



ADVANTAGE
— READYWIDE® —

Use and Care Manual

MC7 / Advantage ReadyWide® Series

Resident Care Bed

PRECISION.
PROTECTION.
PERFORMANCE.



WARNING! To avoid injury, read this manual before using the bed.



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The information in this manual is subject to change without notice. Users must be aware that updates and amendments may be made from time to time.

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Classifications and Icons

The International Electrotechnical Commission (IEC) requires use of symbols to improve readability and increase understanding of the content.

Symbols and Marking used on the MC7 / Advantage ReadyWide® Series Beds

⚠ WARNING!/CAUTION! Symbol is used to identify situations or actions that may cause severe injury or death to you or to other persons.



PROTECTIVE EARTH (GROUND)



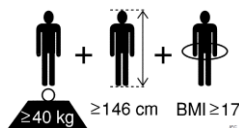
ALTERNATING CURRENT



TYPE B APPLIED PART

IPX4 INGRESS PROTECTION RATING – Protection against water sprayed from all directions.

IP66 INGRESS PROTECTION RATING – Total protection from ingress of dust + protection from water sprayed by powerful jets from any direction.



PHYSICAL DESCRIPTION OF AN ADULT – An “Adult” is a person who is a combination of at least 40kg (88lb) in weight, 146cm (57.5 in) in height and a BMI of 17.



UP



DOWN



BACK DECK ELEVATION



FOOT DECK ELEVATION



BED ELEVATION



TRENDELENBURG



AUTO-CONTOUR ELEVATION



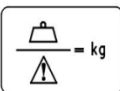
REVERSE TRENDELENBURG



FUNCTION LOCK



COMFORT CHAIR



SAFE WORKING LOAD

(Note: include the weight of Resident, Head and Foot Panels, Mattress, Side Rails, and accessories.)



MAXIMUM PATIENT WEIGHT



QPS listing mark with "C" and "US" indicating that the product to which the mark is attached is certified to the applicable U.S. and Canadian standards.

Safety Precautions

 **WARNING!** For your safety, the information in this manual must be followed to minimize the risk of electric shock, fire, or to prevent property damage, personal injury, or loss of life.

 **WARNING! POSSIBLE INJURY OR DEATH.** This bed is intended for use as an adjustable mattress deck surface. Use of this product in any way other than the intended use, could result in injury or death.

 **WARNING!** Make sure the bed is in the lowest position when the patient is left unattended. This can reduce the severity of any injuries resulting from patient falls.

 **WARNING!** Except for when the bed is being moved, the brakes and directional locks (i.e., flippers) should always be set (locked). After applying the brakes and directional locks, test the motion of the bed to ensure that the brakes and directional locks are properly engaged. Patients use the bed for support when getting in or out of bed and could be injured if the bed unexpectedly moves.

 **WARNING!** Bed safe working load is 500 pounds. This is a total weight including resident/patient, mattress, bedding accessories and any other equipment or persons likely to be on the bed. Do not exceed 500 pounds safe working load. Exceeding the safe working load could result in property damage, injury, or death.

 **WARNING!** MAXIMUM PATIENT WEIGHT IS 350 pounds. This is the maximum weight of a patient/resident. Exceeding the Maximum Patient Weight could result in bed instability, property damage, injury, or death.

NOTE: Refer to Span Academy on the Span America website for guidance on safe patient handling during ingress/egress.

 **WARNING!** When lowering the bed, ensure that no person, limbs, bedding, or any foreign objects are between the bed frame and the floor. Ensure that Over-bed tables and patient lifts are safely removed.

 **WARNING!** Ensure that no body parts or objects are under the mattress decks when lowering them.

 **WARNING! POSSIBLE INJURY OR DEATH** Use only the proper size mattress that will minimize the gap between the side of the mattress and the side rails. The gap must be small enough to prevent the patient from getting his/her neck caught in this zone (read the FDA Entrapment Guidelines for further information).

 **WARNING! POSSIBLE INJURY OR DEATH** The Mattress Stops help control the Entrapment Zone gaps between the Mattress, Side rails, the Head and Foot Boards. Improper mounting or absence of Mattress Stops could result in entrapment injury or death. Ensure the Mattress fills the entire width and length of the sleeping deck with the corners of the Mattress snugly fitted within the Mattress Stops.

 **CAUTION!** Care must be made to ensure that the resident does not fall-on or slide-over the mattress side stops which may cause injury.



Safety Precautions

- ⚠ WARNING!** If a resident/patient's mental or physical condition could lead to resident/patient entrapment, the mattress support platform should be left in the flat position when unattended. Failure to do so could result in injury or death.
- ⚠ WARNING!** Patients with diminished mental awareness should not be allowed access to the pendant, as they may become entangled in the cable. Failure to do so may result in injury or death.
- ⚠ WARNING!** Equipment not suitable for use in the presence of flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- ⚠ WARNING!** Possible fire hazard when used with Oxygen Administering Equipment of other than the Nasal, Mask or 1/2 bed length Tent type. Oxygen Tent should not extend below the mattress support level. Remove or lock-out hand control when using oxygen administering equipment.
- ⚠ WARNING!** Plug the bed directly into a 110-120 VAC 60 Hz properly grounded Hospital Grade outlet. Avoid use of extension cords at all times.
- ⚠ CAUTION!** This product complies with EMC requirements of IEC 60601-1-2. Radio transmitting equipment, cellular phones, or similar electronic devices, used in proximity of bed, may affect bed performance.
- ⚠ WARNING!** Improper connection of the equipment grounding conductor can result in the risk of electrocution. DO NOT modify the plug. The plug must be plugged into a 3-prong receptacle marked "Hospital Grade" or "Hospital Only". Check with a certified electrician.
- ⚠ WARNING!** To isolate bed circuits electrically from the supply mains on all poles simultaneously unplug the power cord from the wall outlet.
- ⚠ WARNING!** Listen for unusual sounds and watch out for uneven running. Stop the motor immediately if anything unusual is observed.
- ⚠ WARNING!** The Electric Components must remain dry. Care must be taken during cleaning and use to ensure that electrical components remain dry.
- ⚠ WARNING!** Ensure that no damage is made to cables, including the power supply cord, by rolling the bed over them or compromising them while operating the bed. Ensure cords are not frayed or damaged.

Safety Precautions

 **WARNING!** Unplug product before cleaning. Do not allow liquids to enter electrical components. Clean with mild solution of antiseptic cleaner and warm water. Read and follow all label instruction on your cleaning products. Do not use solvents, alcohol, or petroleum products on the surface.

 **WARNING!** Fluid spills on the bed electronics can result in a hazard. In the event of a spill, immediately:

- Unplug the bed from the power source and remove it from service.
- Remove the patient from the bed and clean the spill
- Remove the bed from service until the bed is tested and determined to be safe. Failure to do so may result in personal injury or property damage.

 **WARNING!** Do not use any replacement parts or accessories not manufactured, marketed, or provided by Span Medical Products Canada on any Span bed. Use of unapproved replacement parts may result in injury or death.

 **WARNING!** The side rails should always be in the up position when the patient is left unattended. Test the side/assist rails to ensure that they are properly latched before leaving the patient.

 **WARNING!** To avoid potential pinching or crushing, be sure that hands and fingers are clear of the raising arms and latch mechanism when raising and lowering the ½ Length Side Rails.

 **WARNING!** To avoid potential pinching or catching, be sure that hands and fingers are clear of the locating holes and scallop/spline features when rotating the 3 Position Pivoting Assist Rail.

 **WARNING!** Only authorized personnel should perform preventative maintenance. Maintenance by unauthorized personnel could result in property damage or injury.

 **WARNING!** Follow Manufacturer instructions when mounting/assembling accessories especially the Patient Helper Bar, this bar could fall and result in injury or death.

 **CAUTION!** This bed contains electrical components. Before disposal of bed ensure that all electrical components are removed. The components should then be sent back to the manufacturer or disposed of in accordance with local legislation.

 **WARNING!** Use of replacement parts or accessories from other manufacturers will invalidate the warranty and could damage the bed.

 **WARNING!** Only alert and mentally competent patients, caregivers, facility staff, or laypersons should operate the bed.

Note: Bed sleeping surface (decks), side rails, patient assists, footboard, headboard, hand pendant, and trapeze are considered *applied parts* per ANSI/AAMI ES60601-1:2005 / CAN/CSA-C22.2 NO. 60601-1-08 subclause 7.9.2.5.

Safety Precautions

⚠ DANGER - RISK OF ENTRAPMENT

The U.S. Food and Drug Administration (FDA) and Health Canada have warned against the potential danger of entrapment and published safety guidelines for hospital beds. They have identified seven zones in the hospital bed system where there is a potential for patient entrapment. Entrapment may occur in flat or articulated bed positions, with the rails fully raised or in intermediate positions. The seven entrapment zones are identified in the drawing below.

