



FERNO

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Users' Manual



Model 445 Universal Head Immobilizer

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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. It is recommended that training on the proper use of this product 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 Service.

Proprietary Notice

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SECTION 1 - SAFETY INFORMATION

1.1 Warnings

The following warnings appear in this manual:

 WARNING
<p>Improper use of the head immobilizer can cause injury. Use the head immobilizer only for the purpose described in this manual.</p> <hr/>
<p>Untrained operators can cause injury or be injured. Permit only trained personnel to use the head immobilizer.</p> <hr/>
<p>An unattended patient can be injured. Stay with the patient at all times.</p> <hr/>
<p>Improper maintenance can cause injury. Maintain the head immobilizer only as described in this manual.</p> <hr/>
<p>Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service.</p>

1.2 Important

Boxes like the one below emphasize important information.

Important

1.3 Bloodborne Disease Notice

OSHA (Occupational Safety and Health Administration) requires employers to protect workers from workplace exposure to bloodborne diseases like HIV-1 and hepatitis.

To reduce the risk of exposure when using the head immobilizer, follow the maintenance instructions in this manual.

For more information, contact:

U.S. Department of Labor, OSHA
Office of Public Affairs, Room N-3647
200 Constitution Ave., NW
Washington, DC 20210

www.osha.gov

SECTION 2 - LEARNING ABOUT THE HEAD IMMOBILIZER

2.1 Head Immobilizer Description

The Model 445 Universal Head Immobilizer (head immobilizer) is an emergency patient-handling device designed to aid in immobilizing a patient's head and neck. It is for professional use only, by a minimum of two trained operators.

The head immobilizer is vinyl coated, and is both waterproof and buoyant. It is designed not to interfere with medical scanners, and may be left in place during X-rays, MRI or CT scans.

The head immobilizer includes a base plate with retention straps, two support pads, and two forehead/chin straps. Each component features hook-and-loop fastening strips.

The head immobilizer can be used with a Ferno Scoop™ stretcher or on a long (full-length) backboard which has either cervical device slots or a center hole at the head end.

⚠ WARNING

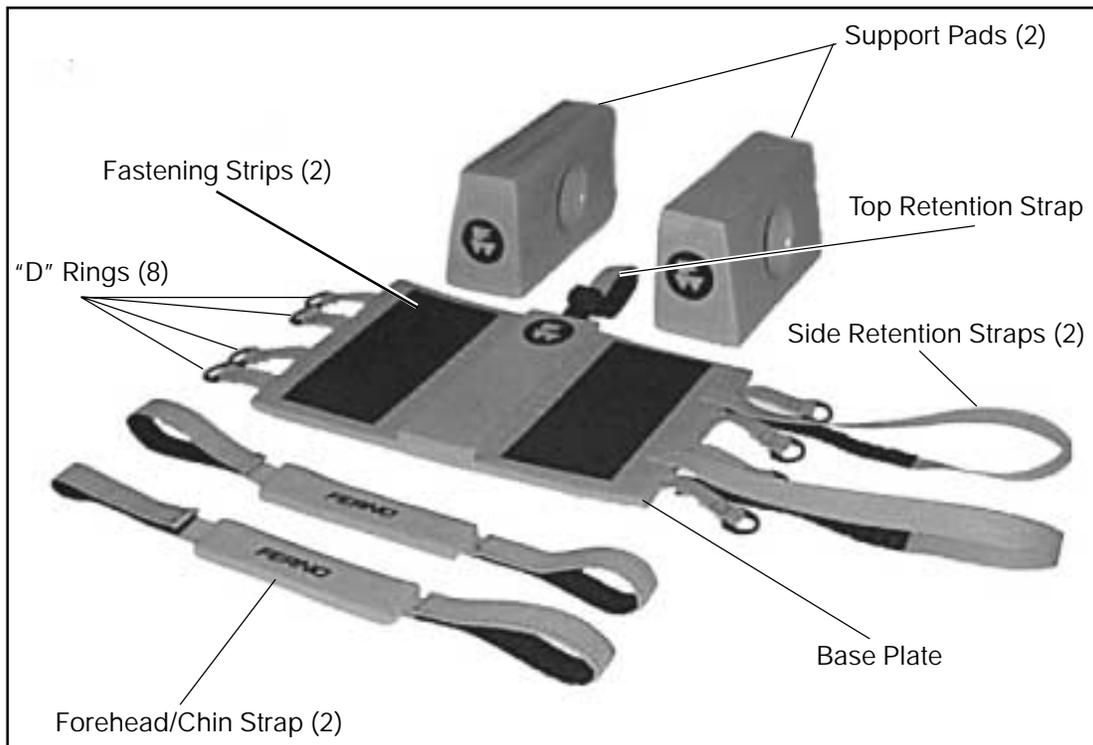
Improper use of the head immobilizer can cause injury. Use the head immobilizer only for the purpose described in this manual.

