift installations e.g. ICU, MedSurg, LTC
- The type of lift system required e.g. straight rail, traverse system, traverse system connected to bathroom system
- The percentage of rooms requiring lift systems, as well as those requiring bariatric lifting capabilities

2

The design phase

Preliminary design – When completing a preliminary design, you can use typical system designs shown later in this guide, or found on the Construction Portal website below.

If needed, Hillrom can provide a preliminary lift system layout in AutoCAD to overlay onto any building plans. Hillrom also offers standard room configurations in Revit which can be found on the Construction Portal at: <https://construction.hill-rom.com/en>

Request For Quote (RFQ) – If requesting a quote from Hillrom, please provide building plans in DWG or Revit format for all rooms requiring lift systems. If available, provide floor plans, RCP (Reflected Ceiling Plans), interior elevation details and building sections.

- Some locations may require a FF&E plan (furniture, fixtures and equipment) to ensure rail is aligned with furniture and avoid other obstructions.

RECOMMENDATION:

Hillrom recommends incorporating the lift system layout prior to designing the ceiling installation. Lift systems are typically aligned with the false ceiling grid and in some cases recessed into the false ceiling. They will require coordination with lighting, diffusers, sprinklers and other such equipment.

3

Shop drawings and final coordination

During this stage there will be:

- Revision phase (if necessary)
- Shop drawings for project coordination process
- Final drawings and approval
- Installation (after final approval)

4

Installation

Note: Installation must be performed by a Hillrom certified installer in accordance with Hillrom specifications and applicable building codes.

- Standard installation by Hillrom includes an installation schedule, to be determined based on mutually agreed plans prior to start
- The team will participate in project-related pre-installation meetings/calls per request
- Installation includes labor, attachment material, lateral bracing, and final load testing
- Charging station(s) installed as per plans
- Written load test report(s) certifying the lift system(s) ready for use



CUSTOMER RESPONSIBILITIES:

- Verification of the integrity of the building structure to support the lift, certifying that said structure can support the weight of the lift system point loads
- Installation of electrical mains to provide power to the ceiling lift charger station(s)
- Certified engineering drawings, analysis and calculations*

**For projects in the US, Hillrom can provide this engineering of the patient lift attachment(s) for an additional fee for service.*

By working and coordinating with Hillrom early in the construction design process, customers can ensure cost savings with other deliverables in the project such as:

- Ventilation/HVAC
- Electrical services/IT
- Ceiling construction

CEILING LIFT COVERAGE RECOMMENDATIONS^{1*}

Clinical Unit/Area	Ceiling Lift Patient/Bed Coverage**	Preferred Track Configuration	Min Weight Capacity
CRITICAL CARE	100% Depending on patient population, consider one or more rooms with expanded-capacity	Traverse	Standard Expanded-capacity
	Lift should travel into toilet room	Traverse or Straight	Match lift type
MICU	100%	Traverse	Standard and/or Expanded-capacity
SICU	100%	Traverse	Standard and/or Expanded-capacity
ICU (combined MICU/SICU/CCU)	100%	Traverse	Standard and/or Expanded-capacity
DEMENTIA CARE/GERI-PSYCHIATRY UNITS	These areas that do not treat actively suicidal patients may need overhead lifts.	Traverse or Straight	Standard and/or Expanded-capacity
DENTAL	Depending on patient population, one regular and/or one expanded capacity/bariatric lift	Straight or Traverse	Standard and/or Expanded-capacity
HEMODIALYSIS ■ Ceiling lift coverage is required in areas where lateral transfers from stretchers or inpatient beds to dialysis beds occur.	50-100%	Traverse or Straight (One straight track over several bays in a row would be appropriate)	Standard At least one Expanded-capacity
EMERGENCY DEPARTMENT/URGENT CARE CENTER	100% Depending on patient population, consider one or more rooms with expanded-capacity	Preferred Design Traverse over multiple bays in a row or in private rooms. Alternate Design Straight track over several bays in a row or in private rooms.	
Ambulance Bay	One expanded capacity/bariatric lift under canopy in ambulance bay. Also consider in Vestibule area just inside the building.	Traverse	Expanded-capacity
ENDOSCOPY FACILITY/DIGESTIVE DISEASES FACILITY	Depending on patient population, one regular and/or one expanded capacity/bariatric lift	Traverse or Straight	Standard and/or Expanded-capacity
HOSPICE FACILITY, NURSING HOME, REHABILITATION, AND OTHER LONG-TERM CARE FACILITIES (COMMUNITY LIVING CENTER)	100% Less coverage may be provided for primarily dementia units	Traverse (Into Bathroom)	Standard and/or Expanded-capacity
IMAGING/RADIOLOGY (X RAY, CT, ULTRASOUND, NUC MED, ETC...) ■ Overhead/ceiling lift system must be compatible with ceiling-mounted imaging equipment and able to accommodate at least the same weight capacity as the table. ■ Careful consideration is required to avoid conflicts between ceiling lift tracks and gantries in radiology rooms with traverse ceiling mounted equipment.	50-100% Where substantial obstacles prevent overhead lift use in rooms, overhead lifts for patient transfers are recommended in nearby holding/transfer areas.	Straight or Traverse	Standard
MRI	100%	Straight (Located in adjacent MRI patient transfer area)	
MEDICAL/SURGICAL UNIT	100% Lift should travel into toilet room	Traverse	Standard and/or Expanded-capacity
MORQUE ■ Expanded capacity lift with minimum weight capacity of 600 lbs or greater depending on patient population characteristics. ■ Include supine lift frame in purchase	100%	Traverse or Straight (Lift system should be able to assist in inserting and extracting trays into cooler as well as lifting and moving bodies into and within autopsy suite.)	Standard and/or Expanded-capacity
NURSE TRAINING AREA	One	Straight	Standard
OBSTETRICAL FACILITIES			
Multipurpose Exam Rooms	At least one standard lift	Traverse	Standard
Labor/Delivery/Recovery (LDR)	Depending on patient population, one regular and/or one expanded capacity/bariatric lift	Traverse	Standard and/or Expanded-capacity
OUTPATIENT/PRIMARY CARE CLINICS			
Exam / Multi-specialty Exam Room	At least one standard lift	Traverse	Standard
Special Care Multi-specialty Exam Room	At least one expanded capacity/bariatric lift	Traverse	Expanded-capacity
Spinal Cord Injury Exam/Treatment Room	100%	Traverse	Standard

Standard lifts should have a minimum weight capacity of 500 to 600 lbs.

Expanded-capacity lifts for individuals of size should have a minimum weight capacity of 750 to 1,000 lbs.

Clinical Unit/Area	Ceiling Lift Patient/Bed Coverage**	Preferred Track Configuration	Min Weight Capacity
OUTPATIENT/PRIMARY CARE CLINICS			
Procedure Room	100%; At least one expanded capacity/ bariatric lift	Traverse	Standard and/or Expanded-capacity
Physical Therapy/Treatment Area	100%	* Traverse design over exercise mats and throughout	Standard and/or Expanded-capacity
Exercise Area	100%	** Straight design over parallel bars walkway	Standard
PEDIATRICS	20%	Traverse	Standard
PSYCHIATRIC CARE AREAS	Overhead lifts shall NOT be installed in behavioral health units with potential for actively suicidal patients	N/A	N/A
RESPIRATORY THERAPY FACILITIES (PULMONARY MEDICINE)			
Bronchoscopy Procedure Room, Pre/Post-procedure area	100%	Traverse	Standard
Sleep Study Room	Depending on patient population, determine if lift is needed and lift type If room has a lift, the lift should travel into toilet room	Traverse Traverse	Standard and/or Expanded-capacity Match lift type
RADIATION THERAPY FACILITIES			
Radiation Therapy Room	Minimum of one lift	Traverse	Standard
Patient Stretcher in holding bay*	*Install lift in holding area if lift cannot be installed inside the Radiation Therapy Room	Traverse	Standard
REHABILITATION FACILITIES — INPATIENT (POLYTRAUMA REHABILITATION CENTER) ■ Provide one supine sling and hanger bar system for unit	50-100% If unit is primary neuro rehab, provide a minimum of 70% coverage. For new construction or rooms large enough for ambulation within rooms, provide 100% coverage to assist in gait training, etc.	Traverse	Standard and/or Expanded-capacity
Rehabilitation Gym	100%	Traverse or Straight	Standard
Hallway for Rehabilitation with Ambulation	100%	Straight	Standard
REHABILITATION FACILITIES — OUTPATIENT			
Physical Therapy, Occupational Therapy, or Kinesiotherapy Clinics	100% *Full room coverage recommended	Preferred Design Multiple but separate traverse systems covering specific areas, such as parallel bars and treatment tables. Alternate Design Straight Track installed over parallel bars, traverse track system covering treatment tables and activity areas.	Standard and/or Expanded-capacity
SPINAL CORD INJURY UNIT - INPATIENT AREAS	100%	Traverse *Lift coverage over the whole bed and transfer areas *Bathrooms should also have separate Traverse track systems	Standard
Surgery Facilities — Inpatient and Ambulatory Surgery Center	100%	Traverse	Standard
Preoperative holding/ Phase II recovery	100%	Traverse	Standard and/or Expanded-capacity
Procedure and Operating Rooms ■ Ceiling or wall-mounted equipment in ORs require careful consideration between lift tracks, traversing lift motors, and other equipment suspended from or mounted on ceilings and walls.	100% Depending on patient population, one or more expanded-capacity/bariatric lift may be needed	Traverse	Standard and/or Expanded-capacity
Cath Lab	100%	Traverse or Straight	Standard
Postoperative / PACU ■ Provide one supine sling and hanger bar system for unit	100% Depending on patient population, one or more expanded-capacity/bariatric lift may be needed	Traverse (If possible, extended over all beds in a row using one lift system per row)	Standard and/or Expanded-capacity

*Above are ceiling lift coverage recommendations by clinical unit/area. These recommendations should be considered advisory and are not intended to be used as regulatory or accreditation requirements. The information in this table; however, may be used to support overhead lift recommendations with consideration of patient needs by clinical unit/area. Insufficient coverage of patients or clinical unit/area presents a risk of injury for caregiver or patient.

