

# **User Manual**



# EZ-Glide<sup>®</sup> LBS Chair

FERNO/MAN/0721/210-R5/UK Stock Code 2003-0141



Read this Manual and Retain for Future Reference

## **Ferno UK Customer Services**

Customer Service and product support are important aspects of each Ferno product. Please have the product serial number available when calling, and include it in all written communications.

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Serial Number

Location: Inner surface of bottom of chair frame

#### **ALL OTHER LOCATIONS**

For assistance or information, please contact your Ferno distributor. If you do not have a Ferno distributor, please contact your nearest Ferno Customer Services office.

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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 service.

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 Ferno Customer Service.

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The products sold by Ferno UK are covered by a limited warranty. The complete terms and conditions of the limited warranty, and the limitations of liability and disclaimers, are also available upon request by calling Ferno UK on +44 (0) 1274 851999.

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### USERS' MANUAL

To request additional free user manuals, contact Ferno Customer Service, your Ferno distributor, or visit www.ferno.co.uk.

# **1 - SAFETY INFORMATION**

## 1.1 Warning

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



Attaching one-piece restraints improperly can allow seat and back panels to dislodge, resulting in injury. Restraints must capture panels AND chair frame.

Using the chair with the track unlocked can cause injury. Verify that the track is locked before transporting the patient.

Lubricating the track system can result in injury to the patient and/or operators. Never lubricate the track or belts.

Improper operation can cause injury. Operate the chair only as described in this manual.

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

An unrestrained patient can fall off the chair and be injured. Use restraints to secure the patient on the chair.

Helpers can cause injury or be injured. Maintain control of the chair, operate the controls, and direct all helpers.

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

Attaching improper items to the chair can cause injury. Use only Ferno-approved items on the chair.

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

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

## **1.2 Important**

Important notices emphasise important usage or maintenance information.

Important

## **1.3 Bloodborne Disease Notice**

To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the chair, follow the disinfecting and cleaning instructions in this manual.

# 1.4 Symbol Glossary

The symbols defined below are used on the chair and in this users' manual. Ferno uses symbols recognized by the International Standards Organization (ISO), American National Standards Institute (ANSI) and the emergency medical services industry.



Product meets UK and EU Standards

# 1.3 Safety and Instruction Labels



# **2 - OPERATOR SKILLS AND TRAINING**

## 2.1 Skills

Operators using the chair need:

- a working knowledge of emergency patienthandling procedures.
- the ability to assist the patient.

## 2.2 Training

Operator trainees need to:

- Read and understand this manual.
- Be trained on the use of the chair.
- Practice with the chair before using it with a patient.
- Record their training information. A sample training record sheet is provided on page 34.

## **WARNING**

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the chair.

# **3 - ABOUT THE CHAIR**

## 3.1 Chair Description

The EZ-Glide<sup>\*</sup> LBS (Large Body Surface) Evacuation Chair (referred to as the chair in this manual) is an emergency patient-handling devices designed to transport a seated patient down stairs and over flat surfaces.

The chair is for professional use by a minimum of two trained operators. A third person to "spot" may be required by local protocols, and additional help may be required when working with heavy patients.

The EZ-Glide<sup>\*</sup> LBS is designed with a braked, belted track that enable operators to "glide" the chair down stairs instead of carrying it.

#### **CHAIR FEATURES:**

- Belted track system for "gliding" chair down stairs
- Braked track system for controlled decent
- ABS seat and back panels
- 5-position extending handle at rear of chair
- 5-position telescoping front handles
- 6" rear locking wheels
- 5" front swivel wheels
- Folding footrest
- Ankle restraint
- Multiple patient restraint options
- Seat cushion
- Headrest
- Rear locking lift handles
- IV Bag Holder
- Winch Attachment

#### **OPTIONAL ACCESSORIES:**

- D size O<sub>2</sub> Bottle Holder
- Floor Mount Lock

## **WARNING**

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

# 3.2 General Specifications

#### Height

Maximum	1610 mm
Minimum	950 mm
Seat Height	485 mm
Width	
Overall	595 mm
Seat	595 mm
Depth	
Tracks Closed, Handles Retracted	850 mm
Weight*	
EZ-Glide <sup>®</sup> LBS	28.6 kg
Load Limit	700 lb/318 kg/50 st
* without restraints or accessories	
Turning Circle Radius	770 mm
Strap Type	Biosafe

Some specifications are rounded to the nearest whole number.

Ferno reserves the right to change specifications without notice.



