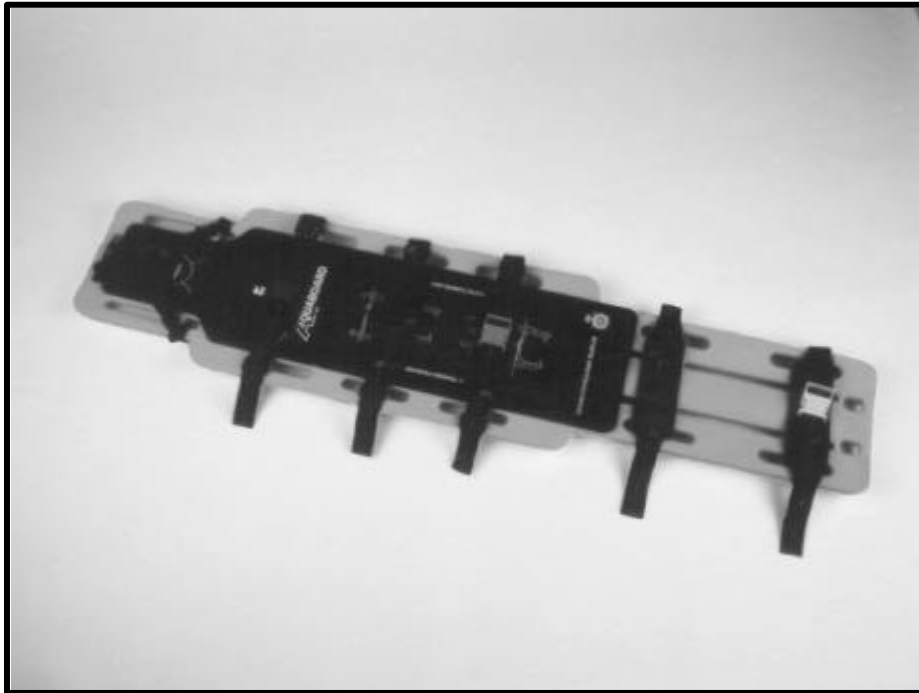




Aquaboard Immobilisation System



**Operation and
Maintenance Manual**

Table of Contents

Section 1 Introduction	
Introduction	1.1
Ferno Aquaboard Immobilisation System	1.2
Technical Specifications	1.2.2
Warranty	1.2.3
Unit Identification	1.3
Section 2 Preparing Unit for Use	
Set Up	2.1
Attaching the Back Support	2.1.1
Attaching the Head Restraint	2.1.2
Attaching the Body Straps	2.1.3
Folding and Storing the Straps	2.1.4
Section 3 Principles of Operation	
Operation	3.1
Preparing the Ferno Aquaboard for use	3.1.1
Positioning the Ferno Aquaboard under the casualty	3.1.2
Securing the casualty to the Ferno Aquaboard	3.1.3
Removal of the Casualty from the water	3.1.4
Section 4 Maintenance Log	
Service and Maintenance	4.1
Cleaning and Sanitization	4.2
Section 5 Parts List Information	
General	5.1
Ordering Information	5.2

The Aquaboard Immobilisation System has been designed in conjunction with the RLSS UK and forms a part of their Spinal Injury Management Programme.



Due to our constant improvement programme, units are subject to change without notice.

Section 1 Introduction

PREFACE

This manual has been prepared to provide general instructions for the proper usage and maintenance of the Ferno Aquaboard. Specific applications and operating techniques may vary from user to user. Ferno does not intend or recommend that this product be used for any purpose other than for which it is designed as outlined in this manual. Any other use or application of this product becomes the complete responsibility of the owner/user. The Ferno Aquaboard is designed to aid in the immobilisation and transfer of a patient from a swimming pool or similar indoor water environment to another location with minimal movement and discomfort to the patient.

