USER MANUAL

TotalCare® Bed System

From Hill-Rom

Product No. P1900

Hill-Rom®
A HILLENBRAND INDUSTRY

Manufactured by:
HILL-ROM COMPANY, INC.
1069 STATE ROUTE 46 E
BATESVILLE, IN 47006-9167

Authorized European Union Representative:
HILL-ROM EUROPE
LE RABELAIS – PARIS NORD II
22 AVENUE DES NATIONS
BP 50436 VILLEPINTE
95944 ROISSY CDG CEDEX
FRANCE
TEL: +33 (0)1 49 89 40 00

Fifth Edition
First Printing 2000
Printed in the USA

To order additional copies of this manual (usr042rd), refer to the back cover for contact information. For countries not listed on the back cover, contact your distributor.

NOTE:
The back cover is a comprehensive list of Technical Support contact information for Hill-Rom. The product discussed in this manual may not be available in all of the countries listed.

Revision Letter	Pages Affected	Date
Original Issue		December, 2000
A	All	March, 2001
B	All	January, 2002
C	All	July, 2003
D	All	February, 2004

Table of Contents

Document Symbol Definition

This manual contains different typefaces and icons designed to improve readability and increase understanding of its content. For a list of symbols used on the product, see “Product Symbol Definition” on page 61.

Note the following examples:

- Standard text—used for regular information.
- **Boldface text**—emphasizes a word or phrase.
- **NOTE:**—sets apart special information or important instruction clarification.
- The symbol below highlights a WARNING or CAUTION:

Warning and Caution

  - A WARNING identifies situations or actions that may affect patient or user safety. Disregarding a warning could result in patient or user injury.
  - A CAUTION points out special procedures or precautions that personnel must follow to avoid equipment damage.
- The symbol below highlights a CAUGHT HAZARD WARNING:

Caught Hazard Warning

- The symbol below highlights a CHEMICAL HAZARD WARNING:

Chemical Hazard Warning

- The symbol below highlights an ELECTRICAL SHOCK HAZARD WARNING:

Electrical Shock Hazard Warning

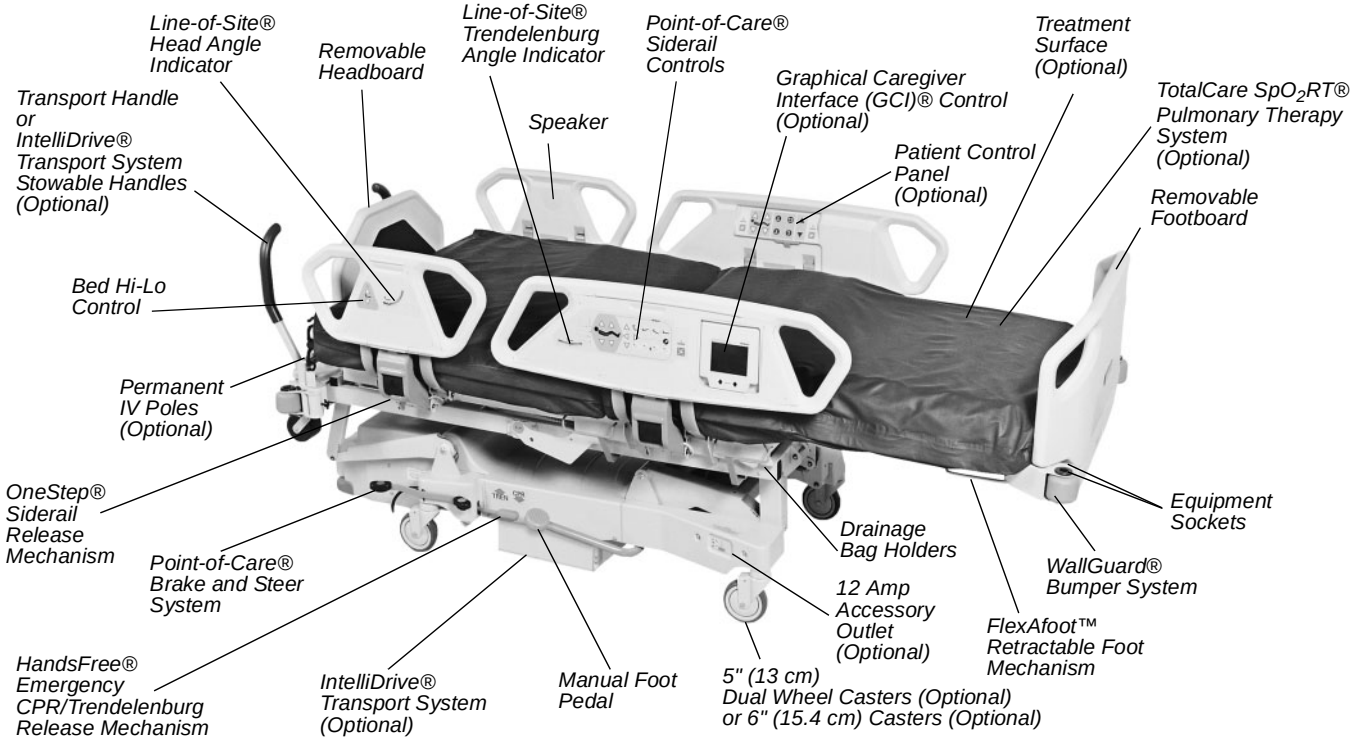
Intended Use

The TotalCare® Bed System is intended to provide a patient support ideally suited to be used in health care environments. The TotalCare® Bed System may be used in a variety of settings including, but not limited to, acute care, including critical care, step down/progressive care, medical/surgical, high acuity sub-acute care, post anesthesia care unit (PACU), and sections of the emergency department (ED). The TotalCare® Bed System is capable of being used with a broad patient population as determined appropriate by the caregiver or institution.

Introduction

This manual provides the information required for normal operation of the TotalCare® Bed System from Hill-Rom. Before operating the TotalCare® Bed System, be sure that you have read and understood in detail the contents of this manual. It is important that you read and strictly adhere to the aspects of safety contained in this manual. Any reference to a side of the bed is from the patients' view lying in the bed on their back.

Features



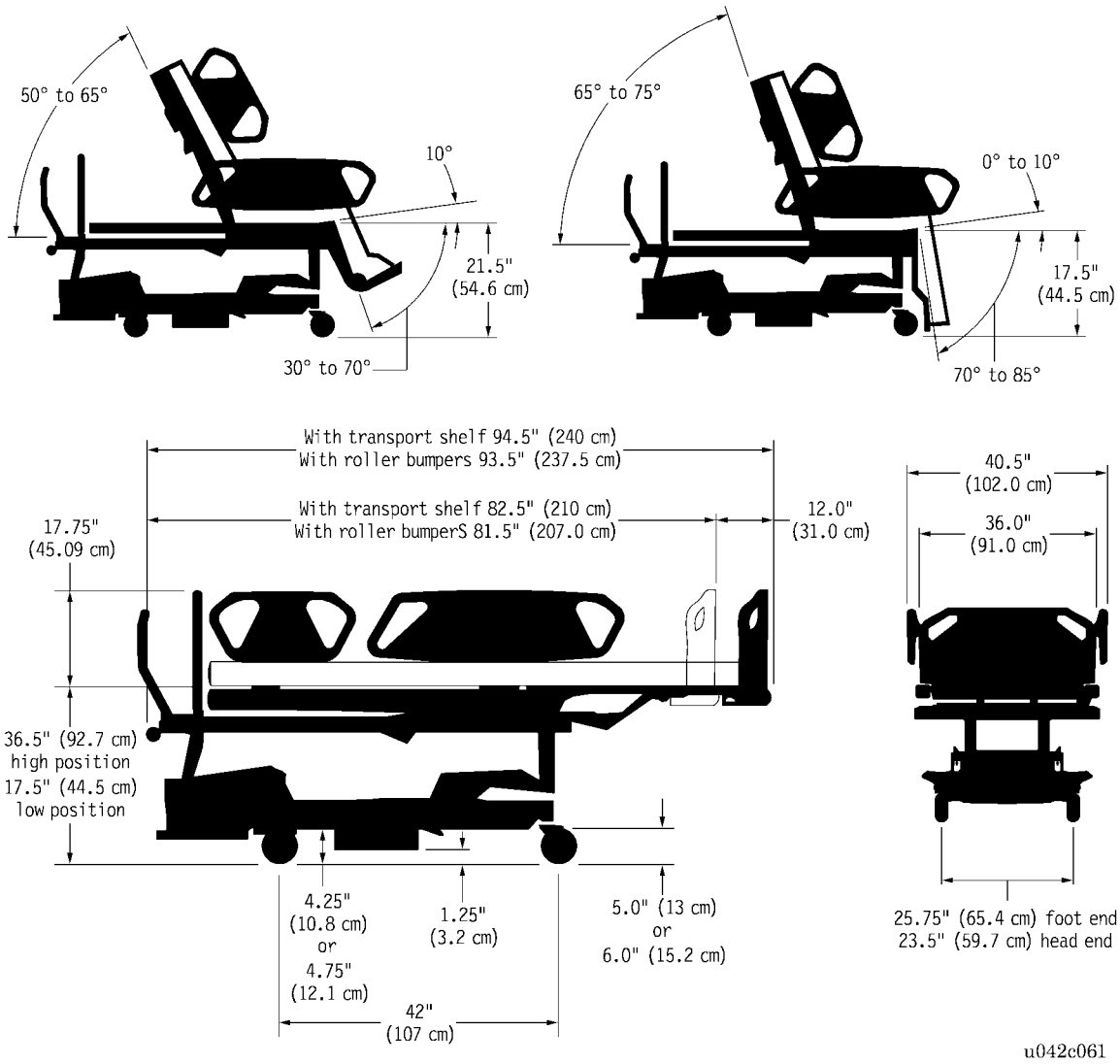
Patient Characteristics:

- Height: 74" (188 cm) maximum, 54" (137 cm) minimum
- Width: 36" (91 cm) maximum
- Weight: *500 lb (227 kg) maximum (safe working load), 70 lb (32.0 kg) minimum

*Safe working load Includes: patient weight, mattress, IV pumps, poles, bags, etc. Scale accuracy may be diminished if patient weight exceeds 400 lb (181 kg). Mattress interface pressure, pulmonary therapy performance, and IntelliDrive® Transport System power assist levels may be diminished if patient weight exceeds 300 lb (136 kg).

WARNING:
Do not use the product outside the recommended patient height, weight, and width ranges. Patient injury or equipment damage can occur.

Dimensions

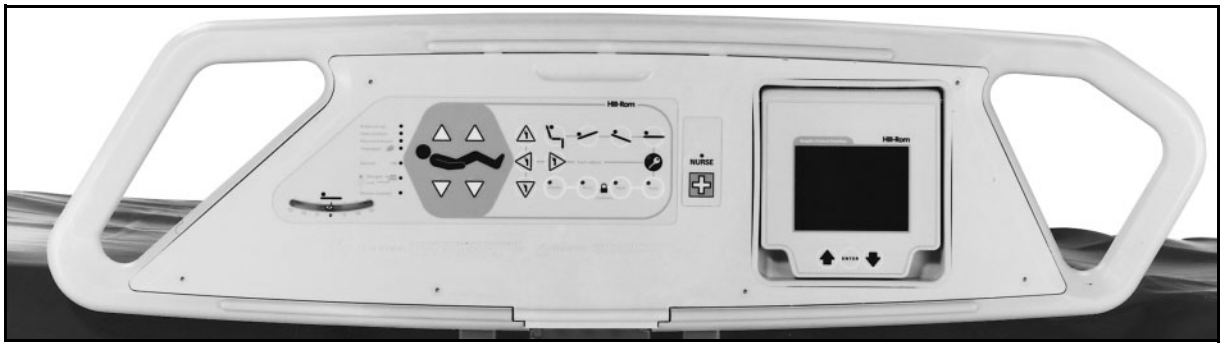


Mattress size: .....35" x 83" (89 x 211 cm)
Foot Retraction: .....12" (31 cm)
Trendelenburg/Reverse Trendelenburg: .....15°/15°
Emergency Trendelenburg: .....20°
Head Section: .....75°
Knee: .....20°
Automatic Knee Contour: .....10°
Foot: .....85° Down
Preliminary Tilt table: .....20°
Articulating Deck: .....32.5" x 84" (82.6 x 213 cm)
Weighing Capacity: .....400 lb (181 kg)
Maximum Safe Working Load: .....500 lb (227 kg)

Features

Standard Point-of-Care® Siderail Controls

Caregiver Point-of-Care® Siderail controls are located on the outboard side of the intermediate siderails.



WARNING:
Instruct visitors not to use caregiver controls at any time. Visitors may assist patients in the use of patient controls. Unauthorized use of the caregiver controls may result in personal injury or equipment damage.

Enable Control

The Enable control deters unauthorized operation of certain user panel controls. The Enable control must be pressed and the indicator light illuminated before the caregiver control will operate. The Enable indicator stays on for 20 seconds. While this indicator light is on, the caregiver can activate any caregiver controls that have not been locked out.

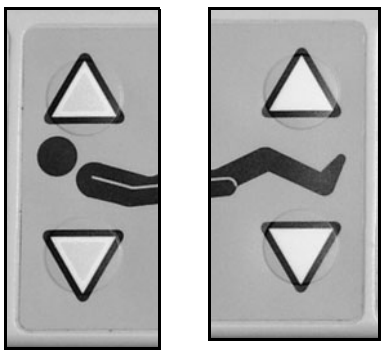
To Activate:

- Press the Enable Control. The Enable indicator light comes on for 20 seconds.
- During the 20-second period, you may activate other caregiver controls without pressing the Enable control again. The 20-second period will start over when another control is pressed.

See “Lockout Controls” on page 5 for instruction on lockouts.

NOTE:
The following patient controls, located on the outside of the rail in the caregiver control panel, **do not** require activation of the Enable Control: Bed Up/Down, Head Up/Down, Knee Up/Down, and NURSE controls.

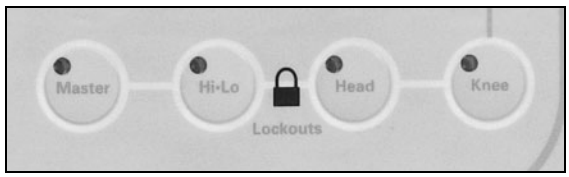
Bed Up/Down Control
(Located on upper rail)



Head Up/Down Control;
Knee Up/Down Control

Nurse Call Control

Lockout Controls



The Lockout Controls located on the caregiver siderail control panel disable the bed articulating functions.

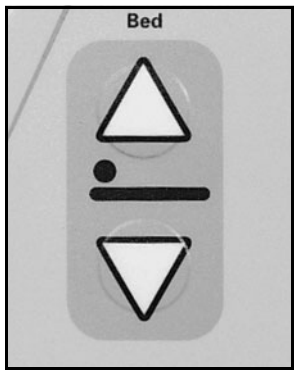
To Activate:

- Simultaneously press the Enable Control and the specific lockout control desired. Both patient and caregiver controls are locked out. An audible alarm sounds when a lockout is activated.
- Disable any lockout by simultaneously pressing the Enable Control and the respective lockout control.

NOTE:
The master lockout disables all articulation controls, scale, and bed exit. No movement of the system is allowed, except for emergency CPR and Trendelenburg functions.

NOTE:
Depending on the model of TotalCare® Bed System, the master lockout may also disable the optional Graphical Caregiver Interface (GCI)® Control.

Bed Up/Down (Hi-Lo) Control



The Bed Up/Down controls are located on the head-end siderail adjust the height of the bed from a low position for patient egress to a high position for examination.

To Activate:

- Press and hold the Bed Up control to raise the system or press and hold the Bed Down control to lower the system. Release the control when the desired height is reached.
- To disable the Bed Hi-Lo – Activate the Hi-Lo lockout control.

Head Up/Down Control

The caregiver can raise or lower the head section by using the Head Up/Down Controls. Using the Line-of-Site® Angle Indicators, the caregiver can articulate the head section to specific angles.

To Activate:

- Press and hold the Head Control to raise the head section. Press and hold the Head Control to lower the head section.

NOTE:
Additionally, the TotalCare® Bed System is equipped with an automatic contour mode. When the Head Up Control is pressed, the automatic contour mode is enabled, and the knee section rises to a maximum of 10°.

- Automatic Contour Feature – Press and hold the Head Control. The head and knee sections rise together to reduce patient migration toward the foot end of the system.
- Disable Automatic Contour – Activate the Knee lockout control.

NOTE:
The automatic contour feature can also be disabled by pressing and holding the Knee Down Control while raising the head section.

Knee Up/Down Control

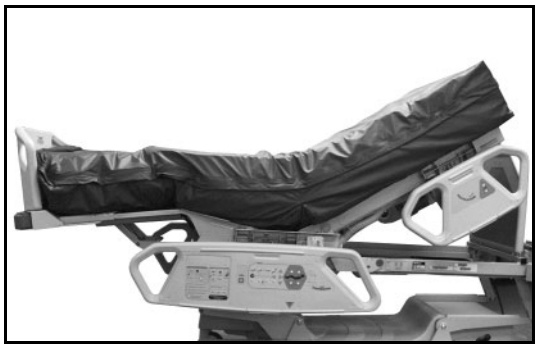
The caregiver can raise or lower the knee section by using the Knee Up/Down Controls.

To Activate:

- Knee Up/Down – Press and hold the Knee Control to raise the knee section.
- Press and hold the Knee Control to lower the knee section.

NOTE:
The automatic contour feature does not work when only using the Knee Up/Down controls.

Automatic Contour



Automatic contour raises the head and knee sections together to reduce patient migration toward the foot end of the system during sleep deck articulation. The knee section raises in conjunction with the head section, until the knee section reaches 10°, which corresponds to 45° for the head section.

To disable the automatic contour function, activate the Knee lockout control, or press the Knee Down control while raising the head section.

Foot Up/Down Controls

The foot section can be lowered and raised by using the Foot Up/Down Controls.

To Activate:

- Press the Enable Control.
- Press and hold the Foot Control to lower the foot section. Press and hold the Foot control to raise the foot section.

WARNING:
Do not use ankle restraints when activating this feature; injury to the patient may result.

CAUTION:
Keep the optional transport shelf horizontal during patient transport. Failure to keep the transport shelf horizontal can result in equipment damage.

CAUTION:
Before activating the foot section controls, make sure the area around the foot section is clear of equipment, or equipment damage may occur.

FlexAfoot™ Retractable Foot Control

The foot section can be extended or retracted using the foot retraction In/Out controls. This feature allows the TotalCare® Bed System to customize the length of the sleep surface to the patient. The foot section can be retracted 12" (30 cm).

To Activate:

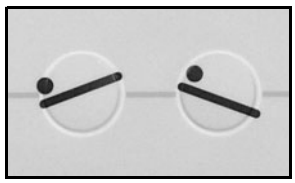
- Press the Enable Control.
- Press and hold the Foot Control to extend the foot section. Press and hold the Foot control to retract the foot section.

Patient comfort can be affected by an improperly adjusted foot section. See Heel Suspension for additional information.

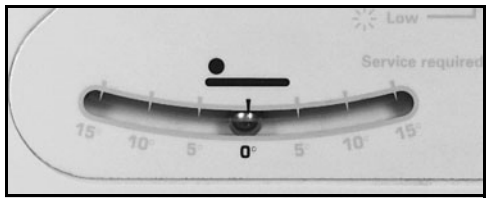
WARNING:
Do not use ankle restraints when activating this feature; injury to the patient may result.

WARNING:
The retractable foot section provides multiple patient benefits. These include facilitating the prevention of footdrop, allowing chair mode patient ingress/egress, and preventing transmission of shear forces from the mattress to the patient during chair mode articulations. However, a retracted foot section may increase the risk of patient entanglement between the siderails and footboard for certain patients. If a potential for entanglement exists, such as with patients who are agitated or disoriented, or who lack the physical strength to extract themselves should they become entangled, the foot section should be left fully extended when the patient is not under direct supervision.

Trendelenburg And Reverse Trendelenburg Controls



The TotalCare® Bed System is capable of 15° Trendelenburg and 15° Reverse Trendelenburg. The powered Trendelenburg and Reverse Trendelenburg controls can be activated at any bed height.



The Trendelenburg feature includes Line-of-Site® Angle Indicators located in the intermediate siderails for determining Trendelenburg angles.

