

Invacare® CS600 Bed

CS600-36, CS600-EXP

en

Long-Term Care Bed

User Manual

For more information regarding bed rail safety, refer to the Bed Rail Entrapment Risk Notification Guide at pro.invacare.com.



This manual **MUST** be given to the user of the product.
BEFORE using this product, this manual **MUST** be read and saved for future reference.



Yes, you can:

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1 General

1.1 Introduction

This user manual contains important information about the handling of the product. To ensure safety when using the product, read the user manual carefully and follow the safety instructions.

Invacare reserves the right to alter product specifications without further notice.

Before reading this document, make sure you have the latest version. Find the latest version as a PDF on the Invacare website.

If you find the font size in the printed document is difficult to read, you can download the PDF version from the website. The PDF can then be scaled on screen to a font size that is more comfortable for you.

In case of a serious incident with the product, you should inform the manufacturer and the competent authority in your country.

1.1.1 Symbols in the Manual

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. Refer to the table below for definitions of the signal words.



DANGER!

-Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING!

-Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION!

-Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage. Gives useful tips, recommendations, and information for efficient, trouble-free use.



NOTICE

-Indicates a hazardous situation that could result in damage to property if it is not avoided.




Gives useful tips, recommendations, and information for efficient, trouble-free use.

Other symbols used in this manual, as well as their related standards, are described in the following table.

Standards include entities such as the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC).

Symbol	Description	Standard Reference
	Indicates the user must read the instruction manual/booklet.	ISO 7010–M002
	Indicates caution should be exercised when operating the device near the location of the symbol or that the current situation requires operator attention or action to avoid undesirable consequences.	ISO 15223–1 Section 5.4.4
	Indicates the entity distributing the product into the locale.	ISO 15223–1 Section 5.1.9

Symbol	Description	Standard Reference
	Indicates the product manufacturer.	ISO 15223-1 Section 5.1.1

1.2 Intended Use

The bed is intended to be used as a mattress support system. The bed allows for articulation of the head and foot sections to provide different positions for the user. It is intended to be used in the home and in long-term facilities.

1.3 Wear-and-Tear Items

Normal wear-and-tear items and components include but are not limited to the items in the following list:

- Hand pendants
- Casters (tread wear and brake levers)

Invacare reserves the right to ask for any item that has an alleged defect in workmanship to be returned. See the warranty that shipped with the product for specific warranty information.

1.4 Service Life



WARNING!

Risk of Injury or Damage

Use of the product beyond its service life may cause product damage and injury.

- This product has an expected lifetime of seven (7) years when used in accordance with safety instructions, maintenance intervals, and correct use stated in this manual.
- Perform all maintenance according to the recommended schedule in this manual.



The effective bed lifetime can vary according to the frequency and intensity of use.

2 Safety



CAUTION!

Risk of Injury

-Caretakers should assess patients for adverse reactions such as redness (erythema), swelling (edema), irritation, sensitization (delayed Type IV hypersensitivity), allergy, immune response, or other reactions on the skin where the device has contact.

2.1 General Guidelines



DANGER!

Risk of Death, Injury, or Damage

Improper use of this product may cause injury or damage.

-If you are unable to understand the warnings, cautions, or instructions, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment.
-Do not use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as user manuals, service manuals or instruction sheets supplied with this product or optional equipment.

Continued use of the product with damaged parts could lead to the product malfunctioning, causing injury to the user and/or caregiver.

-Check ALL product components and carton for damage, and test components before use. DO NOT use product if components are damaged or if product is not working properly. Contact a qualified technician or Invacare for repair.



DANGER!

Risk of Death, Injury, or Damage

To avoid injury or product damage:

-Setup and assembly instructions MUST be performed by qualified technicians only. "Qualified Technician Only" sections are marked accordingly.



THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.



DANGER!

Risk of Death, Injury, or Damage

Lighted cigarettes can cause a fire or other related hazards resulting in death, injury, or damage.

-Do not smoke while using this product.
-Do not allow others to smoke near this product.



DANGER!

Risk of Death, Injury, or Damage

Bed accessories designed by other manufacturers have NOT been tested by Invacare. Use of NON-Invacare bed accessories may result in injury or death.

-Use ONLY Invacare rails, mattresses, bed extenders, and other accessories with Invacare bed products.



DANGER!

Risk of Death, Injury or Damage

Improper assembly may cause injury or damage.

Use of incorrect or improper parts, including replacement (service) parts, may cause injury or damage.

-Replacement parts MUST match original Invacare parts.



DANGER!

Risk of Injury or Death

To reduce the risk of electrical shock:

-Always unplug the product from the electrical outlet before cleaning.



DANGER!

Risk of Death, Injury, or Damage

To reduce the risk of shock:

-Unplug from the outlet before servicing.
-Close supervision is necessary when the product is used by, or near children and/or disabled persons.
-Use this product only for its intended use as described in these instructions. DO NOT use attachments not recommended by the manufacturer.
-If liquid is spilled in or around the product, unplug before cleaning. Clean up the spill and allow the product or the area around the product to dry thoroughly before using the controls again.



DANGER!

Risk of Death, Injury, or Damage

To avoid shock, product damage and personal injury:

-DO NOT use outdoors.
-Connect this product to a properly grounded outlet only. Refer to 5 *Operation*, page 27.
-DO NOT place video equipment such as televisions or computer monitors on the product.

**WARNING!****Risk of Injury or Property Damage**

- The information contained in this manual must be performed by a qualified technician. Invacare expects that the qualified technician is familiar with the product, with good technical knowledge to understand and follow the steps of the described instructions in this manual, and equipped with proper tools.
- Installation, mounting, maintenance or repairs made by unqualified persons can result in hazardous situations to you and others.
- Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury, and/or death.

2.1.1 Operation**DANGER!****Risk of Death, Injury, or Damage**

To avoid injury or damage when operating the product:

- After any adjustments, repair or service and before use, make sure all attaching hardware is tightened securely.
- Close supervision is necessary when the product is used near children or pets OR when this product is operated by or near people with physical/mental disabilities. Physically challenged individuals who cannot prevent themselves from rolling/climbing out of the product may require alternative safe means of restraint.
- The product is not designed to be used as a user transport. When transporting a user, use an approved user transport. Otherwise, injury or damage may result.

**DANGER!****Risk of Injury or Damage**

To avoid injury or damage when operating or moving the bed:

- ALWAYS ensure the individual utilizing the bed is positioned properly within the confines of the bed. DO NOT let any extremities protrude over the side or between the bed rails when performing these functions.
- Be aware of potential pinch points when operating bed, rails, or other accessories.
- Make sure head and foot springs/sections are connected securely to the bed ends before use.
- Note the bed is equipped with locking casters. Before using the bed, test the wheel locks to ensure casters lock correctly. When transferring into or out of the bed, ALWAYS lock the casters. Even with casters properly locked, some flooring surfaces (such as tile or wood,) will allow the bed to move under some conditions. Using the bed on these types of surfaces MUST be evaluated by the care provider. DO NOT transfer the occupant if the bed is not stable. Otherwise, injury and/or damage may occur.
- DO NOT move the product with the locking casters in the LOCKED position.

**DANGER!****Risk of Injury or Damage**

Swivel and wheel rotation will allow bed motion with little or no resistance if the casters are not locked, which can result in loss of balance, falls, and personal injury.

- Note the one-touch locking mechanism can be used for most situations where locking casters are needed. However, movement near the head section of the bed may still result if force is applied. The bed will be most secure if the head casters are locked along with the one-touch lock.


**DANGER!****Risk of Death, Injury, or Damage**

To avoid pinch, crush, and collapse hazards from bed deck contact with objects under the bed:

- DO NOT place any objects or let any individual underneath the bed or in between the raised bed frame components at any time.

To avoid the risk of death or injury from choking or ingestion of small parts or materials:

- Closely supervise children, pets, or individuals with physical or mental disabilities.

-  Refer to the **Bed Rail Entrapment Risk Notification Guide** at pro.invacare.com for additional safety information.

**DANGER!****Risk of Death, Injury, or Damage**

User entrapment from the use of bed side rails may cause injury or death. To avoid user entrapment:

- Note the Invacare mattress **MUST** fit firmly against the bed frame AND bed side rails to prevent user entrapment. Follow the manufacturer's instructions. Monitor user frequently. Read and understand the User Manual prior to using the Invacare bed and bed rails. User manuals are available at pro.invacare.com or your dealer.
- After any adjustments, repair or service and before use, make sure all attaching hardware is tightened securely.

**DANGER!****Risk of Death, Injury, or Damage**

Conditions such as restlessness, mental deterioration and dementia or seizure disorders (uncontrolled body movement), sleeping problems, and incontinence can significantly impact a user's risk of entrapment. Pediatric users or users with small body size may also have an increased risk of entrapment.

- Monitor users with these conditions frequently.
- Place the mattress deck in the flat position when left unattended.

**WARNING!****Risk of Injury or Adverse Health Consequences**

Fall hazard exists due to bed height.

- Always leave the bed at the lowest height when unattended.

**DANGER!****Risk of Death, Injury, or Damage**

To avoid product damage or personal injury from fall or entrapment:

- Invacare recommends the use of mattress keepers.

**Entrapment Notice for the User, User's Family, and Caregivers**

DO NOT use this product without first completely reading and understanding this information and any additional instructional material such as owner's manuals, instruction sheets, and on-product warnings supplied with this product. If you are unable to fully understand this information, the on-product warnings, or any additional instructional material, contact the user's healthcare provider or your equipment provider before using this equipment. Failure to understand and comply with this information can result in serious injury or death.

2.1.2 Replacement Parts/Accessories**DANGER!****Risk of Death, Injury, or Damage**

To avoid fire hazards and tubing entanglement:

- Use masked- or nasal-type oxygen administering equipment only in conjunction with the manual/electric bed. The use of any other type of oxygen administering equipment can result in a fire hazard.
- When using nasal- or masked-type oxygen administering equipment, the oxygen or air tubing **MUST** be routed and secured properly to ensure the tubing does not become entangled and/or severed during normal operation of manual/electric bed.
- Do not use this bed in Active Treatment "Ether Environments."