ENTRAPMENT ZONES:

Zone 1: Within the Rail

Zone 2: Between the Top of the Compressed Mattress and the Bottom of the Rail, Between the Rail Supports

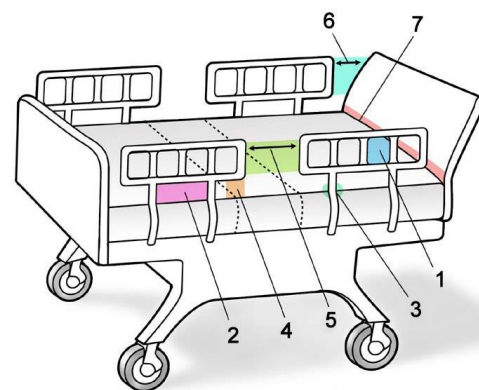
Zone 3: Between the Rail and the Mattress

Zone 4: Between the Top of the Compressed Mattress and the bottom of the Rail, at the End of the Rail.

Zone 5: Between the Split Bed Rails

Zone 6: Between the End of the Rail and the Side Edge of the Head or Foot Board

Zone 7: Between the Head or Foot Board and the Mattress End



⚠ COMPLIANCE - Entrapment Safety

The entrapment zones are a resultant of the dimensional interaction between the bed and components that are often assembled by the Healthcare Facility and not the Manufacturer.

The Healthcare Facility is responsible for compliance with the Entrapment Guidelines by matching the right components and accessories to the right bed.

To learn more about the entrapment zones, assessment methods and guidelines for compliance with the entrapment regulation visit the FDA and Health Canada websites.

Span Medical Products Canada is available to work with customers to minimize the risk of patient entrapment.

⚠ WARNING! Always evaluate patients for and guard against patient risk of side rail entrapment in accordance with medical protocols. Failure to do so could result in injury and/or death.

DISCLAIMER The MC7 / Advantage ReadyWide® low beds are intended to be used for resting and sleeping in a Long Term Care Environment* and are not intended to be used in a Home Care Environment**. The beds are not to be used as a tool for diagnosis (determining cause of an illness), treatment (action(s) taken to change the course of an illness) or monitoring (reading and/or recording physiological parameters).

*Application Environment 3 as per IEC 60601-2-52

** Application Environment 4 as per IEC 60601-2-52

Span Medical Products Resident Care Bed MC7 / Advantage ReadyWide® Series



The MC7 / Advantage ReadyWide® bed is designed for a safe working load of 500 lbs (227 kg). Body weight should be evenly distributed over the surface of the bed. Do not lay, sit, or lean in such a way that the entire body weight is placed only on a raised head or foot section of the bed.

MC7 / Advantage ReadyWide® Bed Features and Specifications		
Height Floor to Mattress Support		7-7/8" - 31"
Deck Angles	1. Back Elevation	0° – 70°
	2. Knee Elevation	0° – 30°
Bed Length	1. Overall Length	82", 86", 90" (with head and foot boards, excluding bumper)
	2. Sleep Surface	76", 80", 84"
Bed Width	1. Overall with Side Rails	40-1/2", 43-1/2", 46-1/2"
	2. Sleep Surface	36", 39", 42"
Mattress Support Deck Construction		Welded Steel Tube and Slats
Mattress Stops		Steel End and Side Stops
Bed End Panels		Permanent or Removable Mounting
Electrical & Mechanical Certification		ANSI/AAMI ES60601-1:2005, Medical Electrical Equipment CAN/CSA-C22.2 NO. 60601-1:14 - Medical Electrical Equipment CAN/CSA-C22.2 NO. 60601-2-52:11 - Medical Beds CAN/CSA-C22.2 NO. 60601-1-2:16 - EMC
Classification		Class 1, Type B
VAC/Hertz/Phase		120/60/1
Maximum Input Current Rating		3.5 Amp (120 V)
Cord Type/Length		2.5 meters minimum, 3 prong hospital grade plug
Electric Motors		Four (4) DC Self-Lubricating Linear Actuators
Operation		10% Maximum Duty Cycle (2 minutes on, 18 minutes off)
Emergency Power back-up battery Pack		24 V DC Battery (optional).
Ingress Protection Rating		IPX4 (Electrical components IP54 or higher)
Audible Acoustic Energy		70 dBA maximum
Weight of Bed (including expanders)		259 lbs (118 kg) without accessories or head/foot boards
Safe Working Load		500 lbs (Includes weight of accessories, options and bedding.) 227 kg
Maximum Patient Weight		350 lbs 159 kg
Mobility		At Any Height (7-7/8" - 31")
Swivel Casters		Heavy Duty 3" Casters
Foot Deck Ratchets		Manual Elevation of the Foot Deck
Environment Conditions		
Operating	Temperature	10° C to 40° C
	Relative Humidity	30% to 75%
	Atmospheric Pressure	700 to 1060 hPa
Storage	Temperature	-10° C to 50° C
	Relative Humidity	20 % to 90 % @ 30° C - not condensing
	Atmospheric Pressure	700 to 1060 hPa



MC7 / Advantage ReadyWide® Bed Features and Specifications	
Pendant Function Controls 1. Hi/Low Elevation 2. Back Deck 3. Knee Deck 4. Auto Contour 5. Comfort Chair 6. Underbed Light (optional)	Eleven (11) function pendant. Up and Down Buttons Up and Down Buttons Up and Down Buttons Up and Down Buttons Up and Down Buttons On/Off button
Foot End (Staff) Controller. 1. Hi/Low Elevation 2. Hi/Low Lock 3. Back Deck 4. Back Deck Lock 5. Knee Deck 6. Knee Deck Lock 7. Auto Contour 8. Underbed Light (optional) 9. Comfort Chair 10. Trendelenburg 11. Reverse Trendelenburg	Sixteen (16) function control. Up and Down Buttons On/Off button Up and Down Buttons On/Off button Up and Down Buttons On/Off button Up and Down Buttons On/Off button Up and Down Buttons Activate Activate
MC7 / Advantage ReadyWide® Accessories and Options	
Head End Assist Rail (Half Side Rail)	Optional (Weight: 23 lb per set)
Three Position Assist Rail	Optional (Weight: 11 lb)
I.V. Ports	Standard
Foot End (Staff) Controller (FEC)	Standard
Emergency Battery Backup	Optional
Total Floor Lock	Optional
Head End and Foot End Boards	Optional (Weight: 27 lb per Standard 36" set)
Directional Caster Lock Hinge	Optional
Bed Expanders	Standard (Weight: 31 lb, included in base bed weight)
Bed Extender 4"	Optional (Weight: 4.5 lb)
Bed Transport Dollies	Optional (Weight: 21.5 lb)
Trapeze - Patient Helper Bracket and Bar	Optional (Weight: 43 lb)
Mattress	Proper sized mattress with special firm borders to prevent patients from being trapped between the mattress and rail. Contact your SPAN representative for mattress sizing recommendations.

SPAN



Assembly Instructions

Introduction

Your MC7 / Advantage ReadyWide® Bed is equipped with four actuators to operate following functions:

Bed up/down	Adjusts the height of the bed from 7-7/8" to 31".
Back up/down	Adjusts the angle of the head deck from 0° to 70°.
Knee up/down	Adjusts the angle of the knee deck from 0° to 30°.
Auto Contour	Adjusts the angle of the head and knee decks.
Trendelenburg	Adjusts the angle of the bed from 0° to 16°.
Reverse Trendelenburg	Adjusts the angle of the bed from 0° to 15°.
Comfort Chair	Adjusts the angle of the bed from 0° to 15° in the Reverse Trendelenburg position, the angle of the head deck to 57° and knee deck 30°

 **CAUTION!** The operating footprint of the bed can range from 96" L x 36" W to 115" L x 76" W depending on bed size configuration, options, bed positioning and option positioning. Before operating the bed, please check all areas around bed to ensure there are no fixed or movable objects within the bed's operating footprint throughout the height range of the bed. Failure to do so could result in property damage or injury.

This instruction manual covers options and accessories which may not be included on your bed. Before operating your MC7 / Advantage ReadyWide®, be sure that you have completely read and understood the instructions and warnings contained in this manual and included with the accessories.

Unpacking Instructions - (PLEASE RECYCLE)

Your MC7 / Advantage ReadyWide® bed is shipped in a vertical position with the Head-End on the ground. If it has not been lowered flat, then two people are required to lower it gently to the ground.

Cut the "shipping ties" securing the deck to the frame. There are also ties securing wiring in place, care must be taken so that only the red "shipping ties" are removed.

Remove the packaging attached to the frame containing the Mattress Stops and the Board Mounting Brackets. Make sure that all parts are included prior to disposing of the packaging material and immediately report any missing parts to Span Medical Products Canada Customer Service.

MANUFACTURER DISCLAIMER: Specifications are subject to change without notice, Span Medical Products Canada reserves the right to continuously improve its products. Illustrations are intended to represent the product and may vary from actual models.

 Before operating it is critical to reset the bed.

To reset the MC7 / Advantage ReadyWide® control box:

Ensure resident/patient is **not** in the bed.

