Xpedition™ Powered Stair Chair

Operations/Maintenance Manual

REF 625700000000
REF 625705550001
REF 625705550002
REF 650700080301
REF 650700450301

6257-009-001

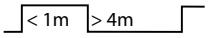
EN

6257-009-001 Rev AG.0 2023-07

Symbols

	Refer to instruction manual/booklet
	Consult instructions for use
	General warning
	Caution
	Warning; crushing of hands
	Warning; non-ionizing radiation
	No pushing
	China RoHS without declarable substances
	China RoHS with declarable substances
	No stepping
	CE mark
	UK Conformity Assessment mark
	Importer
	Unique device identifier
	Authorized representative in the European Community
	Authorized representative in Switzerland

MD	European medical device
REF	Catalogue number
LOT	Lot (batch) code
SN	Serial number
US Patents	For US Patents see www.stryker.com/patents
	Manufacturer
	Date of manufacture
	Mass of equipment with safe working load
	Safe working load
	Type BF applied part
	Medical Equipment Classified by Underwriters Laboratories Inc. With Respect to Electric Shock, Fire, and Mechanical Hazards Only in Accordance with ANSI/AAMI ES60601-1:2012 and CAN/CSA-C22.2 No. 60601-1:14.
⎓	Direct current
~	Alternating current
	Class II electrical equipment: equipment in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as double insulation or reinforced insulation are provided, there being no provision for protective earthing or reliance upon installation conditions.
	Dangerous voltage
IP36	Ingress protection rating
	In accordance with European Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE) as amended, this symbol indicates that the product should be collected separately for recycling. Do not dispose of as unsorted municipal waste. Contact local distributor for disposal information. Ensure infected equipment is decontaminated prior to recycling.
	The Rechargeable Battery Recycling Corporation (RBRC) is a non-profit, public service organization that promotes the recycling of portable rechargeable batteries. Batteries must be delivered to a battery collection site. Visit the RBRC website (www.rbrc.org) to find a nearby collection site or call the phone number shown on the recycling symbol.
	Two person lift
	This way up

	Fragile, handle with care
	Keep dry
	Stacking limit by number
D C T - +	Battery terminal identification (D - data (SMBus data line), C-clock (SMBus clock line), T- T-Pin or temperature, - negative terminal, + positive terminal)
2800 mAh/71.68 Wh	Battery capacity and duration
	Chair duty cycle
U.S.A.	English text below this symbol is intended for USA audiences only
	Distributed by in the US
MADE IN U.S.A.	Product made in the United States of America
	Box manufacturer’s certificate
	The **Alvarium** charger complies with the requirements of UL 62368-1:2019 Ed. 3 and CSA C22.2#62368-1:2019 Ed. 3 for audio/video, information and communication technology equipment, The **Alvarium** battery complies with the requirements of UL 62133-2:2020 Ed. 1 and CSA C22.2#62133-2:2020 Ed. 1 for secondary lithium battery systems.
	The **Alvarium** battery complies with the requirements of UL 62133-2:2020 Ed. 1 and CSA C22.2#62133-2:2020 Ed. 1 for secondary lithium battery systems.
	Main patient containment system (PCS) restraint straps

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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.

WARNING

- This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
- Always use all restraint straps to secure the patient on the product. An unrestrained patient may fall from the product and be injured.
- Do not apply a wheel lock when you move the product to avoid the risk of tipping.
- Always avoid getting dirt or other obstructions inside the track frame. The track system may not work the same on all stair surfaces and in all environmental conditions. Based on conditions, you may encounter varying amounts of resistance.
- Always clean and dry the track belts before stair transport.
- Always clear the path or consider an alternate route to avoid injury. Condensation, water, ice, or debris on the stairs can affect operator footing and proper operation of the track system and cause unpredictable performance that results in a sudden change in the weight that the operators must support.
- Do not attempt to transport patient loads greater than what you can safely lift.
- Always clear any obstacles that may interfere and cause injury to the operator or patient before you operate the product.
- Always inspect the product for damage if involved in an ambulance accident. Contact Stryker Customer Service or Technical Support for more information.
- Always hold onto the grab bar while you extend the tracks. The product is less stable when unoccupied.
- Do not drive the product on winding stairs. Use the carry handles to manually transport the product up and down winding stairs.
- Do not stand on the footrest option. The footrest option is not intended to support the weight of a standing operator or patient.
- Always avoid accidental patient contact with the user controls. User control temperature may reach 118.4° F (48° C) after ten minutes of operation.
- Do not operate if the product is behaving abnormally or erratically.
- Always make sure that the product is locked in the unfolded position before use. An unlocked product may fold during use. If you accidentally activate the fold-release mechanism, pull back on the product until locked in place.
- Do not remove the battery when the product is active.
- Do not attempt to open the battery pack for any reason to avoid the risk of electric shock. If the battery pack case is cracked or damaged, do not insert the case into the charger. Return damaged battery packs to a service center for recycling.
- Always avoid direct contact with a wet battery or battery enclosures. Contact may cause injury to the patient or operator.
- Do not insert a cracked or damaged battery into the charger. Return damaged batteries to a service center for recycling.

- Do not connect AC and DC power supplies to the battery at the same time to avoid the risk of fire or electric shock.
- Always have a certified mechanic, familiar with ambulance vehicle construction, secure the charger mounting plate option and charger.
- Always make sure that the charger mounting plate option is secured to the surface before use.
- Do not use the product to transport patients who have suspected spinal injuries.
- Do not leave a patient unattended. Hold the product while a patient is on the product.
- Always make sure that patient belongings do not interfere with the user interface and track system.
- Do not transfer the patient to or from the product while on uneven surfaces, if possible. Transfer the patient while the product is on flat surfaces to avoid the risk of tipping.
- Do not push the product with the grab bar in the fully extended position. Pushing the product with the grab bar in the fully extended position may cause the product to tip when you encounter obstacles.
- Do not press the GO button while transporting on flat surfaces to avoid operator or patient injury.
- Always transport the patient on stairs with a minimum of two trained operators. Additional operators are recommended for patients who weigh more than 250 pounds.
- Always lock the carry handles in position before you use the carry handles to lift or tip the product back.
- Always lock the track system in position before you transport a patient.
- Do not install or apply a wheel lock on a product with worn wheels.
- Always apply both wheel locks.
- Always clean and disinfect or dispose of contaminated product components to avoid risk of exposure to bloodborne pathogens and injury to the patient or operator.
- Always secure the oxygen bottle and oxygen bottle accessories so they do not interfere with the operation of the product.
- Always follow these cleaning and disinfecting guidelines, in addition to your protocols, to maintain hygienic safety.
- Always use any appropriate personal protective equipment while power washing to avoid inhaling contagion. Power washing equipment may aerate contamination.
- Always wear rubber gloves, in addition to personal protective equipment, when cleaning the battery to reduce the risk of injury.
- Always disconnect the charger from the wall outlet before cleaning to avoid the risk of electrical hazards.
- Do not spray fluid directly onto the charger.
- Do not power wash the charger.
- Do not use solvents, lubricants, or other chemicals to clean the charger unless otherwise directed.
- Do not immerse the charger in liquid or allow liquid to collect on top of the charger to avoid the risk of electric shock.
- Always use only non-conductive materials to wipe the battery.
- Always avoid excessive water exposure to the battery terminals.
- Do not directly handle or make contact with the battery terminals while cleaning to avoid the risk of injury.
- Do not immerse the battery in liquid or allow liquid to collect on top of the battery to avoid the risk of electric shock.
- Do not use solvents, lubricants, or other chemicals to clean the battery unless otherwise directed.
- Do not power wash the battery.
- Do not use portable RF communications equipment, including peripherals such as antenna cables and external antennas, closer than 12 inches (30 cm) to any part of **Xpedition**, including cables specified by the manufacturer.
- Always avoid stacking or placing other equipment adjacent to **Xpedition** to prevent improper operation of the products. If such use is necessary, carefully observe the chair and the other equipment to verify proper operation.
- Do not use accessories, transducers, and cables, other than those specified or provided by the manufacturer, to avoid increased electromagnetic emissions or decreased electromagnetic immunity and 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.
- Always use caution when you operate the product on stairs with condensation, water, or ice. Smooth tracks may have reduced traction in these conditions. Grooved tracks are recommended if you regularly operate the product in cold weather.

- Always use caution if you store the product at temperatures < 14° F (-10° C) or > 113° F (45° C). Drive speed may revert to the low setting at these temperatures.
- Always remove the battery if you do not intend to use the product for more than 24 hours or longer.
- Always place the electrical charger power cord where it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not touch the battery receptacle terminals with metal objects.
- Always grasp and pull the plug, not the cord, when you disconnect the charger to avoid the risk of damage to the electrical plug and cord.
- Always store excess restraint strap material to avoid the risk of tripping.
- Always check for and remove any debris in the casters before transport.
- Always release the red track release bar before you click the track system into the locked position. Try to fold the track system by pushing down and pulling up on the black cross tube before use. Make sure that both sides of the track system lock in the extended position.
- Do not load IV hook above the safe working load of 5 lb (2.3 kg).
- Always secure the oxygen bottle in the oxygen bottle holder. Make sure that the regulator valve of the oxygen bottle does not protrude from the width of the product.
- Always remove the oxygen bottle from the oxygen bottle holder before you attempt to fold or store the product.
- Always use only D-size or JD-size oxygen bottles with the oxygen bottle holder.
- Always remove the battery before you wash the product.
- Do not clean, service, or perform maintenance while the product is in use.
- Do not steam clean or ultrasonically clean the product.
- Do not exceed 180 °F (82 °C) as the maximum water temperature.
- Do not exceed 1500 psi (103.4 bar) as the maximum water pressure. If you are using a hand held wand to wash the product, keep the pressure nozzle at a minimum of 24 in. (61 cm) from the product.
- Always use authorized parts to avoid the risk of product damage.
- Changes or modifications to the **Alvarium** Battery Management System, not expressly approved by Stryker, could void the user's authority to operate the equipment.

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.

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

- This manual is a permanent part of the product and should remain with the product even if the product is sold.
- 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.

Product description

The Stryker **Xpedition**™ Powered Stair Chair is a seated patient transport device with handles and a powered belt and track system. The chair is designed to support and transport a maximum weight of 500 lb (227 kg) up and down stairs. The chair is intended for patients who weigh 50 lb (23 kg) or more and can remain seated in the chair while secured by patient restraint straps. Handles at the head and foot ends allow operators to control the chair during powered or manual ascent or descent on stairs. Operators can push and maneuver the chair over various types of terrain that are expected in commercial and residential environments, as well as lift patients over obstacles. The chair has a removable patient containment system (PCS) with attachment points for the chest and waist to secure a patient during transport. A fold-out footrest can be deployed for secure feet placement. A removable, rechargeable battery powers electrical functions including the motorized drive system for traversing stairs, speed selection, direction selection, ground lighting activation, battery capacity feedback, drive activation buttons, and LED visual feedback networks. User interfaces at the back of the chair and the top handle allow for drive system control. The chair has several mechanical activations including wheel locks to prevent unintended motion on ground, a latch to fold or unfold the chair, a track deployment mechanism to deploy the stair driving track system, and top and bottom handle length adjustment activations. Options include a footrest, head end flip-up carry handles, grooved tracks, head restraint, IV clip, and oxygen bottle holder.

Alvarium™ Battery Management System is comprised of a lithium iron phosphate battery pack and a universal charger. The rechargeable battery acts as a power source for the **Xpedition** chair.

Indications for use

Xpedition transports a patient with a mobility-limiting medical condition or injury, who is physically able to maintain a seated position while restrained, up or down a set of stairs. **Xpedition** is intended for use in residential and commercial environments including pre-hospital and hospital environments, emergency, and non-emergency applications. All operators, including healthcare professionals such as emergency medical service personnel and medical first responders, must be trained by a qualified trainer before product use.