#### LOAD LIMIT

Inspect the chair if the load limit has been exceeded.

# 3.3 Components - EZ-Glide<sup>®</sup> LBS



#### **USERS' MANUAL**



To request additional free users' manuals, contact Ferno Customer Service.

# **4 - USING THE FEATURES**

# 4.1 Braked Track System

The EZ-Glide<sup>\*</sup> LBS track system enables operators to control the glide of the chair down stairs instead of lifting and carrying it. The braked track system aids controlled descent and has various levels of braking resistance which should be preset prior to descending.

#### **GUIDELINES FOR USING THE TRACK SYSTEM**

- Using the chair on stairs requires a minimum of two trained operators. Ferno recommends using a third person as a "spotter".
- Verify that the track system is fully opened and locked into place before using it.
- Never lubricate track belts. Lubricated track belts can perform unpredictably, resulting in injury to the patient and/or operators.
- Moisture, water, snow, ice, or debris on or between the track and belts can cause irregular track-belt performance that results in sudden changes in the weight operators must support. Make sure the track and track belts are clean and dry before using the chair on stairs.
- Water, snow, ice, or debris on the stairs can cause poor footing for operators. To avoid possible injury, clear the stairs or select an alternate route.

#### **OPENING THE TRACK**

1. Grasp the track-release bar located near the top of the track and firmly pull it back until the track locks into the fully extended position.



2. Verify that the lock is engaged by trying to push the track closed. If the lock is fully engaged the track will not move.

#### **CLOSING THE TRACK**

With your hand, push down on the red track-closing handle until the track closes completely.





Track Stored



Track Deployed

# 🔥 WARNING

Using the chair with the track unlocked can cause injury. Verify that the track is locked before transporting the patient.

# 🕂 WARNING

Lubricating the track system can result in injury to patient and/or operators. Never lubricate the track or belts.

## 4.2 Extending Rear Handle

Grasp the rear handle to move, guide and control the chair as you manoeuvre downstairs, along the ground and around obstacles.

The rear handle adjusts to five locked positions. Adjust the height according to operator preference and the task or situation at hand.

### EXTENDING AND RETRACTING THE REAR HANDLE

- 1. With one hand, squeeze the lift-bar release tabs together and with the other hand grasp the rear handle and raise or lower it.
- 2. Verify that the rear handle is locked by trying to raise or lower it without squeezing the release tabs. When the lock is engaged the rear handle will not move.

## 4.3 Telescoping Front Handles

The telescoping from handles can be adjusted to five locked lifting positions. Adjust the handles according to operator preference and the task at hand.

#### EXTENDING AND RETRACTING THE FRONT (FOOT-END) HANDLES

- 1. Pull the plunger knob and push or pull the handle until it is near the stop point desired.
- 2. Release the knob and slide the handle a little forward or backward until it locks into the stop point.
- 3. Verify that both handles are locked by trying to push or pull them without pulling the release knobs. When the locks are engaged, the handles will not move.

## 4.3 Rear Lift Handles

The rear lift handles lock in the stowed position, so press red locking lever and pivot handle out to the position shown, release lock making sure the handle doesn't drop. Reverse the above to stow the handles.



Untrained operators can cause injury or be injured. Permit only trained personnel to operate the chair.



Extending/Retracting front and rear handles



**Rear Lift Handles** 

# EZ-Glide® LBS

## 4.4 Footrest

The footrest has two positions: raised, for storage, and lowered for use.

To lower the footrest, swing it down until it stops.

To raise the footrest, swing it up until it stops.

#### **GUIDELINES FOR USING THE FOOTREST**

Use the footrest properly to ensure that is does not interfere with patient's or operators' feet.

- Before transferring the patient onto the chair, make sure the footrest is raised in the storage position.
- When preparing to transfer the patient off the chair, unfasten the ankle restraint and raise the footrest into the storage position **before** unfastening the patient's torso and lap restraints. This will prevent the patient from attempting to stand before the footrest has been stored out of the way of his/her feet.
- Keep the footrest raised when it is not in use.

# 4.5 Wheel Locks

The rear wheels of the chair are fitted with wheel locks to help keep the chair from rolling during patient transfer.

Stay with the chair and maintain control of it at all times. Do not use the wheel locks as a substitute for operator control.

To engage a wheel lock, press down on the rear end of the lock pedal.

**To disengage a wheel lock,** press down on the forward end of the lock pedal.

# 4.6 IV Bag Holder

The IV Bag Holder is designed to fit an IV bag above the patients head.

