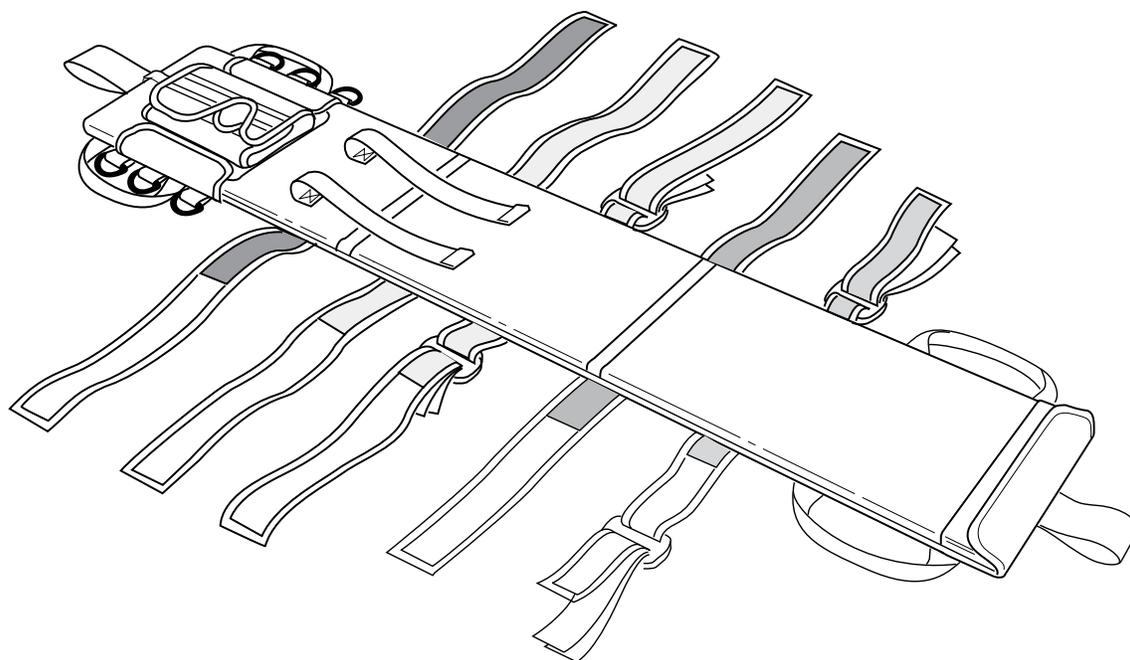




Model 78 Pedi-Pac®

Pediatric Immobilizer



Read this Manual and Retain
for Future Reference



FERNO®

Instructions for Use

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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	www.ferno.com

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.

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Fax	Country Code +1.937.382.6569
Internet	www.ferno.com



USERS' MANUALS
To request additional free users' manuals, contact Ferno Customer Relations, your Ferno distributor, or www.ferno.com.



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.

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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.



Medical Device



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1 - SAFETY INFORMATION

1.1 Warning

Warning notices indicate a potentially hazardous situation which, if not avoided, could result in injury or death.

 WARNING
Improper use can cause injury. Use the Pedi-Pac only as described in this manual.
Improper operation can cause injury. Use the Pedi-Pac only as described in this manual.
Improper maintenance can cause injury. Maintain the Pedi-Pac only as described in this manual.
Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service on the Pedi-Pac.

1.2 Important

Important notices emphasize important usage or maintenance information. Failure to follow Important notices could result in damage to the product or property damage.

Important

1.3 Bloodborne Disease Notice

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

1.4 Symbol Glossary

The symbols defined at right are used on the Pedi-Pac and/or in this manual. Ferno uses symbols recognized by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the emergency medical services industry.



General Warning of Potential Injury



Read the Users' Manual



Manufacturer



Authorized Representative in the European Community

1.5 Safety and Instruction Labels

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

2 - OPERATOR FOCUS

2.1 Operator Training

Operator using the Pedi-Pac:

- must read and understand this manual.
- must have training on proper use of the Pedi-Pac.
- must have a training on emergency-medical service and emergency patient-handling procedures.
- must have the physical ability to assist the patient.
- must practice with the Pedi-Pac before using it with a patient.
- must keep training records. For a sample training record sheet, see “Training Record” on page 15.

3 - ABOUT THE PEDI-PAC

3.1 Pedi-Pac Description

The Model 78 Pedi-Pac® Pediatric Immobilizer (Pedi-Pac) is a device designed to aid in stabilizing and immobilizing a pediatric trauma patient.

The Pedi-Pac is for professional use by a minimum of two trained operators.

The Pedi-Pac features include a plywood backboard with a removable nylon cover, an adjustable, color-coded restraint system, a head support, lifting handle, and cot attachment loops.

Included with the Pedi-Pac is a carrying case, a Pedi-Pad, and two head/chin restraints.