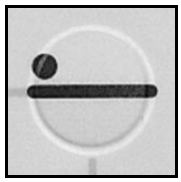
To Activate:

- Press the Enable control.
- Trendelenburg – Press and hold the Trendelenburg control. The foot end of the bed system articulating frame raises relative to the head end.
- Reverse Trendelenburg – Press and hold the Reverse Trendelenburg control. The head end of the bed system articulating frame raises relative to the foot end.
- Return to flat position – Press the opposite control. (If in Trendelenburg – press Reverse Trendelenburg. If in Reverse Trendelenburg – press Trendelenburg.) When the level position is reached, the bed system will pause.

NOTE:
If the foot section is in the down position when Reverse Trendelenburg is activated, the foot section will automatically raise. This prevents the articulated foot section from interfering with the floor.

Features

Bed Flat Control



Bed Flat controls are provided so that a caregiver can easily return the patient deck to the level position from any articulated position.

To Activate:

- Press the Enable Control.
- Press and hold the Bed Flat control. The patient deck moves to the flat position in a two-step motion, first the articulating frame and then the individual sections. When all sections are flat, the system stops.

Chair Positioning

FullChair® Position

Using the FullChair® patient Position Control, the caregiver can place the TotalCare® Bed System in one of three basic chair positions: chair, chair egress, and recliner.

Chair positioning can only be accessed through the caregiver control panel.

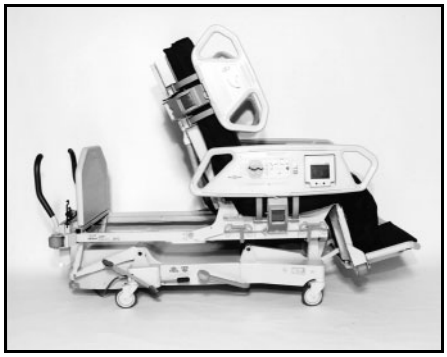
Patient articulation controls are automatically locked out while the system is in the chair or chair egress positions. The chair indicator on the caregiver control panel illuminates when the chair position is entered.

Chair

The head section rises 65°, the knee section rises 10°, and the foot section lowers 70°.

The chair feature allows the caregiver to place the patient in a fully seated position without having to remove the patient from the TotalCare® Bed System. The chair feature also provides a means to support the patient's feet for comfort and security.

To Activate:



- Set the brake.
- Press the Enable control.
- Press the Chair control. The patient deck transitions to the chair position.
- If the footboard is installed, when the articulation stops and a tone sounds, the system has reached the full chair position.

To Support Patient's Feet:

- Check for support in the full chair position. Many patients are adequately supported with no action required.
- Retract the foot section if necessary.
- For shorter patients, reverse the footboard so that the product label is up.
- Move the mattress foot section up to remain within the footboard.
- Adjust the foot section length using the Foot In control to position the legs correctly while maintaining foot support.

Many shorter patients may not require that the footboard be reversed. Use of pillows and blankets may provide adequate support. Extremely short patients may require use of pillows and blankets in addition to reversing the footboard for adequate foot support.

WARNING:
It is not recommended to leave immobile patients in the chair position longer than 2 hours without repositioning.

WARNING:
Full chair position is recommended for no longer than 2 hours at a time unless the patient's weight can be shifted to help offload pressure points.

NOTE:
When the brake is not set and the bed system is in the chair or chair egress positions, the brake not set and chair indicators will flash and an audible alarm will sound.

NOTE:
If the footboard is installed with the bed in the maximum FullChair® Patient position and the chair control or foot down control is pressed, the Remove Ft Board and chair indicators will flash and an audible alarm will sound.

WARNING:
Check periodically to ensure that the patient remains properly positioned. If necessary, use the optional seat belt to keep patients from sliding or falling forward while in a chair position. Use of pillows can maintain side-to-side positioning. Injury to the patient may result from improper positioning.

WARNING:
Do not articulate the head section with the patient buckled with the Seat Belt. Patient injury can occur.

WARNING:
Do not use the Seat Belt as a restraint device. The Seat Belt is only to maintain correct patient positioning in the chair position.

WARNING:
The patient's feet must be supported at all times while in the chair position. Extended periods of time without support can cause discomfort and reduced circulation. Refer to page 6, the FlexAfoot™ Retractable Foot Control, and/or move the patient down in the bed until the patient's feet are supported. Injury to the patient may result from improper positioning.

WARNING:
Do not transport a patient with the TotalCare® Bed System in a chair position. Injury to the patient may result.

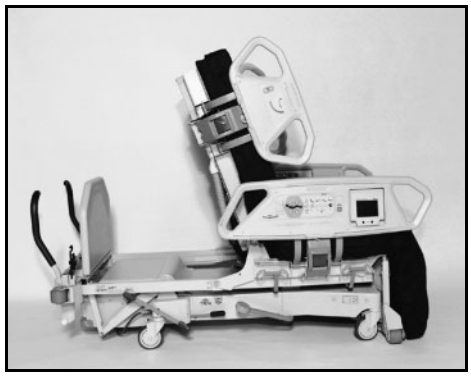
CAUTION:
Do not stand or sit on the footboard. Damage to equipment may result.

NOTE:
For large patients or patients at risk for skin breakdown, use of the Trendelenburg control to tilt the chair position back will optimize interface pressure performance.

Features

Chair Egress

The head section rises 75°, the knee section lowers to 0°, the foot section lowers to 85°, and the Hi-Lo lowers to its lowest height. The foot section also fully retracts automatically.



WARNING:
Patient's should not be left in the chair egress position. The chair egress position is only for egress and ingress.

The caregiver can use this feature to easily position a patient to egress from the foot end of the TotalCare® Bed System.

NOTE:
The FullChair® Patient Egress Position Mechanism is intended to facilitate patient egress and not long-term sitting.

NOTE:
To achieve the egress position, the front casters must be in a trailing position.

To Activate:

- Set the brake.
- Remove the footboard.
- Press the Enable control.
- Press the Chair Patient Position Control. The patient deck transitions to the chair egress position. Monitor the patient as the system moves to the egress position.
- Assist the patient with egress.

NOTE:
When the brake is not set while the bed system is in the chair egress position, the brake not set and chair indicators flash, and an alarm sounds.

NOTE:
The TotalCare® Bed System does not move to the FullChair® Egress Position Mechanism until the footboard is removed. When the footboard is removed the Remove Ft Board indicator light goes out.

WARNING:
If the patient is left sitting in the chair egress position, a thigh angle of 10° should be maintained, except during actual patient egress. The patient's feet must be supported by the floor at all times while in the egress chair position. Injury to the patient may result from improper positioning.

WARNING:
Do not transport a patient with the TotalCare® Bed System in a chair position, injury to the patient may result.

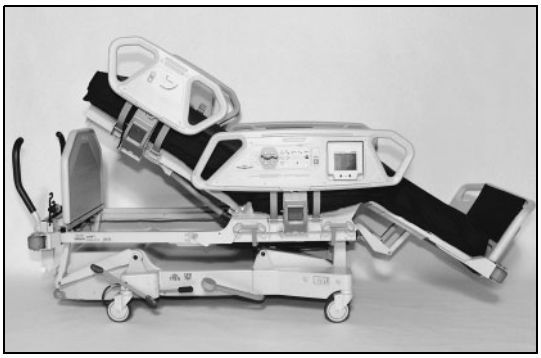
WARNING:
Do not use ankle restraints when activating this feature, injury to the patient may result.

WARNING:
If bed sheets contact the floor during chair egress use, standard infection control procedures should be followed.

CAUTION:
Do not install the footboard in the chair egress position. The Remove Ft Board and Chair indicators flash and an alarm sounds.

When moving the bed out of the chair egress position, a beep sounds to remind the caregiver to install the footboard.

Recliner



The head section rises 50°, the knee section rises 10°, and the foot section lowers 30°.

The recliner feature allows the patient to be placed in a customized semi-seated position.

To Activate:

- Set the brake.
- Press the Enable control.
- Press the Chair control. The patient deck transitions to the reclined position.
- When the system has reached the approximate desired position, release the Chair control. If desired, use the Head, Knee, Foot, or Foot Retract Controls to make custom recliner position adjustments.

WARNING:
Do not transport a patient with the TotalCare® Bed System in a recliner position, injury to the patient may result.

WARNING:
Do not use ankle restraints when using this feature, injury to the patient may result.

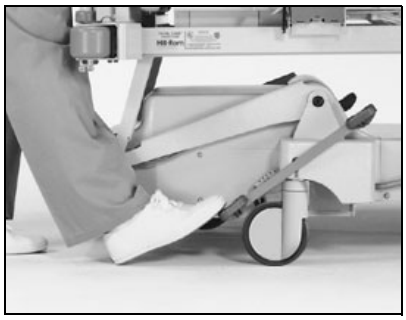
WARNING:
The patient's feet must be supported at all times while in the recliner position. Extended periods of time without support can cause discomfort and reduced circulation. Injury to the patient may result from improper positioning.

Point-of-Care® Brake and Steer System

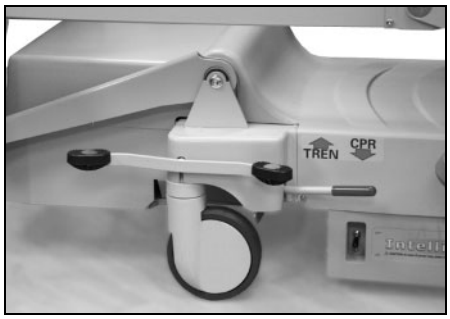
The Point-of-Care® Brake and Steer System pedal control is located above the casters at the head end of the system. Use the steer mode to help move the TotalCare® Bed System in a straight line through hallways. Engaging the brake feature keeps the TotalCare® Bed System from moving. The neutral position allows the system to be moved sideways in a room or small enclosed area.

To Activate:

• Brakes - Step down on the orange Brake Pedal. The *brake not set* indicator goes out, indicating the four casters are locked. Push and pull on the system to make sure that the brake function is fully engaged.



• To Steer - Step down on the green Steer Pedal. The *brake not set* indicator comes on. The two foot-end casters lock in-line ready for system movements.



• Neutral Position - Move the Brake/Steer Pedal to the level position. The *brake not set* indicator comes on. The system can now be moved in any direction.

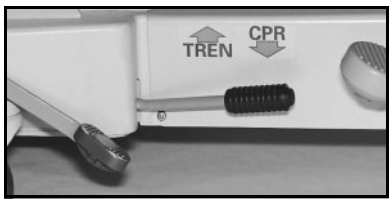
NOTE:
The TotalCare® Bed System should be pushed from the head end of the bed using the transport handles.

For beds with the IntelliDrive® Transport System installed, the brake and steer system operates differently. When the brake and steer pedal is placed in steer, the front casters are **not** locked into steer mode. All four casters on the bed are put into the neutral position. This allows the bed to pivot on the IntelliDrive® Transport System drive wheel. Pivoting on the drive wheel allows for tighter turns, and enhanced ease of steering.

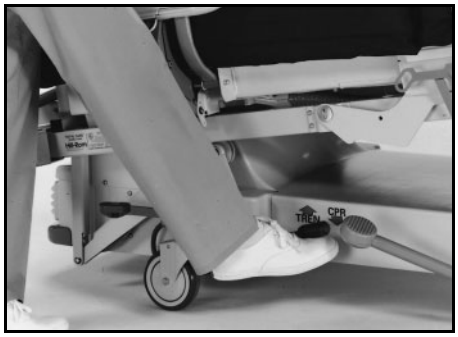
WARNING:
Always set the brake when the bed and/or patient is not being transported. Failure to set the brake can cause personal injury or equipment damage from the bed moving under its own power.

Emergency Caregiver Foot Controls

The Emergency CPR and Emergency Trendelenburg control pedals are located on each side of the base frame between the head end and foot end casters.



HandsFree® Emergency Trendelenburg Release Mechanism



Under normal power, the TotalCare® Bed System is capable of 15° Trendelenburg and 15° Reverse Trendelenburg. The emergency Trendelenburg feature is capable of achieving up to a 20° angle if the bed is in the full height position.

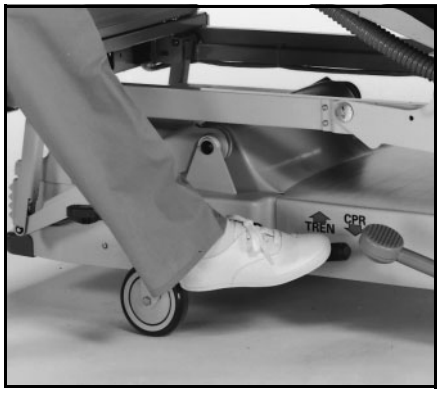
To Activate:

- The head section must be flat for the Emergency Trendelenburg feature to achieve the desired position.
- With your foot, lift and hold the TREN Pedal. When the articulating frame has reached the full or desired Trendelenburg position, release the TREN Pedal.
- If movement of the articulating frame stops before the maximum 15° is achieved, raise the articulating frame higher by using the Bed Up control.

WARNING:
The overall angle of emergency Trendelenburg is directly proportional to the height of the bed. To ensure that a maximum of 15° can be achieved, the bed system should always be transported in a mid-height position. If the bed is in low position and AC power is not available, use pillows to elevate the patient's feet until Trendelenburg can be achieved.

NOTE:
In the event that the bed is equipped with optional manual controls, Trendelenburg and Reverse Trendelenburg positions can be achieved. See "Manual Controls" on page 28.

HandsFree® Emergency CPR Release



When connected to AC power, the CPR release lowers the head and knee sections, and raises the foot section. The head section moves to a flat position within 10 seconds. Emergency CPR is also functional in the chair egress, or recliner positions. When the pedal is held down for 4 seconds, a tone sounds and the foot section rises. The foot section moves to a flat position within a maximum of 25 seconds if fully articulated. If the power cord is unplugged, only the head section lowers. To stop the automatic foot up articulation, press any control except for Bed Up/Down, and the foot section stops.

The optional treatment and pulmonary surfaces will Max-Inflate providing a firm surface to support a CPR board. The headboard can be used as a CPR board in emergency situations. If AC power is lost, the air surfaces stay at the level of pressure that existed at the time of power loss. After 30 minutes of Max-Inflate, the optional treatment surface will go into Normal/Standard mode.

To Activate:

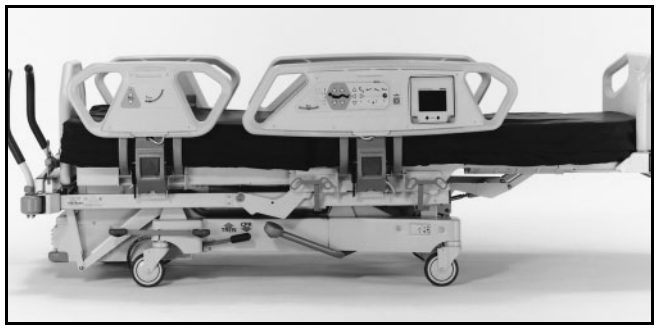
- If the master lockout is enabled, it must be deactivated to allow other controls to stop the foot section.
- Hold the CPR pedal down with your foot until the head section reaches the flat or desired position and you hear the audible tone. Release the CPR pedal to stop head section movement. The foot and knee sections will automatically move to a flat position.
- The surface automatically goes into Max-inflate for 30 minutes. After 30 minutes the surface will go into Normal/Standard mode. A cardiac arrest board is required. The head board can be used in place of the cardiac arrest board.
- To stop foot section movement, simply press any other siderail control.

Features

WARNING:
When the AC power is lost, only the head section will lower. The optional Treatment Surface and pulmonary surface will not Max-Inflate, CPR board effectiveness may be reduced.

NOTE:
The Bed Up/Down controls are usable when the CPR function is activated.

Head and Intermediate Siderails



Siderails Raised

WARNING:
Evaluate patients for entrapment risk according to facility protocol, and monitor patients appropriately.

WARNING:
Evaluate patients for entrapment risk according to facility protocol, and monitor patients appropriately. Ensure that all siderails are fully latched when in the raised position. Failure to do either of these could result in serious injury or death.

NOTE:
Siderails are intended to be a reminder to the patient of the unit's edges, not a patient-restraining device. When appropriate, Hill-Rom recommends that medical personnel determine the proper methods necessary to ensure a patient remains safely in bed.

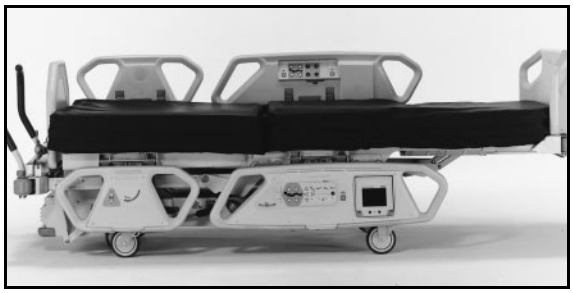
TotalCare® Bed System siderails have been designed for one-step operation.

Siderails in the raised position are intended to make the patient aware of the proximity of the edge of the sleep surface.

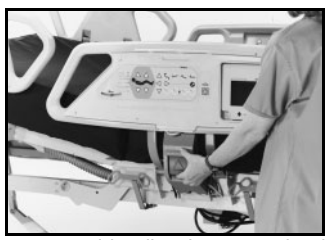
Siderails in the down position, below the patient surface, facilitates a patient's entry or exit from the bed. This design feature also facilitates unobstructed access to the patient.

To Activate:

- To raise a siderail, pull the siderail up until it latches into the locked position.
- While raising the siderails, a **click** will be heard when it latches into the locked position.
- Once the **click** is heard, gently pull on the siderail to ensure it is latched properly.
- To lower a siderail, grasp the release handle and pull out. The siderail automatically lowers and tucks under the sleep surface perimeter.

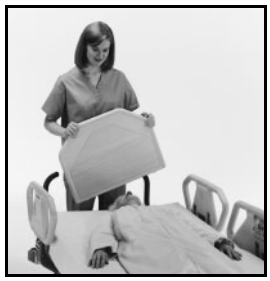


Siderails Lowered



OneStep® Siderail Release Mechanism

Headboard



Old style

The headboard is located at the head end of the bed. It attaches to the head end of the frame, and it articulates with the frame.

The headboard can be removed for increased access to the patient's head. It also can be used as a back board during emergency CPR procedures.

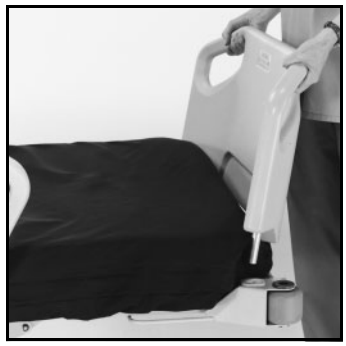
A caregiver can quickly remove or attach the headboard in a single step without the use of tools.

To Remove/Install:

- To remove, grasp the headboard and lift straight up.
- To Install, position the headboard sockets over the pins on the frame. Then lower the headboard onto the pins. Push the headboard down until the bottom rests on the frame.

New style

Footboard



The footboard is located at the foot end of the bed. It attaches to the articulating foot section, and it remains perpendicular to the surface of the foot section at all times. The footboard protects the patient during transport and room docking.

A caregiver can quickly remove or attach the footboard in a single step without the use of tools.

To Remove/Install:

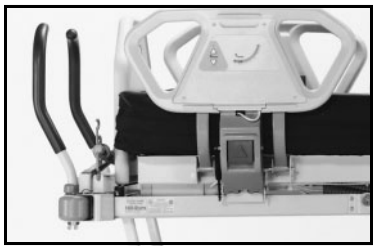
- To remove, grasp the handles on the footboard and lift straight up.
- To install, insert the pins of the footboard into the blue sockets in the articulating frame. Push the footboard down until it rests on the deck.

Standard Casters

The TotalCare® Bed System comes equipped with 5" (13 cm) casters. The casters are integral components of the brake and steer system.

Transport Handles

Transport handles are provided at the head end of the TotalCare® Bed System. The handles provide the caregiver easy-to-grasp grips for steering and positioning the bed.



To Use:

- Grasp the handles, and rotate inward toward the bed.
- When the handles drop and lock into position they are ready for use.

To Store:

- Grasp the handles, and lift.
- Rotate the handles outward to their stowed position.

NOTE:
The handles drop slightly when they have reached the stored position.

To Use (IntelliDrive® Transport System Beds):

- Raise the handles from the stowed position.
- Lower the handles into the bed frame.

