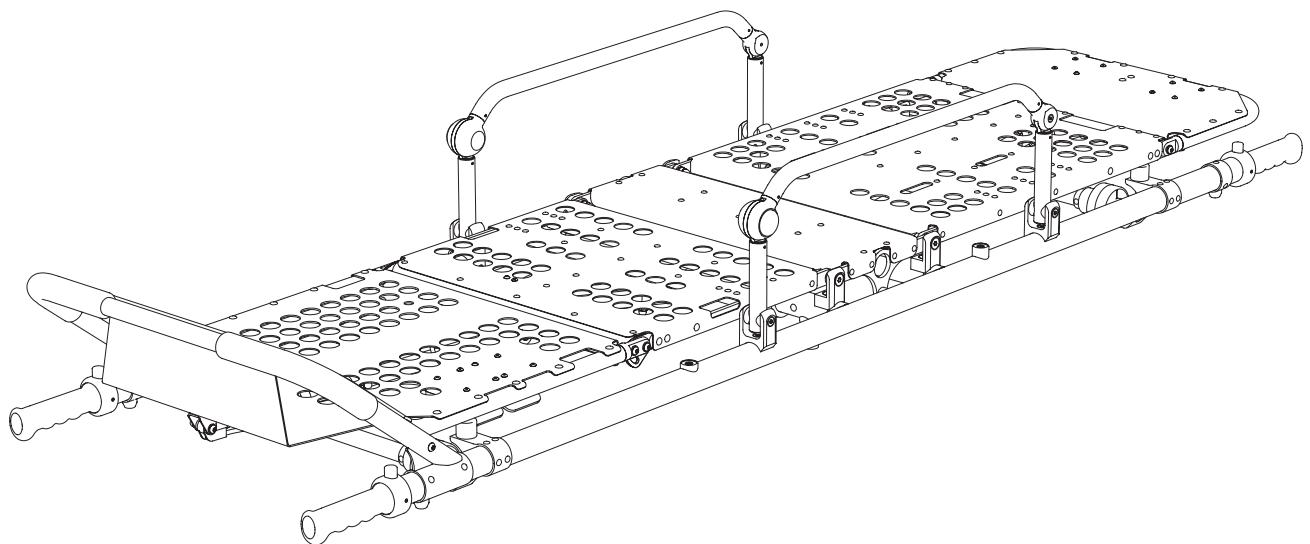




# VIPER

## Lift-Off Stretcher

For use with Viper & VIPER2 Transporter Systems



Read this Manual and Retain  
for Future Reference



# FERNO®

## Instructions for Use

2025-09-29, Rev 1  
Pub. No. VST-IFU-EN

## Ferno Customer Relations

For ordering assistance or general information:

### CANADA AND THE U.S.A.

Telephone (Toll-free)	1.877.733.0911
Telephone	1.937.382.1451
Fax (Toll-free)	1.888.388.1349
Fax	1.937.382.1191
Internet	<a href="http://www.ferno.com">www.ferno.com</a>

### ALL OTHER LOCATIONS

For assistance or information, please contact your Ferno distributor. If you do not have a Ferno distributor, please contact Ferno Customer Relations:

Ferno-Washington, Inc., 70 Weil Way  
Wilmington, Ohio 45177-9371, U.S.A.

Telephone	Country Code +1.937.382.1451
Fax	Country Code +1.937.382.6569
Internet	<a href="http://www.ferno.com">www.ferno.com</a>

## Disclaimer

This manual contains general instructions for the use, operation and care of this product. The instructions are not all-inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations and local protocol. Training on the proper use of this product must be provided before using this product in an actual situation.

Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Relations.

## Proprietary Notice

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## Limited Warranty Statement

The products sold by Ferno are covered by a limited warranty, which is printed on all Ferno invoices. The complete terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are also available upon request by calling Ferno at 1.800.733.3766 or 1.937.382.1451.

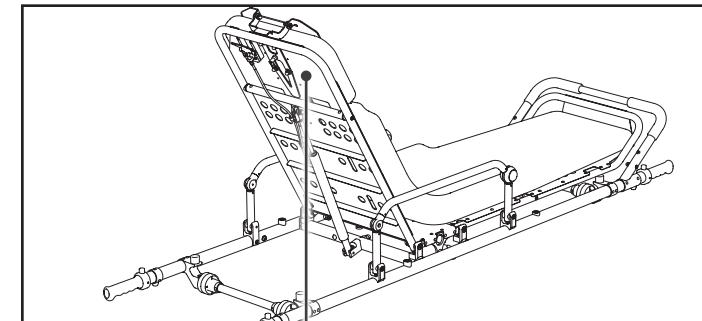
## Adverse Event Notice

In the event of an adverse event or serious incident related to the use of this device, the end user/operator must report the incident to Ferno-Washington, Inc. at 70 Weil Way, Wilmington, Ohio 45177 USA, 1-877-733-0911, or via email at [tscoordinator@ferno.com](mailto:tscoordinator@ferno.com). If the incident occurred in the European Union, report it to Ferno's Authorised EU Representative and the competent authority of the Member State in which the end user is established.



### USERS' MANUALS

To request additional free users' manuals, contact Ferno Customer Relations, your Ferno distributor, or [www.ferno.com](http://www.ferno.com).



### DEVICE TRADE NAME (CATALOG NO)

Date of Manuf.

Serial Number



(01) GTIN  
 (11) Date of Manuf.  
 (21) Serial Number

MEDIROL s.r.o., Na Strži 126/4, 140 00 Prague 4, Czech Republic

## Unique Device Identification (UDI)

Ferno complies with the United States Food and Drug Administration's (FDA), MDA & CE Unique Device Identification (UDI) regulation to identify medical devices. The UDI label contains information in human- and machine-readable form, which includes the serial number, date of manufacture and product name.

The label is located on the backrest as per the photo above.



MEDIROL s.r.o.  
Na Strži 126/4  
140 00 Prague, Czech Republic



Ferno (UK) Ltd.  
Ferno House, Stubs Beck Lane  
Cleckheaton, West Yorkshire, BD19 4TZ  
+44 (0) 1274 851999



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# 1 - SAFETY INFORMATION

## 1.1 Warning

Warning safety alerts indicate a potentially hazardous situation that, if not avoided, could result in injury or death.

### **WARNING**

**Untrained helpers can cause injury or be injured. Trained operators must instruct helpers where to hold the stretcher to avoid injury.**

**An improper fastener can cause injury. Use only a compatible Ferno fastener designed for use with this stretcher.**

**Modifying the stretcher can cause injury and damage. Use the stretcher only as designed by Ferno.**

**Improper operation of the SX cotsides can cause injury. Use the SX cotsides only in a locked position and for the purpose described.**

**Do not sit or stand on the SX cotsides.**

**Do not use the SX cotsides as a patient transfer device or surface.**

**Do not position the full weight of the patient on the SX cotsides.**

**Do not use the SX cotsides as a push/pull device or to steer the Viper Lift-Off Stretcher.**

**Use the telescoping handles only when they are in a locked position.**

**An unsecured patient can be injured. Use properly-installed patient straps to secure the patient on the stretcher.**

**Improper use of the stretcher can cause injury. Use the stretcher only for the purpose described in this manual.**

**An unattended patient may be injured. Do not leave the patient unattended.**

**An improperly-secured stretcher can separate from the Transporter and cause injury. Attach the stretcher securely and verify that the locks are engaged.**

**Sheets or other objects can interfere with, or become entangled in, the actuator or the legs, which can cause injury and/or malfunction, including unexpected lowering of the stretcher legs. Tuck the sheets between the mattress and the patient surface. Keep other items above the mattress.**

**Improper maintenance can cause injury. Maintain the stretcher only as described in this manual.**

**Failure to perform preventative maintenance inspections can cause injury or damage. Have the stretcher inspected regularly by a factory-trained technician.**

## 1.2 Notice

Notices emphasize important, but not hazard-related information. Failure to follow Notices could result in product or property damage.