3.2 General Specifications

Specifications for the Pedi-Pac are shown in the table at right. General specifications are rounded. Metric conversions are calculated before rounding the Imperial measurement.

Ferno reserves the right to change specifications without notice. For more information, contact Ferno Customer Relations or your Ferno distributor (page 2).

 **WARNING**

Improper use can cause injury. Use the Pedi-Pac only as described in this manual.

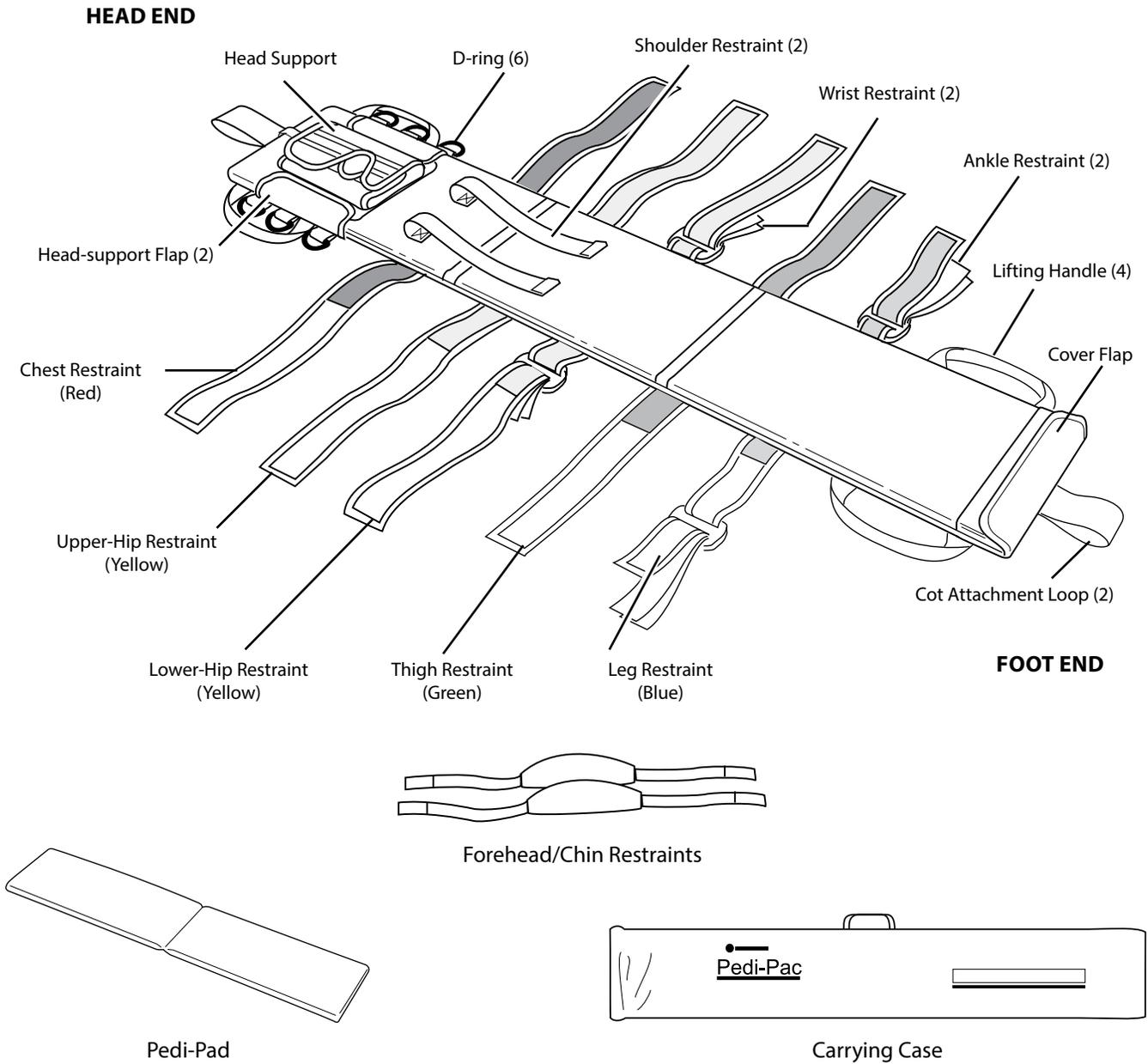


Load Capacity

Inspect the Pedi-Pac if the load capacity has been exceeded. See “Inspecting the Pedi-Pac” on page 13.