PROPRIETARY NOTICE

The information and design disclosed herein are the property of Ferno (UK) Limited, a division of Ferno-Washington Incorporated. Ferno reserves all patents, proprietary design, manufacturing, reproduction use, and sales rights thereto, and to any articles disclosed therein, except to the extent that rights are expressly granted to others. The foregoing does not apply to vendor proprietary parts.

Specifications remain subject to change to allow the introduction of design improvements.

1.1 INTRODUCTION

1.1.1 Precautions for Safety

To ensure safety and satisfaction with your new Ferno Aquaboard, all lifeguards/rescuers should read these instructions completely before attempting to use the Aquaboard.

WARNING

- Only qualified personnel trained in the use of this board should use it.
- Never exceed the maximum load capacity.
- Every individual who may use the board should practice using it to become familiar with the procedures before placing this product into regular service and should undergo a certified training course. Training in use of the board may be obtained through the Royal Life Saving Society UK.

Failure to heed these warnings may result in injury or death.

1.2 FERNO AQUABOARD IMMOBILISATION SYSTEM

The Ferno Aquaboard is designed to effectively immobilise a casualty in the water prior to recovery on the poolside. With the incorporation of several innovative design features, we believe you will find this board easy, quick and effective to use during an aquatic emergency.

The Ferno Aquaboard features the following:

- A concave design for easy positioning under a supported casualty in the water and subsequent centralising of the casualty on the board.
- A convex underside with protected straps and built in runners to facilitate easy recovery onto the poolside.
- Straps and head restraint with a wide range of adjustments to allow for the immobilisation of a range of casualty sizes.
- Colour coded straps for easy identification during the recovery of the casualty.
- A non-slip and padded back support to ensure that the casualty does not move once strapped to the board.
- Multiple hand holds that allow for easy carrying away from the water without jeopardising the rigidity of the board.

1.2.2 Technical Specifications*

Length of Aquaboard	183cm
Width of Aquaboard	43cm
Length of Neoprene Back Support	108cm
Width of Neoprene Back Support	26cm
Width of Neoprene Back Support (Head End)	16.5cm
Max. Load Capacity [†]	182kg
Head Restraint	Neoprene
Body and Leg Straps	Polypropylene

The Ferno Aquaboard is radio translucent and compatible with X-Rays, magnetic resonators and CT Scanners and does not need to be removed for these procedures.

The Ferno Aquaboard is shipped complete with wall bracket, five colour coded straps and buckles, a neoprene padded back support and an adjustable head restraint as standard.

