

## ProCeed Hospital Bed

### Service Manual

REF	8500-000-000
REF	8500-000-100
REF	8500-000-200
REF	8500-000-300
REF	8500-000-400
REF	8500-000-500
REF	8500-000-600
REF	8500-000-700
REF	8500-000-800





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## Warning/Caution/Note Definition

The words **WARNING**, **CAUTION**, and **NOTE** carry special meanings and should be carefully reviewed.

### **WARNING**

Alerts the reader about a situation which, if not avoided, could result in death or serious injury. It may also describe potential serious adverse reactions and safety hazards.

### **CAUTION**

Alerts the reader of a potentially hazardous situation which, if not avoided, may result in minor or moderate injury to the user or patient or damage to the product or other property. This includes special care necessary for the safe and effective use of the device and the care necessary to avoid damage to a device that may occur as a result of use or misuse.

**Note** - Provides special information to make maintenance easier or important instructions clearer.

## Summary of safety precautions

Always read and strictly follow the warnings and cautions listed on this page. Service only by qualified personnel.

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### **WARNING**

- Always line the hex shaft with the hex in the caster. Test the caster to identify the direction of the brake. Damage may occur if you install the caster incorrectly.
  - Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 in.) to any part of **ProCeed**, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
  - Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
  - Use of accessories, transducers, and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- 

### **CAUTION**

- Improper usage of the product can cause injury to the patient or operator. Operate the product only as described in this manual.
  - Do not modify the product or any components of the product. Modifying the product can cause unpredictable operation resulting in injury to patient or operator. Modifying the product also voids its warranty.
  - With the brake in the neutral position, the product could move.
  - During siderail hoop replacement, pay attention to the exact path of the siderail cable during assembly. Assemble the new part in the same way.
-



## Pinch points



Figure 1 – ProCeed pinch points, movable and stationary headboards

## Introduction

This manual assists you with the operation or maintenance of your Stryker product. Read this manual before operating or maintaining this product. Set methods and procedures to educate and train your staff on the safe operation or maintenance of this product.

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### CAUTION

- Improper usage of the product can cause injury to the patient or operator. Operate the product only as described in this manual.
  - Do not modify the product or any components of the product. Modifying the product can cause unpredictable operation resulting in injury to patient or operator. Modifying the product also voids its warranty.
- 

**Note** - Stryker continually seeks advancements in product design and quality. This manual contains the most current product information available at the time of printing. There may be minor discrepancies between your product and this manual. If you have any questions, contact Stryker Customer Service or Technical Support at 1-800-327-0770.

### Expected service life

**ProCeed** has a 10 year expected service life under normal use conditions and with appropriate periodic maintenance.

The backup batteries have a one year expected service life under normal use conditions.

## Headboard illustrations

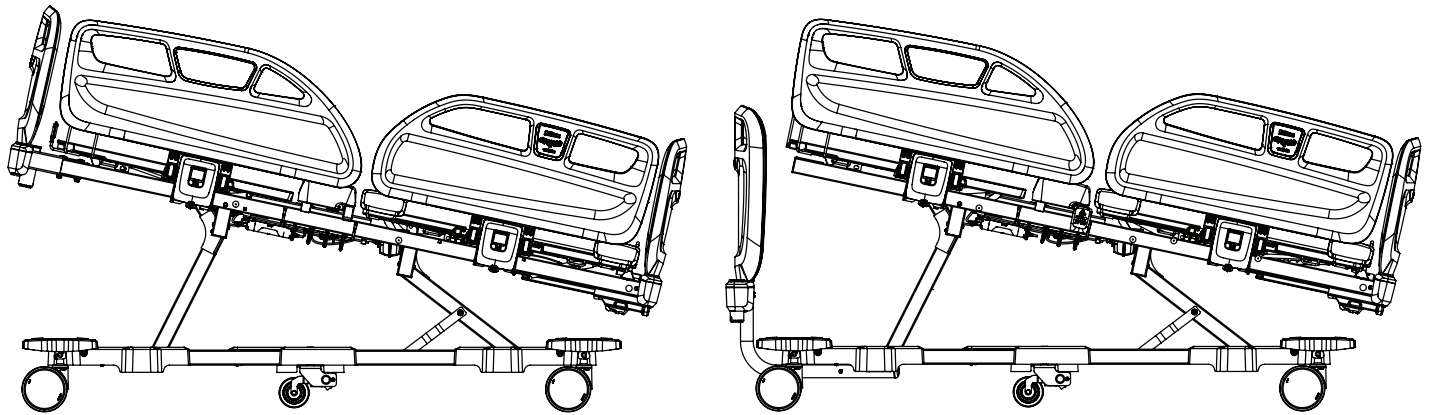


Figure 2 – Headboard models, movable (left) and stationary (right)



Figure 3 – ProCeed bed series, movable headboard option



Figure 4 – ProCeed bed series, stationary headboard option

## Contact information

Contact Stryker Customer Service or Technical Support at: +1 800-327-0770.

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Web: [www.stryker.com](http://www.stryker.com)

**Note** - The user and/or the patient should report any serious product-related incident to both the manufacturer and the Competent authority of the European Member State where the user and/or patient is established.

To view your operations or maintenance manual online, see <https://techweb.stryker.com/>.

Have the serial number (A) of your Stryker product available when calling your Stryker Customer Service. Include the serial number in all written communication.

## Serial number location

The Stryker serial number and specification label (A) is located below the patient siderail near the foot end of the product (Figure 5).

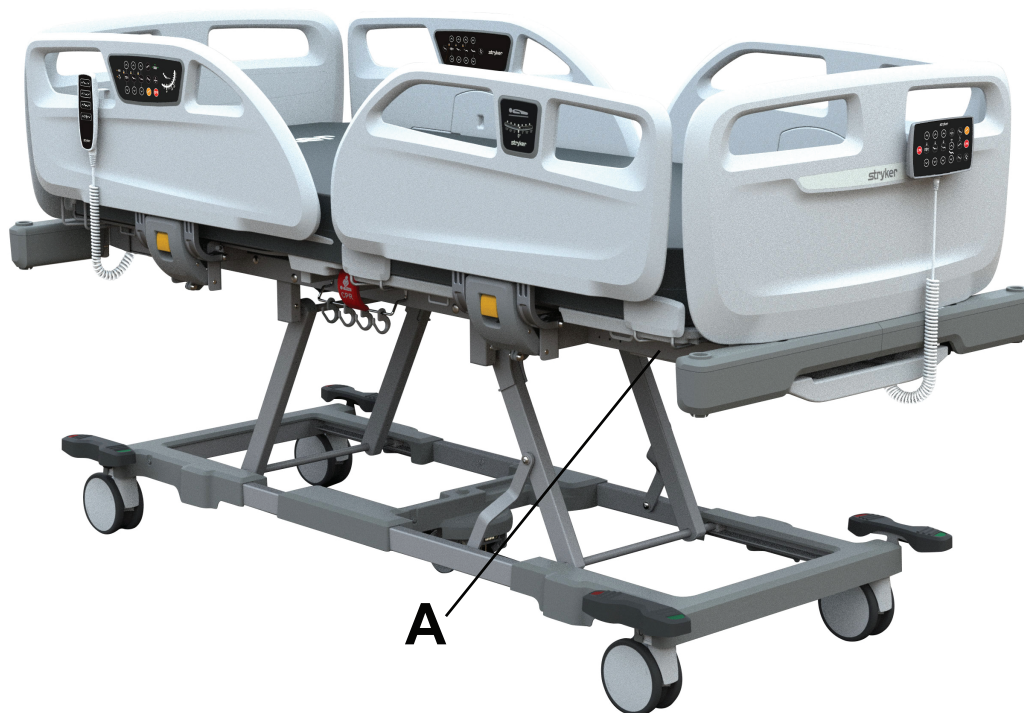


Figure 5 – Stryker serial number and specification label location

## Preventive maintenance

Remove the product from service before you perform the preventive maintenance inspection. Check all items listed during annual preventive maintenance for all Stryker Medical products. You may need to perform preventive maintenance checks more often based on your level of product usage. Service only by qualified personnel.

**Note** - Clean and disinfect the exterior of the support surface before inspection, if applicable.

Inspect the following items:

- \_\_\_\_\_ All fasteners are secure
- \_\_\_\_\_ Apply brake pedal and push on the product to confirm that all casters lock
- \_\_\_\_\_ Head end siderail brake indicators light up when brakes are applied
- \_\_\_\_\_ Steer caster locks and unlocks (only without fifth wheel)
- \_\_\_\_\_ Siderails move, latch, and stow
- \_\_\_\_\_ Backrest CPR release is operable on both sides
- \_\_\_\_\_ IV pole option is intact and operable
- \_\_\_\_\_ Foley bag hooks are intact
- \_\_\_\_\_ No cracks or splits in headboard, footboard, or siderail panels
- \_\_\_\_\_ No frame damage
- \_\_\_\_\_ No rips or cracks in support surface cover
- \_\_\_\_\_ All functions on head end siderails are operable
- \_\_\_\_\_ Night light is always on
- \_\_\_\_\_ Main power cords and plugs are not frayed or damaged
- \_\_\_\_\_ Cables are not worn or pinched
- \_\_\_\_\_ All electrical connections are tight
- \_\_\_\_\_ All grounds are secure to frame
- \_\_\_\_\_ Ground impedance check ( $\leq 0.2 \text{ Ohm}$ )
- \_\_\_\_\_ Leakage current: normal polarity, no ground, L2 active ( $\leq 300 \text{ } \mu\text{A}$  (microamps))
- \_\_\_\_\_ Leakage current: normal polarity, no ground, no L2 ( $\leq 600 \text{ } \mu\text{A}$  (microamps))
- \_\_\_\_\_ Leakage current: reverse polarity, no ground, L2 active ( $\leq 300 \text{ } \mu\text{A}$  (microamps))
- \_\_\_\_\_ Leakage current: reverse polarity, no ground, no L2 ( $\leq 600 \text{ } \mu\text{A}$  (microamps))
- \_\_\_\_\_ Backrest angle accuracy is  $0^\circ - 65^\circ$
- \_\_\_\_\_ Siderail controls for signs of degradation
- \_\_\_\_\_ Backrest dampener for oil leaks
- \_\_\_\_\_ All motions function
- \_\_\_\_\_ Foot end and head end litter bumper are intact and not damaged
- \_\_\_\_\_ Check battery functionality

Product serial number:
Completed by:
Date:

## Troubleshooting

Problem	Possible Cause	Solution
Bed does not operate	<ol style="list-style-type: none"> <li>1. Power cable does not plug into the mains.</li> <li>2. Power cable is damaged.</li> <li>3. Nurse control pendant or patient control pendant may be locked.</li> <li>4. Control box does not operate.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify that the power cable and plug are not damaged. Plug the power cable into the mains.</li> <li>2. Replace the power cable. Service should be performed by authorized service personnel.</li> <li>3. Inspect the nurse control pendant or patient control pendant and make sure they are not locked.</li> <li>4. Call the service center to replace the control box.</li> </ol>
When the system operates, one of the actuators does not operate	<ol style="list-style-type: none"> <li>1. Actuator cable may be out of the control box socket.</li> <li>2. Actuator cable is damaged.</li> <li>3. Actuator is damaged.</li> <li>4. CPR wire remains stuck.</li> <li>5. Control box is damaged.</li> <li>6. Control unit is damaged.</li> <li>7. Nurse control pendant or patient control pendant may be partly locked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Verify that the control box socket connections work.</li> <li>2. Call the service center to replace the actuator cable.</li> <li>3. Call the service center to replace the actuator.</li> <li>4. Verify that the CPR wire and nut adjustment is correct.</li> <li>5. Call the service center to replace the control box.</li> <li>6. Verify that the nurse control pendant or patient control pendant is not locked.</li> <li>7. Unplug the siderail control unit from the socket and verify that it functions with the nurse control pendant. If function is restored, there may be a problem with one of the control units. Call the service center.</li> </ol>
Battery is possibly discharged	<ol style="list-style-type: none"> <li>1. Battery is completely discharged.</li> <li>2. Battery is damaged or expired.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recharge the battery.</li> <li>2. Call the service center to replace the battery.</li> </ol>
Battery is empty (system beeps)	Power is possibly disconnected and the bed is operating by battery power.	<ol style="list-style-type: none"> <li>1. Verify that the power cable is connected to the control panel.</li> <li>2. Verify that the power cable is connected at all places.</li> <li>3. Verify that the socket works.</li> <li>4. Recharge the battery. Call the service center.</li> </ol>
Control box beeps while actuators are raised and lowered	Control box actuator position reference has been lost.	<ol style="list-style-type: none"> <li>1. Unplug the power cord and turn off the battery.</li> <li>2. Plug in the power cord and turn on the battery.</li> <li>3. Run each upper actuator to the highest position.</li> </ol>

Problem	Possible Cause	Solution
The backrest does not raise after CPR is activated	The backrest up button(s) are stuck.	<ol style="list-style-type: none"> <li>1. Press the backrest down button.</li> <li>2. Press the backrest up button.</li> </ol>
<p>Failure Mode:</p> <p>Bed does not operate due to actuator failure or power request error (fatal error). When the bed enters failure mode, pressing any button results in rapid beeping sounds. The LEDs on the control panels and the nurse control pendant will flash.</p> <p>Failure indications:</p> <p>All nurse and patient control pendant LEDs are blinking.</p> <p>The CO65 buzzer beeps fast if the handset is activated.</p>	<ul style="list-style-type: none"> <li>• Actuator cables are unplugged.</li> <li>• Electrical short in a control unit cable or actuator cable.</li> <li>• A function is activated but the actuator configuration does not support the function.</li> <li>• Switch has failed in an actuator.</li> <li>• Control pendant (nurse or patient) or siderail control panel has failed.</li> <li>• Control box has failed.</li> </ul>	<ol style="list-style-type: none"> <li>1. Reset the failure mode. <ol style="list-style-type: none"> <li>a. Press and hold the Trendelenburg button (A) (Figure 6) on the nurse control panel and the Autocontour up button (B) (Figure 7) on the patient control panel at the same time for five seconds.</li> </ol> <p><b>Note</b> - The Trendelenburg and Autocontour up buttons are found on the opposite sides of the same siderail control panel.</p> <ol style="list-style-type: none"> <li>b. Press and hold Autocontour up (C) and Trendelenburg (D) buttons at the same time on the nurse control pendant (option) for five seconds (Figure 9).</li> </ol> </li> <li>2. After five seconds, you will hear a buzzer.</li> <li>3. Press the Trendelenburg and Autocontour buttons until the buzzer stops.</li> <li>4. LEDs will stop blinking.</li> <li>5. Press the Autocontour up button until the bed reaches the highest height position.</li> <li>6. Make sure that the system is in a safe position after you reset the failure mode.</li> <li>7. Continue to troubleshoot through possible causes until corrected.</li> </ol>

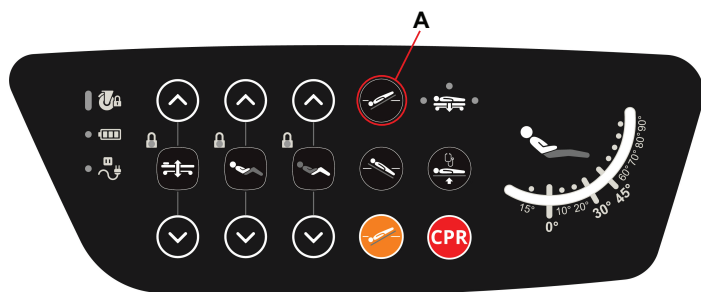


Figure 6 – Nurse control panel

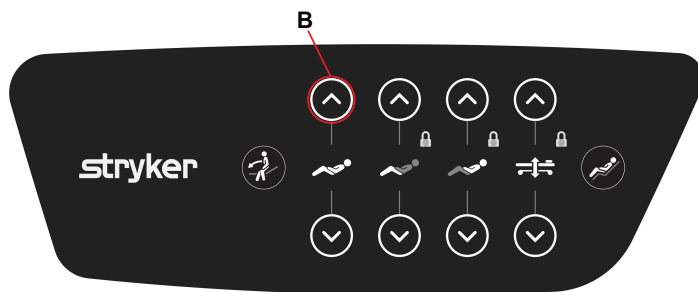


Figure 7 – Patient control panel

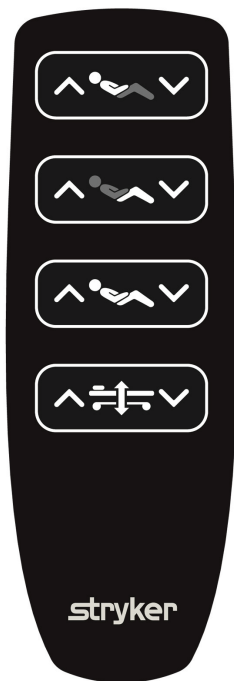


Figure 8 – Patient control pendant

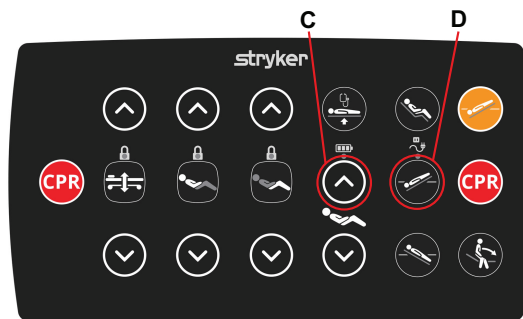


Figure 9 – Nurse control pendant



## Quick reference replacement parts

These parts are currently available for purchase. Call Stryker Customer Service: + 90 (352) 321 43 00 (pbx) for availability and pricing.

Kit name	Number	Kit contents		
		Number	Name	Quantity
Actuator kit, Fowler (backrest)	YM-KIT-100138	HM-17-303	4000 N LA40 QR 215 mm stroke actuator	1
		HM-12-FTR010	Ø14 x Ø10 x 65 mm actuator connection pin	2
		YM-HM-02-027	Actuator pin fixing bush	2
		HM-11-31	Ø10 rue clip	2
Actuator kit, Gatch (legrest)	YM-KIT-100137	HM-17-305	6000 N LA40 100 mm stroke actuator	1
		HM-12-FTR010	Ø14 x Ø10 x 65 mm actuator connection pin	2
		YM-HM-02-027	Actuator pin fixing bush	1
		HM-07-04	M10 iron washer	2
		YM-851-303	Foot actuator bushing	2
		HM-11-31	Ø10 rue clip	2
Actuator kit, lift	YM-KIT-100139	HM-17-323	Linak linear actuator, 160 stroke, S+170 mm, 8000 N	1
		HM-12-FTR011	Ø14 x Ø10 x 41 mm pin	1
		HM-12-FTR010	Ø14 x Ø10 x 65 mm actuator connection pin	1
		YM-HM-02-027	Actuator pin fixing bush	1
		HM-11-31	Ø10 rue clip	2
Battery replacement kit	YM-KIT-100140	HM-17-403	Linak battery, BA16	1
		HM-06-127	M4*20 imbus head Allen bolt	4
		HM-08-19	M4 fiber nut	4
Brake alarm kit	YM-KIT-100143	YM-850-013	Brake alarm option BOM, assembly, Phoenix	1
Brake pedal replacement kit	YM-KIT-100144	YM-850-105-GL	Brake-steer pedal support, weldment	1
		YM-850-238	Pedal, brake/steer, plastic	1
		HM-11-34	Ø13 rue clip	1
		HM-07-09	Special pedal washer	2
		HM-06-86	Ø4 x 16 mm YSB plastic screw	2
		HM-20-1187	Foot pedal red label, Phoenix	1
		HM-20-1188	Foot pedal green label, Phoenix	1
Bumper kit, fixed headboard, left	YM-KIT-100148	HM-02-482	Bumper, fixed headboard, upper left, Phoenix	1
		HM-02-483	Bumper, fixed headboard, lower left, Phoenix	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		YM-851-354	Bumper fixing part, Phoenix	1
		HM-06-119	EJOT Delta PT 5 x 20 SS plastic screw	4
		HM-20-369	Ground label	1
		HM-22-1780	3M prime 94 handkerchief	1
Bumper kit, fixed headboard, right	YM-KIT-100147	HM-02-484	Bumper, fixed headboard, upper right, Phoenix	1
		HM-02-485	Bumper, fixed headboard, lower right, Phoenix	1
		YM-851-354	Bumper fixing part, Phoenix	1
		HM-06-119	EJOT Delta PT 5 x 20 SS plastic screw	4
		HM-20-979	Phoenix headboard warning label	1
		HM-22-1780	3M primer 94 handkerchief	1
Bumper kit, standard headboard, left	YM-KIT-100146	HM-02-458	Bumper, upper left, Phoenix	1
		HM-02-459	Bumper, lower left, Phoenix	1
		YM-851-354	Bumper fixing part, Phoenix	1
		HM-06-119	EJOT Delta PT 5 x 20 SS plastic screw	4
		HM-20-369	Ground label	1
		HM-22-1780	3M primer 94 handkerchief	1
Bumper kit, standard headboard, right	YM-KIT-100145	HM-02-460	Bumper, upper right, Phoenix	1
		HM-02-461	Bumper, lower right, Phoenix	1
		YM-851-354	Bumper fixing part, Phoenix	1
		HM-06-119	EJOT Delta PT 5 x 20 SS plastic screw	4
		HM-20-979	Phoenix headboard warning label	1
		HM-22-1780	3M primer 94 handkerchief	1
Hexagon rod kit	YM-KIT-100172	YM-03-04-10-0760-HZR-GL	Ø11 hexagon rod 760 mm with hole	1
		YM-850-252	50*50 capped caster tube pls cap	2
		HM-11-34	Ø13 rue clip	2
		YM-HM-02-71	12 mm thick pls washer DMR071	2
		HM-11-10	11 mm snap ring (lipper) KMS starlock push on BV/ 6706 fastener	2
		HM-02-139	Ø6 plastic rivet Torx head	2
Caster kit, Steer-Lock	YM-KIT-100175	HM-01-93	Steinco Steer-Lock caster	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		YM-850-252	50*50 capped caster tube pls cap	1
		HM-11-34	Ø13 rue clip	1
		YM-HM-02-71	12 mm thick pls washer DMR071	1
		HM-11-10	11 mm snap ring (lipper) KMS starlock push on BV/ 6706 fastener	1
		HM-02-139	Ø6 plastic rivet Torx head	2
Caster kit, total lock, antistatic	YM-KIT-100173	HM-01-92	Steinco total lock caster antistatic	1
		YM-850-252	50*50 capped caster tube pls cap	1
		HM-11-34	Ø13 rue clip	1
		YM-HM-02-71	12 mm thick pls washer DMR071	1
		HM-11-10	11 mm snap ring (lipper) KMS starlock push on BV/ 6706 fastener	1
		HM-02-139	Ø6 plastic rivet Torx head	2
Caster kit, total lock	YM-KIT-100174	HM-01-91	Steinco total lock caster	1
		YM-850-252	50*50 capped caster tube pls cap	1
		HM-11-34	Ø13 rue clip	1
		YM-HM-02-71	12 mm thick pls washer DMR071	1
		HM-11-10	11 mm snap ring (lipper) KMS starlock push on BV/ 6706 fastener	1
		HM-02-139	Ø6 plastic rivet Torx head	2
Fifth wheel assembly kit	YM-KIT-100135	HM-01-96	Tente fifth wheel UFP100 x 34-Ø8	1
		HM-05-054	M8 x 80 hex head cap screw	1
		HM-08-06	M8 self-lock hex nut	1
Fifth wheel assembly group kit	YM-KIT-100134	YM-850-004	Fifth wheel, assembly, Phoenix	1
		HM-05-057	M8 x 25 hexagon head flange adhesive applied bolt	4
		YM-850-201	Fifth wheel transfer plastic	1
		HM-05-061	M5*25 imbus bolt	1
		HM-02-139	Ø6 plastic rivet Torx head	2
Control box replacement kit	YM-KIT-100176	HM-17-328	Linak control box, CO65	1
		HM-17-335	Linak control box, CO65, assembly adapter	1
		HM-06-09	3.9 x 25 mm cross recessed countersunk head tapping screw	3

Kit name	Number	Kit contents		
		Number	Name	Quantity
Cover kit, base <b>Note</b> - This kit only covers half a base.	YM-KIT-100178	HM-02-290	Hood, base frame	1
		HM-02-139	Ø6 plastic rivet Torx head	2
Cover kit, fifth wheel	YM-KIT-100177	HM-02-289	Hood, fifth wheel	1
		HM-02-139	Ø6 plastic rivet Torx head	2
CPR mechanism kit	YM-KIT-100179	HM-02-034	CPR release handle	2
		HM-12-189	CPR handle, PIM	2
		HM-12-191	Ø5 x 14 clevis pin, drilled	2
		HM-11-33	Ø6 rue clip	4
		HM-05-170	Bolt din 603-M8 x 70 mm-8.8	1
		HM-08-44	Nut din 6926-M8 x 1.25	1
		YM-851-249	CPR roller	1
		HM-20-016	Backrest mechanical CPR release wire	1
Fixed headboard kit	YM-KIT-100184	YM-850-255	Fixed headboard, blow molded part, Phoenix	1
		YM-850-270-GL	Headboard post, fixed headboard, Phoenix	2
		HM-06-49	M3, 9 x 16 mm star square head sheet bolt	4
		HM-20-970	White head color label, small inside, Phoenix	2
		HM-20-969	White fix HB head color label, large inside, Phoenix	1
		HM-20-967	White head color label, outside, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
Standard headboard kit <b>Note</b> - This kit is also used for the footboard.	YM-KIT-100185	YM-850-256	Standard headboard, blow molded part, Phoenix	1
		YM-850-260-GL	Headboard post, Phoenix	2
		HM-06-49	M3, 9 x 16 mm star square head sheet bolt	4
		HM-20-970	White head color label, small inside, Phoenix	2
		HM-20-971	White head color label, large inside, Phoenix	1
		HM-20-967	White head color label, outside, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
Foley bag rack kit	YM-KIT-100136	YM-851-317-GL	Foley bag rack	1
		YM-851-372	Accessory hanger hook	4
		HM-09-36	Dome head pop rivet, 5 x 12 steel	2