Dimensions	Imperial	Metric
Length	48 in	122 cm
Height	75 in	191 cm
Width	9 in	23 cm
Pedi-Pac Weight	7 lb	3 kg
Load Capacity	90 lb	41 kg
Load Capacity (UK)		6.4 st
Designed for Patients	28-54 in	71-137 cm

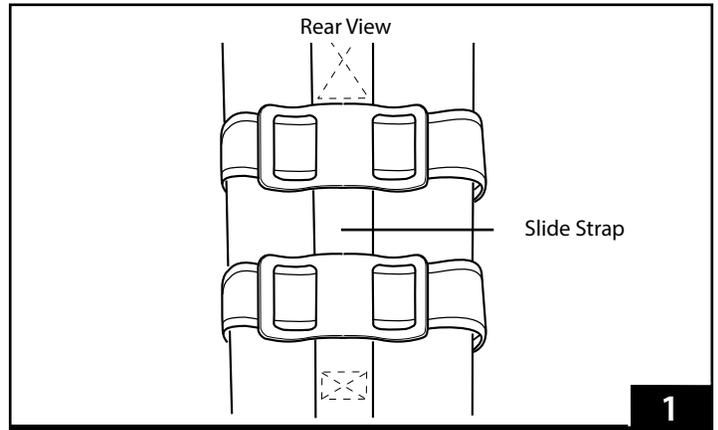
3.3 Components



3.4 Adjustable Color-coded Restraints

The color-coded restraints adjust for proper alignment with each patient.

The color-coded restraints slide along a strap on the rear of the Pedi-Pac (Figure 1). To adjust a color-coded restraint, slide the restraint up or down the slide strap.



3.5 Adjustable Head Support

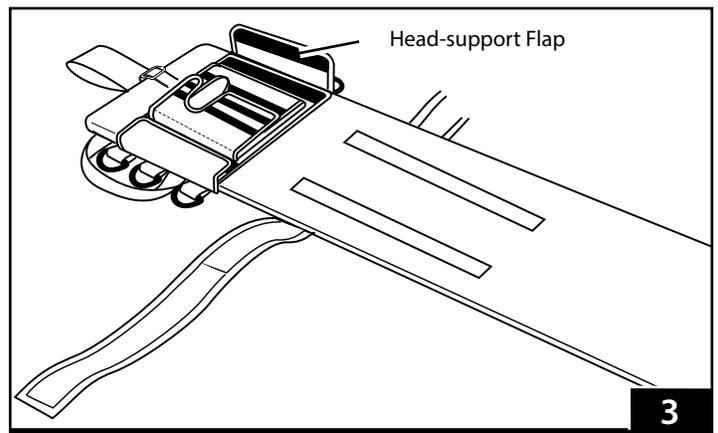
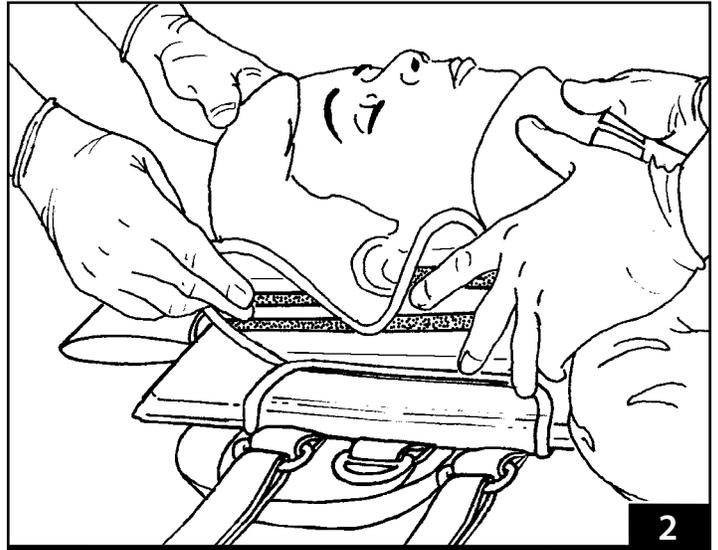
The head support adjusts to align with the patient's ears (Figure 2).

Slots in the head support allow medical service personnel to talk with the patient and to check the patient's ears for bleeding.

To adjust the head support, open the head-support flaps (Figure 3).

Move the head support up or down, then close the flaps.

Tighten the head-support strap, if needed.