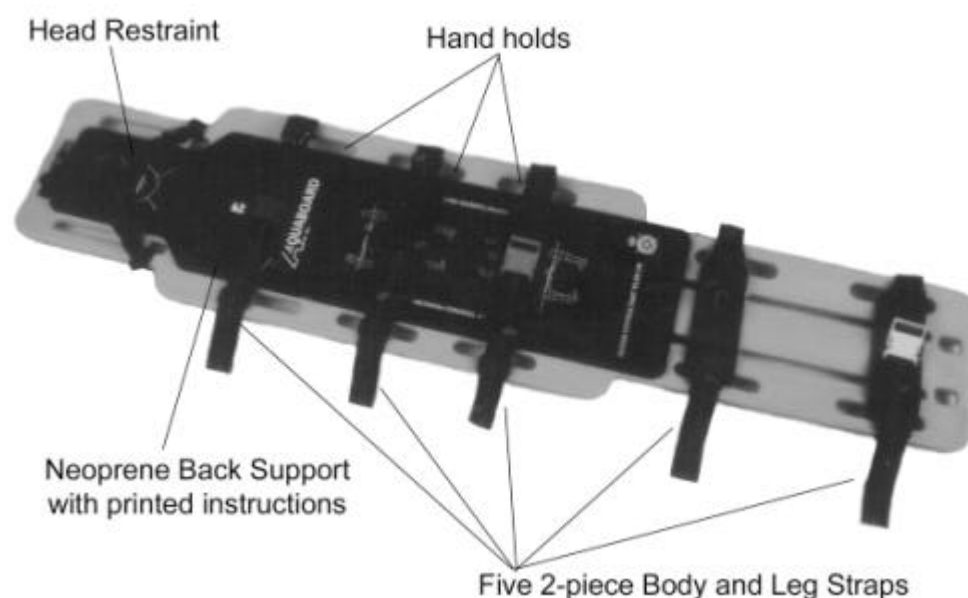
1.2.3 Warranty

The Ferno Aquaboard has been carefully inspected prior to despatch and is fully covered by warranty. We warrant all Ferno equipment to be free of defects in the material and workmanship. Any product claimed defective and caused by materials or workmanship within one year after date of purchase will receive our prompt investigation and a fair adjustment. Obligation is limited to replacement or repair of defective components.

We cannot assume responsibility for repairs made by anyone other than an authorised Ferno repair centre.

You are advised to inspect the strapping system regularly and to replace the straps, back support and head restraint every three years.

1.3 UNIT IDENTIFICATION



*All dimensions are approximate

†Maximum Load Capacity is total weight distributed in accordance with basic human anatomy proportions. Attendants must consider the weight of the casualty and equipment when determining total load.

Section 2 Preparing Unit for Use

2.1 SET UP

The Ferno Aquaboard is shipped in a cardboard box. Inside the box along with the Aquaboard, you will find a plastic bag containing the back support, head restraint and body straps. Before assembly, check that the pack contains the following items:

1. Black neoprene back support, printed on one side.
2. Black neoprene head restraint with three retaining straps.
3. Five body straps, each in two parts and with coloured buckles – green, blue, orange, black and white.

2.1.1 Attaching the Back Support

With the concave side of the board face up, place the back support on the board with the printed surface uppermost and the head icon at the top of the board.

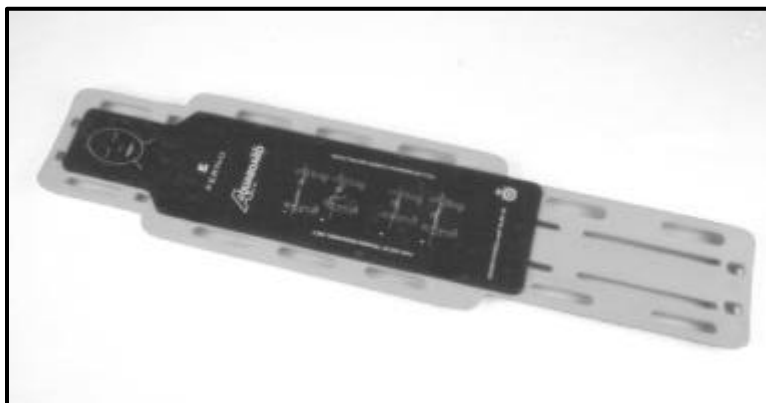


Fig 2-1

The Back Support is attached to the board using the Velcro tapes. Starting at the head end, pass each tape through the slots in the board and attach the Velcro tapes to each other behind the board, pulling them taught and tucking the ends into the slots to prevent them from snagging.

Repeat this for each of the other four tapes until the back support has been securely attached to the board (as in fig 2-2). Check that there are no loose tapes protruding from the back of the board.



Fig 2-2

2.1.2 Attaching the head restraint

To install the head restraint, place it over the icon of the head (printed on the back support) with the apex of the restraint pointing towards the top of the Ferno Aquaboard (as in fig 2-3 below).



Fig 2-3

Push the free end of the top strap through the right hand top slot, then round the back to come back through the left hand slot. Now pass through the middle of the buckle on the top of the board, and pull tight through the left hand part (as in fig 2-4 below).



Fig 2-4

The two bottom straps go through the two bottom outermost slots. Pass the free end of the strap through the slot and fasten it to the buckle. Turn the strap back on itself and pass it through the outermost bar of the buckle for added security. Pull tight.