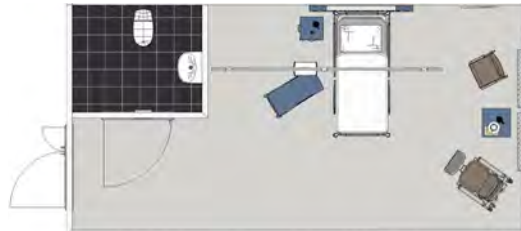
**Lifts with a scale are recommended; especially if your beds do not have one.

CEILING-MOUNTED LIFT SYSTEM CONFIGURATIONS OPTIONS

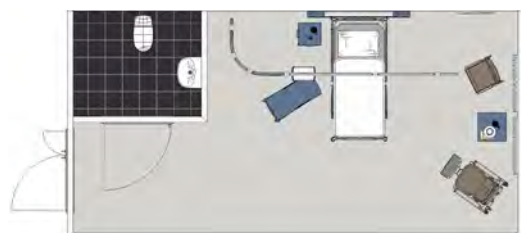
MED-SURG

Basic Rail

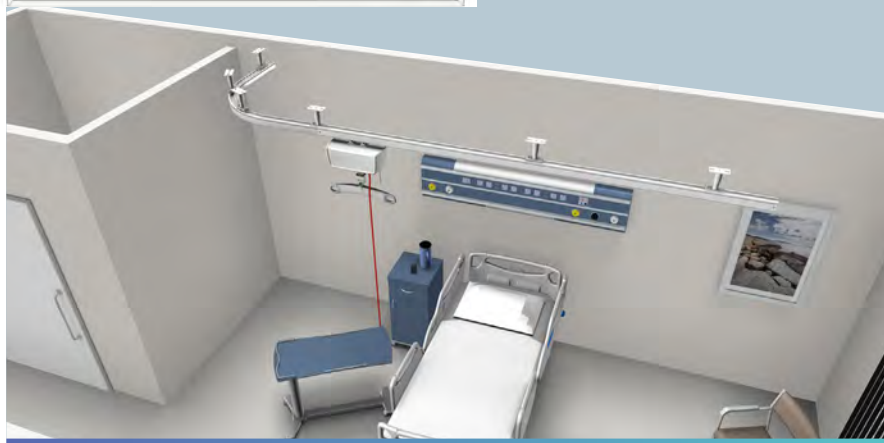
A basic single rail lift system accommodates lifting directly below the rail. It is used to lift and move patients between two fixed points. The inclusion of a curve in the rail system is also possible, and allows for optional storage for the motor, into for instance a headwall or cabinet. To the right are examples of ceiling-mounted, standard single rail lift system configurations.



BASIC SINGLE RAIL



BASIC SINGLE RAIL CURVING INTO HEADWALL

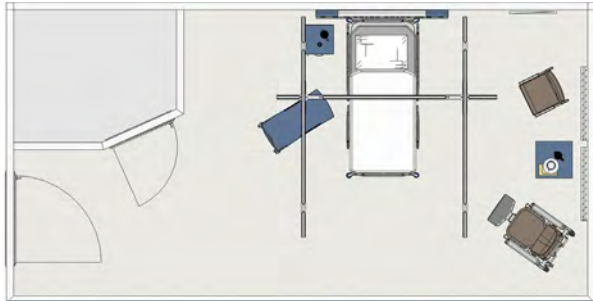


Note: Not all configurations available are shown.

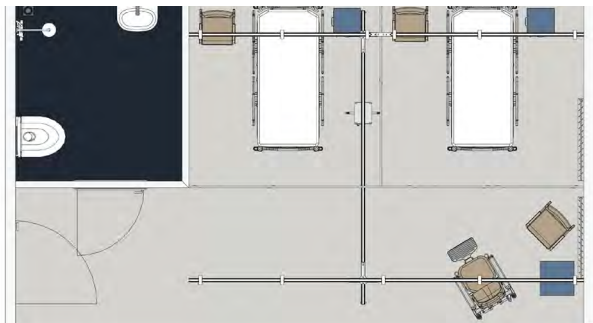
Traverse System

A traverse lift system consists of one traversing rail mounted on two fixed rails. This design covers a greater area for lifting and provides higher flexibility for patient transfers, interior planning and room/acuity scalability versus a basic single rail system.

As with other ceiling mounted rail systems, the traverse system allows for optional storage for the motor, into for instance a headwall or cabinet.



**TRAVERSE SYSTEM
SINGLE BED**



**TRAVERSE SYSTEM
FOR 2 BEDS**

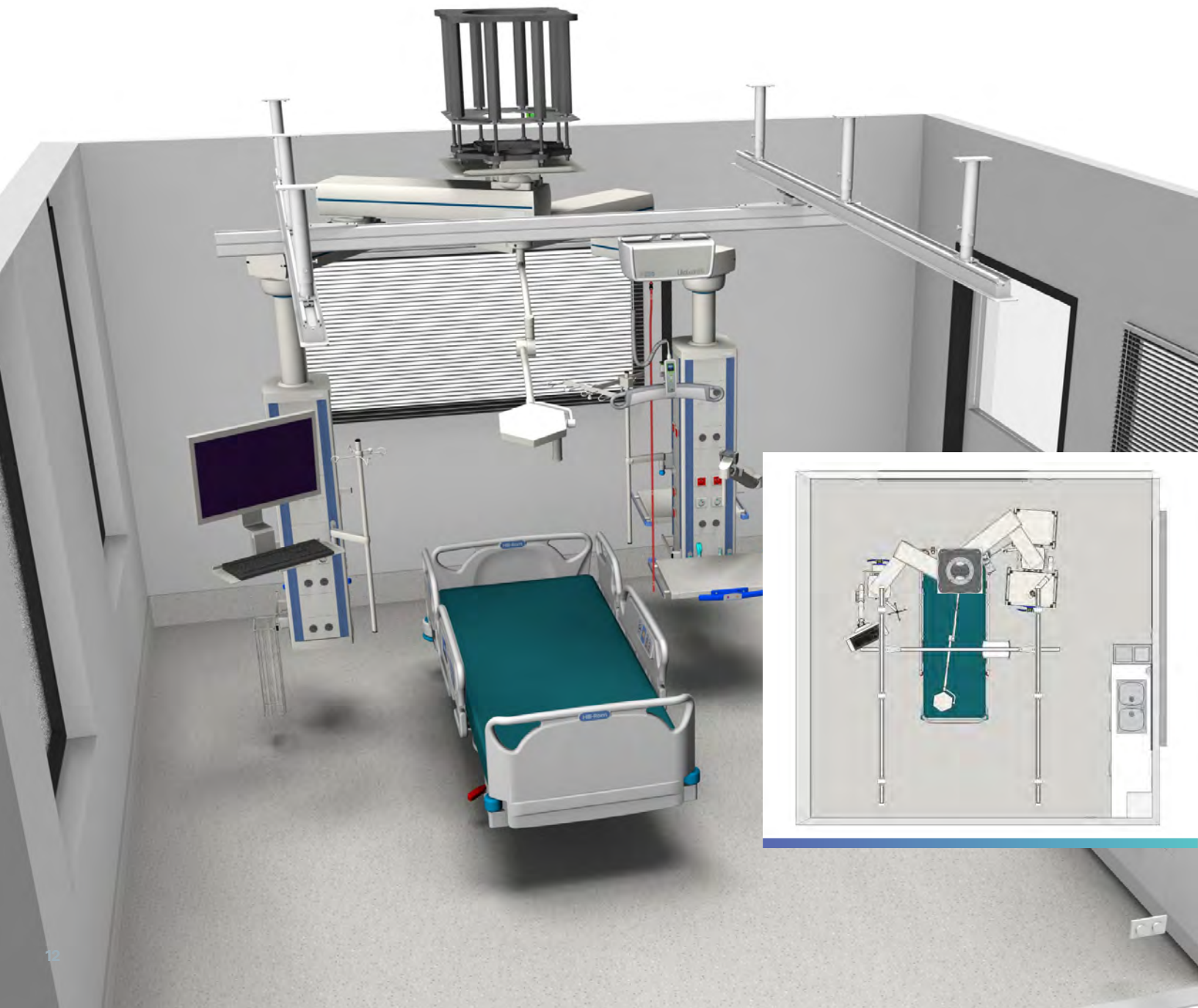


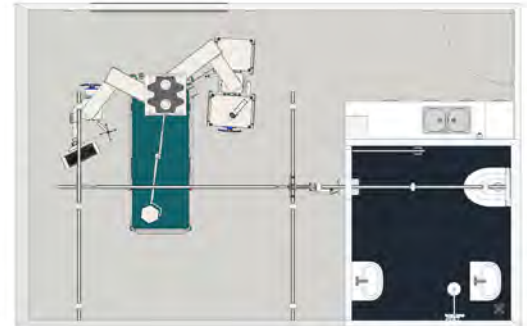
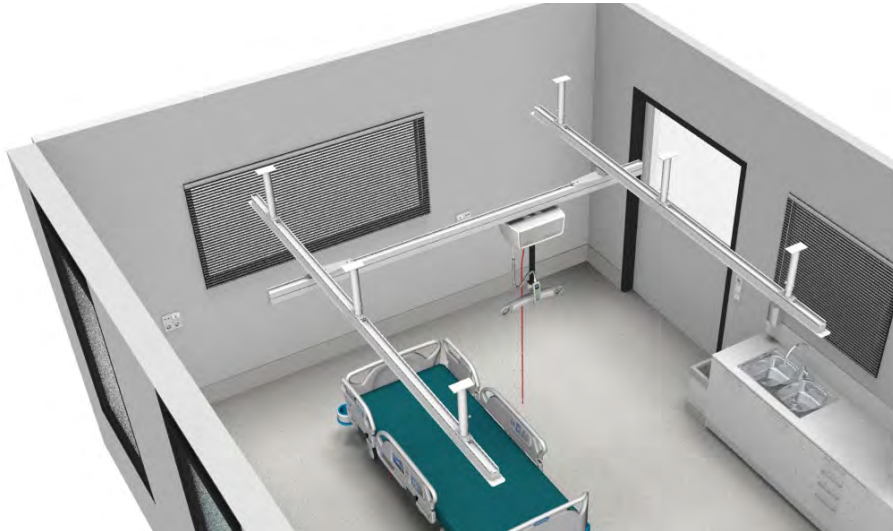
Ceiling-Mounted Lift System Configurations Options