To extend, press down on the end of the red lever and pull up on the pole. There are three slots in the pole that locate the lever and lock the pole in 3 set positions: Closed, semi extended and fully extended.

To release the bag holder, press the red lever and gently push the pole down.



Footrest Lowered Ready for Use

## Important

Raise the footrest into the storage position **before** transferring the patient onto or off from the chair.





Wheel Lock Engaged

Wheel Lock Disengaged



# **5 - USING THE CHAIR**

### 5.1 Before Placing the Chair in Service

- Personnel who will work with the chair need to read this manual.
- Set up the chair ready for use.
- Confirm that the chair operates properly.

#### 

Improper operation can cause injury. Operate the chair only as described in this manual.

### 🔥 WARNING

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

## 5.2 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 chair.
- Operators work together and maintain control of the chair at all times.
- Operators communicate with one another and use coordinated movements to operate the chair.
- Ferno recommends that a third trained person serve as a "spotter" while the chair is being moved up or down stairs.
- Lift only the weight you can safely handle. Use additional help when working with heavy loads (patient and equipment).
- Stay with the patient at all times.
- Always use patient restraints to secure the patient on the chair.

## <u> W</u>ARNING

An unrestrained patient can fall off the chair and be injured. Use restraints to secure the patient on the chair.

## 5.3 Transferring the Patient

Always assist the patient onto and off from the chair.

#### ASSISTING THE PATIENT ONTO THE CHAIR

- 1. Engage the locks on the rear wheels.
- 2. Make sure the footrest is in the storage position.
- 3. Assist the patient onto the chair using accepted practices and following local protocols.
- 4. Fasten and adjust the torso and lap restraints.
- 5. Lower the footrest and place the patient's feet on it.
- 6. Fasten and adjust the ankle restraint.

#### ASSISTING THE PATIENT OFF FROM THE CHAIR

- 1. Unfasten the ankle restraint.
- 2. Raise the footrest to the storage position.
- 3. Unfasten the torso and lap restraints.
- 4. Assist the patient off from the chair using accepted practices and following local protocols.

## 5.4 Rolling the Chair

#### **GENERAL GUIDELINES**

- Roll the chair on smooth, flat surfaces whenever possible.
- For patient comfort, pull the chair backward over low obstacles such as door sills.
- Use the extending rear handle and telescoping front handles to manoeuvre around and over small obstacles, rough surfaces and rough terrain, but only where possible and where enough operators are available to safely control the chair, taking into consideration manual handling protocols and potential risks.
- Wherever possible use the tracks on the chair to manoeuvre the chair down over curbs or single steps.

#### TO ROLL THE CHAIR

- 1. **Head-End Operator:** Release the wheel locks.
- 2. **Head-End Operator:** Adjust the rear handle to a comfortable height and grasp it to push and guide the chair on all four wheels, or tilt the chair back and roll it on its rear wheels.
- 3. **Foot-End Operator:** Assist the head-end operator as needed and attend the patient.

### 5.5 Gliding the Chair Down Stairs

#### **GENERAL GUIDELINES**

- Using the chair on stairs requires a minimum of two operators. Use additional help as needed to control the chair.
- Ferno recommends that the two operators face each other when transporting a patient down stairs and that an optional third trained person "spot" is used for the foot-end operator.
- For heavier-weight patients over around 150 kgs it is recommended that 4 operators are always used, and this should be assessed according to the patient being transferred.
- Check that the stairway is stable and carpet or stair covering is firmly attached to the stairs.
- Remove any water, ice, snow, or debris from the stairs before using the chair on them.
- Remove any water, ice, snow, or debris from the track and tread belts before using the chair on stairs.
- Verify that the track is locked in the open position before starting down the stairs with the chair.

#### **OVERVIEW OF BRAKING SYSTEM**

- The braking system on EZ-Glide<sup>®</sup> LBS is designed to maintain direct control when transporting the chair and occupant downstairs for a wide range of patient weights, allowing the operator to increase or decrease the braking force required according to the weight of the patient being moved and the stair type and angle of stair being negotiated down.
- 2. The track belt system on the chair creates friction between the belt and the track frame, giving a certain level of braking when going down stairs; this is the basis by which all track chairs function and operate. However with heavier-weight patients that are typically carried on EZ-Glide LBS, to sustain a controlled descent more braking may be required additional to that of the "track belt system", hence the inclusion of a brake system on EZ-Glide LBS.