2.2 General Specifications

Length	15 in (40 cm)
Width	10 in (26 cm)
Height	7 in (17 cm)
Weight	2 lb (794 g)

General specifications are rounded to the nearest whole number. For detailed specifications, contact your Ferno distributor (page 12). Ferno reserves the right to change specifications without notice.

2.3 Components



SECTION 3 - OPERATOR SKILLS AND TRAINING

3.1 Skills

Operators using the head immobilizer need:

- q a working knowledge of emergency patient-handling procedures.
- q the ability to assist the patient.
- q a complete understanding of the procedures described in this manual.

WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to use the head immobilizer.

3.2 Training

Trainees need to:

- q follow a training program designed by their training officer.
- q read this manual.
- q practice using the head immobilizer before using it with a patient.
- be tested on their understanding of the head immobilizer.
- record their training information. Use the convenient form on page 13.

SECTION 4 - USING THE HEAD IMMOBILIZER

4.1 Before Placing the Head Immobilizer in Service

- Personnel who will work with the head immobilizer need to read this manual.
- Inspect the head immobilizer before use. Follow instructions in *Inspecting the Head Immobilizer*, page 10.

4.2 General Guidelines for Use

- Qualified EMS personnel should assess the patient's condition and determine the proper procedures and equipment to use.
- The head immobilizer is for professional use only, by a minimum of two operators. One operator supports the patient's head and neck while the other operator applies the head immobilizer.

- Use the head immobilizer only as described in this manual.
- Use a cervical extrication collar with the head immobilizer whenever possible.

WARNING

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

WARNING

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

4.3 Attaching the Head Immobilizer to a Backboard

Note: You must use a full-length backboard with the head immobilizer. The backboard must have either a center hole or cervical device slots at the head end.

1. Separate the components of the head immobilizer.
2. Position the base plate (fastening strips facing up) at the head end of the backboard (below the center hole, if present).
3. If the backboard has slots for cervical devices, thread the side retention straps through the slots (Figure 1), then secure the side retention straps to the fastening strip on the base plate.
4. If the backboard does not have cervical device slots, wrap the side retention straps under the backboard (Figure 2), then secure the side retention straps to the fastening strip on the base plate.
5. If the backboard has a center hole, insert the top retention strap through the center hole and loop it over the end of the backboard. Then, thread the strap through the plastic buckle (Figure 3) and secure it to the hook and loop fastener on the strap itself.
6. Verify that the base plate is firmly in place (does not slip) on the backboard.