### **NOTICE**

## 1.3 Bloodborne Disease Notice

To reduce the risk of exposure to blood or other potentially infectious materials when using the product, follow the disinfecting and cleaning instructions in this manual.

## 1.4 Symbol Glossary

The symbols defined here are used on the product and/or in this' manual. Ferno uses symbols recognised by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the emergency medical services industry.

Symbol	Definition
	General warning of potential injury
	Read the users' manual
	Two trained operators required
	Load Capacity/Safe Working Load
	Lock
	Unlock
	Serial Number
	Medical Device
	Compliant with European Union standards
	Compliant with United Kingdom standards
	Date of Manufacture
	Manufacturer

## 1.5 Safety and Instruction Labels

Safety and instruction labels place important information from the users' manual on the Viper Lift-Off Stretcher. Read and follow label instructions. Replace worn or damaged labels immediately.



A

Symbol	Definition	Part Number
A	General injury warning, read the users' manual, two trained operators required, load capacity	52114
B	Backrest adjustment	52111
C	Leg platform adjustment	52112
D	Leg platform knee angle adjustment	52113
E	Headrest adjustment	52110
F	Press to fold (fold-down sidearms)	52013



B



C



D



E



F

## 2 - OPERATOR FOCUS

### 2.1 Operator Training

Operator that using the stretcher:

- must read and understand this manual.
- must have training on proper use of the stretcher.
- must have the physical ability to assist the patient.
- must practice using the stretcher before using it with a patient.
- must keep training records. For a sample training record sheet, see "Training Record" on page 26.

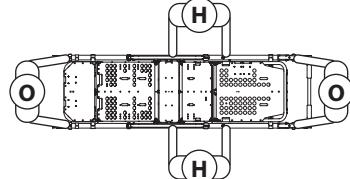
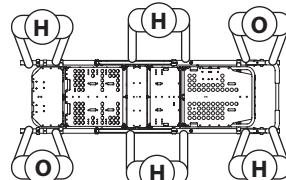
### 2.2 Using Additional Help

Trained operators may need additional help when working with heavy patients.

- Two trained people stand at either end of the stretcher and instructing the helpers.
- It is recommended that helpers work in pairs to help keep the stretcher balanced.

Look at the chart to see where the operators and helpers should stand.

<b>WARNING</b>	
Untrained helpers can cause injury or be injured. Trained operators must instruct helpers where to hold the stretcher to avoid injury.	

Helpers	Lifting or Carrying
Two Operators + Two Helpers	
Two Operators + Four Helpers	

**Key: O = Operator, H = Helper**

## 3 - ABOUT THE STRETCHER

### 3.1 Description

The Ferno® Viper Lift-Off Stretcher is a medical device designed to transport a patient in a vehicle. It is designed for use in conjunction with Viper and VIPER2 Transporter systems.

The stretcher is for use by a minimum of two trained operators.

#### OPTIONS

The stretcher comes equipped with options selected at time of purchase.

- Sidearm Options:
  - Fold-Down Sidearms
  - SX Surface Xtender Cotsides
- Backrest Options:
  - Standard Backrest
  - Head-Tilt Backrest
  - Extending Backrest

#### COMPATIBLE TRANSPORTERS

- Ferno® Viper Transporter
- Ferno® VIPER2 Transporter

#### COMPATIBLE FASTENERS

- See the Transporter user manual

### 3.2 Compliance

The stretcher meets the following standards:

- **EN 1865-1:** Patient handling equipment used in road ambulances – Part 1: Specification for general stretcher systems and patient handling equipment
- **EN 1789:** Medical vehicles and their equipment – Road ambulances

#### WARNING

Improper use of the stretcher can cause injury. Use the stretcher only for the purpose described in this manual.

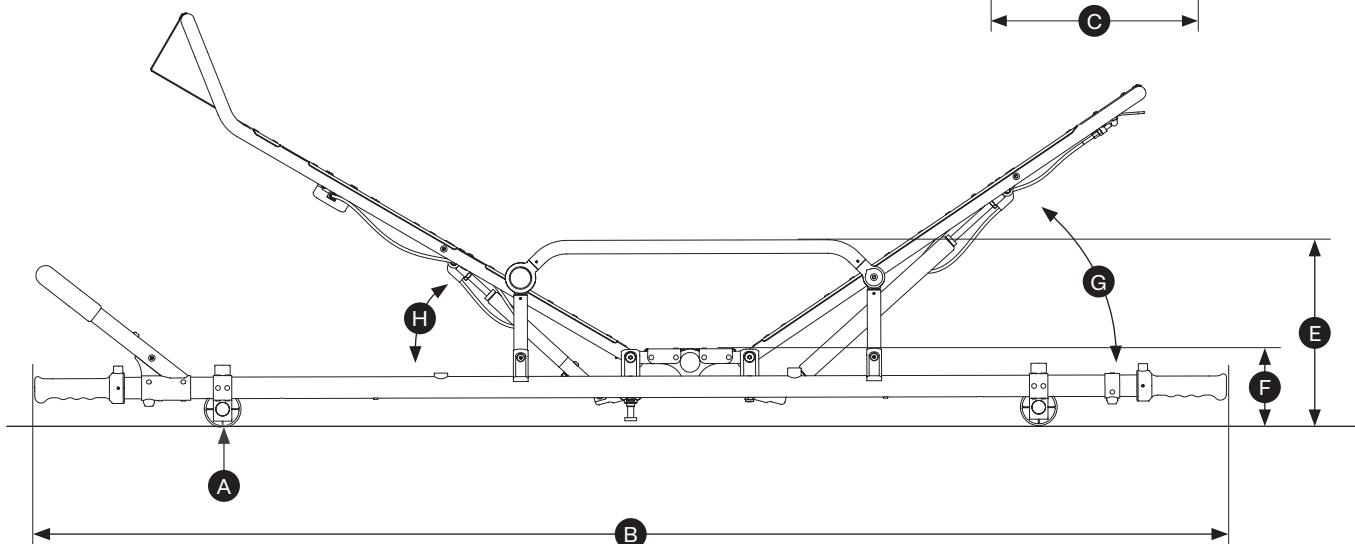
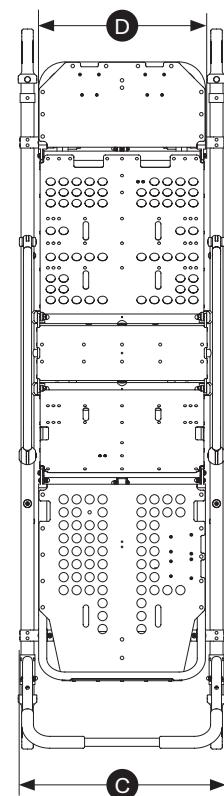
An improper fastener can cause injury. Use only a compatible Ferno fastener designed for use with this stretcher.

Modifying the stretcher can cause injury and damage. Use the stretcher only as designed by Ferno.