Kit name	Number	Kit contents		
		Number	Name	Quantity
Fowler backrest kit, laminated sheet, X-ray	YM-KIT-100180	YM-851-232	Fowler laminated sheet, X-ray	1
		YM-04-FTR024-HZR-GL	FTR024 sheet metal cassette holder	2
		HM-09-44	Pop rivet, large head, 4.8 x 16 AL/ST	4
		HM-09-37	Tubular component, Ø6.35 x 27.2	6
		HM-09-35	Blind rivet, 5 x 15 aluminum	6
		YM-HM-02-438	Washer, 7 x 10 x 4	6
Foot extension assembly kit	YM-KIT-100142	YM-851-112-BY	Bed extension, welding, Phoenix	1
		YM-851-326	Fix head, plastic adapter	2
		YM-851-296	Square extension (internal)	2
		YM-851-297	Square extension (external)	2
		HM-09-35	Blind rivet, 5 x 12 aluminum	4
		YM-851-293	Phoenix, serum adapter	2
		HM-06-119	EJOT Delta PT 5 x 20 SS plastic screw	6
		YM-851-354	Bumper fixing part, Phoenix	1
		HM-02-458	Bumper, upper left, Phoenix	1
		HM-02-459	Bumper, lower left, Phoenix	1
		HM-02-460	Bumper, upper right, Phoenix	1
		HM-02-461	Bumper, lower right, Phoenix	1
		HM-20-979	Phoenix headboard warning label	1
		YM-851-374	Bed extension, carrier cap	2
Foot extension kit, rail plastic	YM-KIT-100141	YM-851-297	Square extension (external)	2
		YM-851-296	Square extension (internal)	2
		HM-09-35	Blind rivet, 5 x 15 aluminum	4
Label kit, fixed headboard	YM-KIT-100186	HM-20-969	White fix HB head color label, large inside, Phoenix	1
		HM-20-970	White head color label, small inside, Phoenix	2
		HM-20-967	White head color label, outside, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
Label kit, standard headboard	YM-KIT-100187	HM-20-971	White head color label, large inside, Phoenix	1
		HM-20-970	White head color label, small inside, Phoenix	2
		HM-20-967	White head color label, outside, Phoenix	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		HM-22-1780	3M primer 94 handkerchief	1
Linen tray kit	YM-KIT-100188	YM-851-366	Linen tray, Phoenix	1
		YM-851-352-BY	Linen tray extension wire painted	1
		HM-20-818	Perforated small magnet	2
		HM-06-81	3*16 chipboard screw	2
		HM-20-849	Capacity is 15 kg, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
Main mechanism kit, foot end	YM-KIT-100189	YM-850-001	Main mechanism holed, assembly, Phoenix	1
		YM-851-244	Main mechanism connection plastic	2
		HM-06-119	EJOT delta PT 5 x 20 SS plastic screw	4
		HM-05-174	M8 x 16 hex socket head bolt DIN912 8.8 galvanized	2
		HM-08-44	Nut DIN 6926-M8 x 1.25	2
		HM-12-FTR011	Ø14 x Ø10 x 41 mm PIN	1
		HM-11-31	Ø10 rue clip	1
Main mechanism kit, head end	YM-KIT-100190	YM-850-002	Main mechanism, assembly, Phoenix	1
		YM-851-244	Main mechanism connection plastic	2
		HM-06-119	EJOT delta PT 5 x 20 SS plastic screw	4
		HM-05-174	M8 x 16 hex socket head bolt DIN 912 8.8 galvanized	2
		HM-08-44	Nut DIN 6926-M8 x 1.25	2
		HM-12-FTR011	Ø14 x Ø10 x 41 mm PIN	1
		HM-11-31	Ø10 rue clip	1
Nurse control pendant replacement kit	YM-KIT-100192	HM-17-814	Linak nurse pendant (PHO)	1
		HM-17-317	0964541 Linak supervisor spiral cable	1
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Patient pendant replacement kit	YM-KIT-100191	HM-17-813	Linak patient pendant	1
		HM-16-03	Ø25 clips (UB250C-N 24 x 4,6 cable connector)	1
Power cord replacement kit, type B (Japan)	YM-KIT-100152	HM-17-020	Japan, type B straight/black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2

Kit name	Number	Kit contents		
		Number	Name	Quantity
Power cord replacement kit, type B (North/South America)	YM-KIT-100154	HM-17-021	Type B SJT North/South America	1
		YM-HM-02-041	Ø8,5 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type I straight orange (Australia)	YM-KIT-100165	HM-17-017	Type I Australia straight orange	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type B coiled orange (North/South America)	YM-KIT-100153	HM-17-023	Type B, SJT North/South America coiled orange	1
		YM-HM-02-041	Ø8,5 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type B (Taiwan)	YM-KIT-100156	HM-17-024	Type B Taiwan	1
		YM-HM-02-041	Ø8,5 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type B (Philippines)	YM-KIT-100155	HM-17-025	Philippine type B power cord	1
		YM-HM-02-041	Ø8,5 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type D straight (India)	YM-KIT-100157	HM-17-026	India type D straight/black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type E/F schuko straight black (Europe)	YM-KIT-100159	HM-17-027	Europe/schuko straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type E/F coiled black (Korean)	YM-KIT-100160	HM-17-028	Korean, coiled black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type E/F schuko coiled orange (Europe)	YM-KIT-100158	HM-17-029	Europe/schuko coiled orange	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type E/F BQ straight black (Europe)	YM-KIT-100213	HM-17-052	E/F type power cord straight black (schuko/ Europe) (BQ)	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type G coiled orange (United Kingdom)	YM-KIT-100161	HM-17-032	Type G United Kingdom coiled orange	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type H straight black (Israel)	YM-KIT-100162	HM-17-033	Type H Israel, straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type I straight black (Argentina)	YM-KIT-100164	HM-17-034	Type I Argentina straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type I straight black (Australia)	YM-KIT-100166	HM-17-035	Type I Australia straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type I coiled orange (Argentina)	YM-KIT-100163	HM-17-037	Type I Argentina coiled orange	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type J straight black (Switzerland)	YM-KIT-100167	HM-17-038	Type J Switzerland straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type K straight black (Denmark)	YM-KIT-100168	HM-17-039	Type K Denmark straight black	1



Kit name	Number	Kit contents		
		Number	Name	Quantity
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type L straight black (Italy)	YM-KIT-100169	HM-17-040	Type L Italy straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type M straight black (South Africa)	YM-KIT-100170	HM-17-041	Type M South Africa, straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Power cord replacement kit, type N straight black (Brazil)	YM-KIT-100171	HM-17-042	Type N Brazil straight black	1
		YM-HM-02-040	Ø7 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Fixed headboard internal universal power cord kit	YM-KIT-100149	HM-17-810	Internal universal power cord	1
		HM-10-24	Ø8-Ø10 drive rivet cable clips, single	8
Standard headboard internal universal power cord kit	YM-KIT-100150	HM-17-066	Internal universal power cord, straight, Phoenix	1
		HM-10-24	Ø8-Ø10 drive rivet cable clips, single	8
Power cord replacement kit, Nema 6-15P (Chile)	YM-KIT-100151	HM-17-818	NEMA 6-15P connector power cord (Chile)	1
		YM-HM-02-041	Ø8,5 plastic cable holder	1
		HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	2
Backrest siderail gas cylinder kit	YM-KIT-100182	HM-18-40	Siderail damper	1
		HM-11-18	Q8 cap ring (DT/6671/43A)	2
		HM-12-146	12-146 Ø8 x 31 mm siderail pin	1
		HM-05-165	Bolt DIN 931-M8 x 120 mm-8.8	1
		HM-08-44	Nut DIN 6926-M8 x 1.25	1
		YM-851-313	Side board lock plastic - long	2
Footrest siderail gas cylinder kit	YM-KIT-100181	HM-18-40	Siderail damper	1
		HM-11-18	Q8 cap ring (DT/6671/43A)	2
		HM-12-146	12-146 Ø8 x 31 mm siderail pin	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		HM-12-FTR005	12-FTR005 shock absorber connection pin	1
		HM-11-05	6 mm ring	1
Fowler backrest damper kit	YM-KIT-100183	HM-18-37	Fowler damper, 215 mm stroke	1
		HM-12-FTR010	Ø14 x Ø10 x 65 mm actuator connection pin	1
		HM-12-FTR011	Ø14 x Ø10 x 41 mm pin	1
		HM-11-31	Ø10 rue clip	2
		YM-HM-02-027	Actuator pin fixing bush	1
Rastomat kit	YM-KIT-100193	HM-20-517	6 stage rastomat (Hettich)	1
		HM-06-08	Bolt DIN 603-M8 x 5.5-8.8	1
		HM-02-469	Plastic washer, Ø8 x 1.6 mm	4
		YM-851-303	Foot actuator bushing	1
		HM-08-44	Nut DIN 6926-M8 x 1.25	2
		HM-05-015	M8 x 30 hexagon head screw	1
		HM-07-03	M8 iron washer	2
Siderail kit, Fowler control unit, left	YM-KIT-100201	HM-17-806	Linak siderail control unit, patient, left	1
		HM-17-807	Linak siderail control unit, nurse, left	1
Siderail kit, Fowler control unit, right	YM-KIT-100200	HM-17-804	Linak siderail control unit, patient, right	1
		HM-17-805	Linak siderail control unit, nurse, right	1
Siderail kit, Fowler control unit without icon, left	YM-KIT-100203	HM-17-806	Linak siderail control unit, patient, left	1
		HM-17-817	Linak siderail control unit, nurse, left, without brake icon	1
Siderail kit, Fowler control unit without icon, right	YM-KIT-100202	HM-17-804	Linak siderail control unit, patient, right	1
		HM-17-816	Linak siderail control unit, nurse, right, without brake icon	1
Siderail kit, full assembly replacement, foot end, left	YM-KIT-100205	YM-851-010	Foot siderail, left, assembly, Phoenix	1
		HM-12-FTR005	12-FTR005 shock absorber connection pin	1
		HM-11-05	6 mm ring	1
Siderail kit, full assembly replacement, foot end, right	YM-KIT-100204	YM-851-012	Foot siderail, right, assembly, Phoenix	1
		HM-12-FTR005	12-FTR005 shock absorber connection pin	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		HM-11-05	6 mm ring	1
Siderail kit, plastic replacement, foot end, left	YM-KIT-100207	YM-851-264	Foot left siderail blow molded part, Phoenix	1
		HM-20-977	Angle indicator label, foot left, Phoenix	1
		YM-851-357	Foot side angle gauge, left, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
		HM-20-528	Ø8 angle gauge ball	1
		HM-06-119	EJOT delta PT 5 x 20 ss plastic screw	2
Siderail kit, plastic replacement, foot end, right	YM-KIT-100206	YM-851-266	Foot right siderail blow molded part, Phoenix	1
		HM-20-976	Angle indicator label, foot right, Phoenix	1
		YM-851-359	Foot side angle gauge, right, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
		HM-20-528	Ø8 angle gauge ball	1
		HM-06-119	EJOT delta PT 5 x 20 ss plastic screw	2
Siderail kit, angle gauge, foot end, left	YM-KIT-100209	YM-851-357	Foot side angle gauge, left, Phoenix	1
		HM-20-977	Angle indicator label, foot left, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
		HM-20-528	Ø8 angle gauge ball	1
		HM-06-119	EJOT delta PT 5 x 20 ss plastic screw	2
Siderail kit, head end left with unit, without icon	YM-KIT-100210	YM-851-263	Fowler left siderail blow molded part, Phoenix	1
		HM-17-806	Linak siderail control unit, patient, left	1
		HM-17-817	Linak siderail control unit, nurse, left, without brake icon	1
		HM-17-819	Linak siderail control unit cable RJ45 connector (1500 mm)	1
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, head end right with unit, without icon	YM-KIT-100211	YM-851-265	Fowler right siderail blow molded part, Phoenix	1
		HM-17-804	Linak siderail control unit, patient, right	1
		HM-17-816	Linak siderail control unit, nurse, right, without brake icon	1

Kit name	Number	Kit contents		
		Number	Name	Quantity
		HM-17-98	0965818-1250-A Linak T cable	1
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, angle gauge, foot end, right	YM-KIT-100208	YM-851-359	Foot side angle gauge, right, Phoenix	1
		HM-20-976	Angle indicator label, foot right, Phoenix	1
		HM-22-1780	3M primer 94 handkerchief	1
		HM-20-528	Ø8 angle gauge ball	1
		HM-06-119	EJOT delta PT 5 x 20 ss plastic screw	2
Siderail kit, head end left with unit	YM-KIT-100199	YM-851-263	Fowler left siderail blow molded part, Phoenix	1
		HM-17-806	Linak siderail control unit, patient, left	1
		HM-17-807	Linak siderail control unit, nurse, left	1
		HM-17-819	Linak siderail control unit cable RJ45 connector (1500 mm)	1
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, head end right with unit	YM-KIT-100198	YM-851-265	Fowler right siderail blow molded part, Phoenix	1
		HM-17-804	Linak siderail control unit, patient, right	1
		HM-17-805	Linak siderail control unit, nurse, right	1
		HM-17-98	0965818-1250-A Linak T cable	1
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, full assembly replacement, head end, left	YM-KIT-100194	YM-851-009	Fowler siderail, left, assembly, Phoenix	1
		YM-851-108-BY	Fowler siderail, welding, Phoenix	1
		HM-05-043	Hexagon head screw M5 x 20 mm	2
		YM-851-254	Siderail stopper plastic	2
		HM-05-165	Bolt DIN 931-M8 x 120 mm-8.8	1
		HM-08-44	Nut DIN 6926-M8 x 1.25	1
		YM-851-313	Side board lock plastic - long	2
		HM-06-131	Screw, DIN 6928-ST6,3 x 38 mm-8.8	2
		HM-08-04	M5 fiber hexagonal nut	2

Kit name	Number	Kit contents		
		Number	Name	Quantity
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, full assembly replacement, head end, right	YM-KIT-100195	YM-851-011	Fowler siderail, right, assembly, Phoenix	1
		YM-851-108-BY	Fowler siderail, welding, Phoenix	1
		HM-05-043	Hexagon head screw M5 x 20 mm	2
		YM-851-254	Siderail stopper plastic	2
		HM-05-165	Bolt DIN 931-M8 x 120 mm-8.8	1
		HM-08-44	Nut DIN 6926-M8 x 1.25	1
		YM-851-313	Side board lock plastic - long	2
		HM-06-131	Screw, DIN 6928-ST6,3 x 38 mm-8.8	2
		HM-08-04	M5 fiber hexagonal nut	2
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, full assembly without icon, head end, left	YM-KIT-100196	YM-851-024	Fowler siderail, left, assembly, Phoenix	1
		YM-851-108-BY	Fowler siderail, welding, Phoenix	1
		HM-05-043	Hexagon head screw M5 x 20 mm	2
		YM-851-254	Siderail stopper plastic	2
		HM-05-165	Bolt DIN 931-M8 x 120 mm-8.8	1
		HM-08-44	Nut DIN 6926-M8 x 1.25	1
		YM-851-313	Side board lock plastic - long	2
		HM-06-131	Screw, DIN 6928-ST6,3 x 38 mm-8.8	2
		HM-08-04	M5 fiber hexagonal nut	2
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Siderail kit, full assembly without icon, head end, right	YM-KIT-100197	YM-851-025	Fowler siderail, right, assembly, Phoenix	1
		YM-851-108-BY	Fowler siderail, welding, Phoenix	1
		HM-05-043	Hexagon head screw M5 x 20 mm	2
		YM-851-254	Siderail stopper plastic	2
		HM-05-165	Bolt DIN 931-M8 x 120 mm-8.8	1
		HM-08-44	Nut DIN 6926-M8 x 1.25	1
		YM-851-313	Side board lock plastic - long	2

Kit name	Number	Kit contents		
		Number	Name	Quantity
		HM-06-131	Screw, DIN 6928-ST6,3 x 38 mm-8.8	2
		HM-08-04	M5 fiber hexagonal nut	2
		HM-16-03	Ø25 clips (UB250C-N 245 x 4,6 cable connector)	6
Under bed light replacement kit	YM-KIT-100212	HM-17-297	Under bed light UBL2	1
		HM-06-121	4,2*19 mm self tapping screw	2

## Service

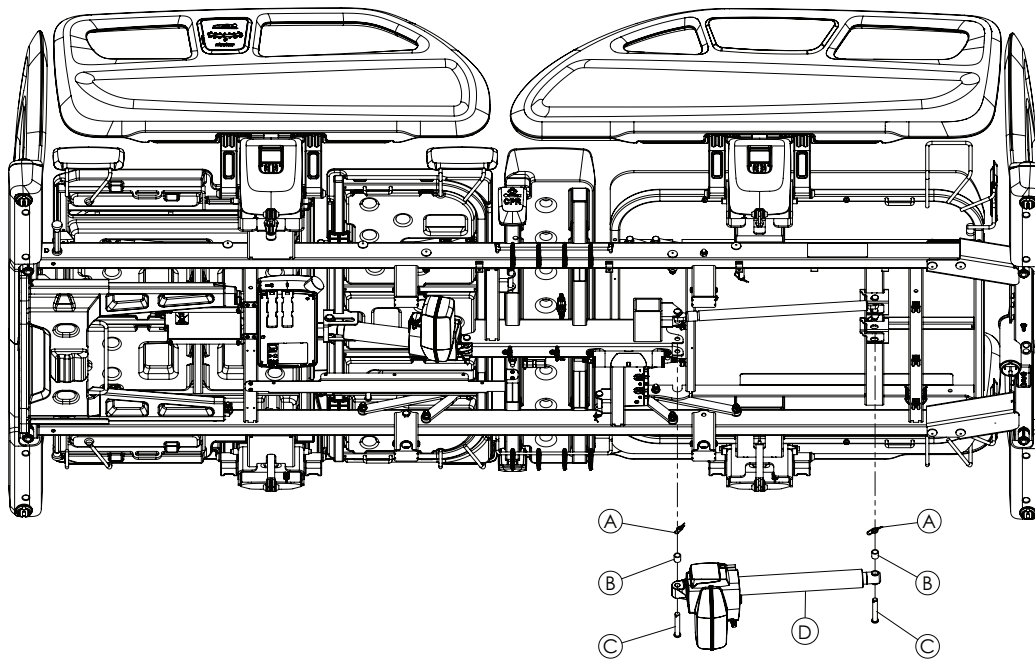
### Fowler backrest actuator replacement

#### Tools required:

- Small slotted screwdriver
- Needle nose pliers

#### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using the CPR release, lower the Fowler backrest to a flat (0 degrees) position.
5. Using a small slotted screwdriver, push in both locking tabs to remove the cable retainer on the Fowler backrest actuator electrical quick connector.
6. Unplug the connector.
7. Using one hand to support the Fowler backrest actuator (D) and a small slotted screwdriver, open the CPR cable cover on the Fowler backrest actuator (Figure 10).
8. Pull back on the CPR cables to remove the CPR cable mechanism from the Fowler backrest actuator.
9. Using needle nose pliers, remove the rue ring cotter pins (A) from each clevis pin. Discard the rue ring cotter pins.



**Figure 10 – Fowler backrest actuator**

10. Using one hand, support the Fowler backrest actuator (D). Remove the foot end spacer (B). Discard the foot end spacer.
11. Using one hand, support the Fowler backrest actuator (D). Remove the head end clevis pin (C) and head end spacer (B). Discard the head end clevis pin and head end spacer. Allow the Fowler backrest actuator to pivot down.
12. Using one hand, support the Fowler backrest actuator (D). Remove the foot end clevis pin (C). Discard the foot end clevis pin.
13. Remove and discard the Fowler backrest actuator.
14. Reverse steps to reinstall.

**Note** - Make sure that the cable ties stay in the same position when you reinstall.

15. Verify proper operation before you return the product to service.

### Gatch leg rest actuator replacement

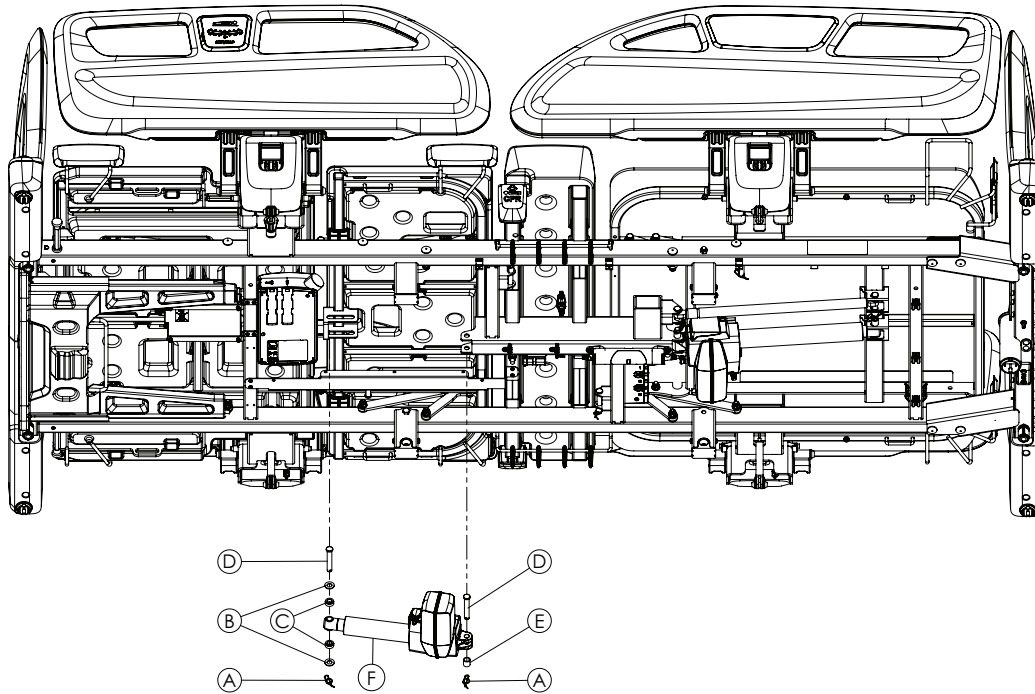
#### Tools required:

- Small slotted screwdriver

- Needle nose pliers

**Procedure:**

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a small slotted screwdriver, push in both locking tabs to remove the cable retainer on the Gatch leg rest actuator electrical quick connector.
5. Unplug the Gatch leg rest actuator cable.
6. Using needle nose pliers, remove the rue ring cotter pins (A) from each clevis pin (Figure 11). Discard the rue ring cotter pins.



**Figure 11 – Gatch leg rest actuator**

7. Using one hand, support the Gatch leg rest actuator (F). Remove the foot end clevis pin (D), spacers (C), and washers (B). Discard the foot end clevis pin, spacers, and washers. Allow the Gatch leg rest actuator to pivot down.
8. Using one hand, support the Gatch leg rest actuator (F). Remove and discard the head end clevis pin (D) and spacer (E).
9. Remove and discard the Gatch leg rest actuator.
10. Reverse steps to reinstall.

**Note** - Make sure that the cable ties stay in the same position when you reinstall.

11. Verify proper operation before you return the product to service.

**Lift actuator, head end replacement**

**Tools required:**

- Small slotted screwdriver
- Needle nose pliers

**Procedure:**

1. Apply the brakes.
2. Support the head end litter cross brace to support the head end litter.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a small slotted screwdriver, push in both locking tabs to remove the cable retainer on the head end lift actuator electrical connector.
5. Unplug the connector.
6. Using needle nose pliers, remove the rue ring cotter pins (A) from each clevis pin. Discard the rue ring cotter pins (Figure 12).



7. Using one hand, support the head end lift actuator (E). Remove the head end clevis pin (D). Discard the head end clevis pin. Allow the head end lift actuator to pivot down.
8. Using one hand, support the head end lift actuator (E). Remove the foot end clevis pin (C) and spacer (B). Discard the foot end clevis pin and spacer.
9. Remove and discard the head end lift actuator.
10. Reverse steps to reinstall.

**Note** - Make sure that the cable ties stay in the same position when you reinstall.

11. Verify proper operation before you return the product to service.

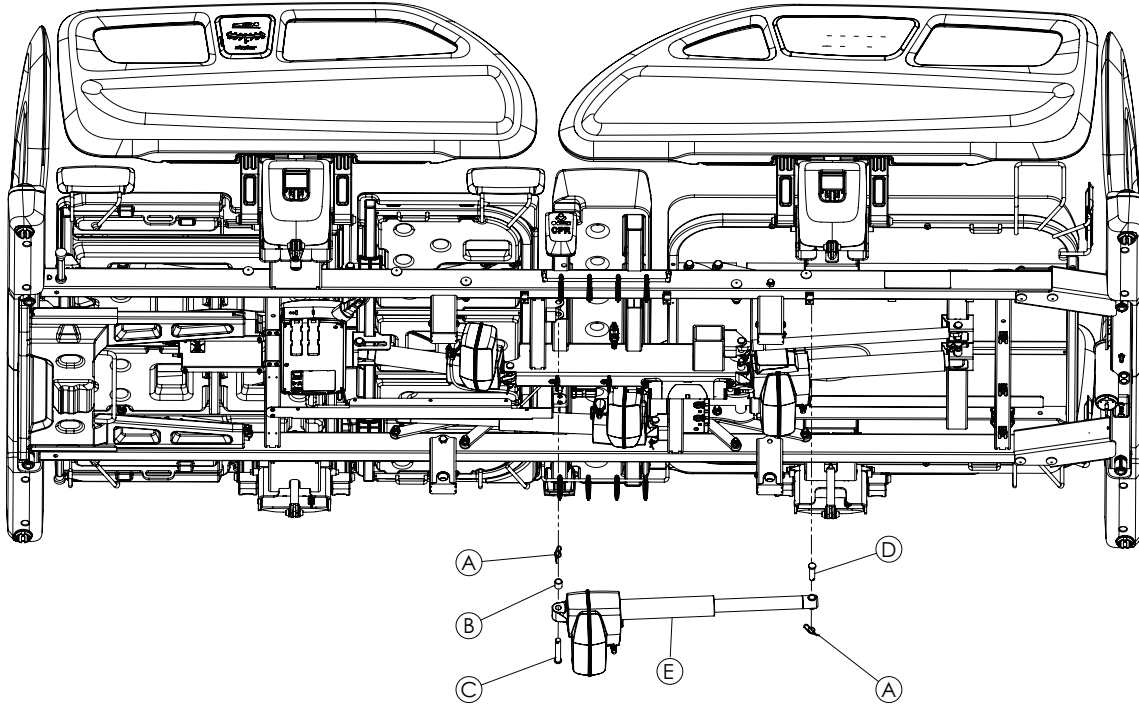


Figure 12 – Lift actuator, head end

## Lift actuator, foot end replacement

### Tools required:

- Small slotted screwdriver
- Needle nose pliers

### Procedure:

1. Apply the brakes.
2. Support the foot end litter cross brace to support the foot end litter.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a small slotted screwdriver, push in both locking tabs to remove the cable retainer on the foot end lift actuator electrical connector.
5. Unplug the connector.
6. Using needle nose pliers, remove the rue ring cotter pins (A) from each clevis pin (Figure 13). Discard the rue ring cotter pins.
7. Using one hand, support the foot end lift actuator (E). Remove the foot end clevis pin (D). Discard the foot end clevis pin. Allow the foot end lift actuator to pivot down.
8. Using one hand, support the foot end lift actuator (E). Remove the head end clevis pin (C) and spacer (B). Discard the head end clevis pin and spacer.
9. Remove and discard the foot end lift actuator.
10. Reverse steps to reinstall.