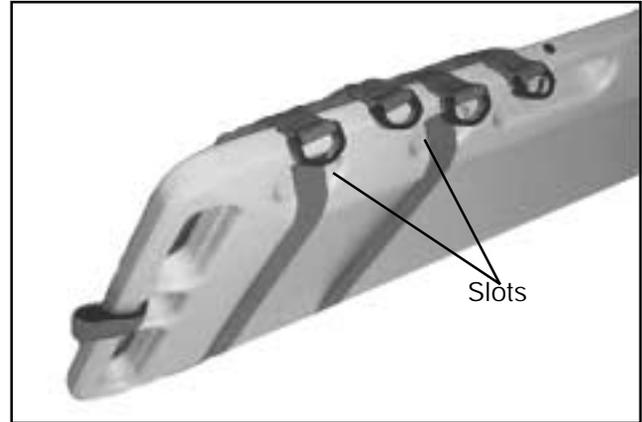


Figure 1 - Retention Straps Threaded Through Cervical Device Slots

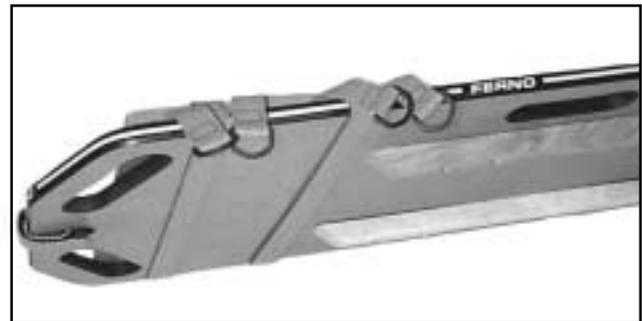


Figure 2 - Retention Straps Wrapped Under the Backboard

Important

The base plate must be tight on the backboard for the head immobilizer to function effectively. If the base plate moves or slips, tighten all retention straps until the base plate remains firmly in place. If the base plate continues to slip, use a different backboard with the head immobilizer.



Figure 3 - Attaching the Top Retention Strap

7. Transfer the patient onto the backboard using approved EMS transfer procedures.

4.4 Attaching the Head Immobilizer to a Scoop™ Stretcher

1. Separate the head immobilizer components, and unfasten the retention straps.
2. Transfer the patient onto the Scoop stretcher using approved EMS transfer procedures. Read and follow all instructions in the Scoop Stretcher Users' Manual.
3. Slide the head immobilizer base plate under the patient's head and onto the Scoop stretcher head panels (Figure 4). This maneuver requires a minimum of two operators. One operator must support the patient's head and neck while the other operator applies the base plate.
4. Wrap the side retention straps under the head panels of the Scoop stretcher and secure them to the fastening strips on the base plate.
5. Loop the top retention strap around the Scoop stretcher's main frame tube; then thread the top retention strap through the plastic buckle and secure it to the fastening strip on the strap itself.



Figure 4 - Sliding the Base Plate Under the Patient's Head

4.5 Securing the Patient in the Head Immobilizer

1. Position the patient on the backboard or Scoop stretcher so that his/her head is in the middle of the base plate.
2. Secure the patient onto the backboard or Scoop stretcher with the restraints provided with the equipment.
3. If the patient is on a backboard, place the straight side of the support pads against each side of the patient's head (Figure 5). The end of each pad should touch the patient's shoulders.



Figure 5 - Positioning the Support Pads for Use on a Backboard

Note: *The support pads may be secured at an angle on the base plate in cases when the patient's neck is twisted or angulated.*

4. If the patient is on a Scoop stretcher, place the angled side of the support pads against the patient's head (Figure 6). The end of each pad should touch the patient's shoulders.

When possible, align the holes in the support pads with the patient's ears. This helps the patient hear the operator and allows the operator to check the patient's ears.

5. Center a forehead/chin strap on the patient's forehead, with the fastening strips facing up.
6. Loop each end of the forehead/chin strap through a "D" ring. Tighten as needed and secure the ends to the fastening strips on the forehead/chin strap (Figure 7).
7. Follow local EMS protocols to determine the use and placement of the second forehead/chin strap.



Figure 6 - Using the Angled Side of the Pads when Patient is on a Scoop Stretcher



Figure 7 - Fastening the Forehead Strap

4.6 Storing the Head Immobilizer

Clean and disinfect the head immobilizer before storing (See *Maintaining the Head Immobilizer*, page 10).