### 3.3 General Specifications

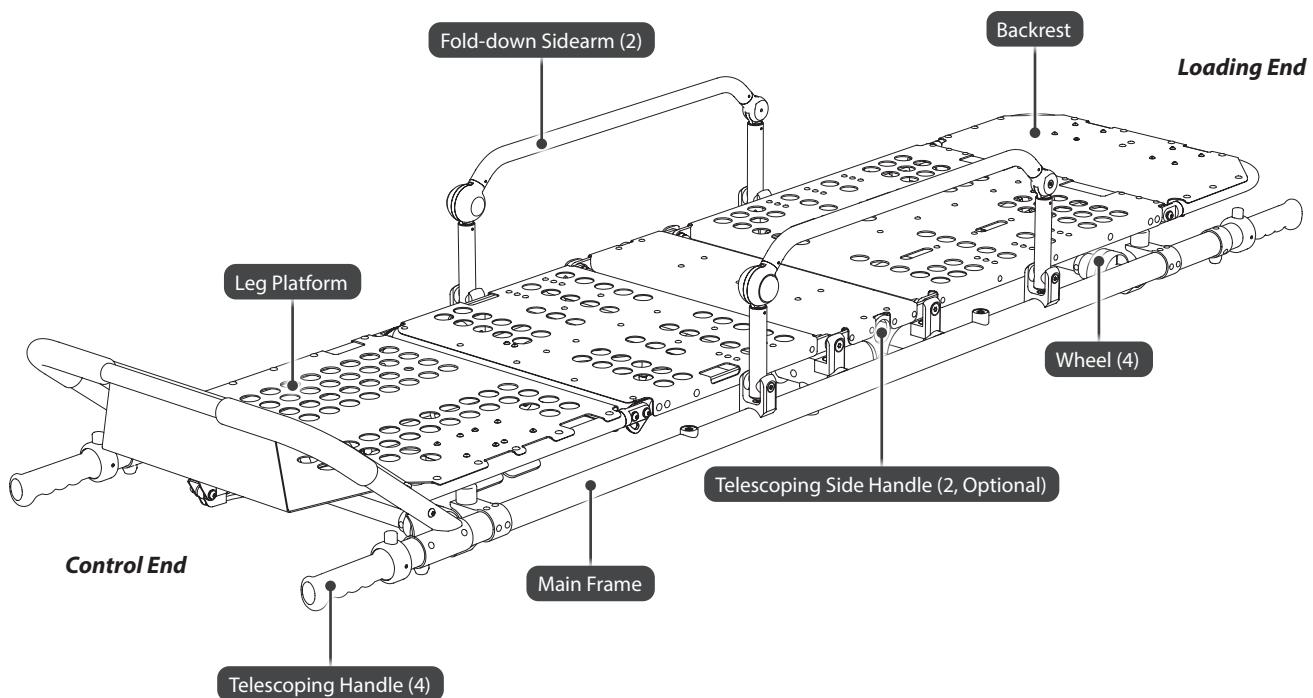
Specifications are rounded. Imperial conversions are calculated before rounding the metric measurement. Ferno reserves the right to change specifications without notice.

- Load capacity is the amount of weight the stretcher is designed to hold, including a patient and accessories attached.
- Weight is stated without a mattress, patient straps, or optional features.
- The stretcher and the Transporter have a specific load capacity. When pairing the stretcher and the Transporter, do not exceed the load capacity of either component.



Specifications	Metric	Imperial
A) Wheels	60 x 30 mm	2.36 x 1.18 in
B) Length	1940 mm	76.38 in
C) Width (Overall)	560 mm	22 in
D) Width (Patient Surface)	460 mm	12 in
E) Height (Top of Fold-Down Sidearms)	300 mm	18 in
F) Height (Patient Surface)	120 mm	4.72 in
G) Backrest Adjustment	0 – 90°	
Headrest Adjustment (optional; not shown)	± 30°	
H) Leg Positioning Platform Adjustment	0 – 30°	
Footrest Adjustment (optional; not shown)	50°	
Load Capacity	250 kg / 40 st	550 lb
Weight	20 kg	31 lb

### 3.4 Components



## 4 - FEATURES

### 4.1 Standard Backrest

The backrest adjusts to different angles for patient comfort and clinical need. To adjust the backrest:

1. Loosen or unbuckle the straps.
2. Lower the sidearms.
3. Support the weight of the backrest and patient before using the levers.
4. Squeeze the backrest angle adjust lever toward the backrest frame to unlock the backrest (Figure 1).
5. Raise or lower the backrest to the desired position, then release the lever to lock the backrest.
6. Adjust the sidearms.
7. Adjust and fasten the patient straps.

#### NOTICE

Do not position the full weight of the patient on the backrest.

Do not use the backrest to lift the stretcher. Only use the stretcher's main frame or the telescoping frame to lift the stretcher.

### 4.2 Adjustable Headrest Option

The adjustable headrest allows the head section of the backrest to be adjusted and better angled to allow trained medical personnel to access and work with the patient's airway.

1. Grasp the head section frame with both hands. Support the weight of the patient's head.
2. Squeeze the head section angle-adjust lever toward the frame to unlock the head section (Figure 2).
3. Raise or lower the head section frame to the desired position, then release the lever to lock the frame.

### 4.3 Head Extension Option

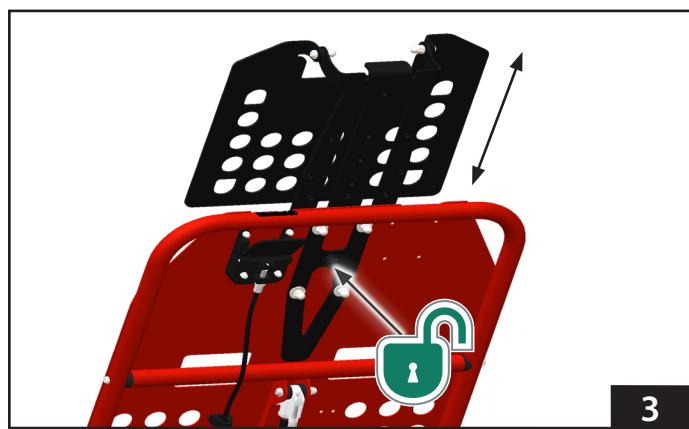
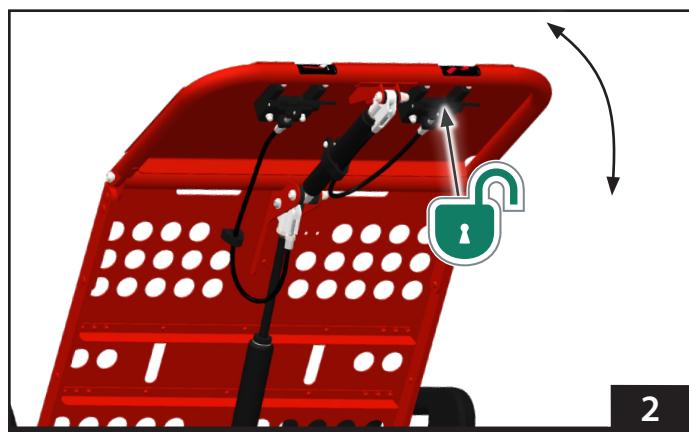
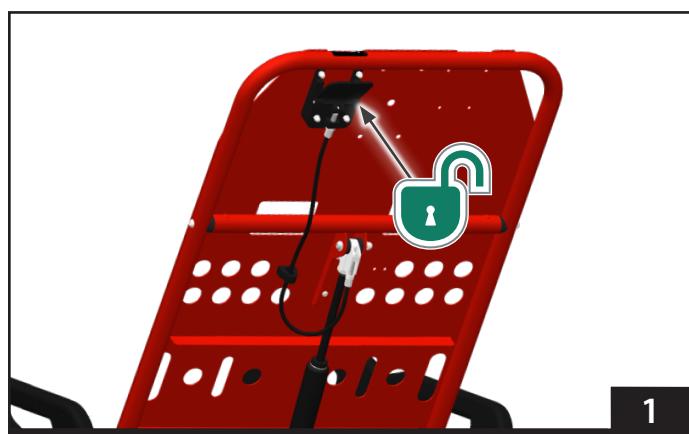
The head extension option includes a moveable head extension plate to make the patient surface longer by 290 mm / 12".

1. Grasp the head section and rotate the release knob (Figure 3) by 180° to unlock the head section.
2. Raise or lower the head section to the desired position.
3. Rotate the release knob by 180° to lock the head section.
4. Pull or push the head section until it locks in the position.

### 4.4 Extending Backrest Option

The extending backrest option (Figure 4) has an upper section of the backrest that can be extended out to make the patient surface longer by 160 mm / 6.3". An additional pillow available and intended for use with this backrest.

To adjust the extending backrest: Grasp the head section and extend or retract the head section to desired position.



## 4.5 Leg Platform

The leg platform raises the patient's legs or knees and allows flat, raised and knees elevated position.

### RAISED POSITION

1. Hold the leg platform with hand. Support the weight of the patient.
2. Squeeze the leg platform raise/lower lever toward the frame (Figure 5) to unlock the leg platform.
3. Adjust the leg platform to the desired position.
4. Release the lever to lock the leg platform at the new position.