With the decks up or down **and bed horizontal** at any height (i.e., bed *not* in Trendelenburg or Reverse Trendelenburg), simultaneously press and hold both **HI-LO Up** and **HI-LO Down** buttons from either the Hand Pendant (buttons **A & B**) -or- from the Foot End Controls (buttons **C & D**). After approximately five seconds, decks will lower (if raised) and the bed will move to the fully lowered position (if bed is raised). Continue holding both buttons down until the Hand Pendant LED & backlight, Foot End Controls LEDs flash (if installed, underbed lights will flash as well). Flashing lights signal a successful bed reset.

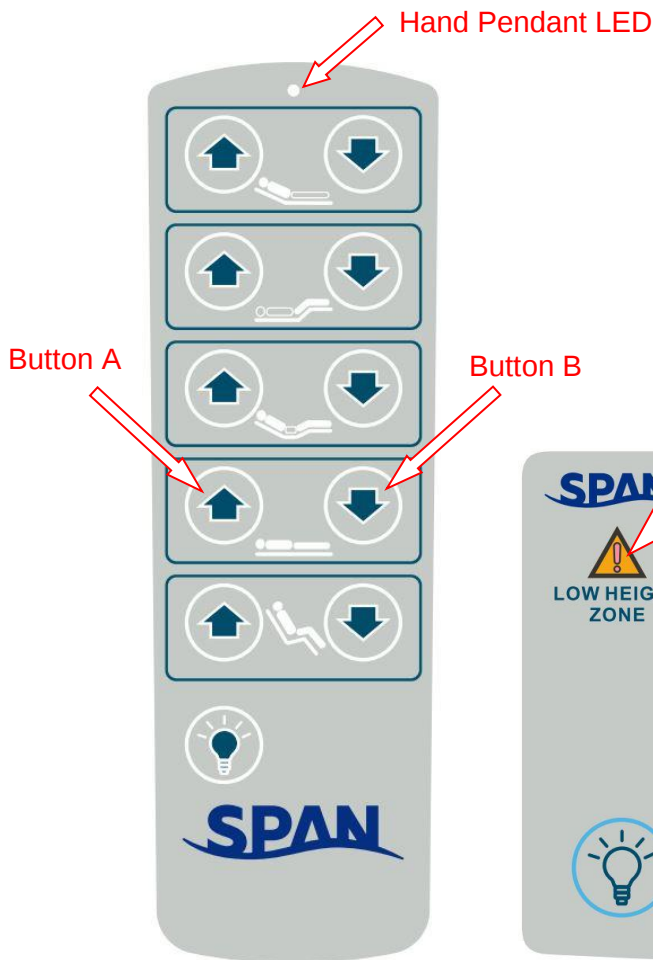


Fig 1

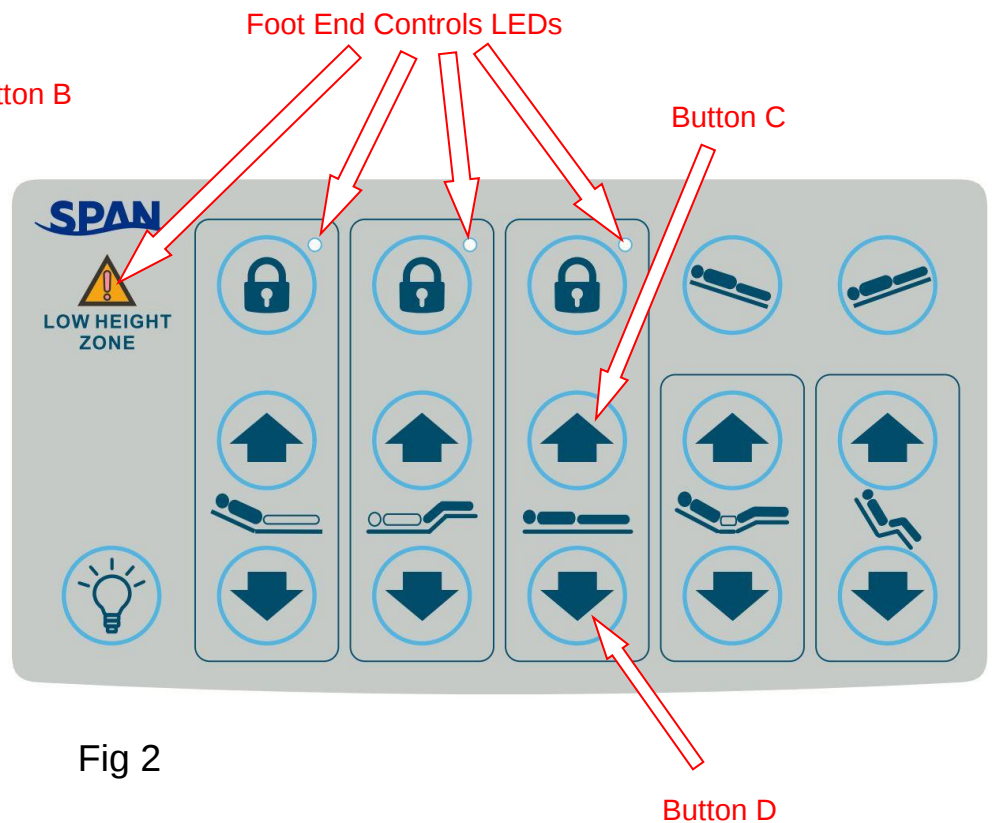


Fig 2



Assembly Instructions

Bed Set-Up

The MC7 / Advantage ReadyWide® bed is approved for operation in a dry environment. To operate the bed, plug the Power Supply Cord running from the patient left hand side of the frame into a three prong 120 V hospital grade wall receptacle. The Pendant is already plugged into the control box and the bed should now be operational. Allow bed to acclimate to room temperature before operating.

Power Supply Cord

To keep the power supply cord off the floor when moving or storing the bed, you need to secure the cord using the Velcro Strap as shown in Fig 3.

⚠ WARNING! POSSIBLE INJURY OR DEATH improper routing of the power supply cord could result in injury or death. Ensure that you do not remove any Cable ties that are intended to keep the power cord away from moving parts.

⚠ WARNING! After completing installation, run the bed through the full range of motion to ensure cables/wires are bundled/stored clear of moving parts. Failure to do so could cause damage to the cable/wire and cause bed malfunction.



Fig 3

Mattress

The MC7 / Advantage ReadyWide® bed has been designed to minimize the risk of patient entrapment while maintaining as much patient comfort and protection as possible.

NOTE: Mattresses that are dimensionally correct still may not comply with FDA and Health Canada entrapment guidelines. In addition to the dimensions of mattresses, therapeutic considerations may be a key criterion in mattress selection, superseding entrapment concerns for resident or patient therapy and clinical benefits.

Irrespective of the mattress it is the responsibility of the healthcare facility to ensure that the bed meets entrapment guidelines at the time of use and throughout the life cycle of the product.

Board Mounting Channels

Hole pairs in each board mounting channel correspond to sleep surface length as follows (see Fig 4):

PAIR A - 76"

PAIR B - 80"

PAIR C - 84" (EXTENDER OPTION REQ'D)

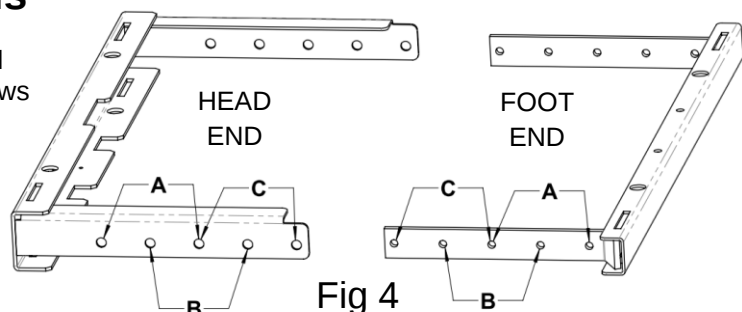


Fig 4

Assembly Instructions

Assembly of Baseboard Bumper

Tools Required: Rubber Mallet

Procedure: Assemble Baseboard Bumper (1) by snapping the two wire end hooks over the head end leg cross tube (2). Note the orientation of the bumper. Please refer to Fig 5.