Intended users

Operators of this product include trained healthcare professionals such as emergency medical service personnel and medical first responders.

Clinical benefits

Transport patients up and down stairs

Contraindications

The use of **Xpedition** is contraindicated for patients who have suspected spinal injuries.

Expected service life

Xpedition has a 7 year expected service life under normal use conditions and with appropriate periodic maintenance.

Alvarium charger has a 7 year expected service life under normal use conditions.

Alvarium battery has a 2 year expected service life under normal use conditions.

Disposal/recycle

Always follow the current local recommendations and/or regulations governing environmental protection and the risks associated with recycling or disposing of the equipment at the end of its useful life.

Specifications - Xpedition

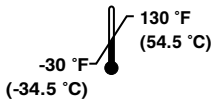
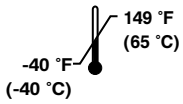
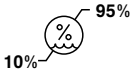
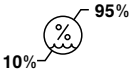
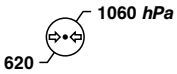
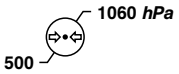
 **Note** - Safe working load includes weight of the patient, equipment, and accessories.	500 lb	227 kg
Height	37.5 in.	95.25 cm
Maximum height	56.7 in.	144 cm
Width	20.5 in.	52 cm
Seat pan width	19.6 in.	49.8 cm
Depth	25 in.	63.5 cm
Folded depth	8 in.	20.32 cm
Folded length	37.5 in.	95.25 cm
Folded width	20.5 in.	52 cm
Foot end carry handle stowed length	25 in.	63.5 cm
Minimum stair width	24 in.	60.96 cm
Minimum landing length (for U-shaped stairs)	3.28 ft	1 m
Maximum slope uphill	11.6°	
Maximum slope downhill	8.2°	
Maximum permissible slope of upper and lower landings	10°	
Maximum pitch of stairs	45°	
Maximum speed for transporting up and down stairs	71 steps/minute	
Maximum direct operating force	208.5 N	
Front wheel diameter	5 in.	127 mm

Back wheel diameter	8 in.	203 mm
Patient tip back angle on stairs	24°	
Weight		
Chair	52.7 lb	23.9 kg
Patient containment system (PCS)	1.25 lb	0.57 kg
Battery	2.15 lb	0.98 kg
Component weight		
Footrest	1.35 lb	0.61 kg
Head end flip-up carry handles	2.65 lb	1.20 kg
Standards		
ISO 7176	**Xpedition** has been successfully tested according to the standard ISO 7176-28:2012. As classified in Annex A, **Xpedition** is classified as a Type A, assistant-operated, self-standing stair-climbing chair.	
Power system		
Battery (650700080301)	25.6 VDC LiFePO4	
Charger (650700450301)	100-240 VAC, 50/60 Hz, 1A	
	12-34 VDC, 5A	

Stryker reserves the right to change specifications without notice.

The yellow and black color scheme is a proprietary trademark of Stryker Corporation.

Labels may be unreadable from a viewing distance greater than 12 inches.

Environmental condition	Operation	Storage and transportation
Temperature		
Relative humidity		
Atmospheric pressure		

European REACH - Xpedition

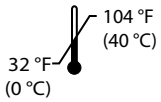
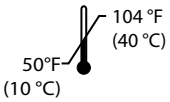
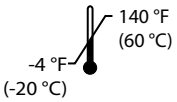
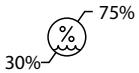
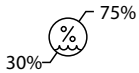
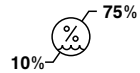
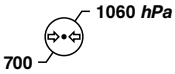
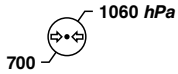
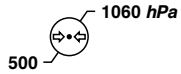
In accordance with the European REACH regulation and other environmental regulatory requirements, the components that contain declarable substances are listed.

Description	Number	Substance of very high concern (SVHC) chemical name
Backdrive PCBA	625700010057	Lead, lead oxide
Battery cable	625700010001	Lead, lead compounds, brominated flame retardants, antimony flame retardants, antimony trioxide, chlorinated flame retardants, PVC, phthalates
Powder coat, black	JN156QF	Silica, crystalline, carbon black
Powder coat, red	EG126QF	Titanium dioxide, silica, crystalline
Powder coat, yellow	JE032QF	Titanium dioxide
Powerbox PCBA	625700010009	Lead, brominated flame retardants, PVC, PVC copolymers, antimony trioxide, phthalates
UI module backrest, patient left	625700110200	Lead, carbon black, nickel, antimony oxide, PVC, PVC copolymers
UI module backrest, patient right	625700110100	Lead, carbon black, nickel, antimony oxide, PVC, PVC copolymers
UI module, grab bar	625700050020	Lead, carbon black, nickel, antimony oxide, PVC, PVC copolymers

Specifications – Alvarium

WARNING - This product can expose you to chemicals including Nickel, which is known to the State of California to cause cancer, and Bisphenol A (BPA), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

	Charger (650700450301)		Battery (650700080301)	
Electrical input	12-34 VDC, 5A		Not applicable	
Electrical output	Not applicable		25.6 VDC LiFePO4	
Height	6.09 in.	154.69 mm	3.62 in.	91.95 mm
Width	4.46 in.	113.28 mm	3.18 in.	80.77 mm
Length	7.79 in.	197.87 mm	6.05 in.	153.67 mm
Weight	1.55 lb	0.70 kg	2.15 lb	0.98 kg
Enclosure protection	Not applicable		IP36	
Standards	IEC 62368		IEC 62133-2, IEC 60529: IP36, SAE J3043	

Environmental condition	Operation	Charging	Storage and transportation
Temperature			
Relative humidity			
Atmospheric pressure			

Specifications are approximate and may vary from product to product or as a result of power supply fluctuations.

European REACH - Alvarium

In accordance with the European REACH regulation and other environmental regulatory requirements, the components that contain declarable substances are listed.

Description	Number	Substance of very high concern (SVHC) chemical name
Battery charger assembly	650700450301	Lead, lead compounds, diboron trioxide, bisphenol A (BPA), antimony oxide (antimony trioxide)
Battery charger PCBA	650700080820	Lead, diboron trioxide
12 VDC cable, automotive	6500-201-247	Lead, fatty acids, C16-18, lead salts, diarsenic pentaoxide

China RoHS - Alvarium

Description	Number	Hazardous substances					
		Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr (VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Battery charger PCBA	650700080-820	O	X	X	X	X	X

This table is prepared in accordance with the provisions of SJ/T 11364.

O: Indicates that said hazardous substance contained in all of the homogenous materials used for this part is below the limit requirement of GB/T 26572.

X: Indicates that said hazardous substance contained in at least one of the homogenous materials used for this part is above the limit requirement of GB/T 26572.

Enterprises may further provide in this box technical explanation for marking “X” based on their actual circumstances.

Product illustration – Xpedition

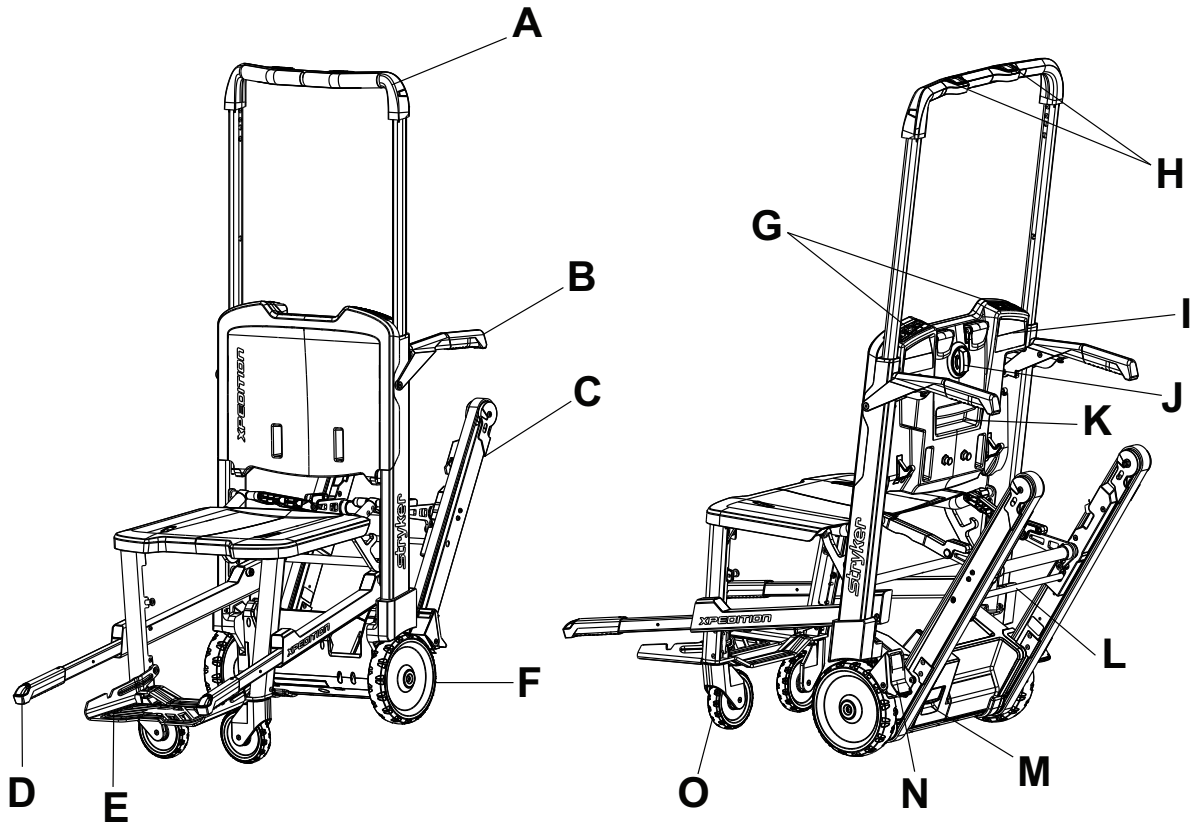


Figure 1 – Xpedition

A	Grab bar
B	Head end flip-up carry handle (option)
C	Track system
D	Foot end carry handle
E	Footrest (option)
F	Back wheel
G	User interface (UI)
H	GO button

I	PCS cam
J	Red twist knob
K	Fold-release handle
L	Red track release bar
M	Battery release latch
N	Wheel lock
O	Caster

Product illustration – Alvarium

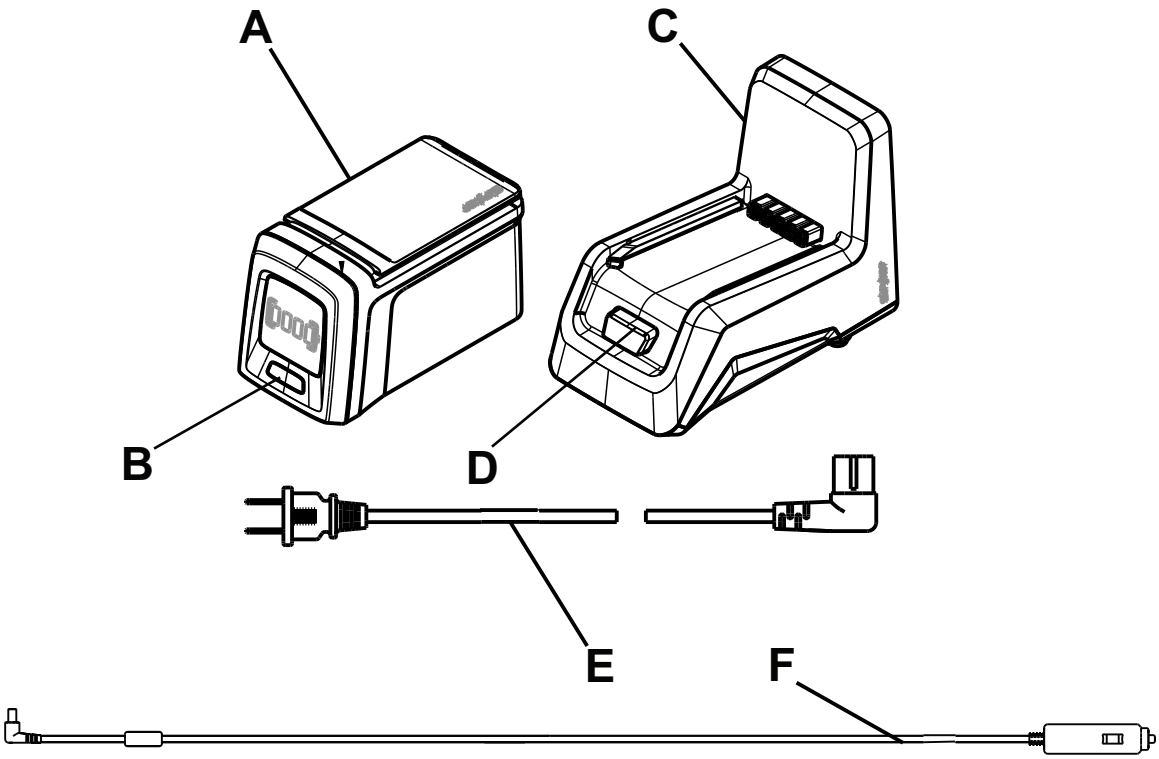


Figure 2 – Alvarium

A	Battery
B	Battery indicator button
C	Charger
D	Battery release button
E	AC power cord
F	DC power cord

Contact information

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

Stryker Medical
3800 E. Centre Avenue
Portage, MI 49002
USA

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 Stryker Customer Service or Technical Support. Include the serial number in all written communication.