**DANGER!****Risk of Death, Injury, or Damage**

To avoid fire hazards, injury, or damage:

- DO NOT use the product with flammable gases. Explosion may occur.

**WARNING!****Risk of Injury or Damage**

To avoid injury or damage from misuse or entrapment:

- Read and understand the instructions or label provided with mattress.
- If you do not understand the instructions or if instructions are missing, contact the mattress manufacturer.



DANGER!

Risk of Death, Injury, or Damage

To avoid entrapment, product damage, and/or personal injury:

- Invacare recommends the mattress be centered on the bed frame. Otherwise, individuals may become trapped between the bed rail and the bed frame.
- ALWAYS test to make sure the side rails are properly and securely in place before using. Otherwise, injury or damage may occur.



DANGER!

Risk of Injury or Adverse Health Consequences

Fall hazards exist due to the incorrect installation of bed rails.

- To avoid injury, ensure the Invacare bed rails are installed correctly and are securely attached to the bed while entering or exiting.
- Fall hazards exist due to the use of non-Invacare bed rails. Non-Invacare bed rails are potentially incompatible with Invacare beds.
- To avoid injury, ensure only Invacare bed rails are used with Invacare beds at all times.
- Fall hazards exist due to the use of non-Invacare mattresses. Non-Invacare mattresses are potentially incompatible with Invacare beds.
- To avoid injury, ensure only Invacare mattresses are used with Invacare beds at all times.



DANGER!

Risk of Death or Injury

An increased risk of user entrapment may occur over time due to mattress compression.

- Periodically monitor gaps between the bed, mattress, and/or bed rail. Where gaps occur, user entrapment is possible and the mattress should be replaced.



DANGER!

Risk of Death, Injury, or Damage

To avoid entrapment, product damage, and/or personal injury:

- When used with a bed, the bed rails DO NOT fall under any weight limitations. Bed rails can be deformed or broken if excessive side pressure is exerted on the bed rails. These bed rails are used for the purpose of preventing an individual from inadvertently rolling out of bed. The bed rails are not intended and are not to be used for restraint purposes. If an individual is capable of injuring himself/herself, a physician or a healthcare professional should be consulted for alternative means of safe restraint.
- After raising/lowering the head/foot end of the electric bed, check the distance between the bottom of the bed rail and the mattress. If there is excessive distance between the bottom of the bed rail and the mattress in which individuals may become entangled, adjust the height of the bed rail (if applicable), or provide alternative means of user protection.
- DO NOT use the side rails as push handles for moving the bed.
- Replacement mattresses and bed side rails with dimensions different from the original equipment supplied or specified by the bed frame manufacturer are not interchangeable. Variations in bed side rail design, width and thickness or firmness of the mattress could cause/contribute to entrapment.

**DANGER!****Risk of Death, Injury, or Damage**

To avoid injury or damage from misuse or entrapment:

- Proper user assessment and monitoring, and proper maintenance and use of equipment is required to reduce the risk of entrapment. Variations in bed rail dimensions and mattress thickness, size or density could increase the risk of entrapment. Visit the FDA website at <http://www.fda.gov> to learn about the risks of entrapment, including “A Guide to Bed Safety”. Use the links located under each bed rail product at <http://www.invacare.com> to access the Bed Rail Entrapment Risk Notification Guide and other product safety information and instructions.
- Refer to the user manuals for beds and rails for additional product and safety information.
- User entrapment from the use of bed side rails may cause injury or death. The Invacare mattress MUST fit firmly against the bed frame AND bed side rails to prevent user entrapment. Follow the manufacturer’s instructions. Monitor user frequently. Read and understand the User Manual prior to using this equipment. Invacare manuals are available at pro.invacare.com or your dealer.
- An increased risk of user entrapment may occur over time due to mattress compression. Periodically monitor gaps between the bed, mattress, and/or bed rail. Where gaps occur, user entrapment is possible and the mattress should be replaced.

2.1.3 Weight Limitations**DANGER!****Risk of Death, Injury, or Damage**

To avoid bed collapse and resulting injury or damage:

- The weight limit of the occupant of the bed CANNOT exceed 500 lb (226 kg). The TOTAL weight limit of the bed (SAFE Working Load) including accessories, the mattress, the occupant, and any other objects positioned on the bed, cannot exceed 600 lb (272 kg).
- NEVER permit more than one person on the bed at any time.
- Note body weight should be evenly distributed over the surface of the bed. DO NOT lay, sit, or lean in such a way that the user's entire body weight is placed only on raised head or foot sections of the bed. This includes when repositioning or transferring in or out of bed.
- Note each of the preceding impacts can permanently damage either HI/LO motor resulting in an inoperable bed. In the case of an inoperable bed due to a damaged HI/LO motor, the HI/LO motor must be immediately replaced. If left unattended, a damaged HI/LO motor can cause the bed to fall from the highest extended position, resulting in patient injury. DO NOT exceed the maximum continuous duty cycle. Refer to *10.1 Technical Specifications, page 42*.

2.2 Label Locations

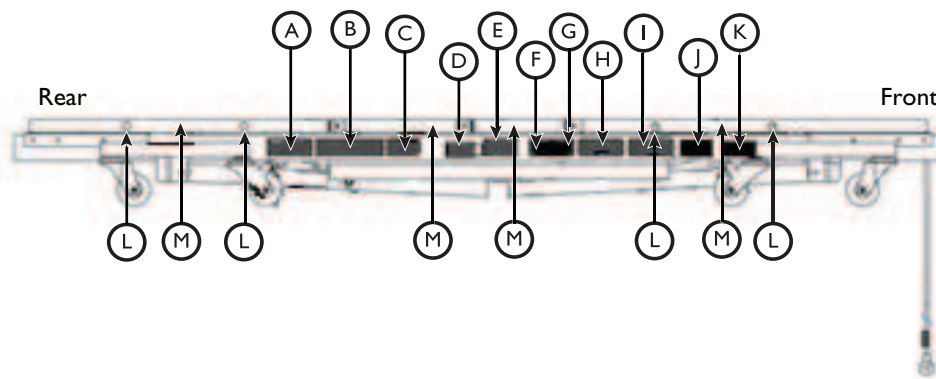
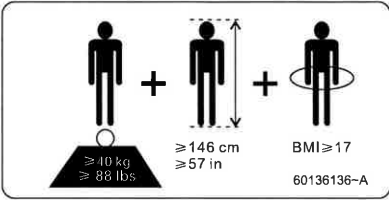
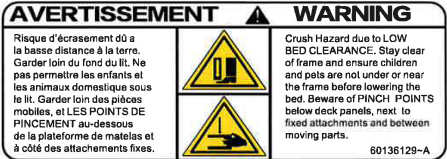
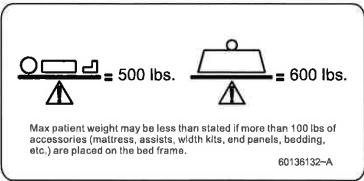
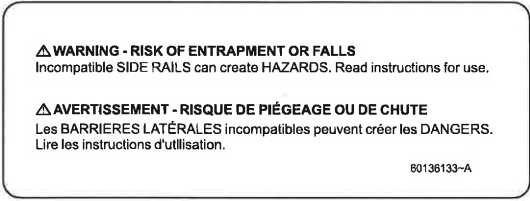
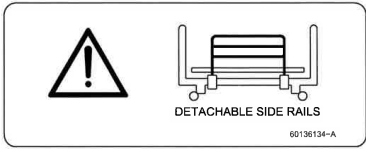
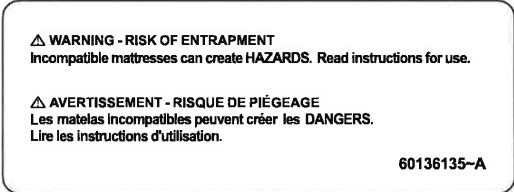
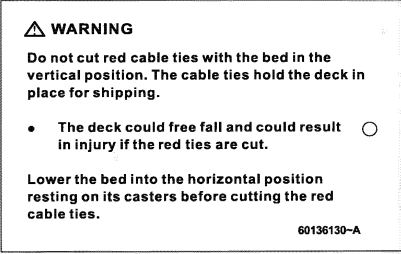







Fig. 2-1

2.2.1 Symbols on the Label

Symbols used on the label are described in the following table.

Symbol	Label	Standard Reference
Ⓐ	<p>⚠ CAUTION: Unplug bed during service or cleaning. Bed is always electrified when connected to a power source. Disconnect power cord to de-energize bed.</p> <p>⚠ AVERTISSEMENT: Débranchez le lit pendant le nettoyage ou l'entretien. Ce lit est toujours électrifié quand branché au courant électrique. Débranchez le cordon avant de servir ou de nettoyer le lit.</p> <p>60136127-A</p>	n/a
Ⓑ	<p>⚠ CAUTION: Possible fire hazard when used with oxygen-administering equipment of other than the nasal, mask or 1/2 bed length tent type. Oxygen tent should not extend below mattress support level. Lock control at foot of bed when using oxygen-administering equipment.</p> <p>⚠ AVERTISSEMENT: Danger de feu quand utilisé avec de l'équipement qui se sert de l'oxygène, sauf pour l'équipement, nasal, masque, ou tente type demi-lit. La tente d'oxygène ne devrait pas étendre sous le niveau de soutien de matelas. Fermez à clé le contrôle à main au pied du lit lorsqu'on utilise en même temps ce produit avec de l'équipement à l'oxygène.</p> <p>⚠ DANGER: EXPLOSION HAZARD - Do not use in the presence of flammable anesthetics.</p> <p>⚠ DANGER: RISQUE D'EXPLOSION - Ne pas utiliser en présence des anesthésiques inflammables.</p> <p>60136131-A</p>	n/a
Ⓒ	<p>⚠ WARNING: Powered bed mechanisms can cause serious injury. Never permit anyone under the bed at any time. Disassembly of bed mechanism may cause bed to collapse. Prior to performing any work on mechanism, turn bed on its side.</p> <p>⚠ AVERTISSEMENT: Le mécanisme actionné mécaniquement du lit causer des blessures graves. Ne permettez personne sous le lit. Le désassemblage du mécanisme peut causer l'écroulement du lit. Avant de se mettre au travail sur ce lit, faut le mettre de côté.</p> <p>60136128-A</p>	n/a
Ⓓ	 <p>Minimum user weight, height, and Body Mass Index (BMI)</p> <p>60136136-A</p>	n/a