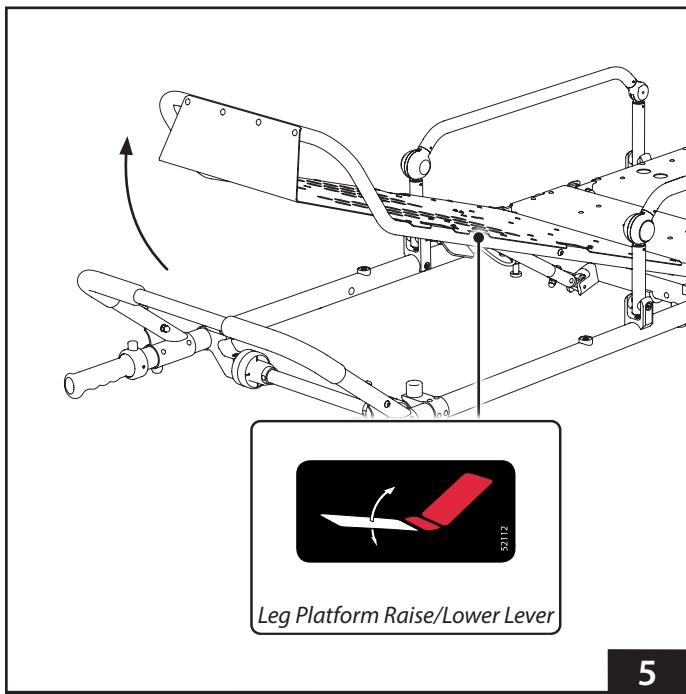
### KNEES ELEVATED POSITION

1. Raise the leg platform to the required position.
2. Hold the lower leg platform with your hand. Support the weight of the patient.
3. Squeeze the leg platform knee angle lever toward the frame (Figure 6) to unlock the lower leg platform section.
4. Adjust the lower leg platform to the desired position.
5. Release the lever to lock the lower leg platform at the new position.

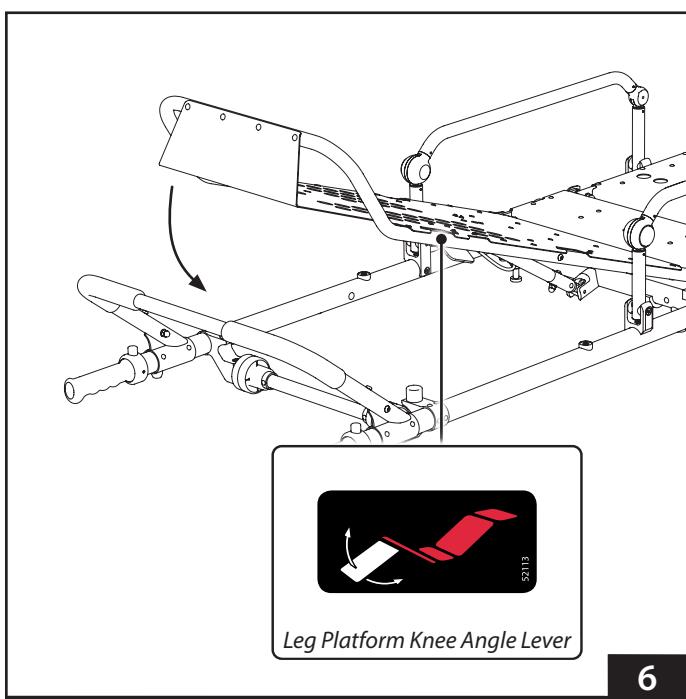
### NOTICE

Do not position the full weight of the patient on the leg platform.

Do not use leg platform to lift the stretcher. Only use the stretcher's main frame or the telescoping handles to lift the stretcher.



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## 4.6 SX Surface Xtender Cotsides

The SX surface extender cotsides provide added patient security and comfort, and increase the width of the patient surface allowing flexibility for large patients. The SX cotsides also provide a location to place a patient's arm to start an IV etc. Each side locks individually. There are five locking positions and an unlocked, 'down' position.

SX cotsides have an integral safety feature which prevents the release mechanism from being overloaded, and to prevent injury to operators. If the release lever is operated while there is pressure on the SX cotsides (i.e. the SX cotsides are supporting patient weight), the ratchet will not release. Lifting up on the SX cotsides to assume the weight will release the ratchet and allow the SX cotsides to be lowered.

**To Raise the SX Cotsides:** Lift the SX cotsides until it lock into the desired position. There is no need to use the release lever when raising. The SX cotsides will ratchet upwards, locking in each position.

**To Lower the SX Cotsides:** Rotate the SX cotsides toward the patient surface slightly to take the weight off the locking mechanism. Squeeze the red lock release lever (Figure 7) and lower the SX cotsides to the desired position, or all the way down if performing a patient transfer.

### ⚠️ WARNING

Improper operation of the SX cotsides can cause injury. Use the SX cotsides only in a locked position and for the purpose described.

Do not sit or stand on the SX cotsides.

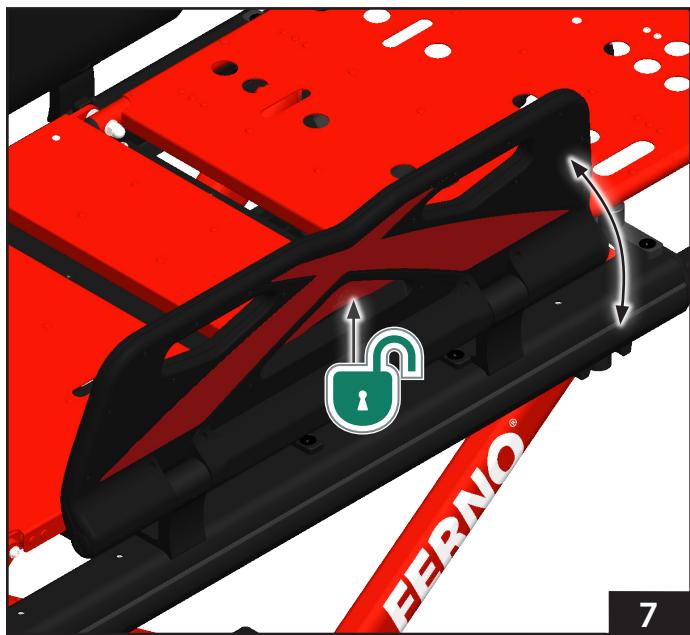
Do not use the SX cotsides as a patient transfer device or surface.

Do not position the full weight of the patient on the SX cotsides.

Do not use the SX cotsides as a push/pull device or to steer the Viper Lift-Off Stretcher.

### NOTICE

Do not use the SX cotsides sidearms to push or pull the stretcher.



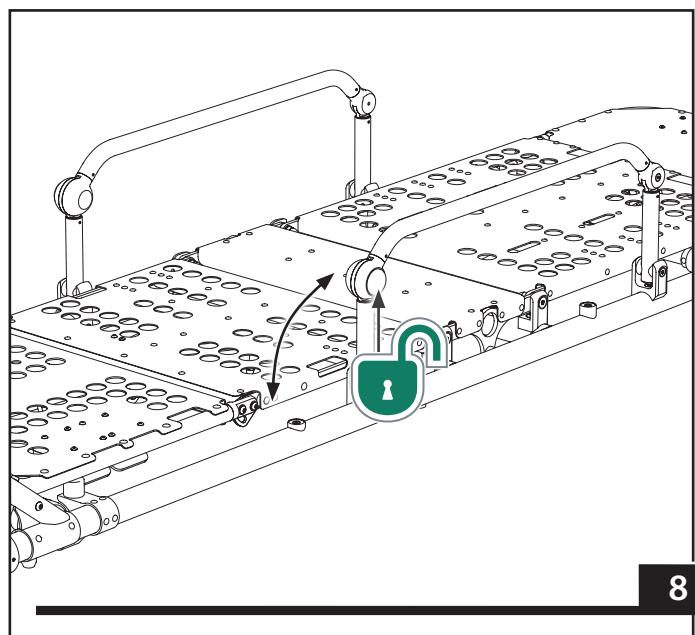
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## 4.7 Fold-Down Sidearms (Optional)

To lower a sidearm, press the release button and lower the sidearm (Figure 8). To raise a sidearm, lift the sidearm up until it locks into position.