Serial number location - Xpedition

See below for the chair (A) serial number location (Figure 3).

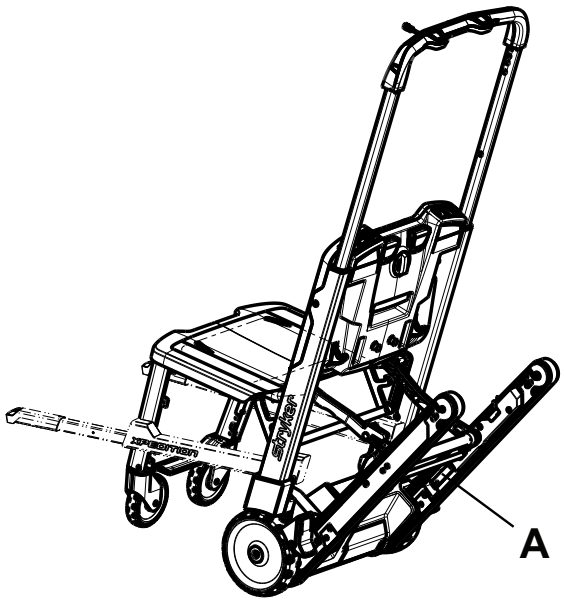


Figure 3 – Serial number location - Xpedition

Serial number location - Alvarium

See below for the battery (B) and charger (C) serial number locations (Figure 4 and Figure 5).

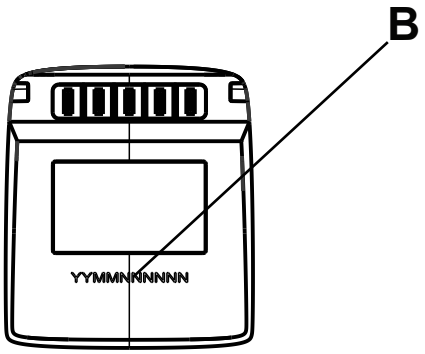


Figure 4 – Alvarium battery serial number location

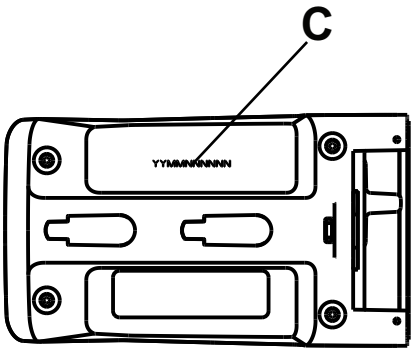


Figure 5 – Alvarium charger serial number location

Date of manufacture

The year of manufacture is the first 2 digits of the serial number.

Setup

During setup, unpack the cartons and check all items for proper operation. Make sure that the product operates before you place it into service.

Remove all the shipping and packaging materials from the product before use.

The vehicle patient compartment where the product will be used must be large enough to accommodate the folded dimensions of the product.

When necessary, modify the vehicle to fit the product. Do not modify the product.

Operation

Operating guidelines

WARNING

- Always use all restraint straps to secure the patient on the product. An unrestrained patient may fall from the product and be injured.
- Do not apply a wheel lock when you move the product to avoid the risk of tipping.
- Always avoid getting dirt or other obstructions inside the track frame. The track system may not work the same on all stair surfaces and in all environmental conditions. Based on conditions, you may encounter varying amounts of resistance.
- Always clean and dry the track belts before stair transport.
- Always clear the path or consider an alternate route to avoid injury. Condensation, water, ice, or debris on the stairs can affect operator footing and proper operation of the track system and cause unpredictable performance that results in a sudden change in the weight that the operators must support.
- Do not attempt to transport patient loads greater than what you can safely lift.
- Always clear any obstacles that may interfere and cause injury to the operator or patient before you operate the product.
- Always inspect the product for damage if involved in an ambulance accident. Contact Stryker Customer Service or Technical Support for more information.
- Always hold onto the grab bar while you extend the tracks. The product is less stable when unoccupied.
- Do not drive the product on winding stairs. Use the carry handles to manually transport the product up and down winding stairs.
- Do not stand on the footrest option. The footrest option is not intended to support the weight of a standing operator or patient.
- Always avoid accidental patient contact with the user controls. User control temperature may reach 118.4° F (48° C) after ten minutes of operation.
- Do not operate if the product is behaving abnormally or erratically.

CAUTION

- Always use caution when you operate the product on stairs with condensation, water, or ice. Smooth tracks may have reduced traction in these conditions. Grooved tracks are recommended if you regularly operate the product in cold weather.
- Always use caution if you store the product at temperatures < 14° F (-10° C) or > 113° F (45° C). Drive speed may revert to the low setting at these temperatures.

Note

- A stair-climbing product may require a more experienced operator and assume a higher degree of risk than a standard wheelchair.
- Stability of the product may vary in real life situations.
- Operate the product only as described in this manual.
- Read all labels and instructions on the product before use.
- Always operate the product on stairs with a minimum of two trained operators.
- Always advise the patient before you roll the product, ascend stairs, or descend stairs. Stay with the patient and control the product at all times.
- Only use the wheel locks during patient transfer or without a patient on the product.
- Always use all restraint straps to secure the patient on the product. An unrestrained patient may fall from the product and be injured.
- All operators must be trained by a qualified trainer before product use.
- Intended operators include trained healthcare professionals such as emergency medical service personnel and medical first responders.
- Use additional trained healthcare professionals to control the product, when necessary.

User controls and LED indicators

Xpedition LED indicators, located on the grab bar and user interface, display the system status. This figure and table highlight all **Xpedition** buttons and LED indicators.

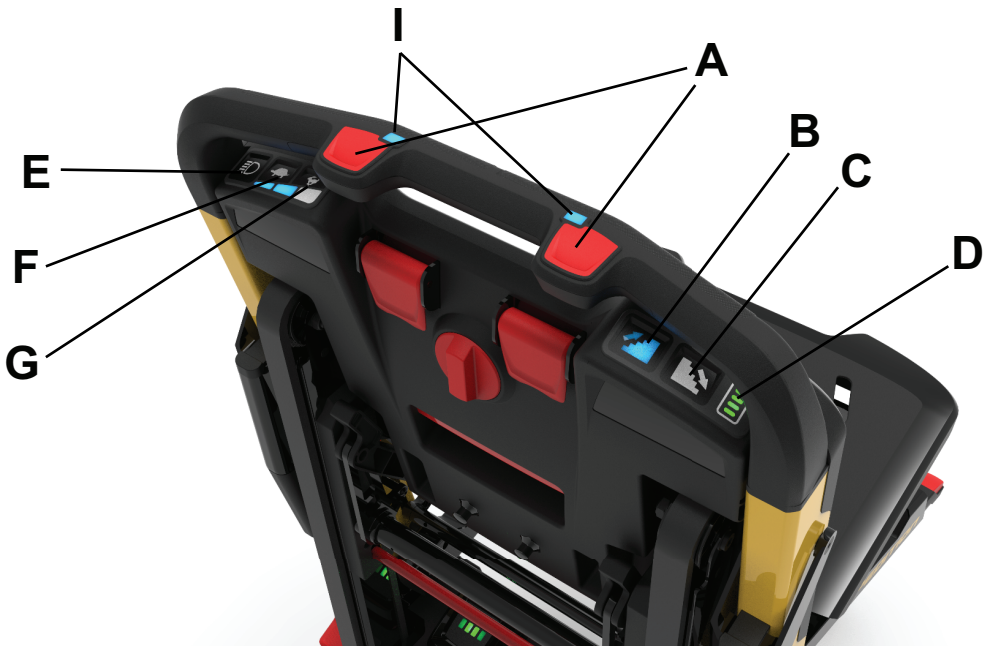
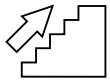
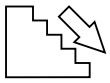
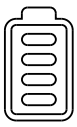
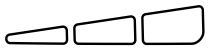


Figure 6 – User controls and LED indicators

A	GO button	See Figure 6	Press one or both buttons to start motion. Release to stop motion.
B	Drive up button		Press to go up stairs.
C	Drive down button		Press to go down stairs.
D	Battery power level LED		Indicates battery power level. See *Checking the battery power level* (page 17) for more information. **Note** - A red or amber colored battery power level LED indicates a battery error. See the Model 6257 **Xpedition** Service Manual for error code information and contact Stryker Technical Support at 1-800-327-0770.
E	LED button		Press to turn the head and foot end LEDs on and off.
F	Tortoise button		Press to decrease drive speed.
G	Hare button		Press to increase drive speed.

H	Speed level LED		Indicates drive speed (low, mid, or high).
I	Head end LED indicator	See Figure 6	Indicates when the product is ready to drive. **Note** - Red or amber colored head end LEDs indicate a product error. See the Model 6257 **Xpedition** Service Manual for error code information and contact Stryker Technical Support at 1-800-327-0770.

Checking the battery power level

A fully charged battery, in working condition, provides power to the chair for at least 74 flights of stairs, up and back down, carrying a 250 lb patient (actual results may vary).

The charger LED indicator bars show the battery power level.

Figure 7 – Battery power level

Status	Battery LED indicator
Discharging	Four LED bars = 76-100% charge Three LED bars = 51-75% charge Two LED bars = 26-50% charge One LED bar = 15-25% charge
Low battery	<15% charge One LED blinks five times, repeated two to three times
Charging	LED indicating current charge percentage is blinking
Error	The outermost LEDs blink five times when you press the LED indicator button, repeated three times **Note** - Do not use a battery that indicates an error. Isolate the battery for transport to service.

Note - Use only Stryker approved batteries.

Unfolding the chair

WARNING - Always make sure that the product is locked in the unfolded position before use. An unlocked product may fold during use. If you accidentally activate the fold-release mechanism, pull back on the product until locked in place.

To unfold the chair:

1. Stand behind the chair.
2. Press the seat toward the backrest to relieve any pressure on the fold mechanism. Lift the fold-release handle on the back of the chair.
3. Pull the seat down (Figure 8).
4. Pull up on the seat to make sure that the chair is locked in the unfolded position. If the chair does not fold, then the chair is locked.