Symbol	Label	Standard Reference
Ⓔ		n/a
Ⓕ	 <ul style="list-style-type: none"> • Maximum user weight (500 lb) • Maximum weight limit including the user and accessories (600 lb) 	n/a
Ⓖ		n/a
Ⓗ		ISO 15223-1 Section 5.4.4
Ⓙ		n/a
⓫ (tag attached to deck and frame)		n/a

Symbol	Label	Standard Reference
Ⓚ		n/a
Ⓛ	 (green circle) Side rail alignment indicators.	n/a
Ⓜ	 Pinch-point warnings in different sizes based on location.	ISO 15223–1 Section 5.4.4
not shown	<div>80 " 84 "</div> Length Extension <ul style="list-style-type: none"> • 80 inches • 84 inches 	n/a
not shown	<div>42 " 39 " 36 " / 36 " 39 " 42 "</div> Left/Right Width Extension (CS600–EXP only): <ul style="list-style-type: none"> • 42 inches • 39 inches • 36 inches Refer to 4.7 Expanding the Deck (model CS600–EXP only), page 26.	n/a
not shown (on caster support)	 No stepping	n/a
not shown (on deck corners)		ISO 15223–1 Section 5.4.4

Symbol	Label	Standard Reference
not shown (on side rails)	<div><div><div><div>● HEAD END PIN HOLE</div><div><div>YES</div><div>NO</div><div>NO</div><div>NO</div></div><div>A</div><div>→</div><div>CENTER OF BED</div><div><div>● HEAD END PIN HOLE</div></div></div><div><div>HEAD END PIN HOLE ●</div><div>CENTER OF BED</div><div>←</div><div>B</div><div><div>NO</div><div>YES</div><div>NO</div><div>NO</div></div><div>HEAD END PIN HOLE ●</div></div><div><div>FOOT END PIN HOLE ●</div><div>CENTER OF BED</div><div>←</div><div>C</div><div><div>NO</div><div>YES</div><div>NO</div><div>NO</div></div><div>FOOT END PIN HOLE ●</div></div><div><div>● FOOT END PIN HOLE</div><div><div>YES</div><div>NO</div><div>NO</div><div>NO</div></div><div>D</div><div>→</div><div>CENTER OF BED</div><div><div>● FOOT END PIN HOLE</div></div></div></div><div>Side rail installation aids.</div></div>	n/a

2.3 Operating Information



DANGER!

Risk of Death, Injury, or Damage

To avoid product damage and/or personal injury from fall or entrapment:
-Invacare recommends the use of mattress keepers.



DANGER!

Risk of Death, Injury, or Damage

To avoid serious injury or product damage from tripping, entanglement, and/or pinched or severed cords:
-Ensure all cord(s) are routed and secured properly.
-Keep all moving parts, including the main frame, mattress deck, and all drive shafts, free of obstruction (i.e., blankets, sheets, tubing, wiring, cords, etc.) during operation of the product.
-Do not roll the product over the power or pendant cord.



DANGER!

Risk of Product Damage

Mis-alignment of cable connections will cause permanent product damage.
-To avoid product damage, all electric cable connections MUST be properly aligned. Align the locking levers with the locking tabs for proper connection.
-DO NOT force the connector into the control box.



DANGER!

Risk of Death, Injury, or Damage

In the event of a power outage, the product can be powered by its optional internal battery. To avoid injury, damage, or death from electrocution or controller malfunction:
-Note the bed must remain plugged into the grounded outlet for proper grounding when powered by the optional internal battery.
-Charge the battery through the controller. NEVER attempt to charge the battery by any other means.
-Conduct monthly tests on the internal battery, if present.

2.4 EMI Information



CAUTION!

Risk of Damage

To avoid product damage from electromagnetic interference:
-It is very important that you read this information regarding the possible effects of electromagnetic interference on this product.


This product may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic (EM) energy emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the powered bed to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered bed control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m).

Each powered bed can resist EMI up to a certain intensity. This is called the *immunity level*. The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI.


A number of sources of relatively intense electromagnetic fields exist in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, EMI risks will be minimized. The sources of radiated EMI can be broadly classified into the following types:

- Handheld portable transceivers (transmitters/receivers) with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, “walkie talkies”, security, fire and police transceivers, cellular telephones, and other personal communication devices.
 - ⓘ Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.
- Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle.

- Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

 Other types of handheld devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances, such as electric shavers and hair dryers, so far as we know, are not likely to cause EMI problems to this product.

2.5 Electromagnetic Compatibility Information

 Portable and mobile RF communications equipment can affect medical electrical equipment.



WARNING!

Risk of Product Damage

The use of accessories, transducers, cords and cables other than those specified by the manufacturer, may result in increased emissions or decreased immunity of this bed.
-This product should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, this product should be observed to verify normal operation in the configuration in which it will be used.

2.6 Servicing Double-Insulated Products

Protection to the user against electrical shock hazard is provided by using double-insulated construction.

Servicing a double-insulated product requires extreme care and knowledge of the system, and is to be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the parts they replace. A double-insulated product is marked with the words “DOUBLE INSULATION” or “DOUBLE INSULATED” or the double-insulated symbol:



3 Components

3.1 Bed Operation and Component Overview


WARNING!
Risk of Injury or Damage

To avoid electrical damage, product damage, shock, and/or personal injury:

- DO NOT unplug the power cord from the junction box.
- When the product is not to be used for an extended period, unplug the product from the wall outlet.
- Keep all product components and accessories a minimum of 12 inches away from hot or heated surfaces.
- After the product has been assembled and before use, always test to make sure all sections of the product are properly and securely in place. If any problems arise during the test, recheck all electrical connections and mechanical hookups and then retest. If the product is not working properly, contact a qualified technician or Invacare for repair.


WARNING!
Risk of Injury or Damage

To avoid unintentionally pressing the pendant buttons and causing injury or damage:

- DO NOT place the pendant under or between objects.


WARNING!
Risk of Injury or Damage

A safety feature of this product includes protection against overheating caused by excessive or extended periods of operation. Depending on the duration, this includes multiple or repeated adjustments or the use of multiple functions at one time.

- To ensure trouble-free operation, ALWAYS allow a slight pause between multiple adjustments and avoid pressing more than one function button at a time. If thermal protection activation should occur, the product will not respond to pendant commands. Given this situation, release the pendant button and allow the product to sit for several minutes. This will allow the protection function time to reset and restore product function. Depending on severity of the initial overheating, this could take up to 30 minutes.
- After the thermal protection activation period is complete, the bed may be prone to sudden movement. Use caution when using the product after the protection function time has reset and the pendant function has been restored.


WARNING!
Risk of Death, Injury, or Damage

Pendant malfunction may cause injury or damage.


- Unplug the bed from the electrical outlet and contact a qualified technician or Invacare for repair if any malfunction is detected.








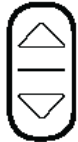



3.2 Symbols on the Product

Symbols used on the product, as well as relevant standard references, are described in the following table.



Standards include entities such as ISO and IEC.

Symbol	Description	Standard Reference
	Warning—Safe Working Load The maximum allowable load on equipment if the instructions for installation and use are followed.	IEC 60601-2-52, 201.105

Symbol	Description	Standard Reference
IPX4	Ingress Protection Code X4 denotes protection against dust and water spray from any direction.	IEC 60601-1, D.3-2
	Class II equipment classification in terms of protection against electrical shock.	IEC 60601-1, D.1
	Battery status: <ul style="list-style-type: none"> • Yellow—Charging • Green—Fully charged 	n/a
	Product can be recycled. Refer to <i>8.2 Disposal, page 39</i> .	WEEE Directive 2012/19/EC
	Initiation to activate the entire mattress support platform (HILO).	IEC 60601-2-25, 201.106
	Initiation to activate the head section of the mattress support platform.	IEC 60601-2-25, 201.106
	Toggle switch for one-touch head and knee-foot raise operation.	IEC 60601-2-25, 201.106
	Initiation to activate the knee-foot section of the mattress support platform.	IEC 60601-2-25, 201.106
	Up Control – Raise the corresponding section of the mattress support platform. Down Control – Lower the corresponding section of the mattress support platform.	n/a
	General warning symbol.	ISO 7010-W001
	Hand crushing hazard symbol.	ISO 7010-W024
	Foot crushing hazard symbol.	n/a

3.3 Electronics

A control box and actuators under the bed control the electrical functions and bed movement. The control box and the actuator locations are shown in the following images.

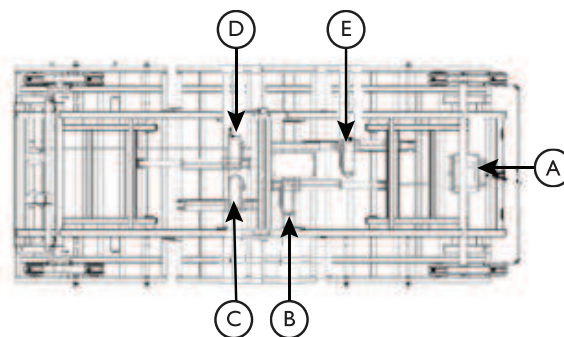
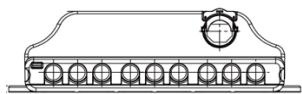


Fig. 3-1 Control Box

Fig. 3-2 Control Box and Actuator Locations

Label	Description
Ⓐ	Control box
Ⓑ	HI/LO head actuator
Ⓒ	Foot actuator
Ⓓ	HI/LO foot actuator
Ⓔ	Head actuator

The actuator and pendant cable plugs correspond to the ports on the control box. For example, connect a blue plug to a blue port.

