

MANUFACTURING GUIDELINES

Trans-Tibial Prosthesis



Promoting
Independent
Lifestyle

rehabimpulse.org

Foreword

The polypropylene (PP) technology

This technology was created by the International Committee of the Red Cross (ICRC) in 1979. Its use is appropriate to specific contexts i.e., countries affected by war and low-income or developing countries.

The technology has been tailored to meet the needs of the physically disabled in the countries concerned.

The features of this technology are:

- Freedom from the transport and storage restrictions of other materials and no shelf-life constraints;
- Durable, comfortable, easy for service users to use and maintain;
- Its hard cosmetic shell helps the device maintain a good appearance throughout its life;
- Easy for P&O technicians to learn, use and repair;
- Standardized but compatible with the environment in different regions of the world;
- Low-cost but modern and consistent with internationally accepted standards (ISO certification and CE marked);
- Does not require expensive machines, tools, and a large setup;
- Easily available.

The choice of technology is of great importance for promoting sustainable affordable quality physical rehabilitation services.

The Rehab'Impulse Brand – owned by ICRC made by Alfaset!

The ICRC registered the Rehab'Impulse trademark in 2019 with the aim of developing a brand identity for its technology. The Rehab'Impulse brand remains under the ownership of ICRC, while the components are manufactured in Switzerland by the Alfaset Foundation, a social enterprise employing persons with disabilities.

Objectives of the manuals

The "Manufacturing Guidelines" are designed to provide the information necessary for production of high-quality assistive devices.

The main aims of these informative manuals are as follows:

- To promote good practice.
- To provide support for training in the use of this technology.
- To promote and enhance Rehab'Impulse technology.

This is another step forward in the effort to ensure that service users have access to high-quality services.

Introduction

The aim of this document is to describe a method for manufacturing **Trans-Tibial (TT) prostheses** using the polypropylene technology with the Rehab'Impulse components/products.

The casting, rectification and alignment methods used correspond to international prosthetic and orthotic (P&O) standards of practice and are therefore not described in these manufacturing guidelines.

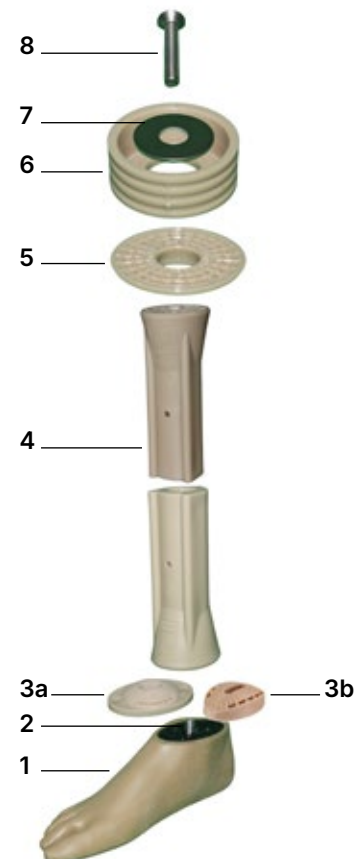
1. Materials and components

For short and medium stumps

The alignment system and foot components are available in adult and child sizes.

Description:

1. SACH foot 2.0 (for adult or child), or dynamic K3 foot (adult only)
2. Socket head cap screw, stainless steel (for adult M10 × 80 or for child M8 × 80), and ribbed lock washer (for adult M10, or for child M8)
- 3a. Convex ankle washer for adult
- 3b. Convex ankle washer for child
4. Two concave cylinders (M10 adult, or M8 child)
5. Convex disc
6. Cup, trans-tibial adult or child
7. Flat washer stainless steel (for adult 15/44/3 or for child 10.5/40/1.5)
8. Screw countersink head, FT, stainless steel (for adult M10 × 60 or for child M8 × 60)

