

INSTRUCTIONS FOR USE

IFU CODE : 19



E 72 Series

**Shuttle
Locks**



E 73 Series



Fig 1. E 73

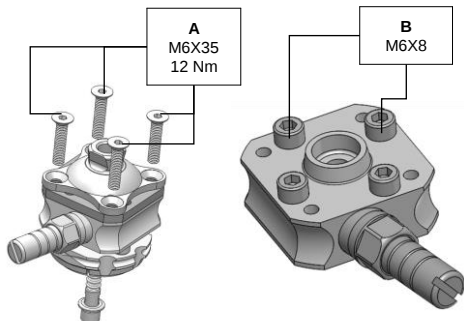


Fig 2. E 73 Torque Values of Pin (B) and Gear (A)

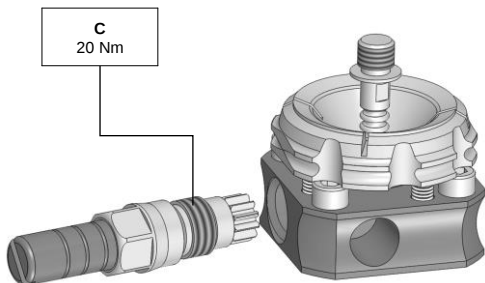


Fig 3. E 73 Dummy Set

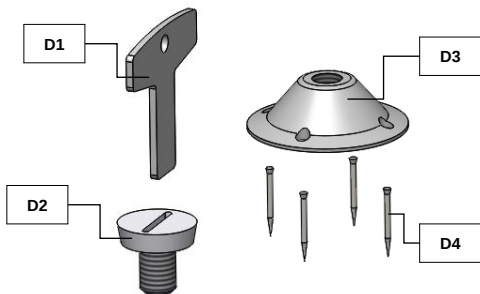


Fig 4. E 73 Support Part (E 73-11 - Flange)

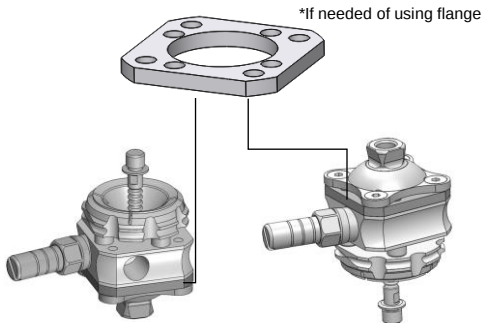


Fig 5. E 72-50

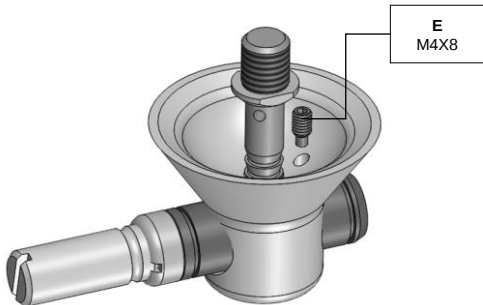
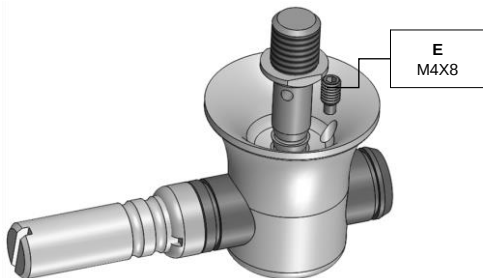


Fig 6. E 72-32



INFORMATION

Last Update: 01-02-2023



- Please read this document carefully before using the product.
- Instruct the user in the appropriate and safe use of the product.
- Follow the safety instructions to abstain injuries and damage to the product.
- Please keep this document in a safe place.

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1. E 72 Shuttle Lock



E 72-36



E 72-50

E72 products are shuttle locks, which is designed to use at BK and Arm Prosthetics. They have complete Delrin body to have light weight as well as durability during the use. This shuttle lock has been designed for medium impact levels and normal daily-basis users.

1.1. Features

Code	Material	Weight	Weight Limit
E 72-36	Delrin	77 gr	100 Kg
E 72-50		91 gr	

1.2 Scope of Delivery

Title	Quantity	Reference Number
E 72 Shuttle Lock Body	1	E 72-36 or E 72-50
Lock Pin	1	E72-50-05
Dummy Part	1	E72-50-08
Extra Spring	1	-

1.3 Laminating

1. Modify the positive cast as needed
2. Unscrew the M4 set screw (E). Then remove the lock body assembly. Carefully note the position of all parts for reassembly purposes. Note that the inner spring is under load.
3. Fill the internal cavities of the housing with plasticine or similar putty-like modeling material. After the gaps are clogged, seal the housing with sealing resin.
4. Using a closed-cell foam such as Pe-Lite, create a small disc about 2.5 mm in diameter and attach it to the bottom of the Lock Body with double-sided tape.
5. Use plaster or double-sided tape to attach the lock body to the plaster model. Make sure the handle release pin opening is in the desired direction; i.e. medial.
6. Cover the lock body and plaster model with nylon and PVA.
7. Place the appropriate material on the model by bending and/or tying from the top and reflecting it back over the lock body. It is recommended to tie the layers around the groove in the lock body.
8. Pull the outer PVA bag over the bed and pour the resin. Be sure it works to thoroughly saturate all material layers.

9. Remove the laminate from the vacuum station when the resin is completely cured. Disconnect the socket by drilling a small hole in the middle of the distal end and tapping the proximal edge or applying air pressure.