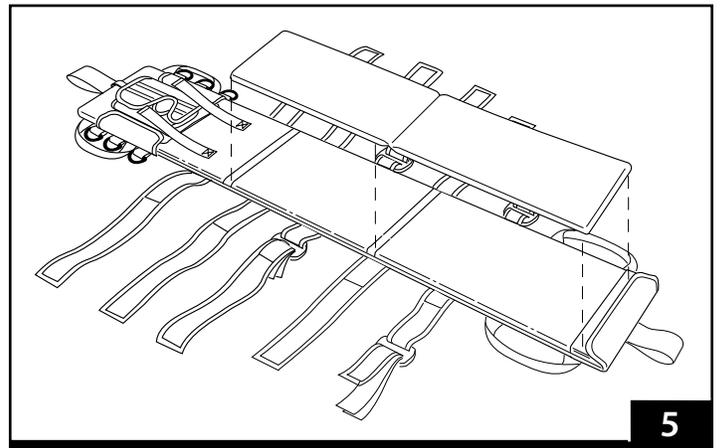
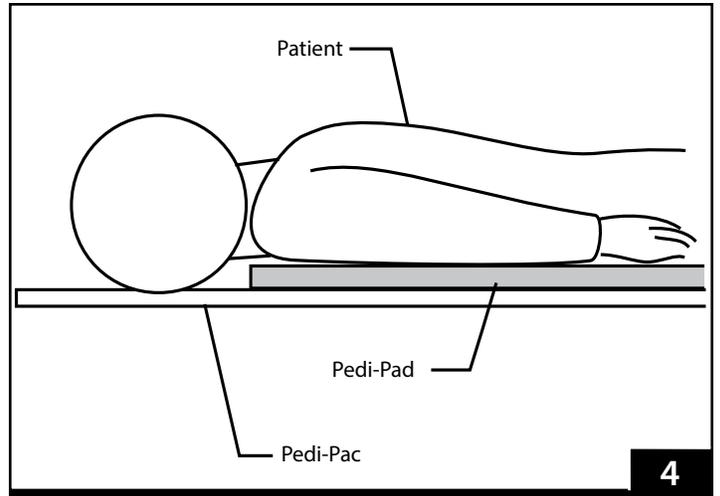


3.6 Pedi-Pad

The Pedi-Pad can help maintain the cervical spine in a neutral position. (Figure 4).

The Pedi-Pad attaches to the Pedi-Pac with hook and loop fasteners (Figure 5).

Follow local protocols and consult your medical advisor about the use of padding with a pediatric patient whom you suspect has a cervical-spine injury.



4 - USING THE PEDI-PAC

4.1 Before Placing the Pedi-Pac in Service

- Before use, personnel who will work with the Pedi-Pac must read and understand this manual. Appropriate skills and training are also required. See “Operator Skills and Training” on page 5.
- Confirm that the Pedi-Pac operates properly. See “Inspecting the Pedi-Pac” on page 13.

4.2 General Guidelines for Use

- Medical advice is beyond the parameters of this manual.
- It is the users’ responsibility to ensure safe practices for the patient and themselves.
- A **minimum** of two trained operators is required.
- Follow standard emergency patient-handling procedures when operating the Pedi-Pac.
- Operators **must** stay with the patient at all times.
- **Always** use patient restraints to secure the patient on the Pedi-Pac.
- Use good lifting techniques when operating the Pedi-Pac. See “Operator Focus” on page 5.

4.3 Prepare the Patient

Use the Pedi-Pac with a patient who is between 28”-54” (71-137 cm) in height and between 20-90 pounds (9-41 kg) in weight. (A child approximately 2-10 years of age.)

Keep the load capacity of the Pedi-Pac in mind when working with a heavy patient. If you suspect the load capacity has been exceeded, inspect the Pedi-Pac.

Immobilize the patient’s head and neck (cervical spine) with a cervical collar or similar device.

4.4 Set Up the Pedi-Pac

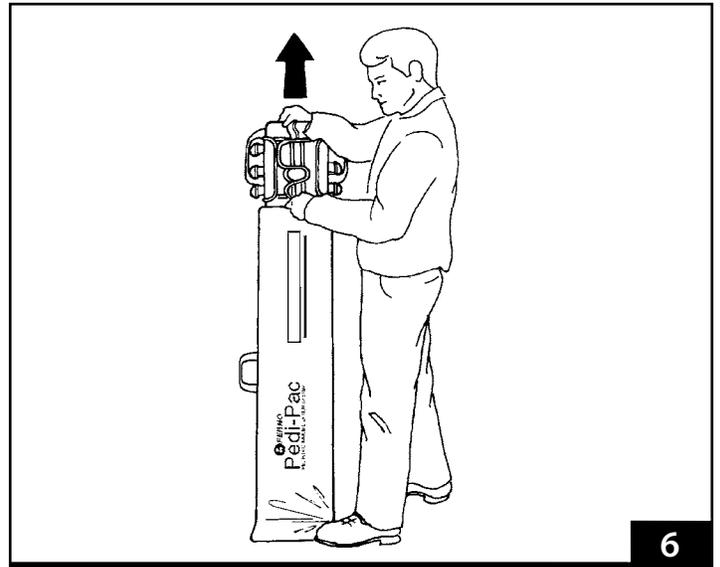
1. Remove the Pedi-Pac from its carrying case (Figure 6).
2. Lay the Pedi-Pac beside the patient.
3. Position the top of the shoulder restraints in line with the top of the patient’s shoulders (Figure 7, Figure 8 on page 10).
4. Unfasten and lay the restraints aside.
5. Align the slots in the head support with the patient’s ears.
6. Open the head support. Align the color-coded restraints with the patient as follows:
 - **Chest restraint (red)** - even with patient’s armpits.
 - **Upper-hip restraint (yellow)** - just above the patient’s hips (on the iliac crest).
 - **Lower-hip restraint (yellow)** - just below the patient’s hips.
 - **Thigh restraint (green)** - just above patient’s knees.
 - **Leg restraint (blue)** - even with patient’s ankles.