CRITICAL CARE

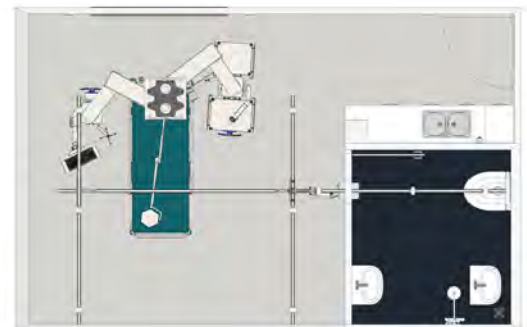
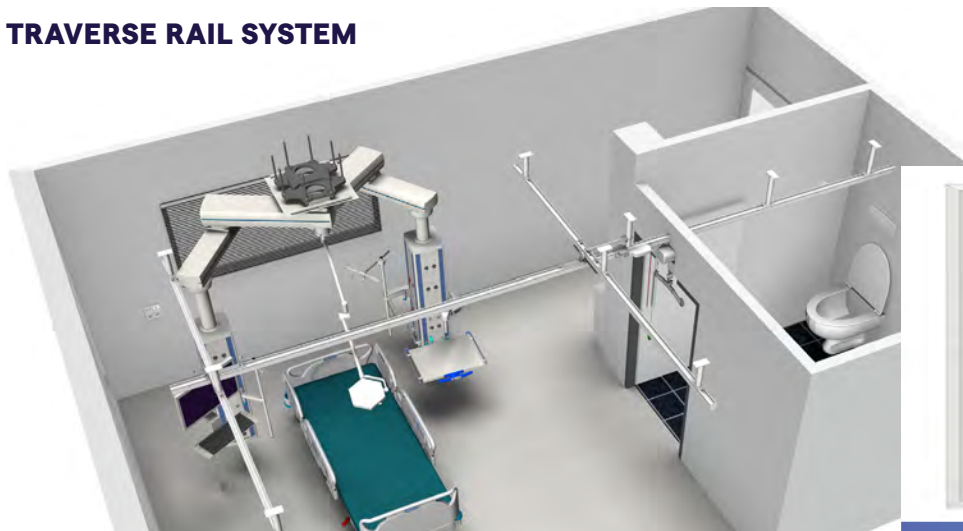
Critical Care and Intensive Care Units care for the highest risk patients. Lift system configurations must be installed to accommodate a variety of tasks, including lateral transfer to/from stretcher, repositioning the patient in-bed, and mobilizing the patient in-bed, up-from-bed, and out-of-bed in a crowded space. The traverse rail system covering the patient room is the preferred layout in this care environment.

TRAVERSE RAIL SYSTEM WITH THE TRUPOINT CEILING SUPPLY UNIT





TRAVERSE RAIL SYSTEM



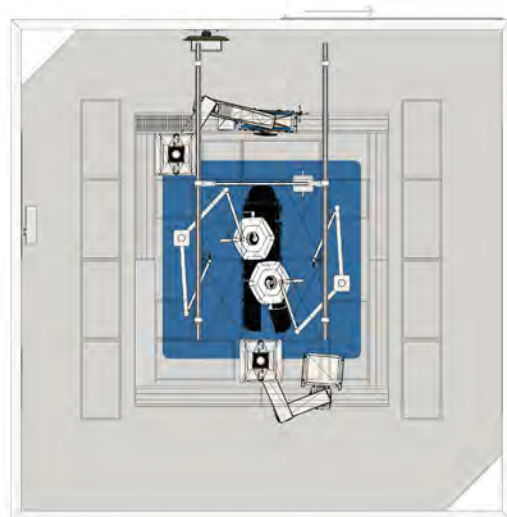
TRAVERSE RAIL SYSTEM WITH THE TRUPORT CEILING SUPPLY UNIT, WITH PATIENT ACCESS IN BATHROOM

Ceiling-Mounted Lift System Configurations Options

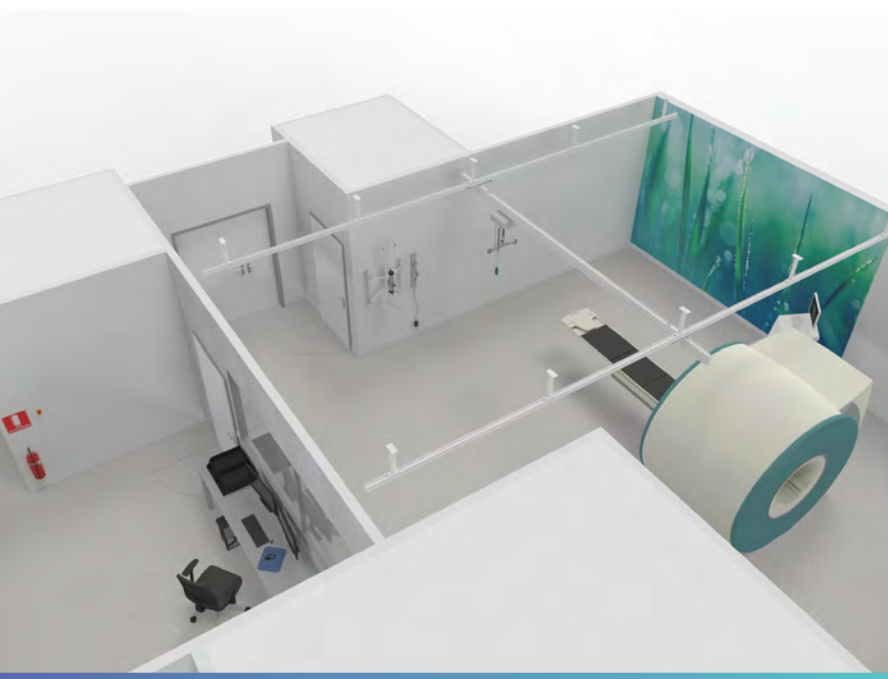
OPERATING ROOM



**TRAVERSE RAIL
PATIENT LIFT - CEILING
MOUNTED**



MRI/CT ROOM

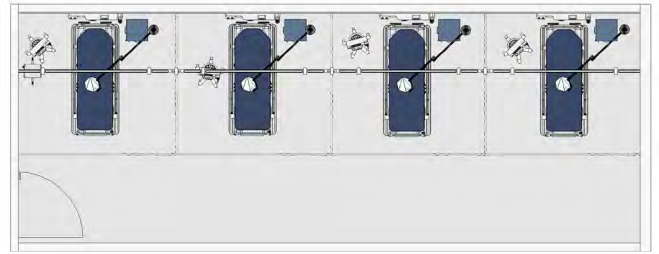


**TRAVERSE RAIL
PATIENT LIFT - CEILING
MOUNTED**

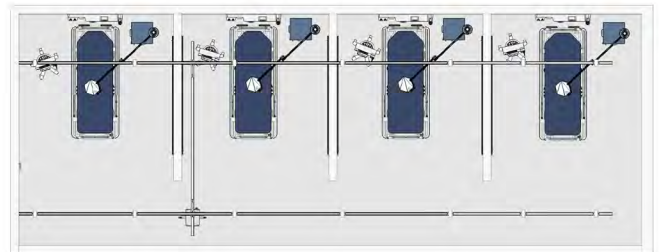


PACU/RECOVERY

STRAIGHT RAIL SYSTEM



TRAVERSE RAIL SYSTEM



Ceiling-Mounted Lift System Configurations Options

BARIATRIC CARE

Bariatric Considerations and Solutions

IN ORDER TO RAISE AWARENESS OF THE CARE REQUIREMENTS FOR PATIENTS OF SIZE, ADEQUATE PLANNING AND DESIGNING OF APPROPRIATE LIFT SYSTEMS IS RECOMMENDED.

The Facility Guidelines Institute's (FGI) Patient Handling and Movement Assessment (PHAMA): A White Paper is an ideal resource for design teams looking to incorporate patient handling equipment into the healthcare environment.

The PHAMA has two distinct yet interdependent phases.

- The first phase includes a patient handling needs assessment which identifies appropriate equipment for each service area in which patient handling and movement occurs.
- The second phase includes definition of space requirements as well as structural and other design considerations that accommodate the incorporation of patient handling and movement equipment.¹

There are additional considerations in caring for patients of size beyond the higher lifting capacity. The US 2019 Facility Guidelines Institute (FGI) include recommendations such as:¹

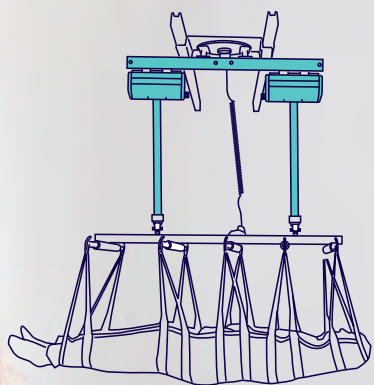
- Provide a minimum clearance of 5 feet (152.4 cm) at the foot of the patient bed.
- Provide a minimum clearance of 5 feet 6 inches (167.4 cm) on the non-transfer side of the patient bed from the edge of the expanded-capacity patient bed.
- Provide on the transfer side of the patient bed, a rectangular clear floor area parallel to the bed with these dimensions: (in patient rooms with ceiling or wall-mounted lifts)
 - + A minimum of 10 feet 6 inches (3.2 meters) long, measured beginning 2 feet from the headwall
 - + A minimum clearance of 5 feet 6 inches (1.68 m) from the edge of the expanded-capacity bed.