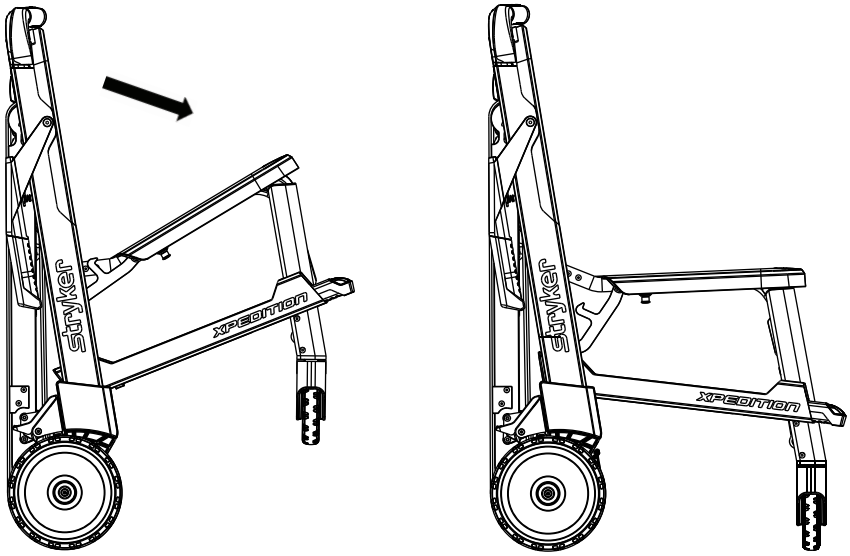


Figure 8 – Unfolding the chair

Folding the chair

To fold the chair:

1. Buckle the restraint straps. Place the straps in the seat pan to prevent them from interfering or dragging on the ground.
2. Lift the fold-release handle on the back of the chair.
3. Fold the seat up to the backrest (Figure 9).
4. Pull down on the seat to make sure that the chair is locked in the folded position. If the chair does not unfold, then the chair is locked.

   Note - The front casters automatically rotate when you fold the chair.

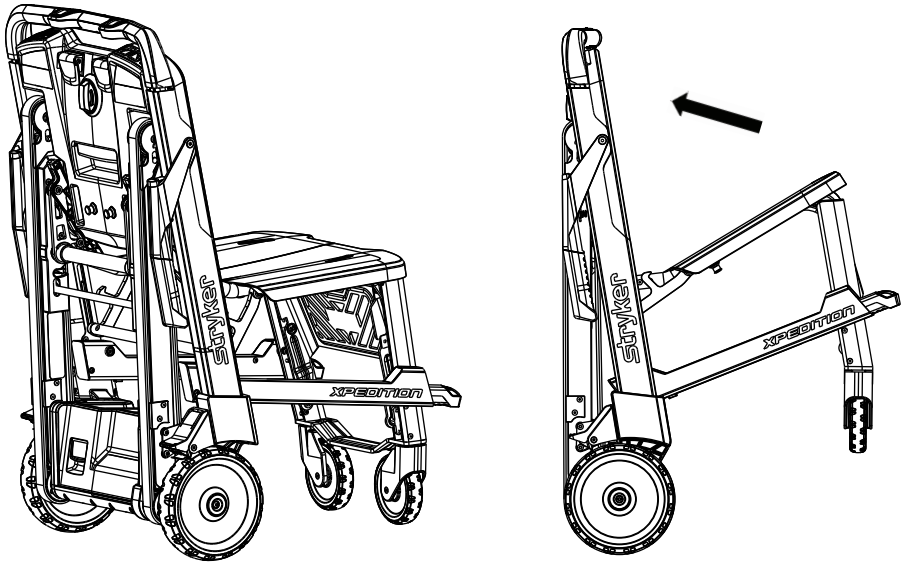


Figure 9 – Folding the chair

Inserting the battery

To maximize available battery power, only use batteries that have been charged within the last 48 hours.

To insert the battery:

1. Align the battery with the tabs in the battery enclosure.
2. Push the battery into the enclosure until the latch clicks into place.

   Note - Fold the chair and deploy the tracks to easily insert the battery.

Removing the battery from the product

After you discharge the battery, remove it from the product and replace with a charged battery.

WARNING

- Do not remove the battery when the product is active.
- Do not attempt to open the battery pack for any reason to avoid the risk of electric shock. If the battery pack case is cracked or damaged, do not insert the case into the charger. Return damaged battery packs to a service center for recycling.
- Always avoid direct contact with a wet battery or battery enclosures. Contact may cause injury to the patient or operator.

CAUTION - Always remove the battery if you do not intend to use the product for more than 24 hours or longer.

Running the battery repeatedly, without rest periods, can increase the temperature within the cells and reduce life. For example, driving a heavy patient up and down several flights of stairs in rapid succession can reduce the battery life.

To remove the battery from the product:

1. Pull the red battery release latch (A) toward you to release the battery from the product (Figure 10).
2. Slide the released battery out of the enclosure.

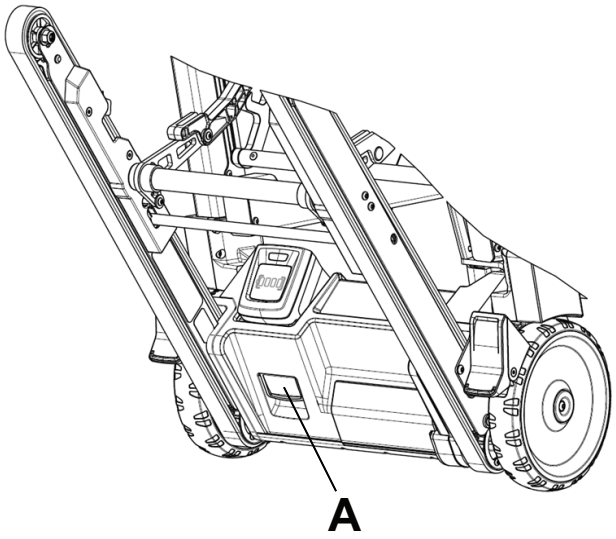


Figure 10 – Battery release latch

Storing the battery

For the longevity, performance, and safety of this product, use the original packaging materials to store or transport this product.

All batteries lose charge during storage or periods of inactivity. The battery can lose up to 30 percent of its charge within 48 hours after you remove it from the charger. Use and fully charge stored batteries every three months to maintain top performance.

Charging the battery

WARNING

- Do not insert a cracked or damaged battery into the charger. Return damaged batteries to a service center for recycling.
- Do not connect AC and DC power supplies to the battery at the same time to avoid the risk of fire or electric shock.

Note - For extended storage, store the battery on the charger to trickle charge. The charger keeps the battery charged and ready for use.

To charge the battery:

1. Insert a clean, dry battery into the charger. Check that the battery is locked into the charger.

   Note
   - When the battery is charged and ready for use, the battery power indicator will show four LEDs.
   - The maximum charge time is 4 hours.

2. Press the battery release button (A) and slide the charged battery out of the charger (Figure 11).

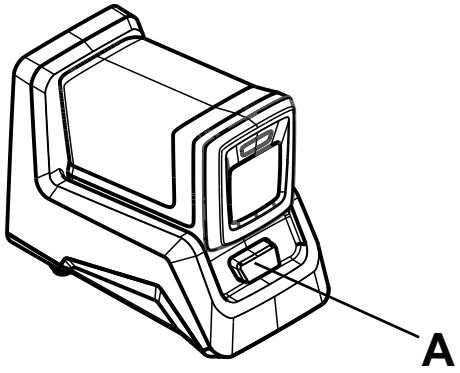


Figure 11 – Charging the battery

Electrical power requirements

For reliable and effective operation, reference the following electrical power requirements when you configure the electrical power source for the charger.

Power type	Operational voltage range	Frequency	Maximum current draw	Standby current draw	Low voltage shut off
AC	100-240 VAC, 50/60 Hz, 1A	50/60 Hz	< 1.2A	< 50 mA	90 VAC
DC	12-34 VDC, 5A	Not applicable	< 6.67A	< 150 mA	10 VDC

Charger setup

During setup, place the charger in an environmentally controlled location that is:

- Free of dust and moisture
- Kept within a constant temperature range; see *Specifications - Alvarium* (page 9)
- Readily accessible for use

Locate and maintain the power supply and power cords to minimize the risk of damage and inadvertent disconnections.

Securing the charger mounting plate option

WARNING

- Always have a certified mechanic, familiar with ambulance vehicle construction, secure the charger mounting plate option and charger.
- Always make sure that the charger mounting plate option is secured to the surface before use.

To secure the charger mounting plate to a surface (Figure 12):

1. Use the charger mounting plate as a template to mark the location of the mounting holes (A).
2. Position the charger mounting plate and check that the:
   a. Spring tab (B) is located at the rear of the charger.

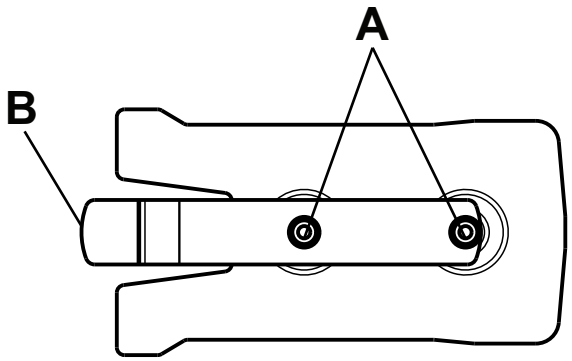


Figure 12 – Charger mounting plate

b. Power cord easily plugs into the rear of the charger.

c. Charger slides from front to back to connect to the plate after mounting.

d. Charger mounting plate is secured for the ambulance or station location:

Ambulance location (AC or DC power)	Station location (AC power)
• Secure the plate to a horizontal surface or shelf with size #10, grade 5 flat head screws minimum (not supplied) • For vertical securement, position the mounting plate with the spring tab below the mounting screws, so the charger supports the battery if you press the battery release button • Check that the selected mounting surface is strong enough to support the charger and battery during transport • Allow for easy battery insertion and removal • Locate the power supply within reach of the power cord	• Secure the plate to a horizontal or vertical surface with size #10, grade 5 flat head screws minimum (not supplied) • For vertical securement, position the mounting plate with the spring tab below the mounting screws, so the charger supports the battery if you press the battery release button • Allow for easy battery insertion and removal

Securing the charger to the charger mounting plate option

To secure the charger to the charger mounting plate (Figure 13):

1. Move the red AC/DC slider (A) to the center position. Avoid interference between the hook features and charger mount spring.
2. Align the rear keyway slots (B) onto the charger mounting plate fasteners (C).
3. Slide the charger (D) onto the charger mounting plate (E) until locked.

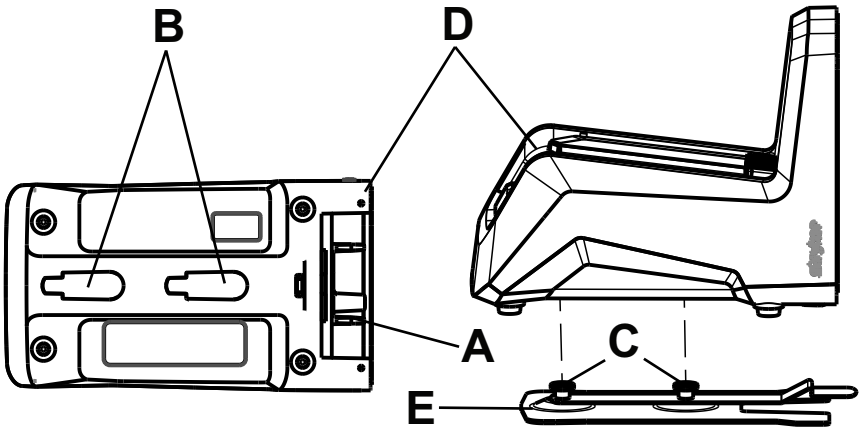


Figure 13 – Securing the charger to the charger mounting plate

Powering the charger

CAUTION

- Always place the electrical charger power cord where it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not touch the battery receptacle terminals with metal objects.