### NOTICE

Do not use the fold-down sidearms to lift the stretcher. Only use the stretcher's main frame or the telescoping handles to lift the stretcher.



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## 4.8 Telescoping Handles

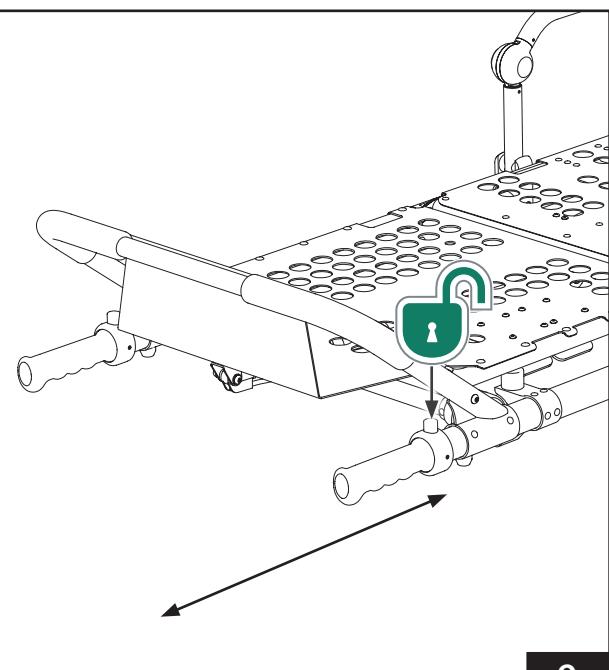
The telescoping handles lock in three positions.

To change the handle position:

1. Press the red button on the handle (Figure 9), then push or pull the handle to the desired position.
2. Release the button. Push or pull the handle to verify it has locked.

### WARNING

Use the telescoping handles only when they are in a locked position.



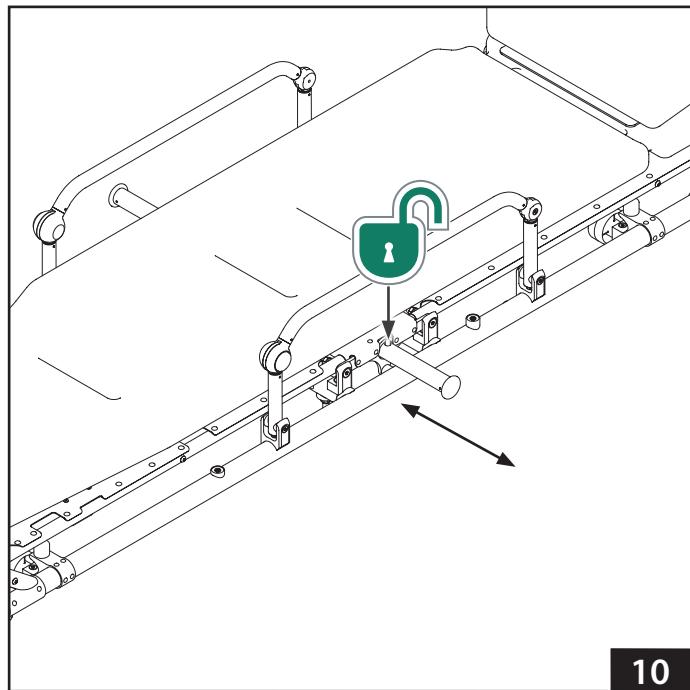
9

## 4.9 Side Telescoping Handles (Optional)

Operators or helpers use the side telescoping handles as extra lifting or grip points.

1. Pull the handle to extend it.
2. Press the knob (Figure 10) and push the handle to retract it.

When lifting, to ensure correct balance of the stretcher ensure to use one operator or helper on each side of the stretcher and lift the stretcher together.



10

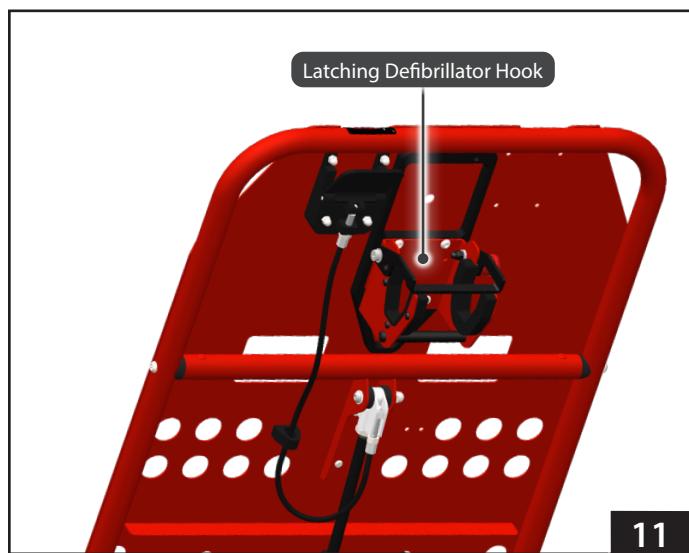
## 4.10 Latching Defibrillator Hook (Optional)

The backrest-mounted defibrillator hook is capable of holding equipment weighing up to 22 kg / 50 lb with a maximum 31.7 mm / 1.21" diameter carry handle (Figure 11).

The defibrillator hook is not designed to secure the equipment during transport in a vehicle. Remove items from the defibrillator hook before transport.

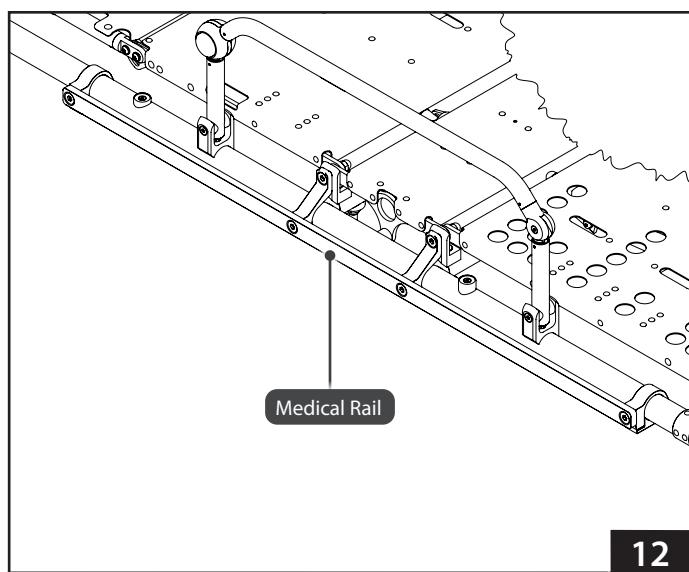
Only use the equipment that fits properly into the equipment hook.

1. Raise the backrest to access the defibrillator hook.
2. Open the defibrillator hook by pulling the red pin on the side.
3. Set the carry handle of the equipment in the hook. Verify the equipment is stable in the hook.
4. Close the lock to hold the equipment in place.
5. Remove the equipment from the hook prior to transport inside a vehicle. For transport of equipment inside a vehicle, secure only to a holder designed for this purpose.
6. It is recommended to remove equipment from the hook before lowering the backrest.



## 4.11 Medical Rail (Optional)

The medical rail option (Figure 12) is fixed to the side(s) of the stretcher and is designed to allow a variety of devices and accessories to be carried on the side of the stretcher when not in a vehicle. The medical rail may be installed to either/both sides of the stretcher.



## 4.12 IV Pole (Optional)

The IV pole (Figure 13) is a device designed to carry IV fluid bags.

The IV pole has three sections with two adjusters that can be quickly adjusted to a wide range of heights. The top and middle stages of the IV pole can be adjusted in any sequence.

