



ELECTRIC HOSPITAL BED (MULTI-FUNCTION) - TORONCARE™ 1091

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ToronCare™ 1091 Multi-Function Electric ICU Bed gives critical care teams a single platform for early mobilization, pressure injury prevention, and pulmonary support. Hospitals, rehabilitation centers, and critical care units use the bed to move patients away from prolonged bed rest. Caregivers guide patients toward sitting, standing, and walking as their condition improves. The seven-function electric platform combines a motorized cardiac chair position with calf and knee articulation. An active air cushion mattress works alongside these positioning functions in one unit.

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Extended bed rest in the ICU contributes to muscle weakness, pneumonia, deep vein thrombosis, and delayed ventilator weaning, all of which lengthen hospital stays. The ToronCare 1091 addresses these risks with a progressive rehabilitation pathway built into the bed, moving patients from evaluation through pre-tilt, sitting, standing, and walking stages. Electric backrest, thigh, and calf actuators position patients precisely for each stage without manual lifting. The bed serves ICUs, high-dependency units, surgical recovery wards, and rehabilitation hospitals across North America.

Beyond mobility support, the ToronCare 1091 integrates a nine-mode air cushion mattress for pressure injury prevention. A three-level bed exit alarm adds a further layer of fall protection. A self-developed information control system displays bed status, alarms, and positioning data in real time. These combined systems give clinical staff a single tool to manage rehabilitation, skin integrity, and fall prevention. Care teams can rely on one connected platform throughout a patient's ICU stay

APPLICATIONS

Electric Hospital Bed (Multi-Function) - ToronCare™ 1091 Applications



The ToronCare 1091 supports care teams across clinical settings where patient mobility, skin integrity, and fall prevention are ongoing concerns.

- Intensive Care Units: supports the full progressive rehabilitation pathway, from evaluation and breathing support through sitting, standing, and walking, for patients recovering from mechanical ventilation
- Critical Care and High-Dependency Units: manages patients at elevated risk of pressure injuries and falls with the integrated air cushion and alarm systems
- Surgical Recovery and Post-Operative Wards: positions patients for safe transfer and early ambulation after major surgery
- Cardiac and Pulmonary Care Units: uses the cardiac chair position to reduce cardiac workload, improve venous return, and support lung expansion for patients with cardiac or respiratory conditions
- Rehabilitation Hospitals and Long-Term Acute Care Facilities: extends progressive mobility programs for patients transitioning from acute illness to functional recovery
- Bariatric and High-Acuity Patient Care: supports a 240 kg (529 lb) safe working load for patients who require higher-capacity equipment

- Clinical Skills Training: demonstrates ICU mobility protocols and fall-prevention technique for nursing and rehabilitation staff education



FEATURES

Electric Hospital Bed (Multi-Function) - ToronCare™ 1091 Key Features

The ToronCare 1091 combines electric positioning, pressure injury prevention, and patient safety tools in a single connected platform.



Improving the Patient Experience

Intuitive, within reach controls help patients adjust bed positions with confidence and independence.

Simplifying the Caregiving Process

Centralized side rail controls streamline caregiver workflows and support safer, more efficient care.

Autoregression Function

When the back section is raised, the bed surface moves automatically to reduce pressure and shear.

The back section and knee section work in coordination to provide a smoother, more comfortable support for the patient.

Enhances patient comfort and helps prevent pressure injuries.



Bed Extension

The bed length can be extended by up to 20 cm to accommodate patients of different heights, providing greater comfort and better support.



Nurse Call

The nurse call button enables patients to easily request assistance from caregivers, enhancing safety and improving the quality of care.



- Seven-Function Electric Positioning: independent backrest, thigh, calf, height, Trendelenburg, reverse Trendelenburg, and cardiac chair actuators adjust patient position without manual lifting
- Progressive Rehabilitation Sequence: guides patients step by step from evaluation and breathing support through pre-tilt, sitting, standing, and walking to support recovery

- Cardiac Chair Position: drops the legs and raises the backrest to reduce cardiac workload, facilitate air exchange, and prepare patients for standing
- Nine-Mode Air Cushion Mattress: cycles normal, hip deflation, left turn, right turn, maximum inflation, microclimate, sleep, comfort, and rotation modes to prevent and relieve pressure injuries
- Three-Level Bed Exit Alarm: alerts staff when a patient is exiting the bed, actively exiting, or has left the bed, reducing the risk of unwitnessed falls
- Siderail Unlocked and Brake-Not-Set Alarms: warns staff when a siderail is unlocked during a turning cycle or when the bed brake is not engaged, adding another layer of fall prevention
- Lowest Position Indicator with Night Light: shows caregivers the bed height at a glance and improves visibility during nighttime care

Detail Design for Convenient Use



Cable storage holder

Improves tidily administration environments and helps care workflow. Enables convenient cable organize and allows healthcare staff easy components.