To power the charger (Figure 14):

1. Locate the power connection on the back of the charger.
2. Move the red AC/DC slider to expose the port and select the desired voltage configuration (AC or DC).

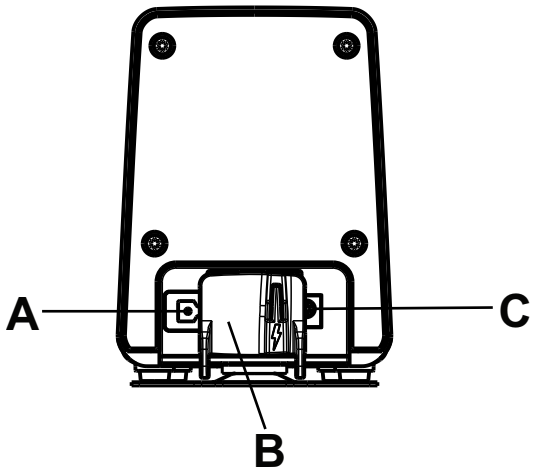


Figure 14 – Charger rear view

A	AC input
B	Red AC/DC slider
C	DC input

3. Insert the power cord into the exposed charger port.
4. Insert the other end of the charger power cord into a clean, uninterruptible power source.

   Note - Use only Stryker approved parts to power the charger.

Disconnecting the charger

CAUTION - Always grasp and pull the plug, not the cord, when you disconnect the charger to avoid the risk of damage to the electrical plug and cord.

To disconnect the charger, unplug the power cord from the AC or DC power source.

Transferring the patient to the chair

WARNING

- Do not use the product to transport patients who have suspected spinal injuries.
- Do not leave a patient unattended. Hold the product while a patient is on the product.
- Always make sure that patient belongings do not interfere with the user interface and track system.
- Do not transfer the patient to or from the product while on uneven surfaces, if possible. Transfer the patient while the product is on flat surfaces to avoid the risk of tipping.

To transfer the patient to the chair:

1. Place the product next to the patient.
2. Apply the wheel locks (*Applying or releasing a wheel lock* (page 33)).
3. Open the restraint straps.
4. Make sure that the footrest, if equipped, is folded up and out of the way.
5. Transfer the patient to the product by using accepted EMS procedures.
6. Lower the footrest, if equipped, to support the patient's feet.
7. Secure the patient to the product with all of the restraint straps (see *Securing the patient with the PCS restraint straps* (page 24)).
8. Release the wheel locks before transport.

Proper lifting techniques

When you lift the product and patient, follow these proper lifting techniques to avoid the risk of injury:

- Keep your hands close to your body
- Keep your back straight
- Coordinate all movement with your partner
- Lift with your legs
- Avoid twisting

Securing the patient with the PCS restraint straps

WARNING - Always use all restraint straps to secure the patient on the product. An unrestrained patient may fall from the product and be injured.

Secure the restraint straps to the product in the required attachment locations. Restraint strap attachment locations should provide strong anchorage and proper restraint position. Do not allow restraint straps to interfere with equipment or accessories. Buckle restraint straps and set them to the appropriate length when the chair is not in use to prevent them from dragging on the ground.

Open the restraint straps and place them on either side of the chair while you position the patient on the seat pan. Lengthen the restraint straps, buckle them around the patient, and shorten them to tighten.

- To open the restraint strap, press the tabs on either side of the buckle receiver.
- To close the restraint strap, push the patient left and patient right buckles together until you hear a click.
- To lengthen the restraint strap, grasp the buckle latch plate, turn it at an angle to the webbing, then pull it out. A hemmed tab at the end of the webbing prevents the latch plate from coming off of the strap.
- To shorten the restraint strap, grasp the hemmed tab and pull the webbing back through the latch plate to tighten.

When you buckle a restraint strap around a patient, secure the buckles together and remove any loose webbing from the chair.

Figure 15 – PCS restraint straps

Attaching the chest/waist restraint straps

To attach the chest/waist restraint straps:

1. With the patient right restraint strap, insert the patient right seat clip through the patient right hole in the seat pan (Figure 16 and Figure 17).

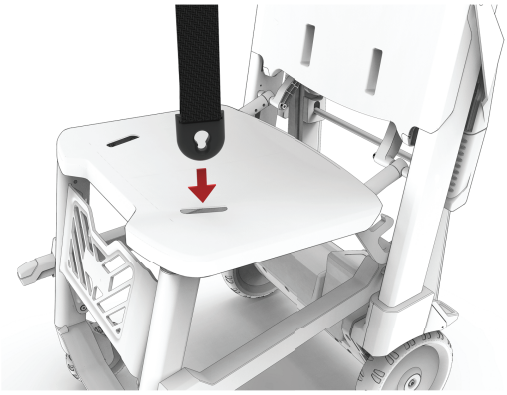


Figure 16 – Seat clip, patient left

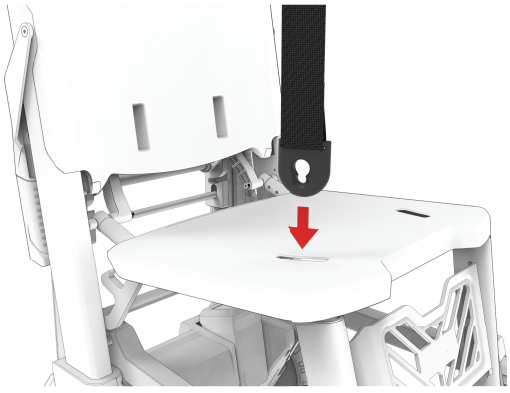


Figure 17 – Seat clip, patient right

2. Secure the patient right seat clip to the seat post on the bottom of the seat pan. Slide the seat clip until the smaller hole locks in place.

Note - You can attach the seat clip in the parallel or crossed configuration, depending on patient size (Figure 18 and Figure 19).

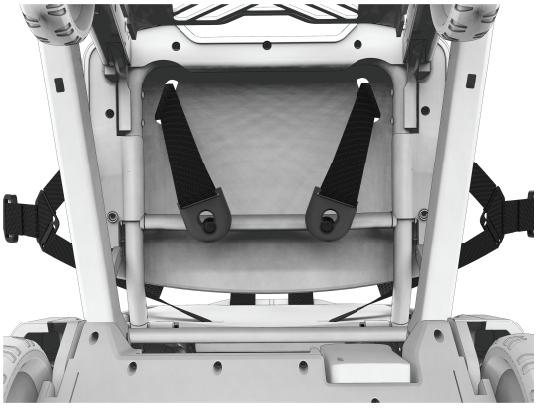


Figure 18 – Seat post, parallel

Figure 19 – Seat post, crossed

3. Insert the patient right backrest clip through the patient right hole in the backrest (Figure 20 and Figure 21).

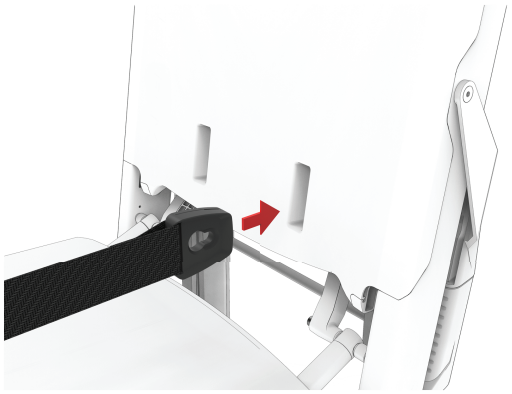


Figure 20 – Backrest clip, patient left

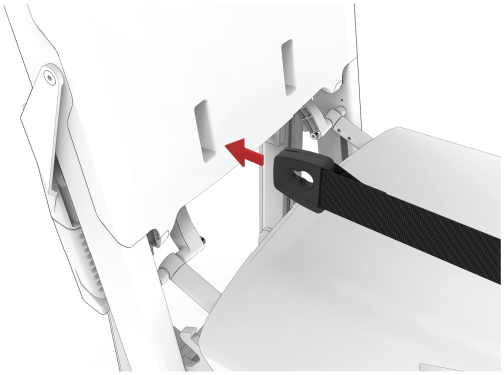


Figure 21 – Backrest clip, patient right

4. Secure the patient right backrest clip to the patient right backrest post (Figure 22). Pull the backrest clip up until the smaller hole locks in place.

Figure 22 – Backrest clip to post location

5. Wrap the patient right shoulder strap over the back of the chair and underneath the grab bar (Figure 23 and Figure 24). Lift the patient right PCS cam, then insert the shoulder clip through the PCS cam and pull through.

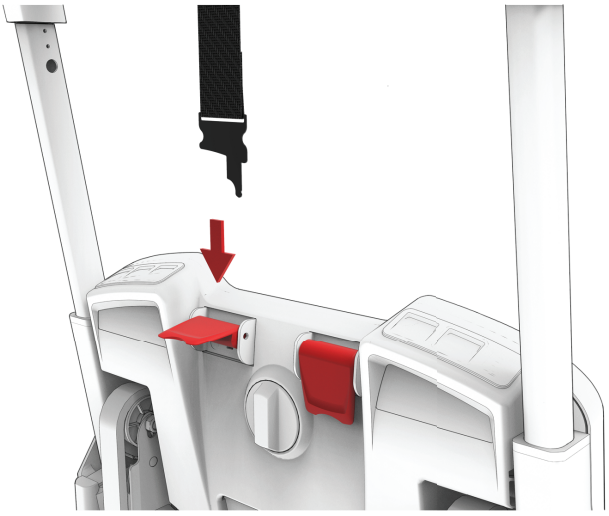


Figure 23 – Shoulder strap, patient left

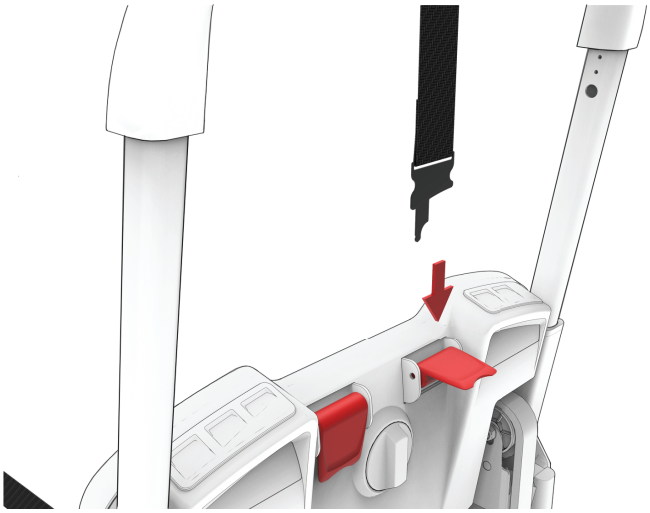


Figure 24 – Shoulder strap, patient right

6. Insert the shoulder clip into the backrest clip to manage the excess restraint strap material (Figure 25). Lift the PCS cam to tighten or loosen the shoulder restraint strap (Figure 26).

CAUTION - Always store excess restraint strap material to avoid the risk of tripping.

Note - Press down on the PCS cams to make sure that the shoulder restraint strap is secure.

Figure 25 – Attach shoulder clip into backrest clip

Figure 26 – Lift PCS cam to tighten or loosen the shoulder restraint strap

7. Repeat steps 1-6 with the patient left restraint strap.
8. Put the patient's arms through the shoulder straps. Lengthen the shoulder straps as necessary.
9. Buckle the shoulder straps (A) at the chest (Figure 27).

   Note - The patient can hold onto the shoulder hand straps during transport, if desired.
10. Pull the waist restraint strap (B) across the patient's lap/waist (Figure 27). Lengthen the restraint strap as necessary.