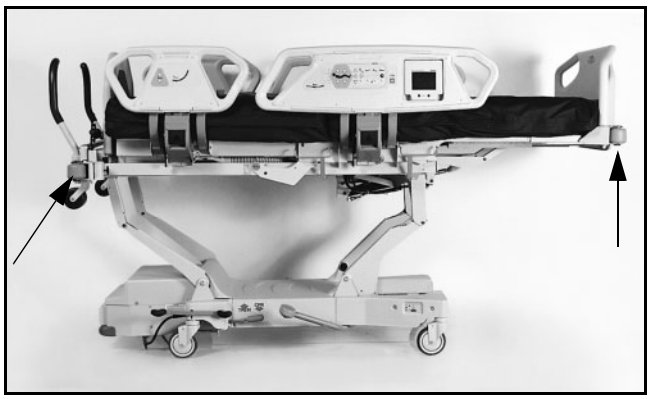
To Stow (IntelliDrive® Transport System Beds):

- Pull the handles upward from the bed frame.
- Rotate the handles inward toward each other until they stop moving.

CAUTION:
Do not push or pull the TotalCare® Bed System by IV poles or other equipment. Use the transport handles or footboard. Failure to do so can result in equipment damage.

Equipment Sockets

Equipment sockets are provided at each corner of the deck for equipment such as IV poles and infusion support.

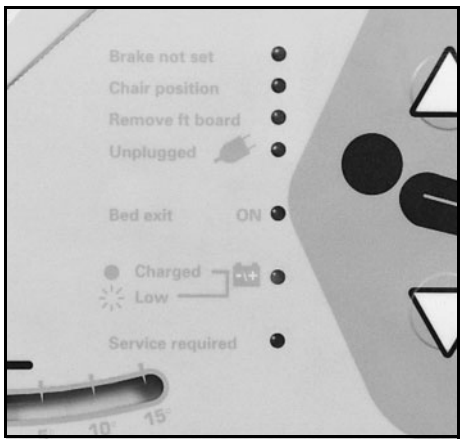


CAUTION:
The equipment sockets are not to be used for overhead fracture frame equipment.

CAUTION:
Before moving the TotalCare® Bed System into any of the chair positions, remove all equipment from the sockets at the foot end of the articulating deck.

CAUTION:
While articulating into a Trendelenburg position, ensure adequate headwall clearance.

Safety and Information Indicators



Safety and Information Indicators provide the caregiver with visual and audio indications about Brake Status, Chair Position, Remove Ft board Alarm, AC Power, Bed Exit Alarm, and Battery Status.

Brake Not Set

If the brake is not engaged, the brake not set indicator flashes.

If the system is in the chair or chair egress positions and the brake is not engaged, the brake not set indicator flashes and an alarm sounds.

Chair Position

The Chair Position indicator comes on when the system is in the chair or chair egress position.

If the bed system is in the chair or chair egress positions and the brake is not engaged, the chair indicator flashes and an alarm sounds. If the bed system is in the chair egress position and the footboard is installed, the chair indicator flashes and an alarm sounds.

Remove Ft Board

If the bed system is in the chair egress position and the footboard is installed, the Remove Ft Board indicator flashes and an alarm sounds.

Unplugged AC

The Unplugged AC indicator flashes when the AC power cord is disconnected and a battery is present.

Bed Exit System (Optional)

The Bed Exit ON indicator comes on when the Bed Exit System detection feature has been activated.

Battery Power (Manual Control Option)

Charged – The Charged indicator comes on when the battery is charged.

Low – The Low indicator flashes when the battery is low. An intermittent tone sounds every two minutes when the battery reaches low condition and AC is unplugged.

Off – If the battery is too low to operate the bed.

CAUTION:
Although a fully-charged battery is preferred, transport may be done when the battery charge is low. The bed should be reconnected to AC power as soon as possible.

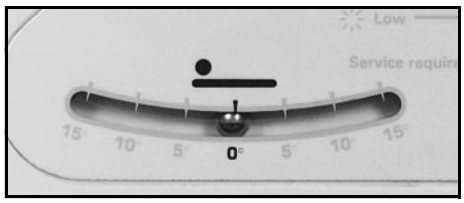
If the Battery Indicator changes from Charged to Low consistently within four hours of being disconnected from AC power, the battery should be replaced.

Service Required

The Service required indicator flashes when the system detects a malfunction. Refer to service manual.

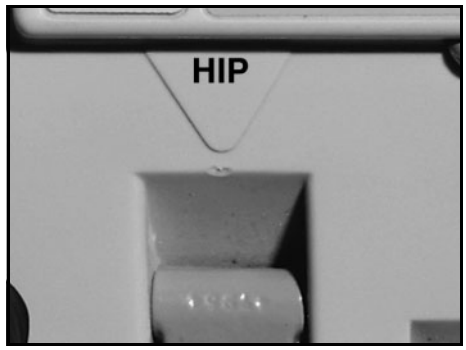
Features

Line-of-Site® Trendelenburg Angle Indicator



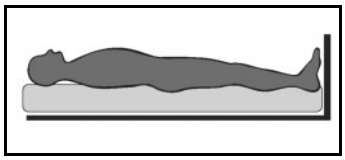
The Line-of-Site® Trendelenburg angle indicator mechanically indicates up to 15° of Trendelenburg and 15° of Reverse Trendelenburg in 5° increments. The degree number where the indicator ball rests is the correct Trendelenburg angle with respect to the floor.

Hip Position Locator



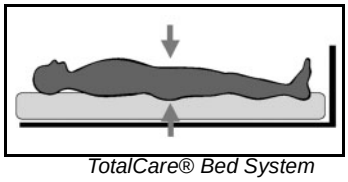
A hip position label appears on the intermediate siderails to indicate the correct position of the patient's hips while on the bed. The labels are on the inside and outside of the intermediate siderail just below the Head Up/Down controls on the patient control panel.

Proper placement of the patient increases the effectiveness of the Shearless Pivot® Patient Position Mechanism frame and minimizes gravitation of the patient to the foot end of the bed when raising the head section.



Traditional Bed

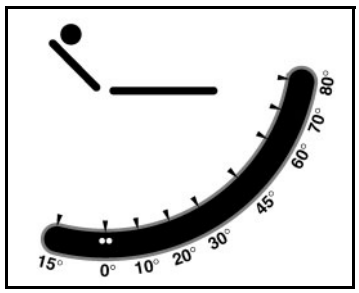
Patient placement towards the head end of the bed



TotalCare® Bed System

Patient position locator indicates correct position of patient's hips

Line-of-Site® Head Angle Indicator



The head angle indicators mechanically indicate the angle of the head section from –15° to +80° with respect to the floor. The head siderails contain head angle indicators on their outboard sides. The degree where the indicator ball rests is the correct angle.

WallGuard® Bumper System

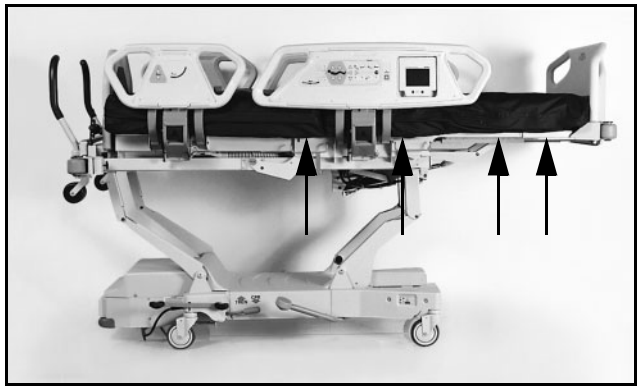
The WallGuard® Bumper System protects the perimeter of the TotalCare® Bed System when it is being moved or transported.

Roller bumpers protect the headwall system when the system is docked in the patient room.

IV Sockets

The TotalCare® Bed System comes with six standard IV sockets. Four are located at the head end and two are located at the corners of the foot end.

Drainage Bag Holders



The TotalCare® Bed System is equipped with six drainage bag holders, four centrally located at the side of the bed and two at the foot. Drainage bags should be placed on these holders.

The holders accommodate any combination of the following drainage devices:

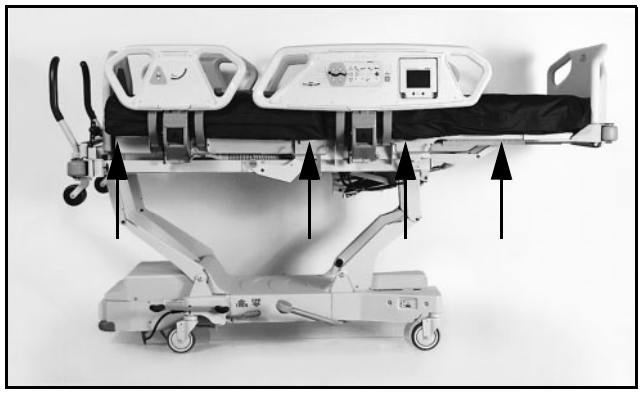
- Fecal incontinence bag
- 250/2000 ml Foley collection bag
- PLEUR-EVAC®[1] on foot-end holders (during transport only)

When the bed system is docked, follow facility protocol for placement of the PLEUR-EVAC® or other chest drainage devices.

The primary drainage bag holders *are not* located on the weigh frame. Secondary drainage bag holders, located on the sides of the foot section, are located on the weigh frame.

WARNING:
Do not tie restraints to the primary drainage bag holders.

Patient Restraint Interface



The TotalCare® Bed System facilitates the use of vest, wrist, waist, and ankle restraints. Hill-Rom makes no recommendation regarding the use of physical restraints. Users should refer to legal restrictions and appropriate facility protocols before physical restraints are used.

WARNING:
Patient restraints are not intended as substitutes for good nursing practices. Physical restraints, even properly installed, can result in entanglement, physical injury, and death, particularly with agitated and disoriented patients. Monitor patients when using physical restraints in accordance with legal requirements and facility protocol.

WARNING:
Restraints must be attached to the articulating sections of the system at the proper attachment points to prevent injury to the patient.

WARNING:
Never use ankle restraints in a chair position or when the foot section is retracted.

1. Pleur-Evac® is a registered trademark of Deknatel, Inc.

Optional Caregiver Controls

Nurse Call

On TotalCare® Bed Systems equipped with the Nurse Call option, use a NURSE control to activate the Nurse Call feature. The controls are located on both the inboard and outboard sides of the intermediate siderails.

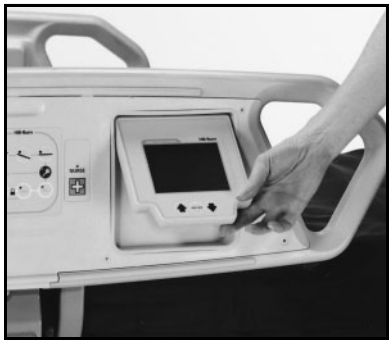
To Activate:

- Press a NURSE control.
- When the nurse's station acknowledges the nurse call, the indicator light on the NURSE control will flash.
- When the nurse's station communication line is open, the indicator stops flashing and illuminates continuously.
- Speak into the speaker/microphone located on the inboard side of the head end siderails.

You do not need to press the Enable control prior to pressing a NURSE control. The NURSE controls are always active. The NURSE controls cannot be locked out by the Master lockout control.

NOTE:
A nurse call is placed automatically one minute after the loss of AC power (only on beds built prior to January 2000).

Graphical Caregiver Interface (GCI)® Control



The Graphical Caregiver Interface (GCI)® Control is an optional feature located on an intermediate siderail on the caregiver control panel.

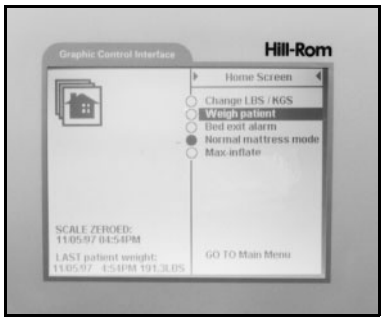
The Graphical Caregiver Interface (GCI)® Control uses a graphic display to provide for full caregiver interaction. Menu choices appear on the right side of the screen. The left side of the screen provides unique information or instructions for the menu item highlighted on the right side of the screen.

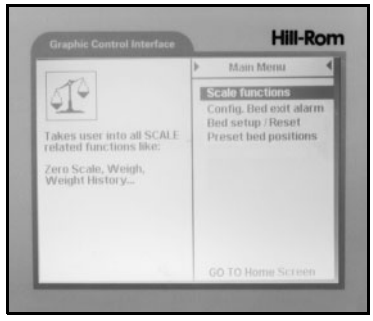
Optional features that are present on the TotalCare® Bed System appear on the screen menus.

The caregiver interacts with the control by using three controls located at the bottom of the control screen: scroll Up arrow, ENTER, and scroll Down arrow.

Generally, to operate system functions, selections are made through the Home screen. From the Home screen the caregiver can also quickly access standard system functions (i.e., Bed Exit alarm, Weigh patient, and Change LBS/KGS). Specific system setup or configuration functions are selected through the Main Menu.

To Activate:



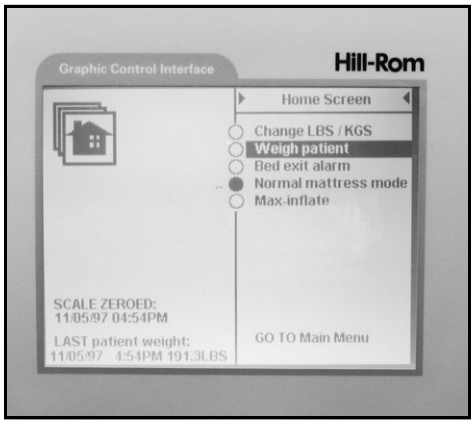


- Using the Up /Down controls, select the desired menu function and then press the ENTER control. Begin selection at either the home screen or the main menu.

NOTE:
After a menu selection has been made, and the system receives no further input, the control will eventually return to the Home Screen and the screen will turn off. For beds with the optional TotalCare SpO_2RT® Pulmonary Therapy System, the Graphical Caregiver Interface (GCI)® Control will stay at the last screen viewed. To reactivate the Graphical Caregiver Interface (GCI)® Control, press the ENTER button or either the Up or Down arrow.

<u>Home Screen</u>

Change LBS/KGS



- From the Home Screen, scroll to Change LBS/KGS. Press ENTER.
- For additional scale functions, scroll to Main menu. Press ENTER.
- Scroll to Scale functions. Press ENTER.
- Follow the on-screen instructions.

Weigh Patient

- Center the patient on the surface.
- Raise the siderails.
- Ensure the TotalCare® Bed System is clear of all obstructions: lines, tubing, walls, etc.
- From the Home screen, scroll to Weigh patient. Press ENTER.
- For additional Scale functions, scroll to Main menu. Press ENTER.
- Scroll to Scale functions. Press ENTER.
- Follow the on-screen instructions.
- To obtain accurate patient weight, the head and foot sections must be flat to a maximum 30° articulation and the bed must be level.

CAUTION:
Failure to place the bed within these limits will affect scale accuracy.

Optional Caregiver Controls

Bed Exit System Alarm

To Activate:

- Ensure that the patient is on the bed.
- At the Home Screen, scroll to Bed Exit Alarm. Press ENTER. This activates the Bed Exit detection feature.
- The Bed Exit ON indicator comes on to indicate that the Bed Exit detection feature is activated.
- For additional Bed Exit alarm functions, scroll to Main Menu. Press ENTER.
- Scroll to Config. Bed exit alarm. Press ENTER.
- Follow the on-screen instructions.

When 50% of the weight, recorded at the time the Bed Exit alarm is armed, is removed from the bed, the Bed Exit alarm activates, sending a nurse call signal (if the bed is equipped with the Nurse Call feature) and turns on an audible alarm.

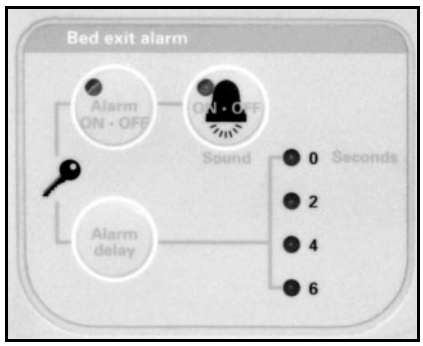
To Deactivate:

- At the Home Screen, scroll to Bed exit alarm. Press ENTER.
- The Bed Exit ON indicator goes off to indicate that the Bed Exit detection feature has been deactivated.

WARNING:
The Bed Exit System is not intended as a substitute for good nursing practices. The Bed Exit system must be used in conjunction with a sound risk assessment and protocol.

WARNING:
The addition of a significant weight to the bed (i.e. a visitor sitting on the bed) may allow the patient to exit without the Bed Exit System alarming.

NOTE:
The Bed exit alarm can also be activated through the Bed exit alarm panel located on the siderail opposite the Graphical Caregiver Interface (GCI)® Control.



To Activate:

- Press the Enable control.
- Press the Alarm ON•OFF control.

Panel options include Audible Alarm control:

To Activate:

- Press the Enable control.
- Press the Sound control.

Alarm Delay control:

To Activate:

- Press the Enable control.
- Press Alarm Delay Control.
- Continue to press Alarm Delay Control until LED indicates the desired station (0, 2, 4, 6 seconds).

Normal Mattress Mode

From the home screen, scroll to Normal mattress mode. Press ENTER. Follow the on-screen instructions.

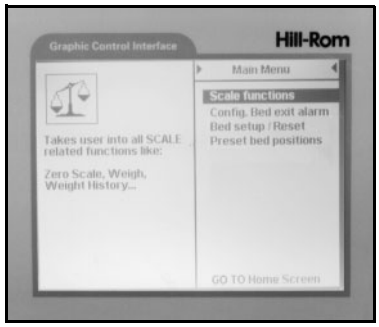
NOTE:
See Treatment Surface for additional information.

Max-Inflate

From the home screen, scroll to Max-inflate. Press ENTER.

Main Menu Screen

At the Home Screen, scroll to GO TO Main Menu. Press ENTER. The Graphical Caregiver Interface (GCI)® Control displays the Main Menu.



Main Menu

Scale Functions

- From the Main Menu, scroll to Scale functions. Press ENTER. The screen displays the scale menu.
- Scroll to desired function. Press ENTER.

Example: *Weigh Patient*

- At the Scale menu, scroll to Weigh patient. Press ENTER. The left side of the display screen becomes active.
- Follow the on-screen instructions.
- To return to the Scale menu for another selection, press the Cancel/Exit function.
- At the scale menu, scroll to the applicable function. Press ENTER. Scale menu functions include Zero, Delayed Weigh, Tare List, Change LBS/KGS, Access Weight History, Add/Remove Items, or Set Weight.
- Follow the on-screen instructions for each selection.

Prior to adding or removing items from the bed, the Add/Remove Items option **must** be used. Using the Add/Remove Items option will hold the patient's weight in memory while items are being added or removed. Follow the on-screen instructions for using the Add/Remove Items option.

NOTE:
Scale accuracy: 1% of patient weight
Scale repeatability: + /- .3% 70.5 to 175 lbs. (32.0 to 79.4 kg); + /- .1% 175 to 400 lbs. (79.4 to 181.4 kg)
Patient weight should not be taken while the optional percussion or vibration pulmonary therapy is active.

Config. Bed Exit Alarm

- From the Main menu, scroll to Config. Bed exit alarm. Press ENTER.

Bed Exit Alarm Delay

- Scroll to Change delay. Press ENTER.
- On the left side of the screen, scroll to either a 0, 2, 4, or 6-second alarm delay. Press ENTER. The filled circle indicates the selected delay duration.

Bed Exit

- Scroll to Bed exit: On/Off. Press ENTER.
- Select either On to activate the Bed Exit detection feature or Off to cancel the Bed Exit functions.

Optional Caregiver Controls

Sound On/Off

- Scroll to Sound On/Off. Press ENTER.
- Select either On for active audible indication or Off to cancel audible indication. This only affects the audible alarm on the bed. A nurse call is still placed.

NOTE:
If the bed does not have nurse call capabilities, the audible alarm is always active.

WARNING:
The Bed Exit System is not intended as a substitute for good nursing practices. The Bed Exit System must be used in conjunction with a sound risk assessment and protocol.

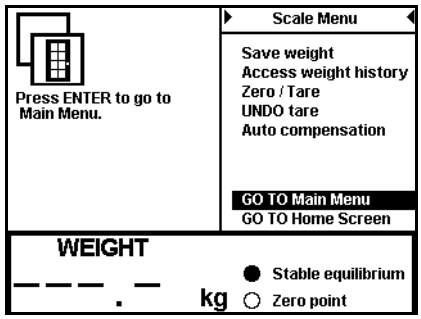
WARNING:
The activation of 2, 4, or 6-second delay of the Bed Exit alarm feature will reduce the effectiveness of the Bed Exit System.