ULTRATWIN SYSTEM

Available in straight rail or traverse models, the UltraTwin system consists of two Likorall motors which, together, offer a lifting capacity of up to 500 kg / 1,100 lbs. And with the UltraTwist accessory, you can adjust the patient's position during and after the transfer.

Tilt and Space

Dual motors can also help you tilt patients and allow more space for their girth. This means you can safely and easily tilt and angle your patient's position while they are suspended — all with hands-free repositioning. For bariatric patients, it makes a variety of patient mobility tasks safer and more efficient — including repositioning, turning, limb lifting, seated transfers and more.



DUAL SINGLE RAIL ULTRATWIN SYSTEM



TRAVERSE RAIL ULTRATWIN SYSTEM



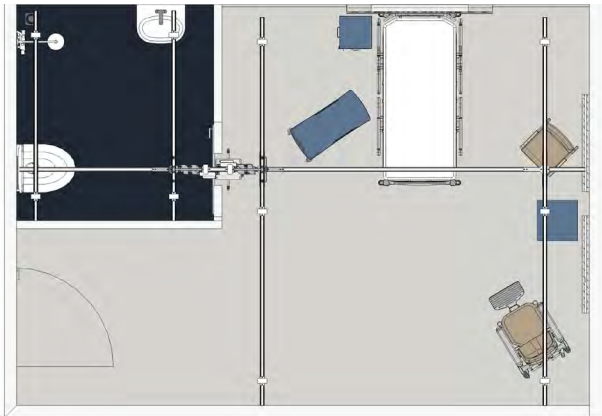
TRAVERSE RAIL ULTRATWIN SYSTEM WITH BATHROOM COVERAGE (Lowered Ceilings)



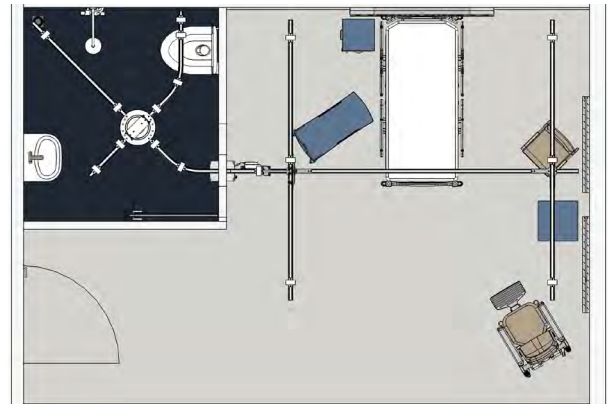
Ceiling-Mounted Lift System Configurations Options

LONG-TERM CARE

Below are examples of ceiling-mounted traverse rail systems providing complete room coverage in a resident room and bathroom. Option A provides full coverage, but requires the bathroom walls to be lowered 20 - 40 cm / 8 - 16". This option works well with a new construction project, and is an alternative to the use of switches or a turntable as shown in the other images.



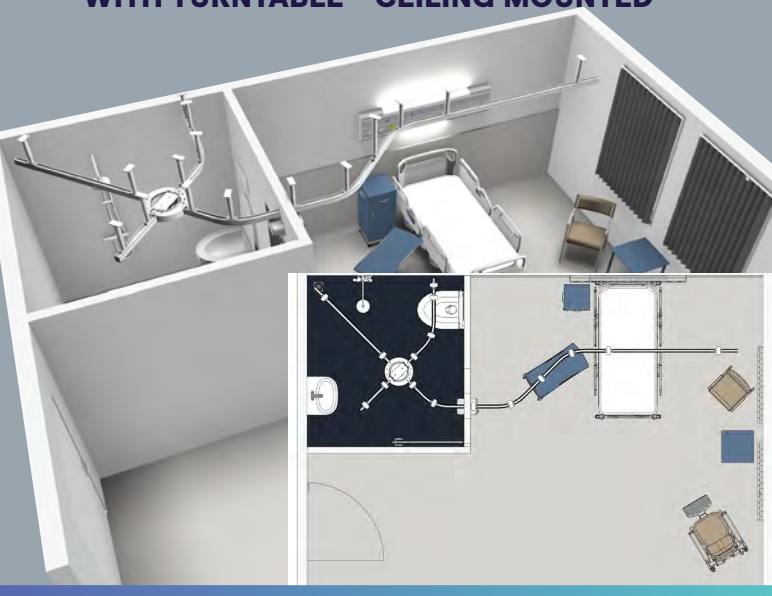
TRAVERSE SYSTEM WITH RESIDENT ACCESS INTO BATHROOM



TRAVERSE SYSTEM WITH RESIDENT ACCESS INTO BATHROOM WITH TURNTABLE



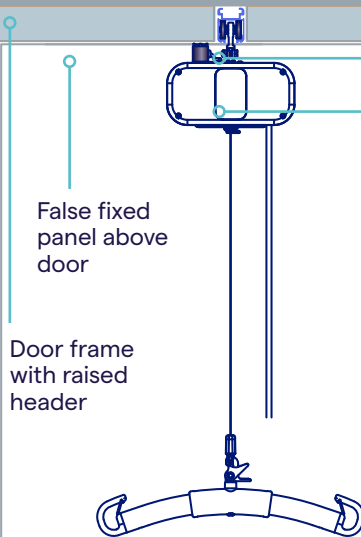
BASIC SINGLE RAIL SYSTEM WITH RESIDENT ACCESS INTO BATHROOM WITH TURNABLE - CEILING MOUNTED



BASIC TRAVERSE RAIL SYSTEM - WALL MOUNTED



Finished ceiling



RECOMMENDED CUSTOM DOORWAY APPLICATION

Image illustrates how the motor can pass in an opening made above the door.