#### **OVERVIEW OF BRAKE CONTROLS**

- The EZ-Glide LBS brake system consists of a rotating dial positioned on the top of the chair frame, which when rotated in either direction increases or decreases the force the brake pad exerts onto the brake disc, thereby increasing or decreasing the braking effect and subsequent speed of movement of the tracks.
- 2. The rotating dial is connected to the brake system using a tensioned cable.
- 3. Rotating the brake dial clockwise decreases the braking (denoted by a green arrow and "-" sign)
- 4. Rotating the dial anti-clockwise increases the braking (denoted by a red arrow and "+" sign)



#### **OPERATION OF BRAKING SYSTEM**

- 1. Before transporting a patient down stairs using EZ-Glide LBS chair, the initial braking level needs to be set on the chair.
- 2. First ensure that the brake is completely off, by rotating the dial in a clockwise direction as far as it will go (in the direction of green arrow). Once reached the end point, where the dial will not turn anymore, the 2 dot reference points should be adjacent to each other as per photo below.



#### **BRAKING SYSTEM ADJUSTMENT**

- 1. The brake setting should then be adjusted according to the patient weight, by rotating the dial in an anticlockwise direction (in direction of the red arrow), which will then increase the braking effect as the dial is rotated. The brake dial will rotate a total of 2.5 complete turns, from fully clockwise position of zero braking to the brake fully on after 2.5 turns antclockwise.
- 2. Increase of weight of patient being transported on the chair does not always directly equate to an increase in braking required over the entire weight range of the chair capacity. The below table shows suggested initial brake level settings for moving a patient, which are based on tests carried out on a set of metal stairs with a step height (rise) of 170mm, and tread depth of 270mm, and with a stair incline of 32.5 degrees.

Braking level (No. ofturns)	Observations
0	
0.5	
1	
1.5	Some track slippage with two operators, may require 4 operators
1.5	4 operators required *
1	4 operators required *
0.5	4 operators required *
0.5	4 operators required *
	of turns)   0   0.5   1   1.5   1.5   1.5   0   0.5

\* Four trained operators are required to operate the chair due to occupancy weight. Extra care should be taken to ensure the track does not slip on the stairs, ensuring that the chair is held into the stairs at foot-end and head-end at all times.

- 1. The table above shows that for an increasing weight of patient, up to around 150 kg the required braking level increases linearly, from 1/2 a turn for a 50 kg occupant up to 1.5 turns for a 150 kg occupant.
- 2. Above this weight, the braking level setting required actually then reduces, decreasing from 1.5 turns at 150 kg to 0.5 turns for a patient weight of 300/350 kg, this being due to fact that the weight of the patient in the chair actually creates more resistance on the tracks (increased braking effect) with heavier-weight occupant, and therefore less braking from the brake system is actually required.

- 1. Note that with stairs with a steeper incline, more braking may be required as the patient weight is further forward of the chair and this will therefore cause more forward movement, meaning more braking may be required
- 2. It is suggested that when transporting patients of 150 kgs and over that 4 operators are always used, not just because of the weight of the patient but also due to physical body mass of the patient and to ensure full control and safety of the patient at all times during the movement of the patient.
- 3. Prior to taking the patient down the stairs, the brake should be initially set at the suggested level and the chair then moved down the stairs following to the standard procedures for operating a track chair, as outlined in the EZ-Glide LBS user manual.
- 4. Once on the stairs and starting to transport the occupant downstairs, if it is felt by the head-end and foot-end operators(s) that the chair is totally under control and tracks felt to be running away slightly, even when holding the tracks into the stairs at foot-end and head-end, then the decent should be stopped and the brake increased by ½ turn, turning the dial in an anti-clockwise direction (in the direction of red arrow), increasing further if necessary until such time as the movement of the chair is felt to be controlled and the chair not running away.
- 5. If the chair is difficult to move and the tracks do not seem to be rotating, even when a forward/ downwards pressure is being exerted by the headend operator, then the braking level should be reduced by turning the dial ½ a turn in the clockwise direction (in direction of green arrow) and decreased further if required, until such time as the chair is moving more freely, but still controlled.

#### **MOVING THE CHAIR DOWN STAIRS**

- 1. **Head-End Operator:** Roll the chair to the stairs and engage the wheel locks.
- 2. **Foot-End Operator:** Extend the front (foot-end) handles to the desired stop point. Verify that both handles are locked.
- 3. **Spotter:** Stand below the foot-end operator with a hand on the operator's back to help steady and guide him/her throughout the descent.
- 4. **Head-End Operator:** Pull the track system toward yourself until the track locks open. Verify that the track is locked.
- 5. **Head-End Operator:** Raise the rear handle to the desired position and verify that it is locked.
- 6. **Head-End Operator:** Disengage the wheel locks and tilt the chair back.