NOTE:
If the bed is equipped with the TotalCare SpO_2RT® Pulmonary Therapy System, the bed scale system will automatically re-calculate the zero weight when adding or removing the pulmonary modules. There is no need to re-zero the scale.

Scale Operation (European Version Scale Only)

Scale Functions

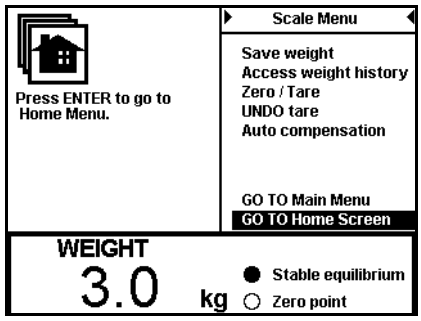
The scale on the TotalCare® Bed System is a real time scale that constantly reads the patient's weight.



- From the Home Screen **or** Main Menu, scroll to Scale functions. Press ENTER. The screen displays the Scale Menu functions, patient weight, Stable equilibrium, and Zero point.
- The following functions can be accessed from the Scale Menu: Save weight, Access weight history, Zero/Tare, UNDO Tare, and Auto compensation.
- Scroll to the desired function. Press ENTER.

WEIGHT

The WEIGHT section of the screen displays patient weight in kilograms in .5 kg increments. This reading changes as the patient moves, gains or loses weight, or visitors lean on the bed or siderails. The caregiver **cannot** change this reading.



If the WEIGHT reading displays as all dashes, the scale is unable to weigh the patient. Possible reasons for this are the bed weight limit may be exceeded, or there may be an internal error. Remove the weight from the bed. If this does not fix the problem, contact facility maintenance for further troubleshooting.

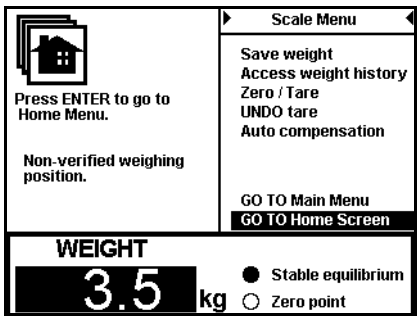
To get the most accurate weight reading, the bed must be in the highest position and the mattress flat.

NOTE:
"Non-verified weighing position" means that the bed is not in the position that the scale was certified in during manufacturing. This may affect accuracy, but not the scale operation or function.

NOTE:
The WEIGHT reading is only displayed on a Scale Function screen.

Stable equilibrium

Stable equilibrium indicates equilibrium between internal readings for the scale. If the Stable equilibrium indicator is not illuminated, it does not affect scale the function. This function is automatic and **cannot** be selected by the caregiver.



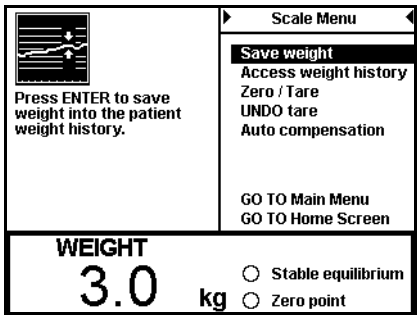
Zero point

Zero point is indicated after a Tare is taken. The final reading is .25 kg of the actual weight on the bed. This reading is automatic and **cannot** be changed by the caregiver.

Save weight

The Save weight function enables the caregiver to store the patients weight in the scale memory for reference at a later time.

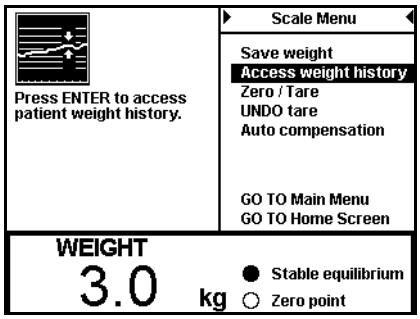
From the Scale Menu, scroll to Save weight. Press ENTER. Follow the on-screen instructions.



Access weight history

The Access weight history enables the caregiver to view saved weights and delete saved weights.

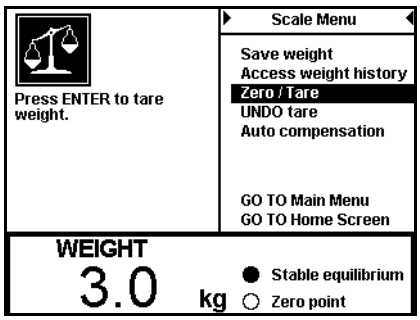
From the Scale Menu, scroll to Access weight history. Press ENTER. Follow the on-screen instructions.



Zero/Tare

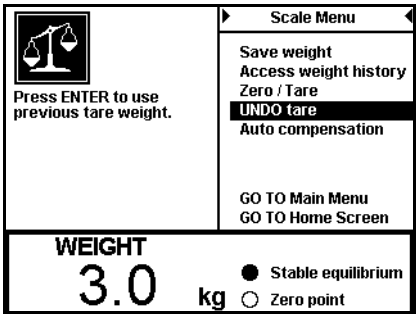
The Zero/Tare function enables the caregiver to reset the scale system **prior** to a new patient using the bed.

- Remove any equipment and accessories from the bed.
- From the Scale Menu, scroll to Zero/Tare. Press ENTER. Follow the on-screen instructions.



Optional Caregiver Controls

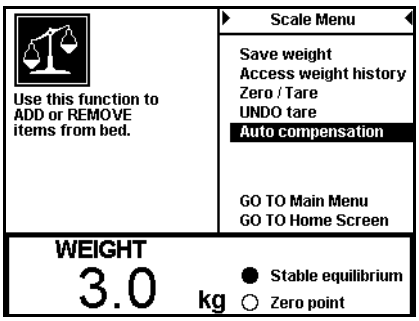
UNDO Tare



If a patient is on the bed and a tare is accidentally taken, UNDO tare enables the caregiver to undo the last tare on the bed. UNDO tare resets the bed to the last tare that was taken.

From the Scale Menu, scroll to UNDO tare. Press ENTER. Follow the on-screen instructions.

Auto compensation



If a patient is on the bed, Auto compensation enables the caregiver to change items on a bed and correct the weight reading.

NOTE:
If a patient is **not** on the bed, use the Zero/Tare function after changing items.

The Auto compensation function stores the patient's weight in memory when items on the bed are being changed. Prior to adding or removing items on the bed, use the Auto compensation option to track the weight reading for the items being changed.

From the Scale Menu, scroll to Auto compensation. Press ENTER. Follow the on-screen instructions.

Scale specifications:

Class IIII

Maximum weight: 200 kg

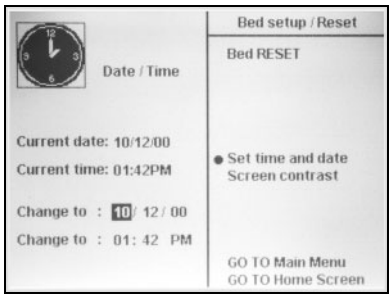
Minimum weight: 5 kg

Display interval: .5 kg

Combined zero and tare range: 0 kg to 200 kg

NOTE:
If the bed is equipped with the TotalCare SpO_2RT® Pulmonary Therapy System, the bed scale system will automatically re-calculate the tare weight when pulmonary modules are added or removed. There is no need to re-tare the scale.

Bed Setup/Reset



The Bed setup/reset control clears the weight history and re-zero's the scale.

Bed RESET

- From the Main menu, scroll to Bed setup/reset. Press ENTER.

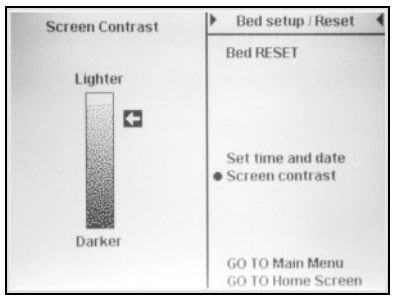
NOTE:
If the bed is equipped with a pulmonary therapy surface, the Therapy Statistics will be cleared with Bed RESET.

Set Time and Date

- Scroll to Set Time and Date. Press ENTER.
- Move the up and down arrows to change the time and date. Press ENTER.

Screen Contrast

- Scroll to Screen contrast. Press ENTER. An arrow is highlighted on the left side of the screen.
- Move the arrow up and down for lighter or darker settings. Press ENTER.



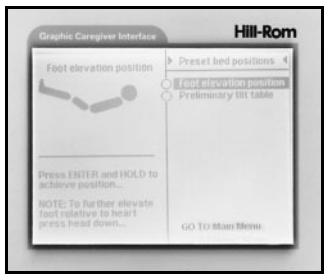
Preset Bed Options

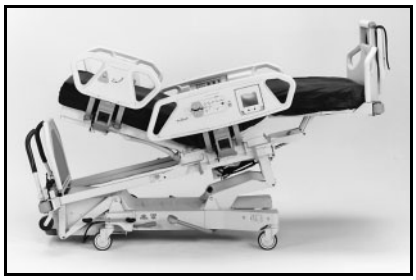
The Graphical Caregiver Interface (GCI)® Control is equipped with two preset system positions: Foot elevation and Preliminary tilt table. Both positions can be activated through the control.

Foot Elevation

The preset Foot elevation feature raises the patient's feet while lowering the head position.

- From the Main Menu, scroll to Preset bed positions. Press ENTER.
- Select Foot elevation, and then press and hold ENTER until the patient is in the desired position.

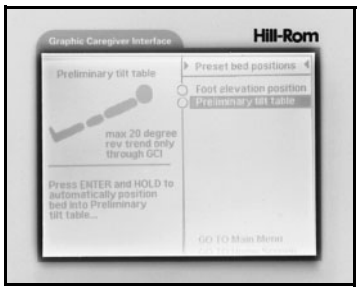


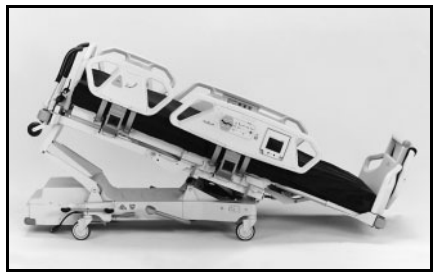


Preliminary Tilt Table

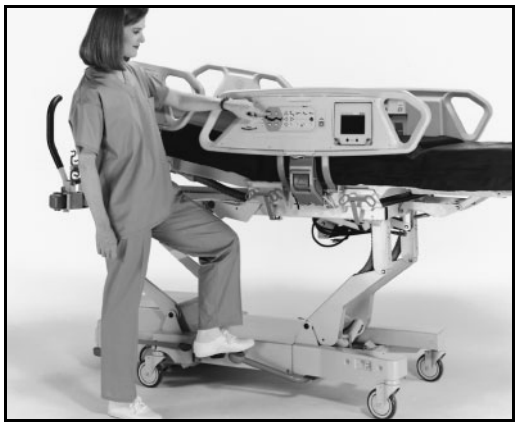
The preset Preliminary tilt table feature articulates the system to a maximum 20° Reverse Trendelenburg position.

- From the Main Menu, scroll to Preset bed positions. Press ENTER.
- Select Preliminary tilt table, and then press and hold ENTER until the patient is in the desired position.





Manual Controls



In the absence of AC power, the optional manual control can be used to operate all bed system articulation functions.

The manual controls only work on beds with the optional battery installed.

To Activate:

- Press and hold the appropriate caregiver control (Bed Up/Down, Head Up/down, and Knee Up/Down) while repeatedly stepping down on the blue Manual Foot Pedal.
- Continue until the desired position is achieved.
- If the Enable Control is required when AC power is applied to the bed, then the Enable Control must be used to operate those functions when using the manual controls.
- To activate the Foot Down control, press the Foot Down Control and press and hold down the blue Manual Foot Pedal.
- To activate the other down functions, press the appropriate caregiver control.

Optional Patient Controls

With the Patient Positioning Control option, patient controls are located on the inboard side of the intermediate siderails.

Nurse Call

On systems equipped with the Nurse Call option, NURSE controls are located on both the inboard and outboard sides of the intermediate siderails. Operation of this feature is the same as that for the caregiver control previously described in this manual.

After transport, the Nurse Call system connections are to be made according to the applicable Hill-Rom service manual. Use only Hill-Rom communications cables to ensure proper operation of the Nurse Call system.

Head Up/Down Control

The patient can raise or lower the head section by using the Head Up/Down controls. Operation of this feature is the same as that for the caregiver control previously described in this manual except head elevation is restricted to 55°.

NOTE:
When in chair mode, as indicated by an illuminated chair position indicator, the optional patient positioning controls are disabled.

Knee Up/Down Control

The patient can raise or lower the knee section using the Knee Up/Down controls. Operation of this feature is the same as that for the caregiver control previously described in this manual.

NOTE:
When in chair mode, as indicated by an illuminated chair position indicator, the optional patient positioning controls are disabled.

Optional Patient Controls

Room Light

The Room Light control is found on systems equipped with the Patient Lighting/Entertainment option.

To Activate:

- Press the Room control.
- To turn off the Room Light, press the Room control again.

Read Light

The Read Light control is found on systems equipped with the Patient Lighting/Entertainment option.

To Activate:

- Press the Read control.
- To turn off the Read Light, press the Read control again.

Television

The Television control is found on systems equipped with the Patient Lighting/Entertainment option.

To Activate:

- Press the Television control.
- To reach the desired channel, continue to press the control.
- To turn off the television, press the Television control until the television turns off.

Music/Select

The Music/Select control is found on systems equipped with the Patient Lighting/Entertainment option.

To Activate:

- Press the Music/Select control.
- To turn off the music, press the Music/Select control again.

NOTE:
When the system is equipped with the enhanced entertainment control option, the Music/Select control also functions as a TV select control.

Optional Enhanced Entertainment Control Option

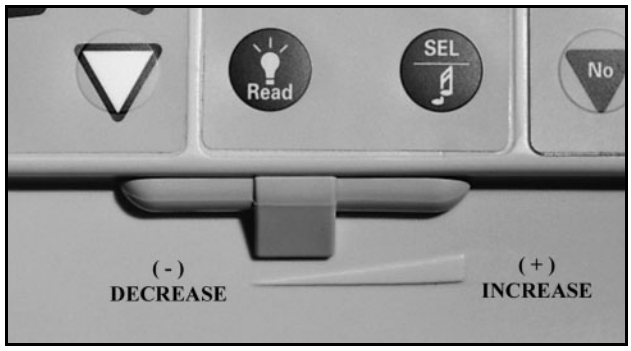
<u>Yes Up Arrow/No Down Arrow</u>

These controls are found on systems equipped with the Enhanced Patient Lighting/Entertainment option. Control functions vary depending upon the type of hospital entertainment available.

NOTE:
When the system is equipped with the Patient Lighting/Entertainment control option, the music/select control functions as a TV or music control.

Volume Control

Speaker volume is controlled by using the volume slide bar located below the entertainment controls on the inside of the intermediate siderails.



To Activate:

- Slide the volume control bar in the desired direction to either increase or decrease speaker volume.

Optional Features

WARNING:
Do not use mattresses, mattress overlays, mattress replacements, or speciality mattress products that have not been designed by Hill-Rom for the TotalCare® Bed System. Use of surface products other than those designed for the TotalCare® Bed System could substantially reduce the effectiveness of the safety features incorporated into the system.

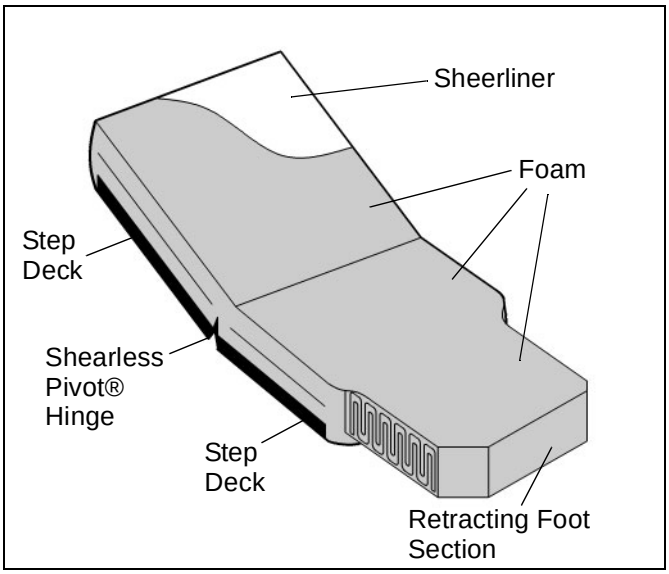
Short Stay Surface

The short stay surface is an all-foam, modular, three-layered foam system with a viscoelastic core and foam-side bolsters. The short stay surface reduces patient pressure.

The TotalCare® Bed System surfaces are designed especially to work with the following system features:

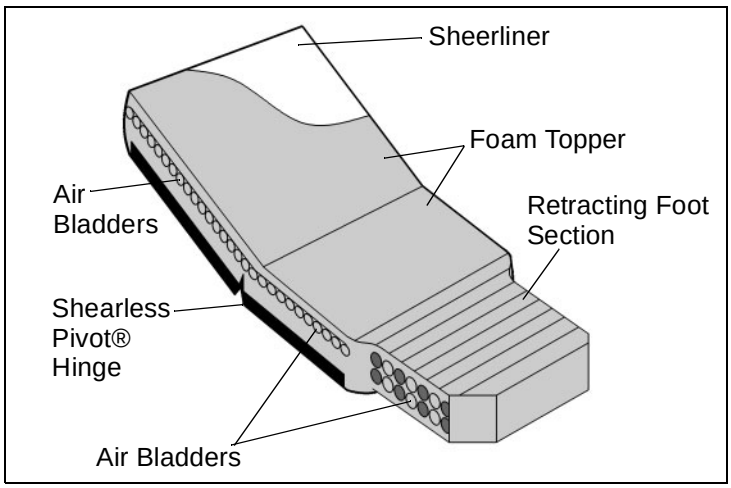
- Step deck
- Shearless Pivot® Patient Position Mechanism
- FlexAfoot™ Retractable Foot Mechanism
- FullChair® Patient Position Mechanism
- FullChair® Patient Egress Position Mechanism

Loose fitting sheets (preferably knitted) must be used for correct operation of the sleep surface.



Treatment Surface

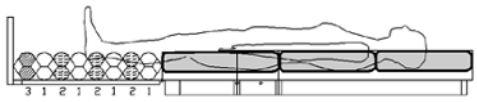
WARNING:
Contraindication: Unstable spinal cord injuries. Under normal circumstances, proper alignment on an air bladder system is easy to maintain; however, through user error or equipment malfunction, cushions may deflate, putting proper alignment at risk. The choice of a therapeutic support for such conditions as unstable spinal cord injuries is based upon the medical judgement of professionals, and each case should be evaluated individually.



Treatment Surface Controls

Treatment Modes

Fully Extended



Normal Treatment Mode

The normal mode of the optional treatment surface provides continuous full-body pressure relief management. The surface provides pressure relief management by automatically adjusting the air system to accommodate changes in weight distribution. Additional pressure relief can be provided in the heel section, see “Heel Suspension Mode” on page 34.

Loose fitting sheets (preferably knitted) must be used for correct operation of the sleep surface.

The normal treatment mode is always active unless:

- Max-Inflate has been activated.
- AC power is not available or power failure has occurred.

WARNING:
A sound risk assessment and protocol is necessary to determine the appropriate surface for the patient's condition.

WARNING:
The optional treatment surface is not a substitute for good nursing practices. The treatment mode should be used in conjunction with good assessment and protocol.

WARNING:
Sleep surface impermeability and pressure relieving capabilities of the Treatment Surface could be affected by needle sticks or other bladder punctures. Caregivers should be instructed to AVOID bladder punctures caused by improper use of x-ray cassette holders and **needle sticks**.

The sleep surface should be regularly inspected for such damage.

Refer to the Mattress control panel to determine the active treatment surface mode. An illuminated indicator indicates the active mode.

To Activate:

- Press the Enable control.
- Press the Normal control on the Mattress control panel.

WARNING:
Patients with body weight or length near the recommended limits should be monitored more frequently for desired results. Lower the head section to optimize pressure performance if necessary.

WARNING:
If a patient is at risk for heel breakdown, use the heel suspension mode.

Optional Features

Max-Inflate Mode

The max-inflate mode maximizes the firmness of the primary section of the patient surface. This assists in patient surface-to-surface transfers and/or repositioning. If the bed system is not equipped with a Graphical Caregiver Interface (GCI)® Control, the Max-Inflate mode can be activated through the optional Mattress control panel.