4 Setup

4.1 Receiving


WARNING!
Risk of Injury or Damage

“Qualified Technician Only” sections are marked accordingly.
-Setup and assembly instructions **MUST** be performed only by qualified technicians.

 All shipments must be inspected within 5 days in order to make a freight claim for any concealed damage .

1. Count the cartons before signing the shipping papers.
2. Designate someone at the facility to receive and inspect all merchandise. Use the master order acknowledgment to check off items as they are received.
3. Inspect the cartons for damage.
4. Compare the number of cartons shipped with the number of cartons actually received and note such on the consignee copy of the freight bill. Make sure to have the truck driver sign the copy acknowledging the count and any damage.
5. If there is a shortage or if the cartons are damaged, **IMMEDIATELY** contact Invacare Customer Service at (800) 333-6900.

4.2 Unpacking


DANGER!
Risk of Injury or Damage

Continued use of the product with damaged parts could lead to the product malfunctioning, causing injury to the user and/or caregiver.

-Check ALL product components and carton for damage and test components before use. In case of damage or if the product is not working properly, contact a qualified technician or Invacare for repair.
-Any modifications to the product are strictly prohibited.


WARNING!
Risk of Injury or Damage

To avoid damage or personal injury:

-DO NOT plug the power cord into a power source until assembly is complete.
-DO NOT attempt to operate product controls prior to completion of assembly.


WARNING!
Risk of Injury or Damage

To avoid damage or personal injury:

-Note the bed is extremely heavy. Make sure at least two people unpack it.
-Ensure the center of the bed is properly connected prior to use.


WARNING!
Risk of Damage

To avoid product damage from misuse:

-DO NOT cut any trimmed plastic wire ties.
-Cut only the untrimmed plastic ties around the wood spacer. All other plastic ties are used to secure the electric cables in place and should not be cut.

1. Remove the outside packaging.



Fig. 4-1

2. Remove the two screws on the head base frame and the two screws on the foot base frame.

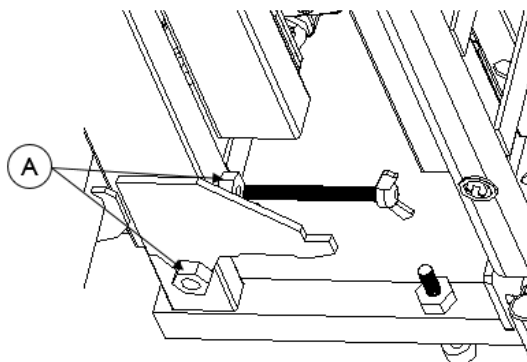


Fig. 4-2

3. Lift the head and foot frame from its support (B).

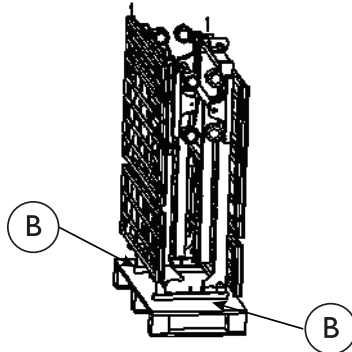


Fig. 4-3

4. Lay the head and foot frame flat on the floor.

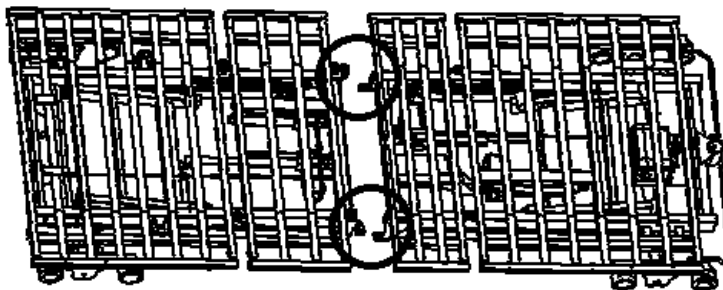


Fig. 4-4

5. Insert the two motor cables as shown.

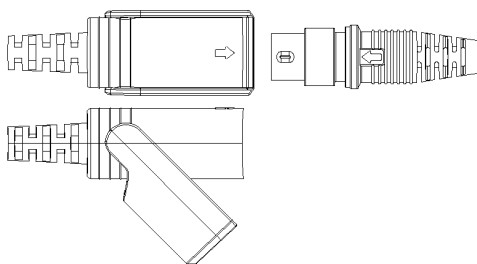


Fig. 4-5

6. Push out the two pins © on the foot frame, gather the head and foot frames together, and pull the pins ④ to lock the frames.

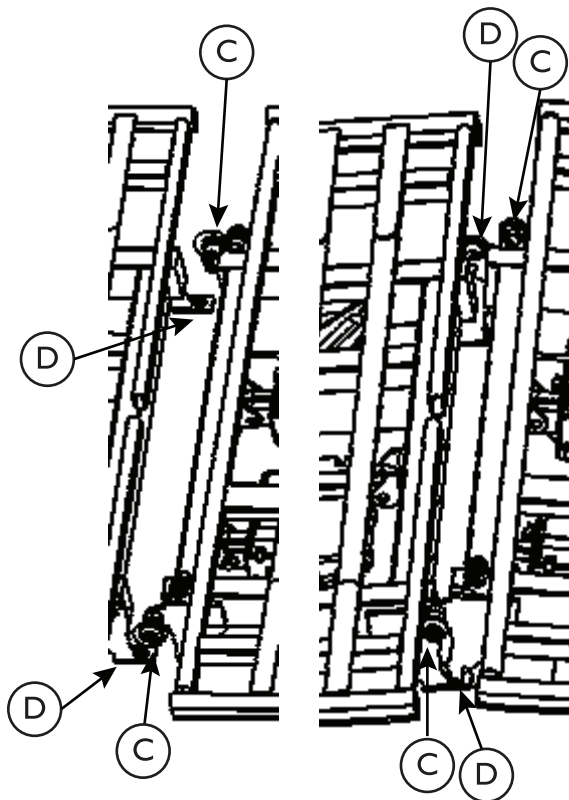


Fig. 4-6

Fig. 4-7

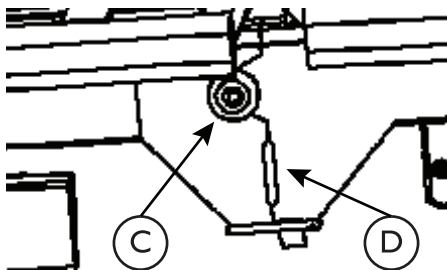


Fig. 4-8

7. Remove the bands.
8. Inspect the plug and cord for any cuts or damage. If there is no damage, plug in the bed and elevate the bed deck to a comfortable working height.
9. Cut the cable tie holding the power cord and the hand pendant, being careful not to damage cords or cables. DO NOT cut the cable ties holding the bed electronic wiring that connects the actuators to the control box.
10. Cut the cable ties holding the deck sections, being careful not to damage cords or cables.

**WARNING!****Risk of Injury or Damage**

Bed damage or personal injury may occur if bed is dropped. To avoid:

- Slowly lower the bed to the floor.
- Use additional people if necessary.

4.2.1 CS600 Bed Parts

The packaging contents include the parts and quantities listed in the following table.

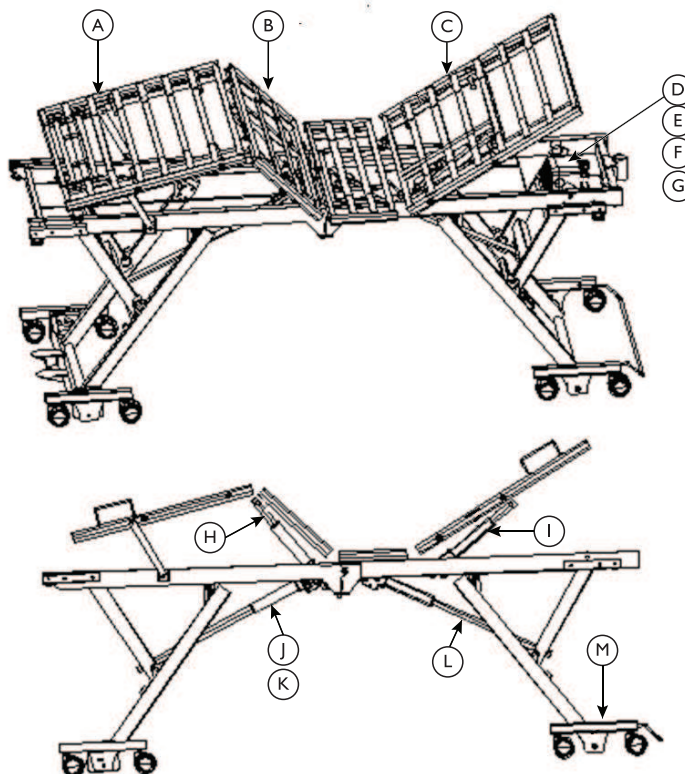


Fig. 4-9

Label	Description	Quantity
(A)	Leg Frame	1
(B)	Thigh Frame	1
(C)	Head Frame	1
(D)	Control Box	1
(E)	Hand Pendant	1
(F)	Power Cable	1
(G)	T-cable	1
(H)	Foot Section Actuator	1
(I);	Head Section Actuator	1
(J)	Hi/Lo Actuator for Foot Section	1
(K)	Hi/Lo Motor Extension Cable	2
(L)	Hi/Lo Actuator for Head Section	1
(M)	Head Section H-Shape Base	1

4.3 Inspecting



DANGER!

Risk of Injury or Damage

To avoid injury or damage, inspect the following items and contact a qualified technician or Invacare if any of the following issues are present:

- Pendant covering is cracked or damaged.
- Power cord or plug are cut or damaged.
- Motor cables are cut or damaged.
- Junction box or connectors are damaged.



DANGER!

Risk of Injury or Damage

To avoid injury or damage:

- Ensure the connectors are plugged into the junction box and fit properly.

4.4 Installing the Mattress Keepers



DANGER!