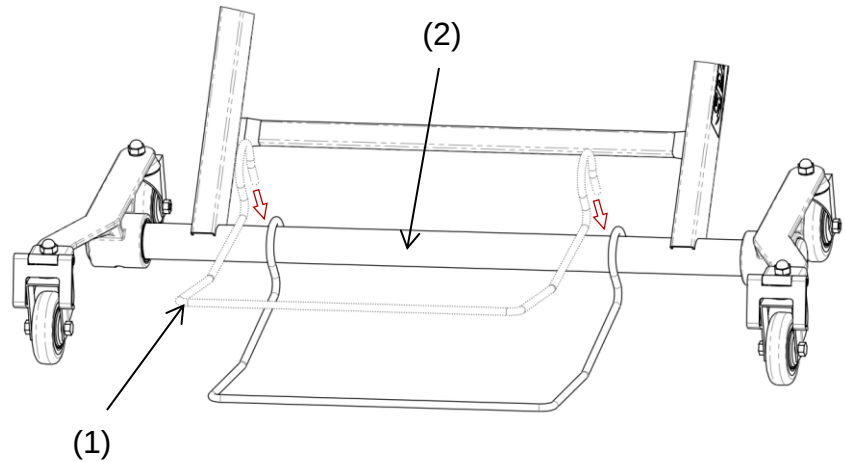
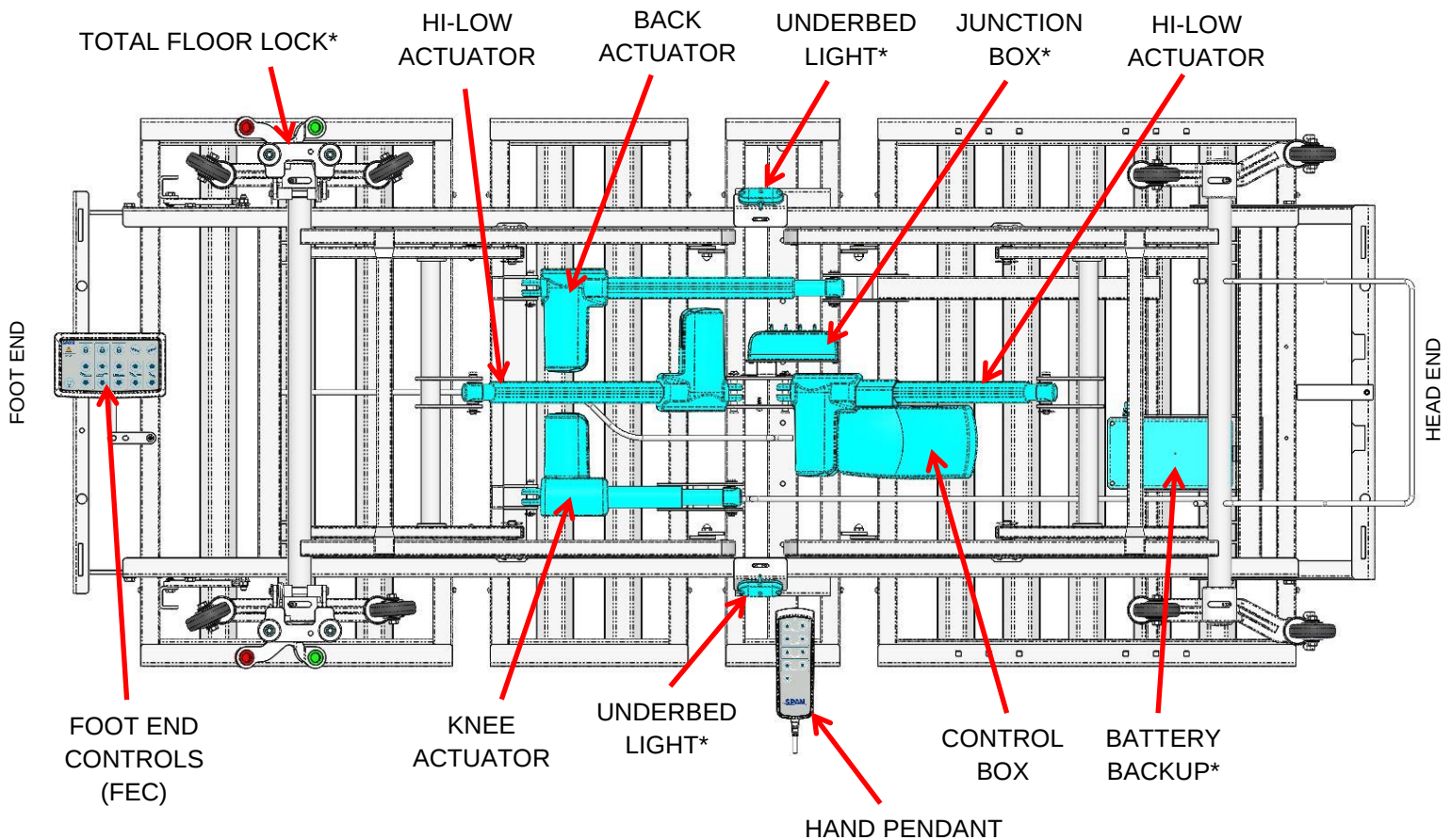


Fig 5

Bed Components



* OPTIONAL

Fig 6



Assembly Instructions

Mattress Stop Assembly

Tools Required: 5/32" Allen Key

Side mattress stops are integral to the expanders, but 76" and 80" bed configurations require assembly of the foot end center mattress stop using 1/4-20 button head screws as shown in Fig 7.

The foot end center mattress stop is not used in the 84" configuration (optional extender kit required).

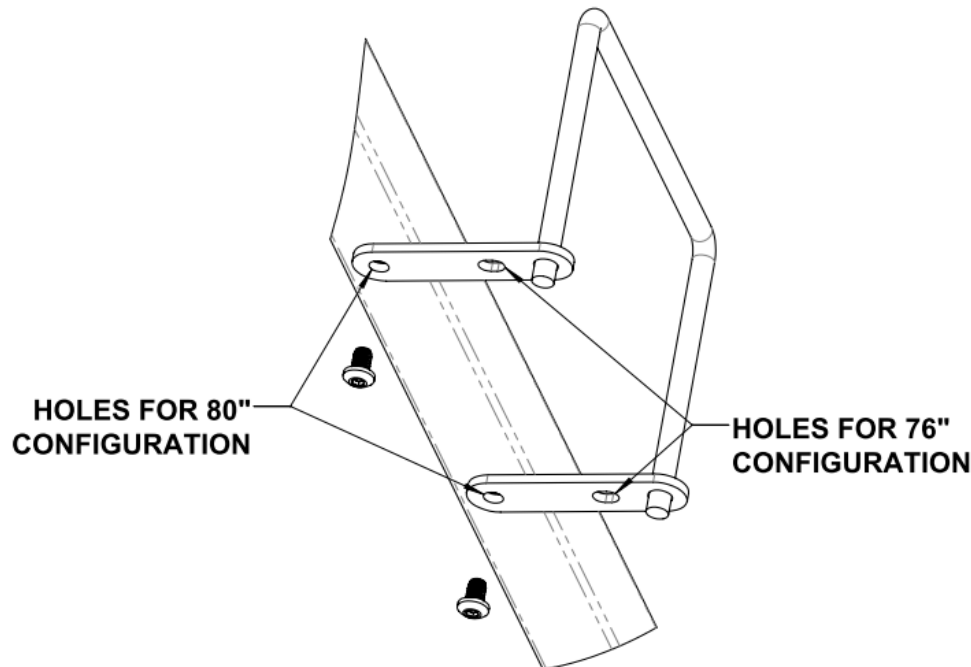


Fig 7

⚠ WARNING! Entrapment Safety: Use only the proper size boards and mattress to minimize the Entrapment Zone gaps. The gaps must be small enough to prevent the patient from getting his/her neck caught in this location (you must read the FDA Entrapment Guidelines). The entrapment zones are a resultant of the dimensional interaction between the bed and components that are often assembled by the Healthcare Facility and not the Manufacturer.

NOTE: The Healthcare Facility is responsible for compliance with the Entrapment Guidelines by matching the right components and accessories to the right bed.

Operating Instructions

ReadyWide® Integrated Expansion

ReadyWide® expansion is operated by pushing both spring buttons and sliding the expander in or out until both spring buttons are seated in the desired holes (please see Fig 8).

⚠ WARNING! Ensure that all the expander pieces are adjusted to the same width and that extension length is equal on either side of the bed. Failure to do so could lead to property damage or personal injury.

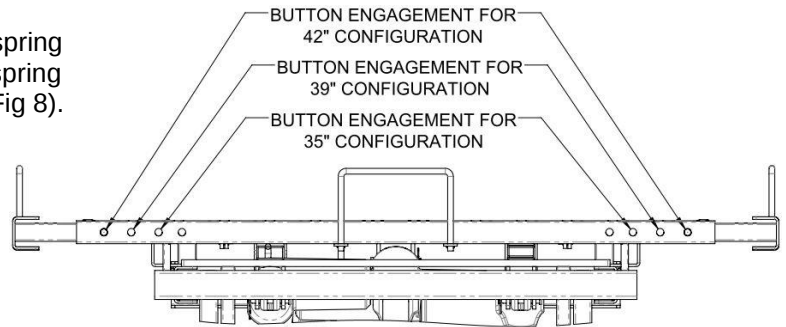


Fig 8

Bed Extender (Optional)

Once assembled, the only adjustment required for extenders is when expanders are also present. In this case, the extender's end tubes must be adjusted in or out, using the spring button, to correspond to the expander width (please see Fig 9).