NOTE:
The Treatment Surface will automatically exit the Max-Inflate mode after a period of 30 minutes.

To Activate:

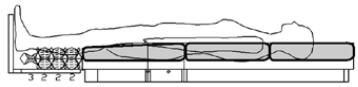
- Press the Enable Control.
- Press the Max-Inflate control on the Mattress control panel.

To Deactivate:

- Press the Enable control.
- Press the Normal control on the Mattress control panel.

Heel Suspension Mode

The treatment surface mode also provides optimal pressure relief for the patient's heels. This mode is active when the foot section is retracted and the bed is not in chair or chair egress position. The patient's feet must always be positioned against the footboard for proper heel relief. When the foot section has been retracted the heel suspension indicator illuminates. Heel relief can only be activated using the Foot Retract control.



Foot Retraction

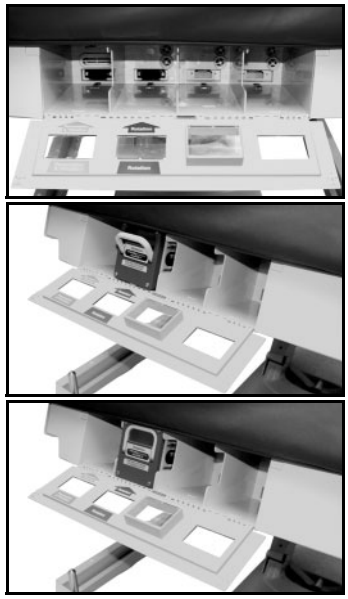
To Activate:

- Press the Enable control.
- Press the Foot Retract control on the Point-of-Care® Siderail Controls until the footboard is against the patient's feet.

WARNING:
The caregiver should personally assess the patient, and reposition the patient's feet to insure that suspension of the heels is optimized.

WARNING:
Patients with a height of 54" (137 cm) or less may not be supported with the foot section fully retracted. Move the patient down in the bed until the patient's feet contact the footboard.

TotalCare SpO_2RT® Pulmonary Therapy System



WARNING:
Contraindication: Unstable spinal cord injuries. Under normal circumstances, proper alignment on an air bladder system is easy to maintain; however, through user error or equipment malfunction, cushions may deflate, putting proper alignment at risk. The choice of a therapeutic support for such conditions as unstable spinal cord injuries is based upon the medical judgement of professionals, and each case should be evaluated individually.

The TotalCare SpO_2RT® Pulmonary Therapy System offers Therapy-on-Demand® System Modules, CLRT, and Percussion and Vibration therapies through the use of a "pulmonary-ready" surface and modules that enable caregivers to easily initiate therapies as desired.

The recommended therapeutic weight range for pressure relief and turning capabilities is 90 to 300 lb (40.8 to 136.1 kg).

SHOCK HAZARD:
Electric shock to the patient may occur if LIVE terminals in the pulmonary module compartments and the patient are touched simultaneously.

To Install the Rotation and/or Percussion and Vibration Modules:

- Remove the headboard.
- Raise the head section to a minimum of 15°.
- Open the manifold door located at the head of the bed under the sleep surface.
- Locate the appropriate slot for the required module (Rotation or Percussion and Vibration).
- Grasp the module by the handle, and slide it into the manifold.
- Gently push on the module until it **snaps** into place. The handle will not fold into the box if the module is not completely engaged into the manifold. Therapy will not start if the module is not fully engaged in position.
- Close the manifold door. The door will not close unless the module handle is folded into the module.
- Install the headboard.
- Once the module is installed, the Graphical Caregiver Interface (GCI)® Control and the siderail will indicate that the module is installed.
- Activate therapy by accessing the Pulmonary Menu in the Graphical Caregiver Interface (GCI)® Control.

To Remove the Rotation and/or Percussion and Vibration Modules:

- Using the Graphical Caregiver Interface (GCI)® Control, go to Normal mode to turn off the pulmonary therapy.
- Raise the head section to a minimum of 15°.
- Remove the headboard.
- Open the manifold door at the head of bed under the sleep surface.
- Grasp the handle on the module, and pull downward. This will release the module from the locked position.
- Remove the module from the manifold.
- Close the manifold door.
- Install the headboard.
- Once the module is removed, the Graphical Caregiver Interface (GCI)® Control screen and the siderail will indicate that the module is removed.

Optional Features

NOTE:
Any active therapy will cease when any module is removed.

NOTE:
It is normal for the Graphical Caregiver Interface (GCI)® Control screen to go blank for approximately 11 seconds immediately after adding or removing a module.

Normal/Standard Operation

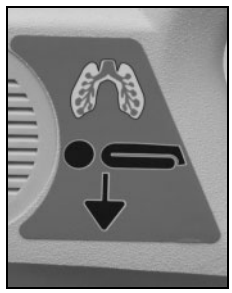
The TotalCare SpO_2RT® Pulmonary Therapy System surface provides interface pressure relief during all modes of operation (normal/standard, rotation, Perc/Vib, turn assist, and OPTI-REST) except during Max-inflate.

WARNING:
In consideration of a possible patient transport, an alarm will sound if optimal interface pressure relief is not present at the time of power loss. Patient injury may occur after a prolonged time.

Rotational Therapy

The rotation mode provides gentle, side-to-side, continuous lateral rotation therapy (CLRT) to aid in the prevention and treatment of pulmonary complications related to immobility. Patients can be positioned laterally on the right or left side with varying amounts of turn and pause times to match each individual patient's condition. Pressure relief is provided when the rotation mode is active.

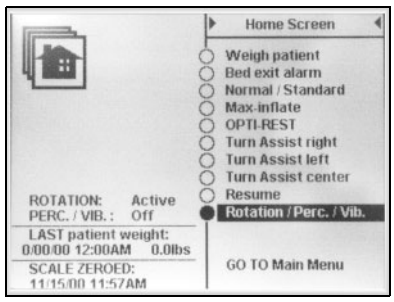
Prior to activating the rotation mode, perform the following:



- Install the Rotation module.
- Align the patient's shoulders with the label on the inside, upper siderail. This will ensure proper placement of the patient on the surface to receive maximum benefits.
- Weigh the patient. This automatically adjusts the cushion pressures for the patient's rotation set-up.
- The top cushion is designed to support the head for pressure relief and comfort. No pillow is necessary.

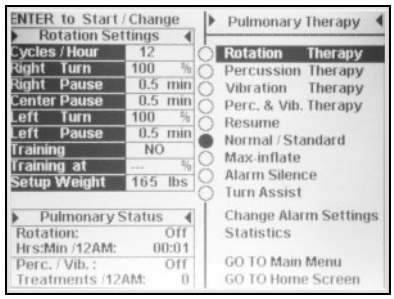
WARNING:
Observe lines closely during rotations. Always use good line management techniques to prevent lines and tubing from becoming dislodged during rotation. Patient injury can occur.

To Initiate Rotation Therapy:



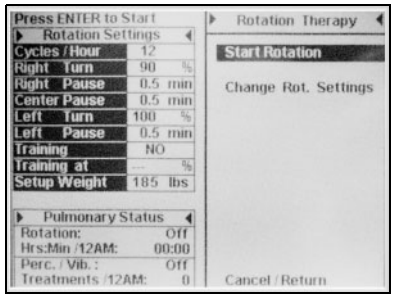
- On the Graphical Caregiver Interface (GCI)® Control in the siderail, touch the ENTER button or the Up or Down button to activate the screen.
- From the Home Screen or Main Menu, scroll to Rotation/Perc./Vib. Press ENTER. The Pulmonary Therapy Screen is now displayed.
- Scroll to Rotation Therapy. Press ENTER.
- Review the therapy settings at the left. If the settings are acceptable, select Start Rotation. Press ENTER.

The Following Values Can Be Customized:



- Cycles per hour: Depends on pause times (automatically calculated)
- Right turn %: Customize the amount of turn to the right
- Right pause: Amount of time in side-lying position
- Center pause: Amount of time centered in middle
- Left turn %: Customize the amount of turn to the left side
- Left pause: Amount of time in side-lying position
- Training: Yes/No (Starts rotation at 50% of maximum programmed turn and increases 10% each hour for patient acclimation)
- Set up weight: Manually enter patient weight for rotation therapy or weigh the patient using the scale to automatically update setup weight

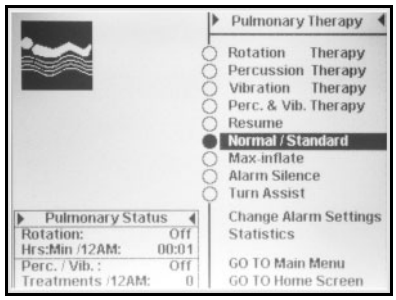
To Change Settings:



- Scroll to Change Rot. Settings. Press ENTER. Press ENTER again. This confirms the desire to change the settings.
- The icon moves to Rotation Settings on the upper left screen. Use the Up/Down arrows to adjust values. Press ENTER to go to the next setting.
- Continue making changes by using the Up/Down arrows and the ENTER key until all changes are made.
- Icon moves to Accept Changes. Press ENTER if acceptable. Press ENTER to start rotation.
- If the rotation therapy is not going to be used at the time of setting, press ENTER; then release the Graphical Caregiver Interface (GCI)® Control or select GO TO Home Screen for other options.

- If not acceptable, scroll to Change Settings, Clear Changes, Cancel/Return, or go to Home Screen, press ENTER.

To Stop Rotational Therapy:



Graphical Caregiver Interface (GCI)® Control method:

- On the Graphical Caregiver Interface (GCI)® Control in the siderail, touch the ENTER button or either the UP or DOWN button to activate the screen.
- Scroll to Normal/Standard. Press ENTER.

Siderail Method:

- On the siderail opposite the Graphical Caregiver Interface (GCI)® Control, press the Enable Control and Normal/Standard Control.

Rotation Reminders:

- Rotation therapy will be suspended when:
  - Any siderail is lowered. To restart rotation - raise siderail to upright position.
  - Head of Bed (HOB) is raised higher than 40 degrees. To restart rotation - lower HOB.
  - Foot of Bed (FOB) is lowered more than 30 degrees. To restart rotation - raise FOB.
  - Chair position is attempted. To restart rotation - exit chair position.
  - Percussion/Vibration, Max-inflate, or Turn Assist is active.
- The Therapy Suspended light on the siderail will blink when therapy has been suspended for any of the above conditions.

Optional Features

- If CPR is activated, rotation therapy automatically stops and Max-inflate is activated. To resume rotation, see “Rotational Therapy” on page 36.
- Use Alarm Silence (located on Graphical Caregiver Interface (GCI)® Control screen or the opposite siderail panel) to turn off any audible alarms.
- Pulmonary Status is shown in the lower left corner. This shows: hrs/mins. rotated since 12 am., active, off, suspended, or removed.
- Check the Graphical Caregiver Interface (GCI)® Control screen if you are uncertain why the bed is alarming - the reason will be displayed on the Graphical Caregiver Interface (GCI)® Control screen.

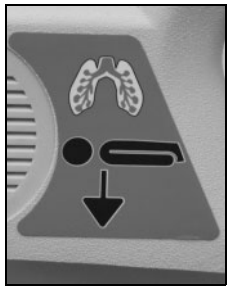
Percussion and/or Vibration Therapies

WARNING:
Contraindication: Unstable spinal cord injuries. Under normal circumstances, proper alignment on an air bladder system is easy to maintain; however, through user error or equipment malfunction, cushions may deflate, putting proper alignment at risk. The choice of a therapeutic support for such conditions as unstable spinal cord injuries is based upon the medical judgement of professionals, and each case should be evaluated individually.

Percussion is the clapping of the posterioral chest wall to loosen secretions in the lungs.

Vibration, or shaking, of the posterioral chest wall helps move lung secretions for easier removal.

The percussion and vibration therapies can be done separately or together as a sequential treatment.



Treatments can be done with the patient in the supine or the right or left side lying positions to facilitate postural drainage or in conjunction with CLRT.

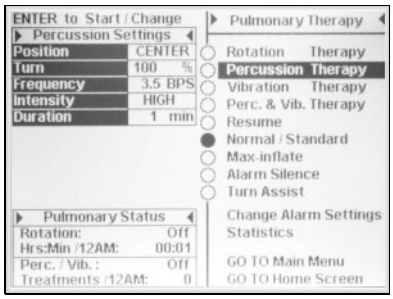
Use the same treatment parameters as for manual percussion/vibration regarding frequency, duration, as directed by physicians orders.

The percussion and vibration therapy options will not work unless the percussion and vibration module is installed.

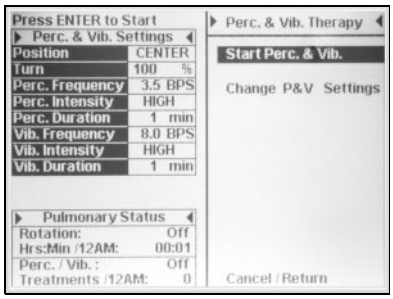
Prior to activating the Percussion and Vibration Modes, align the patient's shoulders with the label on the inside, upper siderail. This ensures proper placement of the patient on the surface to receive maximum benefits. The top cushion is designed to support the head for pressure relief and comfort. No pillow is necessary.

To Activate:

- Touch the ENTER button or the UP or DOWN button to activate the screen.
- From the HOME SCREEN or Main Menu, scroll to Rotation/ Percussion/Vibration. Press ENTER.
- The Pulmonary Therapy Screen is now displayed.
- Scroll to Percussion, Vibration or Perc/Vib Therapy. Press ENTER. Select the desired therapy. Press ENTER.
- Review therapy settings - if settings are acceptable, press Start Percussion, Vibration or Perc/Vib then press ENTER.



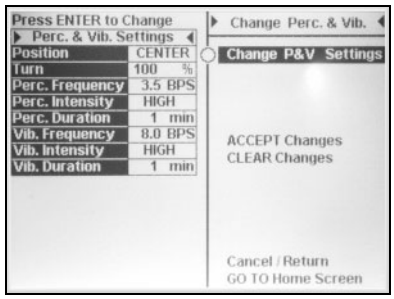
NOTE:
A treatment must be at least 3 minutes in duration to be captured as a treatment in the Statistic Summary.



The following settings can be changed:

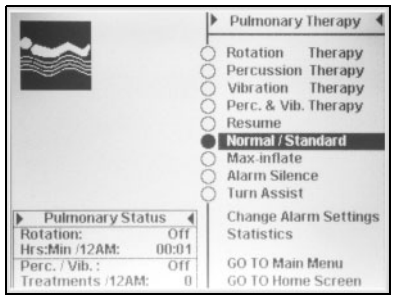
- Position: Right/Left/Center or CLRT
- Turn %: For right and left position only
- Percussion/Vibration: Right/Left/Center or CLRT
- Percussion frequency: 1 to 5 Beats/Sec
- Intensity: Low-Med-High
- Duration: 1 to 30 minutes (Therapy must be more than 3 minutes to be captured in the statistics.)
- Vibration frequency: 5 - 25 Beats per Sec (BPS)

To Change Settings:



- Scroll to Percussion, Vibration or Perc/Vib. Press ENTER.
- Scroll to change settings. Press ENTER again. This confirms the desire to change the settings.
- The icon moves to Percussion, Vibration or Perc/Vib Settings on upper left screen. Use the Up/Down arrows to make setting changes. Press ENTER to advance to next setting.
- Continue making changes, scrolling, using Up/Down arrows and the ENTER key until all changes are made.
- When the icon moves to Accept Changes. Press ENTER if acceptable. Press ENTER again to start therapy.
- If percussion/vibration therapy is not going to be used at the time of setting, scroll to ACCEPT Changes, press ENTER. Release the Graphical Caregiver Interface (GCI)® Control or select GO TO Home Screen for other options.
- If not acceptable, scroll to Change P and V setting, Clear Changes, Cancel/Return, or go to Home screen, press ENTER.

To Stop Percussion and/or Vibration Therapy:



Graphical Caregiver Interface (GCI)® Control method:

- On the Graphical Caregiver Interface (GCI)® Control in the siderail, touch the ENTER button or the UP or DOWN button to activate the screen.
- Scroll to Rotation or Normal/Standard. Press ENTER.

Siderail method:

- On the siderail opposite the Graphical Caregiver Interface (GCI)® Control, press the ENABLE control, and then the Normal/Standard control or Resume if another therapy was suspended during Percussion and Vibration.

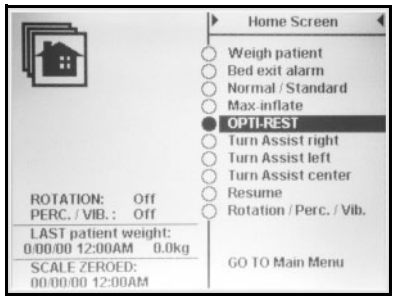
TotalCare SpO_2RT® Pulmonary Therapy System Mattress CPR Function

When the CPR function is activated, the surface will go into Max-inflate. A cardiac arrest board is recommended. After 30 minutes of Max-inflate, the mattress will automatically go into normal mode. This change in pressures will not alter the effectiveness of CPR if a cardiac arrest board is in place.

To manually discontinue Max-Inflate function from the CPR mode, press Resume to return to normal mode.

OPTI·REST Mode

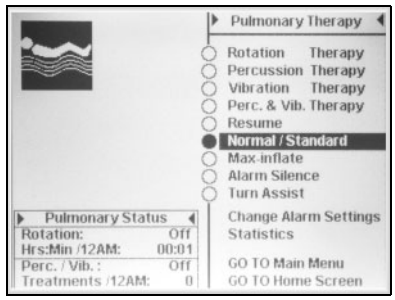
The OPTI·REST mode offers increased comfort to the patient while maintaining pressure relief. It vents the chest, seat, and thigh zones producing a massaging wave-like action.



To Activate:

From the Home screen, scroll to OPTI·REST. Press ENTER.

To Stop Opti·Rest:



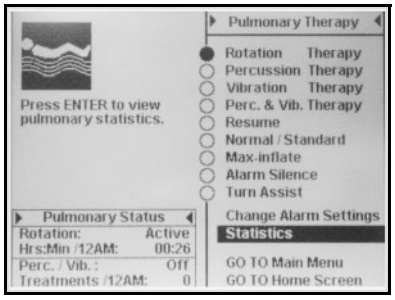
Graphical Caregiver Interface (GCI)® Control method:

- On the Graphical Caregiver Interface (GCI)® Control in the siderail, touch the ENTER button or the UP or DOWN button to activate the screen.
- From the Home Screen, Main Menu, or Rotation/ Perc./Vib screen, scroll to Normal/Standard or other desired mode. Press ENTER.

Siderail method:

- On the siderail opposite the Graphical Caregiver Interface (GCI)® Control, press the ENABLE control and Normal/Standard control.

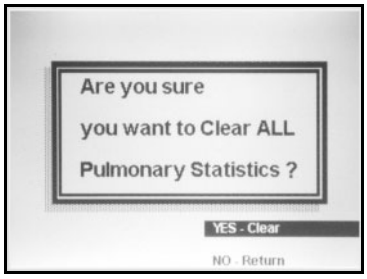
Therapy Statistics



To access the therapy statistics, scroll to the Statistics on the Pulmonary Therapy screen. Press ENTER.

Therapy Statistics for all therapy modes can be located from the Pulmonary Menu. Select desired therapy statistic, press ENTER. All readings will be documented at 12 am for each 24-hour period.

Rotation Summary: Displays the maximum number of cycles/hour the patient has rotated and Hrs: Mins in rotation, in 24 hours. For positive pulmonary outcomes, rotate the patient at least 18 hours per day and as frequently per hour as patient will tolerate.



Percussion and Vibration Summaries: Displays the number of treatments provided per 24-hour period. Duration of therapy must be at least 3 minutes to be counted as a treatment.

Opti·Rest Summary: Time spent in Opti·Rest mode since 12 am.

To Clear ALL Statistics:

Scroll to Clear ALL Statistics, Press Enter. All statistics will be cleared.

It is recommended to clear all statistics between patients.

NOTE:
Bed Setup/Reset will clear all Therapy Statistics.

Turn Assist

The turn assist mode assists the caregiver in turning the patient for linen changes, dressing changes, bedpanning, backcare, and other nursing procedures.

NOTE:
For enhanced posterior patient access, Max-Inflate may be used once the patient has been turned to the desired side.