Risk of Death, Injury, or Damage

To avoid product damage and/or personal injury from fall or entrapment:

- Mattress keepers **MUST** be used.



For more information regarding bed rail safety, refer to the Bed Rail Entrapment Risk Notification Guide at www.invacare.com.

The CS600–36 and CS600–EXP mattress keepers kit includes four parts.

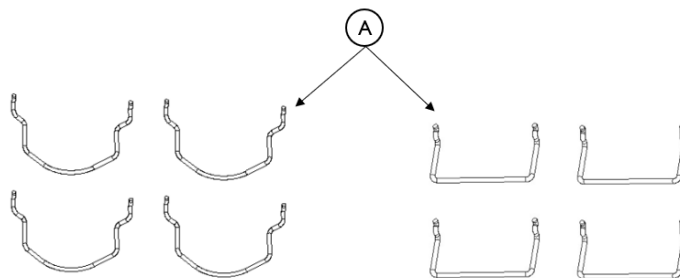


Fig. 4-10 CS600 Mattress Keepers (CS600–36 on the left; CS600–EXP on the right)

To install the mattress keepers:

1. In the two holes on the sides of the head and foot ends of the bed frame, insert each leg of the mattress keeper ①.

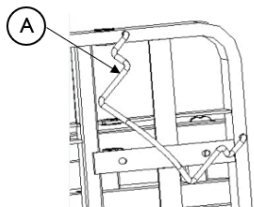


Fig. 4-11 CS600–36

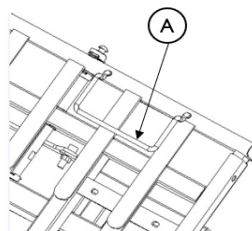


Fig. 4-12 CS600–EXP and CS600–36 with width extender CS600WIDTHEXP

2. With the mattress keeper (A) legs positioned in the holes, rotate the mattress keeper toward the outside of the bed while slowly pushing the legs farther into the holes.

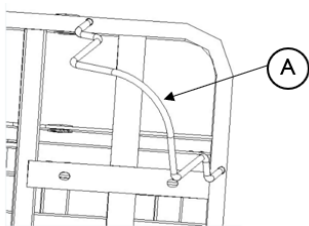


Fig. 4-13 CS600-36

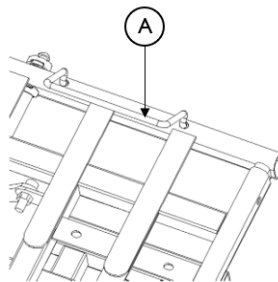


Fig. 4-14 CS600-EXP and CS600-36 with width extender CS600WIDTHEXP

3. When the mattress keeper (A) is fully rotated, press the mattress keeper into position.

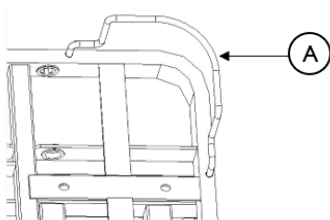


Fig. 4-15 CS600-36

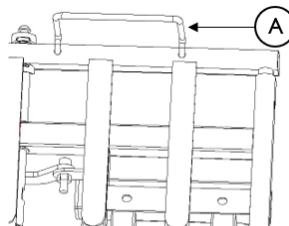


Fig. 4-16 CS600-EXP and CS600-36 with width extender CS600WIDTHEXP

4. Repeat steps 1-3 for the remaining mattress keepers.
5. Place the mattress on the bed sleep surface. Note the mattress should be slightly compressed.

4.5 Installing the Bed Ends

The CS600–36 and CS600–EXP bed end kit includes:

- One headboard (A)
- One foot board (B)
- Four L tubes (C)
- Eight screws (D)

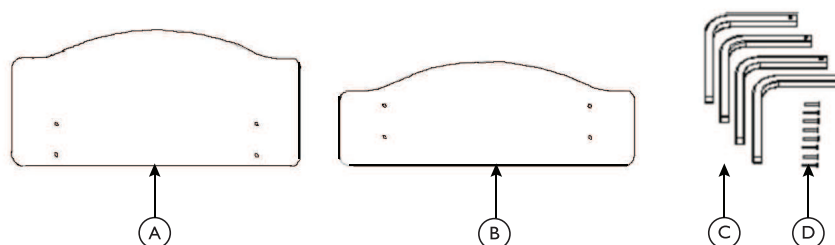


Fig. 4-17 Bed End Kit

To install the bed ends:

1. Loosen the black knobs (E) under the head and foot ends.

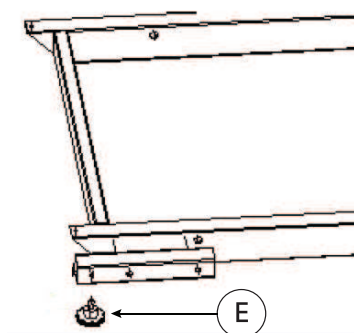


Fig. 4-18

2. Press the snap button (F) on one L tube (C) and insert it into the mounting tube (G) until the snap buttons align in the mounting tube holes.

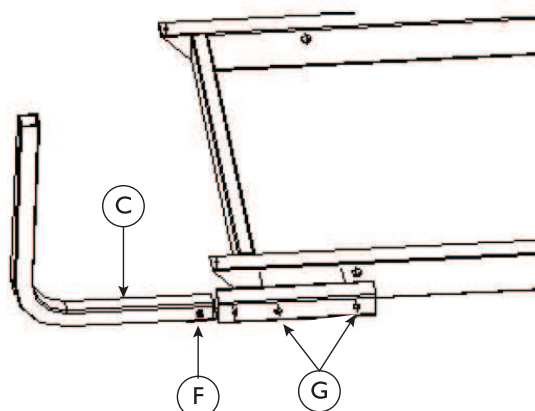


Fig. 4-19

- 3. Repeat step 2 for the remaining L tubes.
- 4. Ensure the snap buttons are seated in the proper holes.

Bed Length (inches)	Headboard Bracket Hole	Foot Board Bracket Hole
80	2	3
84	2	4

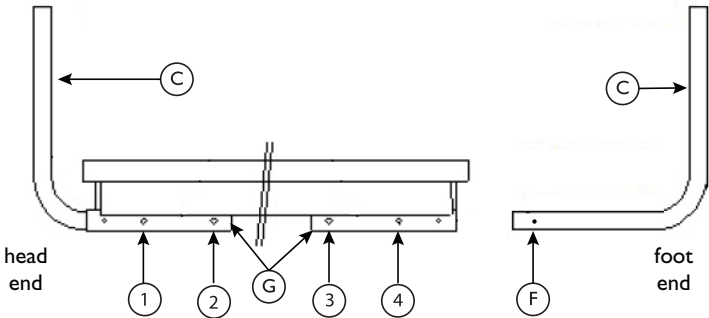


Fig. 4-20

- 5. Attach the headboard (A) and the foot board (B) to the L tubes (C) with a Phillips® screwdriver.

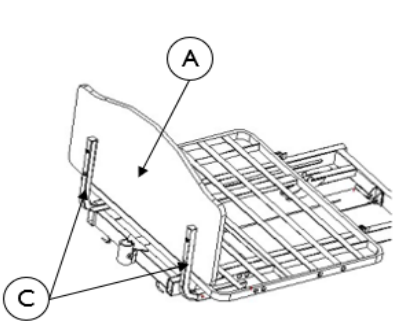


Fig. 4-21 Headboard

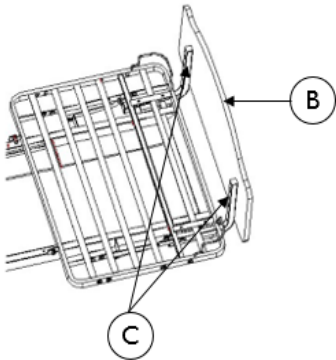


Fig. 4-22 Foot Board

4.6 Installing or Moving the Pendant

- ⚠ Before working on any electrical part, such as the 9-pin pendant coupling, ensure the main power to the bed is disconnected.
- After disconnecting the power, sequentially depress the **Up** and **Down** buttons on the hand pendant at least 20 times to dispel any remaining charge. Ensure the hand pendant is not locked out when performing this function.



CAUTION!
Risk of Damage

To avoid damage to the bed and hand pendant:
-Ensure the pendant and pendant cable are clear of moving parts at all times.

The CS600–36 and CS600–EXP beds include a hand pendant ④.

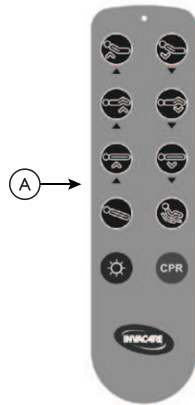



Fig. 4-23

 The pendant is installed on the bed at the factory. Refer to this procedure if a pendant must be reinstalled.

To install and move the pendant:

1. Plug the pendant cable ① into the eighth hole of the control box ②.

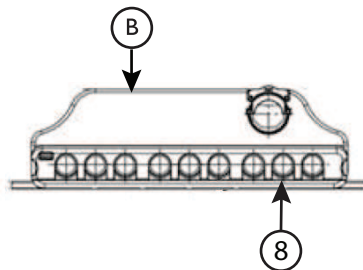


Fig. 4-24

2. Use the clip on the back of the pendant to attach the pendant to one of the following locations:
 - Rail bars
 - Bed linens
 - Head end
3. To move the pendant:
 - A. Ensure the pendant cable is not entangled in bed parts or linens.
 - B. Move the pendant to its new location and attach it with the clip.

4.7 Expanding the Deck (model CS600-EXP only)

CS600–EXP model bed decks can be expanded from 36 inches to 39 inches or to 42 inches.

1. To expand the deck to 39 inches:
 - A. On the bed deck, press the **36** button.
 - B. Pull out the deck to 39 inches.
2. To expand the deck to 42 inches:
 - A. Press the **39** button.
 - B. Pull out the deck to 42 inches.