10. Finish the distal end of the socket and remove the foam disc. Drill or sand open access holes and remove the putty. Trim and shape the socket according to the patient's requirements.

11. Reassemble the lock pin. Be sure the lock pin is inserted in the correct orientation with the larger flat facing up. Push in on handle as you tighten the M4 set screw. Failure to comply can result in pin disengaging from lock!

IMPORTANT!



M4 set screw (E) should be applied with an average adhesive before inserting into lock assembly.

IMPORTANT!



Improper installation or loosening of screw connections may cause injury. To avoid injury:

- Clean the threads before each assembly.
- Apply the recommended tightening torques.

2. E 73 Shuttle Lock

The Shuttle-Lock is used to connect the prosthetic socket of a transtibial or transfemoral prosthesis to the socket liner and is integrated into the laminated socket during the lamination process. A release button on the ratchet unit can be used to unlock the Pin from the Shuttle-Lock.



Rotation secured lamination disc, 4-hole connection provides distally easy cleaning and replacing of complete locking unit.

2.1 Features

Code	Material	Weight	Weight Limit
E 73-Disk	Aluminium	78 gr	100 Kg
E 73-Body		128 gr	
E 73-Kit		254 gr	

2.2 Scope of Delivery

Title	Quantity	Reference Number
E 73 Shuttle Lock	1	E 73-Kit
Lock Pin	1	E73-06
Support Part (fig. 4)	1	E73-11
Dummy Set (Ingredient: 1 conic part (D3), 1 bolt for assembly (D2), 1 key for bolt (D1), 4 nails (D4))	1	E73-10, E73-12, E73-13, steel nail

2.3 Assembly

E 73 Gear (C) should be fixed with an average adhesive after final adjustment. Screw the gear (C) into the shuttle lock and tighten with the torque wrench.

Tightening torque: **20 Nm**

IMPORTANT!



Improper installation or loosening of screw connections may cause injury. To avoid injury:

- Clean the threads before each assembly.
- Apply the recommended tightening torques.

2.3.1 Using of Support Part

The support part is used as a flange between the 4-hole socket adapter and the E73 shuttle lock when necessary. By gaining elevation, the lock pin is prevented from hitting other components.

If it is necessary to use the flange, the place of use is as in the figure 4.

2.3.2 Lamination

1. Flatten distal end of plaster cast enough to centrally attach delrin tooling body. Attach with the supplied nails or double-sided tape, keeping the original pin setting.
2. Apply the inner PVA bag. Expand the bag away from the center hole. Attach the ring with the Delrin Screw, closing the PVA bag during the process.
3. Place some clay in spacing screw heads (B) and in a groove on Delrin Screw (D2).
4. Tie in lay-up material. Be sure that four spacing screws (B) are buried evenly in material.
5. Apply the outer PVA bag and finish the lamination.
6. Sand the distal end properly to expose the screw heads (B). Warning: Do not sand any deeper.
7. Remove the short screws (B) and attach the lock body with the four long countersunk screws (A). Screws (A) should be fixed with an average adhesive.

Tightening torque: **12 Nm**

3. Usage

E 72 and E 73 Shuttle locks are compatible with “Silicone” and “Gel” liners with the distal attachment system (pin system).

To release the pin, the button should be pressed.

4. Environmental Conditions

Acceptable Environmental Conditions
Temperature use range: -10 °C to +45°C
Humidity: Allowable relative humidity 20% to 90%, non-condensing

Unsuitable Environmental Conditions
Fresh water, salt water, sweat, urine, acids e.g.
Sand, dust, highly hygroscopic particles (e.g., talcum)
Mechanical vibrations, impacts

5. Service Life

The service life of the product is about 3 years. This duration depends on the daily activity of the user.

6. General Safety Instructions

CAUTION!



To avoid the risk of injury and product damage, do not use for longer than the service life of the product.

The suitability of the device to the patient and the prosthesis should be evaluated by a healthcare professional.

The device must be fitted and adjusted by a healthcare professional.

Avoid using this product in unsuitable environmental conditions. If the product has been exposed to unsuitable environmental conditions, check for damage.

Do not use the product that is damaged, has limited functionality or is in doubtful condition. Ensuring that appropriate measures are taken (e.g. control, cleaning, repair, replacement by the authorized workshop or manufacturer).

To prevent mechanical damage, be careful and caution when working the product.

Use the product for a single patient to avoid injuries and product damage.

Products should be used in appropriate combinations. Using the product with unsuitable combinations may result in possible injury.

In case of feeling any space or sound, apply the rehabilitation center who installed the foot.

CAUTION!



Align the Shuttle lock with the longitudinal axis of the residual limb to prevent unnecessary load and wear.

CAUTION!



Always verify that the pin is engaged in the lock before using the prosthesis.

7. Maintenance

1. After the first 30 days of use, the prosthesis parts should be visually inspected and function checked.
2. Inspect the entire prosthesis for wear during normal consultations.
3. This prosthesis and components should be checked for its functions at least once a year with regular intervals by a prosthesis specialist. There is no risk if suggestions are followed by properly.

8. Warranty

IB-ER company provides the warranty for the products in case of material and production flaws. Warranty duration for the above-mentioned products are individually mentioned at below.

Product	Duration After The IB-ER Invoice Date
E 72-36	12 Months
E 72-50	
E 73-Kit	18 Months

This warranty covers on only replacement and repair of failed products after assemblies performed by qualified individuals and competent institutions. This warranty is not applicable in case of following points:

- Improper use of the product, using with unsuitable conditions and fault assembly.
- Issues arising from replacement of our products with other products.



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