The siderails MUST be in the up position to activate turn assist. Once the patient has started to turn, the siderails can be lowered for easier patient access. The alarm will beep twice, as a safety alert, when the siderail is lowered.

To Activate:

- The Graphical Caregiver Interface (GCI)® Control in the siderail, touch the ENTER button or the UP or DOWN button to activate the screen.
- From the Home Screen, Main Menu, or Pulmonary Therapy screen, scroll to Turn Assist right, Turn Assist left, or Turn Assist center. Press ENTER.

To Activate:

- The siderail opposite the Graphical Caregiver Interface (GCI)® Control, press the ENABLE control and the desired Turn Assist setting.
- Turn assist will override all therapy modes.

Optional Features

To Deactivate:

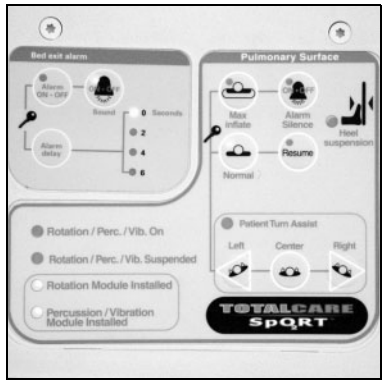
- On the Graphical Caregiver Interface (GCI)® Control in the siderail, touch the ENTER button or the UP or DOWN button to activate the screen.
- From the Home Screen or Main Menu, scroll to Resume. Press ENTER.
- On the siderail opposite the Graphical Caregiver Interface (GCI)® Control, press the ENABLE control and the Resume control.

NOTE:
The surface still provides limited turn assist without the rotation module being installed.

Additional GCI and Siderail Controls available with TotalCare SpO_2RT® Pulmonary Therapy System

The following controls are available on the siderail opposite the Graphical Caregiver Interface (GCI)® Control and through the Graphical Caregiver Interface (GCI)® Control:

To Activate:



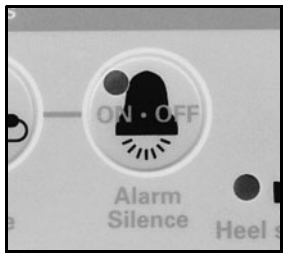
Press the Enable Control in the siderail to enable the desired features or scroll to the desired function on the Graphical Caregiver Interface (GCI)® Control and press ENTER on the Graphical Caregiver Interface (GCI)® Control screen:

- **Max-Inflate** for easier patient repositioning. To discontinue Max-Inflate, press Resume to return to previous therapy mode (Rotation, Percussion or Vibration, Opti·Rest, or Normal/Standard).
- **Resume** to return to prior therapy (Rotation, Percussion or Vibration or Normal/Standard). If a pulmonary therapy was suspended, Resume must be pressed before Normal/Standard can be activated.
- **Normal** to place the patient on a pressure relief surface, without Rotation/Percussion/Vibration.
- **Turn Assist** for easier patient repositioning (i.e., for back care, linen changes, wound/dressing care).
- **Alarm Silence** for silencing alarms on the bed.

Siderail indicator indicates:

- Rotation/Percussion/Vibration Therapy is on.
- Rotation/Percussion/Vibration Therapy is Suspended.
- Rotation Module and/or Percussion/Vibration Modules are Installed.

Alarm Silence Control



In the event of Max-Inflate or Turn Assist timing out, excessive air loss, pressure changes, or air system failure, the optional TotalCare SpO_2RT® Pulmonary Therapy System or Treatment Surfaces initiates a continuous audible alarm.

In the pulmonary therapy menu under “Change Alarm Settings”, alarm settings allow the caregiver to adjust the duration of alarm silence in 5 minute increments up to 30 minutes.

CAUTION:
Hospital service personnel should be contacted immediately to assess and, if necessary, correct the failure mode.

To Silence the Alarm:

- Press the Enable Control
- Press the Alarm Silence Control

The Service Required Indicator located on the caregiver control panel also illuminates to provide the caregiver with both a visual and audible indication of a potentially hazardous condition.Once activated, the Alarm Silence Control will silence the service required alarm for eight hours. Continuous patient assessment and protocol is necessary to determine if the patient should be removed from the bed. The Service Required Indicator remains illuminated until the failure has been corrected. The audible alarm reactivates after eight hours until the failure has been corrected.

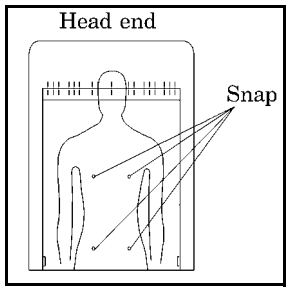
WARNING:
Excessive mattress pressure changes or air system failures could impact the pressure-relieving ability of the TotalCare SpO_2RT® Pulmonary Therapy System or Treatment Surface. The Alarm Silence feature is not a substitute for good caregiving practice and the patient should be constantly monitored and, if necessary, removed from the bed.

Fluoroscopy

Fluoroscopy provides a radiolucent head section that measures 23" L x 22" W (58 cm x 56 cm).

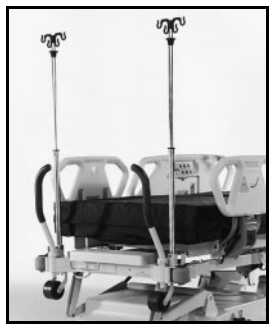
The radiolucent head section allows a caregiver to perform fluoroscopy of patients from head to waist when the patient is lying flat. Fluoroscopy of the patient's head and chest cavity is possible when the head section angle is at 75°.

WARNING:
When x-raying a patient on the optional pulmonary mattress, do not misidentify the four metal snaps, located in the fluoroscopy window.



Pulmonary Surface
Snap Pattern

Permanent IV Poles Option



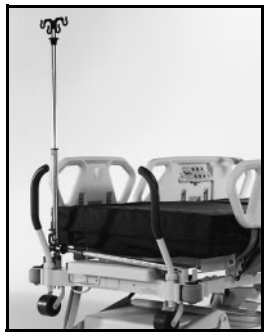
The Permanent IV Poles option consists of two IV poles that support up to two IV pumps plus bags. The IV poles are attached to the frame near the corners of the headboard.

Up to 40 lbs. (18.1 kg) of total weight can be supported per pole.

To Deploy:

- Lift the IV pole from its stored position from behind the headboard.
- Make sure that the pole drops and locks into position.
- Raise the upper section of the pole to the desired height. The pole is ready for use.

To Store:

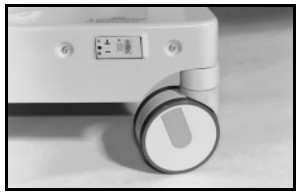


- Grasp and hold the upper section of the pole. Push the upper collar down and lower the upper pole section.
- Lift the lower section of the pole up and rotate the pole down to the stored position between the transport handles and the headboard. The poles should rest in the storage slots provided on the frame.

CAUTION:
Permanent IV Pole safe working load is 40 lbs. (18.1 kg). Exceeding the safe working load can result in equipment damage.

CAUTION:
Do not mount infusion pumps on the lower section of an IV pole. Interference with head section articulation could result.

Optional 5" (13 cm) Dual Wheel Casters

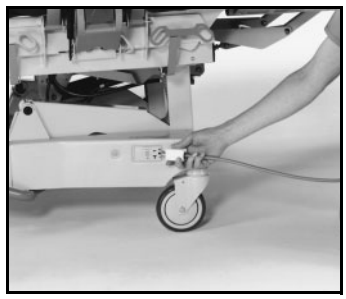


These casters are a dual wheel design providing a smooth rolling action.

Optional 6" (15.2 cm) Casters

These casters provide an extra 1 3/8" (3.5 cm) of clearance under the bed.

Accessory AC Receptacle Option (120 V Version Only)



WARNING:
Do not plug both power cords into the same wall receptacle. Plug the power cords into different receptacles on separate circuits. Failure to do so can result in equipment damage or tripping of facility power breakers. **Do not use the accessory receptacle for life support equipment. Plug life support equipment directly into facility power supply.**

The accessory receptacle option is a convenient source of AC power for accessory devices. **The accessory receptacle is not intended for life support equipment.** It is located at the foot end of the base frame. When AC power is present at the receptacle, the indicator light on the receptacle illuminates.

The accessory receptacle has a surge suppression feature. If the receptacle indicator light does not illuminate or a continuous beep sounds while the receptacle power cord is plugged in, the accessory receptacle is no longer providing electrical surge protection. Replace the receptacle to restore surge protection.

The accessory receptacle provides up to 12 A of AC current. TotalCare® Bed Systems that have this option are equipped with two power cords, one for the accessory receptacle and one for the TotalCare® Bed System. The receptacle is insulated from the bed system's AC supply.

NOTE:
The bed power cable is gray, and the accessory receptacle power cable is black.

COMposer® Communication System

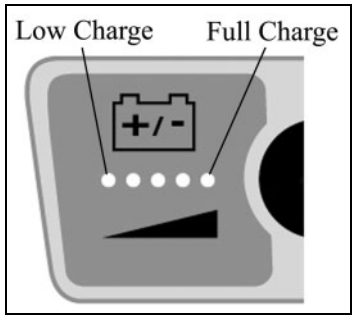
The COMposer® Communication System is integrated into the TotalCare® Bed System. With the COMposer® Communication System, the bed can be monitored for the following functions:

- Bed in Low position
- Siderail(s) up or down
- Brake set
- Bed exit on or off

IntelliDrive® Transport System

The IntelliDrive® Transport System is a permanently attached powered drive mechanism built into the bed. This mechanism deploys or stows as a function of the position of the brake/steer pedal and AC power availability. It is activated by applying pressure to the transport handles located at the head end of the bed. This allows the caregiver to propel the TotalCare® Bed System during patient transport with minimal applied force.

Optional Features

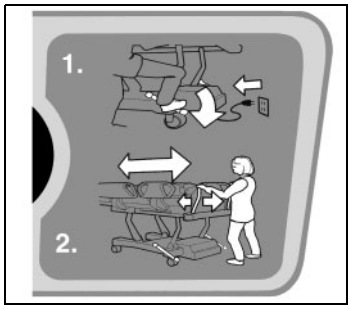


To prepare the bed for transport:

- Raise all four siderails to the up and locked position.
- Adjust the bed position to ensure an unobstructed view from the head end of the bed.
- Secure all equipment being transported with the bed, such as monitors, oxygen tanks, and IV poles.
- Ensure the transport handles are up and locked in position.

To activate the IntelliDrive® Transport System for transport:

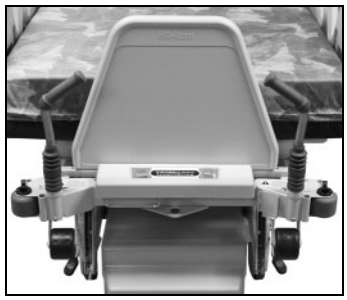
- Unplug the bed from its power source.
- Set the brake/steer pedal to *steer.*



NOTE:
Unplugging the bed, and putting the bed in steer mode will automatically deploy the drive wheel, but will **not** power the IntelliDrive® Transport System.

To power the IntelliDrive® Transport System:

- Grip one or both of the transport handles located at the head end of the bed.
- Depress at least one of the enable switches on the inside of the transport handles.
  - Depressing an enable switch engages the drive wheel on the bed so it can move when pressure is applied to the handles.
  - Depressing an enable switch will not cause the bed to start moving if there is no pressure applied to the handles.

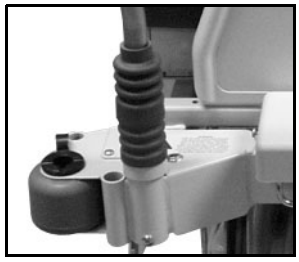


- Push the transport handles forward to start forward movement or pull them toward you to start reverse movement.
  - Pressure sensors located in the transport handles sense the applied pressure, activate the motor, and propel the bed in the direction of applied pressure.
  - The amount of applied pressure to the handles will regulate the speed of the bed.
    - Increasing the forward applied pressure, will move the bed forward faster. Maximum forward speed is between 2.5 and 3.5 mph on level flooring.
    - Increasing the reverse applied pressure, will move the bed in reverse faster. Maximum reverse speed is between 1.0 and 2.0 mph on level flooring.
- Decreasing pressure on the transport handles will slow the bed down.
- Releasing the enable switch(es) on the transport handles will cause the bed to stop.

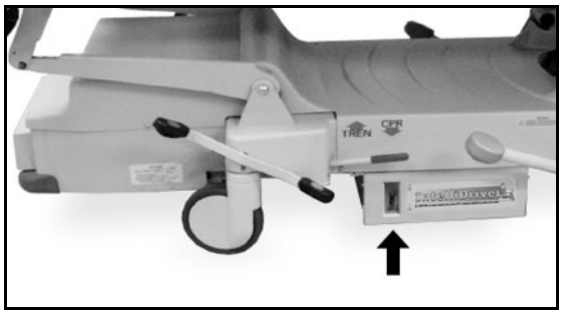
To deactivate the IntelliDrive® Transport System:

- Set the brake/steer system to neutral or brake, or
- Plug the bed into an appropriate power source.

To store the transport handles:



- Grasp the handles, and lift upwards to unlock the handles.
- Swing the handles inward toward the center of the bed into the stowed position.



WARNING:
In case of battery or motor power loss, press the electronic brake switch to **OFF** to permit forward and reverse bed movement with a deployed, unpowered, IntelliDrive® Transport System.

WARNING:
If the bed propels forward or reverse when depressing one of the enable switches and not applying any pressure on either of the handles, contact your local service personnel for repair. Failure to do so can result in personal injury or equipment damage.

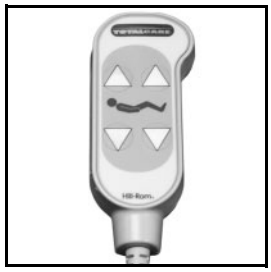
WARNING:
If the bed propels forward or reverse while applying pressure on either of the transport handles and not pressing either of the enable switches, contact your local service personnel for repair. Failure to do so can result in personal injury or equipment damage.

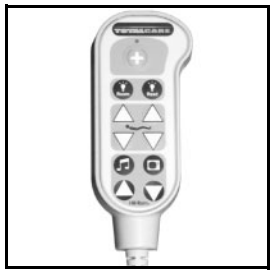
WARNING:
If the bed is stopped on a ramp, or a patient is left unattended, set the brake to avoid unwanted bed movement. Failure to do so can result in personal injury or equipment damage.

WARNING:
Significantly reduce the speed of travel when powering the IntelliDrive® Transport System when using freestanding patient attached equipment or traveling through doorways. Failure to do so can result in personal injury or equipment damage.

CAUTION:
The IntelliDrive® Transport System is intended for indoor use only. Outdoor use may cause temporary or permanent damage to the powered drive mechanism and/or drive belt.

Patient Pendant





There are two configurations of the pendant: 4-button and 11-button. The Head Up/Down functions are locked out when the caregiver controls have the head section above 50°.

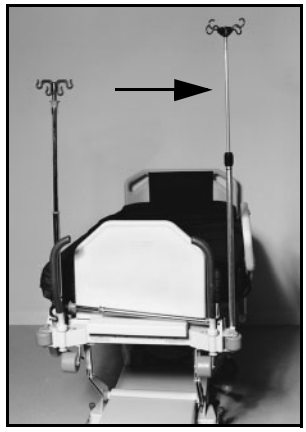
The 4-button pendant controls only the Head Up/Down and Knee Up/Down functions.

The 11-button pendant controls the following functions: Head Up/Down, Knee Up/Down, Radio On/Off, Television On/Off, Channel/Station Up/Down, Room Light On/Off, Reading Light On/Off, and Nurse Call.

Accessories

Accessories may be added or removed at the point of patient care by a caregiver without the use of tools. Accessories are interchangeable within a product configuration.

Infusion Support System



The Infusion Support System (ISS) consists of a movable and adjustable IV pole. The pole supports IV pumps or bags in a vertical orientation and raises or lowers the pumps or bags with respect to the system frame.

The head end of the system has attaching points for two mobile Infusion Support Systems. Each Infusion Support System can support one infusion pump plus two liters of intravenous solution.

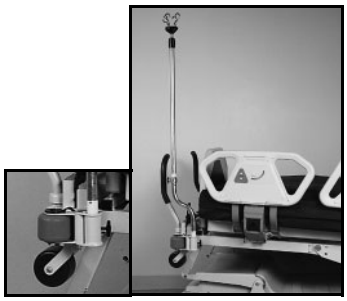
CAUTION:
ISS Pole safe working load is 20 lbs. (9 kg). Exceeding the safe working load can result in equipment damage.

CAUTION:
Do not mount infusion pumps on the lower section of an IV pole. Interference with head section articulation could result.

CAUTION:
When lowering the upper section of an IV pole, always grasp and hold the upper section of the pole before pulling the release knob.

Infusion Support System Bracket

When using the ISS off-set bar, it is necessary to use the 1 1/16" (2.70cm) Adapter Bracket.



Vertical Oxygen Tank Holder

The oxygen tank holder attaches to the head end of the articulating frame in a vertical position. The oxygen tank holder accommodates one **E** size oxygen tank with a regulator. The mounting points are located to allow the affixed oxygen tank holders to pivot.

CAUTION:
Vertical Oxygen tank holder safe working load is 30 lbs. (13.6 kg). Exceeding the safe working load can result in equipment damage.

To Install:

- Install the mounting bar vertically into a mounting socket at the head end of the articulating frame.
- Place the tank in the holder, and tighten the holder thumbscrew. The thumbscrew keeps the oxygen tank from rotating in the holder.

To Remove:

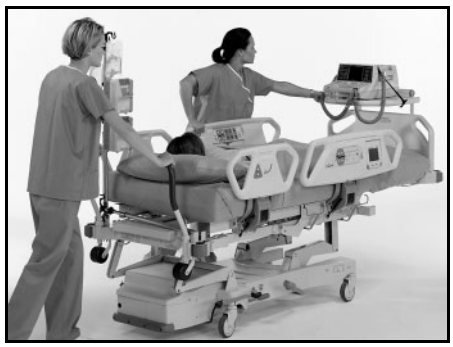
- Loosen the thumbscrew that holds the tank secure in the holder.
- Lift the tank out of the holder.
- Lift up on the tank holder, and remove it from the mounting sockets.

Transducer Holder

Use of the Infusion Support System is required to use the Transducer Holder.

CAUTION:
Transducer holder safe working load is 2.5 lbs. (1.13 kg). Exceeding the safe working load can result in equipment damage.

Transport Shelf/Charting Table



The Transport Shelf/Charting Table provides a platform for small equipment during patient transfer and also serves as a writing surface during patient charting. The shelf has a vertical load capacity of 45 lbs. (20 kg).

With the shelf stowed, the Transport Shelf/Charting Table performs all of the functions of the standard footboard.

A caregiver can quickly deploy or stow the Transport Shelf/Charting Table in a single step.

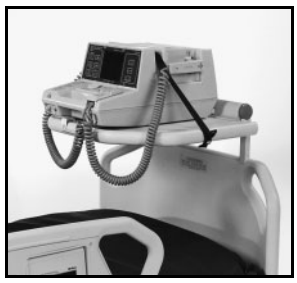
To Deploy:

- Grasp the shelf and rotate it to a horizontal position above the foot section of the sleep surface.

To Store:

- Remove all items and equipment from the shelf.
- Grasp the shelf and rotate it away from the sleep surface to the vertical position.

Removal/Installation:



- To remove the Transport Shelf/Charting Table, grasp the handles on the footboard and lift straight up.
- To replace the Transport Shelf/Charting Table, insert the pins of the into the sockets in the articulating foot section. Push the Transport Shelf/Charting Table down until it rests on the articulating foot section.

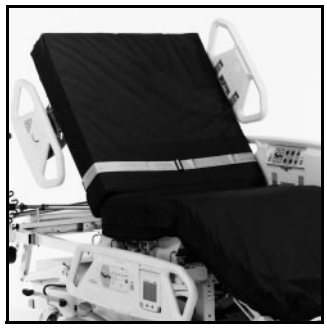
Accessories

WARNING:
Equipment placed on the shelf must be secured with straps. Patient injury or equipment damage can occur.

CAUTION:
Do not lower the foot section while the shelf is in use. Equipment could fall.

CAUTION:
Transport shelf safe working load is 45 lbs. (20.4 kg). Exceeding the safe working load can result in equipment damage.