Fixed rail extending through doorway under header

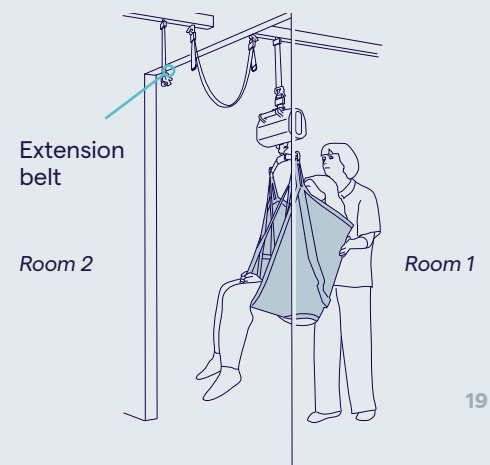
Lift motor

Door frame

Door opening



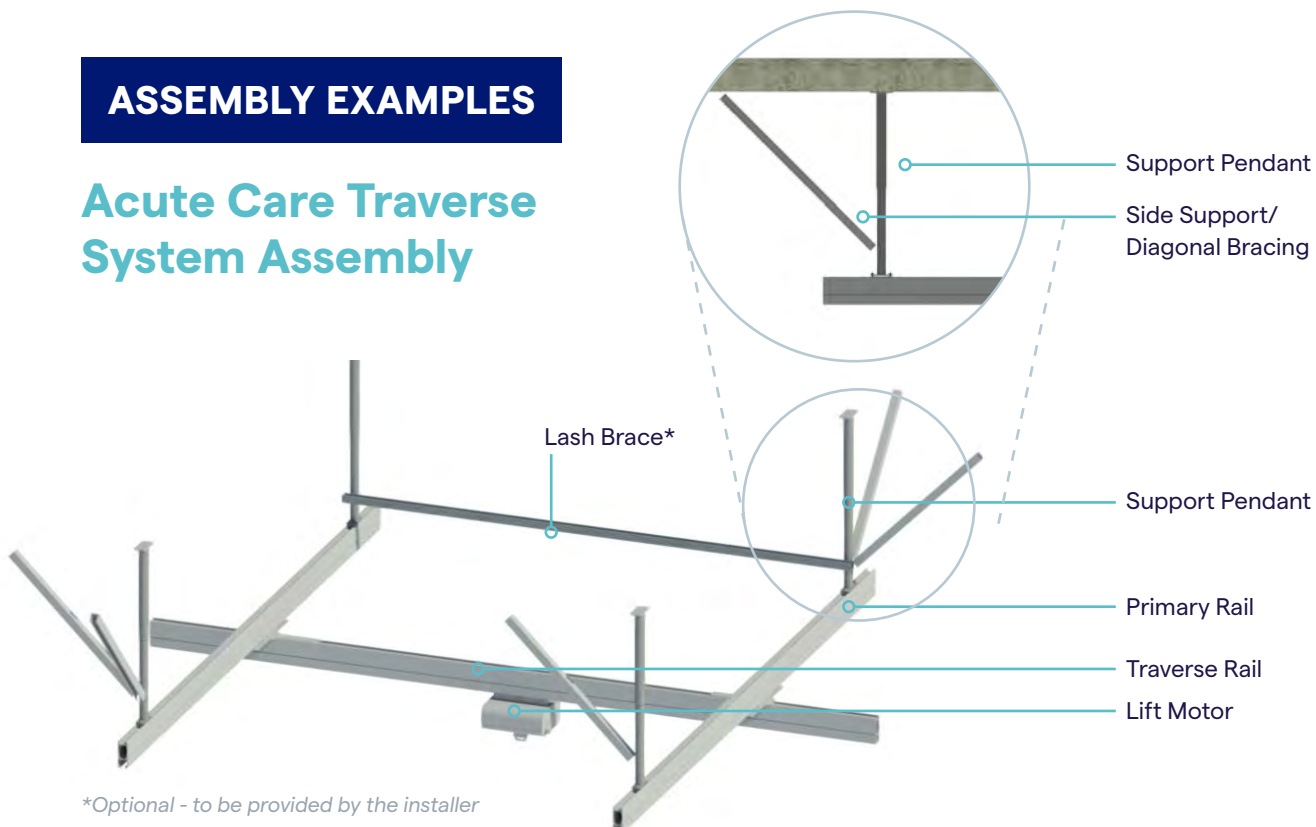
ALTERNATIVE DOORWAY APPLICATION



OVERHEAD SYSTEM COMPONENTS

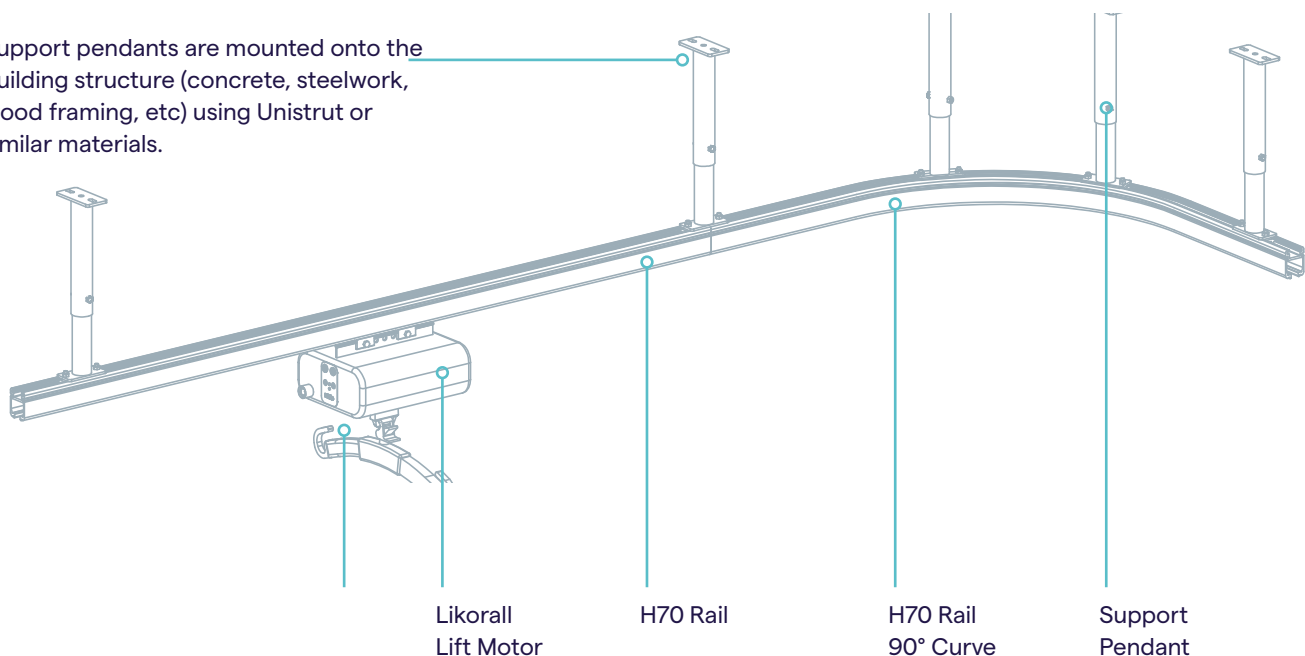
ASSEMBLY EXAMPLES

Acute Care Traverse System Assembly



Acute Care Single Rail "J" Track System Assembly

Support pendants are mounted onto the building structure (concrete, steelwork, wood framing, etc) using Unistrut or similar materials.





LIFT MOTOR OPTIONS

LikoGuard L/XL

LikoGuard is a family of overhead lifting motors, designed to provide safety you can trust and the performance you need. LikoGuard L has a maximum load of 272 kg / 600 lbs and XL a maximum load 800 lbs/363 kg. Both lift motors feature a lithium-ion battery, easy-to-reach manual lowering and emergency stop, an IPX7-approved hand control with optional graphical display, lift counter and the possibility of optional In-Rail charging.

Likorall

Likorall is a family of overhead lifting motors with a lifting capacity from 200 – 250 kg / 440 – 550 lbs. The combination of unique technology, operational reliability and ease-of-maintenance, together with the wide range of accessories, makes it possible for Likorall to accommodate almost any lifting situation. All models are equipped with a patented safety drum, electrical emergency lowering and stop, lift strap with 10-fold safety margin and safety squeeze protection.



Likorall 200
Basic model



Likorall 242S/ES and Likorall 242S/ES R2R
Optional mechanical emergency lowering



Likorall 250ES and 250S IRC
Optional in-rail charging



Multirall 200

The Multirall 200 is a portable overhead lift with a maximum load of 200 kg / 440 lbs that can also be used for room-to-room patient transfers — with just one lift motor. Its portability makes it an excellent and economical solution for care situations where lifting needs are temporary.

Overhead System Components

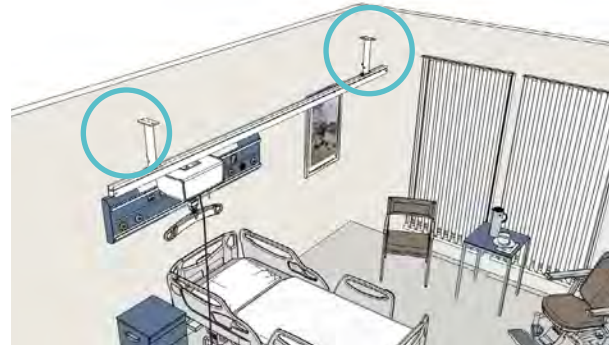
LIFT SYSTEM ATTACHMENTS



FLUSH AGAINST A CONCRETE CEILING

With a concrete ceiling, fixtures can be installed directly. A variety of attachments are available to make installation easier.

A noise-dampening ceiling bracket can be used to minimize the spread of vibrations in the rail.



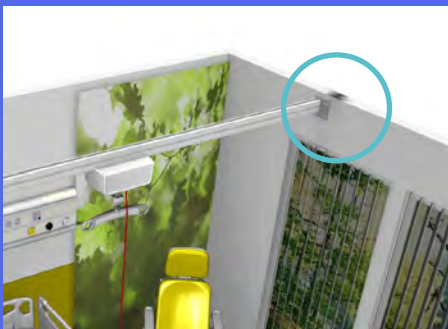
PENDANTS IN A CONCRETE CEILING*

Another option is to install the rail under a false ceiling, with pendants from the concrete ceiling.

Pendants may also be utilized in the event that the ceiling is very high or if light fixtures block the rails.

Pendants are available in lengths of up to 2100 mm / 82".

**False ceiling not shown for illustration purposes.*



WALL BRACKETS*

Wall bracket installations are an option in a room with concrete walls, where ceiling installation is not possible. They are also an option in rooms with framed plasterboard walls.

***Note:** Wall Brackets installations required coordination with construction/remodel efforts as reinforcement within building walls may be required.



UPRIGHT SUPPORTS

Another alternative when ceiling installation is not possible is an upright support. It has a minimal impact on the space and is easy to remove when the lift system is no longer needed. The upright support option accommodates surface-mounted pipes as well as existing skirting boards.



FREESTANDING

A freestanding system can be used instead of a fixed overhead installation, allowing you to test an overhead lift without having to make alterations to the room. It offers an ideal solution when the lifting need is temporary and has no structural requirements on the ceiling or walls.

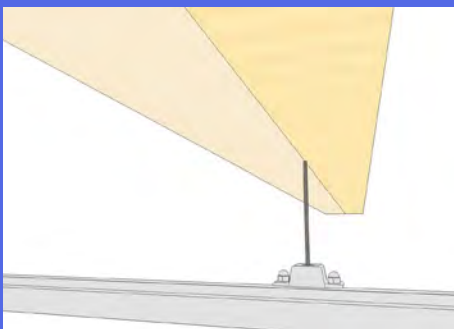
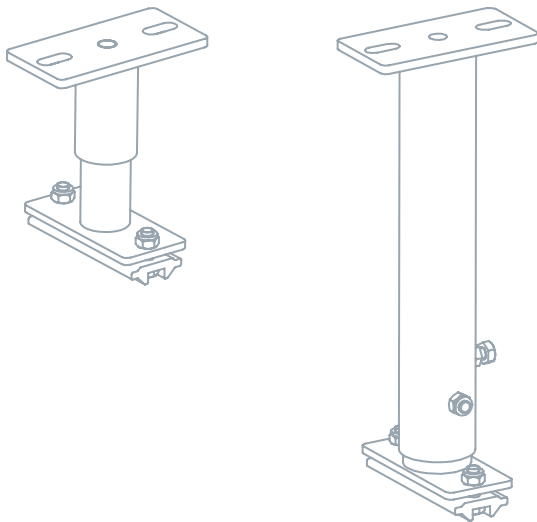
Pendants

Pendants are the most common type of support used. They are adjustable in height and extend from the fixed rails to the building structure (concrete/steelwork) above ceiling.

Pendant (adjustable):

90 – 310 mm /
3.5" – 12.25"

300 – 2100 mm /
12" – 82.5"



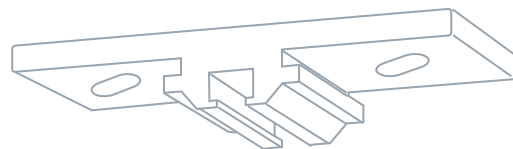
WOOD JOIST CEILING

Wood joists are common in private homes. The rail is first suspended on brackets with a threaded steel rod attached through the joist (see image to the right), then mounted under a false ceiling.