Angle indicator

The angle scale provides within easy bed can be accurately arranged to the required position according to conditions, improving the accuracy and effectiveness of nursing care.



Drainage hook

Prevent accidental drainage or drainage bag entanglement due to hanging over or moving, reducing health risks during healthcare activities or patient transfer.



Anti-collision bumpers

Effectively reduce the impact of unexpected hits to the bed, minimize accidental scratches, prolong the bed service life and reduce maintenance costs.



Oxygen cylinder holder

Ensure the stability of oxygen cylinders during bed movement or transfer. Help securely hold the oxygen cylinder in place, ensuring a steady oxygen supply for the patient.



Patient Restraint Bolt holes

Fix compartment to the back board maintain patients effectively preventing them from accidentally overturning or falling off the bed, and enhancing caring.



- Flip Touch Screen Controller: folds away to protect the screen when not in use and gives caregivers one-touch control of bed and body position functions
- Internal Siderail Control Panel: lets patients adjust authorized functions themselves, reducing dependence on staff and supporting comfort during recovery
- Autoregression Function: reduces pressure on the pelvis and sacrum and shear force on the back while expanding abdominal space during chair positioning, supporting lung ventilation and comfort
- Bed Extension: lengthens the bed to match patient height, keeping the feet supported during rehabilitation exercises



1. Bed exit alarm function



2. Side controller



3. Hand controller



4. Hand crank



5. 5th wheel central brake system



6. CPR pedal

- Integrated Nurse Call: built into the siderail so patients can summon staff quickly without repositioning
- Anti-Collision Bumpers: absorb impact during transport to protect patients and reduce wall and equipment damage
- Oxygen Cylinder and Cable Storage Holders: keep gas cylinders stable and cables organized during bed movement and transport
- Drainage Hook: keeps catheter and drainage lines secured during turning to reduce tubing tension and cross-contamination risk
- CPR Pedal: lowers the backrest and knee section and raises the foot section in one step to reposition a patient quickly for emergency response
- Patient Restraint Belt Holes: provide attachment points at the back, hands, waist, and ankles to help prevent accidental sliding or falls
- Directional and Universal Braking and Steering: switches between free-roll movement in open areas and straight-line steering for precise corridor transport

THEORY & METHOD

Theory and Method



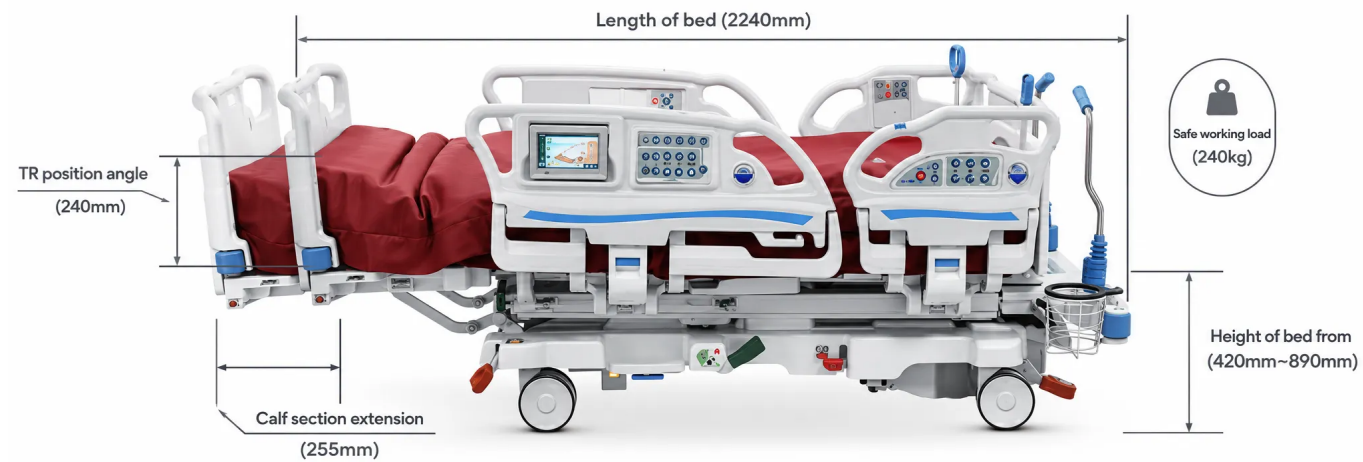
Prolonged immobility in the ICU triggers rapid skeletal muscle catabolism, weakening the diaphragm and peripheral muscles within days of bed rest. This muscle loss extends the time patients need to wean from mechanical ventilation. It also slows the return to independent breathing and movement. Progressive mobilization counters this process through graded mechanical loading: raising the head of the bed and moving a patient toward an upright seated position both activate postural muscles. This loading improves diaphragm excursion, which supports gas exchange and reduces pulmonary complications.