- 7. **Both Operators:** Working together, guide the chair over the edge of the top step, allowing the track belts to engage the step.
- 8. Move the chair slowly downward until the tracks are resting on the top two or three steps. This establishes the glide angle.
- 9. To maintain the glide angle as you descend, work together as follows:

The head-end operator applies slight <u>downward</u> pressure on the extended rear handle.

The foot-end operator applies slight <u>upward</u> pressure on the front (foot-end) handles.

- 10. **Both Operators:** When the chair reaches the bottom of the steps and the rear wheels are on the floor, the head-end operator tips the chair forward until all four wheels are on the floor and the foot-end operator retracts the front handles.
- 11. **Head-End Operator:** Close the tracks and adjust the rear handle to a comfortable height, then roll the chair.
- 12. Once the occupant has been successfully transported down the stairs, it is suggested to take the brake off fully, by rotating the dial fully in the clockwise direction until it stops, such that the chair is then prepared ready for the next time it is used and the operator can set the new required braking level.

### To Pause During the Descent

To pause during the descent for readjustment of the brake or other reasons, tilt the chair forward just enough to allow the rear wheels to rest on the step while both operators hold the chair in place.

To continue down the stairs, tilt the chair back to the glide angle and engage the belts on the steps.

## 🕂 WARNING

Using the chair with the track unlocked can cause injury. Verify that the track is locked before transporting the patient.

### <u> W</u>ARNING

Lubricating the track system can result in injury to patient and/or operators. Never lubricate the track or belts.

# 5.6 Using Additional Help

Operating the chair requires a minimum of two trained operators at all times for occupants being moved up to around 150 kgs and 4 operators for occupants over 150 kgs

Ferno recommends that the operators and helpers at opposite ends of the chair face each other when transporting a patient up or down stairs, and that an additional trained person "spot" for the lead operator. However, all applicable local protocols for carrying chairs should be followed.

The trained operators should maintain control of the chair and operate the controls, and the designated lead operator should direct all helpers. The chart below shows suggested placement for operators and helpers.





Key: O = Operator H = Helper S = Spotter P = Patient

# 6 - MAINTENANCE

## 6.1 Maintenance Schedule

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

Keep maintenance records.

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

# 6.2 Disinfecting/Cleaning Restraints

**Ankle Restraint:** Place buckled restraint in a mesh bag and launder in a washing machine using warm water, a disinfectant soap, and gentle agitation. Hang the restraint to dry. Do not put it in a dryer.

**Chest and Lap Restraints:** Disinfect and clean restraints as directed in the restraint users' manual.

# 6.3 Disinfecting/Cleaning Chair

**To disinfect:** Remove restraints and seat and backrest panels or soft vinyl cover. Wipe all surfaces of the chair and panels or cover with disinfectant. Follow the disinfectant manufacturer's directions for application method and contact time.

**To clean:** Wash panels or cover, and all parts of the chair, with warm water and a mild detergent. Rinse with clean water. Dry with a towel or allow to air-dry.

# 6.4 Cleaning Track and Belts

To ensure predictable belt performance, it is important to keep the track and belts free of oil, grease, dirt, and debris.

- 1. Hold the belts away from the track frame and remove any debris.
- 2. Clean both sides of the track frame, and both belts, with SD-20 All-Purpose Cleaner and a clean cloth. Follow instructions on the container.
- 3. Dry track and belts thoroughly.

Minimum Maintenance Intervals	Each Use	As Needed	Each Month
Disinfecting Chair	•		
Cleaning Chair		•	
Cleaning Track System		•	
Inspecting Chair		•	•
Inspecting Track System	•	•	
Lubricating		•	

## 🕂 WARNING

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

### Important

Disinfectants and cleaners containing bleach, phenolics, or iodines can cause damage. Use caution when disinfecting and cleaning with products containing these chemicals.

## Important

Water under high pressure, or steam, can penetrate joints, flush away lubricant, and cause corrosion. Use caution when cleaning moving parts such as joints and hinges.

## Important

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

	TRAINING RECORD		
Date	Name	Training Method	

	MAINTENANCE RECORD		
Date	Maintenance Performed	Ву	
İ			