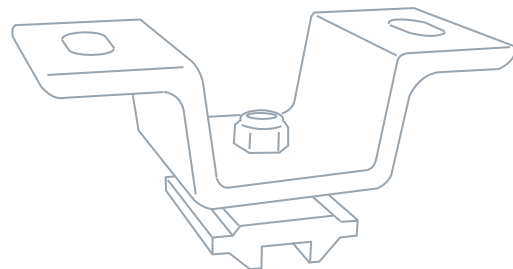
Ceiling Bracket/ Threaded Rod

Ceiling brackets are developed for ceilings with very few or no obstacles. Threaded rods are used mostly for attachments to wooden beams.

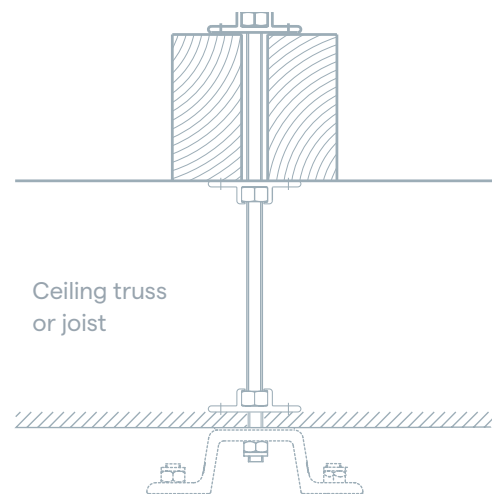
Concrete applications



Concrete or wood applications



Wood or steel applications

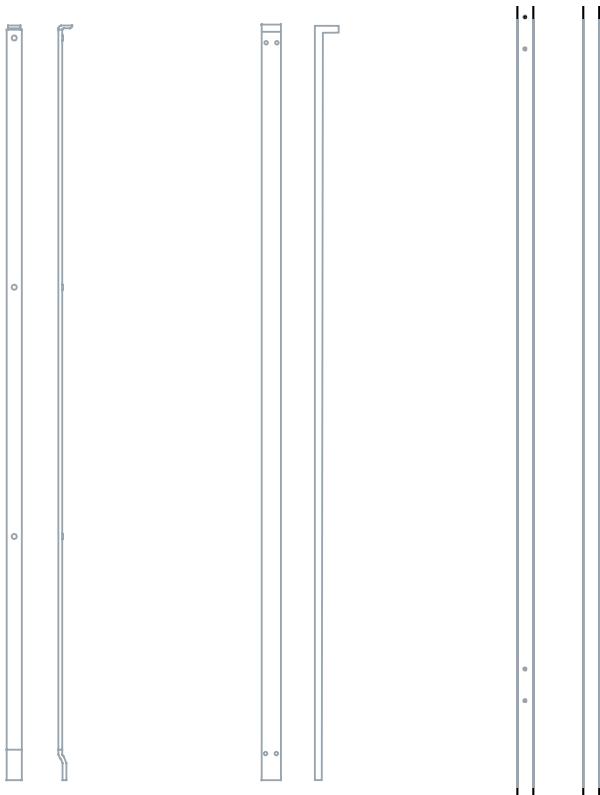


Overhead System Components

LIFT SYSTEM ATTACHMENTS

Upright Supports

Rail attachment components for a suspended lift system are typically either wall brackets or upright supports. For both of these solutions, bayonet rails are necessary for the connection between the attachments and the rail.



Slimline Upright
Support: Max Load
272 kg / 600 lbs

Standard Upright
Support: Max Load 363
kg / 800 lbs

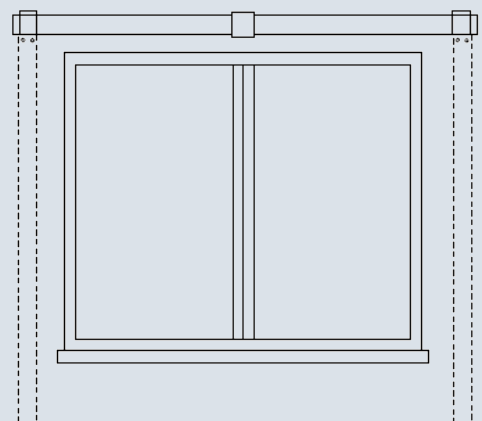
Steel Upright
Support: Max Load 500
kg / 1100 lbs

Installation with upright supports is ideal when neither the ceiling nor the walls can support the weight of a rail system or when the wall material is unknown. Upright support installation results in minimal changes to the room, and can be easily removed.

Note: Upright Supports are commonly used for existing buildings and renovations and offer simple and quick installation without requiring work above the ceiling space(s).



Superstructure over window



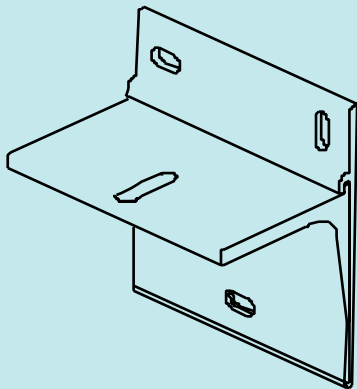
Wall Bracket

WALL BRACKET INSTALLATION

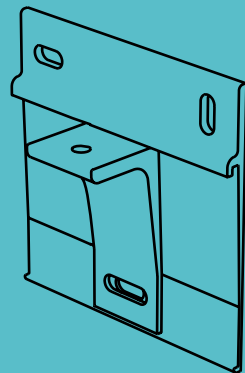
Wall brackets are commonly used for new construction and more extensive renovations. Provides for a more aesthetically-pleasing look to the finished room.



Wall Bracket – Parallel:*
Max Load 272 kg / 600 lbs



Wall Bracket – Turntable:*
Max Load 272 kg / 600 lbs

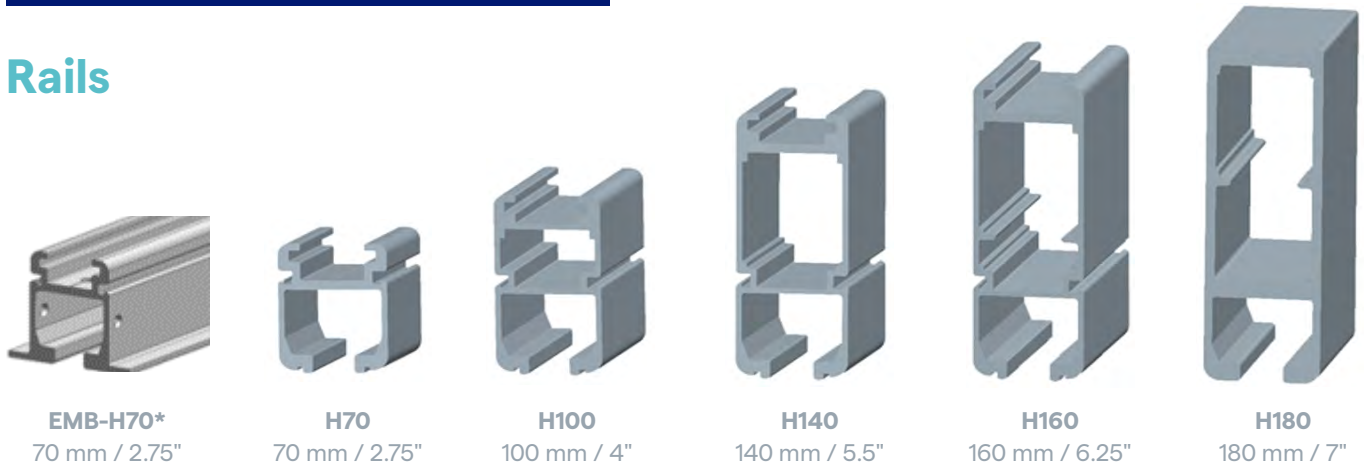


Note: Wall Brackets installations require close coordination with construction/remodel efforts as reinforcement within building walls may be required.

Overhead System Components

LIFT SYSTEM ATTACHMENTS

Rails



Lift rails from Hillrom are made of aluminum, and available in two colors (natural aluminum or white), ensuring installations blend more easily with the interior.

Rails are available in five different heights from 70-80 mm / 2.75 - 7.0" (shown above) with different weight-bearing capacities. The distance between the fixture points, as well as the required weight-bearing capacity, determine the choice of rail profile (height). Wide intervals between fixture points demand a deeper profile, while a ceiling-mounted rail with a short distance between fixture points can have a lower profile (for example H70).

EMB-H70* is used for installations where the rail is to be embedded in a drop-down ceiling. Embedded rails blend in more easily to the ceiling, offering enhanced aesthetics.

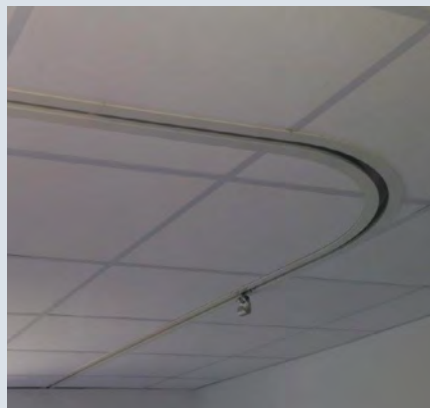
Keep in mind that individual rail systems from Hillrom have varied operational requirements. Contact a Hillrom representative for more details.

- Switches and turntables only work with an H70 rail profile
- 45° and 90° curves are only available with an H70 rail profile
- H180 cannot be pendant mounted
- H70 cannot be mounted with upright supports. However, this can be used with parallel wall brackets.