Fig 2-5

NOTE: When attaching the Head Restraint to the Ferno Aquaboard, the straps must be pulled as tightly as possible to prevent slippage.

For clarity in showing these procedures, the back support has been removed on these photographs.

2.1.3 Attaching the body straps

The body straps are attached to the long slots down either side of the Aquaboard. Starting with the strap with the green buckle, ensure that both halves of the buckle are connected and lay the strap across the board on top of the back support, adjacent to the two top outermost slots.

Pass the left hand of the strap through the top left hand slot, bring the free end round the outside of the slot and then back through the retaining buckle. Pull the free end of the strap tight. For increased security this end may also be pulled back on itself through the buckle again.



Fig 2-6

Take the free end of the strap back through the outermost bar of the buckle to secure it and prevent slipping. Pull the strap tight. Repeat this process with the right hand part of the green buckle strap, adjusting both parts of the body strap to ensure that the neoprene pad lies centrally across the board.

Repeat this procedure to attach the remaining straps to each of the other four pairs of outermost slots **and in the following order** down the length of the board, as the strap lengths vary to fit the contours of the body.

Blue
Orange
Black
White

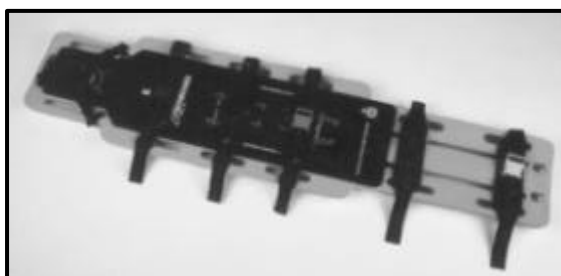


Fig 2-7

Once all of the straps have been attached to the board, ensure that the retaining buckles are tightly adjusted and that each strap has been passed back through the outermost bar of the buckle for additional security.

2.1.4 Folding and Storing the Straps

There is a Velcro retaining tape on the right hand part of each strap, adjacent to the coloured buckle. This is provided for storing the adjustable part of the body strap so that it is ready for immediate use.

Starting with the strap with the green buckle, release the tape and fold the strap, zigzag fashion, on top of the tape attachment point, finishing with the free end of the strap facing the centre of the board.



Fig 2-8

Pass the tape around the folded strap and secure it behind the body of the strap by pressing the Velcro sections together. When correctly secured, the adjustable strap should be easily pulled out from the securing tape without the need to undo the tape.

Repeat this process with the four remaining straps, checking that the straps will release freely.

The Aquaboard is now ready to be mounted on its wall bracket and once in this position is ready for use.

The Aquaboard strapping system should be cleaned in fresh water immediately after use, whether for training or as a result of an emergency, allowed to dry naturally and reassembled in the manner described in the set-up procedure.

Section 3 Principles of Operation

3.1 OPERATION

Once supported in the water by either three or four lifeguards/rescuers, the casualty is ready to be removed from the water. It is essential that the casualty be removed from the water as quickly as possible to prevent the onset of hypothermia and to facilitate the administration of Expired Air Ventilation and Chest Compression, should this prove necessary. The use of the Ferno Aquaboard allows the lifeguard/rescuer to ensure that there is limited movement of the spine and head during this critical phase of the casualty's recovery.

3.1.1 Preparing the Ferno Aquaboard for Use

With the casualty supported in the water by three lifeguards/rescuers, a fourth lifeguard/rescuer should prepare the board for use. The Emergency Action Plan should take account of the need for this type of rescue and allow for a member of the lifeguard/rescue team to bring the board to the site of the rescue whilst the rescue itself is actually taking place.



Fig 3-1

The board should be prepared on the poolside by fully loosening the straps and head restraint. As the board is placed in the water, the straps nearest to the casualty should be eased under the board to prevent them becoming tangled.