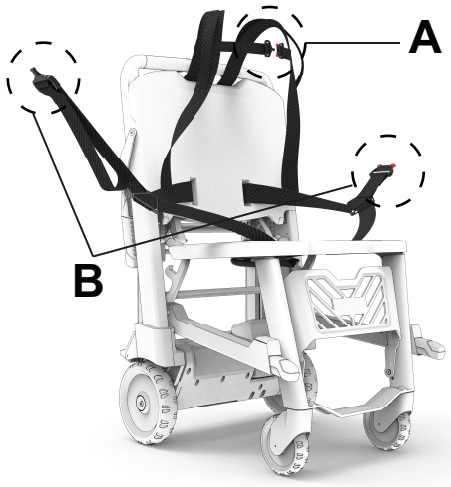


Figure 27 – Buckle the shoulder and waist restraint straps

11. Buckle the restraint strap at the waist.
12. Pull the loose end of the restraint straps to tighten around the patient.

Attaching the ankle restraint strap

To attach the ankle restraint strap:

1. Wrap the straps around the front chair legs and connect the side release buckles (A) (Figure 28).
2. Wrap the straps around the patient's ankles. Connect the larger, double-adjust side release buckle (B) (Figure 29).

3. Tighten the straps around the patient’s ankles.

Figure 28 – Connect the side release buckles

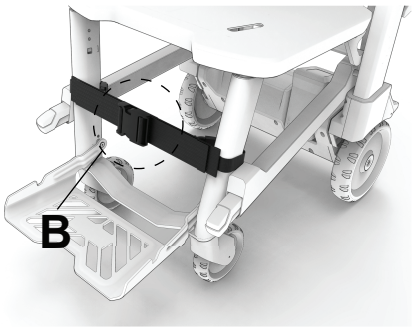


Figure 29 – Connect the double-adjust side release buckle

Attaching the head restraint strap option

To attach the head restraint strap option:

1. Wrap the straps around the grab bar and connect the side release buckles (A) (Figure 30).
2. Adjust the restraint strap height to align with the patient's forehead.
3. Tighten the straps around the grab bar.
4. Feed the male side release buckle through the loop on the opposing head restraint strap. Pull the side release buckle through the loop.
5. Wrap the straps around the patient’s head and connect the side release buckle (B) (Figure 30).
6. Tighten the head restraint strap around the patient's forehead.

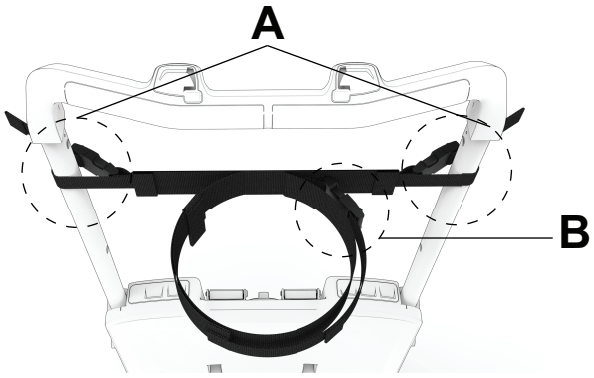


Figure 30 – Connect the side release buckles

Supporting the patient’s head with the head support option

To support the patient’s head with the head support option:

1. Use one hand to twist the red twist knob on the back of the chair. Use the other hand to pull up and extend the grab bar. Release the red twist knob and make sure that the grab bar is locked in the mid position.
2. Wrap the left head support strap (A) around the left side of the grab bar (B). The strap should frame both sides of the left GO button. Clip the hook (C) to the loop on the head support to secure the strap around the grab bar (Figure 31).
3. Repeat step two to secure the right head support strap to the right side of the grab bar.
4. Push the plastic clip (D) at the bottom of the head support between the two black PCS cam mounts (E) on the back of the chair (Figure 32).

Note - The two prongs on the outside of the plastic clip fit in the space between the PCS cam mounts and the backrest.

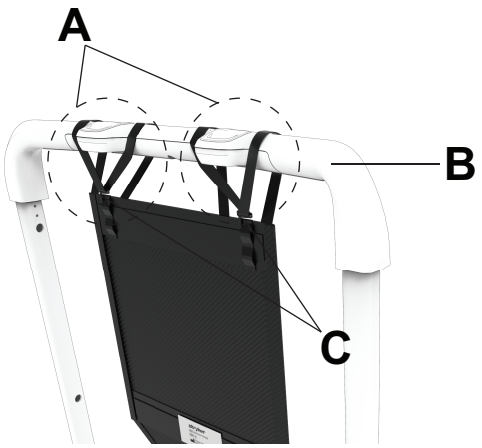


Figure 31 – Attach the straps to the grab bar

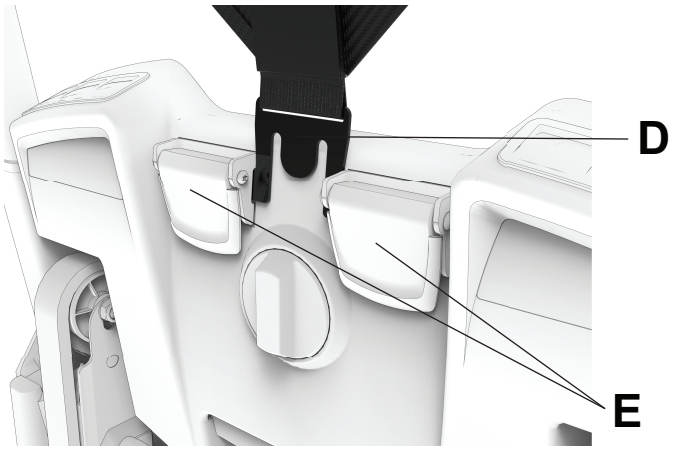


Figure 32 – Insert the hook

5. Adjust the grab bar (F) height so that the patient's head can rest on the head support (Figure 33).

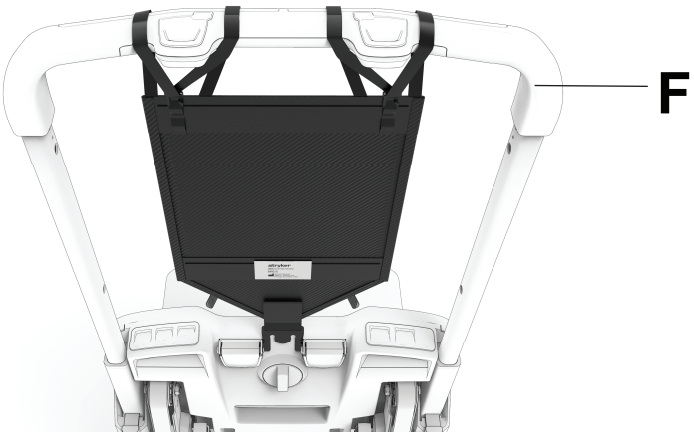


Figure 33 – Installed head support option

6. If you need to restrain the patient's head, secure the head with the head restraint strap. See *Attaching the head restraint strap option* (page 29).

Transporting the patient on flat surfaces

WARNING

- Do not push the product with the grab bar in the fully extended position. Pushing the product with the grab bar in the fully extended position may cause the product to tip when you encounter obstacles.
- Do not press the GO button while transporting on flat surfaces to avoid operator or patient injury.

CAUTION - Always check for and remove any debris in the casters before transport.

To transport the patient on flat surfaces:

1. Push and guide the chair with the grab bar or head end flip-up carry handles option.
2. Lift the chair over and around obstructions with the grab bar or the head end flip-up carry handles option.

Note - Roll the chair backward over thresholds when necessary. It may be easier to pull the chair backward over thresholds instead of pushing forward since the back wheels are larger.

Transporting the patient down stairs

WARNING

- Always transport the patient on stairs with a minimum of two trained operators. Additional operators are recommended for patients who weigh more than 250 pounds.
- Always lock the carry handles in position before you use the carry handles to lift or tip the product back.
- Always lock the track system in position before you transport a patient.
- Always avoid getting dirt or other obstructions inside the track frame. The track system may not work the same on all stair surfaces and in all environmental conditions. Based on conditions, you may encounter varying amounts of resistance.
- Always clean and dry the track belts before stair transport.
- Always clear the path or consider an alternate route to avoid injury. Condensation, water, ice, or debris on the stairs can affect operator footing and proper operation of the track system and cause unpredictable performance that results in a sudden change in the weight that the operators must support.
- Do not attempt to transport patient loads greater than what you can safely lift.
- Always make sure that the product is locked in the unfolded position before use. An unlocked product may fold during use. If you accidentally activate the fold-release mechanism, pull back on the product until locked in place.
- Always make sure that patient belongings do not interfere with the user interface and track system.

CAUTION

- Always release the red track release bar before you click the track system into the locked position. Try to fold the track system by pushing down and pulling up on the black cross tube before use. Make sure that both sides of the track system lock in the extended position.
- Always use caution when you operate the product on stairs with condensation, water, or ice. Smooth tracks may have reduced traction in these conditions. Grooved tracks are recommended if you regularly operate the product in cold weather.
- Always use caution if you store the product at temperatures < 14° F (-10° C) or > 113° F (45° C). Drive speed may revert to the low setting at these temperatures.

To transport the patient down stairs:

1. Roll the chair to the stairs. Align the front casters of the chair with the edge of the first step.
2. Foot end operator: Push the red release buttons to extend the foot end carry handles and pull the handles out until they stop. Release the buttons to lock the handles.
3. Head end operator: Use one hand to twist the red twist knob on the back of the chair. Use the other hand to pull up and extend the grab bar. Release the red twist knob and make sure that the grab bar is locked in the extended position.
4. Head end operator: Select the desired direction (drive down button) on the right user interface and desired speed on the left user interface.

   Note

   - The default speed is low if you do not make a speed selection.
   - The grab bar and user interface LEDs will turn from white to blue when the drive system is ready for activation. The LEDs will turn from flashing to solid blue after you select a direction (drive up or drive down).
   - Do not stow the tracks while you transport a patient up or down the stairs.
5. Head end operator: Squeeze the red track release bar against the black cross tube. Relax your grip on the release bar and forcefully pull the track system to the extended position until both sides lock in place. Push up and pull down the black cross tube to try and fold the chair. Make sure that both sides of the track system click into place before use.
6. Operators face each other while you descend the stairs.
7. Head end operator: Tilt the chair back slightly so the front casters are off the ground.

8. Both operators: Maintaining the angle, guide the chair over the edge of the stairs. Allow the track system to connect with the first step.
9. Both operators: Head end operator apply slight downward pressure on the grab bar while the foot end operator applies slight upward pressure on the foot end carry handles to keep the chair from rocking forward as it drives down the stairs.
10. Head end operator: Press one or both of the GO buttons to start motion.
11. When the track system reaches the last step, head end operator: Release the GO button to stop motion. Both operators pull the chair onto the landing and allow the chair to tip forward until all four wheels are on the ground. Foot end operator: release and stow the foot end carry handles.
12. To fold the track frame, pull the red track release bar toward the black cross tube and fold the track system toward the chair. Pull out on the black cross tube to make sure that the track system is locked in place.
13. Roll the chair. See *Transporting the patient on flat surfaces* (page 30).

Note

- If you need to pause or rest while descending the stairs, release the GO button to stop motion. Allow the chair to rest on the tracks. To continue down the stairs from the resting position, start motion with the GO button.
- If power failure occurs, the chair will slowly descend the stairs and an operator will have to manually maneuver the chair to the bottom of the stairs.
- If the chair motor overheats, track speed may slow to allow the motor to cool down.

Transporting the patient up stairs

WARNING

- Always transport the patient on stairs with a minimum of two trained operators. Additional operators are recommended for patients who weigh more than 250 pounds.
- Always lock the carry handles in position before you use the carry handles to lift or tip the product back.