⚠ WARNING

Improper operation can cause injury. Operate the Pedi-Pac only as described in this manual.

An unattended patient can be injured. Stay with the patient at all times.

An unrestrained patient can be injured. Use patient restraints to secure the patient on the Pedi-Pac.

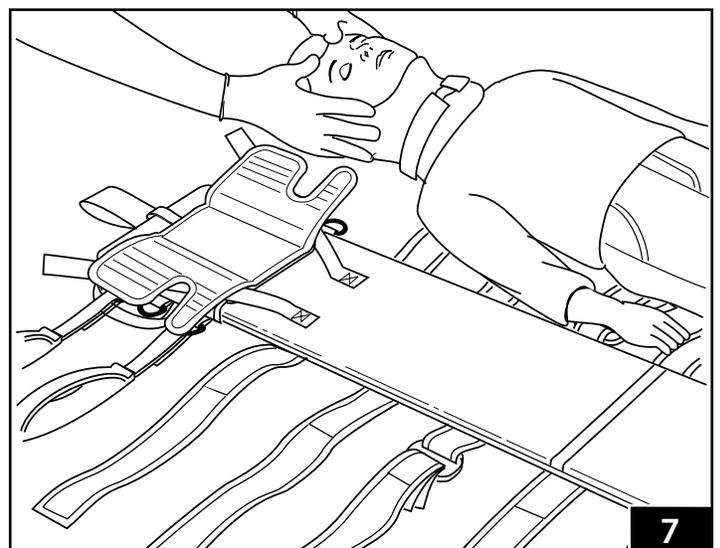


6

90 lb
41 kg
6.4 st

Load Capacity

Inspect the Pedi-Pac if the load capacity has been exceeded. See “Inspecting the Pedi-Pac” on page 13.

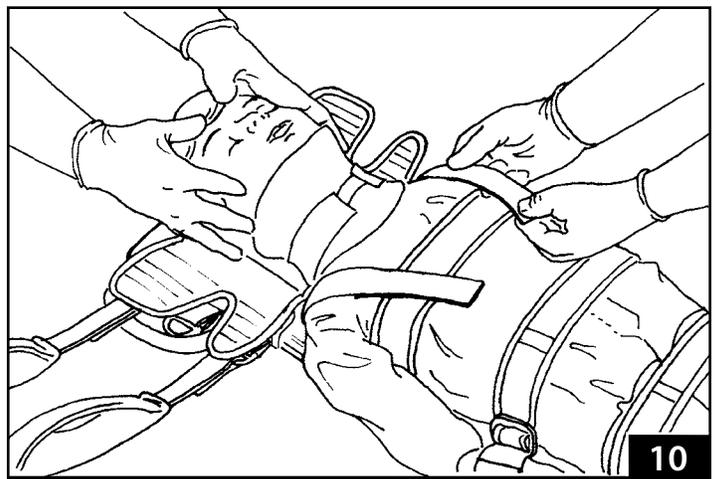
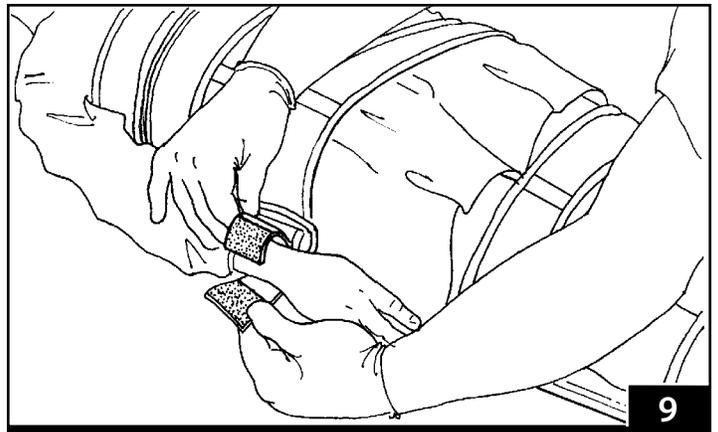
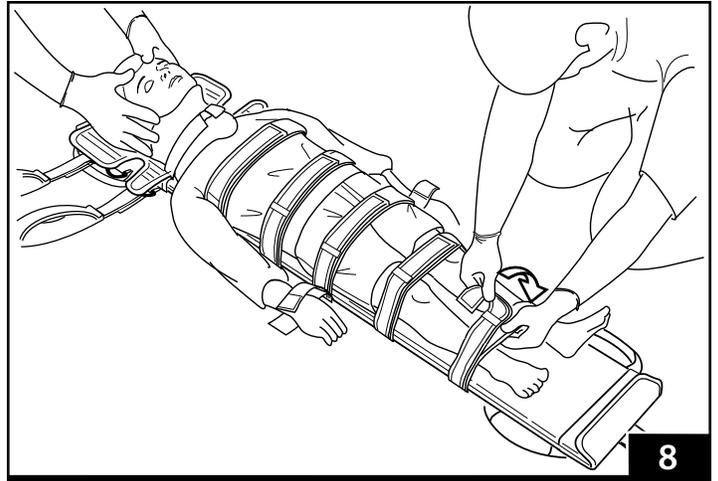