5 Operation

5.1 Bed Operation and Component Overview


WARNING!
Risk of Injury or Damage

To avoid electrical damage, product damage, shock, and/or personal injury:

- DO NOT unplug the power cord from the junction box.
- When the product is not to be used for an extended period, unplug the product from the wall outlet.
- Keep all product components and accessories a minimum of 12 inches away from hot or heated surfaces.
- After the product has been assembled and before use, always test to make sure all sections of the product are properly and securely in place. If any problems arise during the test, recheck all electrical connections and mechanical hookups and then retest. If the product is not working properly, contact a qualified technician or Invacare for repair.


WARNING!
Risk of Injury or Damage

To avoid unintentionally pressing the pendant buttons and causing injury or damage:

- DO NOT place the pendant under or between objects.


WARNING!
Risk of Injury or Damage

A safety feature of this product includes protection against overheating caused by excessive or extended periods of operation. Depending on the duration, this includes multiple or repeated adjustments or the use of multiple functions at one time.

- To ensure trouble-free operation, ALWAYS allow a slight pause between multiple adjustments and avoid pressing more than one function button at a time. If thermal protection activation should occur, the product will not respond to pendant commands. Given this situation, release the pendant button and allow the product to sit for several minutes. This will allow the protection function time to reset and restore product function. Depending on severity of the initial overheating, this could take up to 30 minutes.
- After the thermal protection activation period is complete, the bed may be prone to sudden movement. Use caution when using the product after the protection function time has reset and the pendant function has been restored.


WARNING!
Risk of Death, Injury, or Damage

Pendant malfunction may cause injury or damage.

- Unplug the bed from the electrical outlet and contact a qualified technician or Invacare for repair if any malfunction is detected.

5.2 Operating the CS600 Bed

Before placing the bed into use, test the bed by operating it through all phases of its operation.


CAUTION!
Risk of Falls or Injury

If casters are not locked, swivel and wheel rotation will allow bed motion with little or no resistance. This can result in loss of balance, falls, and personal injury.

- Use the one-touch locking mechanism in most situations where locking casters are needed. The bed will be most secure if the head end casters are locked along with the one-touch lock.
- Because movement near the head section of the bed may still result if force is applied, lock the head-end casters and the one-touch locking mechanism.

1. Use the pendant for all bed operations.
2. If any problems arise during the test, recheck all electrical connections and mechanical hookups.

5.2.1 Raising and Lowering the Head and Foot Sections

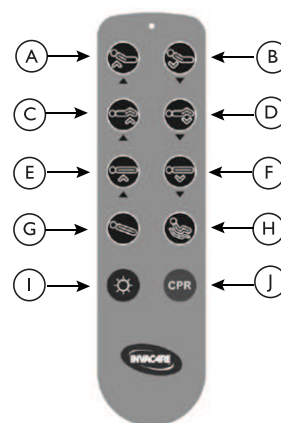


Fig. 5-1

1. To raise the head of the bed, press and hold the **Head Up** button (A).

2. To lower the head of the bed, press and hold the **Head Down** button ②.
3. To raise the foot of the bed, press and hold the **Foot Up** button ③.
4. To lower the foot of the bed, press and hold the **Foot Down** button ④.

5.2.2 Raising and Lowering the Entire Bed

1. To raise the entire bed, press and hold the **Bed Up** button ⑤.
2. To lower the entire bed, press and hold the **Bed Down** button ⑥.

5.2.3 Placing the Bed in the Reverse Trendelenburg and Chair Positions

1. To move the bed to the reverse Trendelenburg position, press and hold the **Reverse Trendelenburg** button ⑦.
2. To move the bed to the chair position, press and hold the **Chair** button ⑧.

5.2.4 Using the Under-bed Light and Returning the Bed to Level

1. To turn on or turn off the under-bed light (if available), press the **Light** button ①.
2. To return the bed to a flat position, press and hold the **CPR** button ④.

5.3 Using the One-Touch Floor Lock



CAUTION!

Risk of Damage

Moving the bed while the floor lock, caster lock, or foot pad is engaged may damage the bed. To avoid damage:

-DO NOT move the bed unless the floor lock, caster lock, or foot pad is disengaged (unlocked).

The one-touch floor lock allows the assistant to lock the bed in place or unlock it to move it.

The lock consists of two pedals. The left pedal ① is green; the right pedal ② is red.

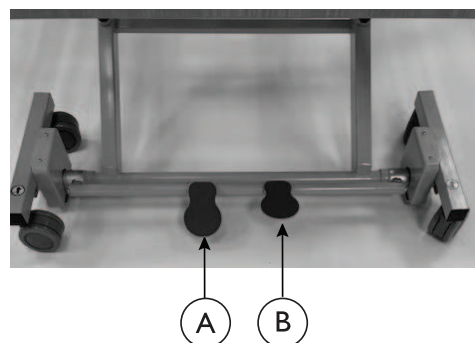


Fig. 5-2

To use the floor lock:

1. To lock the bed, press the red pedal ② with your foot.

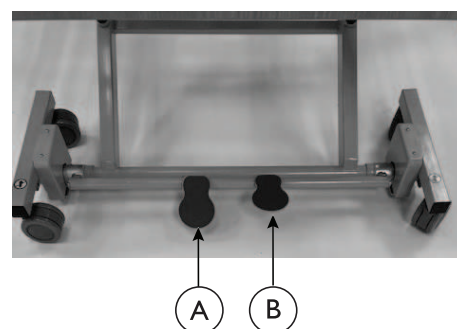


Fig. 5-3

2. To unlock the bed, press the green pedal ① with your foot.

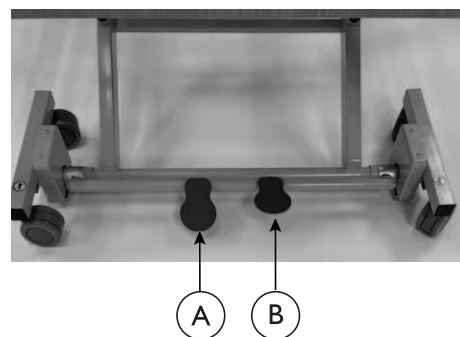


Fig. 5-4

5.4 Using the Bed Steering Mechanism

The bed steering mechanism is located on either side of the head end of the bed.


When the bed steering mechanism is engaged, the bed steers easily.

To engage the bed steering mechanism:

With the locking wheel tab facing outward, flip the steer mechanism.

6 Accessories

6.1 Bed Rails and Positioning Devices

-  Separate instructions for bed rails are available at pro.invacare.com. Separate instructions for other accessories are available in their respective manuals.



DANGER!

Risk of Injury or Damage

To avoid injury or damage from misuse:

- DO NOT install the optional bed rails without reading and understanding the **Bed Rail Risk Notification Guide** that accompanies this manual and is included with each bed rail kit. The **Bed Rail Risk Notification Guide** can also be found at www.invacare.com.



DANGER!

Risk of Death, Injury, or Damage

Patient entrapment from the use of bed side rails may cause injury or death. To avoid patient entrapment:

- The Invacare mattress **MUST** fit firmly against the bed frame AND bed side rails to prevent patient entrapment. Follow the manufacturer's instructions. Frequently monitor the patient. Read and understand the User Manual prior to using the Invacare bed and bed rails. User manuals are available at pro.invacare.com or your dealer.
- After any adjustments, repair, or service and before use, make sure all attaching hardware is securely tightened.



DANGER!

Risk of Death or Injury

To avoid entrapment, product damage, and/or personal injury:

- Invacare recommends the mattress be centered on the bed frame. Otherwise, individuals may become trapped between the bed rail and the bed frame.
- ALWAYS test to make sure the side rails are properly and securely in place before using. Otherwise, injury or damage may occur.



DANGER!

Risk of Death or Injury

An increased risk of patient entrapment may occur over time due to mattress compression.

- Periodically monitor gaps between the bed, mattress, and/or bed rail. Where gaps occur, patient entrapment is possible and the mattress should be replaced.



DANGER!

Risk of Death, Injury, or Damage

Proper patient assessment and monitoring, and proper maintenance and use of equipment is required to reduce the risk of entrapment. Variations in bed rail dimensions and mattress thickness, size, or density could increase the risk of entrapment.

- Visit the FDA website at <http://www.fda.gov> to learn about the risks of entrapment. Review "A Guide to Bed Safety", published by the Hospital Bed Safety Workgroup. Use the link located under each bed rail product entry to access this bed's safety guide.



DANGER!

Risk of Death, Injury, or Damage

Conditions such as restlessness, mental deterioration, and dementia or seizure disorders (uncontrolled body movement), sleeping problems, and incontinence can significantly impact a patient's risk of entrapment. Pediatric patients or patients with small body size may also have an increased risk of entrapment.

- Frequently monitor patients with these conditions.

**WARNING!****Risk of Death, Injury, or Damage**

To avoid injury or damage from instability, entanglement, or misuse:

- Evaluate residents prior to allowing them to use a trapeze.
- Only use the Invacare Heavy Duty Trapeze (1153386) with the bed.
- Never allow children to use, play, or swing on the trapeze.
- The heavy-duty trapeze is NOT designed to support the total body weight of an individual. Use it ONLY for assistance.
- When in use, always rotate the trapeze until the handle is located over the center of the bed and ensure it drops down into the anti-rotation position.



The CS600 trapeze safe working load is 220 lb (100 kg).
DO NOT exceed 220 lb (100 kg).

**WARNING!****Risk of Injury or Damage**

Contact between the floor and the assist rail may cause the bed to become unstable. An unstable bed may tilt from horizontal and/or drop suddenly causing property damage or personal injury. To avoid injury or damage from instability:

- Before lowering the bed, ensure the assist rail is not in the transfer position. Injury from patient falls may occur even when operating the side rails as instructed. Place the bed in the lowest position to minimize the risk from falls.
- Invacare recommends removing the trapeze when using the Trendelenburg function.

**WARNING!****Risk of Injury or Damage**

A risk of FALL exists when the assist bar is UNLATCHED. The assist bar may rotate quickly and drop to the next locked position, causing the patient to lose his or her balance and fall.