CAUTION

- Always release the red track release bar before you click the track system into the locked position. Try to fold the track system by pushing down and pulling up on the black cross tube before use. Make sure that both sides of the track system lock in the extended position.
- Always use caution when you operate the product on stairs with condensation, water, or ice. Smooth tracks may have reduced traction in these conditions. Grooved tracks are recommended if you regularly operate the product in cold weather.
- Always use caution if you store the product at temperatures < 14° F (-10° C) or > 113° F (45° C). Drive speed may revert to the low setting at these temperatures.

To transport the patient up stairs:

1. Roll the chair to the stairs. Align the rear wheels of the chair with the edge of the first step.
2. Head end operator: Select the desired direction (drive up button) on the right user interface and desired speed on the left user interface.

   Note

   - The default speed is low if you do not make a speed selection.
   - The grab bar and user interface LEDs will turn from white to blue when the drive system is ready for activation. The LEDs will turn from flashing to solid blue after you select a direction (drive up or drive down).
   - Do not stow the tracks while you transport a patient up or down the stairs.
3. Foot end operator: Push the red release buttons to extend the foot end carry handles and pull the handles out until they stop. Release the buttons to lock the handles.
4. Head end operator: Use one hand to twist the red twist knob on the back of the chair. Use the other hand to pull up and extend the grab bar. Release the red twist knob and make sure that the handle is locked in the extended position.

5. Head end operator: Squeeze the red track release bar against the black cross tube. Relax your grip on the release bar and forcefully pull the track system to the extended position until both sides lock in place. Push up and pull down the black cross tube to try and fold the chair. Make sure that both sides of the track system click into place before use.
6. Operators face each other while you ascend the stairs.
7. Head end operator: Tilt the chair back slightly so the front casters are off the ground.
8. Both operators: Maintaining the angle, guide the chair to the edge of the stairs. Allow the track system to connect with the first step.
9. Head end operator: Apply slight downward pressure on the grab bar while the foot end operator applies slight upward pressure on the foot end carry handles to keep the chair from rocking forward as it drives up the stairs.
10. Head end operator: Press either of the GO buttons to start motion.
11. When the track system reaches the last step, head end operator: Release the GO button to stop motion. Both operators pull the chair onto the landing and allow the chair to tip forward until all four wheels are on the ground. Foot end operator: release and stow the foot end carry handles.
12. To fold the track frame, pull the red track release bar toward the black cross tube and fold the track system toward the chair. Pull up on the black cross tube to make sure that the track system is locked in place.
13. Roll the chair. See *Transporting the patient on flat surfaces* (page 30).

Note

- If you need to pause or rest while ascending the stairs, release the GO button to stop motion. Allow the chair to rest on the tracks. To continue up the stairs from the resting position, start motion with the GO button.
- If power failure occurs, the chair will slowly descend the stairs and two or more operators will have to manually carry the chair to the top of the stairs.
- If the chair motor overheats, track speed may slow to allow the motor to cool down.

Applying or releasing a wheel lock

WARNING

- Do not apply a wheel lock when you move the product to avoid the risk of tipping.
- Do not install or apply a wheel lock on a product with worn wheels.
- Do not leave a patient unattended. Hold the product while a patient is on the product.
- Always apply both wheel locks.

To apply a wheel lock, press down on the pedal until the pedal stops and rests against the surface of the wheel.

To release a wheel lock, press down on the top of the pedal with your foot. The top of the pedal will rest against the frame of the chair when you release the wheel lock.

Note - Wheel locks help prevent the product from rolling while unattended. Wheel locks may not provide sufficient resistance on all surfaces, slopes, or under loads.

Raising or lowering the head end flip-up carry handles option

You can use the locking head end flip-up carry handles to tip the product back.

WARNING - Always lock the carry handles in position before you use the carry handles to lift or tip the product back.

To raise the head end flip-up carry handles, rotate the handles up until they lock in position.
To lower the head end flip-up carry handles:

1. Lift up on the head end flip-up carry handle (A) (Figure 34).
2. Pull the red handle trigger (B) toward you with your finger (Figure 34).
3. Fold the head end flip-up carry handle down against the chair frame.

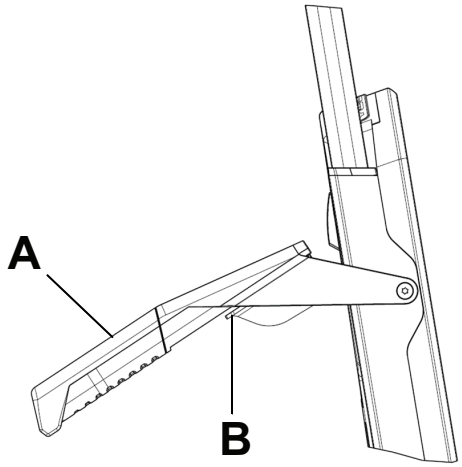


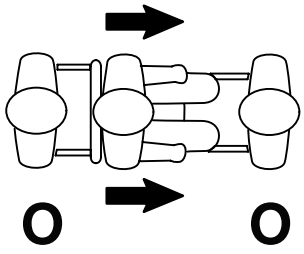
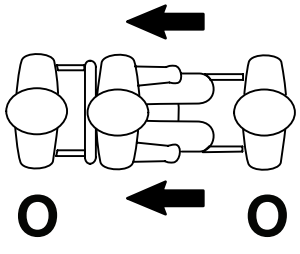
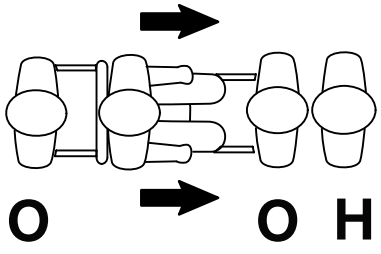
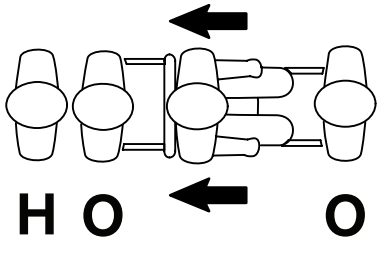
Figure 34 – Lowering the head end flip-up carry handles

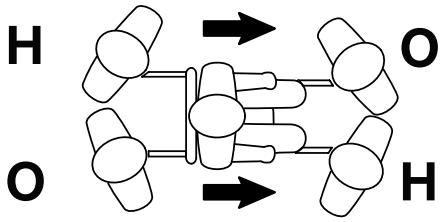
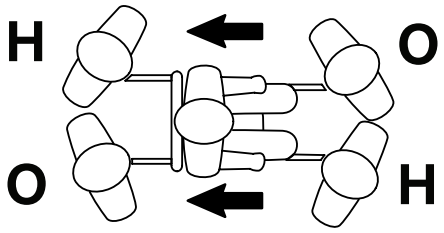
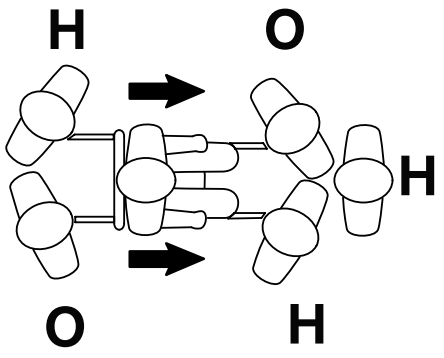
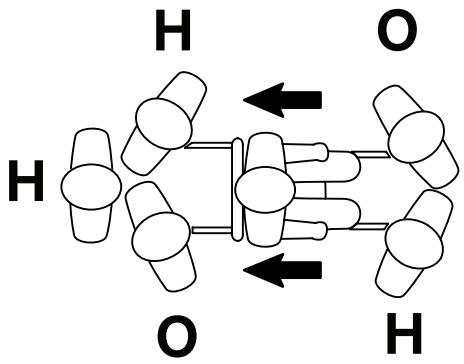
Supporting the patient's feet with the footrest option

WARNING - Do not stand on the footrest option. The footrest option is not intended to support the weight of a standing operator or patient.

1. Pull the footrest down to support the patient's feet.
2. Push the footrest up until locked in place when not in use.

Positioning operators and helpers for additional assistance

	Down stairs	Up stairs
Two operators (O)		
Two operators (O) One helper (H)		

	Down stairs	Up stairs
Two operators (O) Two helpers (H)		
Two operators (O) Three helpers (H)		

Attaching the IV hook option

The IV hook is intended to secure an IV bag to the product during transport.

CAUTION - Do not load IV hook above the safe working load of 5 lb (2.3 kg).

1. Extend the grab bar.
2. Match the mating clips (A and B) and hold the two IV hook pieces on the grab bar (Figure 35).
3. Slide the IV hook collar (C) around the grab bar and the two IV hook pieces (Figure 35).
4. Push the collar down until locked in place.

   Note - Align the IV hook around the extrusion on the grab bar patient left side (Figure 36).

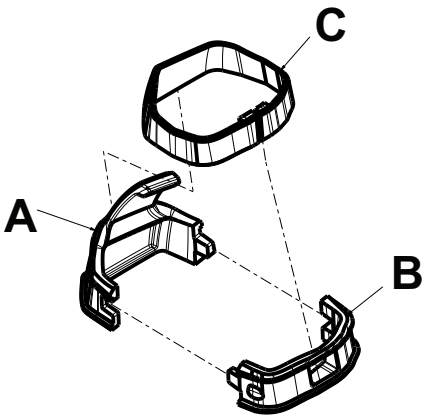


Figure 35 – IV hook components

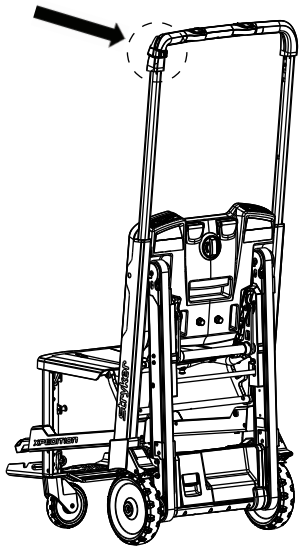


Figure 36 – Attach IV hook to chair

Attaching the oxygen bottle holder option

WARNING - Always clean and disinfect or dispose of contaminated product components to avoid risk of exposure to bloodborne pathogens and injury to the patient or operator.

WARNING

- Always secure the oxygen bottle and oxygen bottle accessories so they do not interfere with the operation of the product.
- Always secure the oxygen bottle in the oxygen bottle holder. Make sure that the regulator valve of the oxygen bottle does not protrude from the width of the product.
- Always remove the oxygen bottle from the oxygen bottle holder before you attempt to fold or store the product.
- Always use only D-size or JD-size oxygen bottles with the oxygen bottle holder.

To attach the oxygen bottle holder:

1. Make sure that the chair is unfolded and locked. See *Unfolding the chair* (page 18).
2. Place the oxygen bottle holder (A) between the two lower lift handle tubes under the seat pan (Figure 37).
3. Wrap all four straps around the lower lift handle tubes (B) and connect the side release buckles (Figure 37).

Note - Locate the side release buckles on the outside of the lower lift handle tubes (by the **Expedition** logo) so they do not interfere when you fold the chair.

4. Slide the oxygen bottle (C) into the holder (Figure 37).

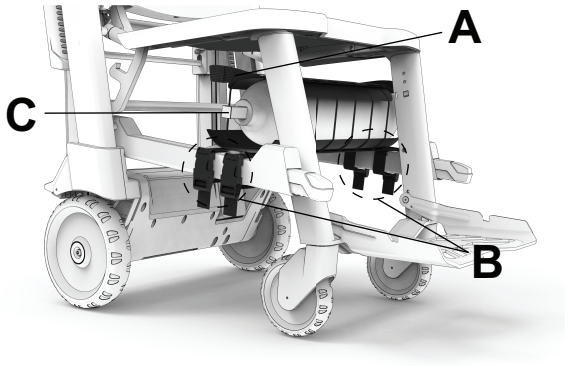


Figure 37 – Attaching the oxygen bottle holder

Accessories and parts

These accessories may be available for use with your product. Confirm availability for your configuration or region. Call Stryker Customer Service: 1-800-327-0770.