**Note** - Make sure that the cable ties stay in the same position when you reinstall.

11. Verify proper operation before you return the product to service.

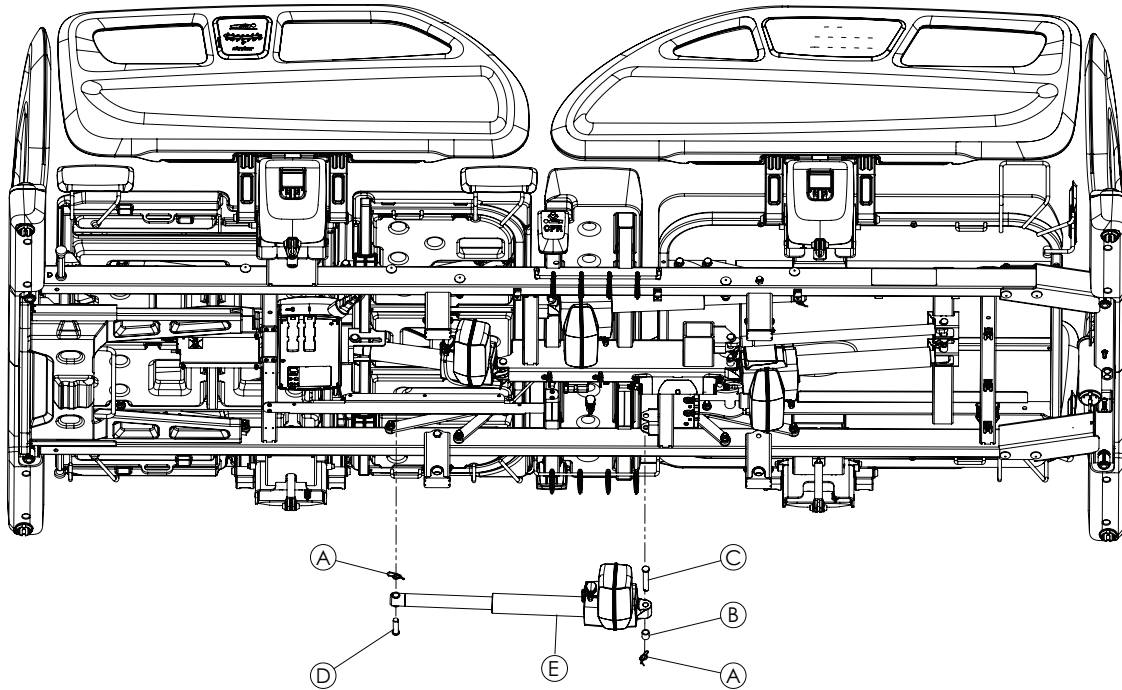


Figure 13 – Lift actuator, foot end

## Non-steer caster replacement

### Tools required:

- T25 Torx wrench
- Needle nose pliers
- Diagonal pliers
- 11 mm combination wrench
- Small floor jack
- Large screwdriver
- Hammer

### Procedure:

1. Put the brake in the neutral position.

---

**CAUTION** - With the brake in the neutral position, the product could move.

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2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a T25 Torx wrench, remove the cover screws (C). Remove the cover (D). Discard the cover screws (Figure 14).
5. Using needle nose pliers, remove the rue ring cotter pin (A) from the hex shaft. Discard the rue ring cotter pin.
6. Pull the brake pedal (B) off the hex shaft. Set aside.
7. Remove the plastic washer (E) that is on the hex shaft. Discard the plastic washer.
8. Using diagonal pliers, cut the starlock retainer (F) that is on the hex shaft. Discard the starlock retainer.

**Note** - To reinstall the starlock retainer, place it on top of the 11 mm combination wrench and hit it with the hammer by passing it through the hexagonal rot.

9. Using a small floor jack, lift the base frame cross tube to loosen the non-steer caster.
10. Using a large screwdriver, remove and discard the plastic tube cape (G) on the tube.

**Note** - Note the colored label on the old caster mounting shaft for when you reinstall the replacement caster. A green label is a **Steer-Lock** caster. An orange label is a total lock caster. An orange label on top of the wheel and a yellow dot on the side is an antistatic total lock caster.

11. Grasp the opposite brake/steer pedal and pull out about 3.5 in. (80 mm) to remove the non-steer caster (I). Discard the non-steer caster.
12. Reverse steps to reinstall.

**WARNING** - Always line the hex shaft with the hex in the caster. Test the caster to identify the direction of the brake. Damage may occur if you install the caster incorrectly.

13. Verify proper operation before you return the product to service.

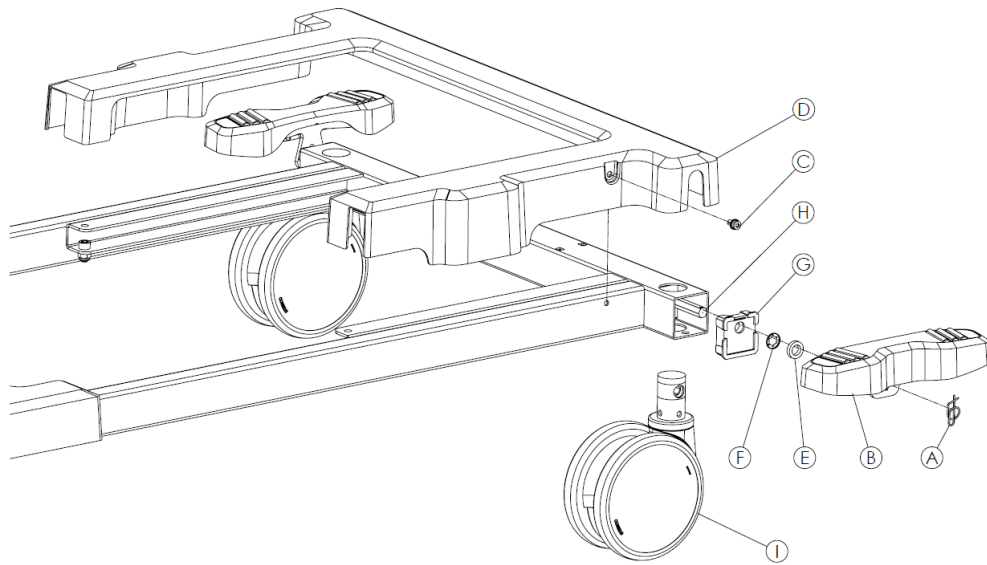


Figure 14 – Non-steer caster

## Steer caster replacement

### Tools required:

- T25 Torx wrench
- Needle nose pliers
- Diagonal pliers
- 11 mm combination wrench
- Small floor jack
- Large screwdriver
- Hammer

### Procedure:

1. Put the brake in the neutral position.

**CAUTION** - With the brake in the neutral position, the product could move.

2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a T25 Torx wrench, remove the cover screws (C). Remove the cover (D). Discard the cover screws (Figure 15).
5. Using needle nose pliers, remove the rue ring cotter pin (A) from the hex shaft. Discard the rue ring cotter pin.
6. Pull the brake pedal (B) off the hex shaft. Set aside.
7. Remove the plastic washer (E) that is on the hex shaft. Discard the plastic washer.
8. Using diagonal pliers, cut the starlock retainer (F) that is on the hex shaft. Discard the starlock retainer.

**Note** - To reinstall the starlock retainer, place it on top of the 11 mm combination wrench and hit it with the hammer by passing it through the hexagonal rot.

9. Using a small floor jack, lift the base frame cross tube to loosen the steer caster.
10. Using a large screwdriver, remove the plastic tube cape (G) on the tube. Discard the plastic tube cape.

**Note** - Note the colored label on the old caster mounting shaft for when you reinstall the replacement caster. A green label is a **Steer-Lock** caster. An orange label is a total lock caster. An orange label on top of the wheel and a yellow dot on the side is an antistatic total lock caster.

11. Grasp the opposite brake/steer pedal and pull out about 3.5 in. (80 mm) to remove the steer caster (I). Discard the steer caster.
12. Reverse steps to reinstall.

**WARNING** - Always line the hex shaft with the hex in the caster. Test the caster to identify the direction of the brake. Damage may occur if you install the caster incorrectly.

13. Verify proper operation before you return the product to service.

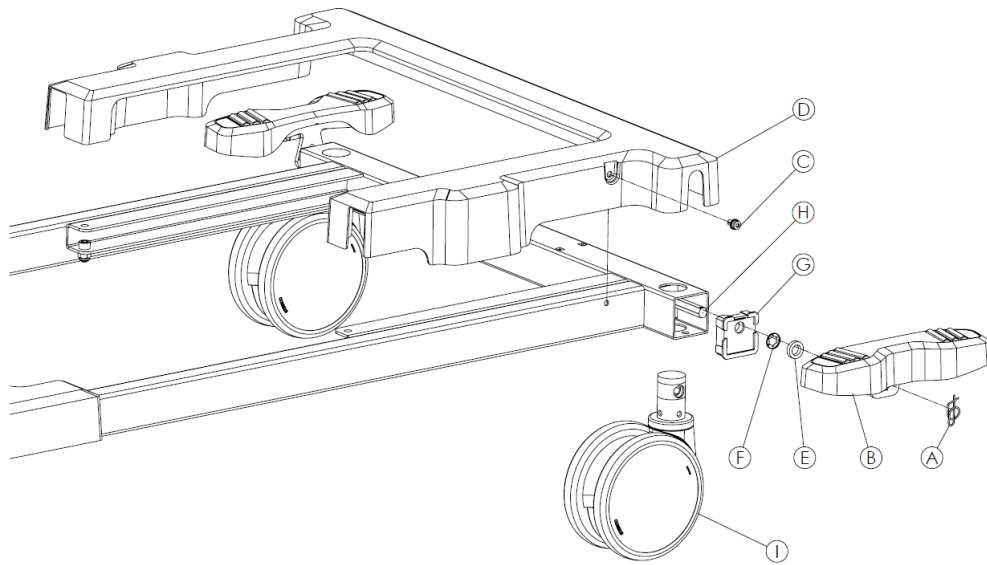


Figure 15 – Steer caster

### Fifth wheel replacement option

#### Tools required:

- T25 Torx wrench
- M5 Allen hex wrench
- 3/8" drive ratchet
- 13 mm socket
- Small floor jack

#### Procedure:

1. Put the brake in the neutral position.

**CAUTION** - With the brake in the neutral position, the product could move.

2. Raise the product to the highest height position.
3. Power off the product and unplug the power cord from the wall outlet.
4. Using a T25 Torx wrench, remove the cover screws (A). Remove the hood (B). Discard the cover screws (Figure 16).
5. Using an M5 Allen hex wrench, remove the bolt (E) and transfer plastic (F) from inside of the base frame. Discard the bolt and transfer plastic.
6. Using a 3/8" drive ratchet and 13 mm socket, remove the nuts (C) from inside of the base frame. Discard the nuts.
7. Using a small floor jack, lift the base frame cross tube to loosen the fifth wheel assembly.
8. Remove and discard the fifth wheel assembly (H).
9. Reverse steps to reinstall.
10. Verify proper operation before you return the product to service.

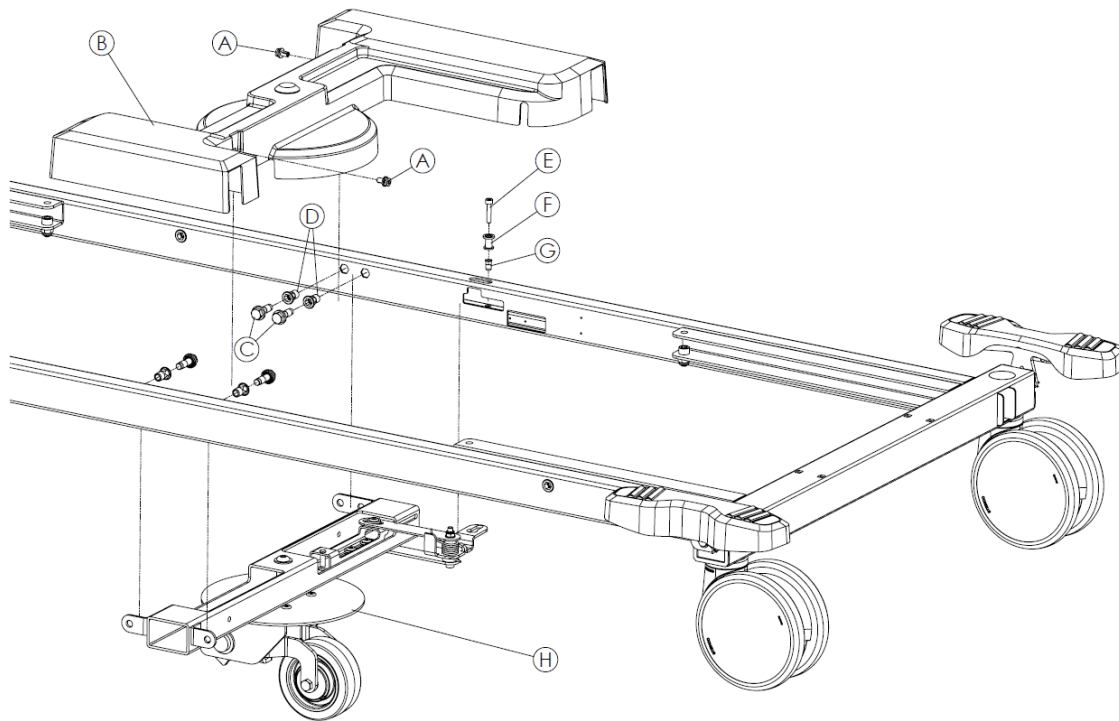


Figure 16 – Fifth wheel

## Siderail head end assembly replacement

### Tools required:

- Diagonal pliers
- 3/8" drive ratchet
- 13 mm socket
- 13 mm combination wrench
- Small slotted screwdriver
- Large slotted screwdriver
- Hammer

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise the siderail to the highest height and latched position.
5. Remove the support surface.
6. Unplug the cable connecting the siderail control panel to the control box.
7. Using diagonal pliers, cut the cable tie that secures the siderail cables to the bottom of the litter frame.
8. Using a 3/8" drive ratchet and 13 mm socket with a 13 mm combination wrench, remove the bolt (B), spacers (D), and nut (C) that secure the head end siderail gas cylinder to the Fowler backrest frame (Figure 17). Discard the bolt, spacers, and nut.
9. Using a large slotted screwdriver and a hammer, remove one of the hat-shaped segments (E) that cover the siderail pin.
10. Using one hand to support the siderail, use a large slotted screwdriver and a hammer to remove the siderail pin (F) and spacers (D, G) that secure the siderail assembly with aluminum curved leg (A) to the litter frame.
11. Using a small slotted screwdriver, remove the e-clip (H) that secures the short siderail pin (I) to the siderail main mechanism.
12. Using one hand to support the siderail, use a large slotted screwdriver and a hammer to remove the siderail pin (I) that secures the siderail assembly with siderail main mechanism plastic part (A) to the litter frame.
13. Reverse steps to reinstall.
14. Verify proper operation before you return the product to service.

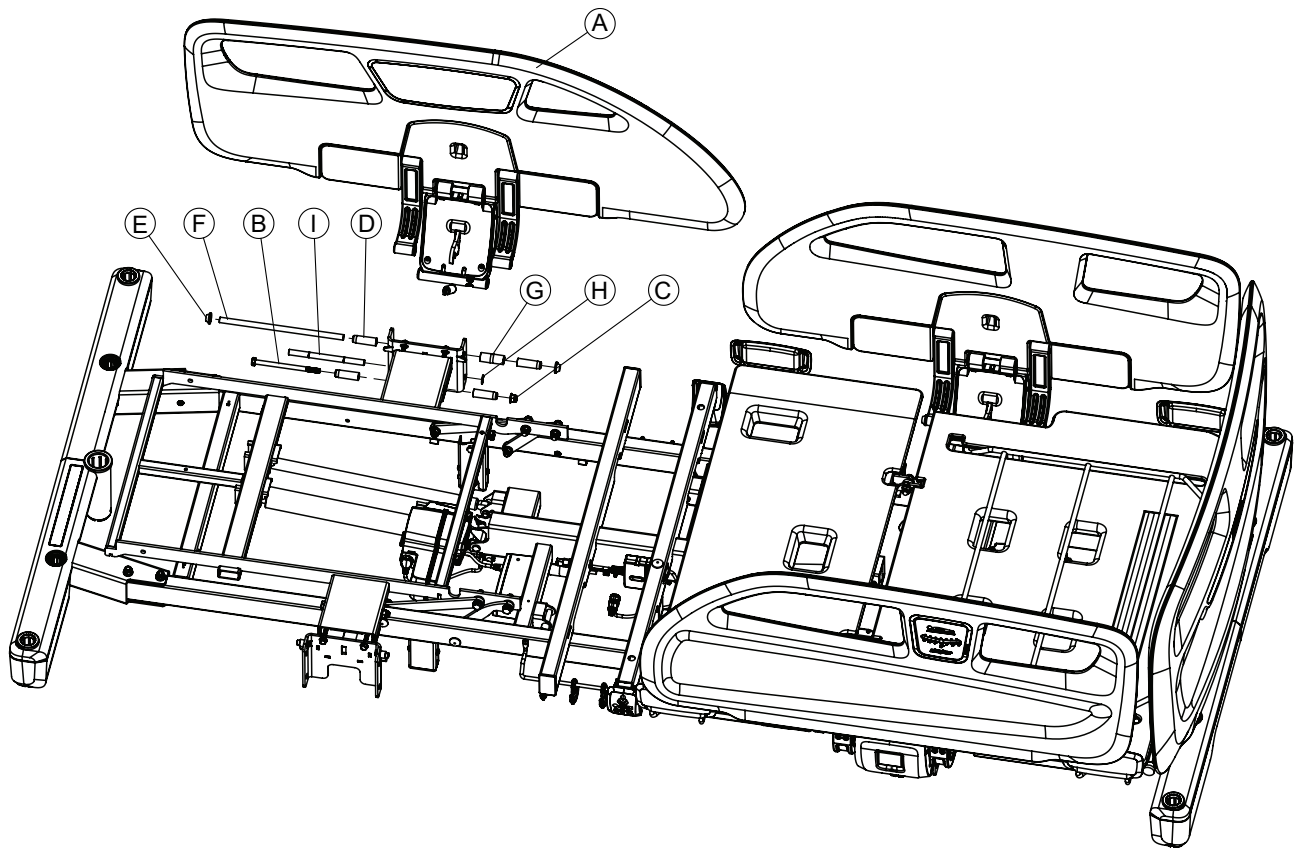


Figure 17 – Siderail head end assembly

## Siderail foot end assembly replacement

### Tools required:

- Small slotted screwdriver
- Large slotted screwdriver
- Hammer

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise the siderail to the highest height and latched position.
5. Remove the support surface.
6. Using a small slotted screwdriver, remove the e-clip (B) and pin (C) that secure the foot end siderail gas cylinder to the foot section frame. Discard the e-clip (B) and pin (C) (Figure 18).
7. Using a large slotted screwdriver and a hammer, remove and discard one of the hat-shaped segments (D) that cover the siderail pin.
8. Using one hand to support the siderail, use a large slotted screwdriver and a hammer to remove the siderail pin (E) and spacers (F, G) that secure the siderail assembly with the aluminum curved leg (A) to the litter frame. Discard pin and spacers.
9. Using a small slotted screwdriver, remove the e-clip (H) that secures the short siderail pin (I) to the siderail main mechanism. Discard the e-clip.
10. Using one hand to support the siderail, use a large slotted screwdriver and a hammer to remove the siderail pin (I) that secures the siderail assembly with the siderail main mechanism plastic part (A) to the litter frame. Discard the pin.
11. Remove and discard the siderail foot end assembly (A).
12. Reverse steps to reinstall.
13. Verify proper operation before you return the product to service.

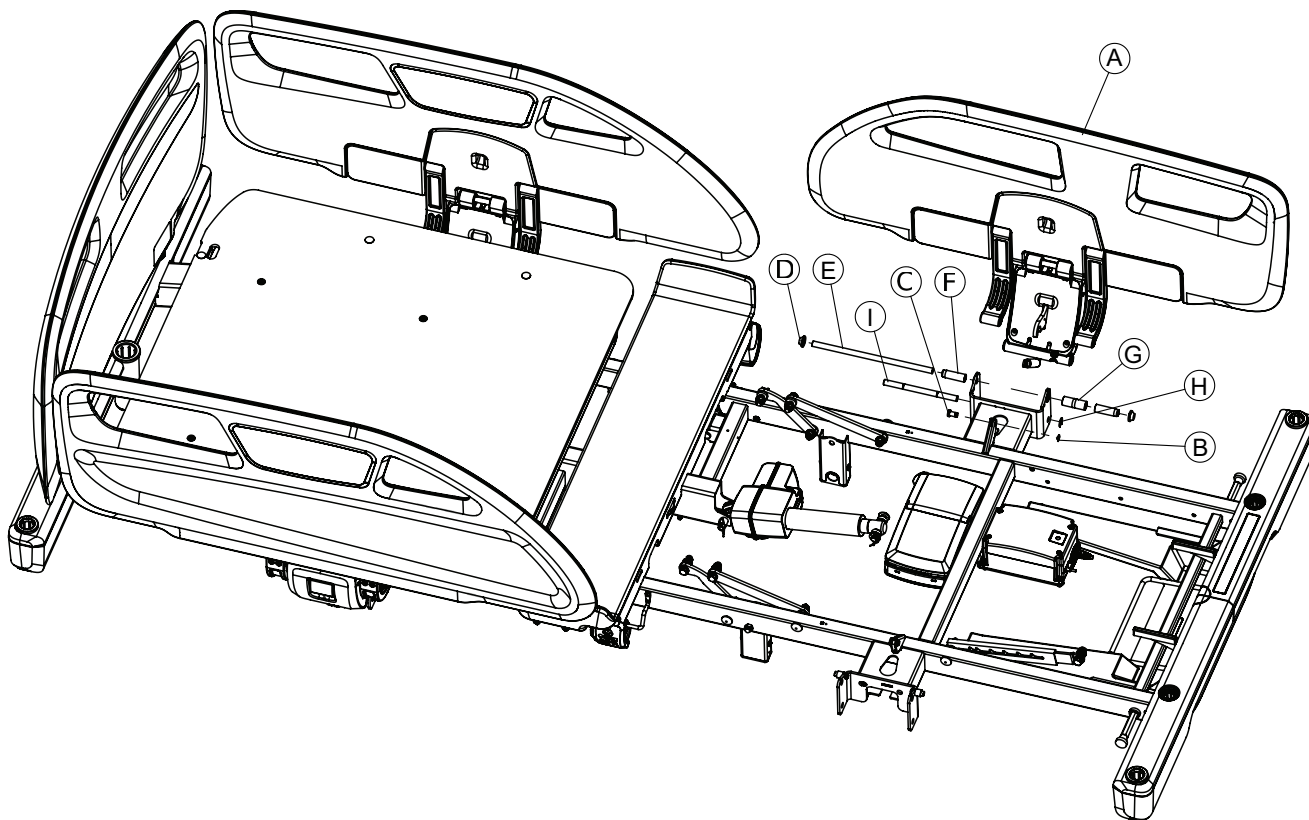


Figure 18 – Siderail foot end assembly

## Siderail gas cylinder, head end replacement

### Tools required:

- Large slotted screwdriver
- Hammer
- 3/8" drive ratchet
- 13 mm socket
- 13 mm combination wrench

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and latch the siderail in the highest height position.
5. Using a 3/8" drive ratchet and a 13 mm socket with a 13 mm combination wrench, remove the bolt (F), spacers (B), and nut (A) that secure the head end siderail gas cylinder to the Fowler backrest frame. Discard the bolt, spacers, and nut (Figure 19).
6. Using a large slotted screwdriver and a hammer, remove one of the hat-shaped segments (C) that secure the bottom of the head end siderail gas cylinder (E) to the siderail mechanism. Discard the hat-shaped segment.
7. Remove and discard the pivot pin (D) and the head end siderail gas cylinder (E).
8. Reverse steps to reinstall.
9. Verify proper operation before you return the product to service.

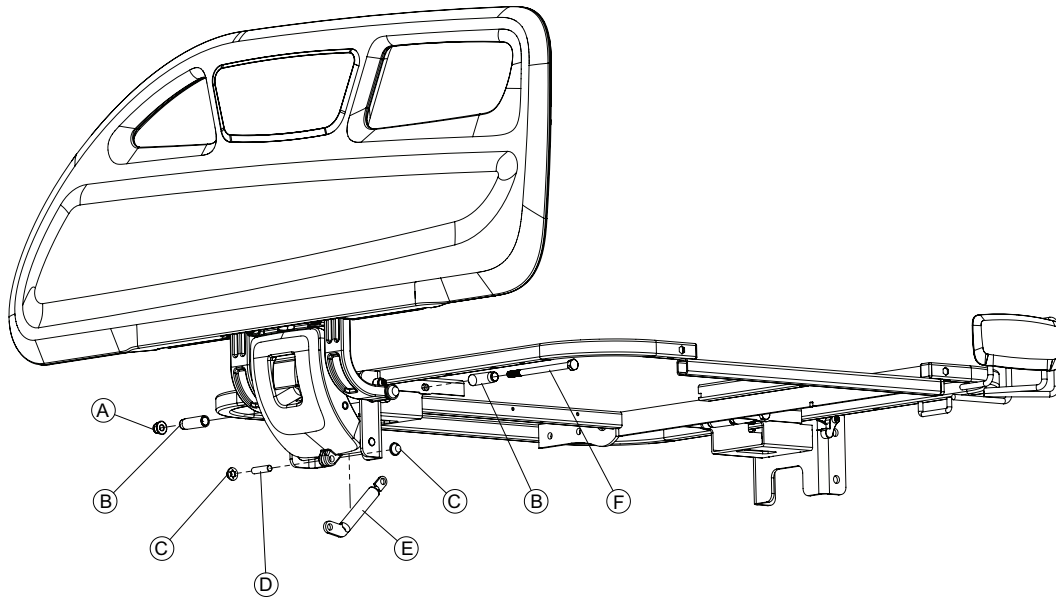


Figure 19 – Siderail gas cylinder, head left assembly

### Siderail gas cylinder, foot end replacement

#### Tools required:

- Large slotted screwdriver
- Small slotted screwdriver
- Hammer

#### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and latch the siderail in the highest height position.
5. Using a small slotted screwdriver, remove the e-clip (D) that secures the foot end siderail gas cylinder to the foot section frame. Discard the e-clip (Figure 20).
6. Remove the pin (E) that secures the foot end siderail gas cylinder to the foot section frame. Discard the pin.
7. Using a large slotted screwdriver and a hammer, remove one of the hat-shaped segments (A) that secure the bottom of the foot end siderail gas cylinder (C) to the siderail mechanism. Discard the hat-shaped segment.
8. Remove and discard the pivot pin (B) and foot end siderail gas cylinder (C).
9. Reverse steps to reinstall.
10. Verify proper operation before you return the product to service.



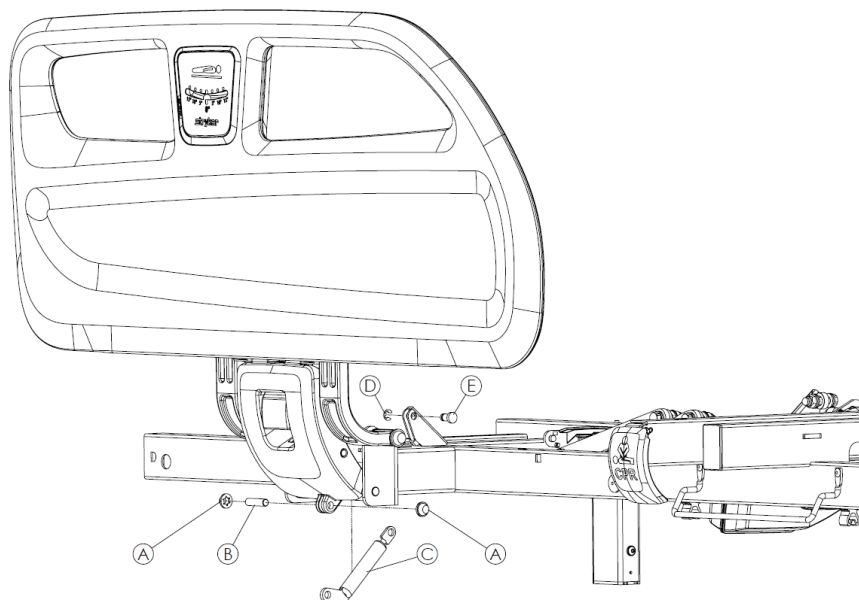


Figure 20 – Siderail gas cylinder, foot end assembly

## Lower leg section locking mechanism replacement

### Tools required:

- 3/8" drive ratchet
- 13 mm socket
- 13 mm combination wrench

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and lock the lower leg section (A) (Figure 21).

**Note** - If you cannot lock the lower leg section, support the lower leg section.

5. Using a 13 mm combination wrench, 3/8" drive ratchet, and a 13 mm socket, remove the upper bolt (C), nut (F), and washers (D, E) that secure the lower leg section locking mechanism (B) to the foot section weldment.

**Note** - The washers (D and E) are different types and materials. Note order of washer assembly for when you reinstall.