- Ensure the assist bar is fully latched in the down position after each use.
- Ensure the assist bar is locked before leaving a patient unattended.
- Never use the assist bar as a rail.

6.2 Available Accessories

Accessories available with the CS600 beds are listed in the following table. Refer to the accessory user manual and the *Bed Rail Entrapment Risk Notification Guide* on pro.invacare.com for important safety and operating information.



- ✓ indicates the accessory is compatible with the bed model.
- Blank indicates the accessory is not compatible with the bed model.

Accessory Description	Model	CS600–36 Compatible	CS600–EXP Compatible
CS600 Length Extension Kit	CS600LENGTHEXP	✓	✓
CS600 36" Quarter Length Rail Head Qty 2	CS600HALFRAILH	✓	
CS600 36" Quarter Length Rail Foot Qty 2	CS600HALFRAILF	✓	
CS600 Quarter Length Rail Head EXP Qty 2	CS600HALFRAILHEXP		✓

Accessory Description	Model	CS600–36 Compatible	CS600–EXP Compatible
CS600 Quarter Length Rail Foot EXP Qty 2	CS600HALFRAILFEXP		✓
CS600 Assist Rail 36" Qty 1	CS600ASTRAIL36	✓	
CS600 Assist Rail Expandable Qty 1	CS600ASTRAILEXP		✓
CS600 Head and Footboard 36" Solar Oak	CS600BE36SO	✓	✓
CS600 Head and Footboard 42" Solar Oak	CS600BE42SO	✓	✓
CS600 Head and Footboard 36" Biltmore Cherry	CS600BE36BC	✓	✓
CS600 Head and Footboard 42" Biltmore Cherry	CS600BE42BC	✓	✓
CS600 Head and Footboard 36" African Walnut	CS600BE36AF	✓	✓
CS600 Head and Footboard 42" African Walnut	CS600BE42AF	✓	✓
CS600 Under-bed Light	CS600UNDLIGHT	✓	✓
CS600 Trapeze	CS600TRAPEZE	✓	✓
CS600 Battery Backup	CS600BATBCK	✓	✓
CS600 Trolley Kit	CS600TROLLEY	✓	✓
CS600 Width Extension Kit: 36", 39", 42"	CS600WIDTHEXP	✓	
CS600 ACP Controller	CS600ACPPAD	✓	✓
CS600 Mattress Keeper 36" (without the width expansion accessory)	CS600MATKEEP	✓	
CS600 Mattress Keeper EXP (for CS600–EXP and CS600–36 with the width expansion accessory)	CS600MATKEEPEXP	✓	✓

6.3 Available Mattresses



DANGER!

Risk of Death, Injury, or Damage

To avoid product damage and/or personal injury from fall or entrapment:

-Invacare recommends the use of mattress keepers.

The mattresses in the following table have been tested to comply with FDA Entrapment Guidelines when sold new and unused and used as part of a system with new and unused beds and rails.



- ✓ indicates the mattress is compatible with the bed model.
- Blank indicates the mattress is not compatible with the bed model.

Mattress Description	Model	Weight	CS600–36 Compatible	CS600–EXP Compatible
Active 2 Hybrid Mattress	SRS3080M		✓	✓

Mattress Description	Model	Weight	CS600–36 Compatible	CS600–EXP Compatible
Active 2 Hybrid Mattress with Pump	SRS3080		✓	✓
Mattress Performance 1000, 80X36X6	SPS1080		✓	✓
Mattress Performance 1000, 84X36X6	SPS1084		✓	✓
Softform Premier Foam Mattress 80X36X6	IPM1080	32.0 lb (14.5 kg)	✓	✓
Softform Premier Foam Mattress 84x36x6	IPM1084	34.0 lb (15.4 kg)	✓	✓
Softform Premier Foam Mattress Bariatric 80X42X6	IPM1080B42	37.5 lb (17.0 kg)		✓
microAIR MA500 Alternating Pressure Low Air Loss Mattress System*	MA500	17–56 lb (7.7–25.4 kg), depending on model	✓	✓
microAIR MA600 Alternating Pressure Low Air Loss Mattress System*	MA600		✓	✓
microAIR MA800 Alternating Pressure Low Air Loss Mattress System*	MA800		✓	✓
microAIR MA800 42-inch Alternating Pressure Low Air Loss Mattress System*	MA800B42			✓
microAIR MA900 Lateral Rotation Low Air Loss Mattress System*	MA900		✓	✓
microAIR MA900 42-inch Lateral Rotation Low Air Loss Mattress System*	MA900B42			✓

 * The microAir series of air mattresses is excluded from the FDA Entrapment Guidelines tests.

** A length extension is required for this mattress.

*** A width extension is required for this mattress.

7 Maintenance



WARNING!

Risk of Injury or Property Damage

The information contained in this section of the manual must be performed by a qualified technician. Invacare expects that the qualified technician is familiar with the product, with good technical knowledge to understand and follow the steps of the described instructions in this manual, and equipped with proper tools.

- Installation, mounting, maintenance, or repairs made by unqualified persons can result in hazardous situations to you and others.
- Failure to carefully read and follow all instructions in this manual can result in equipment malfunction, property damage, personal injury, and/or death.

7.1 Cleaning



WARNING!

Risk of Injury or Damage

To avoid injury or damage from misuse:

- Read all guidelines, warnings, and cautions before performing any repair or maintenance on the bed.
- All repair and maintenance should be performed by a qualified technician.



DANGER!

Risk of Death, Injury, or Damage

To avoid damage to electric controls:

- If a liquid is spilled in or around the electric bed, unplug the electric bed before cleaning.
- Clean up the spill and allow the electric bed or the area around the electric bed to dry thoroughly before using the electric controls again.



WARNING!

Risk of Injury or Damage

Grease may leak from the gearbox and cause injury or damage from falling or fire.

- Follow the maintenance instructions in this manual.
- Routinely inspect the gearbox for grease leakage.

If the gearbox is leaking grease:

- Stop use immediately.
- Keep the product away from sparks, flame, and open heat sources.
- Contact your dealer or Invacare for repair.



WARNING!

Risk of Injury or Damage

The electric motors, control box, and pendant are NOT protected against the entrance of dust and liquids.

- DO NOT spray liquids into any electrical components.
- DO NOT wash the head or foot section.
- DO NOT allow the electrical components to get wet.



WARNING!

Risk of Injury or Damage

To avoid product damage or injury:

- Clean the product according to the instructions.
- Note the product may be damaged from multiple or excessive cleanings.




CAUTION!

Risk of Injury or Damage

The bed is a heavy piece of equipment.

- To avoid product damage or injury, it is strongly recommended that any servicing or maintenance of the bed be performed by two or more technicians.

Beds must be cleaned every two months or between users.

1. Unplug the product before washing it.
2. Wipe the product with disinfectant.
3. Allow the product to completely dry before use.
4. Make sure all electrical parts (motor, control box, and pendant) are not damaged and all connection ports are plugged. DO NOT allow liquids to enter the electrical components.
5. Disinfect and wash all components. DO NOT submerge the bed frame or electrical parts.
6. DO NOT power wash or steam clean. Use only household water pressure.
7. Rinse thoroughly with water at a maximum temperature of 110°F (43°C).
 -  DO NOT use solvents, bleach, alcohol, petroleum products, caustic agents, or highly alkaline or acidic agents to clean the bed.

8. Retract each actuator to the minimum stroke length before washing to avoid degreasing the piston rod.
9. Dry all components before storing.

7.2 Annual Maintenance Checklist

- ☐ Inspect the bed control panel and the patient control panel coverings for cracks or damage.
- ☐ Inspect for damaged or loose wiring. Have a qualified technician replace any frayed or damaged cords.
- ☐ Inspect for secure grounding.
- ☐ Inspect the rail latches. Ensure all rails engage and lock as specified.
- ☐ Inspect the rails for wear and damage and replace as necessary.
- ☐ Lubricate the rail pivot points with white lithium grease as necessary.
- ☐ Inspect the bed, rails, assist rails, and assist bars for the presence of tubing end caps and replace as necessary.
- ☐ Tighten, adjust, or replace any bolts or other parts or bolts that are loose or show signs of wear.
- ☐ Lubricate all mechanical hinge points, bushings, and surface contact points with white lithium grease.
- ☐ Inspect the clevis pins and hitch pins for wear and replace them if they are worn or missing.
- ☐ Inspect the rails for noticeable scratches and chips. Use a matching enamel touch-up paint to retouch them as necessary.

7.3 Every-Other-Month Maintenance Checklist

- ☐ Unplug the bed from the wall outlet and verify battery function, if equipped. The battery may be built-in or portable.
- ☐ Inspect all bed components for damage or excessive wear.

- ☐ Visually examine all welds for cracks.
- ☐ Inspect the deck components for any bending, damage, or excessive wear.
- ☐ Check the ends of the actuators and mounting hardware for any bending, damage, or excessive wear.
- ☐ Inspect all bolts and fasteners for proper functioning. Do NOT overtighten bolts at the pivot points.
- ☐ Check the casters to ensure they are mounted tightly, locking properly, and rolling properly.

7.3.1 Electrical Inspection

- ☐ Inspect all electrical bed components for damage or excessive wear (for example, broken housings or worn components).
- ☐ Check handset, power, and actuator cords for chafing, cuts, or excessive wear.
- ☐ Ensure all plugs are fully plugged in and free of damage.
- ☐ Ensure all cords are properly routed with cable ties and free of moving parts.
- ☐ Check all bed functions:
 - ☐ Head raises and lowers properly.
 - ☐ Foot raises and lowers properly.
 - ☐ Bed raises and lowers properly.
 - ☐ Comfort Chair raises and bed levels properly.
- ☐ Check for malfunctions, recalls, or safety notices.

7.4 Maintenance Log

Use the following table to record cleaning, inspection, and maintenance tasks.

[illegible]

7.5 Maintenance and Cleaning Checklist

Invacare recommends the following maintenance and cleaning procedures be conducted initially, between users, and as needed. This form is provided as a guide to help with documentation.