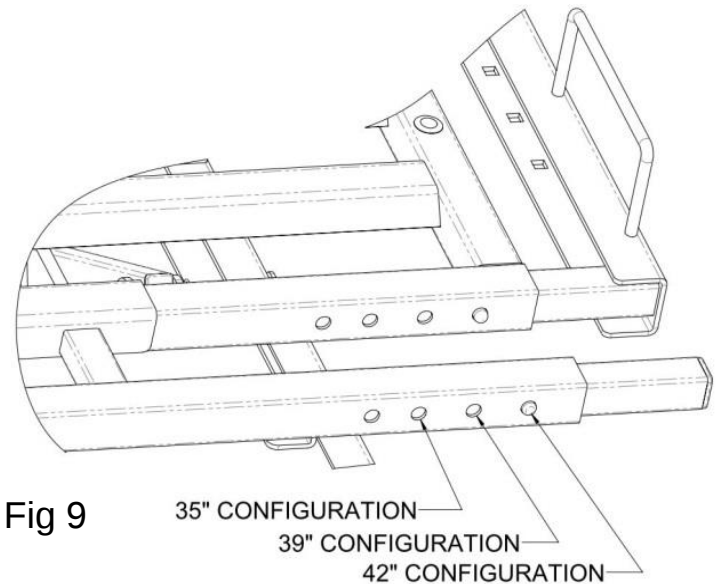


Fig 9

⚠ WARNING! POSSIBLE INJURY OR DEATH Use only the proper size mattress and extension pads in order to minimize the Entrapment Zone gaps. The gaps must be small enough to prevent the patient from getting his/her neck caught in this location (you must read and follow the FDA Entrapment Guidelines).

Operating Instructions

DIRECTIONAL LOCK HINGES (Fig 10)

Patients tend to use the bed for support when getting in or out of bed. Patients could be injured if the bed moves sideways. To guard against this risk, engage the Directional Lock Hinges. Simply flip the U-shaped tab down with your toe over both Casters. This will prevent any lateral movement (swiveling) of the caster. To release the casters and allow full mobility of the bed, flip the U-shaped tab up and over the top of the caster.

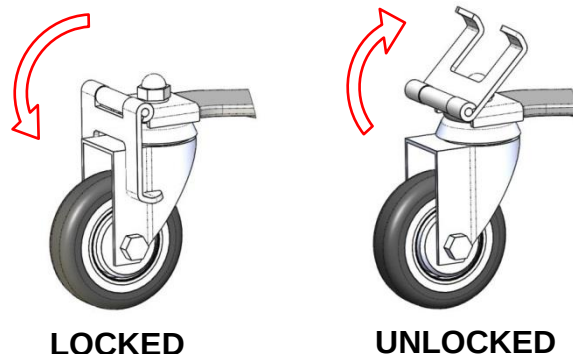


Fig 10

TOTAL FLOOR LOCK (Fig 11)

The Total Floor Lock is engaged by pressing the Red Pedal down as shown in Fig 11. The bed user will hear/feel the lock click into place when the Lock is fully engaged. This will immobilize the bed. To make the bed mobile again, unlock the Total Floor Lock by pressing the Green Pedal down as shown in Fig 11.

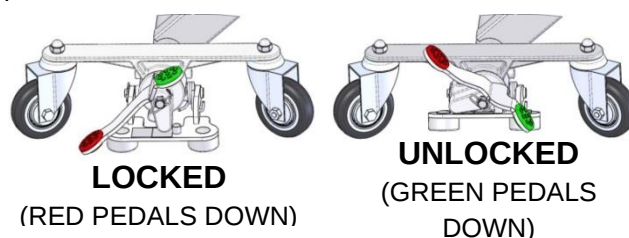


Fig 11

TOTAL LOCK CASTERS (Fig 12)

To engage the total lock casters, simply press down on the locking tab with your toe on all four casters. This will prevent any movement of the caster (rolling or swiveling). The rubber wheel gives good traction on most floor surfaces. To release the casters and allow mobility of the bed, press down on the release lever to unlock each caster.

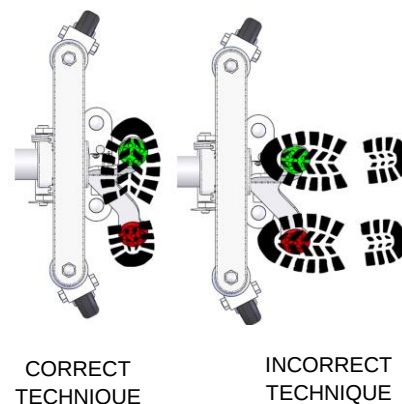


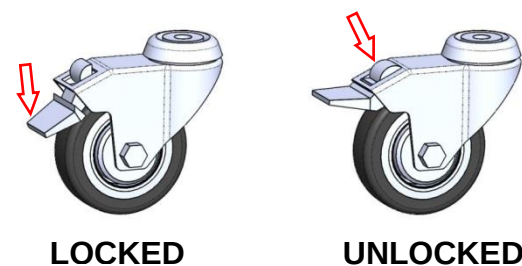
Fig 12

⚠ WARNING! When the bed is not being moved, the casters should always be locked. After applying the brakes test the motion of the bed to ensure that the brakes are properly engaged. Patients tend to use the bed for support when getting in or out of bed, and could be injured if the bed unexpectedly moves sideways.

TRANSPORTING BED

The MC7 / Advantage ReadyWide® is designed for mobility at any height. Never use Side Rails, Assist Rails, or other accessories to move the bed. To prevent any damage or injury, it is recommended that two personnel be present when moving a bed. The bed is not intended for transporting patients. Before moving the bed, you should check all around the perimeter of the bed to ensure that no accessories will fall or get damaged and that:

1. The Power Supply Cord is unplugged and the cord is safely stored off the floor.
2. All the head and foot brakes are released.
3. All accessories used on the bed are secured or removed.



⚠ WARNING! Do not roll the bed over high thresholds with the patient in the bed.

Operating Instructions

BED CONTROLS

The MC7 / Advantage ReadyWide® Bed is electrically operated using Pendant buttons as follows:

BACK DECK OPERATION

1. To raise, press and hold UP button.
To lower, press and hold DOWN button.

KNEE DECK OPERATION

2. To raise, press and hold UP button.
To lower, press and hold DOWN button.

AUTO CONTOUR OPERATION

3. To raise, press and hold UP button.
To lower, press and hold DOWN button.

BED HI-LO ELEVATION

4. To raise, press and hold UP button.
To lower, press and hold DOWN button.

COMFORT CHAIR OPERATION

5. To raise, press and hold UP button.
To lower, press and hold DOWN button.

Prior to Comfort Chair positioning the patient/resident should be centered in the bed side to side and head to toe (sacrum on the seat deck of the bed) with bed wheels in the locked position. Be sure the area under the bed is clear of all body parts, equipment, and foreign objects. Do not stop and/or leave the bed in the Reverse Trendelenburg position while transitioning into and out of the Comfort Chair position.

UNDERBED LIGHT (LIGHT KIT OPTIONAL)

6. To turn on, press button.
To adjust brightness, press button.
To turn off, press button.

NOTE: Upon receiving the bed, to ensure that all functions will work correctly, reset the bed as described on page 12.