**Embedded Rail (EMB) options are currently not available for installations in the US and Canada*

RECESSED PRIMARY RAILS APPLICATION

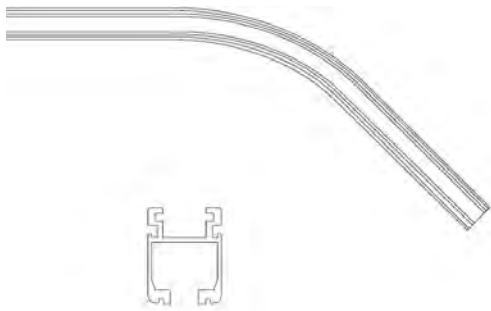
¼" or 1-¾" rail exposed below finished ceiling



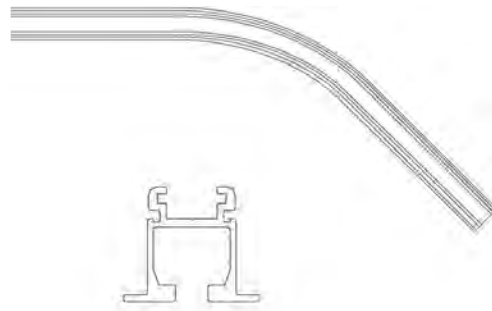
Curves

Curves can be used in ceiling-mounted systems using an H70 rail profile, and are available in 45° and 90°. They are also available as embedded curves, which can be used in suspended ceilings.

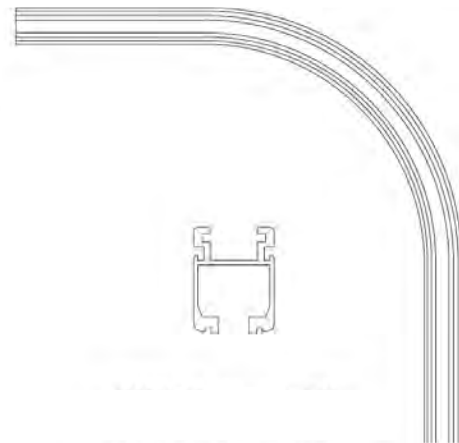
45° rail curve H70



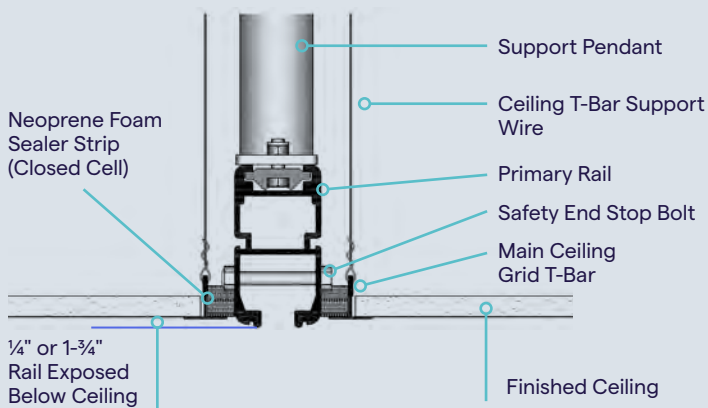
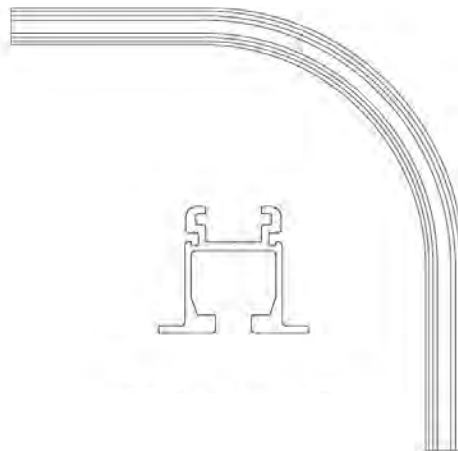
45° embedded rail curve EMB H70*



90° rail curve H70



90° embedded rail curve EMB H70*

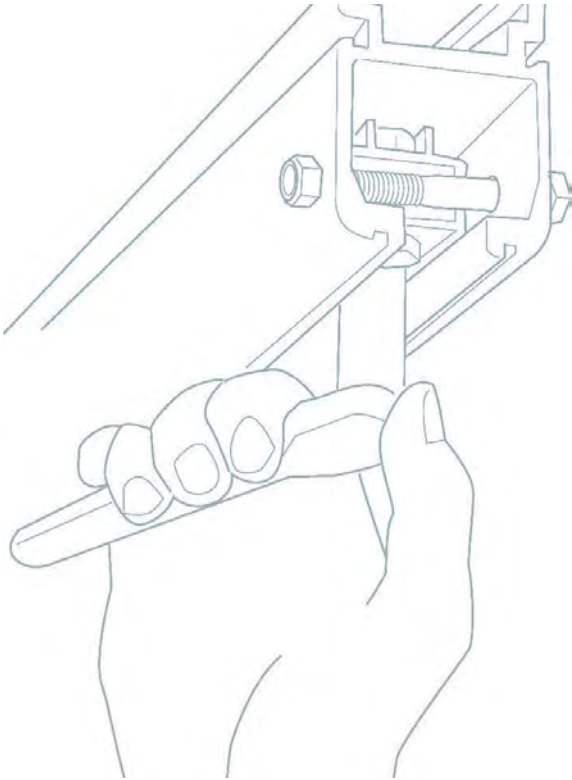


IMPORTANT: It is not recommended to adhere or attach the ceiling structure directly to the Primary Rail. During use the rail will deflect due to the lifting load. If the ceiling is adhered to the Primary Rail, then this normal deflection may cause damage to the finished ceiling.

NOTE: The 1-3/4\" Exposed Option allows for serviceability of the rail and motor carriages without requiring removal of any ceiling components. For the 1/4\"

Overhead System Components

LIFT SYSTEM ATTACHMENTS



End stop

The end stop is hidden within the rail and is designed to stop the motion of the lift motor. It can be adjusted to limit the range of the lifting area. An additional safety feature of the end stop is the safety bolt, which prevents the motor from accidental detachment from the rail system.

Curtain supporting solutions

We provide a variety of curtain supporting solutions that work in conjunction with overhead lift systems, providing enhanced privacy.

Solutions with switches

TRAVERSE SWITCH

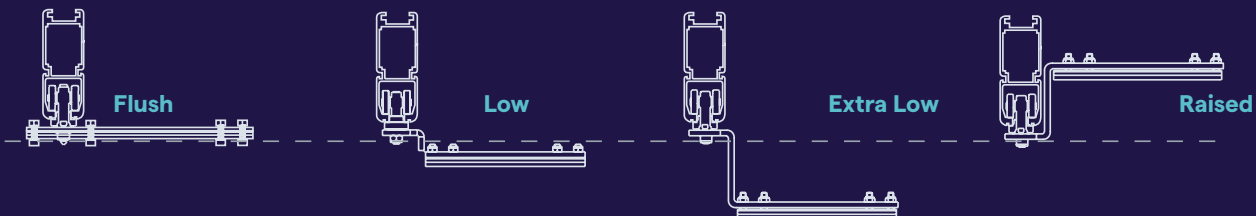
Offers the ability to go from a fixed rail to a traverse system, for example, between different rooms.

TURNTABLE SWITCH

With a turntable switch, users have the ability to select tracks in four different directions.

Traverse rail carriers

Hillrom offers a selection of traverse rail carriers for a variety of configurations. The distance between the fixed rails (which are the primary rails in a traverse system) determines the selected width of the traverse rail carriers. Selecting the correct width of the traverse rail carriers will ensure smooth and easy movement of the traverse rail.



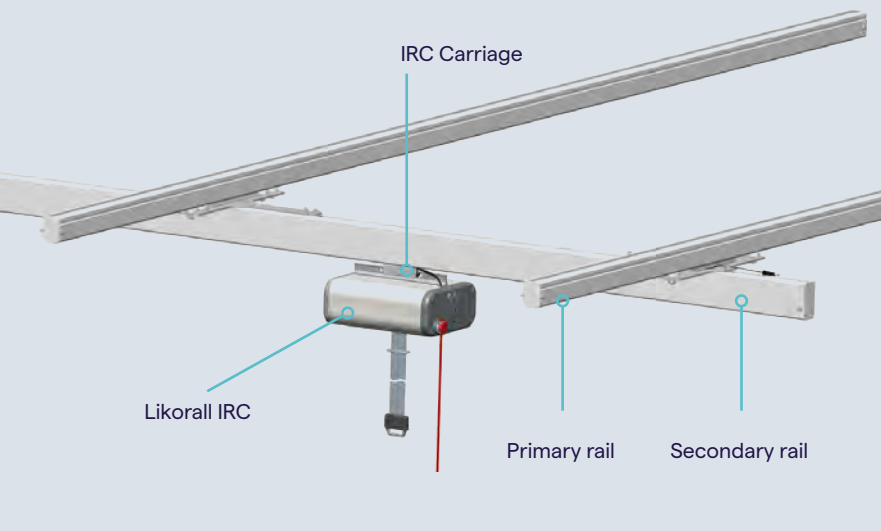
Traverse rail carriers are available for both raised and lowered secondary rails, helping to avoid other objects in the ceiling, such as sprinklers or lamps and offering a more aesthetic solution.

Charging

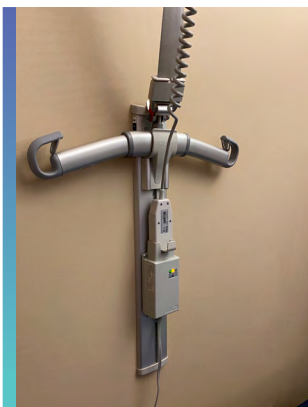
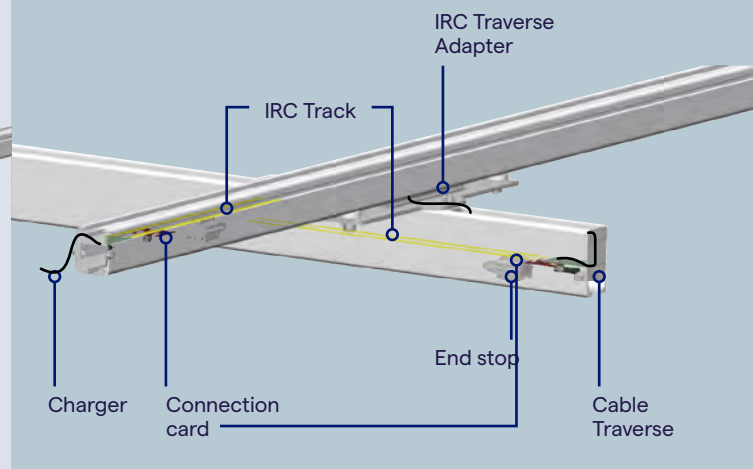
IN-RAIL CHARGING*

Hillrom in-rail charging means that the lift unit is constantly charged along the complete rail system and is always ready for use.