6. Using a 13 mm combination wrench, remove the bolt (G), nut (F), washer (E), and spacer (H) that secure the bottom of the lower leg section locking mechanism to the litter frame. Discard the bolt, nut, washer, and spacer.
7. Remove the lower leg section locking mechanism (B). Discard the lower leg section locking mechanism.
8. Reverse steps to reinstall.
9. Verify proper operation before you return the product to service.

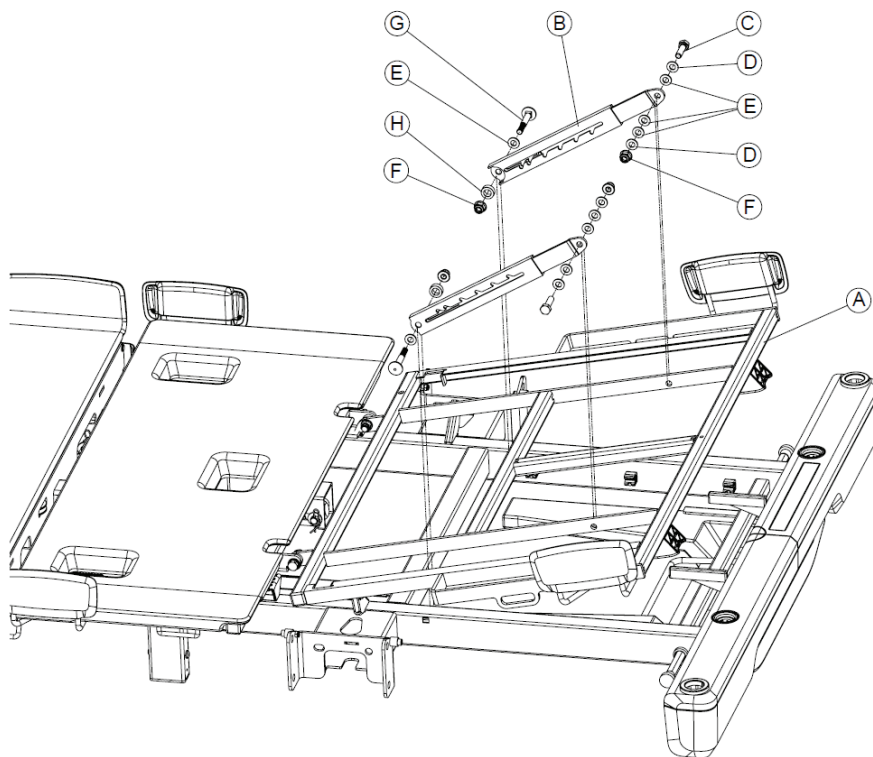


Figure 21 – Lower leg section locking mechanism

## Patient control pendant replacement

### Tools required:

- Diagonal pliers

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using diagonal pliers, cut the cable tie that secures the pendant to the bottom of the litter frame.
5. Remove the multi-junction box cover/cable holder.
6. Discard the patient control pendant.
7. Reverse steps to reinstall.
8. Verify proper operation before you return the product to service.

## Nurse control pendant replacement

### Tools required:

- Diagonal pliers

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using diagonal pliers, cut the cable tie that secures the Fowler backrest actuator cable to the wire routing channel. Discard the cable tie.
5. Remove the cable routing covers that secure the Gatch leg rest actuator cable to the litter frame.
6. Unplug the nurse control pendant cable from the junction box.
  - a. If the bed has a brake indicator, remove the nurse cable from MJB2.
  - b. If the bed does not have a brake indicator, remove nurse cable from MJB5.

7. Discard the nurse control pendant.
8. Reverse steps to reinstall.
9. Verify proper operation before you return the product to service.

## Siderail control panel, right replacement

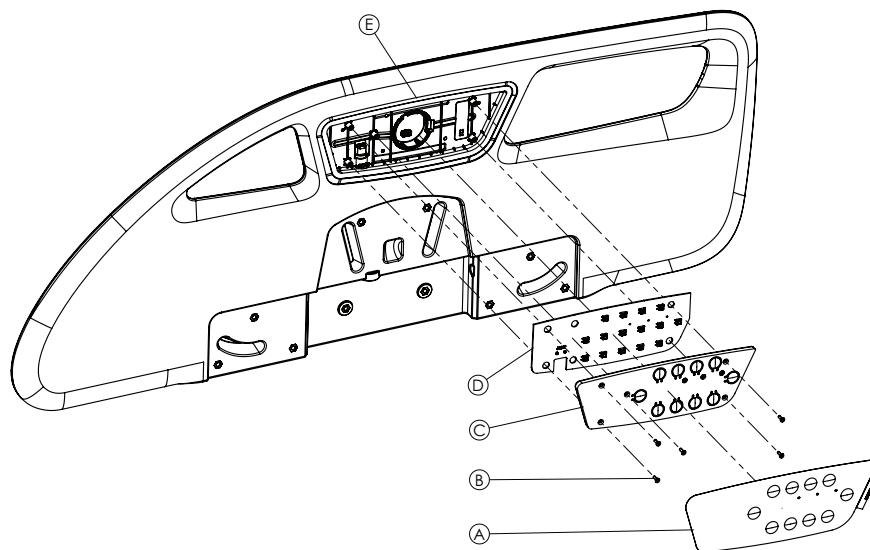
### Tools required:

- Slotted screwdriver
- M2 Allen wrench
- Hammer and pin
- Step drill or min Ø17 drill

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a slotted screwdriver, remove the foil (A) from the disassembly side (Figure 22). Discard the foil.

**Note** - When you remove the foil, the light blockers can fall out.

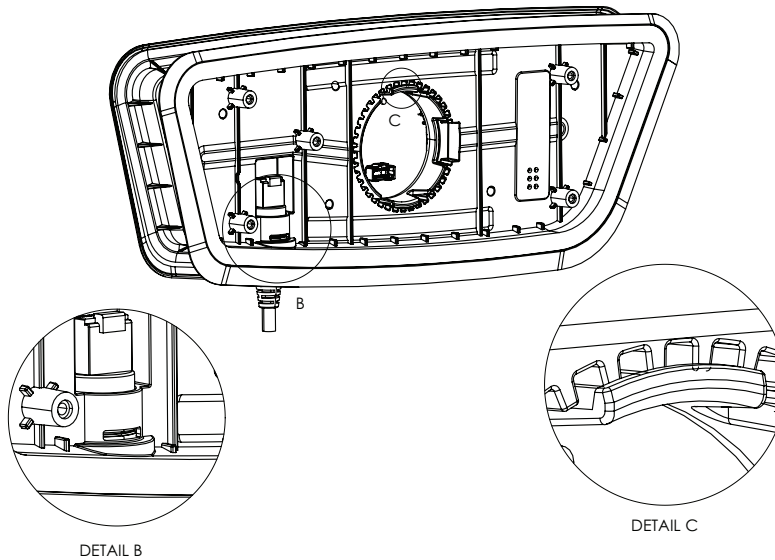


**Figure 22 – Siderail control panel assembly**

5. Using an M2 Allen wrench, remove all the screws (B) from the light guide (C). Remove the light guide.

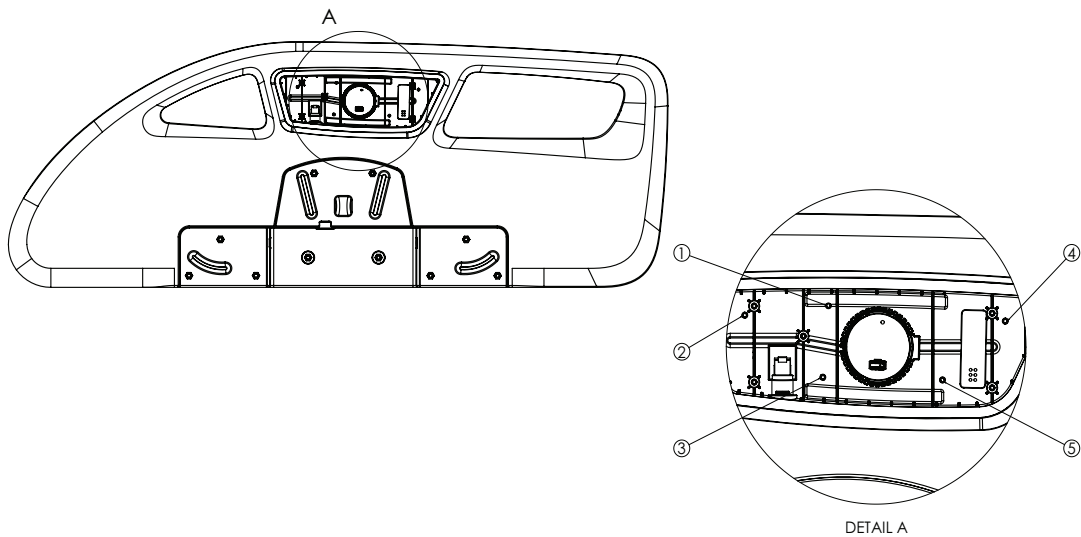
**Note** - When you remove the light guide for the right nurse control panel, the ball and ball guide can fall down.

6. Using a slotted screwdriver, push down on the RJ50 cable (Figure 23, Detail B) to gain clearance to remove the PCBA (D) (Figure 22). Press on the top side and on the O-ring. A small pulling force on the cable is beneficial.



**Figure 23 – Disconnect the PCBA cables**

7. Twist the PCBA (A) away from the locating pins. Twist the RJ50 connector out of the side panel (Figure 24).



**Figure 24 – PCBA and snaps**

8. Disconnect the RJ50 cable. Disconnect the 20P cable to remove the PCBA.
9. Using a hammer and pin, hit at the specified locations to release the five snaps (Figure 24, Detail A).
10. Using a slotted screwdriver, release the last two snaps (Figure 23, Detail C). Remove the side panel from the bed frame.
11. Using a step drill or a min Ø17 drill, drill at the punch locations (Figure 24, Detail A). Drill until the snap edges are cut.
12. Repeat step 11 for all snap locations.
13. Remove and discard the siderail control panel.
14. To reinstall, reverse steps 7-8 to reattach the pendants. Place the pendant remotes in the correct position and make sure that they are seated.
15. Verify proper operation before you return the product to service.

### Siderail control panel, left replacement

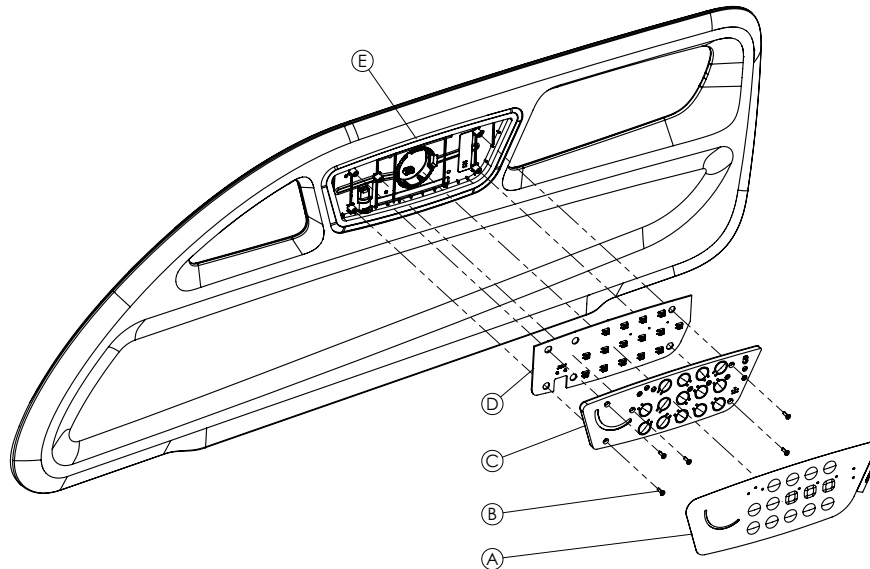
#### Tools required:

- Slotted screwdriver
- M2 Allen wrench
- Hammer and pin
- Step drill or min Ø17 drill

**Procedure:**

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a slotted screwdriver, remove the foil (A) from the disassembly side (Figure 25). Discard the foil.

**Note** - When you remove the foil, the light blockers can fall out.

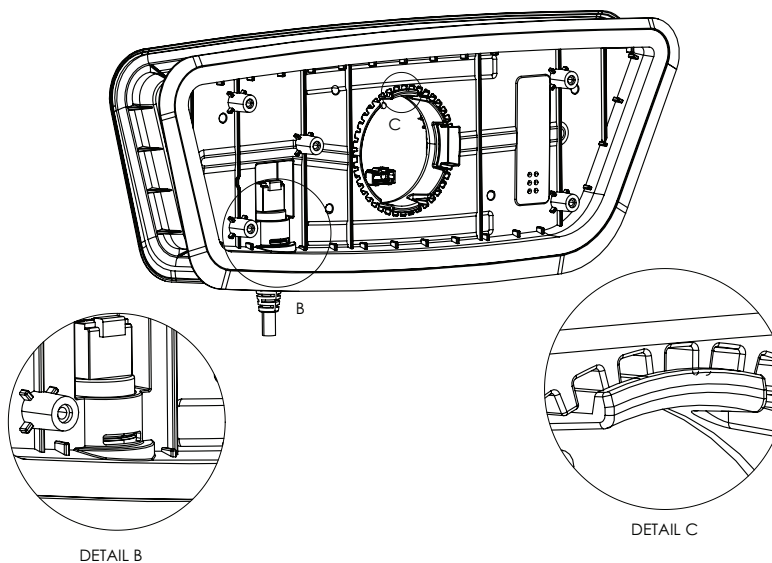


**Figure 25 – Siderail control panel assembly**

5. Using an M2 Allen wrench, remove all the screws (B) from the light guide (C). Remove the light guide.

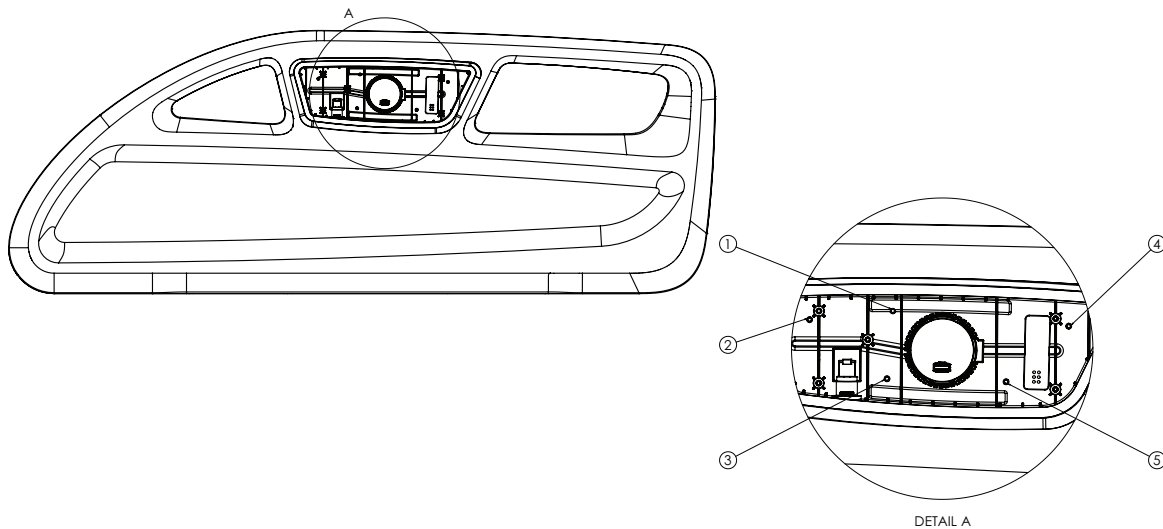
**Note** - When you remove the light guide for the left nurse control panel, the ball and ball guide can fall down.

6. Using a slotted screwdriver, push down on the RJ50 cable (Figure 26, Detail B) to gain clearance to remove the PCBA (D) (Figure 25). Press on the top side and on the O-ring. A small pulling force on the cable is beneficial.



**Figure 26 – Disconnect the PCBA cables**

7. Twist the PCBA (A) away from the locating pins. Twist the RJ50 connector out of the side panel (Figure 27).



**Figure 27 – PCBA and snaps**

8. Disconnect the RJ50 cable. Disconnect the 20P cable to remove the PCBA.
9. Using a hammer and pin, hit at the specified locations to release the five snaps (Figure 27, Detail A).
10. Using a slotted screwdriver, release the last two snaps (Figure 26, Detail C). Remove the side panel from the bed frame.
11. Using a step drill or a min Ø17 drill, drill at the punch locations (Figure 27, Detail A). Drill until the snap edges are cut.
12. Repeat step 11 for all snap locations.
13. Remove and discard the siderail control panel.
14. To reinstall, reverse steps 7-8 to reattach the pendants. Place the pendant remotes in the correct position and make sure that they are seated.
15. Verify proper operation before you return the product to service.

## Control box replacement

### Tools required:

- #2 Phillips screwdriver
- Small slotted screwdriver

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and lock the lower leg section in the highest height position.
5. Remove the cable routing cover that secures the actuator cable from the control box. Save the cable routing cover.
6. Unplug the actuator cable from the control box.
7. Using a small slotted screwdriver, push in on the power cord lock and pull out on the power cord.
8. Disconnect the power cord from the control box.
9. Push down on the tab located on the connection plastic (C). Slide the control box to the patient right side. The control box comes off (Figure 28).
10. Remove and discard the control box.
11. To replace the connection plastic (C), use a #2 Phillips screwdriver to remove the three screws (B) located on the plastic.
12. Reverse steps to reinstall.
13. Verify proper operation before you return the product to service.

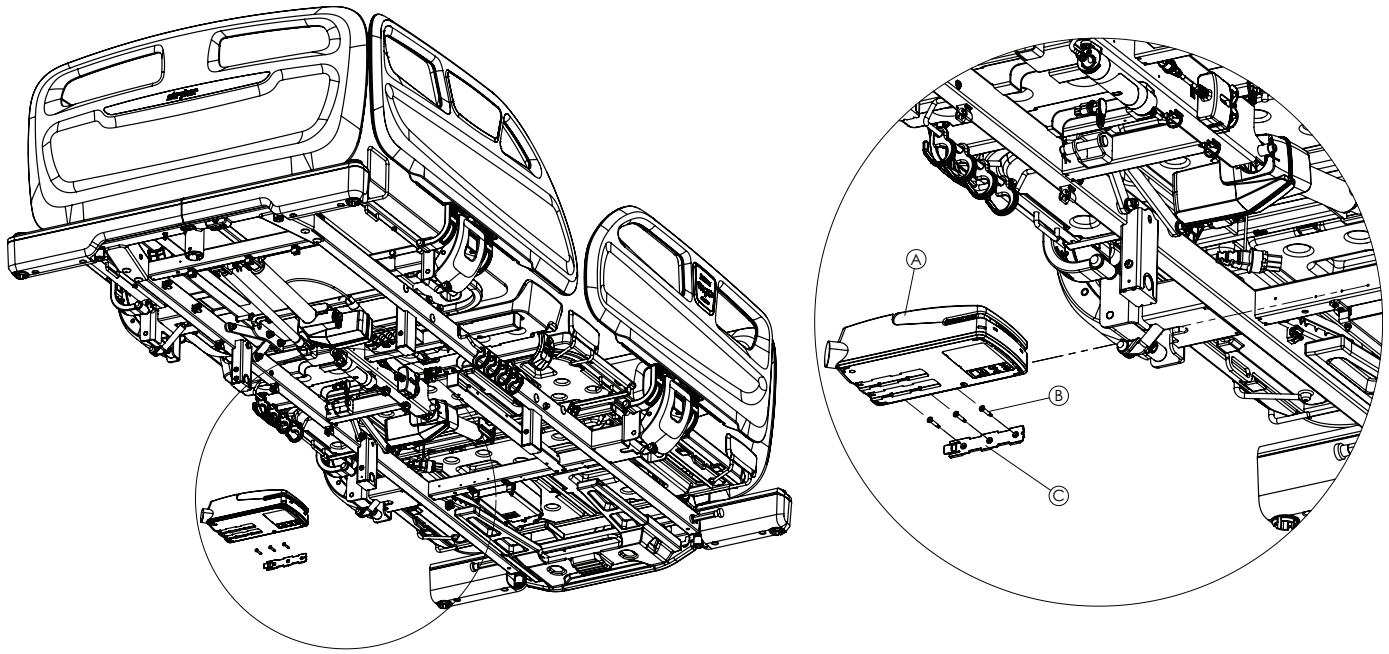


Figure 28 – Control box

## Battery replacement

### Tools required:

- Small slotted screwdriver
- M4 Allen wrench
- 7 mm combination wrench

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and lock the lower leg section in the highest height position.
5. Using a small slotted screwdriver, push in on the battery cable lock and pull out on the battery cable.
6. Using an M4 Allen wrench and a 7 mm combination wrench, remove the four bolts (B) and nuts (C) that secure the battery to the battery holder metals (Figure 29). Discard the bolts and nuts.
7. Remove the battery (A). Dispose of the battery according to local laws and procedures.
8. Reverse steps to reinstall.
9. Verify proper operation before you return the product to service.

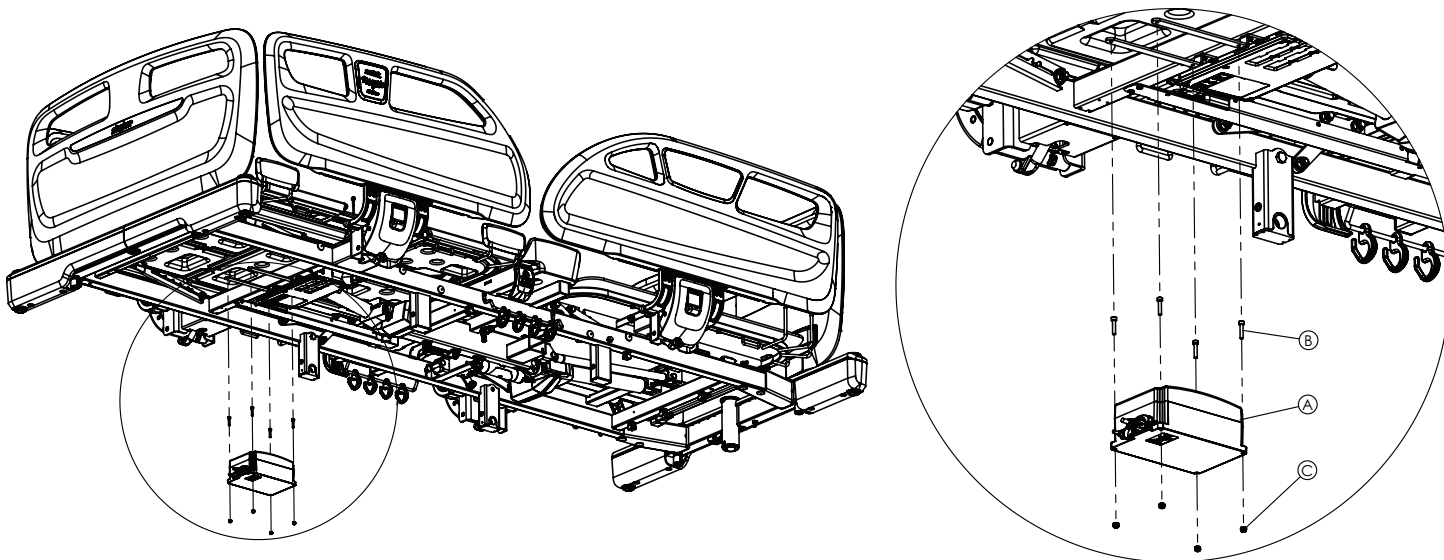


Figure 29 – Battery

## Power cord replacement

### Tools required:

- #2 Phillips screwdriver

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Using a #2 Phillips screwdriver, remove the two screws (A) that secure the plastic cable holder (B) to the litter frame (Figure 30). Discard the screws.
5. Remove the external power cord (C) from the internal power cord. Discard the external power cord.
6. Reverse steps to reinstall.
7. Verify proper operation before you return the product to service.



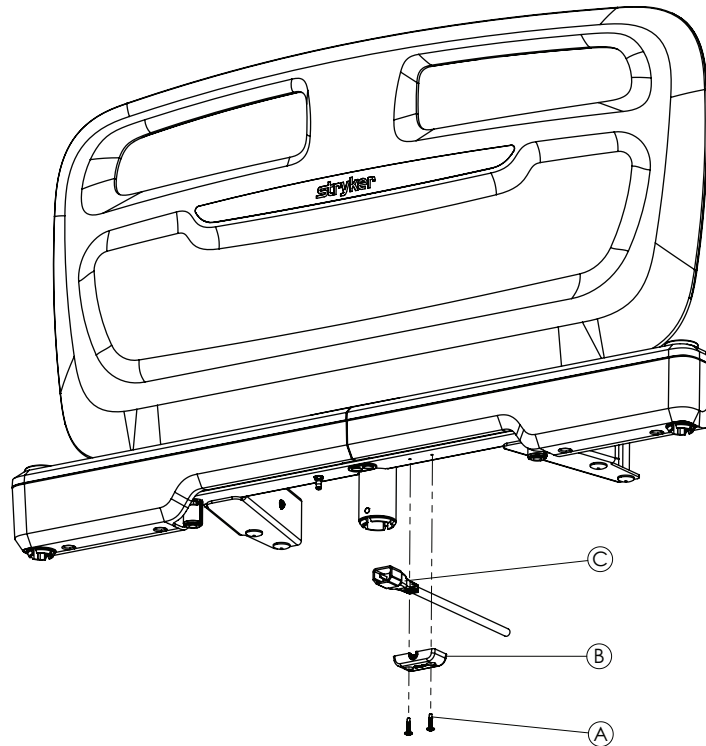


Figure 30 – Power cord assembly

## Siderail hoop, head end replacement

### Tools required:

- Diagonal pliers
- Small slotted screwdriver
- #2 Phillips screwdriver

### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and latch the siderail in the highest height position.
5. Remove the support surface.
6. Unplug the cable that connects the siderail control panel to the control box.
7. Using diagonal pliers, cut the cable tie that secures the siderail cables to the bottom of the litter frame.

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**CAUTION** - During siderail hoop replacement, pay attention to the exact path of the siderail cable during assembly. Assemble the new part in the same way.

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8. See *Siderail head end assembly replacement* (page 31) to detach the siderail from the bed.
9. Using a small slotted screwdriver, remove the plastic covers (A, B, C) that cover the bolt (P) and washers (Q) on the siderail (Figure 31). Save the covers.
10. Using a #2 Phillips screwdriver, remove the screws (D) that attach the main mechanism plastic cover (E) to main mechanism (O). Save the screws and plastic cover.
11. Using a small slotted screwdriver, remove the e-clip (F) that secures the pin (G) that connects the siderail lock laser sheet (H) to the main mechanism plastic. Remove and save the e-clip, pin, siderail lock laser sheet, and latching mechanism spring (I).
12. Using a small slotted screwdriver, remove the e-clip (J) that secures the pin (K) that connects the latching mechanism handle (L) to the main mechanism plastic. Remove and save the e-clip, pin, and latching mechanism handle.
13. Using a small slotted screwdriver, remove the e-clip (M) that secures the pin (N) to the siderail main mechanism. Remove and save the e-clip and pin.
14. Remove the siderail connection cable from the main mechanism. Save the main mechanism (O).
15. Using a #2 Phillips screwdriver, remove the bolts (P) and washers (Q) that attach the siderail cover sheet (T) to the siderail assembly (U). Save the bolts and washers.

16. Remove the pin that connects the aluminum curved legs (S) to the siderail cover sheet (U). Save the pin.
17. Remove and discard the siderail assembly (U).
18. Reverse steps to reinstall.
19. Verify proper operation before you return the product to service.