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7. When padding is needed, place the Pedi-Pad on the Pedi-Pac.
8. When individual leg immobilization is needed, fasten the leg restraint.

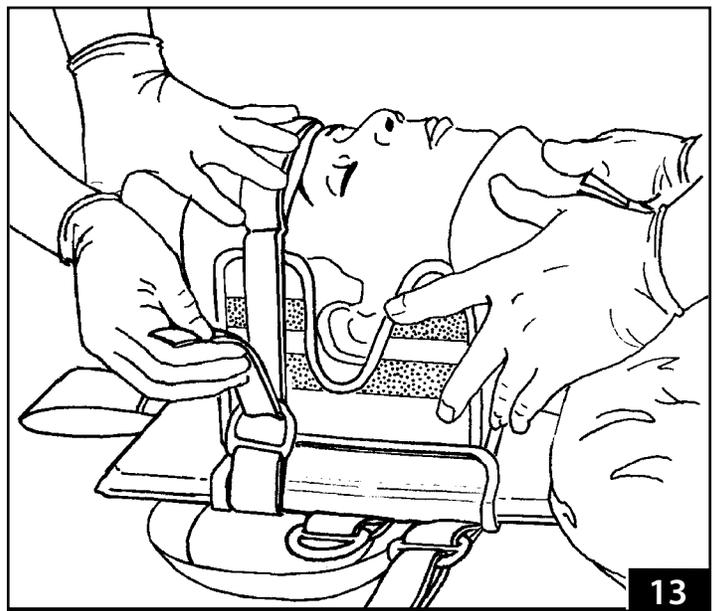
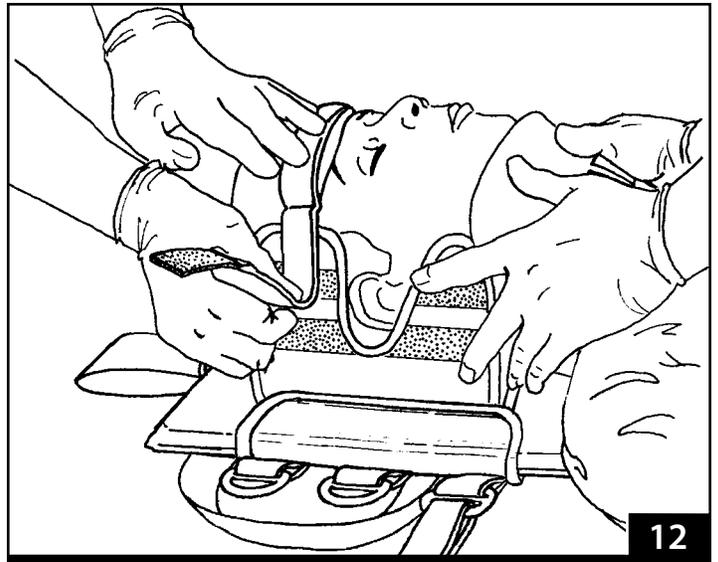
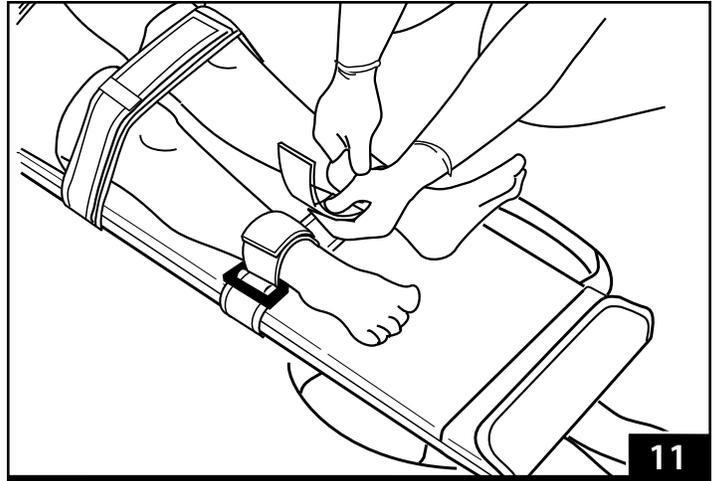
4.5 Apply the Pedi-Pac

1. Transfer the patient onto the Pedi-Pac using a method approved by your EMS medical advisor. Maintain stabilization of the patient's head and neck during the transfer and while applying the Pedi-Pac.
2. Fasten the color-coded restraints over the patient in a progressive sequence (Example: **red-yellow-yellow-green-blue**, Figure 8).
3. Fasten the wrist restraints (Figure 9).
4. Tighten the restraints to limit movement but not to impair circulation.
5. Bring the shoulder restraints over the patient's shoulders, and fasten the shoulder restraints to the chest restraint (Figure 10).