Name	Number
Ankle restraint assembly	625700100450
Carry handles option, upper	625709990001
Carry handles option, none	625709990002
Carry handles option, lower, standard	625709990003
Charger mounting plate assembly	650700450031
Footrest option	625709990007
Head support option	625700100350
IV hook	625700100260
Oxygen bottle holder option	625700100300
Restraint, head option	625700100400
Restraint, PCS full assembly	625700100600
Track option, grooved	625709990006
Track option, smooth	625709990005

Use only Stryker-approved parts. Other parts may result in increased electromagnetic emissions or decreased electromagnetic immunity of the system. Do not modify parts. Failure to comply may result in injury.

Name	Number
Power components - DC	
Additional battery option, none	650700080303
Battery	650700080301
Charger	650700450301
Charger, none	650700450302
Power cord, Argentina	650700450212
Power cord, Australia	650700450105
Power cord, Brazil	650700450109
Power cord, China	650700450108
Power cord, Europe	650700450103
Power cord, Israel	650700450210
Power cord, Japan	650700450106
Power cord, North America	650700450102
Power cord, South Africa	650700450211

Name	Number
Power cord, South Korea	650700450213
Power cord, Switzerland	650700450107
Power cord, United Kingdom	650700450104
Power components - DC	
12 VDC cable, automotive	650700450101

Cleaning the product

WARNING

- Always follow these cleaning and disinfecting guidelines, in addition to your protocols, to maintain hygienic safety.
- Always use any appropriate personal protective equipment while power washing to avoid inhaling contagion. Power washing equipment may aerate contamination.

CAUTION

- Always remove the battery before you wash the product.
- Do not clean, service, or perform maintenance while the product is in use.
- Do not steam clean or ultrasonically clean the product.
- Do not exceed 180 °F (82 °C) as the maximum water temperature.
- Do not exceed 1500 psi (103.4 bar) as the maximum water pressure. If you are using a hand held wand to wash the product, keep the pressure nozzle at a minimum of 24 in. (61 cm) from the product.

The product is power washable. The product may show some signs of oxidation or discoloration from continuous washing. No degradation of the product's performance will occur from power washing as long as you follow the proper procedures.

- Immersing restraint strap metal buckles can cause buckle corrosion and is not recommended. Rinse with clean water and allow to air dry to reduce chance of corrosion. Replace restraints if metal buckles are corroded.
- Direct skin contact with visibly soiled, permeable material may increase the risk of infection.

Cleaning is the first step in a reprocessing procedure. Adequate disinfection depends on the timeliness and thoroughness of cleaning. Follow the procedure below to clean the product promptly after use. Then proceed to disinfection (*Disinfecting the product* (page 42)). Delays in cleaning and disinfection may result in microbial growth. This may increase the time and effort to clean and disinfect the product and pose a risk to patients.

After you clean the product, work in a well-lit area and visually inspect all surfaces for evidence of soil. Repeat cleaning steps until the product is visually clean.

Recommended cleaning method:

1. Clean the product after each use.
2. Follow the disinfectant solution manufacturer's dilution recommendations exactly.
3. Stryker recommends the standard hospital cart washer for power washing.
4. Allow the product to air dry.
5. Verify proper operation before you return the product to service.

Cleaning the track frame

If a foreign material gets between the track belt and track frame, you must clean the track frame.

To clean the track frame:

1. Loosen the track belts. See *Track belt adjustment* in the Model 6257 **Xpedition** Service Manual.
2. Clean the track frame.
3. Use water at high pressure to rinse the track belts. Clean both the inside and outside track belt surfaces.
4. Allow the track belts to completely dry.
5. Reassemble the track belts (loosened in step 1).
6. Following the appropriate warnings and cautions, test the performance of the chair with a simulated patient weight while you descend a flight of stairs.

If performance does not return to the original conditions, you may need to replace the track belts.

Cleaning the charger

WARNING

- Always wear rubber gloves, in addition to personal protective equipment, when cleaning the battery to reduce the risk of injury.
- Always disconnect the charger from the wall outlet before cleaning to avoid the risk of electrical hazards.
- Do not spray fluid directly onto the charger.
- Do not power wash the charger.
- Do not use solvents, lubricants, or other chemicals to clean the charger unless otherwise directed.
- Do not immerse the charger in liquid or allow liquid to collect on top of the charger to avoid the risk of electric shock.

To clean the charger:

1. Disconnect the charger from the wall outlet to avoid electrical hazards during cleaning.
2. Wipe surfaces of the charger with a soft cloth dampened with a non-abrasive, disinfectant solution. See *Disinfecting the product*.
3. Wipe with a cloth moistened with clean water to remove any cleaning chemicals or residue.
4. Dry before you return the charger to service.

Cleaning the battery

WARNING

- Always wear rubber gloves, in addition to personal protective equipment, when cleaning the battery to reduce the risk of injury.
- Always use only non-conductive materials to wipe the battery.
- Always avoid excessive water exposure to the battery terminals.
- Do not directly handle or make contact with the battery terminals while cleaning to avoid the risk of injury.
- Do not immerse the battery in liquid or allow liquid to collect on top of the battery to avoid the risk of electric shock.
- Do not use solvents, lubricants, or other chemicals to clean the battery unless otherwise directed.
- Do not power wash the battery.

CAUTION - Do not steam clean or ultrasonically clean the product.

To clean the battery:

1. Remove the battery from the product or charger.
2. Inspect the battery housing and terminal area for any cracks or damage.
3. Clean the battery with a disinfectant solution. See *Disinfecting the product*.
4. Rinse the battery with clean water to remove any cleaning chemical or residue. Position the battery to avoid water from pooling near the terminals.
5. Dry before you insert the battery into the product or charger.

Disinfecting the product

In general, when used in concentrations recommended by the manufacturer, either phenolic type or quaternary type disinfectants can be used. Iodophor type disinfectants are not recommended for use because staining may occur.

Recommended disinfectants:

- Quaternary cleaners (active ingredient - ammonium chloride)
- Phenolic cleaners (active ingredient - o-phenylphenol)
- Chlorinated bleach solution 10,000 ppm available chlorine (941 mL of a 5.25% sodium hypochlorite solution per 4000 mL of water)
- ≤ 70% isopropanol alcohol

Recommended disinfection method:

1. Disinfect the product after exposure to soils or contaminants.
2. Follow the disinfectant solution manufacturer’s dilution recommendations exactly.
3. Hand wash all surfaces of the product with a disinfectant solution.
4. Avoid oversaturation and make sure that the product does not stay wet longer than the chemical manufacturer’s guidelines for proper disinfecting.
5. Wipe the product clean with water.
6. Allow the product to air dry.
7. Verify proper operation before you return the product to service.

Note

- Failure to follow the above directions when using these types of disinfectants may void this product’s warranty.
- Always wipe the product with clean water and dry after cleaning. Some cleaning agents are corrosive in nature and may cause damage to the product. Failure to properly rinse and dry the product leaves a corrosive residue on the surface of the product and may cause premature corrosion of critical components.

Preventive maintenance

CAUTION - Always use authorized parts to avoid the risk of product damage.

Establish and follow a maintenance schedule and keep records of the maintenance activity. Remove product from service before you perform the preventive maintenance inspection. You may need to perform preventive maintenance checks more often based on your level of product use. Service only by qualified personnel.

When using maintenance products, follow the directions of the manufacturer and reference all Material Safety Data Sheets (MSDS).

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

Operation	Schedule	Procedure
Cleaning and disinfecting	Each use	See *Cleaning* and *Disinfecting* in the Operations/Maintenance Manual
Inspection	For 1-25 calls per month, inspect chair every 6 months	See checklist below
	For 26-200 calls per month, inspect chair every 3 months	
	For 201+ calls per month, inspect chair monthly	

Inspect the following items:

_____ All fasteners secure (reference all assembly drawings)

_____ No bent or broken tubing or sheet metal

_____ No debris in wheels

_____ Back wheels are secure and roll

_____ Front casters are secure, roll, and swivel

_____ Wheel locks hold wheels when applied and clear the wheels when released

_____ Chair unfolds and locks

_____ No rips or cracks in seat or backrest

_____ Backrest covers are secure and align with the product

_____ Restraint straps installed, intact, and working

_____ Foot end carry handles extend and lock in place

_____ Head end flip-up carry handles option, if equipped, fold and unfold

_____ Grab bar extends and locks in all positions

_____ Track system mechanism unfolds and locks in place

_____ Track belt inner cords not showing; replace if necessary

_____ Track release springs are intact (replace the track release springs every seven years)

_____ Track belts for severe degradation that may affect track performance (replace track belts every three years)

_____ Battery can be inserted and removed (replace the battery connector every three years)

_____ Battery release springs and battery latch return springs are intact

_____ No lubricants present on the track belts or the track frame surfaces

_____ Foot end carry handle button is intact and secure (replace the foot end carry handle button every year)

_____ Footrest can be stowed and deployed

_____ Tracks rotate at three speeds in both directions when you press the GO buttons with a charged battery inserted

_____ Lights operate and battery indicator is accurate

_____ All accessories and parts operate

Product serial number:
Completed by:
Date:

EMC information

WARNING

- Do not use portable RF communications equipment, including peripherals such as antenna cables and external antennas, closer than 12 inches (30 cm) to any part of **Xpedition**, including cables specified by the manufacturer.
- Always avoid stacking or placing other equipment adjacent to **Xpedition** to prevent improper operation of the products. If such use is necessary, carefully observe the chair and the other equipment to verify proper operation.
- Do not use accessories, transducers, and cables, other than those specified or provided by the manufacturer, to avoid increased electromagnetic emissions or decreased electromagnetic immunity and improper operation.

Guidance and manufacturer's declaration - electromagnetic emissions		
Emissions test	**Compliance**	**Electromagnetic environment**
Xpedition is intended for use in the electromagnetic environment specified below. The customer or the user of **Xpedition** should assure that they are used in such an environment.		
RF emissions CISPR 11	Group 1	The emissions characteristics of this equipment make it suitable for use in professional healthcare facilities, emergency medical services, and home healthcare environments. If it is used in other environments, this equipment might not offer adequate protection to radio-frequency communication services and power supply networks. The user might need to take mitigation measures, such as relocating or reorienting the equipment.
RF emissions CISPR 11	Class B	

Guidance and manufacturer's declaration - electromagnetic immunity			
Xpedition is suitable for use in a professional healthcare facility, home, and EMS environments. **Xpedition** is not suitable for use 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 **Xpedition** 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	±12 kV contact ±15 kV air	±12 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%.
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.

Guidance and manufacturer's declaration - electromagnetic immunity			
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m	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 **Xpedition**. 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. Recommended separation distance: $D=(0.6)(\sqrt{P})$ where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

Note - These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast, and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which **Xpedition** is used exceeds the applicable RF compliance level above, **Xpedition** should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating **Xpedition**.

[b] Over the frequency range 150 kHz to 80 MHz, field strengths are less than 10 V/m.

Recommended separation distances between portable and mobile RF communications equipment and Xpedition			
Band (MHz)	**Service**	**Maximum power (W)**	**Minimum separation distance (m)**
Xpedition is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of **Xpedition** can help prevent electromagnetic interferences by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters), **Xpedition**, and cables, as recommended below, according to the maximum output power of the communications equipment.			
380-390	TETRA 400	1.8	0.3
430-470	GMRS 460 FRS 460	2.0	0.3
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
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer. **Note**: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.			

CAUTION - Changes or modifications to the **Alvarium** Battery Management System, not expressly approved by Stryker, could void the user's authority to operate the equipment.

For United States only:

Alvarium Battery Management System: Model 650700080301 (battery) and Model 650700450301 (charger)

Note - This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or TV technician for help

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