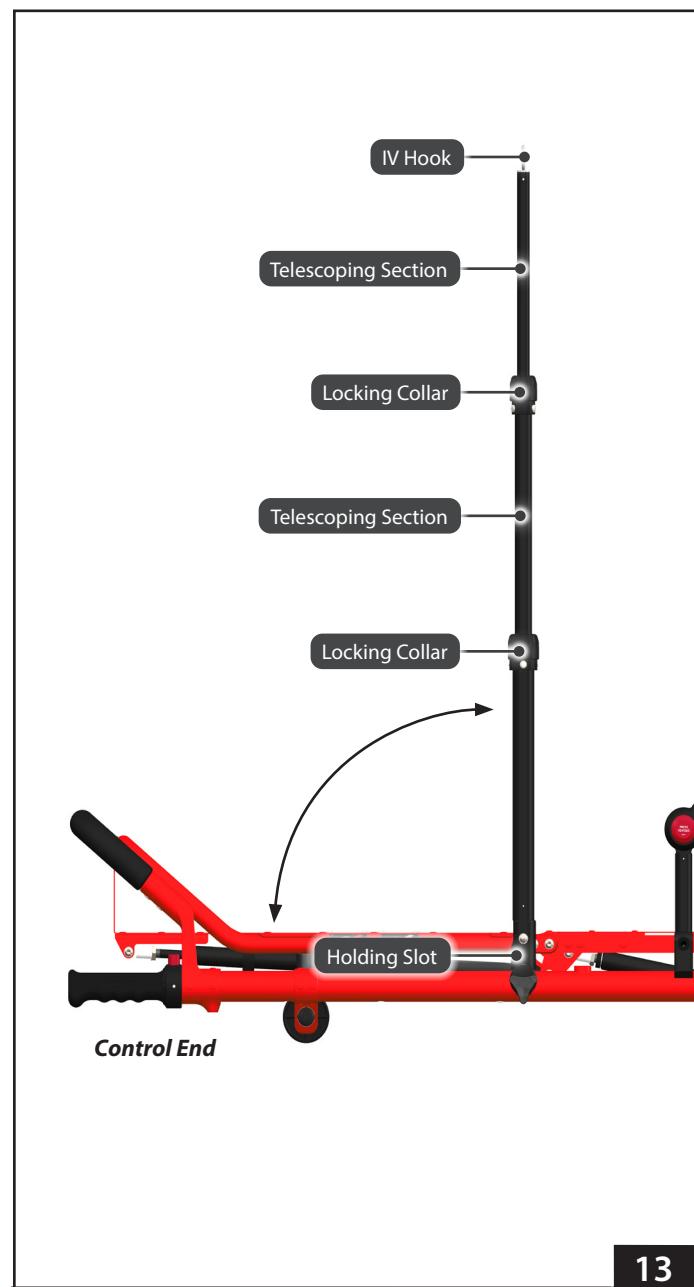
To adjust the IV pole:

1. Lift and pivot the IV pole from the storage position. Push down until the IV pole locks into the holding slot.
2. To raise the height of the IV pole, turn the locking collars counterclockwise and pull up on the telescoping sections.
3. Raise the IV pole to the desired height.
4. Turn the locking collars clockwise to lock the telescoping sections in place.
5. Hang the IV bags on the IV hook.
6. To lower the IV pole, remove the IV bags from the hook, turn the locking collars counterclockwise and slide the sections into the bottom tube.
7. Turn the locking collars clockwise to tighten them.
8. Lift up and pivot the pole down into the storage position.

### NOTICE

Remove IV fluid bags from the IV pole prior to transport inside a vehicle. For transport of an IV fluid bag inside a vehicle, secure only to a holder designed for this purpose.

Do not use the IV pole to push or pull the stretcher.



#### 4.13 Mattress

The mattress is designed to provide patient security and comfort. The VELCRO® pads on the mattress bottom attach to the patient surface (Figure 15). The head section includes slots to allow the patient shoulder straps to be routed over the patient's shoulders.

**To Attach:** Lower the backrest and/or leg positioning platform. Place the mattress on VELCRO® pads (Figure 14).

**To Remove:** Disconnect the VELCRO® pads with both hands and remove the mattress.

#### NOTICE

Your stretcher may have been shipped with different mattress per your order. Follow instructions in mattress users' manual and keep it with this manual for future reference.



*Mattress Top*



*Mattress Bottom*

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## 4.14 Patient Harness System

Patient harness system consist of three parts (Figure 16):

- 4-point harness for use around the patient's shoulders, chest and waist
- 2-piece strap for use on the patient's upper legs
- 2-piece strap for use on the patient's lower legs/ankles

Ensure to use upper body harness and both legs straps at all times to secure the patient on the stretcher.

Adjust the straps to safely secure the patient without causing discomfort or impairing circulation.

### ATTACHING THE HARNESS SYSTEM

1. Unbuckle and separate the straps.
2. Wrap the loop end of a strap around the designated attachment point on the stretcher backrest, main frame and leg platform (Figure 16).
3. Thread the male buckle/tang or female buckle/receiver through the loop and pull the strap through the loop until the loop is tight around the attachment point (Figure 17).
4. Repeat Steps 2 and 3 to attach the other part of the strap to the selected attachment point on the opposite side of the stretcher.

**Note:** When attaching the shoulder straps, orient the links so they touch when the buckle is assembled (Figure 16). Insert the male buckle (tang) through both shoulder-strap links and into the female buckle (receiver) until it locks into place.

### REMOVING THE STRAPS

1. Unbuckle the strap.
2. Feed the buckle (tang) through the loop, and remove the loop from the stretcher.

### SECURING A PATIENT

1. Unbuckle all the straps and position them out of the way.
2. Transfer the patient onto the stretcher following local protocols. Adjust the backrest, leg platform and strap lengths as needed.
3. Lay the shoulder straps over the patient's shoulders and attach them across the patient's chest in an H-formation.
4. Fasten the pelvic/waist straps across the patient's pelvis.
5. Fasten the leg straps over the patient's legs.
6. Adjust the straps so they are snug on the patient, holding the patient safely in place but not too tight.

### ADJUSTING A STRAP

**To lengthen a strap:** Unbuckle the strap. Hold the male buckle/ tang and turn it perpendicular to the strap material and pull outward, away from the strap attachment point until the strap is the desired length.

**To shorten a strap:** Hold the end of the strap and pull the strap through the male buckle/tang until the strap is the desired length.

### WARNING

An unsecured patient can be injured. Use properly-installed patient straps to secure the patient on the stretcher.