Using the Pedi-Pac

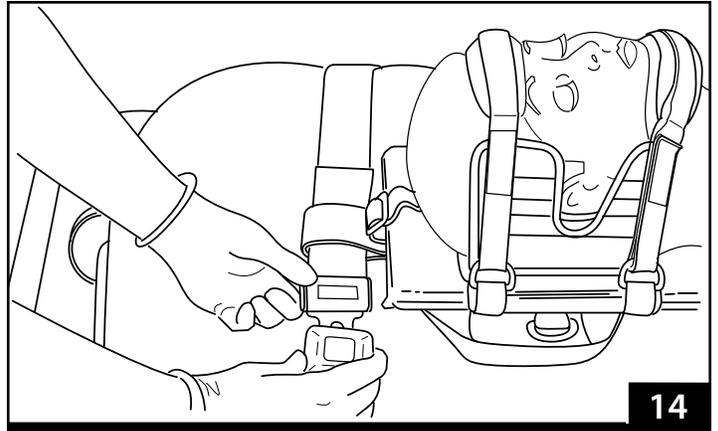
6. Fasten the ankle restraints for individual leg immobilization, if needed (Figure 11).
7. Place a forehead/chin restraint on the patient's forehead (Figure 12).
8. Press the forehead/chin restraint against the fastening strips on the sides of the head-support flaps.
9. Thread each end of the forehead/chin restraint through a D-ring (Figure 13).
10. Fasten the end of the forehead/chin restraint to the fastening strip on the top of the forehead/chin restraint. Tighten the forehead/chin restraint snugly.
11. Use the second forehead/chin strap is to secure the patient's chin, if needed.
12. Wrap the head-support around the patient's head. The slots in the head support should be in line with the patient's ears.



4.6 Transport the Patient

USING AN AMBULANCE COT

1. Use an ambulance cot equipped with three restraints.
2. Unfasten the restraints on the cot.
3. Use the lifting handles to lift the patient immobilized in a Pedi-Pac onto the cot.
4. To secure the Pedi-Pac to the cot, thread the head-end cot restraint through the cot-attachment loop at the head end of the Pedi-Pac (Figure 14).
5. Fasten the head-end cot restraint.
6. Thread the foot-end cot restraint through the cot-attachment loop at the foot end of the Pedi-Pac.
7. Fasten the foot-end cot restraint.
8. Fasten the center cot restraint over the patient's hip area (Figure 15).



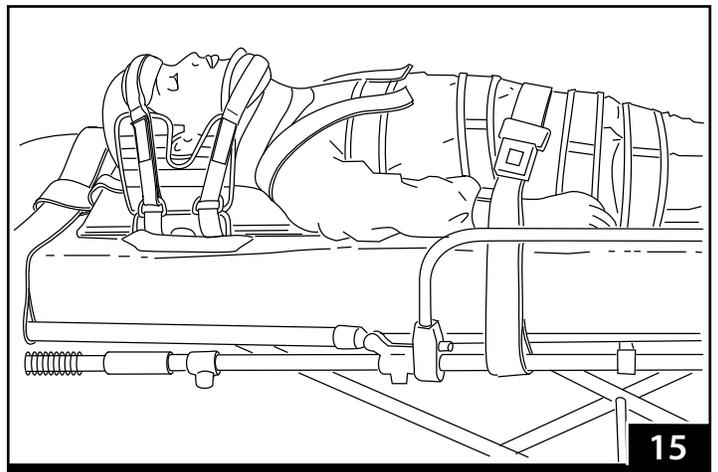
USING OTHER EMERGENCY EQUIPMENT

When transporting the Pedi-Pac on other emergency equipment (such as a basket stretcher), use restraint and transportation techniques approved by an EMS medical advisor.

4.7 Remove the Patient from the Pedi-Pac

1. Unfasten the restraints.
2. Transfer the patient off of the Pedi-Pac, following local protocols and approved emergency patient-handling procedures.

Note: Inform the emergency room personnel that cutting the restraints is not necessary. Shoulder restraints and cot-attachment loops are not replaceable. If the color-coded restraints are cut or damaged, replacement restraints are available. See "Parts and Service" on page 14.



4.8 Storing the Pedi-Pac

Before storing the Pedi-Pac, confirm it is completely dry.