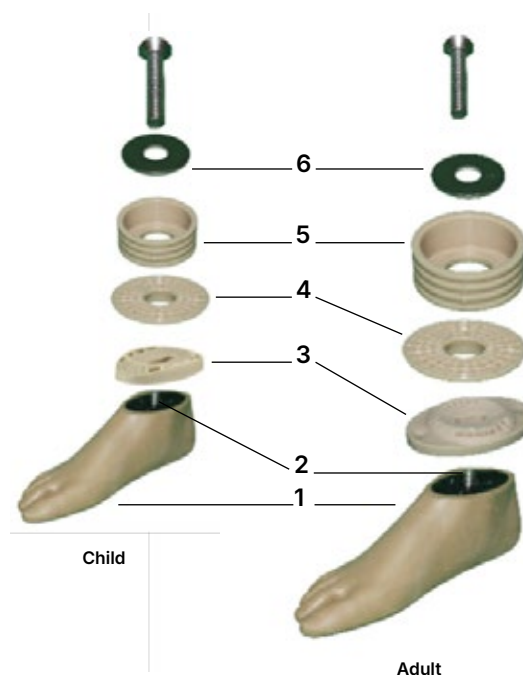


For long stump

The alignment system and foot components are available in adult and child sizes.

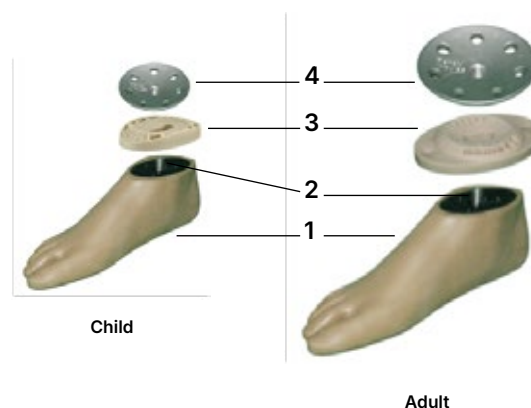
A) Alignment kit description:

1. SACH foot 2.0 (for adult / child), or dynamic K3 foot (adult only)
2. Socket head cap screw, stainless steel (M10 × 80 for adult or M8 × 80 for child), and ribbed lock washer (M10 for adult, or M8 for child)
3. Concave ankle washer
4. Convex disc
5. Cup, trans-tibial adult or child
6. Flat washer stainless steel, for adult or child (15/44/3 for adult or 10.5/40/1.5 for child)



B) Alignment nut description:

1. SACH foot 2.0 (for adult / child), or dynamic K3 foot (adult size only)
2. Socket head cap screw, stainless steel (M10 × 80 for adult or M8 × 80 for child) and ribbed lock washer (M10 for adult, or M8 for child)
3. Concave ankle washer (for adult or child)
4. Heavy duty nut, stainless steel (M10 for adult, or M8 for child)



Socket design

PTB (Patellar-Tendon-Bearing) socket secured with a cuff suspension (Fig 1). The suspension can be adjusted.

In case of medio-lateral instability of the knee or for a strong hyperextension, a thigh corset with sidebars may be more suitable.

This can be made with or without a soft liner.



Fig 1

PTB-SC (Supra-Condylar) (Fig 2)
Should be made with a soft liner.



Fig 2

PTB-SCSP (Supra-Condylar, Supra-Patellar) (Fig 3)
Must be made with a soft liner.



Fig 3

2. Measurements and soft socket manufacture

- The service user is assessed, a prescription is made, measurements are taken and casting and rectification are performed according to best P&O practice (Fig 4 and 5).



Fig 4



Fig 5

Soft liner manufacture

- Measure the positive plaster model (Fig 6).

Note the:

- A** smallest circumference
- B** largest circumference
- C** length

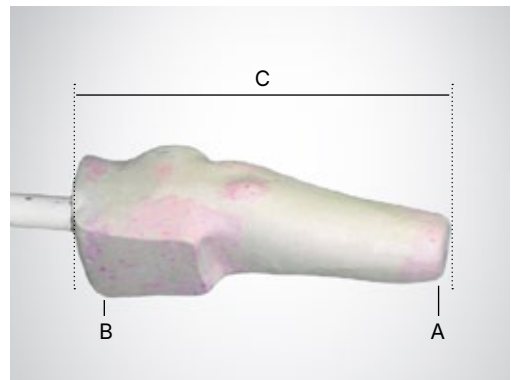


Fig 6

- Draw a trapezoid on a sheet of 6 mm EVA foam according to the measurements taken but adding 3 cm to the length on the short side of the trapezoid (Fig 7).