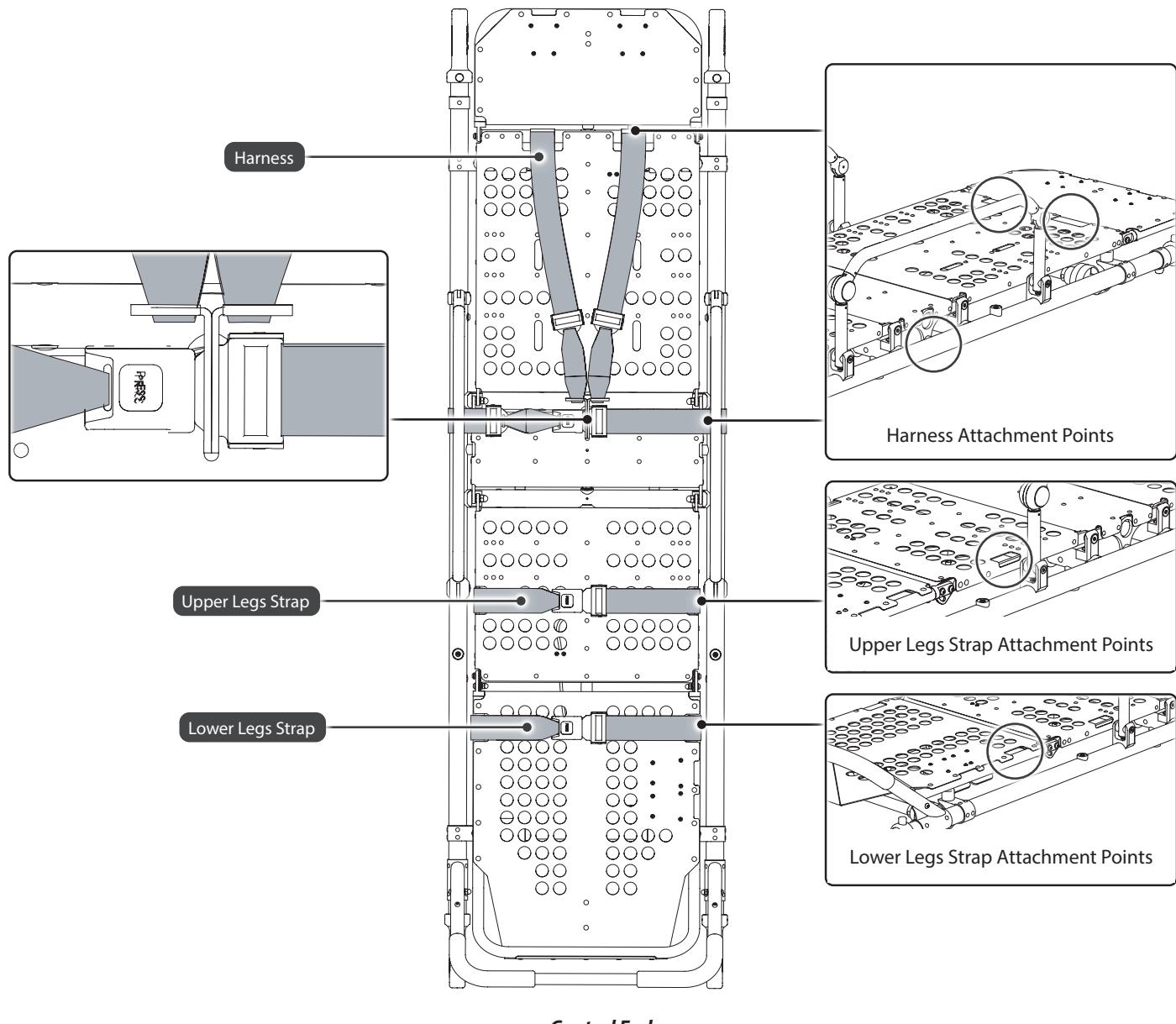
### NOTICE

Your stretcher may have been shipped with different straps per your order. Follow instructions in straps users' manual and keep it with this manual for future reference.

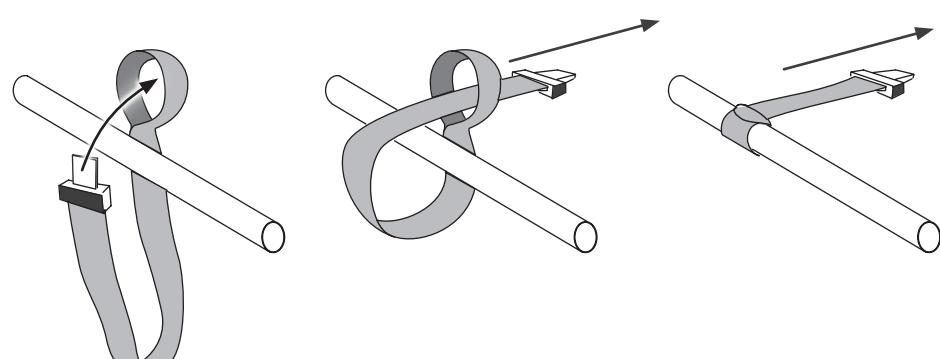
Keep straps fastened when not in use to prevent them from interfering with stretcher operation.

## VIPER LIFT-OFF STRETCHER

### Loading End



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## 5 - USING THE STRETCHER

### 5.1 Before Placing the Stretcher in Service

- Before use, personnel who will work with the stretcher must read and understand this manual. Appropriate training is also required. See "Operator Training", page 7.
- Confirm that the stretcher operates properly. See "Inspecting", page 24.
- Install any accessories shipped with the stretcher.

#### **WARNING**

Improper use of the stretcher can cause injury. Use the stretcher only for the purpose described in this manual. An unattended patient may be injured. Do not leave the patient unattended.

### 5.2 General Guidelines for Use

Medical advice is beyond the parameters of this manual. It is the operators' responsibility to ensure safe practices for the patient and themselves. A minimum of two trained operators is required.

- Follow standard patient-handling procedures when operating the stretcher.
- Communicate with one another and use coordinated movements to operate the stretcher.
- Talk to the patient. Communicate with the patient before changing the stretcher position.
- Stay with the patient at all times. Do not leave the patient unattended.
- Use the patient harness and the leg straps to secure the patient on the stretcher at all times.
- Use additional help as needed (page 7).
- Read the Transporter user manual.

### 5.3 Attaching and Removing A Stretcher

The stretcher can be locked onto a Transporter in both directions.

The stretcher locks onto the Transporter when the pins on the bottom of the stretcher platform engage the Transporter locks (Figure 18).

#### To attach the stretcher:

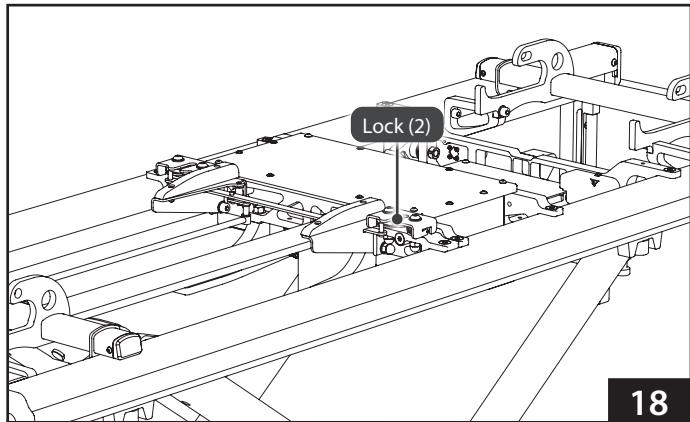
1. Lock the Transporter wheel locks.
2. Lift the stretcher platform and position it slightly toward the control end of the Transporter (Figure 19).
3. Align the stretcher wheels with the Transporter main frame and place the stretcher on the Transporter main frame.
4. Push the stretcher toward the loading end of the Transporter until the stretcher pins fully engage in the Transporter locks.
5. Verify that the stretcher is locked by attempting to pull it toward the control-end of the Transporter. If the locks are engaged, the stretcher remains fixed on the Transporter. If the locks are not engaged, repeat Steps 2-4.
6. Release the Transporter wheel locks.

#### To remove the stretcher:

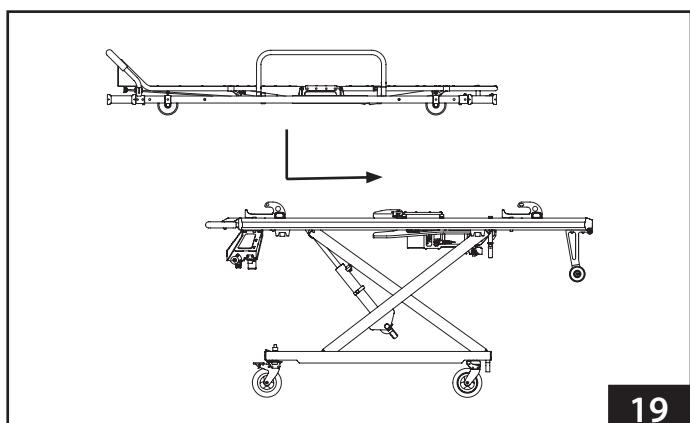
1. Push and hold the stretcher-release handle on the Transporter (Figure 20).
2. Both operators move the stretcher slightly toward the control end of the Transporter to move the pins out of the locks.
3. When the stretcher pins have left the Transporter locks, let go of the stretcher-release handle.
4. Together, lift the stretcher platform off the Transporter.