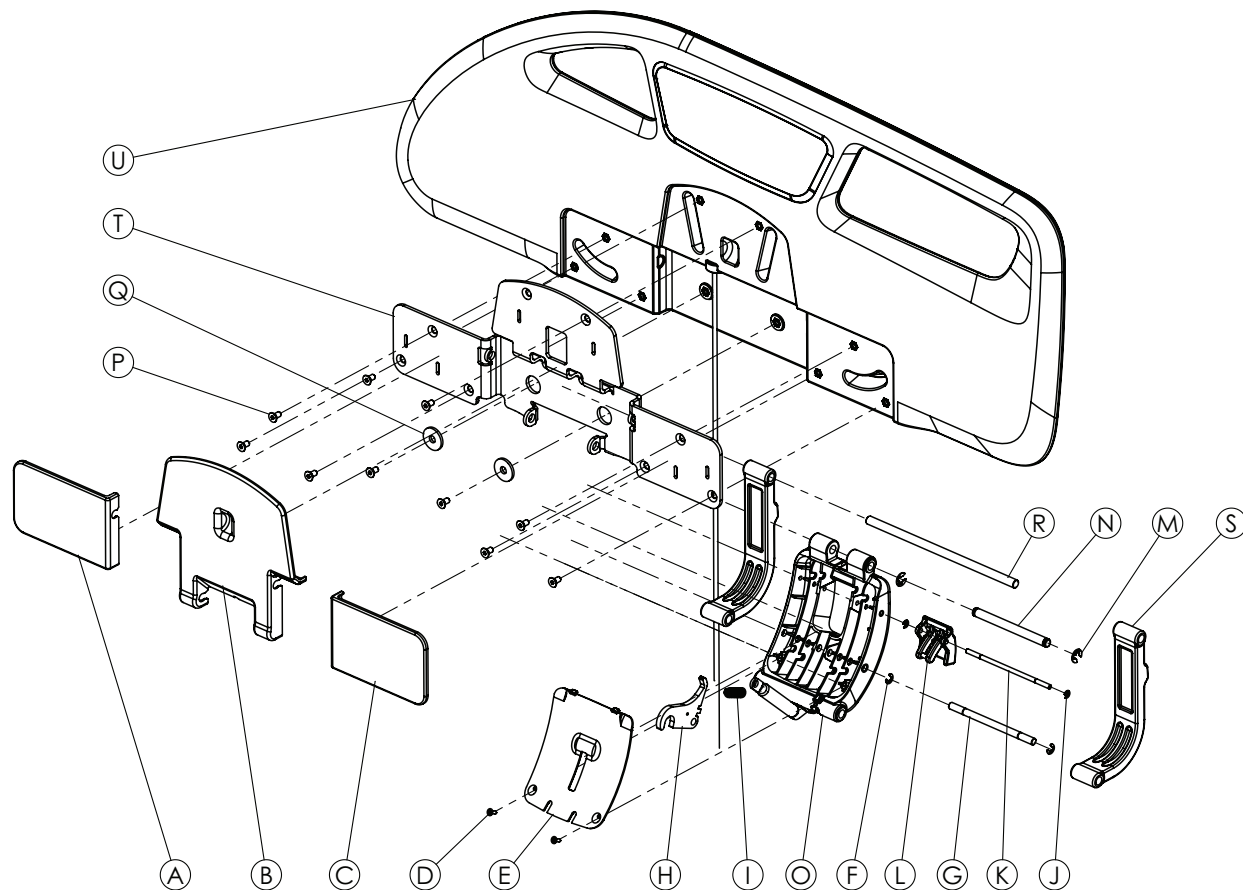


Figure 31 – Siderail hoop, head end assembly

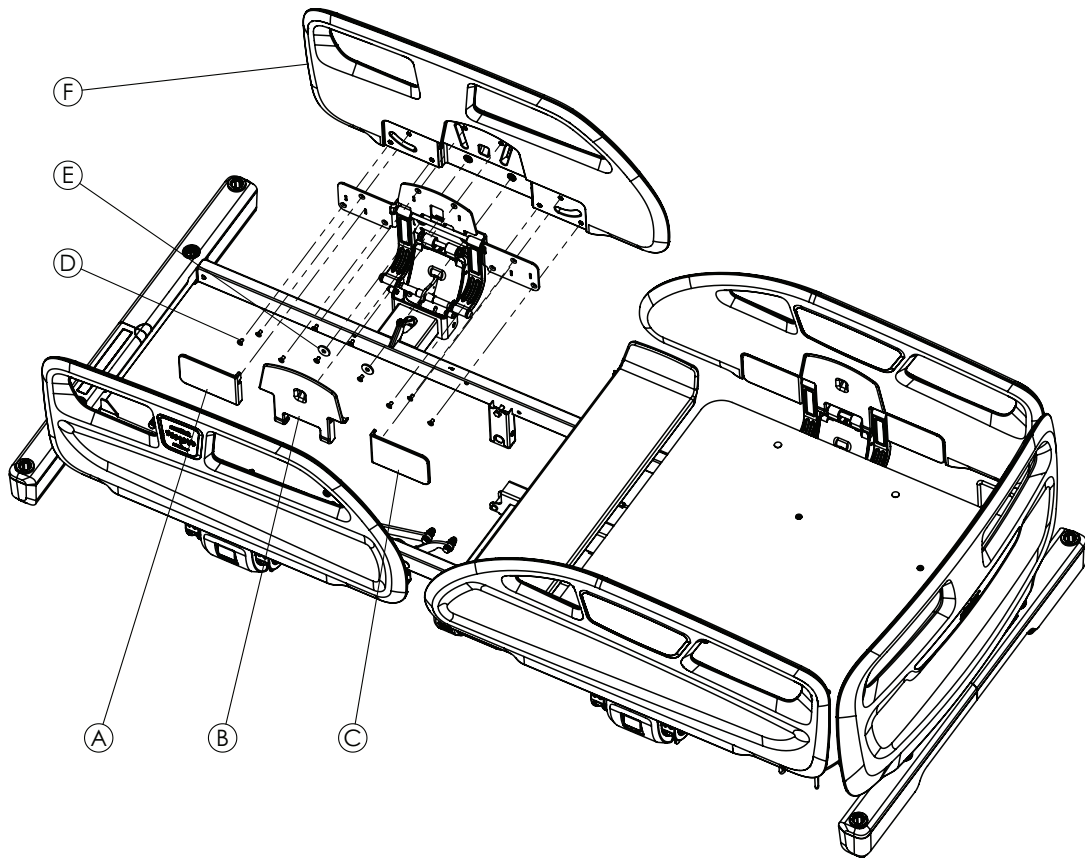
## Siderail hoop, foot end replacement

### Tools required:

- #2 Phillips screwdriver
- Small slotted screwdriver

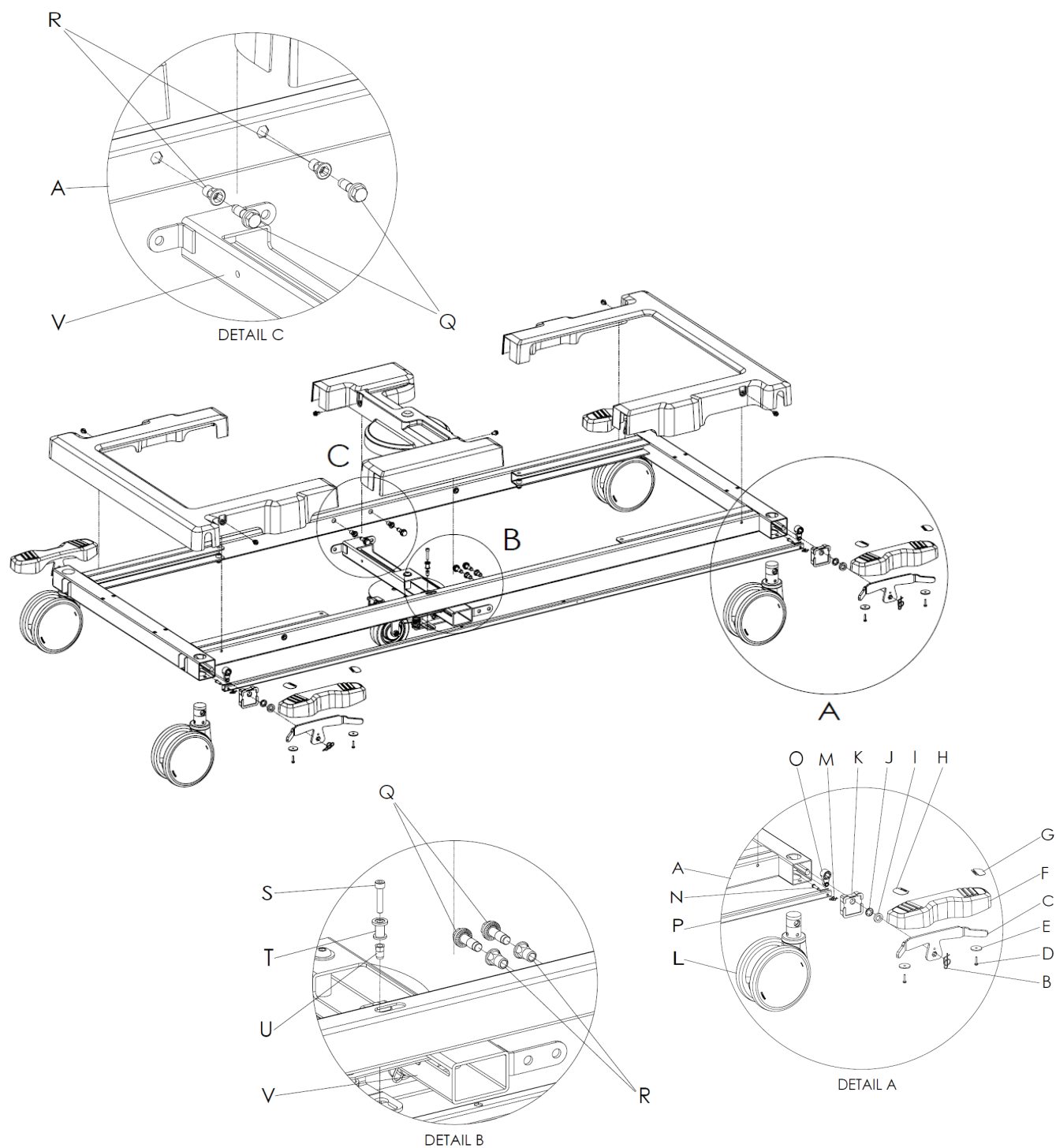
### Procedure:

1. Apply the brakes.
2. Raise the product to the highest height position.
3. Power off the bed and unplug the power cord from the wall outlet.
4. Raise and latch the siderail in the highest height position.
5. Remove the support surface.
6. Using a small slotted screwdriver, remove the plastic covers (A, B, C) that cover the bolt (D) and washers (E) on the siderail (Figure 32). Save the covers.
7. Using a #2 Phillips screwdriver, remove the bolts (D) and washers (E) that attach the siderail cover sheet to the siderail assembly (F). Save the bolts and washers.
8. Remove and discard the siderail assembly (F).
9. Reverse steps to reinstall.
10. Verify proper operation before you return the product to service.



**Figure 32 – Siderail hoop, foot end assembly**

Brake system

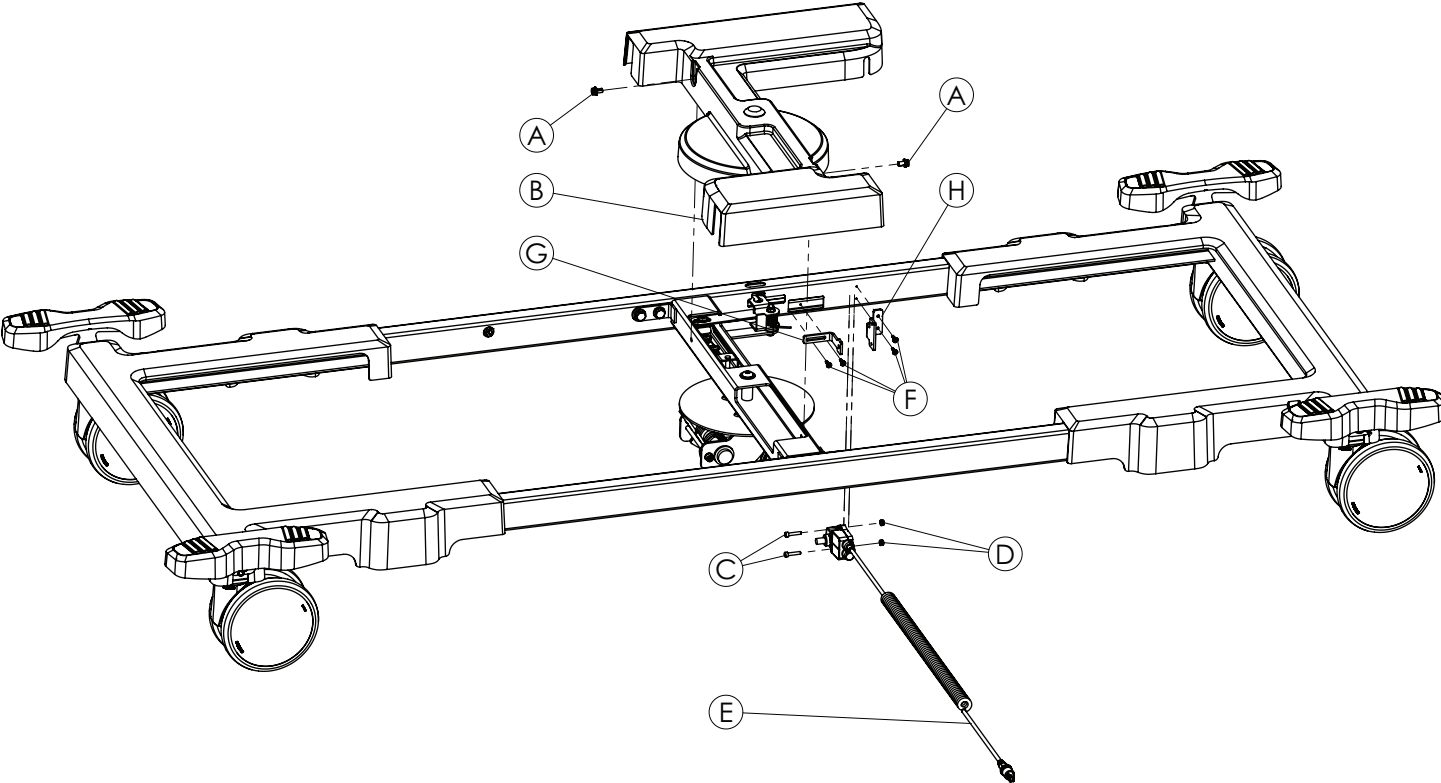


Item	Number	Name	Quantity	Torque value (Nm)
A	YM-850-104-BY	Base frame weldment, Phoenix	1	
B	HM-11-34	Ø13 rue clip	4	
C	YM-850-105-GL	Brake-steer pedal support, weldment	4	
D	HM-06-86	Ø4 x 16 mm YSB plastic screw	8	Fully seated
E	HM-07-09	Special pedal washer	8	
F	YM-850-238	Pedal, brake/steer, plastic	4	

Item	Number	Name	Quantity	Torque value (Nm)
G	HM-20-1187	Foot pedal red label, Phoenix	4	
H	HM-20-1188	Foot pedal green label, Phoenix	4	
I	YM-HM-02-71	12 mm thick PLS washer DMR071	4	
J	HM-11-10	11 mm snap ring (lipper) KMS starlock push on BV/6706 fastener	4	
K	YM-850-252	50*50 capped caster tube PLS cap	4	
L	HM-01-91	Steinco total lock caster	3	
M	HM-11-33	Ø6 rue clip	4	
N	HM-12-098	Ø5 clevis pin, drilled	4	
O	HM-12-169	Brake-steer change lever	4	
P	YM-850-239-BY	Brake-steer transmission tube	1	
Q	HM-05-057	M8 x 25 hexagon head flange adhesive applied bolt	4	16-18
R	HM-08-43	M8 rivet nuts SS half - hex. flange head	4	
S	HM-05-061	M5*25 imbus bolt	1	3-5
T	YM-850-201	Fifth wheel transfer plastic	1	
U	HM-08-16	M5 rivet nuts SS half - hex. reduced head	1	
V	YM-850-004	Fifth wheel, assembly, Phoenix	1	

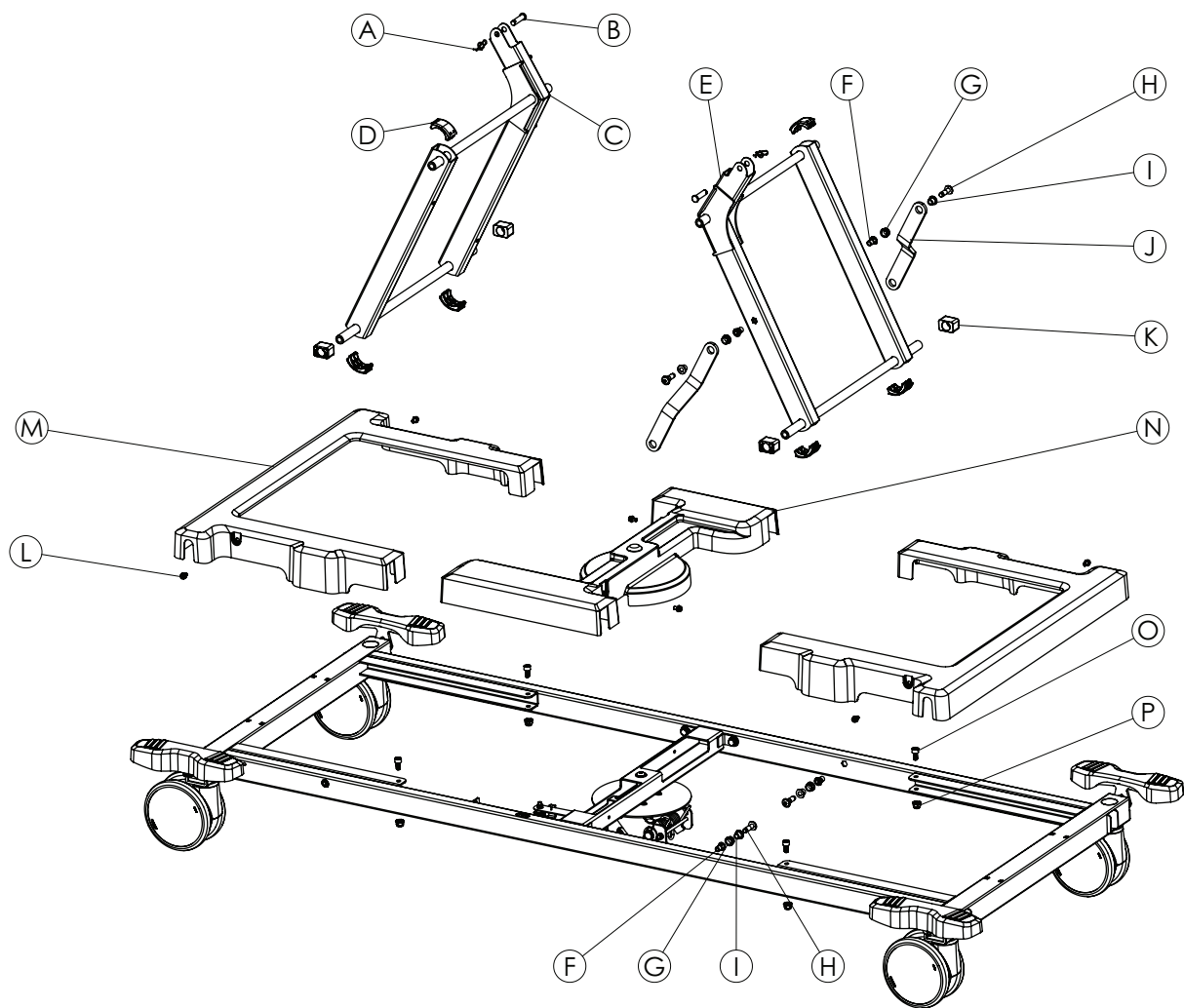
**Note** - Make sure that the product is clean and dry before you affix the label. See the **ProCeed** Operations/Maintenance Manual for cleaning instructions.

Brake alarm



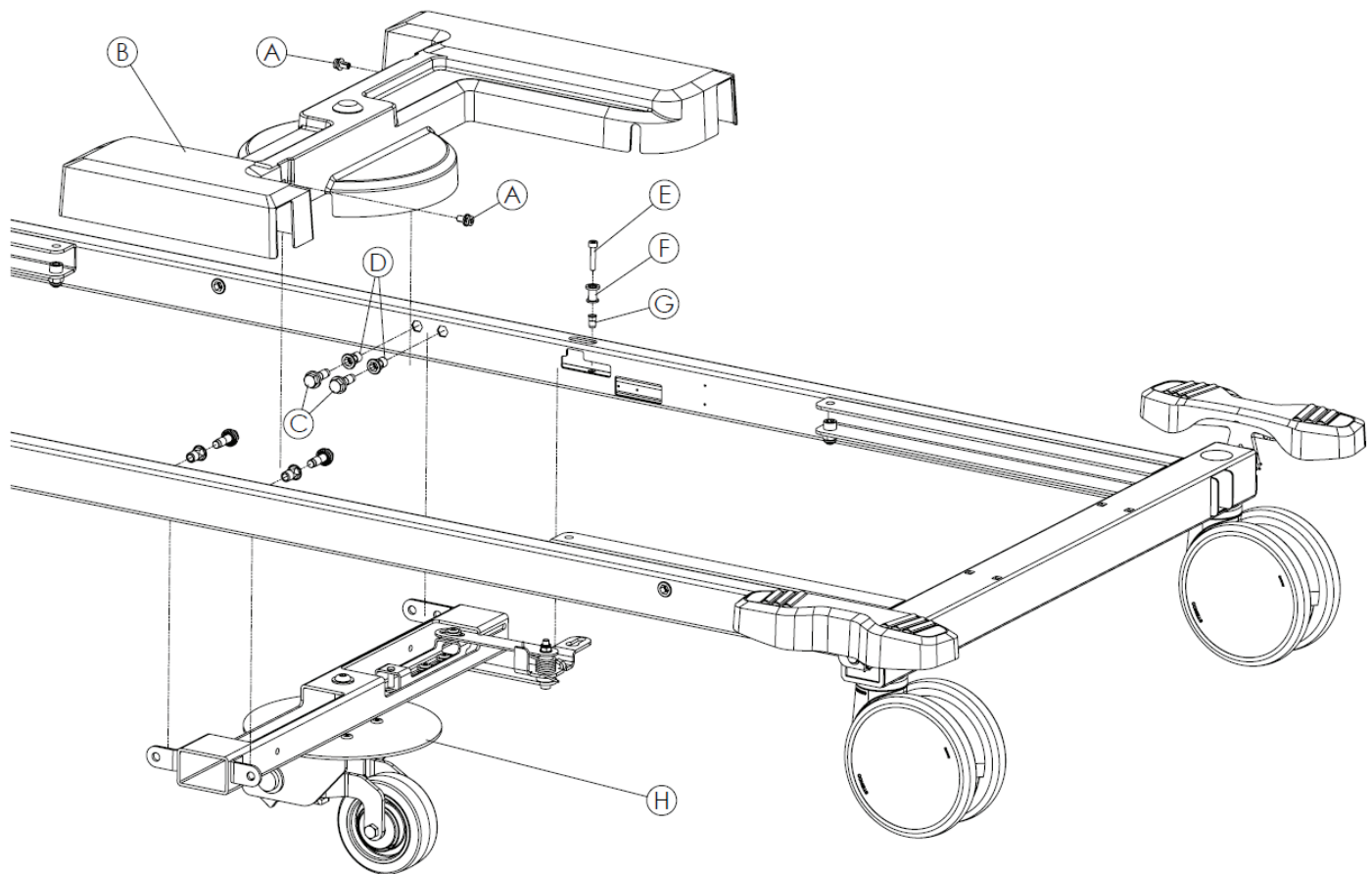
Item	Number	Name	Quantity	Torque value (Nm)
A	HM-02-139	Ø6 plastic rivet Torx head	2	
B	HM-02-289	Fifth wheel hood	1	
C	HM-06-127	M4*20 imbus head Allen bolt	2	1.6-1.8
D	HM-08-19	M4 fiber nut	2	
E	HM-17-503	Linak brake alarm switch (openbus)	1	
F	HM-06-02	Curved head screwdriver star channel (Ø3.9 x 12)	4	Fully seated
G	YM-850-250-BY	Brake alarm moving sheet	1	
H	YM-850-249-BY	Brake alarm fixed sheet	1	

## Base and leg assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	HM-11-31	Ø10 rue clip	2	
B	HM-12-FTR011	Ø14 x Ø10 x 41 mm pin	2	
C	YM-850-101-BY	Main mechanism, weldment, Phoenix	1	
D	YM-850-216	Main mechanism, tube cap, Phoenix	6	
E	YM-850-100-BY	Main mechanism holed, weldment, Phoenix	1	
F	HM-08-43	M8 rivet nuts SS half - hex. flange head	4	
G	YM-850-243	Balance sheet bearing bush, Phoenix	4	
H	HM-05-002	THMS, M8X30	4	10-12
I	YM-850-246	Balance arm flanged bush, Phoenix	4	
J	YM-850-220-BY	Balance sheet, Phoenix	2	
K	YM-850-217	Main mechanism, slide plastic, Phoenix	4	
L	HM-02-139	Ø6 plastic rivet Torx head	6	
M	HM-02-290	Hood, base frame	2	
N	HM-02-289	Hood, fifth wheel	1	
O	HM-05-174	M8x16 hex socket head bolt DIN912 8.8 galvanized	2	16-18
P	HM-08-44	Nut DIN 6926-M8x1.25	2	

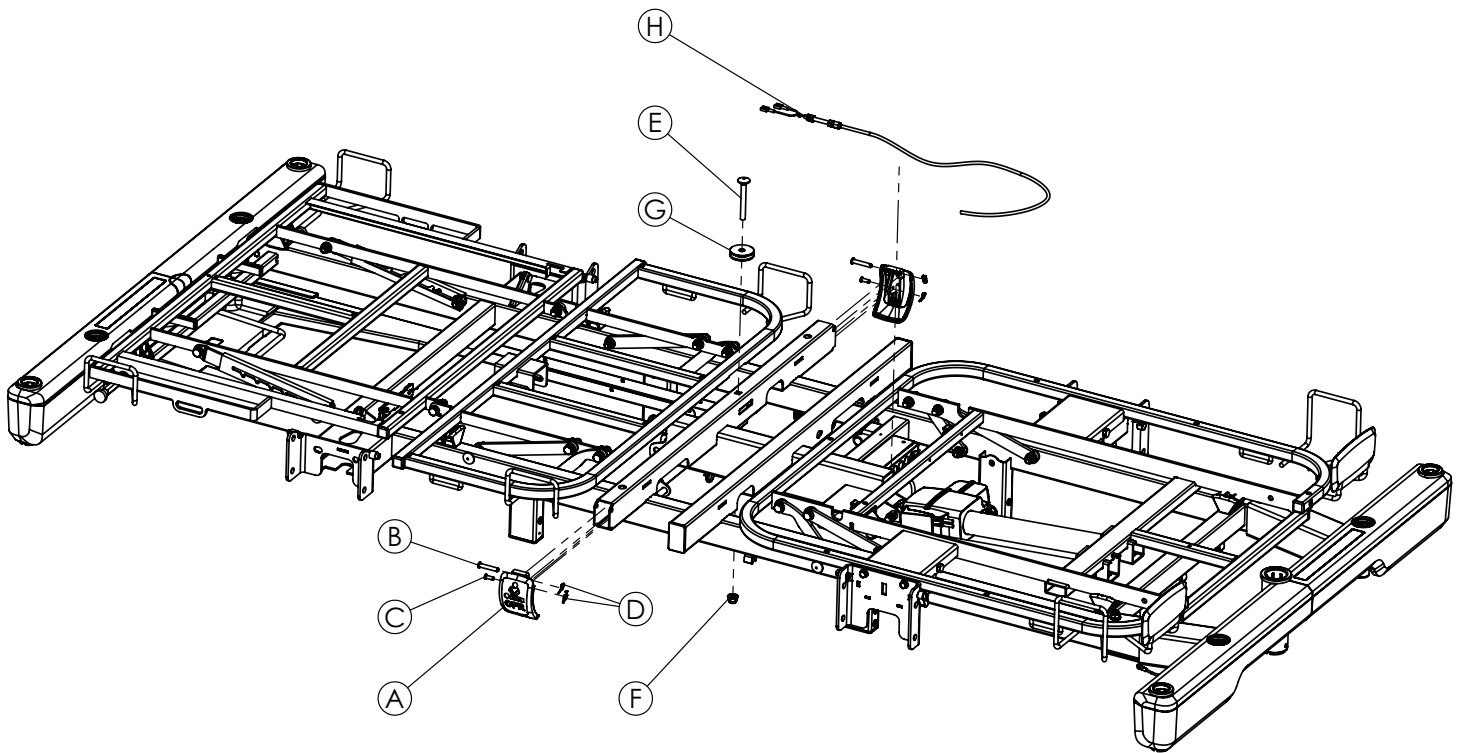
## Base and leg assembly with fifth wheel