3.1.2 Positioning the Ferno Aquaboard under the Casualty

Position the board alongside the casualty and align the head markings on the board with the casualty's head. Ensure that the board is correctly aligned and that the straps are not tangled.

Tilt the board so that it is at right angles to the water and push it down into the water. The design of the board is such that, as it submerges, it will slide under the casualty. Allow the board to float up under the casualty.

With the casualty still supported by the team of lifeguards/rescuers, make any minor adjustments to the position of the board. When satisfied that the board is correctly aligned, the lifeguard/rescuer supporting the casualty's lower limbs should slide his own hands out from between the limbs and the board and move to the foot of the board, to take hold of it.



Fig 3-2

Similarly, the lifeguard/rescuer supporting the shoulders and the upper back should slide his hands gently out and move to support the head end of the board.

At all times during these early stages, when securing the board, the lifeguard/rescuer supporting the casualty's head should ensure that the head and neck are maintained in neutral alignment.

3.1.3 Securing the Casualty to the Ferno Aquaboard

The lifeguard/rescuer who has positioned the board should now secure the casualty to the board. The chest strap should be secured first by clipping together the two halves of the green buckle and gently tightening the strap, thus effectively securing the casualty to the board.



Fig 3-3

The head restraint should be positioned over the forehead and tightened by gently pulling the straps to secure the head. As the head restraint is placed over the forehead, the lifeguard/rescuer supporting the head should ensure the head restraint is properly aligned during tightening.

Once the lifeguard/rescuer is satisfied that the head restraint is in place and correctly adjusted, the remaining straps should be secured, working down towards the casualty's feet and in the following order: Blue, Orange, Black and finally White. In each case, the strap should be gently tightened before moving on to the next buckle.



Fig 3-4

When all of the straps are secure, it is important to ensure that all are correctly adjusted and that the buckles are securely fastened and that the head restraint and straps are tightened. The casualty is now ready to be removed from the water by lifeguards/rescuers.



Fig 3-5

3.1.4 Removal of the Casualty from the Water

The casualty must be removed from the water in a horizontal position. The lifeguards/rescuers supporting the board should position the board at right angles to the poolside. The team leader should climb onto the poolside to be ready to receive the board as it comes out of the water. The other three lifeguards/rescuers should position themselves with two supporting the head end (the heaviest end as the board comes out of the water) and the third at the foot end.



Fig 3-6

Once the board is firmly on the poolside, it should be moved away from the water and arrangements made to cover the casualty or, if desirable, move the casualty from the poolside to a first aid room.

Section 4 Maintenance Log

4.1 SERVICE AND MAINTENANCE

The Ferno Aquaboard is covered by the Ferno warranty. In order to register your purchase, please return the enclosed card.

After each use, inspect the board, straps and neoprene back support regularly for indications of wear or damage. The Aquaboard should be checked weekly and this should be recorded on the log sheet.

You are advised to replace the back support, head restraint and straps every 3 years to ensure the Aquaboard is always in a sound condition and ready for immediate use.

4.2 CLEANING AND SANITIZING

After each use, the straps and pads may be cleaned with warm, soapy water. The Aquaboard may also be cleaned with a hard surface disinfectant.

NOTE: After each use in chlorinated water, rinse the Ferno Aquaboard and straps with fresh water.

Name of Centre _____

Date Purchased _____

Date Placed in Service _____

Purchased From _____

Replace Straps & Back Support after 3 yrs on _____

TRAINED PERSONNEL	DATE OF TRAINING

AQUABOARD IMMOBILISATION SYSTEM

DATE	CLEANED	Check condition of: BOARD HEAD RESTRAINT NEOPRENE SUPPORT STRAPS	PARTS REPLACED	CHECKED BY:

Section 5 Parts List Information

5.1 GENERAL

This section contains a listing of all replaceable parts of the Aquaboard Immobilisation System. For the purposes of part identification, the unit is shown in a view, which is keyed to the accompanying parts list. Each parts list contains the figure index part number, part number and an abbreviated description.