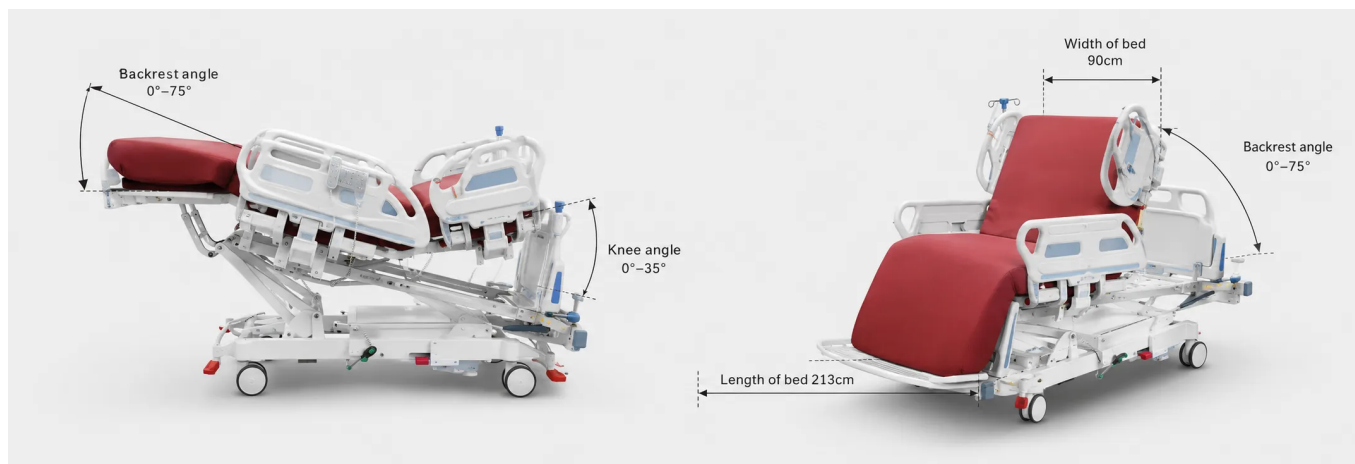
The ToronCare 1091 translates this physiology into a mechanical sequence. Independent backrest, thigh, and calf actuators raise a patient step by step from a reverse Trendelenburg pre-tilt position through an upright cardiac chair position. This sequence redistributes weight onto the seating bones the way a normal seated posture would. The graded loading reduces cardiac workload compared with a sudden transfer to standing. It also conditions respiratory and postural muscles for the transition to bedside standing and ambulation.

Pressure injuries form when sustained tissue compression over bony prominences restricts capillary blood flow, causing localized tissue damage if the pressure is not relieved. The mattress on the ToronCare 1091 addresses this mechanism with an alternating air chamber system. Air chambers beneath the hips and turning zones inflate and deflate on a cycle, restoring capillary perfusion without manual repositioning. A paired microclimate airflow mode keeps the skin surface dry, since moisture buildup at the interface also raises the risk of tissue breakdown.

TECHNICAL SPECIFICATIONS

Electric Hospital Bed (Multi-Function) - ToronCare™ 1091 Technical Specifications





Parameter	Specification
TR Position Angle	0° to 12°
ATR Position Angle	0° to 13°
Backrest Angle	0° to 67°
Calf Section Folding Angle	0° to 70°
Knee Rest Angle	0° to 29°
Calf Section Extension	255 mm
Maximum Mattress Height	240 mm
Bed Length	2,240 mm
Bed Width	1,032 mm
Bed Height from Ground	420 mm to 890 mm
Safe Working Load	240 kg (529 lb)
Air Cushion Mattress Modes	9 modes: Normal, Hip Deflation, Left Turn, Right Turn, Maximum Inflation, Microclimate, Sleep, Comfort, Rotation

Parameter	Specification
Bed Exit Alarm Levels	3 levels: exit position, exiting bed, out of bed

Controller Display and Function Panel

Function	Purpose
Bed Exit Alarm Status Display	Shows current bed exit alarm state
Weighing Zeroed Time Display	Shows when the integrated scale was last zeroed
Air Cushion Operating Mode Display	Shows the active air cushion mode
Bed Tilt Status Display	Shows current TR/ATR tilt status
Rotation Function Status Display	Shows current turning mode status
Percussion/Vibration Function Status Display	Shows current percussion and vibration therapy status
Home Screen	Central navigation screen for all bed functions
Rotation, Percussion, and Vibration Function	Controls automated turning and chest percussion therapy
Air Cushion Mode Function	Selects among the nine air cushion operating modes
Weigher Function	Displays integrated patient weight readings
Alarm Function	Manages and displays active bed alarms
Reminder Function	Provides caregiver reminders for scheduled care tasks
Preferences Feature	Stores caregiver or facility control settings
Lock Screen Function	Locks the controller to prevent unauthorized changes
Patient Information Function	Displays stored patient identification and care data
Backrest Angle Display	Shows current backrest angle in real time

Function	Purpose
Head Tilt Alarm Status Display	Shows alarm status for head-of-bed angle limits
System Time	Displays current date and time on the controller



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