Cut the EVA foam and skive the lateral and the distal sides (about 15 mm) (Fig 8):

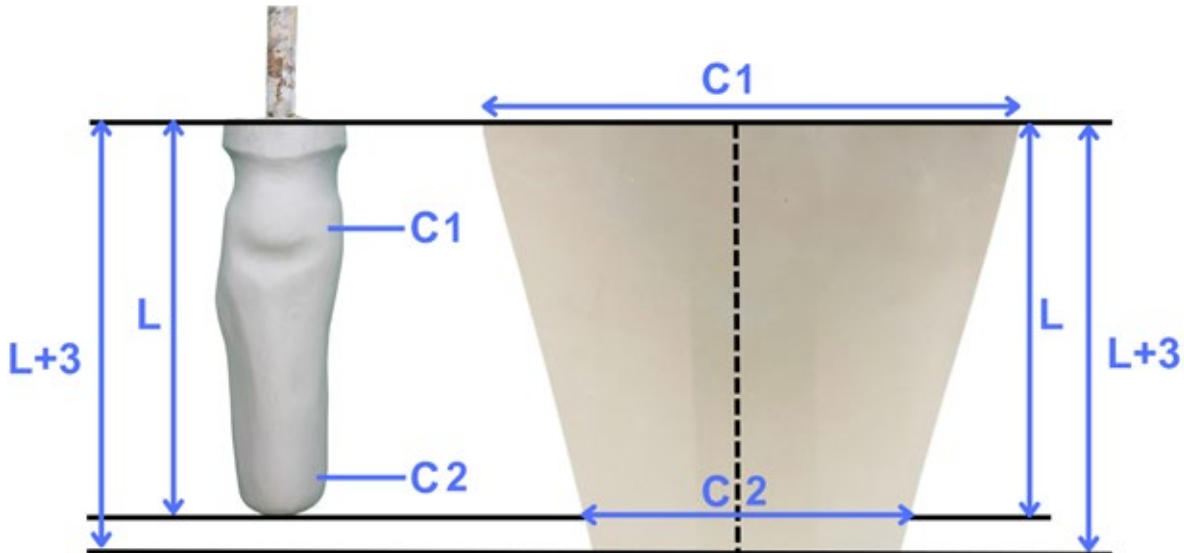


Fig 7

- Apply neoprene contact glue on both skived sides of the EVA and form a cone (Fig 9 and 10). Keep the trimmed distal side on the outside of the cone and leave it free of glue.

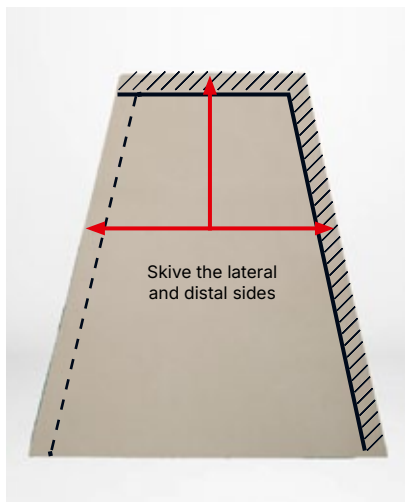


Fig 8



Fig 9



Fig 10

- Heat the EVA foam cone in the oven at 120°C for about 3 minutes, thermoforming is done using the vacuum pump, on a vertical suction hose.

Quickly apply talcum powder inside the cone and on the positive plaster model, immediately after removing it from the oven and pulling it over the positive plaster model.

- Pull the EVA foam cone over the positive plaster model, keeping the glued line on the posterior, until the trimmed distal end coincides with the tip of the positive plaster model (Figs 11 to 13).



Fig 11

- Cover the model with a plastic bag, close it securely below the model with an elastic strap and switch on the vacuum pump (Fig 12).



Fig 12

- Allow the soft liner to cool down for few minutes.
- Remove the plastic bag.
- Prepare a piece of 6 mm EVA foam large enough to cover the distal end.
- Apply neoprene contact glue to the trimmed edge and the distal cap.
- Heat the cap in the oven and mould it on the socket.
- Cut off the extra EVA foam and grind it smoothly.
- Add EVA padding above the medial condyle and other areas if required.



Fig 13

■ To reinforce the soft liner / socket

Cover the soft socket with a cotton tubular stockinette and a coating of neoprene contact glue (Fig 14).



Fig 14

■ Prepare a sheet of 3 mm EVA foam to cover the stockinette (Fig 15).