Item	Number	Name	Quantity	Torque value (Nm)
A	HM-02-139	Ø6 plastic rivet Torx head	2	
B	HM-02-289	Hood, fifth wheel	1	
C	HM-05-057	M8x25 hexagon head flange adhesive applied bolt	4	16-18
D	HM-08-43	M8 rivet nuts SS half - hex. flange head	4	
E	HM-05-061	M5*25 imbus bolt	1	3-5
F	YM-850-201	Fifth wheel transfer plastic	1	
G	HM-08-16	M5 rivet nuts SS half - hex. reduced head	1	
H	YM-850-004	Fifth wheel, assembly, Phoenix	1	

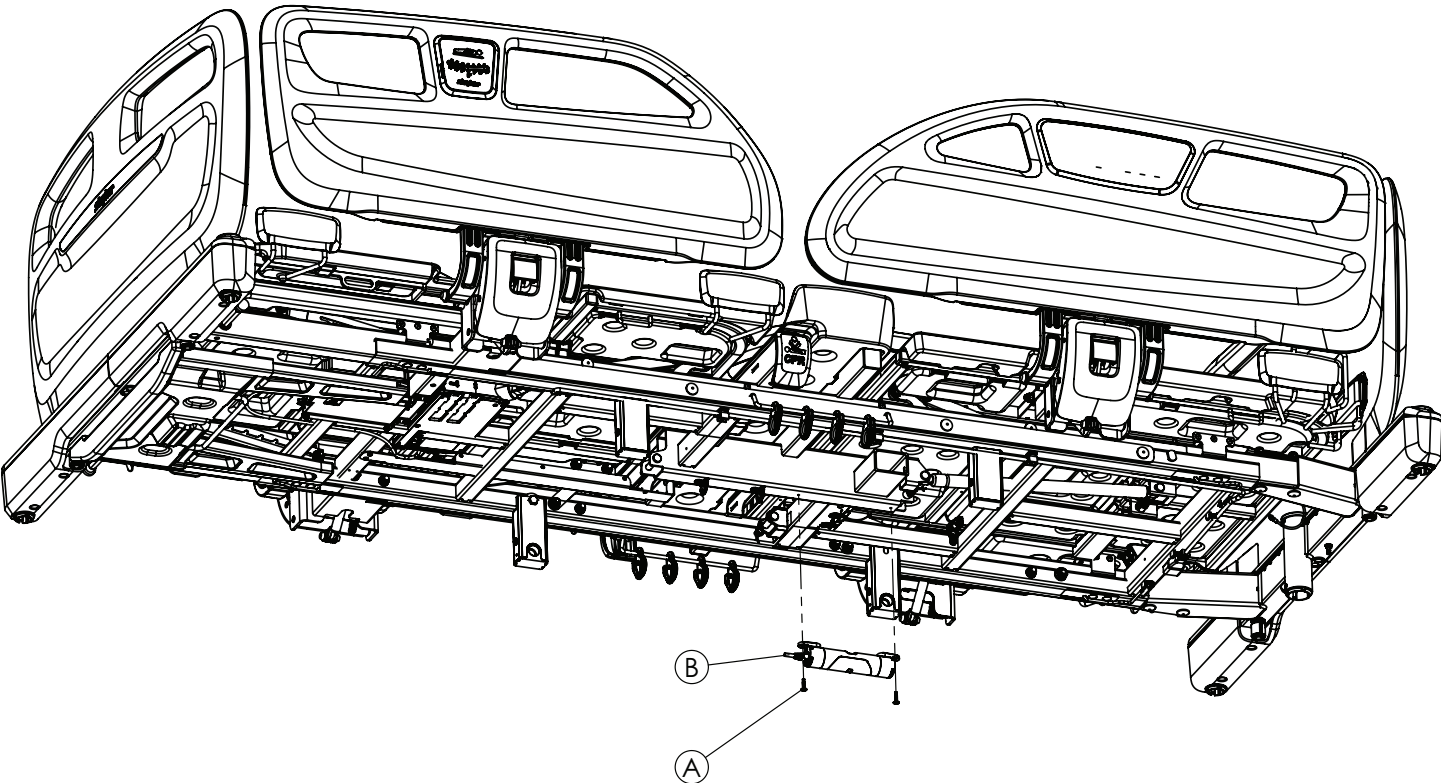


## CPR mechanism



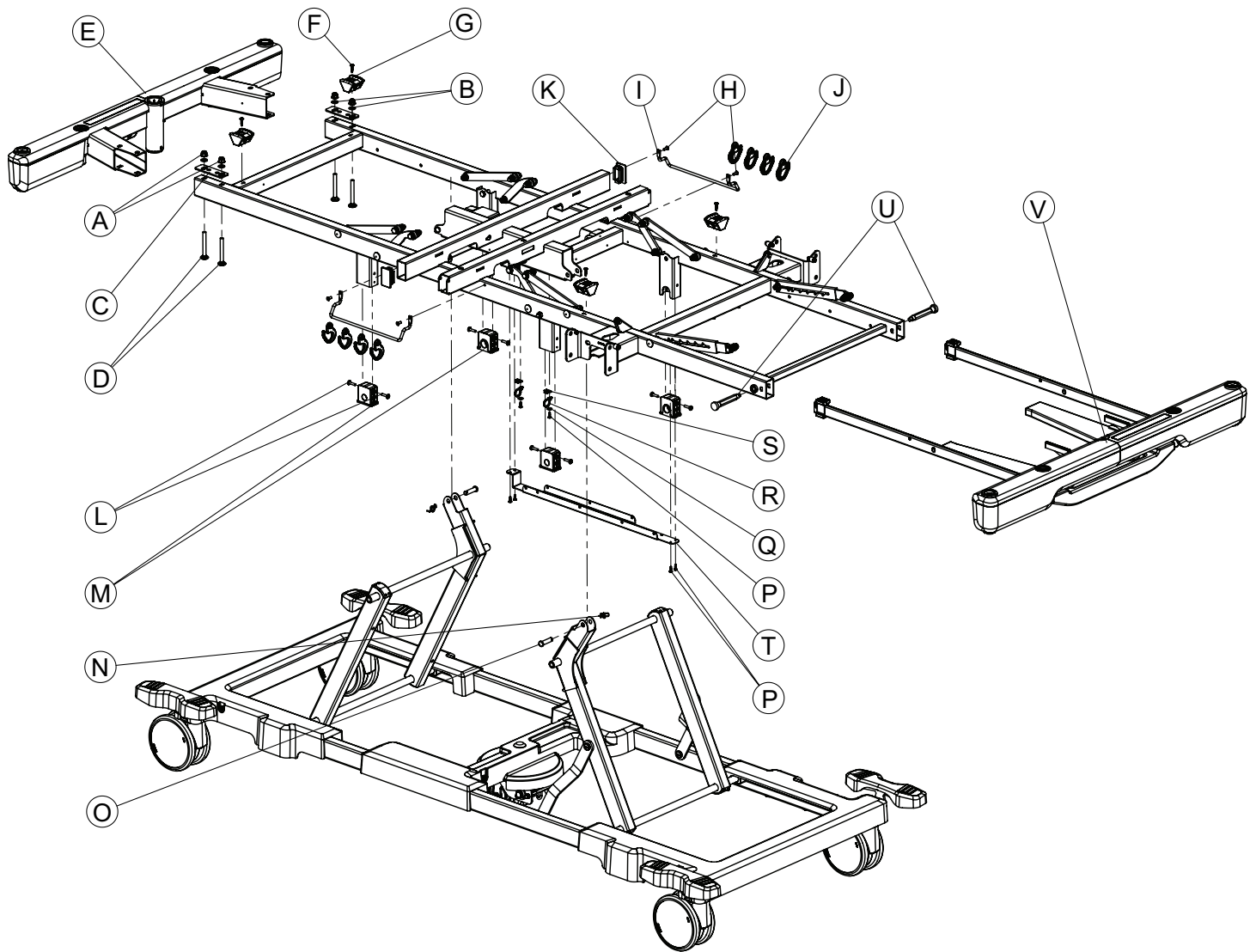
Item	Number	Name	Quantity	Torque value (Nm)
A	HM-02-034	CPR release handle	2	
B	HM-12-189	CPR handle, PIM	2	
C	HM-12-191	Ø5 x 14 clevis pin, drilled	2	
D	HM-11-33	Ø6 rue clip	4	
E	HM-05-170	Bolt din 603-M8 x 70 mm-8.8	1	8-10
F	HM-08-44	Nut din 6926-M8 x 1.25	1	
G	YM-851-249	CPR roller	1	
H	HM-20-016	Backrest mechanical CPR release wire	1	

Under bed light



Item	Number	Name	Quantity	Torque value (Nm)
A	HM-06-121	4,2*19 mm self tapping screw	2	Fully seated
B	HM-17-297	Under bed light UBL2	1	

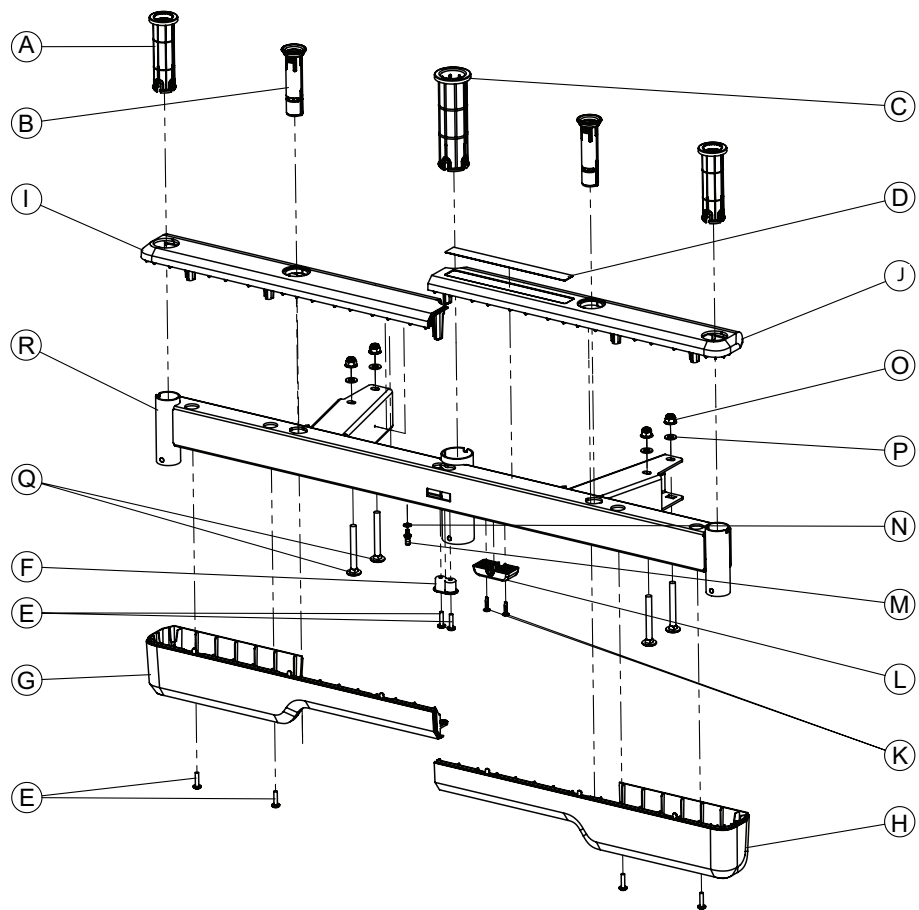
## Litter/frame assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	HM-08-44	Nut DIN 6926-M8x1.25	4	8-10
B	HM-02-469	Plastic washer, Ø8X1.6 mm	4	
C	YM-851-288	3 mm HRP sheet metal	2	
D	HM-05-170	Bolt DIN 603-M8X70MM-8.8	4	
E	YM-851-035	Demounted headboard, assembly, Phoenix	1	
F	HM-06-121	4,2*19 mm self tapping screw	4	Fully seated
G	YM-851-210	Fowler-thigh support stopper	4	
H	HM-09-36	Dome head pop rivet, 5 x 12 steel	4	
I	YM-851-317-GL	Foley bag rack	2	
J	YM-851-372	Accessory hanger hook	8	
K	YM-HM-02-34	30 x 50 x 2 mm profile plug	2	
L	HM-06-119	EJOT delta PT 5 x 20 SS plastic screw	8	Fully seated
M	YM-851-244	Main mechanism connection plastic	4	
N	HM-11-31	Ø10 rue clip	2	
O	HM-12-FTR011	Ø14 x Ø10 x 41 mm pin	2	

Item	Number	Name	Quantity	Torque value (Nm)
P	HM-06-02	Bolt curved head screwdriver star channel (Ø3.9 x 12)	2	Fully seated
Q	HM-07-22	M6 steel washer (small)	2	
R	HM-16-03	Ø25 clips (UB250C-N 245x4,6 cable connector)	2	
S	HM-22-60	VK1 screw hook	2	
T	YM-851-306-BY	Cable channel, Phoenix	1	
U	HM-20-840	Elesa Ganter extension locking mechanism	2	Fully seated
V	YM-851-015	Foot extension, assembly, Phoenix	1	

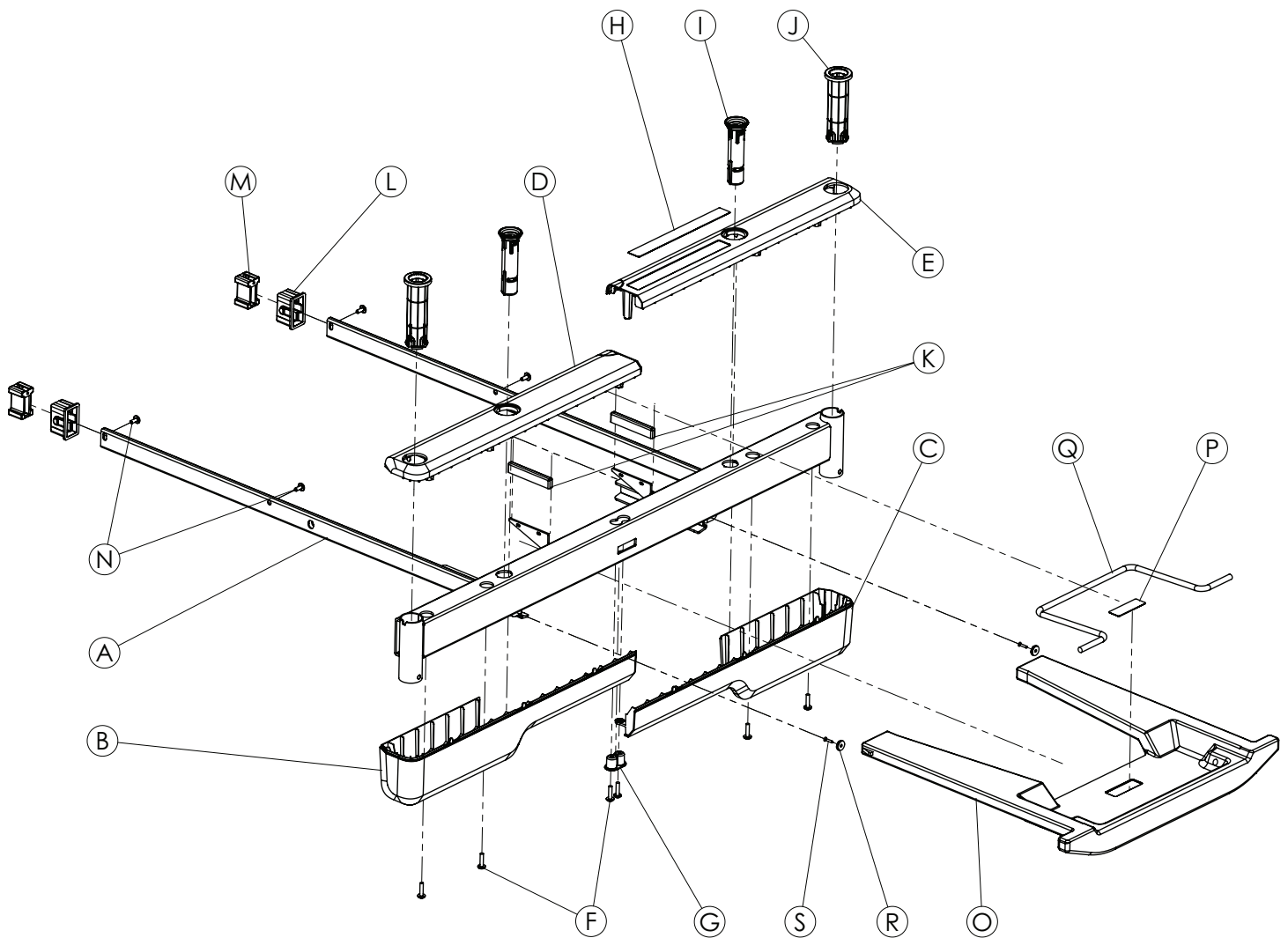
## Bumper assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-851-293	Phoenix, serum adapter	2	
B	YM-851-326	Fix head, plastic adapter	2	
C	YM-851-325	Lifting pole, plastic adapter	1	
D	HM-20-979	Phoenix headboard warning label	1	
E	HM-06-119	EJOT delta PT 5 x 20 SS plastic screw	6	4-5
F	YM-851-354	Bumper fixing part, Phoenix	1	
G	HM-02-459	Bumper, lower left, Phoenix	1	
H	HM-02-461	Bumper, lower right, Phoenix	1	
I	HM-02-458	Bumper, upper left, Phoenix	1	
J	HM-02-460	Bumper, upper right, Phoenix	1	
K	HM-06-121	4,2*19 mm self tapping screw	2	Fully seated
L	YM-HM-02-041	Ø8,5 plastic cable holder	1	
M	HM-12-128	Grounding socket	1	Fully seated
N	HM-09-04	M6 serrated lock washer	1	
O	HM-08-44	Nut DIN 6926-M8x1.25	4	8-10
P	HM-02-469	Plastic washer, Ø8x1.6 mm	4	
Q	HM-05-170	Bolt DIN 603-M8x70MM-8.8	4	
R	YM-851-113-BY	Demounted headboard, welding, Phoenix	1	

**Note** - Make sure that the product is clean and dry before you affix the label. See the **ProCeed** Operations/Maintenance Manual for cleaning instructions.

## Bed extender assembly

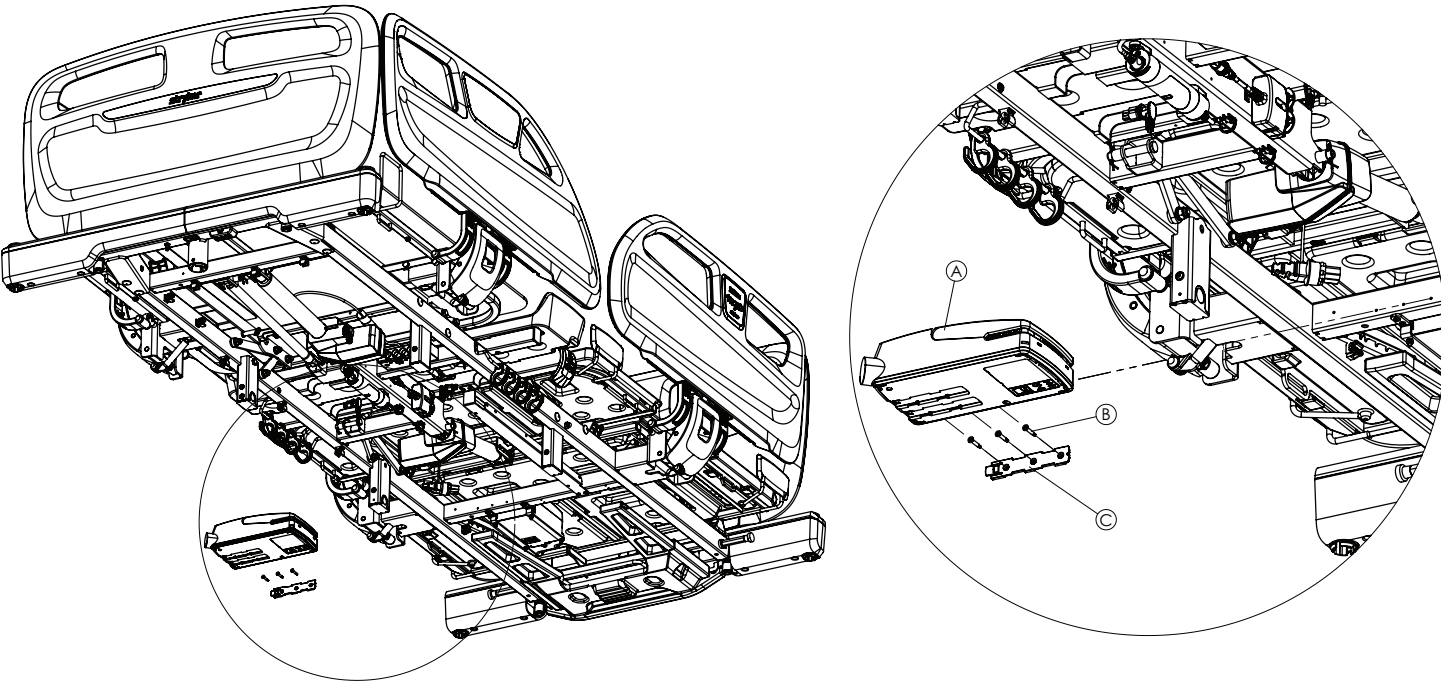


Item	Number	Name	Quantity	Torque value (Nm)
A	YM-851-112-BY	Bed extension, welding, Phoenix	1	
B	HM-02-459	Bumper, lower left, Phoenix	1	
C	HM-02-461	Bumper, lower right, Phoenix	1	
D	HM-02-458	Bumper, upper left, Phoenix	1	
E	HM-02-460	Bumper, upper right, Phoenix	1	
F	HM-06-119	EJOT delta PT 5 x 20 SS plastic screw	6	4-5
G	YM-851-354	Bumper fixing part, Phoenix	1	
H	HM-20-979	Phoenix headboard warning label	1	
I	YM-851-326	Fix head, plastic adapter	2	
J	YM-851-293	Phoenix, serum adapter	2	
K	YM-851-374	Bed extension, carrier cap	2	
L	YM-851-297	Square extension (external)	2	
M	YM-851-296	Square extension (internal)	2	
N	HM-09-35	Blind rivet, 5 x 15 aluminum	4	
O	YM-851-366	Linen tray, Phoenix	1	
P	HM-20-849	Capacity is 15 kg, Phoenix	1	

Item	Number	Name	Quantity	Torque value (Nm)
Q	YM-851-352-BY	Linen tray extension wire painted	1	
R	HM-20-818	Perforated small magnet	2	
S	HM-06-81	3 x 16 mm star countersunk head sheet metal screw	2	Fully seated

**Note** - Make sure that the product is clean and dry before you affix the label. See the **ProCeed** Operations/Maintenance Manual for cleaning instructions.