Seat Belt

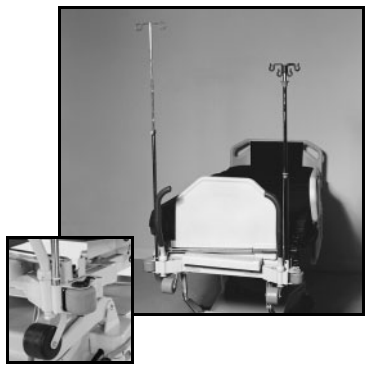


The Seat Belt is adjustable, which allows the caregiver to adjust the Seat Belt to the size of the patient. Holes, located on both sides of the bed near the center, accommodate installation of the Seat Belt.

WARNING:
Do not articulate the head section with the patient buckled with the Seat Belt. Patient injury can occur.

WARNING:
Do not use the Seat Belt as a restraint device. The Seat Belt is only to maintain correct patient positioning in the chair position.

Removable IV Pole



The IV pole is a removable, telescopic pole that installs at any of the four corners of the bed in the holes provided. The IV pole can hold 25 lb (11kg).

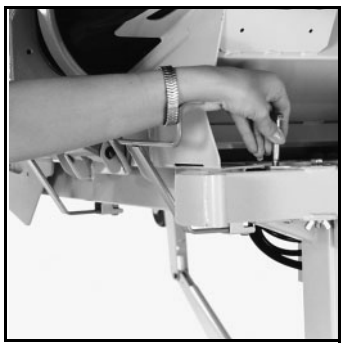
To install the standard IV pole, insert and rotate a quarter-turn clockwise. Removal is opposite of installation.

CAUTION:
Removable IV Pole safe working load is 25 lbs. (11.3 kg). Exceeding the safe working load can result in equipment damage.

CAUTION:
When lowering the upper section of an IV pole, always grasp and hold the upper section of the pole before pulling the release knob.

NOTE:
Added height recommended for gravity drain applications.

Fracture Frame Adapter Brackets

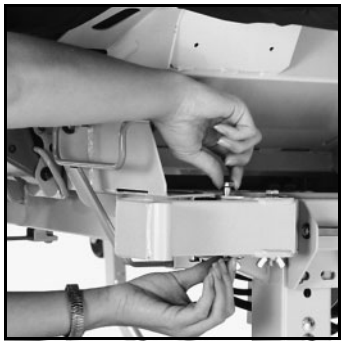


Installation

The fracture frame adapter brackets (model 1940), available from Hill-Rom, work with fracture frames from Texas Medical Instruments and Orthopedic Systems, Inc.

The mount holes for the adapter brackets are located on the weigh frame, under the head section and the thigh section.

1. Raise the head section and the thigh section about 20°.
2. Slide the mount plate of the adapter bracket over the tube of the weigh frame.
3. Align the square holes in the adapter bracket mount plate with the round holes in the weigh frame.
4. Insert the carriage bolts from the top of the weigh frame, and tighten the wing nut on the bottom of the weigh frame. See the photos of the installed adapter brackets below.
5. Repeat steps 1-4 at all four corners of the bed.
6. Install the fracture frame following the manufacturer's instructions.
7. Refer to the fracture frame equipment manufacturer's user's manual for proper installation and setup of the fracture frame.



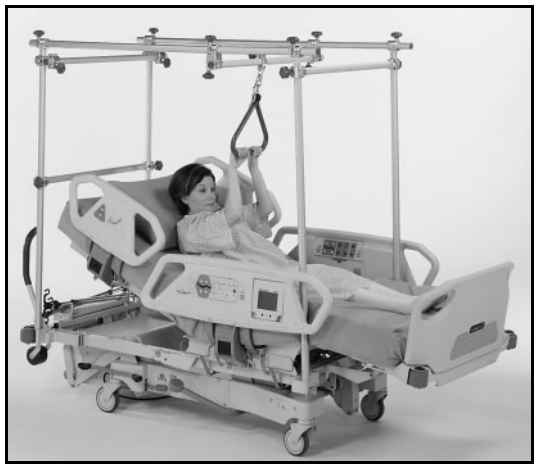
CAUTION:
A fracture frame is not to be used with the TotalCare® Bed System without the use of the fracture frame adapter brackets. Use of a fracture frame without the use of the fracture frame adapter brackets may result in structural failure of the bed and/or the traction equipment, loss of egress chair capability, and scale inaccuracy.

CAUTION:
When a fracture frame is used for mounting Buck's traction, the knee controls should be locked out.

CAUTION:
When a fracture frame is used for cervical traction, the head and knee controls should be locked out.

WARNING:
To avoid injury, the bed should not be operated until all persons are clear of mechanisms and the fracture frame adapter brackets.

CAUTION:
Do not use the fracture frame to push, pull, or steer the bed. Use the transport handles or the footboard.



Patient Helper Interface

Accessories

CAUTION:
After the fracture frame is installed, check the thigh section for proper, unobstructed movement, and check the siderails to ensure latching in the up position, and proper operation.

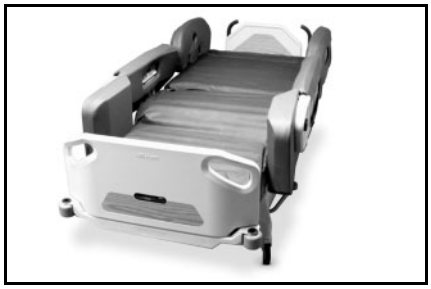
CAUTION:
Fracture frames used with these brackets are to be no taller than 54" (137 cm) from the top of the brackets.

CAUTION:
Fracture frames used with the TotalCare® Bed System are not to extend beyond the head end, foot end, or sides of the bed.

CAUTION:
Each fracture frame adapter bracket safe working load is 200 lbs. (90.7 kg). Exceeding the safe working load can result in equipment damage.

CAUTION:
With the bed in chair position, maximum load for patient lifting poles is 200 lbs. (90.7 kg), or as specified by the fracture frame manufacturer, whichever is lower.

Siderail Pads and Extenders



The siderail pads and extenders are placed over the siderail for protection against patient injury. The pads and extenders are not to be used as restraining devices.

WARNING:
When the siderail pads are installed, a caregiver's line of sight is greatly impaired. Caregivers should periodically check patients in accordance with facility protocols.

WARNING:
Adding siderail pads reduces the space between the mattress and the siderail, thereby creating the potential for certain high risk patients to accidentally suffocate if improperly monitored.

WARNING:
Although siderail pads have been designed to reduce the risk of patient injury, the potential exists for patient entanglement, particularly in agitated or disoriented patients, as well as patients who lack the physical strength to extract themselves if they become entangled. Caregivers should carefully evaluate the need for siderail pads and periodically check patients in accordance with facility protocols for safe positioning.

If the siderail pads are installed, the siderail extenders **must** be installed. The siderail pads have to be installed before the extenders. The siderail extenders can be installed without the siderail pads.

If a fracture frame is installed on the bed, the siderail pads and extenders will not allow siderails to be lowered. The siderail pads and extenders must be removed before lowering the siderails.

After the siderail pads and extender are installed, the bed scale **must** be re-zeroed.

Ensure the proper siderail extender is installed for the proper surface. The siderail extenders are marked for which surface they are to be installed with.

Safety Tips

For over 65 years Hill-Rom has set the standard for quality in patient beds. During this time, with input from many of our customers, we have acquired these useful tips.

Bed Positions

WARNING:
Make sure the bed is in the low position when the patient is unattended. This can reduce the possibility of patient falls and the severity of any resultant injuries.

Brakes

WARNING:
Always set the brakes when the bed is occupied, except during patient transport. To help ensure the bed will not move, push and pull on the bed to check it after the brakes are engaged.

Brakes should always be set when the bed is occupied and especially when moving a patient from one surface to another. Patients often use the bed for support when getting out of bed and could be injured if the bed unexpectedly moves. After setting the brakes, push and pull the bed to ensure stability.

Fluids

WARNING:
Fluid spills onto the bed electronics can result in a hazard. If such a spill occurs, unplug the bed, and remove it from service. Failure to do so could result in personal injury or equipment damage.

When fluid spills occur, outside that seen in normal use, immediately:

- Unplug the bed from its power source.
- Remove the patient from the bed.
- Clean the fluid spill from the bed system.
- Have maintenance inspect the system completely.

Do not put the bed back into service until it is completely dry, tested, and determined to be safe to operate.

Siderails/Restraints/Patient Monitoring

Siderails may serve several beneficial uses including providing an edge reminder, bed exit assist, and access to caregiver interface and patient controls. The use of siderails also may provide a sense of security. Siderails should always be in the upright and latched position when the TotalCare® Bed System is in the chair position. The use of siderails in the bed position should be determined according to patient need after assessing any risk factors according to the facility protocols for safe positioning.

When raising the siderails, a click indicates that the siderails are completely raised and locked in place. once the click is heard, gently pull on the siderail to ensure the siderail is latched in position.

Siderails are intended to be a reminder, not a patient restraining device. Hill-Rom recommends that the appropriate medical personnel determine the level of restraint necessary to ensure a patient will remain safely in bed.

For restraining devices, consult the restraint manufacturer’s instructions for use to verify the correct application of each restraining device.

Safety Tips

WARNING:
Evaluate patients for entrapment risk according to facility protocol, and monitor patients appropriately.

WARNING:
Evaluate patients for entrapment risk according to facility protocol, and monitor patients appropriately. Ensure that all siderails are fully latched when in the raised position. Failure to do either of these could result in serious injury or death.

WARNING:
When a patients condition (such as disorientation due to medication or clinical condition) could lead to Patient Entrapment, the Mattress Support Platform should be left in the flat position while unattended (except when required otherwise by medical staff for special or particular circumstances).

WARNING:
If siderails are used with patients at rick of entrapment, install siderail extenders and extend foot section.

NOTE:
Siderails are intended to be a reminder to the patient of the unit's edges, not a patient-restraining device. When appropriate, Hill-Rom recommends that medical personnel determine the proper methods necessary to ensure a patient remains safely in bed.

1. Develop guidelines for all patients that indicate:
    - Which patients may need to be restrained and the appropriate restraint to utilize.
    - The proper method to monitor a patient, whether restrained or not, including time interval, visual check of restraint, etc.
2. Develop training programs for all caregivers concerning the proper use and application of restraints.
3. Maintain the bed at its lowest position whenever a caregiver is not in the room.
4. Clarify the need for restraint devices to families or guardians.

Electricity

SHOCK HAZARD:
Establish policies and procedures to train and educate your staff on the risks associated with electrical equipment. Failure to do so could result in personal injury or equipment damage.

WARNING:
Fluid spills onto the bed electronics can result in a hazard. If such a spill occurs, unplug the bed, and remove it from service. Thoroughly clean the bed and allow it to dry; then have the bed checked by service personnel.

CAUTION:
Before transporting the bed, ensure that the power cord is properly stored. Failure to do so could result in equipment damage.

WARNING:
Improper use or handling of the power cord may result in damage to the power cord. If damage has occurred to the power cord, immediately remove the bed from service, and contact the appropriate maintenance personnel. Failure to do so could result in personal injury or equipment damage.

WARNING:
If the integrity of the external protective earth conductor is in doubt, operate the bed from its internal electrical power source. Failure to do so could result in personal injury.

CAUTION:
This device meets all requirements for electromagnetic compatibility per IEC 601-1-2. It is unlikely that the user will encounter problems with this device because of inadequate electromagnetic immunity. However, electromagnetic immunity is always relative, and standards are based on anticipated environments of usage. If the user notes unusual device behavior, particularly if such behavior is intermittent and associated with nearby usage of radio or TV transmitters, cell phones, or electro-surgical equipment, this could be an indication of electromagnetic-interference. If such behavior occurs, the user should try moving the interfering equipment further from this device.

Policies and procedures must be established to train and educate your staff on the risks associated with electric equipment. It is never prudent or necessary for personnel to place any part of their body under or between moving parts of the bed. Whenever a bed is being cleaned or serviced, it should be unplugged from its power source, and the lockouts should be activated to keep the bed from accidentally operating due to the battery backup. Refer to the *Totalcare® Bed System Service Manual* (man112).

Parts and Accessories

Use only Hill-Rom parts and accessories. Do not modify the bed system without authorization from Hill-Rom.

Operating Bed/Surface Precautions

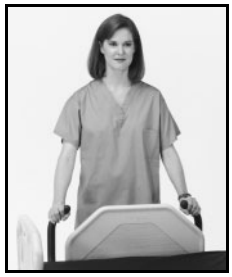
WARNING:
Do not operate the bed in the presence of flammable gas or vapors. Doing so could result in personal injury or equipment damage.

WARNING:
Use oxygen administering equipment of the nasal, mask, or ventilator type only. Do not use the bed with oxygen tents. Doing so could result in personal injury or equipment damage.

WARNING:
Deactivate the bed functions by using the lockout control. Movement of a patient or inadvertent activation of the bed functions by anyone else could result in personal injury.

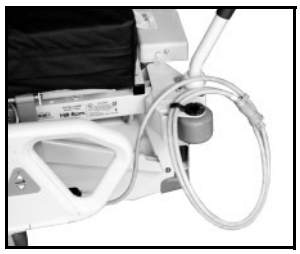
Safety Tips

Transport Mode



The TotalCare® Bed System is intended to be used to transport patients with the foot end of the system forward. Prior to transport, properly store the power cords to prevent tripping. Take care to prevent damage to AC power cords. An electrical shock hazard exists. Use only transport handles or the footboard to move the bed.

Make sure that the patient, equipment, and all lines are securely placed within the perimeter of the bed for intra-hospital transport. The TotalCare® Bed System is not intended to be used to transport a patient in the chair, recline chair, or chair egress positions.



If the bed is equipped with the Transport Shelf/Charting Table, secure all of the equipment with the straps provided, and observe the 45 lb (20 kg) weight limit. Keep the Transport Shelf/Charting Table horizontal during patient transport. This requires that the foot section be in the horizontal position during patient transport.

Fully extended IV poles could impact doorways or ceiling fixtures. Lower poles prior to patient transport.

Ensure that the Nurse Call system cables are properly connected after transport.

SLEEP SURFACE/MATTRESS

WARNING:
Do not use mattresses, mattress overlays, mattress replacements, or speciality mattress products that have not been designed by Hill-Rom for the TotalCare® Bed System. Use of surface products other than those designed for the TotalCare® Bed System could substantially reduce the effectiveness of the safety features incorporated into the system.

WARNING:
Sleep surface impermeability and pressure relieving capabilities of the treatment surface could be affected by needle sticks or other bladder punctures. Caregivers should be instructed to **avoid** bladder punctures caused by improper use of x-ray cassette holders and/or needle sticks.

The sleep surface should be regularly inspected for such damage.

Flammability

Reduce the possibility of fires by observing fire prevention rules and regulations.

The sleep surface mattress meets the following specifications:

- The sleep surface foam meets applicable requirements of California Technical Bulletin 117—*Requirements, Test Procedure and Apparatus for Testing the Flame Retardance of Resilient Filling Materials Used in Upholstered Furniture*.
- The sleep surface meets applicable requirements of: California Technical Bulletin 129—*Flammability Test Procedure for Mattresses for Use in Public Buildings*; Boston Fire Department BFD, IX-11—*Mattress Fire Test*; and '97 LSC - NFPA 101: 1997—*Life Safety Code*.

WARNING:
Patients should not be allowed to smoke in bed. Sheets and pillows generally do not have flame retardance properties.

Bed Articulations

Do not operate system controls until all persons and equipment are clear of mechanisms. To stop a function: release the control, and/or activate the opposite function, and/or immediately unplug the power cord.

Observe lines closely during articulations. Always use good line management techniques, particularly as the head section rises.

Chair Positioning

Always set the brakes before placing the system in a chair position. Observe lines closely during head up/down and chair articulation.

Visitor Notification

Instruct visitors not to attempt operation of caregiver controls. They may assist the patient with patient controls.

Preventive Maintenance

WARNING:
Only facility-authorized personnel should perform preventive maintenance on the TotalCare® Bed System. Preventive maintenance performed by unauthorized personnel could result in personal injury or equipment damage.

The TotalCare® Bed System requires an effective maintenance program. We recommend that you perform bi-annual preventive maintenance (PM) and testing for Joint Commission on Accreditation of Healthcare Organizations (JCAHO). PM and testing not only meet JCAHO requirements but will help ensure a long, operative life for the TotalCare® Bed System. PM will minimize downtime due to excessive wear. For the preventive maintenance schedule, refer to the *TotalCare® Bed System Service Manual* (man112).

Perform annual preventive maintenance procedures to ensure all TotalCare® Bed System components are functioning as originally designed. Pay particular attention to safety features, including but not limited to:

- Siderail latching mechanisms
- Caster braking systems
- Electrical system components
- Electrical power cords for fraying, damage, and proper grounding
- Current leakage at the Nurse Call system communication connections
- All controls return to off or neutral position when released
- Controls or cabling entanglement in system mechanisms or siderails
- Proper operation of the lockout controls
- Integrity of sleep surface ticking
- Operation and accuracy of the optional scale system

TotalCare® Bed System Main Battery

Replace the battery if any of the following conditions exist (refer to the *TotalCare® Bed System Service Manual* (man112):

- The battery indicator does not light within 3 minutes of bed connection to AC mains
- The battery indicator does not stop flashing (low condition) within 12 hours of bed connection to AC mains
- Successive transports of 4 hours or less cause the battery to discharge to low condition as indicated by a flashing battery indicator.

Safety Tips

NOTE:
The battery is present on any TotalCare® Bed System with the nurse call option, Treatment Surface, or TotalCare SpO_2RT® Pulmonary Therapy System option, or manual control option.

IntelliDrive® Transport System Batteries

Replace the batteries if the IntelliDrive® Transport System automatically shuts down power before the final battery charge indication LED flashes (refer to the *TotalCare® Bed System Service Manual* (man112):

After replacing the batteries, charge the batteries a minimum of 20 hours before use.

NOTE:
Follow instructions on the batteries for proper disposal or recycling.

Troubleshooting

WARNING:
Only facility-authorized personnel should troubleshoot the TotalCare® Bed System. Troubleshooting by unauthorized personnel could result in personal injury or equipment damage.

Always check the battery charge status on the siderail. The bed may not be functioning due to the battery being drained, and the bed needing to be plugged into its appropriate power source.

General Cleaning/Disinfecting

WARNING:
Follow the product manufacturer's instructions. Failure to do so could result in personal injury or equipment damage.

SHOCK HAZARD:
Unplug the unit from its power source. Failure to do so could result in personal injury or equipment damage.

WARNING:
Do not expose the unit to excessive moisture that would allow for liquid pooling. Personal injury or equipment damage could occur.

CAUTION:
Do not use harsh cleansers/detergents, such as scouring pads and heavy duty grease removers, or solvents, such as toluene, xylene, and acetone. Equipment damage could occur.

CAUTION:
Ensure that the metal platform is dry before placing the mattress back onto the bed. Failure to do so could result in equipment damage.

If there is no visible soilage with possible body fluids, we recommend that you clean the unit with a mild detergent and warm water. If disinfection is desired, you may use a combination cleanser/disinfectant as explained in "Disinfecting" below.

In either case, ensure that the metal platform is dry before placing the mattress back onto the bed.

General Cleaning

CAUTION:
Ensure that the metal platform is dry before placing the mattress back onto the bed. Failure to so could result in equipment damage.

Clean the unit with a lightly dampened cloth and ordinary disinfectants. Do not use excessive liquid. Allow the metal platform to dry before placing the mattress back onto the bed.

Steam Cleaning

Do not use any steam cleaning device on the TotalCare® Bed System. Excessive moisture can damage mechanisms in this unit.

Cleaning Hard to Clean Spots

To remove difficult spots or stains, use standard household cleaners and a soft bristle brush.

General Cleaning/Disinfecting

Disinfecting

When there is visible soilage and between patients, we recommend that you disinfect the unit with a tuberculocidal disinfectant. (For customers in the US, the disinfectant should be registered with the Environmental Protection Agency.)

Dilute the disinfectant according to the manufacturer's instructions.

Cleaning Short Stay, Treatment Surfaces, or Pulmonary Therapy Mattress

Follow these instructions for cleaning the Short Stay, Treatment Surfaces or Pulmonary Therapy Mattress:

- Press Max-Inflate prior to cleaning.
- Unplug the system from its power source.
- To clean directly beneath the sleeping surface at the head end, lift the head end of the mattress.
- To clean directly beneath the sleeping surface at the foot end, lift the foot end of the mattress.