5.2 ORDERING INFORMATION

Orders for Replacement Spare Parts should be directed to Ferno (UK) Limited, your nearest authorised repair centre or your local dealer. For more information contact:

Ferno (UK) Limited
 Ferno House
 Stubs Beck Lane
 Cleckheaton
 West Yorkshire
 BD19 4TZ
 Tel: 01274 851999
 Fax: 01274 851111

Model Number _____

Serial Number _____

Date Received _____

Purchased From _____

Practice Completion Date _____

Used on Vehicle Number _____

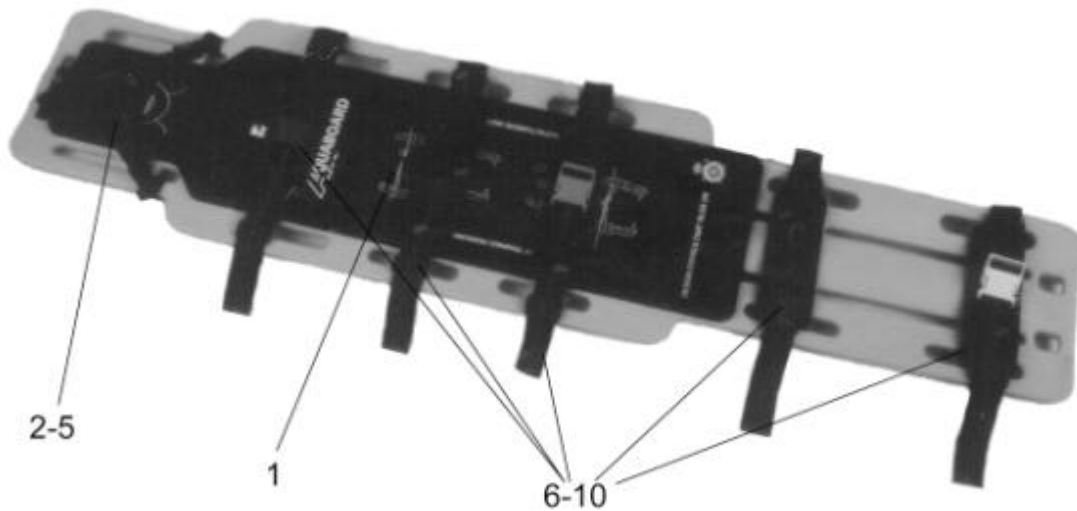
You now own a Ferno Aquaboard Immobilisation System, manufactured for the Ferno (UK) Division of Ferno-Washington Inc. The serial number for this product is located at the head end of the convex side. Record the number with other pertinent information in the space provided above. Retain this manual for future reference and include it with the Ferno Aquaboard if you transfer the system to new owners.

With proper care and maintenance, we believe this product will provide you with years of trouble free service. However, if it becomes necessary to order a replacement part or an additional manual, reference to both the model and serial numbers will help us or your local dealer supply the proper parts or literature. If extensive repairs ever need to be made, please contact Ferno.

If questions arise regarding the use or care of this product that are not covered in this manual, our Ferno Customer Service Department will be happy to assist you.

5.3 REPLACEMENT SPARE PARTS

Item	Part Number	Description	No. Rq'd
1	038245100	Neoprene Back Support	
2	038245200	Head Restraint (head piece)	
3	038245400	Left Hand Retaining Strap for Head Restraint	
4	038245300	Right Hand Retaining Strap for Head Restraint	
5	038245500	Top retaining strap for Head Restraint	
6	038244600	Two Piece Body Strap (green)	
7	038244700	Two Piece Body Strap (blue)	
8	038244800	Two Piece Body Strap (orange)	
9	038244900	Two Piece Body Strap (black)	
10	038245000	Two Piece Body Strap (white)	
11	010776400	Wall Mount Bracket (not shown)	



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