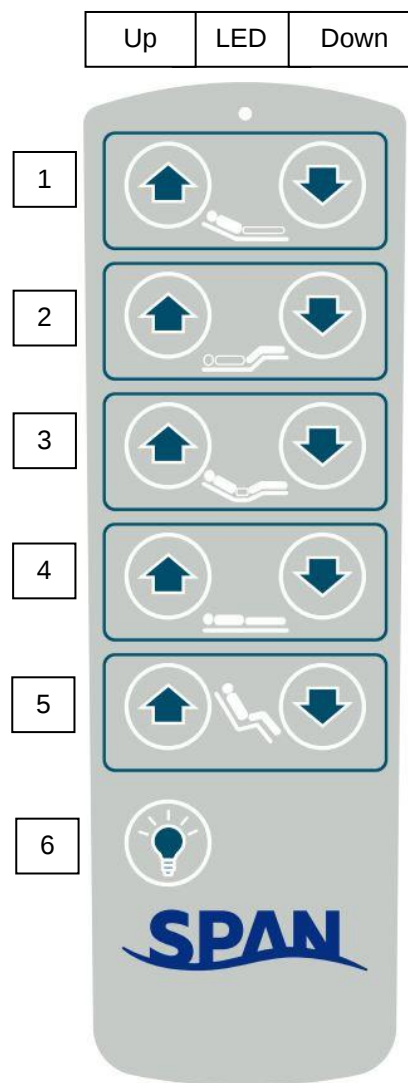
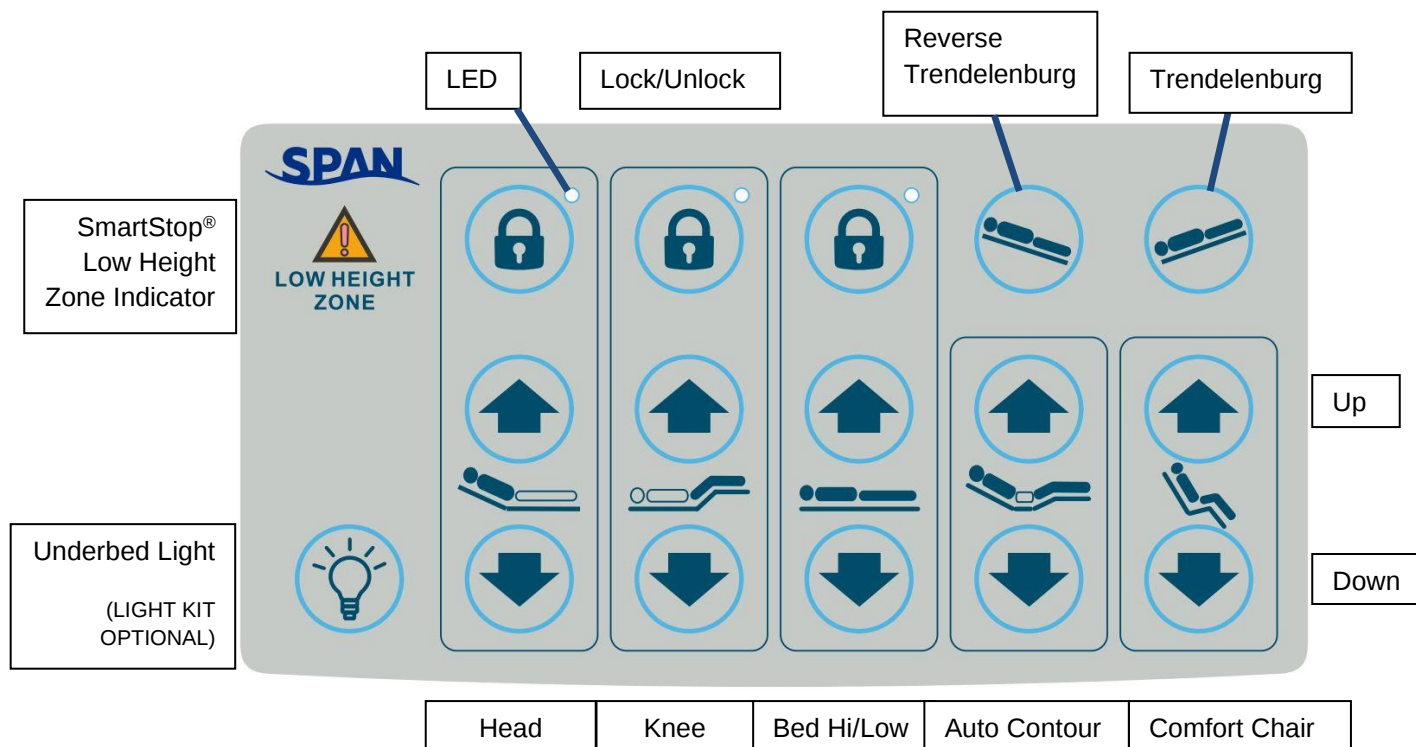


Fig 13



Operating Instructions



FOOT END (STAFF) CONTROLLER

Fig 14

The FEC (Staff) Controller mounts flush on the Foot Board and allows the caregiver to operate the bed or to lockout the bed functions so that they cannot be operated with the Hand Pendant. Trendelenburg, Reverse Trendelenburg, and full lowering of the bed functions are activated by the caregiver only.

To lock out a function, press Lock/Unlock button. Illuminated LED indicates that the function is now locked out.

To unlock a function, press the Lock/Unlock button. When the LED is off, it indicates that the function is now operable.

To move the bed into the Comfort Chair position, press and hold the Comfort Chair button.

SmartStop® LOW POSITION AUTO-PAUSE

To Fully Lower the bed from 12-1/2" down to 7-7/8" the Bed Hi/Low Down button must be pressed on the FEC, as the bed lowers the SmartStop® Low Height Zone Indicator will illuminate (and, if installed, underbed lights will flash) as a warning to the operator, to ensure that the area under the bed is clear of any body parts or foreign objects.

Operating Instructions

BACK-UP BATTERY

The bed comes with an optional internal or external Battery Back-up. The Back-up Battery is for use when there is a power outage, or the bed needs to be operated where there is no power source nearby. The back-up battery is replaceable. Replace only with battery provided by Span Medical Products Canada. Please contact Span Customer Service for details.

Battery Type: Lead Acid

Input Voltage: 30VDC (29VDC min, 45VDC max)

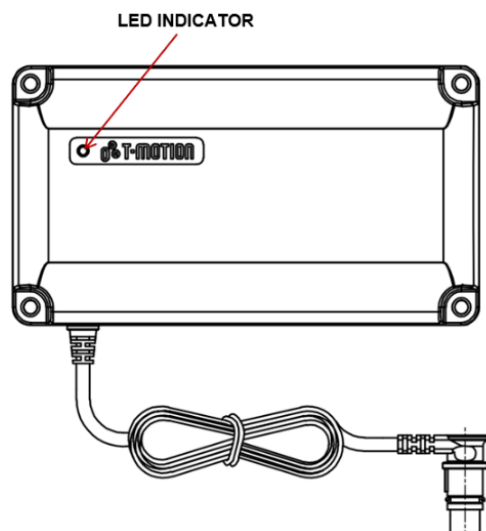
Output Voltage: 24VDC

Duty Cycle: 10% (maximum 2 minutes ON, 18 minutes OFF)

To charge, the battery must be plugged into the bed's control box with the control box connected to AC power. Always keep battery plugged into the control box.

The LED on the battery indicates charge status as shown in the table below.

Status	Capacity	LED Colour and Mode	
When Charging (the whole system is connecting with AC power)			
Charging State	< 100%	Green	Continuously short flashing: On (1sec) / Off (1sec)
Fully Charged State	= 100%	Green	Continuously On
When Discharging (the whole system is unplugged and the battery is supplying the electricity)			
High Capacity State	25%-100%	Green	Continuously long flashing: On (0.5sec) / Off (4sec)
Low Capacity State	< 25%	Orange	Continuously long flashing: On (0.5sec) / Off (4sec)
During Over Discharge Protection			
Under protection	< 20%	LED is continuously off	



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Fig 15

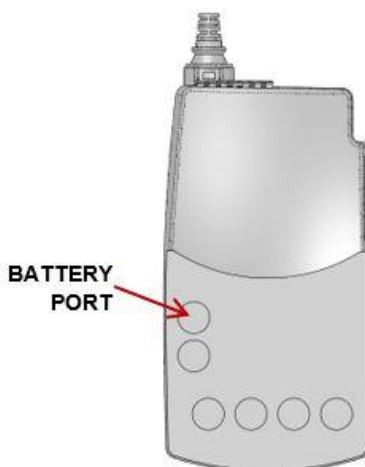


Fig 16

It is highly recommended to charge the battery continuously for at least 24hrs for these situations:

1. First time usage.
2. Before long term storage (or bed will not be connect with the AC power for a long period of time).
3. After long term storage (or bed has not connected with the AC power for a long period of time).



Maintenance

CLEANING

The MC7 / Advantage ReadyWide® bed can be cleaned with warm water and a mild detergent or diluted disinfectant like Dynakil Plus or the PH7Q Ultra Neutral pH. Use a damp cloth or a sponge to clean all exposed surfaces of the bed. Take care not to use excessive water around the control panels and the control box.

 **WARNING!** The MC7 / Advantage ReadyWide® bed was not designed to be cleaned using a high pressure wash tunnel. Never spray directly on to the actuator with a high pressure cleaner.

PREVENTATIVE MAINTENANCE

There are a number of maintenance items that shall be reviewed every 6 -12 months (depending on the severity of use) to ensure proper functioning of the bed.

ALL PIVOT AND ROTATING JOINTS – All moving components of the bed, including deck joints, motor clevis joints, casters, etc., are self-lubricating and maintenance free. Preventive maintenance and inspection is recommended to assure defect-free and reliable operation. All pivot and rotating joints should be free from dirt, lint, grease, food residues and other foreign materials.

ACTUATOR OPERATION– The actuators should run smoothly and quietly throughout their range. Normal operation over full range - The bed should move evenly through its full range of motion from low to high position and from flat to contoured with no jerking or twisting.

GRINDING, POPPING, OTHER NOISES – The bed should be fairly silent. Some motor/gear noise is normal and some settling noises are expected, but nothing loud and no squeaking. Look for abnormal wear, lubricate any joints exhibiting noise.

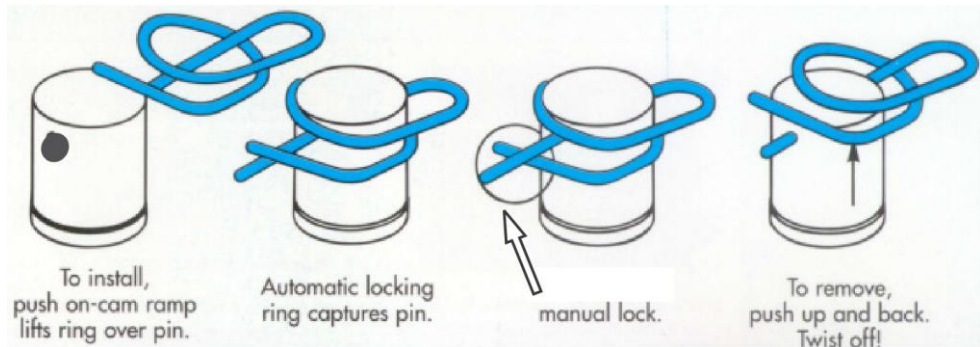
ACTUATOR SYSTEM - The Actuator must be maintained correctly and not tampered with.