To remove the sleep surface mattress:

- Make sure that the seat belt is unlatched.
- Raise the head section for easier access to the air hose connectors on the manifold assembly.
- Disconnect the quick-disconnect air hose(s). Air hoses are color-coded for proper installation.
- To remove the sleep surface, lift up on the foot and head ends of the sleep surface until the magnets inside the ticking release the frame. Slide the sleep surface off the articulating deck.

To replace the sleep surface mattress, do the following:

- Return the patient deck to the level position, and fully extend the foot section.
- Position the sleep surface on the system frame with air hoses pointing towards the head of the system.
- Connect applicable quick-disconnect connectors at the head end to the manifold assembly. Match the color of an air hose with the same-colored connector.
- Ensure that the foot section of the sleep surface is extended completely to the foot board.

Cleaning Medical Fluid Spills

Fluid spills should be wiped up as soon as possible. Always unplug the unit from its power source before cleaning up major fluid spills. Some fluids used in the hospital environment, such as iodophor and zinc oxide creams, can cause permanent stains.

Temporary stains can be removed by wiping vigorously with a lightly-dampened sponge or rag and an approved cleaner/disinfectant solution.

Cleaning Blood And Excreta

If possible, wipe up excess blood and excreta when wet since the cleaning process is more difficult after these substances dry on the surface. In the presence of visible blood or other body fluids, the use of an intermediate-level (tuberculocidal) detergent/disinfectant would be recommended.

Damage/Repair Surface Ticking

Tears, holes, and cracks in the sleep surface ticking will compromise surface impermeability and infection resistance. Repairs to the ticking are not recommended.

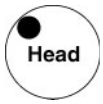
WARNING:
Surfaces should be periodically checked to ensure that ticking impermeability is not compromised.

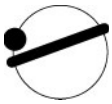
Product Symbol Definition

The following symbols are used on the TotalCare® Bed System:

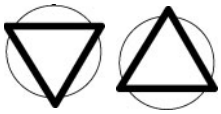
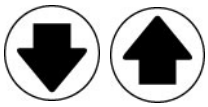
Symbol	Description
	Type B applied part according to EN 60601-1
IPX0	According to IEC 60529, Rating for protection against fluid ingress.
	CAUTION: Consult accompanying documents
	Conforms to the European Medical Device Directive 93/42/EEC
CE 03 0122	Conforms to the European Non-Automatic Weighing Instrument Directive 90/384/EEC.
CE 0123	Conforms to the European Medical Device Directive 93/42/EEC for a device that has a measuring function (for beds with scale).
[a] 	Medical Electrical Equipment Classified By Underwriters Laboratories Inc. with respect to Electric Shock, Fire, and Mechanical and other Specified Hazards only in accordance with UL2601-1, IEC 60601-2-38, IEC 60601-1-2, IEC 60601-1-4
	CPR function—Identifies the release lever, and direction of travel, to manually drop the inclined head section, in order that cardiopulmonary resuscitation can be performed without delay

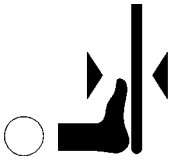
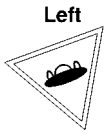
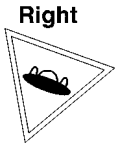
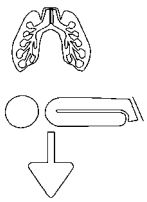
Product Symbol Definition

Symbol	Description
	Battery charge status (Steady indicator light means fully charged battery; flashing indicator means battery charging; no indicator light means battery charge is too low to operate the bed)
	Nurse Call Control
	Master Lockout control status—When the lockout control status light is on, the lockout function is activated.
	Hi-Lo Lockout control status—When the lockout control status light is on, the lockout function is activated.
	Head Lockout control status—When the lockout control status light is on, the lockout function is activated.
	Knee Lockout control status—When the lockout control status light is on, the lockout function is activated.
	Identifying mains fuse
	Alternating current
	Verband Deutscher Electrotchniker (VDE) Certified Unit

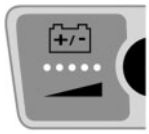
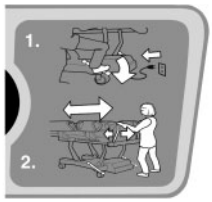
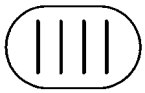
Symbol	Description
	Electric shock hazard
	Trendelenburg control
	Reverse Trendelenburg Control
	Alarm Silence
	
	Chair position Control
	Foot Up/Down Control
	Foot In/Out Control
	Enable Control (Enable switch for caregiver controls only, not intended for patient use)

Product Symbol Definition

Symbol	Description
	Up/Down arrows (used with Bed Up/Down, Head Up/Down, and Knee Up/Down)
	Up/Down arrows (used with the Graphical Caregiver Interface (GCI)® Control)
	Hip Locator (used to position the patient's hips for optimum pressure relief with mattress)
	Max-Inflate Control (used to inflate the treatment surface or TotalCare SpO_2RT® Pulmonary Therapy System to maximum inflation)
	Normal Control (used to return the treatment surface or TotalCare SpO_2RT® Pulmonary Therapy System to the normal operating position)
	Music Control (used to select the music function)
	Reading Light Control (used to select the optional reading light)
	Room Light Control (used to select the room lighting)
	Television Control (used to select the TV for patient control)

Symbol	Description
	Resume Control. (used to return to a prior therapy (Rotation, Percussion or Vibration, or Norma/Standard). If a pulmonary therapy was suspended, Resume must be pressed before Normal/Standard can be activated). The Resume Control is also used to return the TotalCare SpO_2RT® Pulmonary Therapy System to the previous mode of operation after Turn Assist or Max-Inflate have been used.
	Heel relief indicator. When the indicator is illuminated, the heel relief feature is active.
	Left Turn (used to manually control the rotation of the patient to the left side of the mattress) It be used to assist the caregiver in moving the patient for changing sheets or other functions.
	Center Turn (used to manually control the rotation of the patient to the center of the mattress)
	Right Turn (used to manually control the rotation of the patient to the right side of the mattress) It be used to assist the caregiver in moving the patient for changing sheets or other functions.
	Emergency Trend label Identifies the release lever and direction of travel to place the patient in the Trendelenburg position.
	CSA®[b] certified.
	Shoulder Locator (used to position the patient's shoulder on the TotalCare SpO_2RT® Pulmonary Therapy System)

Product Symbol Definition

Symbol	Description
	IntelliDrive® Transport System Battery Charge Indicator
	IntelliDrive® Transport System Activation Sequence (located on the SideCom® Communication System cover on the head end of the bed)
	**Black** M on **green** background—Signifies the scale (European only) is certified to weigh in certain positions)
	Scale class identifier—Identified the European scale as Class IIII.

a. The UL logo is a registered trademark of Underwriters Laboratories, Inc.
b. CSA® is a registered trademark of Canadian Standards Association.

Technical Specifications

Product Identification

Product Number	Description
P1900	TotalCare® Bed System

Dimensions for TotalCare® Bed System

Feature	Dimension
Total Length (transport handles stored)	92.5" (235.0 cm)
Maximum Width (siderails stored)	36.5" (92.7 cm)
Maximum Width (siderails up)	40" (102 cm)
Maximum Headboard Height	52" (132 cm)
Maximum Siderail Height (without mattress)	14.75" (37.47 cm)
Minimum Underbed Clearance	4.75" (12.1 cm) (A model beds) 4.25" (10.8 cm) (B model beds and newer) 1.25" (3.2 cm) IntelliDrive® Transport System
Wheel Base	42" x 25.75" (107 cm x 65.4 cm) foot end, 42" x 23.5" (107 cm x 59.7 cm) head end
Short Stay Mattress Dimensions:	
Mattress Width	35" (88.9 cm)
Mattress Length	85.25" (216.5 cm)
Maximum Mattress Thickness	6" (15.2 cm)
Mattress Weight	33 lb (15.0 kg)
Treatment Surface Dimensions:	
Mattress Width	35" (88.9 cm)
Mattress Length	85.25" (216.5 cm)
Maximum Mattress Thickness	6" (15.2 cm)
Mattress Weight	33 lb (15.0 kg)
Pulmonary Surface Dimensions:	
Mattress Width	35" (88.9 cm)
Mattress Length	84" (213.4 cm)
Maximum Mattress Thickness	11" (28.0 cm)
Mattress Weight	37.5 lb (17.0 kg)
Caster Size	5" (13 cm) single wheel or 5" (13 cm) dual wheel or 6" (15.2 cm)
Total Weight	525 lb (238 kg) with minimum options 585 lb (265 kg) with maximum options

Technical Specifications

Specifications for TotalCare® Bed System

Feature	Dimension
Head Section Inclination (maximum)	75°
Seat Section Inclination (maximum)	15°
Bed Height Range	14.5" to 33.5" (37 cm to 85 cm)
Bed Height Range (with mattress)	22" to 38" (56 cm to 97 cm)
Trendelenburg Position (maximum)	15°
Bed Lift Capacity (maximum safe working load)	500 lb (227 kg)
Foot Section Lift capacity (maximum)	400 lb (181 kg)
Head Section Lift capacity (maximum)	200 lb (91 kg)
Maximum Height of Seat Section (in Trendelenburg position)	40" (102 cm)
Siderail Opening Size	4.34" (110.2 mm)
Distance between Siderails	< 2.4" (61 mm) (F model and newer) 2.4" (61 mm) (A through E model beds)

Environmental Conditions for Transport and Storage

Condition	Range
Temperature	-40°F(-40°C) to 158°F (70°C)
Relative Humidity	10 to 90%
Pressure	500 hPa to 1060 hPa

Environmental Conditions for Use

Condition	Range
Temperature	50°F to 104°F (10°C to 40°C) ambient temperature 50° F to 94°F (10°C to 35°C) ambient temperature (pulmonary and treatment surfaces)
Relative Humidity Range	30% to 75% non-condensing
Atmospheric Pressure	700 hPa to 1060 hPa

Mains Power Requirements

Condition	Range
Rated Voltage	100V/110V/120V/127V/220V/230V/240V AC
Power/Input	5.5 A (220V, 230V, and 240V beds) 9.9 A (100V and 120V beds) 11.5 A (110V beds) 11.9 A (127V beds)
Frequency	60/50 Hz (all beds)

Fuse Specifications

Condition	Range
Air System Fuse (air system optional)	2 A, 250 V~, 5 x 20 mm, UL 198G Fast Acting
Battery Fuse	10 A, 32 V~, ATO
Mains Fuse (100V, 110V, 120V, and 127V bed model)	2 each 15 A, 250 V~, ¼" x 1¼", UL 198G Slo-Blo®[a] or equivalent
Mains Fuse (220V, 230V, and 240V bed model)	6.3 A, 250 V~, 5 x 20 mm, IEC127 Sheet III, Time Delay

a. Slo-Blo® is a registered trademark of Littelfuse, Inc.

Auxiliary Outlet Power Specifications (120V Beds Only)

Condition	Range
Auxiliary Receptacle	120V AC, 12 A outlet, electrically isolated from the beds mains power.

Scale Classification (European Scale Beds Only)

Condition	Range
Technical and Quality Standards	EN45501
Classification per EN 45501	Class IIII

European Mattress Flammability Codes

Condition	Range
P1915EA23/24/25	Meets Codes of Italian Standards: UNI-EN597-1: 1997 UNI-EN597-2: 1997 UNI 9175: 1987/A1:1994
P1915EA26/27/28	Meets Codes of United Kingdom Standards: BS-EN597-1: 1995 BS-6807: 1996 Crib 5 top and bottom, BS-6807: 1996 BS EN-597-2: 1995
P1915EA20	Meets Codes of French Standards: NF EN597-1: 1995 NF EN597-2: 1995 GPEM/CP D1 bis 89 GPEM/CP D1 90
P1915	Meets Codes of European Standards: CEN EN597-1: 1994 CEN EN597-2: 1994

Technical Specifications

Classification and Standards

The TotalCare® Bed System is designed and manufactured according to the following equipment classifications and standards:

Technical and Quality Assurance Standards	UL 2601-1 CSA®[a] C22.2 No. 601.1 IEC 60601-2-38 EN 60601-1 IEC 60601-1-2 IEC 60601-1-4 EN ISO 9001 and EN 46001
Equipment Classification per EN 60601-1	Class I equipment, internally powered equipment
Degree of Protection Against Electric Shock	Type B
Classification According to Directive 93/42/EEC	Class I Class IIa for treatment and pulmonary surfaces
Degree of Protection Against Ingress of Water	Ordinary Equipment - IPX0
Degree of Protection Against the Presence of Flammable Anaesthetic Mixtures	Not for use with flammable anaesthetics.
Mode of Operation (120V)	Continuous operation with intermittent loading, 3 minutes ON/30 minutes OFF
Mode of Operation (100V, 110V, 127V, 220V, 230V, and 240V)	Continuous operation with intermittent loading, 3 minutes ON/45 minutes OFF
Sound level (measured 1 meter from patient's ear)	< 65 dB(A) without therapy or IntelliDrive® Transport System active < 69 dB(A) with percussion and vibration therapy active < 73 dB(A) with IntelliDrive® Transport System active

a. CSA® is a registered trademark of Canadian Standards Association, Inc.

Electromagnetic Emissions Guidance

Guidance and Manufacturer's Declaration—Electromagnetic Emissions		
The TotalCare® Bed System model P1900 is intended for use in the electromagnetic environment specified below. The customer or the user of the model P1900 should assure that it is used in such an environment.		
Emissions Test	**Compliance**	**Electromagnetic Environment—Guidance**
RF emissions CISPR 11	Group 1	The Model P1900 uses RF energy only for its internal functions. Therefore, its RF emissions are low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class A	The Model P1900 is suitable for use in all establishments other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic Emissions IEC 61000-3-2	Not Applicable	
Voltage Fluctuations/ Flicker Emissions IEC 61000-3-3	Not Applicable	

Electromagnetic Immunity Guidance

Guidance and Manufacturer's Declaration - Electromagnetic Emissions			
The TotalCare® Bed System model P1900 is intended for use in the electromagnetic environment specified below. The customer or the user of the model P1900 should assure that it is used in such an environment.			
Immunity Test	**IEC 60601 Test Level**	**Compliance Level**	**Electromagnetic Environment—Guidance**
Electrostatic Discharge (ESD) IEC 61000-4-2	± 6kV Contact ± 8kV Air	± 6kV Contact ± 8kV Air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Radiated RF IEC 61000-4-3	3 Vrms 80 MHz to 2.5 GHz	3 Vrms 80 MHz to 2.5 GHz	Portable and mobile RF communications equipment should not be used at close distances to the P1900 bed. (See Note 2)
Electrical Fast Transient/Burst IEC 61000-4-4	± 2kV on Power Supply Lines ± 1kV on Input/ Output Lines	± 2kV on Power Supply Lines ± 1kV on Input/ Output Lines	Mains power quality should be that of a typical commercial or hospital environment
Surge IEC 61000-4-5	± 1kV Differential Mode (line-line) ± 2kV Common Mode (Line-Ground)	± 1kV Differential Mode (line-line) ± 2kV Common Mode (Line-Ground)	Mains power quality should be that of a typical commercial or hospital environment
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms 150 kHz to 80 MHz	Portable and mobile RF communications equipment (cell phones) should not be used at close distances to the P1900 bed. (See Note 2)
Power Frequency Magnetic Fields IEC 61000-4-8	3 A/m	3 A/m	The power frequency magnetic field should be measured in the intended installation location to assure it is sufficiently low.
Voltage Dips, Short Interrupts, & Variations On Power Supply Lines IEC 61000-4-11	< 5% U_T (95% dip in U_T for 0.5 cycles) < 40% U_T (60% dip in U_T for 5 cycles) < 70% U_T (30% dip in U_T for 25 cycles) < 5% U_T (95% dip in U_T for 5 seconds) (see note 1)	< 5% U_T (95% dip in U_T for 0.5 cycles) < 40% U_T (60% dip in U_T for 5 cycles) < 70% U_T (30% dip in U_T for 25 cycles) < 5% U_T (95% dip in U_T for 5 seconds)	Mains power quality should be that of a typical commercial or hospital environment. If operation is required during an extended power outage or interruption, the model P1900 should be switched to operate from the backup battery.
Note 1: U_T is the AC mains voltage prior to application of the test level.			
Note 2: The compliance levels in the ISM frequency range 150 kHz to 2.5 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into the patient area. However, Emission limits, IEC 60601 Test Levels, and tests specified in IEC 60601-1-2:2001 do not address Electromagnetic Compatibility of electrical equipment at very close distances. Care should always be exercised when using any electrical or RF equipment in the immediate patient area.			

Hill-Rom
A HILLENBRAND INDUSTRY

Batesville USA
Hill-Rom Company, Inc.
1069 State Route 46 E
Batesville, IN 47006-9167
Tech. Support: 800-445-3720
www.hill-rom.com

Charleston USA
Hill-Rom Company, Inc.
4349 Corporate Road
Charleston, SC 29405
Customer Care: 800-638-2546

Canada
Hill-Rom Company, Inc.
5444 Timberlea Blvd.
Mississauga, Ontario, Canada
800-267-2337

Belgique / België
Distribal
Admiral De Boisot Straat 19-21
2000 Antwerpen
Tel: +32 (0)32 38 43 15
Fax: +32 (0)32 16 06 86

Danmark
Grøndorf Medical a/s
Holmevej 30
DK-2970 Hørsholm
Tel: +45 (0)45 57 08 81
Fax: +45 (0)45 57 06 50
Info@gm-medical.dk

Deutschland
Hill-Rom GmbH
Franz-Rennefeld-Weg 4
40472 Dusseldorf
Tel: +49 (0)211 16450 0
Fax: +49 (0)211 16450 182

Ellás
Meditime
Nikolaos Chatziioannidis
Egnatia 142 Str
54622 Thessaloniki
Tel: +30 2310 263300
Fax: +30 2311 263329

España
Hill-Rom Iberia S.L.
Edificio Océano, 1, 1º 4B
Parque de Negocios Mas Blau
08820- El Prat de Llobregat (Barcelona)
Tel: +34 (0)93 478 77 49
Fax: +34 (0)93 379 48 91

France
Hill-Rom SAS
Z.I. du Talhouët, BP 14
56330 Pluvigner
Tel: +33 (0)2 97 50 92 12
Service France: +33 (0)820 01 23 45
Fax: +33 (0)2 97 50 92 00

Ireland
Hill-Rom Ltd.
Unit 1 - Kilcarberry Business Park
Nangor Road
Dublin 22
Tel: +353 (0)1 413 6005
Fax: +353 (0)1 413 6030
dublin.sales@hill-rom.com

Italia
Hill-Rom S.p.A.
Via Ambrosoli 6
20090 Rodano
Tel: +39 (0)02 / 950541
Fax: +39 (0)02 / 95328578

Nederland
Hill-Rom Medical Services BV
Hagenweg 1c
Postbus 173
4130 ED Vianen
Tel: +31 (0)347 / 32 35 32
Fax: +31 (0)347 / 32 35 00

Norge
Avalon Medical
Biscop Gens Nilssongate 5
0659 Oslo
Tel: +47 (0)23 03 63 70
Fax: +47 (0)23 03 63 71

Österreich
Hill-Rom Austria GmbH
Bueropark Donau / Haus 8
3400 Klosterneuburg
Tel: +43 (0)2243 / 28550
Fax: +43 (0)2243 / 28550-19
austria@hill-rom.com

Portugal
Hill-Rom Iberia S.L.
Edificio Océano, 1, 1º 4B
Parque de Negocios Mas Blau
08820- El Prat de Llobregat (Barcelona)
Tel: +34 (0)93 478 77 49
Fax: +34 (0)93 379 48 91

Suisse / Schweiz
Hill-Rom SA
Chemin du Vallon 26
1030 Bussigny
Tel: +41 (0)21 / 706 21 30
Fax: +41 (0)21 / 706 21 33
hrch.info@hill-rom

Nordic Region
Hill-Rom AB
Ekbacksvägen 20
168 69, Bromma
Sweden
Tel: +46 (0)8 564 353 60
Fax: +46 (0)8 564 353 61
se.marketing@hill-rom.com

United Kingdom
Hill-Rom Ltd.
Clinitron House
Ashby Park
Ashby de la Zouch
Leicestershire LE65 1JG
Tel: +44 (0)1530 411000
Fax: +44 (0)1530 411555

International
Hill-Rom Company, Inc.
International Department
1069 State Route 46 East, J55
Batesville, Indiana 47006 USA
Tel: +1 (0)812 934 8173
Fax: +1 (0)812 934 7191
www.hill-rom.com
international@hill-rom.com

In countries not listed above, contact your distributor.

usr042rd/February, 2004