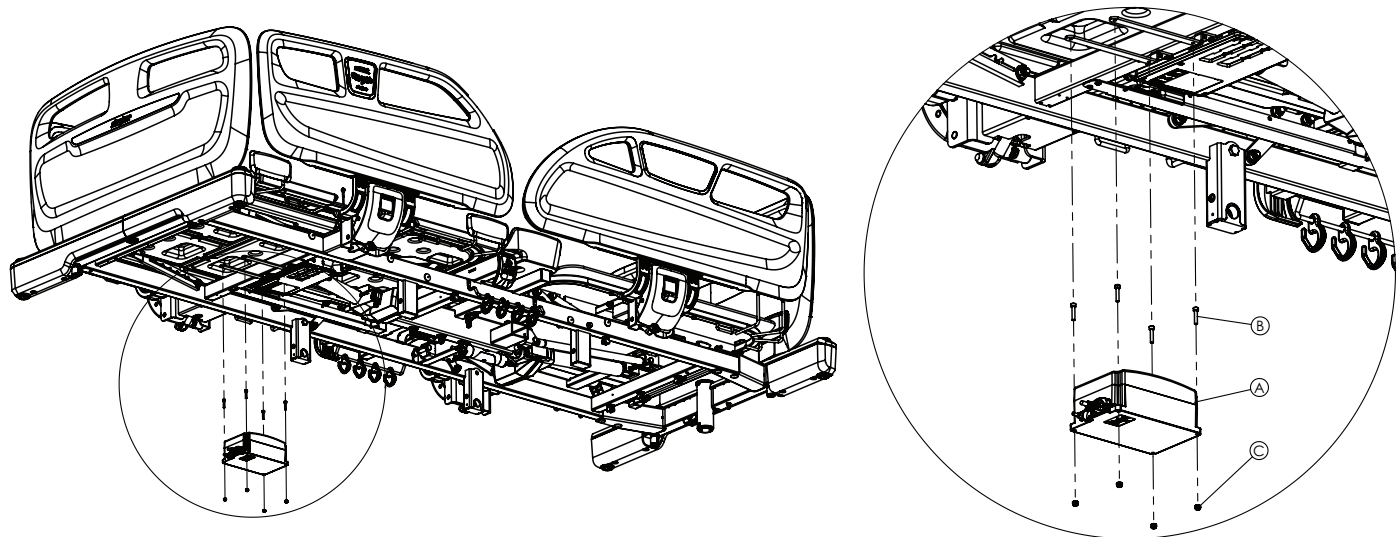
Control box assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	HM-17-328	Linak control box, CO65	1	Fully seated
B	HM-06-09	3,9 x 25 mm cross recessed countersunk head tapping screw	3	
C	HM-17-335	Linak control box, CO65, assembly adapter	1	

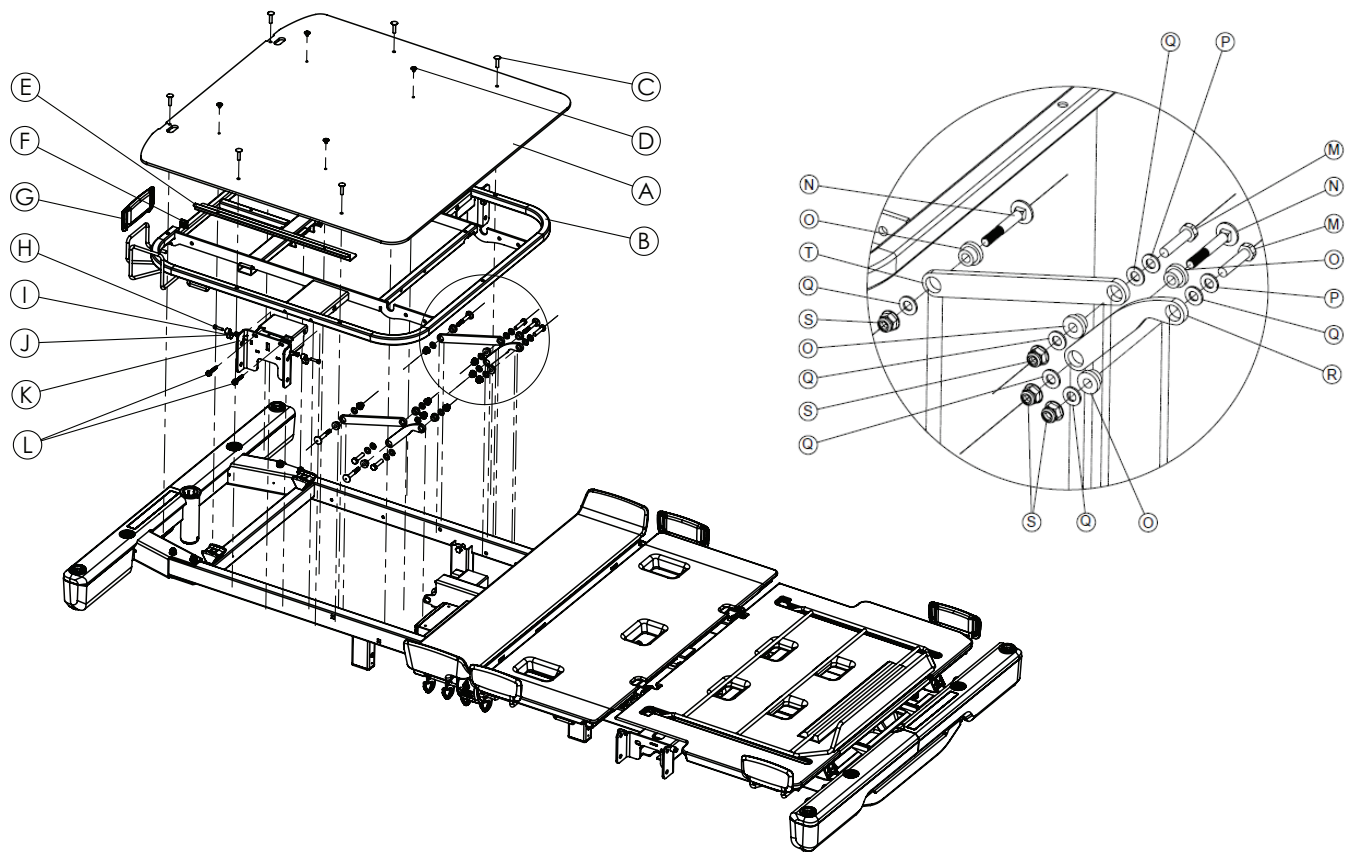


Battery assembly



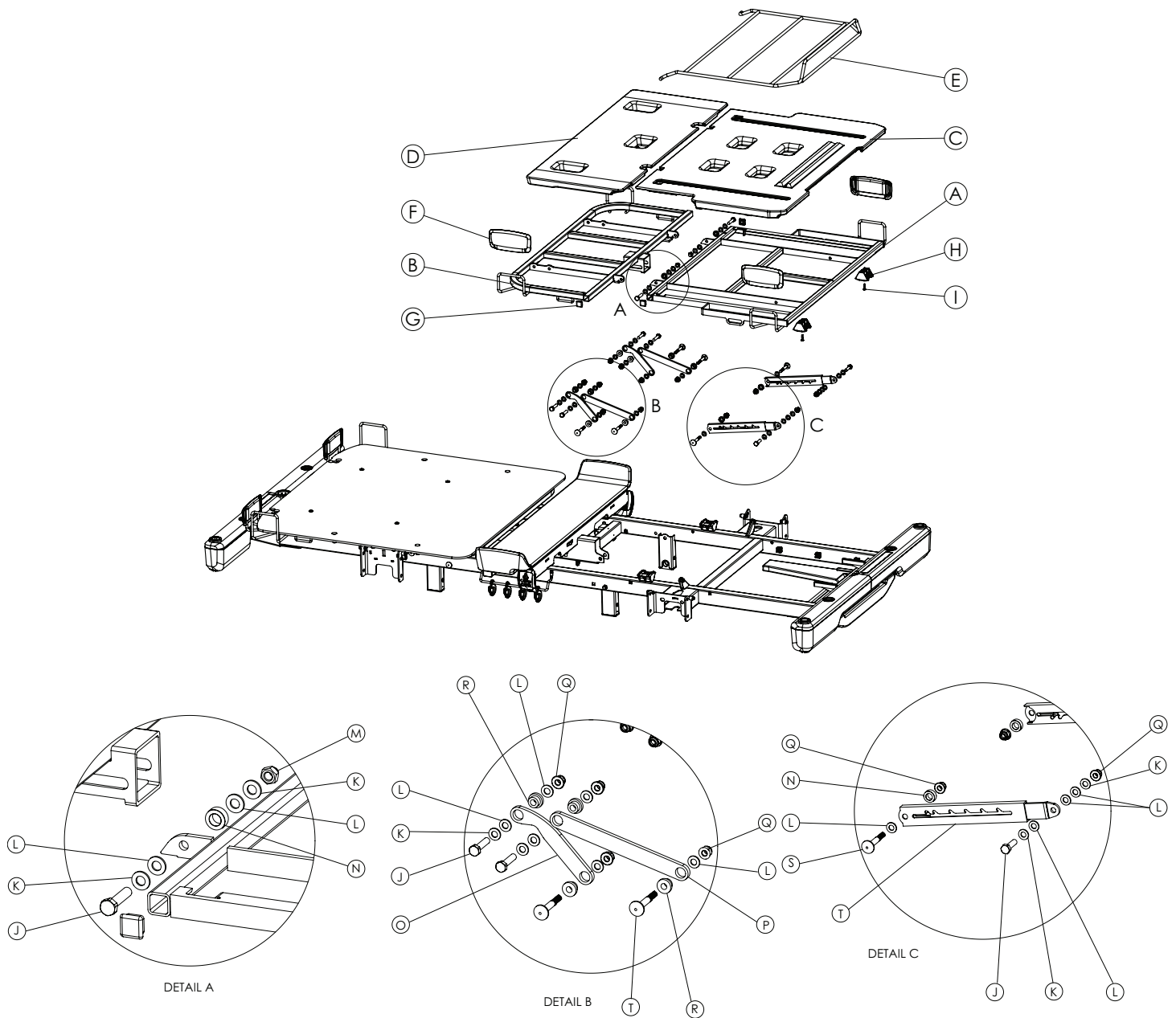
Item	Number	Name	Quantity	Torque value (Nm)
A	HM-17-403	Linak battery, BA16	1	Fully seated
B	HM-06-127	M4*20 imbus head Allen bolt	4	
C	HM-08-19	M4 fiber nut	4	

## Litter Fowler backrest assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-851-232	Fowler laminated sheet, x-ray	1	
B	YM-851-104-BY	Fowler, welding, x-ray, Phoenix	1	
C	HM-09-37	Tubular component, Ø6.35 x 27.2	6	
D	HM-09-44	Pop rivet, large head, 4.8 x 16 AL/ST	4	
E	YM-04-FTR024-HZR-GL	FTR024 sheet metal cassette holder	2	
F	YM-HM-02-36	Fowler and foot profil plastic cover	2	
G	YM-851-314	Mattress retainer plastic	2	
H	HM-05-043	M5 x 20 mm hex socket cap screw	4	8-10
I	YM-851-254	Siderail stopper plastic	4	
J	HM-08-04	M5 fiber hexagonal nut	4	
K	YM-851-108-BY	Fowler siderail, welding, Phoenix	2	
L	HM-06-131	Screw, DIN 6928-ST6,3 x 38 mm-8.8	4	8-10
M	HM-05-062	Bolt DIN 931- M8 x 35 mm-8.8	4	8-10
N	HM-06-08	Bolt DIN 603-M8 x 55-8.8	4	
O	YM-851-208	Gradual bushing	8	
P	HM-07-03	M8 iron washer	4	
Q	HM-02-469	Plastic washer, Ø8X1.6 mm	12	
R	YM-851-222-BY	Fowler-thigh mechanism arm, short	2	
S	HM-08-44	Nut DIN 6926-M8 x 1.25	8	8-10
T	YM-851-223-BY	Fowler-thigh mechanism arm, long	2	

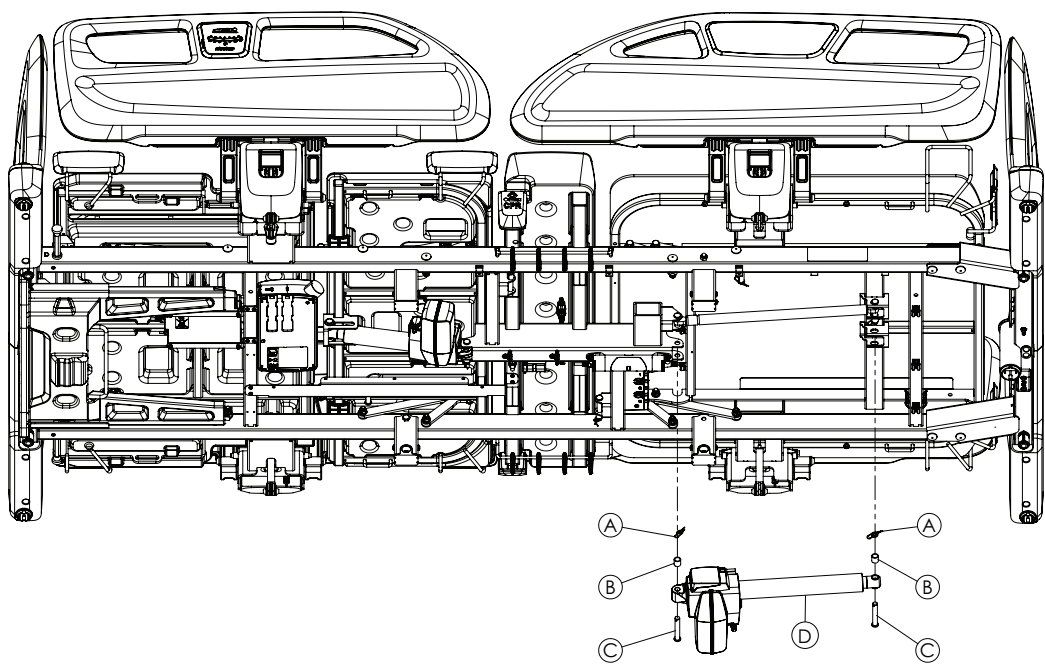
## Litter Gatch leg rest assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-851-110-BY	Foot, extendable, welding, Phoenix	1	
B	YM-851-102-BY	Thigh, weldment, Phoenix	1	
C	HM-02-487	Foot tray	1	
D	HM-02-486	Thigh tray	1	
E	YM-851-111-BY	Foot, extendable, bed handling platform, welding, Phoenix	1	
F	YM-851-314	Mattress retainer plastic	4	
G	YM-HM-02-36	Fowler and foot profil plastic cover	4	
H	YM-851-210	Fowler-thigh support stopper	4	
I	HM-06-121	4,2*19 mm self tapping screw	4	Fully seated
J	HM-05-062	Bolt DIN 931- M8 x3 5 mm-8.8	8	8-10
K	HM-07-03	M8 iron washer	12	

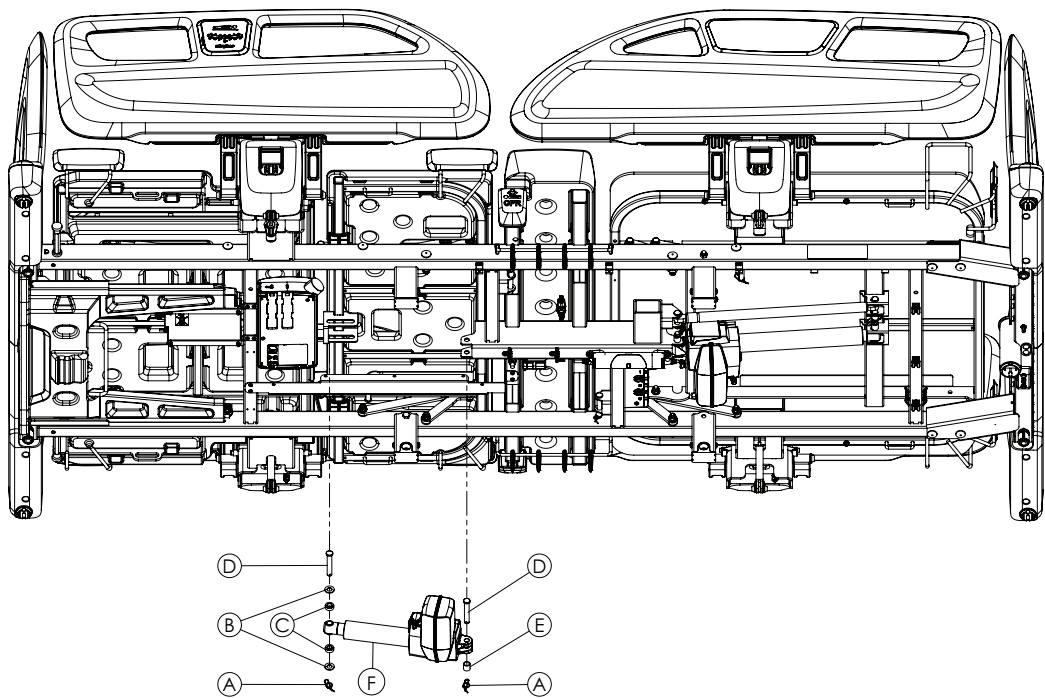
Item	Number	Name	Quantity	Torque value (Nm)
L	HM-02-469	Plastic washer, Ø8 x 1.6 mm	24	
M	HM-08-45	Nut DIN 986-M8 x 1.25	2	
N	YM-851-303	Foot actuator bushing	4	
O	YM-851-222-BY	Fowler-thigh mechanism arm, short	2	
P	YM-851-223-BY	Fowler-thigh mechanism arm, long	2	
Q	HM-08-44	Nut DIN 6926-M8 x 1.25	12	
R	YM-851-208	Gradual bushing	8	
S	HM-06-08	Bolt DIN 931- M8 x 35 mm-8.8	4	8-10
T	HM-20-517	6 stage rastomat	2	

Fowler backrest actuator



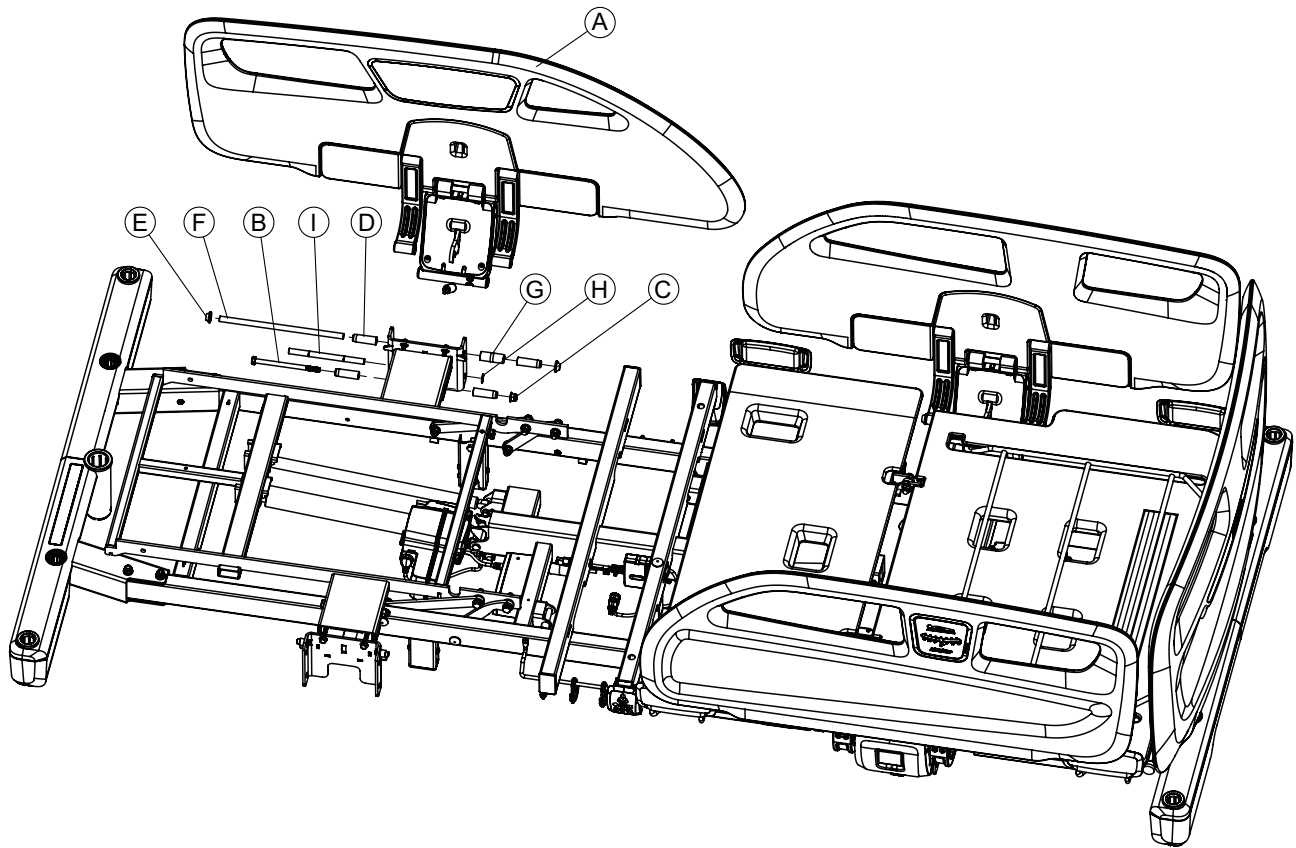
Item	Number	Name	Quantity
A	HM-11-31	Ø10 rue clip	2
B	YM-HM-02-027	Actuator pin fixing bush	2
C	HM-12-FTR010	Ø14 x Ø10 x 65 mm actuator connection pin	2
D	HM-17-303	4000 N LA40 QR 215 mm stroke actuator	1

Gatch leg rest actuator



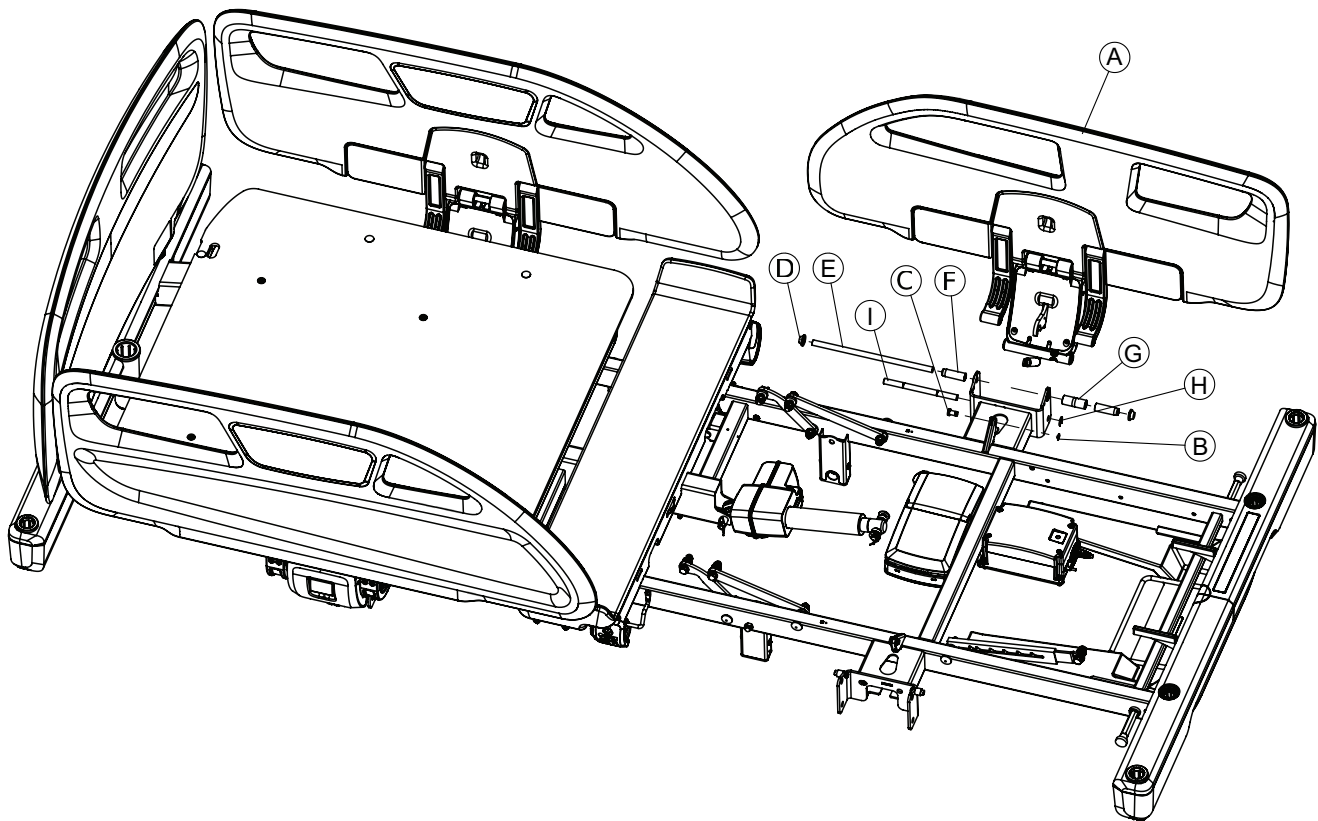
Item	Number	Name	Quantity
A	HM-11-31	Ø10 rue clip	2
B	HM-07-04	M10 iron washer	2
C	YM-851-303	Foot actuator bushing	2
D	HM-12-FTR010	Ø14 x Ø10 x 65 mm actuator connection pin	2
E	YM-HM-02-027	Actuator pin fixing bush	1
F	HM-17-305	6000 N LA40 100 mm stroke actuator	1

## Siderail, head end assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-851-024	Fowler siderail, left, without brake icon, assembly, Phoenix	1	
B	HM-05-165	Bolt DIN 931-M8 x 120 mm-8.8	1	8-10
C	HM-08-44	Nut DIN 6926-M8 x 1.25	1	
D	YM-851-313	Side board lock plastic - long	4	
E	HM-11-19	Q10 capped snap ring	2	
F	HM-12-177	Long siderail pin	1	
G	YM-851-312	Side board lock plastic - short	1	
H	HM-11-04	8 mm ring	1	
I	HM-12-048	Short siderail pin	1	

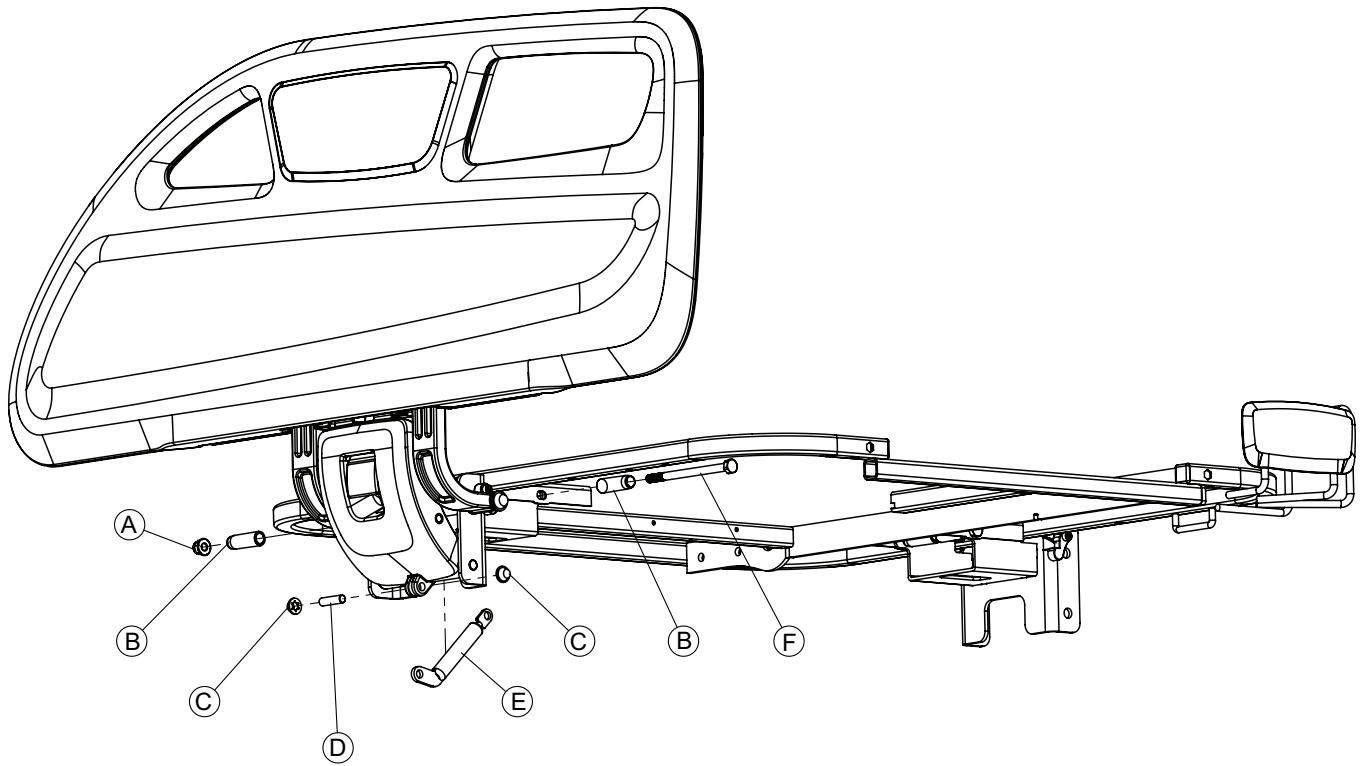
## Siderail, foot end assembly



Item	Number	Name	Quantity
A	YM-851-010	Foot siderail, left, assembly, Phoenix	1
B	HM-11-05	6 mm ring	1
C	HM-12-FTR005	12-FTR005 shock absorber connection pin	1
D	HM-11-19	Q10 capped snap ring	2
E	HM-12-177	Long siderail pin	1
F	YM-851-313	Side board lock plastic - long	2
G	YM-851-312	Side board lock plastic - short	1
H	HM-11-04	8 mm ring	1
I	HM-12-048	Short siderail pin	1