#### WARNING

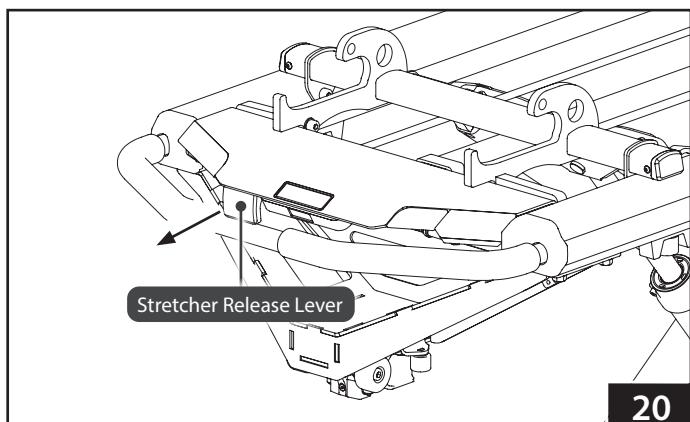
An improperly-secured stretcher can separate from the Transporter and cause injury. Attach the stretcher securely and verify that the locks are engaged.



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## 5.4 Transferring the Patient

### To transfer the patient onto the stretcher:

**Note:** This procedure is recommended when the patient is on the floor or on the ground, or when the patient location cannot be accessed by the Transporter.

1. Lock the Transporter wheel locks.
2. Remove the stretcher from the Transporter and place it near the patient.
3. Lower the sidearms.
4. Unfasten the straps and position them so they do not interfere with transferring the patient.
5. Transfer the patient onto the stretcher using the approved emergency medical procedures and the local protocols.
6. Raise the sidearms, adjust the backrest and/or leg platform as needed and fasten and adjust the straps.
7. Lift and carry the stretcher with the patient to the Transporter.
8. Secure the stretcher on the Transporter.
9. Unlock the Transporter wheel locks.

### To transfer the patient onto the stretcher with the Transporter:

**Note:** This procedure is recommended when the patient is on a bed, a sofa, etc. and the Transporter can be placed near the patient.

1. Position the stretcher with the Transporter near the patient, lower it to the patient's level and lock the wheel locks.
2. Lower the sidearms, unfasten the straps and position them so they do not interfere with transferring the patient.
3. Transfer the patient onto the stretcher using the approved emergency medical procedures and your local protocols.
4. Raise the sidearms, adjust the backrest and/or leg platform as needed and fasten and adjust the straps.
5. Unlock the wheel locks and raise the Transporter to the transport height.

### To transfer the patient off the stretcher:

1. Position the stretcher near the bed and adjust the stretcher to the bed height or slightly above.
2. Lock the wheel locks. Lower the sidearms.
3. Unfasten the patient straps and arrange them so they do not interfere with transferring the patient.
4. Transfer patient onto the bed using the approved emergency-medical procedures and following the local protocols.
5. Fasten and arrange the patient straps so they do not interfere with using the stretcher/Transporter.
6. Confirm that the sheets and other articles do not interfere with stretcher/Transporter operation.

### WARNING

Sheets or other objects can interfere with, or become entangled in, the actuator or the legs, which can cause injury and/or malfunction, including unexpected lowering of the stretcher legs. Tuck the sheets between the mattress and the patient surface. Keep other items above the mattress.

## 6 - MAINTENANCE

### 6.1 Maintenance Schedule

The stretcher requires regular maintenance. Set up a maintenance schedule and follow it. The table at right represents minimum intervals for maintenance.

Keep the maintenance records. For a sample record sheet, see "Maintenance Record" on page 27.

When using maintenance products, always follow the instructions given by the manufacturers, and read any material safety data sheets.

### 6.2 Service Life

Many factors affect service life of the product, including frequency of use, local environment, maintenance and other factors.

Follow the disinfecting, cleaning, and inspection procedures in this manual to ensure long life for the stretcher.

### 6.3 Disinfecting

Wipe all surfaces with disinfectant. Follow the disinfectant manufacturer's instructions for application method and contact time. It is recommended to inspect the stretcher for any damage as you disinfect it.

### 6.4 Cleaning

1. Remove the straps, the mattress and any accessories.
2. Hand clean all surfaces of the stretcher with warm water and a mild detergent, or pressure-wash the stretcher as described in "Pressure-Washing" on page 24.
3. Rinse with warm, clear water. Dry the stretcher with a towel or allow it to dry.

**Note:** Do not lubricate the stretcher. Lubricating allows dirt and foreign particles to collect on the stretcher, causing damage.

4. When fully dry, reattach the straps, the mattress and the accessories.

### 6.5 Preventative Maintenance Inspections

Preventative maintenance inspections must be performed by a factory-trained service technician regularly. The product is first checked 24 months after purchase and then every 12 months. Always make sure the product is properly cleaned and disinfected before an inspection.

#### WARNING

Improper maintenance can cause injury. Maintain the stretcher only as described in this manual.

Failure to perform preventative maintenance inspections can cause injury or damage. Have the stretcher inspected regularly by a factory-trained technician.

Minimum Maintenance	Each Use or Daily	As Needed	Monthly
<b>Disinfecting</b> (this page)	•		
<b>Cleaning</b> (this page)		•	•
<b>Pressure-Washing</b> (page 24)	•		
<b>Inspecting</b> (page 24)	•	•	•

#### NOTICE

Disinfectants and cleaners containing phenolics or iodines can cause damage. Do not use products containing these chemicals. If bleach is used, rinse with plenty of clear water to remove bleach residue.

Using abrasive cleaning compounds or applicators on the stretcher can cause damage. Do not use abrasive materials to clean the stretcher.

Do not lubricate the stretcher. Applying lubricant can cause damage to the stretcher.

Clean and disinfect the product properly before preventative maintenance inspection.

## 6.6 Pressure-Washing

Use caution when cleaning the stretcher with pressurised water. Wear all safety equipment recommended by the manufacturer of the pressure washer.

1. Remove the straps, the mattress and any accessories.
2. Secure the wheel locks.
3. Set the nozzle pressure at 20,000 kPa/2,900 psi or less and 15 liters/4 gallons per minute or less. Keep the nozzle at least 50 m/20" from the stretcher at all times.
4. Use only cold water without any disinfectants.
5. Spray the patient surface, the legs and the wheels of the stretcher.
6. Allow the stretcher to dry for 10 minutes.
7. When fully dry, reattach the patient straps, the mattress and any accessories.

### NOTICE

Water under high pressure, or steam, can penetrate joints and cause corrosion. Use caution when cleaning movable parts.

## 6.7 Inspecting

Inspect the stretcher regularly. Follow the checklist on the right and try all the stretcher functions described in this manual.

A daily inspection is recommended at the start of each operator shift, including the manual override release handle and the electrical inspection on this page.

If the inspection reveals damage or excessive wear, remove the stretcher from service until it has been repaired.

### Inspection Checklist

- Are all components present?
- Is the stretcher free of excessive wear?
- Are all screws, nuts and rivets securely in place?
- Do all moving parts operate smoothly and properly?
- Are optional features free of damage and do they function properly?
- Does the stretcher attach securely to the Transporter?
- Are the patient straps installed properly?
- Are the straps in good condition with no cuts or frayed edges?
- Are the strap buckles free of visible damage and do they operate properly?
- Is the vehicle properly prepared for the stretcher with an approved fastening system installed?
- Do the installed accessories operate properly without interfering with stretcher operation?

## 7 - ACCESSORIES

Ferno offers a full line of accessories approved for use with the Viper Lift-Off Stretcher. Follow all instructions in accessory users' manuals. Keep the instructions with this manual.

When using accessories, be aware of any special considerations such as doorway heights and widths, or other factors which may be affected by the addition of the accessory/accessories to the Viper Lift-Off Stretcher.

Contact Ferno Customer Relations (page 2) or your Ferno distributor for Viper Lift-Off Stretcher information.

### ⚠️ WARNING

Attaching improper items to the Viper Lift-Off Stretcher can cause injury. Use only Ferno-approved items on the Viper Lift-Off Stretcher.

# TRAINING RECORD

## MAINTENANCE RECORD



70 Weil Way  
Wilmington, OH 45177

Aviation

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Military

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Mortuary

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EMS

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Rescue

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