Insert the backboard into the cover, and close the cover flap.

Attach the head support and the Pedi-Pad, and fasten the restraints.

Slide the Pedi-Pac into its carrying case.

5 - MAINTENANCE

5.1 Maintenance Schedule

The Pedi-Pac requires regular maintenance. Set up and follow a maintenance schedule. The table at right represents minimum intervals for maintenance.

Keep maintenance records. For a sample record sheet, see "Maintenance Record" on page 15.

When using maintenance products, follow the manufacturers' directions and read the manufacturers' material safety data sheets.

⚠ WARNING

Improper maintenance can cause injury. Maintain the Pedi-Pac only as described in this manual.

5.2 Disinfecting the Pedi-Pac

1. Disinfect the Pedi-Pac after each use.
2. Remove the head support and the Pedi-Pad.
3. Open the cover flap, and remove the backboard (Figure 16).
4. Wipe all surfaces with disinfectant. Follow the disinfectant manufacturer's directions. As you wipe the Pedi-Pac down, inspect the Pedi-Pac for obvious damage, excessive wear, or missing components.

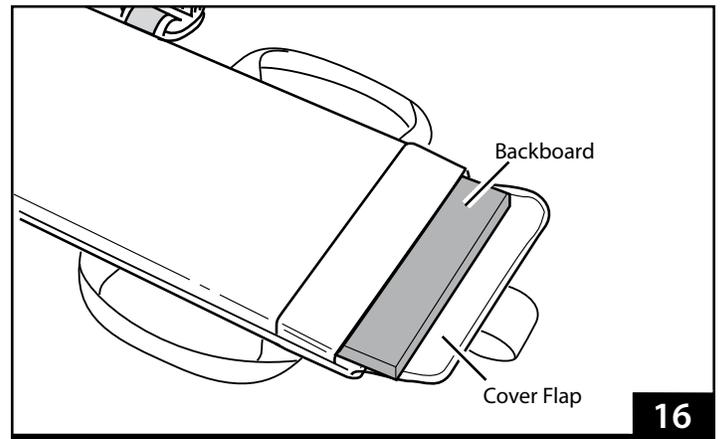
Minimum Maintenance	Each Use	As Needed	Monthly
Disinfecting (this page)	•		
Cleaning (this page)		•	
Inspecting (this page)		•	•

Important

Disinfectants and cleaners containing bleach, phenolics, or iodines can cause damage. Do not use products containing these chemicals.

5.3 Cleaning the Pedi-Pac

1. Disinfect the Pedi-Pac.
2. Remove the head support and the Pedi-Pad.
3. Open the cover flap, and remove the backboard.
4. Remove the backboard from the cover.
5. Clean the cover, backboard, Pedi-Pad, and carrying case with cold soapy water and a stiff brush.
6. Wash the forehead/chin restraints in cold soapy water.
7. Rinse all parts in cold water.
8. Towel off excess moisture.
9. Allow the Pedi-Pac to air dry completely before reassembling and packing it.



ALTERNATE CLEANING METHOD

The cover and carrying case can be professionally dry-cleaned.

1. Disinfect the Pedi-Pac.
2. Dry clean using an 8-minute cycle.

5.4 Inspecting the Pedi-Pac

Have your service's equipment maintenance personnel inspect the Pedi-Pac regularly. Follow the checklist at right and operate the Pedi-Pac through all its functions as described in this manual.

If inspection shows damage or excessive wear, remove the Pedi-Pac from service until repair is made. See "Parts and Service" on page 14.

Inspection Checklist

- Are all components present?
- Are the cover, Pedi-Pad, forehead/chin restraints, and backboard free of excessive wear?
- Are the restraints, lifting handles, and cot-attachment loops in good condition (free of frays and cuts)?
- Do the restraints and all other fastening strips fasten and unfasten properly?
- Are the D-rings and plastic slides (attaching the color-coded restraints to the slide strap) free of cracks?

6 - PARTS AND SERVICE

6.1 U.S.A. and Canada

In the United States and Canada, to order parts or for professional repair, contact EMSAR® – the only agent authorized by Ferno to manage, service, and repair Ferno products.

Telephone (Toll-Free)	1.800.73.EMSAR
Telephone	1.937.383.1052
Fax	+1.937.383.1051
Internet	www.EMSAR.com



WARNING

Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service on the Pedi-Pac.

Modifying the Pedi-Pac can cause injury and damage. Use the Pedi-Pac only as designed by Ferno.

6.2 Worldwide

To order Ferno parts, and for professional repair, contact your Ferno distributor. Your distributor is the only agent authorized by Ferno to manage, service, and repair Ferno products.

6.3 Parts List

Part #	Description	Qty.
031-3981	Forehead/Chin Restraints	1

Aviation

Military

Mortuary

EMS

Rescue