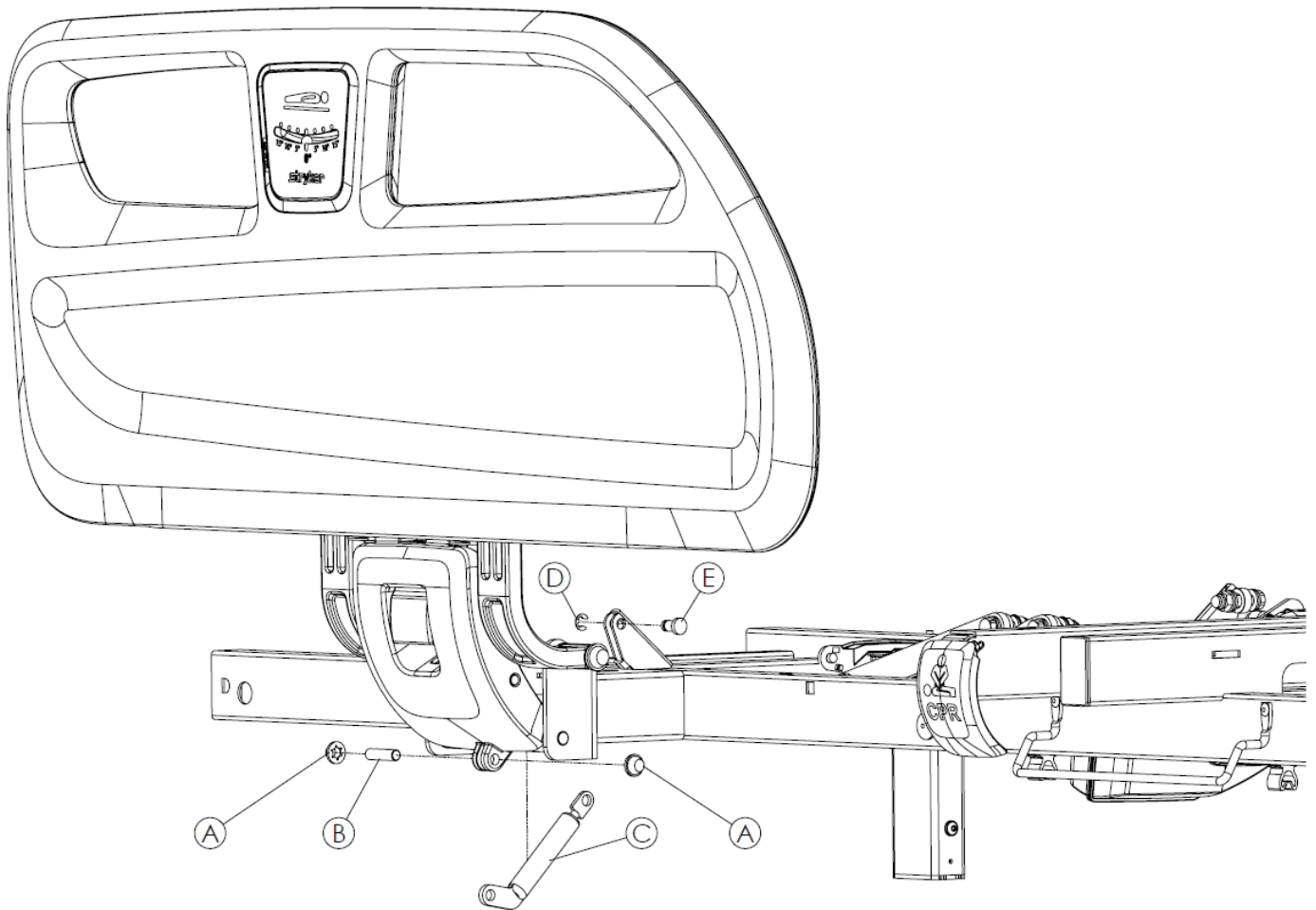


## Siderail gas cylinder, head end



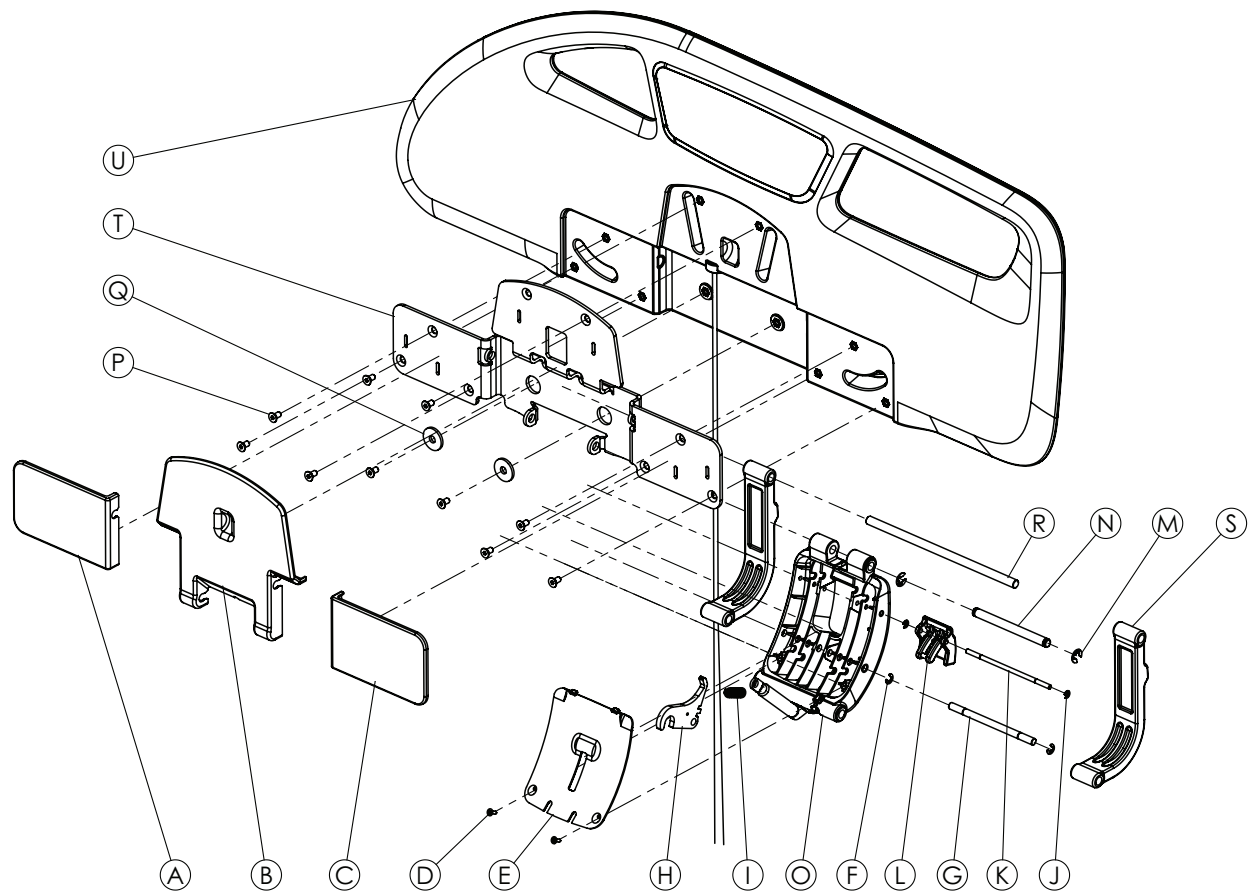
Item	Number	Name	Quantity	Torque value (Nm)
A	HM-08-04	Nut din 69-26M8x1.25	1	
B	YM-851-313	Side board lock plastic, long	2	
C	HM-11-18	Ø8 hat-shaped segment (DT/6671/43A)	2	
D	HM-12-146	12-146 Ø8x31mm clevis pin	1	
E	HM-18-40	Siderail damper	1	
F	HM-05-165	Bolt din 931-M8x120mm-8.8	1	8-10

## Siderail gas cylinder, foot end



Item	Number	Name	Quantity
A	HM-11-18	Q8 cap ring (DT /6671/43A)	2
B	HM-12-146	12-146 8 x 31 mm siderail pin	1
C	HM-18-40	Siderail damper	1
D	HM-11-05	6 mm ring	1
E	HM-12-FTR005	Fixed arm ring canal	1

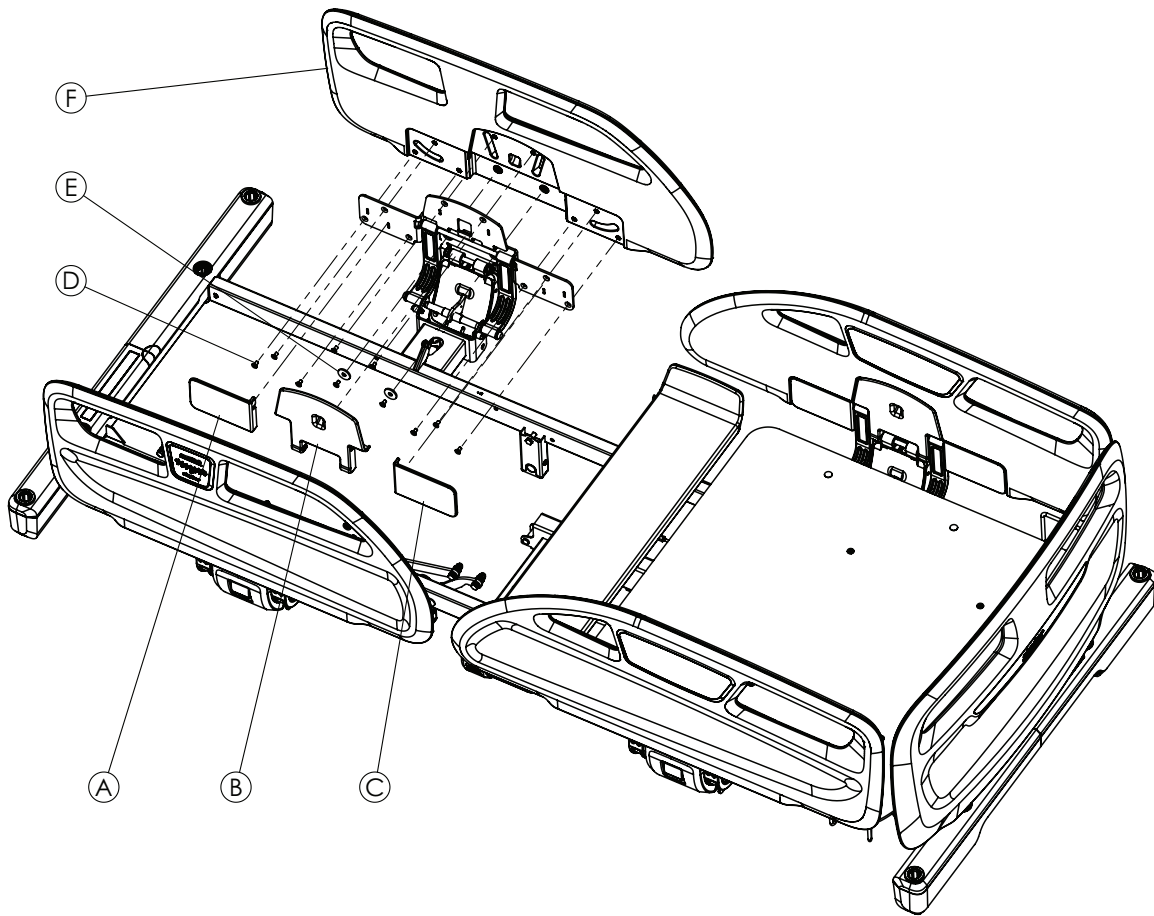
## Siderail hoop, head end



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-850-268	Siderail, side cover left, Phoenix	1	
B	YM-850-253	Siderail, middle cover, Phoenix	1	
C	YM-850-254	Siderail, side cover right, Phoenix	1	
D	HM-06-14	3,5x13mm YHB screw	2	Fully seated
E	YM-851-255	Siderail main mechanism cover	1	
F	HM-11-05	6 mm ring	2	
G	HM-12-179	8 x 130 siderail pin	1	
H	YM-851-349-GL	Phoenix siderail lock laser sheet	1	
I	HM-16-14	Latching mechanism spring	1	
J	HM-11-06	4 mm C shape snap ring	2	
K	HM-12-178	5 x 130 mm siderail pin	1	
L	YM-HM-02-374	Yellow hand plastic	1	
M	HM-11-04	8 mm ring	2	
N	HM-12-199	12-199 Ø10x114 mm pin	1	
O	-	Siderail main mechanism + gas cylinder assembly	1	
P	HM-05-173	Bolt din 7991 - M6x12-10.9	10	4-5
Q	HM-07-02	Washer din 440 - M8	2	
R	HM-12-177	Ø10 transmission pin	1	
S	YM-850-272	Aluminum curved leg painted	2	

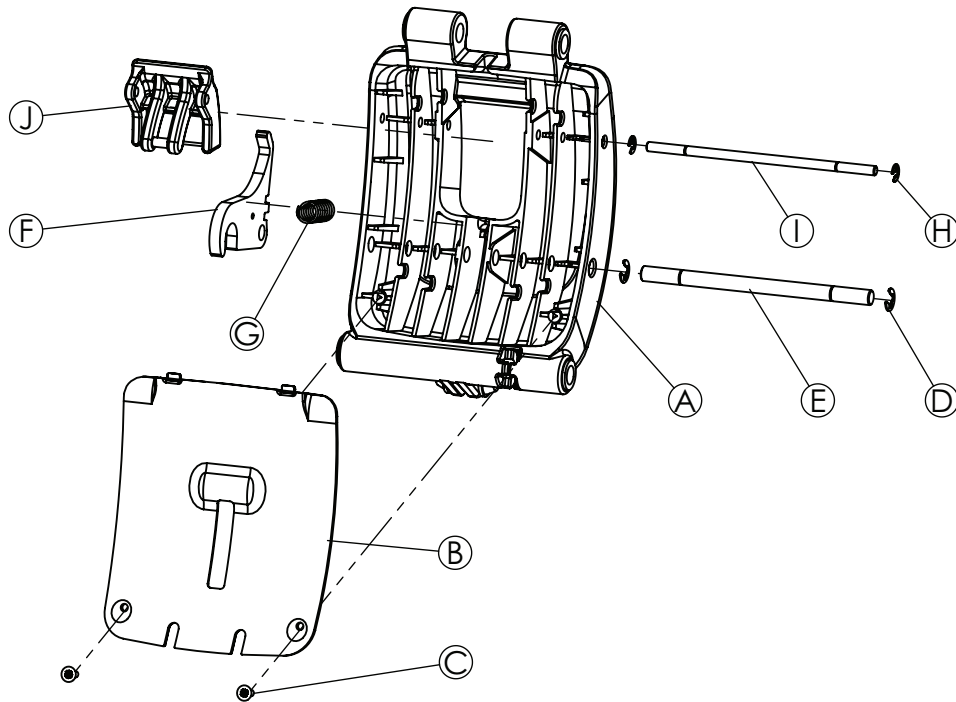
Item	Number	Name	Quantity	Torque value (Nm)
T	HM-04-259	Siderail cover sheet	1	
U	-	Siderail + pendant + cable assembly	1	

## Siderail hoop, foot end



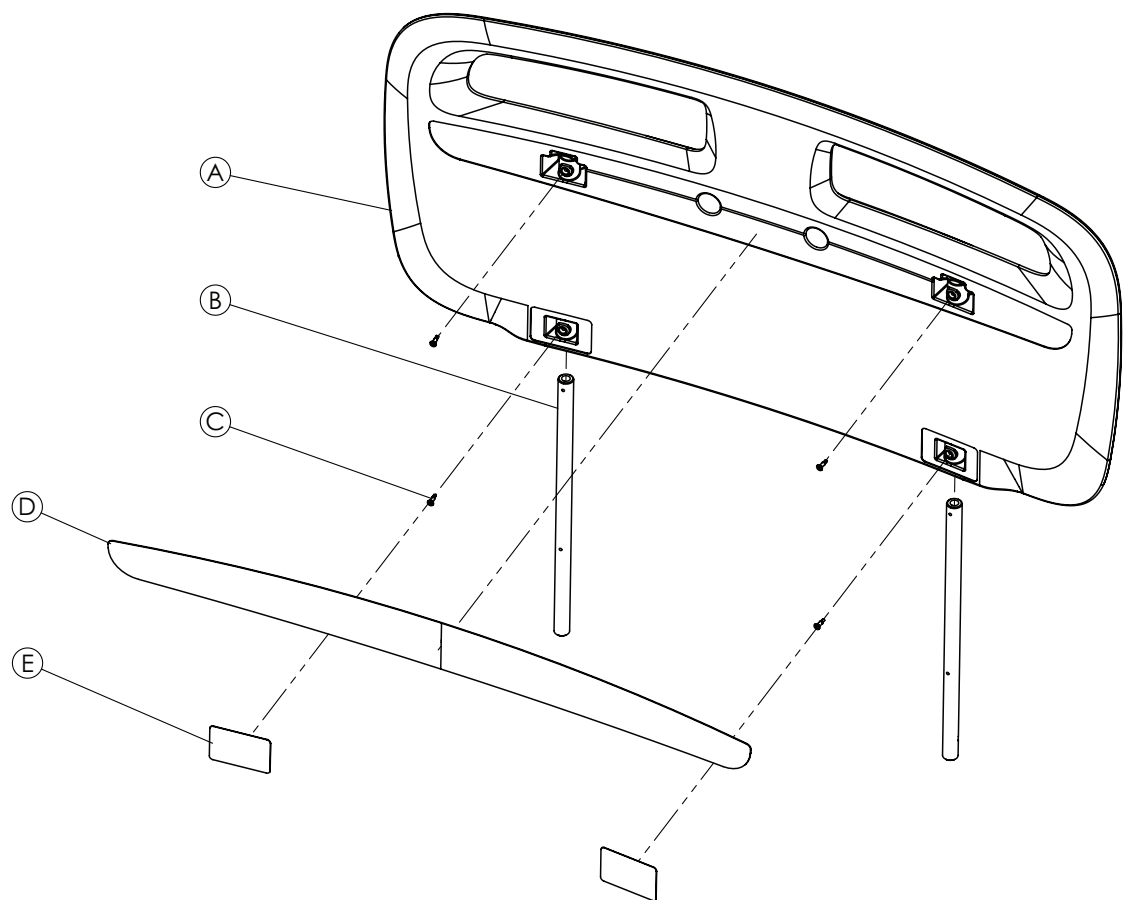
Item	Number	Name	Quantity	Torque value (Nm)
A	YM-850-268	Siderail, side cover left, Phoenix	1	
B	YM-850-253	Siderail, middle cover, Phoenix	1	
C	YM-850-254	Siderail, side cover right, Phoenix	1	
D	HM-05-173	Bolt din 7991 - M6x12-10.9	10	4-5
E	HM-07-02	Washer din 440 - M8	2	
F	-	Siderail + angle gauge assembly	1	

## Siderail release latch assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-851-256	Siderail main mechanism plastic part	1	
B	YM-851-255	Siderail main mechanism cover	1	
C	HM-06-14	3,5 x 13 mm YHB screw	2	Fully seated
D	HM-11-05	6 mm ring	2	
E	HM-12-179	8 x 130 siderail PIM	1	
F	YM-851-349-GL	6 mm HRP sheet metal	1	
G	HM-16-14	Latching mechanism spring	1	
H	HM-11-06	4 mm C shape snap ring	2	
I	HM-12-178	5 x 130 mm siderail pin	1	
J	YM-HM-02-374	Yellow hand plastic	1	

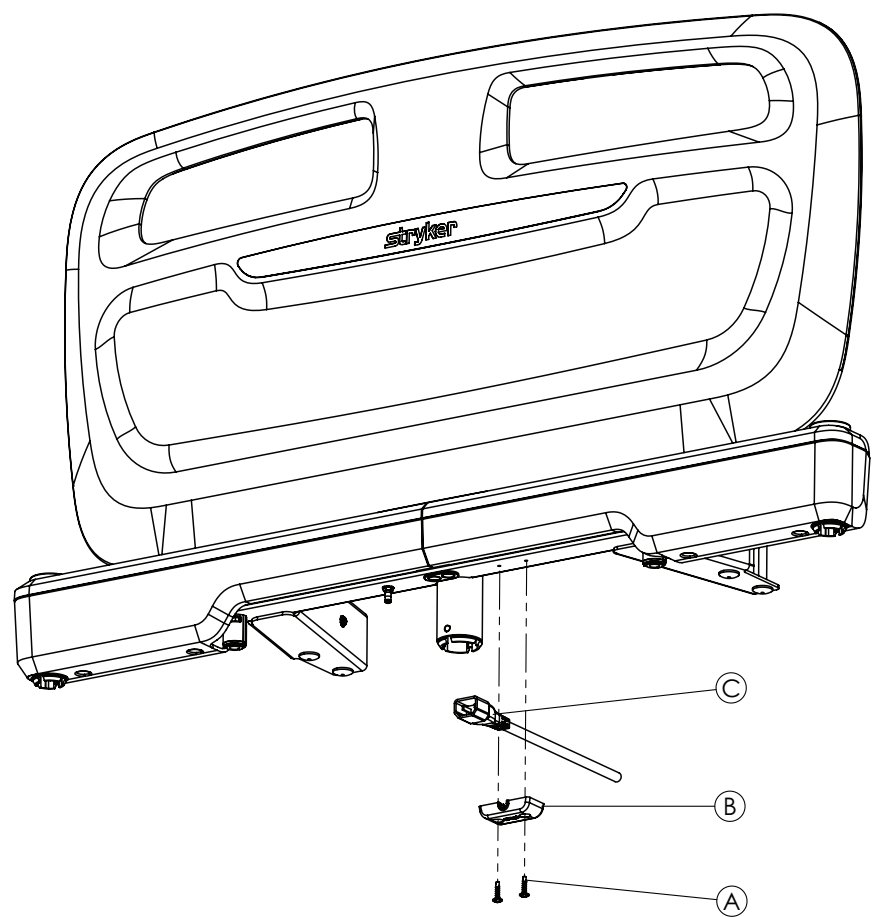
Headboard and footboard assembly



Item	Number	Name	Quantity	Torque value (Nm)
A	YM-850-256	Standard headboard, blowmolded part, Phoenix	1	Fully seated
B	YM-850-260-GL	Headboard post, Phoenix	2	
C	HM-06-49	M3, 9 x 16 mm star square head sheet bolt	4	
D	HM-20-971	White head color label, large inside, Phoenix	1	
E	HM-20-970	White head color label, small inside, Phoenix	2	

**Note** - Make sure that the product is clean and dry before you affix the label. See the **ProCeed** Operations/Maintenance Manual for cleaning instructions.

Power cord



Item	Number	Name	Quantity	Torque value (Nm)
A	HM-06-09	Countersunk milling head self drilling screw	2	Fully seated
B	YM-HM-02-041	Ø8,5 plastic cable holder	1	
C	HM-17-066	Internal universal power cord, straight, Phoenix	1	



## EMC information

### WARNING

- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 in.) to any part of **ProCeed**, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- Use of accessories, transducers, and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

The **ProCeed** bed series was evaluated using the following cables:

Cable	Length (m)
AC mains input cable	2.5
Pendant	5.3

Guidance and manufacturer's declaration - electromagnetic emissions		
The <b>ProCeed</b> bed series is intended for use in the electromagnetic environment specified below. The customer or the user of the <b>ProCeed</b> bed series should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment
RF Emissions CISPR 11	Group 1	<b>Note</b> - The emissions characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.
RF Emissions CISPR 11	Class A	
Harmonic Emissions IEC 61000-3-2	Class A	
Voltage Fluctuations Flicker Emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration - electromagnetic immunity			
The <b>ProCeed</b> bed series is suitable for use in a professional healthcare facility environment and not in environments exceeding immunity test conditions that the product was evaluated to, such as near high frequency (HF) surgical equipment and inside of the radio frequency (RF) shielded room of magnetic resonance imaging (MRI) equipment. The customer or the user of the <b>ProCeed</b> bed series should assure that it is used in such an environment and that the electromagnetic environment guidance listed below is followed.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment-guidance
Electrostatic Discharge (ESD) IEC 61000-4-2	±8 kV contact ±15 kV air	±8 kV contact ±15 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrostatic fast transient/ burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Main power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±0.5 kV, ±1 kV lines to lines ±0.5 kV, ±1 kV, ±2 kV lines to earth	±0.5 kV, ±1 kV lines to lines ±0.5 kV, ±1 kV, ±2 kV lines to earth	Main power quality should be that of a typical commercial or hospital environment.
Voltage dips, voltage variations and short interruptions on power supply input lines IEC 61000-4-11	0% $U_T$ for 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315°  0% $U_T$ for 1 cycle  70% $U_T$ (30% dip in $U_T$ ) for 25/30 cycles  0% $U_T$ for 250/300 cycles	0% $U_T$ for 0.5 cycle at 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315°  0% $U_T$ for 1 cycle  70% $U_T$ (30% dip in $U_T$ ) for 25/30 cycles  0% $U_T$ for 250/300 cycles	Main power quality should be that of a typical commercial or hospital environment. If the user of the <b>ProCeed</b> bed series requires continued operation during power main interruptions, it is recommended that the device be powered from an uninterrupted power supply or a battery.

Guidance and manufacturer's declaration - electromagnetic immunity			
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
<b>Note</b> - $U_T$ is the a.c. mains voltage before applications of the test level.			
Conducted RF IEC 61000-4-6  Radiated RF IEC 61000-4-3	3 Vrms 6 Vrms in ISM bands 150 kHz to 80 MHz 3 V/m 80 MHz to 2.7 GHz	3 Vrms 6 Vrms in ISM bands 3 V/m	<p>Portable and mobile RF communications equipment should follow the guidance in the table titled "Recommended separation distances between portable and mobile RF communication equipment and the ProCeed bed series." If the mobile service is not listed in the table, the recommended separation distance should be calculated from the equation appropriate for the frequency of the transmitter.</p> <p>Recommended separation distance <math>D=(2)(\sqrt{P})</math> where <math>P</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> is the recommended separation distance in meters (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey<sup>a</sup>, should be less than the compliance level in each frequency range<sup>b</sup>.</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol: </p>
<p><b>Note</b> - These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p> <p><b>Note</b> - The ISM (Industrial, Scientific, and Medical) bands between 0.15 MHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz.</p> <p><sup>a</sup>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 ProCeed bed series is used exceeds the applicable RF compliance level above, the ProCeed bed series should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the ProCeed bed series.</p> <p><sup>b</sup>Over the frequency range 150 kHz to 80 MHz, field strengths are less than 3 Vrms.</p>			

Recommended separation distances between portable and mobile RF communication equipment and the ProCeed bed series			
The ProCeed bed series is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ProCeed bed series can help prevent electromagnetic interferences by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ProCeed bed series, including cables, as recommended below, according to the maximum output power of the communications equipment.			
Band (MHz)	Service	Maximum power (W)	Minimum separation distance (m)
380-390	TETRA 400	1.8	0.3
430-470	GMRS 460; FRS 460	2.0	0.3

Recommended separation distances between portable and mobile RF communication equipment and the ProCeed bed series			
704-787	LTE Band 13, 17	0.2	0.3
800-960	GSM 800/900; TETRA 800; iDEN 820; CDMA 850; LTE Band 5	2.0	0.3
1,700-1,990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	2.0	0.3
2,400-2,570	Bluetooth; WLAN; 802.11 b/g/n; RFID 2450; LTE Band 7	2.0	0.3
5,100-5,800	WLAN 802.11 a/n	0.2	0.3
<p>For transmitters rated at a maximum output power not listed above, the recommended separation distance <math>d</math> in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where <math>P</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.</p> <p><b>Note</b> - These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p>			

Test frequency	Modulation	Immunity test level (A/m)
134,2 kHz	Pulse modulation <sup>b)</sup> 2,1 kHz	65 <sup>c)</sup>
13,56 MHz	Pulse modulation <sup>b)</sup> 50 kHz	7,5 <sup>c)</sup>
<p><sup>b)</sup> The carrier shall be modulated using a 50% duty cycle square wave signal.</p> <p><sup>c)</sup> r.m.s., before modulation is applied.</p>		







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