It can be fitted to all standard rail systems, as well as new or previously installed rails.



CHARGING DETAIL



WALL-MOUNTED CHARGING STATION*

With a wall-mounted charging station, the lift motor should be positioned above the charging panel, placing the hand control into the dedicated charging point. This panel is also equipped with hooks for hanging the slingbar and sling, and is available as a separate modular product.



MULTISTATION - CHARGING ON THE RAIL (LIKORALL ONLY)

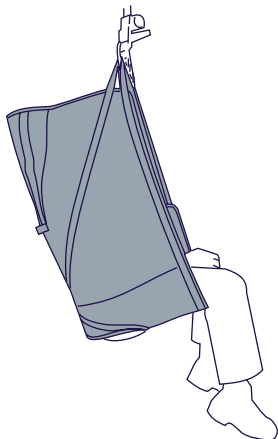
The MultiStation offers on-rail charging and allows the caregiver to operate rail switches and turntables via the motor's hand control. Charging takes place at a pre-selected point along the rail.

*Requires electrical power source near ceiling line. Charger cord length is 6 feet.

SLINGS AND LIFTING ACCESSORIES

SLINGS

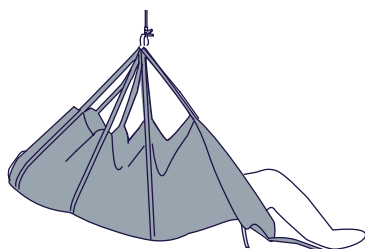
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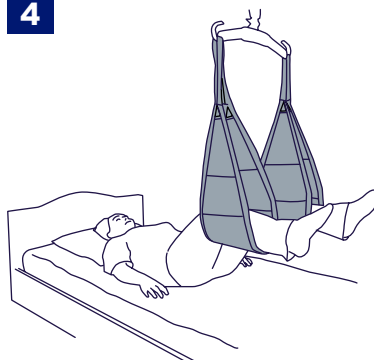
2



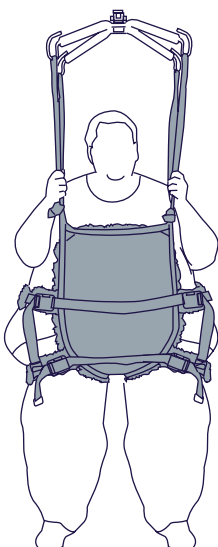
3



4



5



6



Our slings and accessories are designed for the many lifting requirements you face every day — from basic to highly specialized. Available in a variety of fabrics and sizes (from XXS to XXXL), we offer slings for repositioning, sitting, horizontal lifting, walking and bariatric care. And our accessories, from slingbars to scales, work with any Hillrom lift — so you can spend less time searching for equipment and more time caring for your patients.

1. HighBack Sling
2. UltraSling
3. Reposheet
4. MultiStraps
5. LiftPants Ambulation Support
6. MasterVest

ACCESSORIES

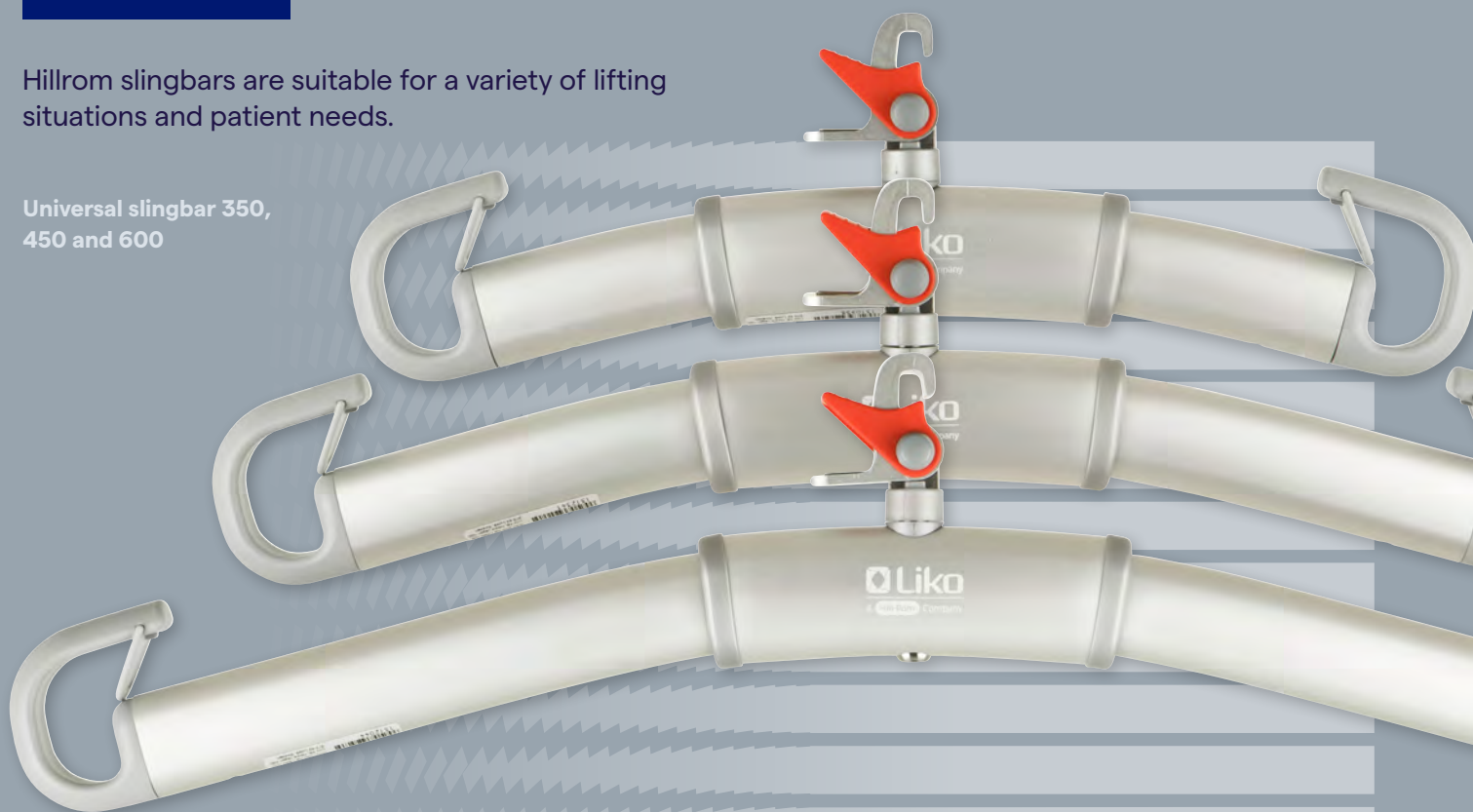
- LikoScale
- Quick release carriage
- Paddy Cover



SLINGBARS

Hillrom slingbars are suitable for a variety of lifting situations and patient needs.

Universal slingbar 350,
450 and 600



SlingGuard 450
SlingGuard 670 Twin (not shown)



Universal slingbar 670 twin



Cross slingbar

A man and a woman, both wearing blue Hillrom polo shirts, are engaged in a conversation. The man, on the right, has dark curly hair and is looking towards the woman. The woman, on the left, has dark hair and is looking back at him. They are standing in what appears to be a clinical or office setting. The background is blurred, showing some architectural elements.

SUPPORTING YOU EVERY STEP OF THE WAY

At Hillrom, we're more than a lift manufacturer. We're your full-service partner — from planning to implementation and beyond.



Building a Smarter Future with Hillrom Construction Solutions

The Hillrom Construction Portal is a powerful tool for architects and healthcare facility designers. The resource center includes:

- Free, downloadable room layouts and DWG blocks
- Design specifications
- Videos, images and more

SEE IT IN ACTION AT [HILLROM.COM/CONSTRUCTION](https://hillrom.com/construction).

Safe Transfers and Movement Program (STAMP)

When smart solutions are backed by clinical evidence, better outcomes are possible. That's why we help providers like you implement evidence-based clinical programs focused on early mobility, falls prevention, skin safety and more.

Bedside Mobility Assessment Tool (BMAT) 2.0

The Bedside Mobility Assessment Tool (BMAT) 2.0 is a validated tool to help nurses assess mobility at the bedside. At Hillrom, we offer CE programs, tools and assessment training aligned with the BMAT 2.0 principles and clinical application.

The goal? Helping you get your patients moving earlier and often — in the safest possible way. Talk to your Hillrom representative to learn more.

[LEARN MORE ABOUT BMAT AT HILLROM.COM](https://hillrom.com/bmat).



IF YOU KNOW LIKO, YOU KNOW HILLROM.

**We've unified our brands to
advance connected care.
Visit us at hillrom.com.**





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References

- ¹ Matz M, Celona J, Martin M, McCoskey K, Gaius N et al. Patient Handling and Movement Assessments Second edition. Dallas, TX: The Facility Guidelines Institute; 2019. www.fgiguideelines.org.

For more information, please contact your Hillrom sales representative at 1-800-445-3730.

hillrom.com

Hillrom range of lifts and accessories are intended to be used for the lifting and transferring of patients in a variety of care settings. Hillrom slings and accessories are intended to be used in combination with Hillrom lifts for a range of lifting and transferring situations in a variety of care settings.

Hillrom reserves the right to make changes without notice in design, specifications and models. The only warranty Hillrom makes is the express written warranty extended on the sale or rental of its products.

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