To reassemble the components, loop the retention straps under the base plate and secure them to the fastening strip.

Place the support pads on their sides on the base plate.

Place the forehead/chin straps on the support pads and secure the ends in the "D" rings (Figure 8).

Note: The head immobilizer base plate can also be stored attached to a backboard.



Figure 8 - Preparing for Storage

SECTION 5 - MAINTAINING THE HEAD IMMOBILIZER

5.1 Maintenance Schedule

The head immobilizer requires regular maintenance. Set up and follow a maintenance schedule. Use the convenient form on page 14.

The following chart represents minimum maintenance.

	Each Use	As Needed	Each Month
Disinfecting (this page)	●		
Cleaning (this page)		●	
Inspecting (this page)		●	●

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

Contact Ferno Customer Service to order Ferno disinfectants and cleaners (see page 12).

 WARNING
Improper maintenance can cause injury. Maintain the head immobilizer only as described in this manual.

5.2 Disinfecting the Head Immobilizer

Wipe all surfaces with disinfectant, following disinfectant manufacturer's directions (see also *Bloodborne Disease Notice*, page 4).

Ferno recommends inspecting the head immobilizer for obvious damage as you disinfect.

Important
Disinfectants and cleaners containing phenolics or iodines can harm the head immobilizer. Disinfect and clean the head immobilizer only with products that do not contain phenolics or iodines.

5.3 Cleaning the Head Immobilizer

Clean all surfaces of the head immobilizer with warm water and a mild detergent. Rinse with warm water. Towel dry the head immobilizer or allow it to air dry.

5.4 Inspecting the Head Immobilizer

Have your service technician check the following:

- q Are all components present?
- q Are all the components in good condition, free of punctures, fraying and tears?
- q Does the base plate remain firmly in place (does not slip) when secured to the backboard or Scoop stretcher?
- q Is the head immobilizer free of excessive wear?

If inspection shows damage or excessive wear, remove the head immobilizer from service until repair is made (see *Repair Parts*, page 11).

SECTION 6 - REPAIR PARTS

Use only Ferno-approved parts to maintain the safety and performance of the head immobilizer.

To order parts, contact EMSAR®. EMSAR is the only agent authorized by Ferno to manage, service, and repair Ferno products.

EMSAR factory-trained technicians use Ferno-approved parts and repair procedures.

EMSAR has a franchise location serving you. Phone or fax for details.



800.73EMSAR (Phone)
 937.383.1051 (Fax)
www.EMSAR.com (Internet)

! WARNING
Improper parts and service can cause injury. Use only Ferno parts and Ferno-approved service on the head immobilizer.

Ref. #	Description	Part #
1	Chin/Forehead Straps (pair)	039-0204
2	Head Support Pads (pair)	039-0205
3	445 Base Plate	039-0206

SECTION 7 - LIMITED WARRANTY

Limited Warranty Summary

Ferno-Washington, Inc. (Ferno), warrants the products we manufacture to be free from defects in material and workmanship for one year except as follows:

(A) Soft goods (webbing, vinyl, fabric, foam, etc.) are warranted for 90 days.

This limited warranty applies when you use and care for the product properly. If the product is not used and cared for properly, the warranty is void. The warranty period begins the day the product is shipped from Ferno or the day you receive it if you have proof of the delivery date. Shipping charges are not covered by the limited warranty. We are not liable for shipping damages or damages sustained through using the product.

Limited Warranty Obligation

If a product or part is proven to be defective, Ferno will repair or replace it. At our option, we will refund the product's purchase price. The purchaser accepts these terms in lieu of all damages.

This is a summary of the limited warranty. The actual terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are available upon request by calling 800.733.3766 or 937.382.1451.

SECTION 8 - CUSTOMER SERVICE

Customer service and product support are important aspects of each Ferno product.

For assistance with the Model 445 Universal Head Immobilizer, contact Ferno Customer Service.

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

Telephone 800.733.3766

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