1. The Actuator must be cleaned at regular intervals to remove dust and dirt and inspected for mechanical damages or wear.
2. Inspect all attachment points, wires, piston rod, cabinet, and plug as well as check that the actuator functions correctly.
3. The actuator is a closed unit and requires no internal maintenance.
4. To ensure that the pre-greased inner tube remains lubricated the actuator must only be washed down when the piston rod is fully retracted.

 **WARNING!** The Actuator must be used and maintained correctly and not exposed to violent treatment or tampered with. If any irregularities are observed, the Actuator must be replaced immediately.

Maintenance

RETAINING RINGS – All clevis pins must have retaining rings present. Replace any missing rings. All "Rue" type pins should be manually locked and visually inspected on a regular basis, as illustrated.



NOTE: The low end of the Hi-Lo Actuator must have an "Extended Prong Style Cotter Pin". The "Rue" type pin is used on all other Clevis Pins.

⚠ WARNING! Damage to the cotter pins may occur when the bed is in its lowest position and removing patients using a patient lift and/or cleaning areas under the bed.

FASTENERS – Ensure that all fasteners are tightened and seated completely within the limits of the specified maximum torque unless specified otherwise.

Standard Dry Torque in Foot-Pounds		
Bolt Size	Coarse Threads/Inch	SAE Grade 0-1-2 74,000 psi Low Carbon Steel.
1/4	20	6
5/16	18	12
3/8	16	20
7/16	14	32
1/2	13	47

CABLING – Inspect the cabling on the bed to ensure that it is all still in place with no drooping or loose wires, and that it is not interfering with any moving parts. Check for any cut, nicked or crushed wiring. Reattach any loose wires, and repair or replace any damaged wires.

POWER SUPPLY CORD – Inspect the power cord for nicks or crushed insulation. Replace if damaged with original manufacturer parts only.

CASTER LOCKING – Check to ensure that the casters swivel and roll freely when unlocked, and do not swivel or roll when the lock is engaged. Tighten, repair, or replace if damaged, loose or not working properly. Note: a torque of 25-30 lb-ft (300-360 in-lb) should be applied on the 1/2" Nut.

SIDE RAILS – Check the action of the side rails. The rails should move freely through their range, latch fully when raised, and not be excessively "wobbly" when raised.

HEAD & FOOT BOARD PANELS – Inspect the wood panels for nicks, scratches, and missing edging. Seal any damage that penetrates through to the wood to prevent possible water damage.

PAINT FINISH – Check the bed for any loose, missing, peeled, scraped off or flaked paint. Touch up as required.

OVERALL APPEARANCE – Inspect the bed generally. Visually inspect welds on the bed and accessories and look at any bent or cracked components. Document any concern and remove the bed from service immediately until the affected parts are replaced or the corrective action is taken.

NOTE: Span Medical Products Canada will make available any resource material required for service personnel to perform maintenance of parts deemed as "repairable by service personnel" by Span.



Note: Accessories not listed should be inspected as applicable.

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Troubleshooting Tips

MC7 / Advantage ReadyWide® Electrical Schematic

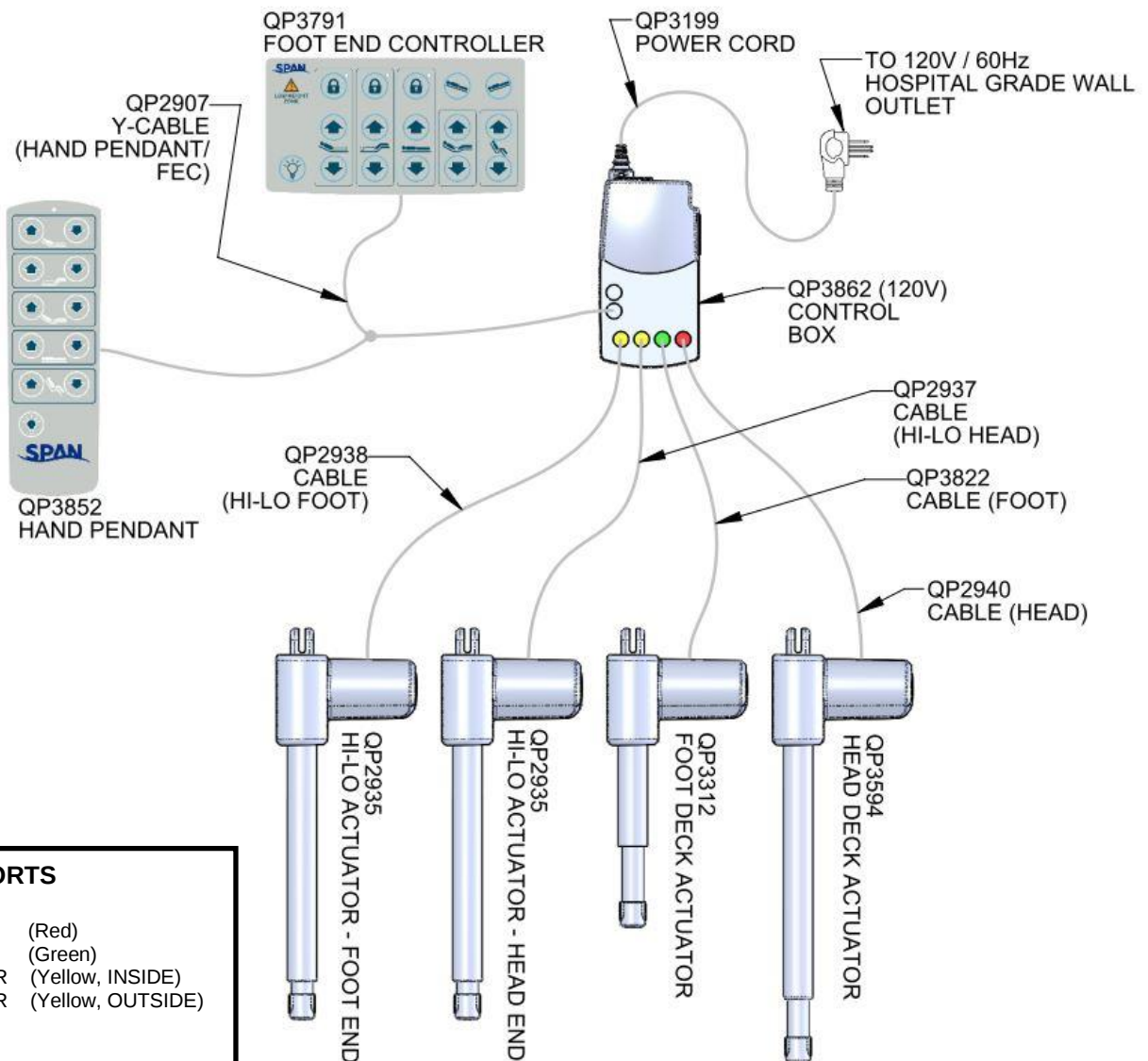


Fig 17

A flat screwdriver is used to open the control box cover.



Troubleshooting Tips

BEFORE YOU CALL FOR SERVICE (Always record the Serial Number of the bed)

If you are having a problem with your MC7 / Advantage ReadyWide® bed, please go through this troubleshooting section to see if your problem can be resolved easily. If you are still having problems, then please call our Parts and Service Department for assistance at **1-800-268-8671**. Do not ship any parts back to Span Medical Products Canada without an RMA (Return Material Authorization) number, they will not be accepted, and no credit will be given.

PROBLEM: ONE FUNCTION NOT WORKING

When some, but not all functions work on a bed, it typically indicates that there is a problem with the pendant or one of the actuators, but not the Control Box. Prior to troubleshooting use reset function.

SEE PAGE 12 FOR RESET PROCEDURE.

1. Check to ensure that the Foot End (Staff) Controller is unlocked. If it is not, then press the function switch to toggle to the unlock position, and the function should now work. If this is not the case, continue with the next step.
2. Ensure that all of the connectors are firmly seated, and then check to see if this corrects the problem.
3. Try using a different pendant, either from another bed, or a spare. If this resolves the problem, then a replacement pendant is needed.
4. If the problem persists, try switching the actuator ports. Select an actuator that is working and plug it into the port that is not working. If the function works (it may work in reverse) then the problem is with the actuator.
5. Plug the actuator that was not working into a working port and try it. If the actuator works in this port, then the problem is with the control box.

PROBLEM: NO MOTOR SOUND OR MOVEMENT OF PISTON ROD

When no bed functions work, it typically indicates a problem with the Control Box or the power supply cord, and not the components plugged into it.