7.5.1 Cleaning and Disinfecting

- Unplug the power cord of electric beds before performing maintenance.
- Wipe down with disinfectant. Allow to dry completely.

7.5.2 Mechanical Inspection and Maintenance

- Inspect all bed components (for example, rails, clevis pins, and hitch pins) for damage or excessive wear and replace as necessary.
- Visually examine all welds for cracks.
- Inspect the head and foot spring sections for bending, warping, or damage.
- Check the drive shaft and drive shaft connections for bending, damage, or excessive wear.
- Inspect the pull tubes and mounting hardware for bending, damage, or excessive wear.
- Inspect all bolts and rivets to ensure they are securely tightened and properly functioning.
- Check casters to ensure they lock, if applicable, and properly roll.
- Ensure the end caps are in place and secure. Replace them if they are missing or damaged.

In addition, dealers should inspect bed ends for proper operation:

1. Adjust the bed ends to the lowest position.
2. Remove the bed ends from the head or the foot spring.
3. Remove the bed end caps and the plastic cover.
4. Inspect the cables and pulleys for wear.
5. Inspect the Acme screws for lubrication. Apply a light lithium-based grease as necessary.
6. Reinstall the plastic cover and end caps.

7.5.3 Electrical Inspection and Maintenance

- Inspect all electrical bed components for damage or excessive wear (for example, cracked or broken housings or worn components).
- Check the pendant, power, and motor cords for chafing, cuts, or excessive wear.
- Make sure all plugs are fully attached and free of damage.
- Check all functions:
 - The head raises and lowers properly.
 - The foot raises and lowers properly.
 - The bed ends raise and lower properly.

In addition, dealers should inspect all electrical bed components for the following issues:

- Chafing
- Nicks in the insulation
- Missing insulation
- Exposed internal wiring or conductors
- Signs of pinching or crushing

- Broken or deformed connectors

ⓘ If these conditions are present, the bed **MUST NOT** be used until the damaged component or wiring is replaced. Modifications or other forms of repair, including electrical or similar tape, **MUST NEVER** be used.

7.5.4 PASS/FAIL

- **PASS:** The bed and all components passed all of the preceding inspection criteria and the bed is ready for placement into a client's home.
- **FAIL:** The bed or any component failed any of the preceding inspection criteria. Tag the bed or component with a complete description of the failure and have the bed serviced.

8 After Use

8.1 Storage

8.1.1 Storing the Bed


WARNING!
Risk of Injury or Damage

To avoid product damage and personal injury:
-DO NOT place other objects on top of the cartons.


WARNING!
Risk of Injury or Damage

To avoid product damage and personal injury:
-Disconnect the pendant when it is not in use and store it out of reach of children.

If the bed is not being assembled immediately, retain the cartons and packaging for storage until it is ready for assembly.

Store the bed in a dry area.

8.1.2 Storing the Power Cord



Disconnect the main power cable from the wall outlet and store the power cord when the bed is not in use.

1. Secure the power cord to the hook under the head end of the bed frame when moving the bed.
2. Secure excess power cord to the hook under the head end of the bed frame.

8.2 Disposal

Follow local governing ordinances and recycling plans regarding disposal of the product or components normally used in operation. The product does not generate waste or residue in operation. Any accessories not part of the product **MUST** be handled in accordance with the individual product marking for disposal.

This product has been supplied from an environmentally aware manufacturer that complies with the Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EC.

This product may contain substances that could be harmful to the environment if disposed of in places (landfills) that are not appropriate according to legislation.

Please be environmentally responsible and recycle this product through your recycling facility at its end of life.

8.3 Wear-and-Tear Items

Normal wear-and-tear items and components include but are not limited to the items in the following list:

- Hand pendants
- Casters (tread wear and brake levers)

Invacare reserves the right to ask for any item that has an alleged defect in workmanship to be returned. See the warranty that shipped with the product for specific warranty information.

9 Troubleshooting

Symptom	Probable Cause	Solution
None of the functions work.	The hand pendant is not plugged in.	<ol style="list-style-type: none"> 1. Plug in the hand pendant. 2. Replace the hand pendant.
	The bed is not connected to an outlet.	Plug the bed power cord into a wall outlet.
	The power outlet is connected to a switch.	<ol style="list-style-type: none"> 1. Turn on the switch. 2. Check the fuse box. 3. Try another wall outlet. 4. Verify the outlet is adequate for the bed electrical rating.
	The power cord is not fully connected to the control box.	Fully insert the power cord into the control box.
	The power cord is damaged.	Replace the power cord.
The bed functions correctly but moves slowly.	The bed is not connected to an outlet.	Plug the power cord into a wall outlet.
	The power outlet is connected to a switch.	<ol style="list-style-type: none"> 1. Turn on the switch. 2. Check the fuse box. 3. Try another wall outlet. 4. Verify the outlet is adequate for the bed electrical rating.
	The power cord is not fully connected to the control box.	Fully insert the power cord into the control box.
	The power cord is damaged.	Replace the power cord.
One of the actuators is making a grinding noise.	The actuator gear is stripped.	Replace the actuator.

Symptom	Probable Cause	Solution
One of the actuators is not functioning.	The hand pendant is not working.	Replace the hand pendant.
	The control box port is not functioning.	<ol style="list-style-type: none"> 1. Insert the actuator cord into a working control box port. 2. Replace the actuator.
	The actuator cable is damaged.	<ol style="list-style-type: none"> 1. Inspect the actuator cable for damage. 2. Replace the actuator cable.
	The actuator cable plug is not fully inserted in the actuator and in the control box.	Fully insert the actuator cable plug into the actuator and the control box.
	The port on the control box is not functioning.	Insert the actuator cord into another working port on the control box.
The bed is not level when operating the Hi/Lo functions.	The bed load is not evenly distributed.	Raise or lower the bed to its maximum or minimum height.
The actuators operate but do not move correctly.	The actuators are plugged into the wrong ports.	<ol style="list-style-type: none"> 1. Plug the actuators into the correct ports on the control box. 2. Replace the control box.

If the solutions in the preceding table do not resolve the issue, contact Invacare Customer Service at 1-800-333-6900.

10 Technical Data

10.1 Technical Specifications

10.1.1 Specifications

Specification	Value
Shipping Weight (including mattress keepers)	<ul style="list-style-type: none"> CS600–36: 216.7 lb (98.3 kg) CS600–EXP: 243 lb (110.3 kg) and including width expander
Bed Deck Length	
Overall	80 inches (223.4 cm)
With optional sleep surface extension	84 inches (213.4 cm)
Width	
Overall	36 inches (91.4 cm)
With optional width extension	<ul style="list-style-type: none"> 36 inches (91.4 cm) 39 inches (99.1 cm) 42 inches (106.7 cm)
Adjustment Range	
Maximum Back Angle	60° ± 5°
Maximum Knee Angle	30° ± 5°
Deck Height	7 inches (17.8 cm) to 30 inches (76.2 cm)
Electrical Specifications	
Power	<ul style="list-style-type: none"> 100–240 V.A.C. 20 A 50/60 Hz
Duty Cycle	10% maximum (2 minutes on; 18 minutes off)
Weight Capacity	
Occupant	500 lb (227 kg)
Safe Working Load*	600 lb (272 kg)

* The safe working load includes the weight of the user and all other accessories, such as mattresses, headboards, foot boards, and side rails.

10.1.2 Certifications

Models CS600–36 and CS600–EXP have passed type-testing for compliance with IEC 60601-2-52:2009, AMD 1:2015 and are determined to be safe by a nationally recognized testing laboratory recognized pursuant to 29 CFR 1910.7.

10.2 Operating Conditions

Specification	Value
Recommended Storage and Shipping Temperature	14°F to 125°F (-10°C to 50°C) up to 75% relative humidity
Recommended Operating Temperature	41°F to 104°F (5°C to 40°C) up to 80% relative humidity
Recommended Atmospheric Pressure	700 hpa to 1060 hpa

11 Warranty

11.1 Limited Warranty

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser who purchases this product when new and unused from Invacare or a dealer. This warranty is not extended to any other person or entity and is not transferable or assignable to any subsequent purchaser or owner. Coverage under this warranty will end upon any such subsequent sale or other transfer of title to any other person.

This warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state. Invacare warrants the mechanical and electrical components of this product when purchased new and unused to be free from defects in materials and workmanship for the periods described below from date of purchase from Invacare or a dealer, with a copy of the seller's invoice required for coverage under this warranty. The component warranty periods are listed in the following table:

Component	Warranty Period (Years)
Actuator	3
Control box	3
Frame	7
Frame welds*	Lifetime
Hand pendant and all other parts not listed in this table	1

*The lifetime warranty on the frame welds applies for as long as the original purchaser (who purchases this product when new and unused from Invacare or a dealer) owns the product.

If within such warranty periods any such product shall be proven to be defective, such product shall be repaired or replaced at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the back cover, provide the dealer's name, address, and the date of purchase, indicate the nature of the defect and, if the product is serialized, indicate the serial number. Do not return products to our factory without our prior consent.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT (INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY INVACARE. THE WARRANTY SHALL NOT APPLY TO MISUSE, NEGLIGENCE, OR NORMAL WEAR AND TEAR OR FAILURE TO ADHERE TO THE PRODUCT INSTRUCTIONS.

THE WARRANTY DOES NOT EXTEND TO NON-DURABLE COMPONENTS, SUCH AS RUBBER ACCESSORIES AND CASTERS, WHICH ARE SUBJECT TO NORMAL WEAR AND REQUIRE PERIODIC REPLACEMENT.

THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THE SOLE REMEDY FOR VIOLATIONS OF ANY WARRANTY WHATSOEVER, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN. THE APPLICATION OF ANY IMPLIED WARRANTY WHATSOEVER SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESS WARRANTY PROVIDED HEREIN. INVACARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.

Some states do not allow the exclusion or limitation of incidental or consequential damage, or limitation of how long an implied warranty lasts, so the above exclusion and limitation may not be applicable.

THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE/PROVINCIAL LAWS AND REQUIREMENTS.

Contact Information



United States

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Yes, you can.