1. Check that the bed is plugged into a working electrical outlet.
2. Check the power supply cord for damage. Look for breaks, pinches, or creases in the cord.
3. On the Control Box there is a green LED light, this indicates power to the control box. Check to ensure this light is glowing when the bed is plugged in. Re-check all ports for connection, and wall socket.
4. If the pendant is plugged into a foot end controller, ensure that all functions are unlocked. If they are all unlocked and the bed still does not function, then unplug the pendant from the FEC cable and plug it directly into the control box. If the bed works, then the problem is with the foot end controller.
5. Check that the pendant is plugged completely into the port on the control box. If the problem still persists, then try a working pendant from another bed, or a spare pendant. If the bed works, then the problem is with the pendant. If the bed still does not work, then the problem is a faulty control box.

Performing these steps accurately will assist in pointing the problem and Span Medical Products Canada will be able to expedite the correct replacement part to you.

EMC (Electromagnetic Compatibility): User Information and Guidance Tables

- Medical electrical equipment needs special precautions regarding EMC and needs to be assembled and put into service according to the EMC information provided in this manual.
- Portable and mobile RF communications equipment can affect medical electrical equipment.
- The use of accessories, transducers and/or cables other than those specified, with the exception of those sold by the manufacturer as replacement parts for internal components, may result in increased emissions or decreased immunity of the equipment or system.
- The equipment or system should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the equipment or system should be observed to verify normal operation in the configuration in which it will be used.

Guidance and Manufacturer's Declaration - Emissions		
The MC7 / Advantage ReadyWide® is intended for use in the electromagnetic environment specified below. The customer or user of MC7 / Advantage ReadyWide® should ensure that it is used in such an environment.		
Emissions Test	Compliance	Electromagnetic Environment - Guidance
RF Emissions CISPR 11	Group 1	The MC7 / Advantage ReadyWide® uses RF energy only for its internal function. Therefore, the RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Class A	The MC7 / Advantage ReadyWide® 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	Class A	
Voltage Fluctuations/ Flicker Emissions IEC 61000-3-3	Complies	



Span Medical Products Resident Care Bed MC7 / Advantage ReadyWide® Series

Guidance and Manufacturer's Declaration – Immunity			
The MC7 / Advantage ReadyWide® is intended for use in the electromagnetic environment specified below. The customer or user of the MC7 / Advantage ReadyWide® should ensure that it is used in such an environment.			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
ESD IEC 61000-4-2	±6kV Contact ±15kV Air	±8kV Contact ±15kV Air	Floors should be wood, concrete or ceramic tile. If floors are synthetic, the r/h should be at least 30%.
Electrical Fast Transient/Burst IEC 61000-4-4	±2kV on Power Supply Lines ±1kV on I/O Lines	±2kV on Power Supply Lines ±1kV on I/O Lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±2kV common mode on AC lines ±1kV differential on AC lines ±2kV common mode on outdoor I/O lines	±2kV common mode on AC lines ±1kV differential on AC lines ±2kV common mode on outdoor I/O lines	Mains power quality should be that of a typical commercial or hospital environment.
Voltage Dips/Dropout IEC 61000-4-11	0% U _T for 0.5 cycles (0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°) 0% U _T for 1 cycle (0°) 70% U _T (30% dip in U _T) for 25/30 cycles(0°) 0% U _T for 250/300 cycles(0°)	0% U _T for 0.5 cycles (0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°) 0% U _T for 1 cycle (0°) 70% U _T (30% dip in U _T) for 25/30 cycles(0°) 0% U _T for 250/300 cycles(0°)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the MC7 / Advantage ReadyWide® requires continued operation during power mains interruptions, it is recommended that the MC7 / Advantage ReadyWide® be powered from an uninterruptible power supply or battery.
Power Frequency 50/60Hz Magnetic Field IEC 61000-4-8	30A/m	50 Hz, 30A/m 60 Hz, 30A/m	Power frequency magnetic fields should be that of a typical commercial or hospital environment.
Note: U _T is the AC mains voltage prior to application of the test level.			

Guidance and Manufacturer's Declaration – Immunity			
The MC7 / Advantage ReadyWide® is intended for use in the electromagnetic environment specified below. The customer or user of the MC7 / Advantage ReadyWide® should ensure that it is used in such an environment.			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	(V1) = 3Vrms	Portable and mobile communications equipment should be separated from the MC7 / Advantage ReadyWide® by no less than the distances calculated/listed below: $D=(3.5/V1)(\sqrt{P})$ 150kHz to 80MHz $D=(3.5/E1)(\sqrt{P})$ 80 to 800 MHz $D=(7/E1)(\sqrt{P})$ 800 MHz to 2.5 GHz where P is the max power in watts and D is the recommended separation distance in meters. Field strengths from fixed transmitters, as determined by an electromagnetic site survey ^a , should be less than the compliance levels (V1 and E1). Interference may occur in the vicinity of equipment containing a transmitter. Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	(E1) = 3V/m	
NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people. ^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the MC7 / Advantage ReadyWide® is used exceeds the applicable RF compliance level above, the MC7 / Advantage ReadyWide® should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the MC7 / Advantage ReadyWide®.			



Recommended Separations Distances for the MC7 / Advantage ReadyWide®.			
The MC7 / Advantage ReadyWide® is intended for use in the electromagnetic environment in which radiated disturbances are controlled. The customer or user of the MC7 / Advantage ReadyWide® can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF Communications Equipment and the MC7 / Advantage ReadyWide® as recommended below, according to the maximum output power of the communications equipment.			
Max Output Power (W)	Separation (m) 150kHz to 80MHz $D=(3.5/V1)(\sqrt{P})$	Separation (m) 80 to 800MHz $D=(3.5/E1)(\sqrt{P})$	Separation (m) 800MHz to 2.5GHz $D=(7/E1)(\sqrt{P})$
0.01	0.11667	0.11667	0.23333
0.1	0.36894	0.36894	0.73785
1	1.1667	1.1667	2.3333
10	3.6894	3.6894	7.3785
100	11.667	11.667	23.333



Customer Support

HOW TO MAKE A WARRANTY CLAIM:

Do not disassemble any electrical component parts.

1. Troubleshoot the electrical system (actuators, control box and pendant) to determine the not functioning components. Contact Span Medical Products Canada - Parts and Service department if required.
2. Obtain purchasing authority from your facility with a purchase order reference number.
3. Have the serial number from the bed to which the claim pertains.
4. Communicate with Span Medical Products Canada - Warranty claims processor.
5. Describe the reason or cause of failure.
6. Order the parts required to return the bed to proper operation.
7. Obtain a Return Material Authorization (RMA) number for authorization to return parts. Any product returned without a valid RMA number may be refused and returned at your expense.
8. Receive and assemble replacement parts, ensure that the bed is functioning as intended.
9. Return the claimed defective parts, with RMA tags attached to each part, and the RMA number clearly marked on the packaging. Only parts with RMA tags may be returned. For health and safety of our employees we will only accept cleaned parts.



Span Medical Products Resident Care Bed
MC7 / Advantage ReadyWide® Series

Parts Order Form

SPAN MEDICAL PRODUCTS CANADA
4658 Ontario St. Beamsville, Ontario
Canada L3J 0T9

Contact Name

Bed Serial Number(s)

Facility Name

Address

Phone:

Fax:

Parts Order Date

Purchase Order #

RMA Number

Part Number	Description	Quantity	Warranty Claim?

Notes

[illegible]



Limited Warranty Beds and Accessories

Span Medical Products Canada warrants all beds and bed accessories sold by Span to be free from defects in workmanship and materials under normal and proper use and service from the date of initial delivery by Span for:

Electrical Components**	5 Years
Batteries, Hand Pendants, FECs, and Cables	1 Year
Parts Subject to Wear	1 Year
Frame	15 Years
All Welds on Steel Structural Components	15 Years
Bed Accessories	1 Year

** Control Box, All Actuators (motors)

Excluding the above, Span makes no and expressly excludes any warranties (expressed or implied) and shall not be liable for any loss or damage, directly or indirectly, arising from the use, installation, or maintenance of such merchandise or for indirect, special, or consequential damages.

Our warranty is in addition to rights provided by consumer law.

No other party is authorized to make warranties on behalf of Span.

This warranty does not cover any labour expenses for service; these are at the purchaser's expense.

This warranty does not apply where:

- The product has been abused, misused, or improperly maintained
- The product has been exposed to excessive loads
- Any repairs, alterations, or modifications have been made that were not expressly approved by Span.

All claims must be submitted in writing within the warranty period.

All authorized warranty claims, must have an RMA (Returned Materials Authorization) number attached to any returns. The RMA will be provided by Span Medical Products Canada Customer Service at the time the claim is initiated.

Returned RMA's are subject to inspection. It is the sole discretion of Span personnel to determine if the claim is billable or a no charge warranty replacement.

Warranty claim parts must be returned to Span for inspection and testing. If the claim parts are not returned in 45 days of the filing of the RMA, Span reserves the right to initiate a billing invoice for the replacement parts sent to the customer. A billing to the customer may also occur if upon inspection the claim is not validated. Normal billing terms will apply. No warranty claims or credit is extended to accounts which have an overdue outstanding balance with our accounts receivables department.

This Warranty is extended to the original purchaser of the equipment only.

Shipping expenses are covered during the first year of the warranty. In subsequent years of the warranty, shipping expenses will be billed and payable by the recipient of the warranty items.