Skive one side of the EVA foam, apply glue to the entire surface of the EVA foam including the skived side, and place it in the oven at 120°C for about 1 minute.

Cover the soft liner, starting from the posterior side. Remove the excess EVA foam and grind the posterior side and the distal part smooth.



Fig 15

■ Lastly, cover the distal part with a 3 mm or 6 mm EVA foam "cap" and grind it smooth (Fig 16).



Fig 16

3. Trans-tibial cup / heavy duty nut placement and socket manufacture

- Grind the internal edge of the socket cup (Fig 17).

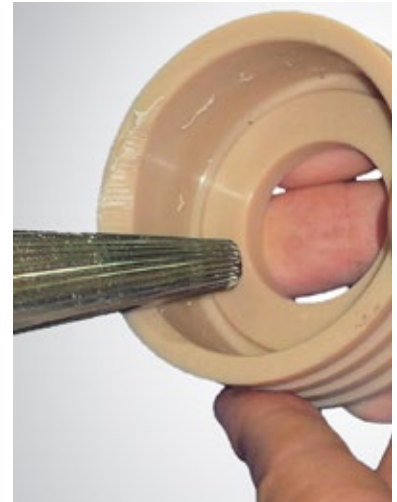


Fig 17

Placement of the trans-tibial cup

- Fix a nail in the distal end of the model, where the cup will be attached and leave protruding from the model 10–15 mm.

Place the TT model on the alignment jig (Fig 18); align according to the instructions on the use of the jig (separate manual). Perform the alignment in accordance with the measurement card. Protect the cup with tape and fix the cup to the soft socket with plaster (Fig 20 and 21).



Fig 18

- The plumb line should pass through the middle of the patella and the middle of the cup (Fig 19).

The plumb line should pass through the middle of the condyle and through the middle of the cup (Fig 20).

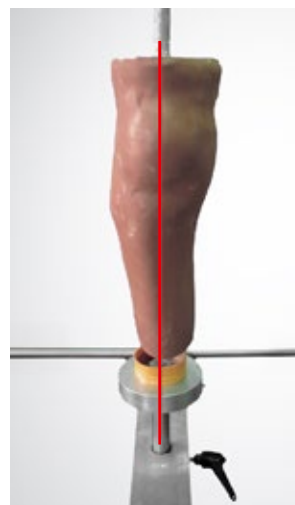


Fig 19

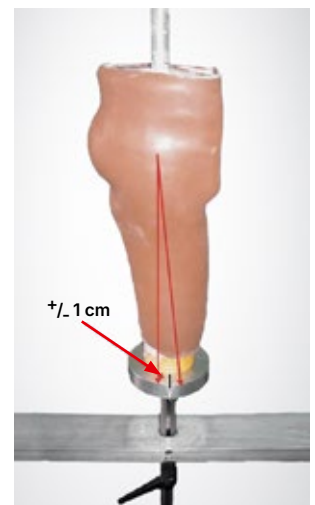


Fig 20

- When the plaster has set, smooth it.



Fig 21

- Cover the soft liner with a lady's nylon stocking or cotton tubular stockinette. Remove the nylon stocking covering the cup (Fig 22).



Fig 22

Placement of the heavy-duty nut (Fig 23) for long stump

Fix the nail at the bottom of the model, where the heavy duty nut will be attached and leave protruding from the model around 5–10 mm. Perform the alignment in accordance with the measurement card. Fix the heavy duty nut to the distal part of the soft socket with plaster. In this configuration, not all the parts of the trans-tibial kits of the child or adult size are necessary as the socket with the heavy duty nut will be attached directly to the convex ankle washer and then to the foot.

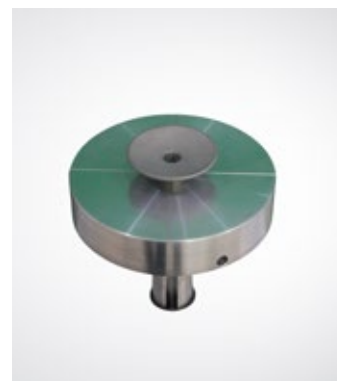


Fig 23

On the frontal view:

The plumb line should pass from the middle of the patella to the middle of the heavy duty nut (Fig 24).

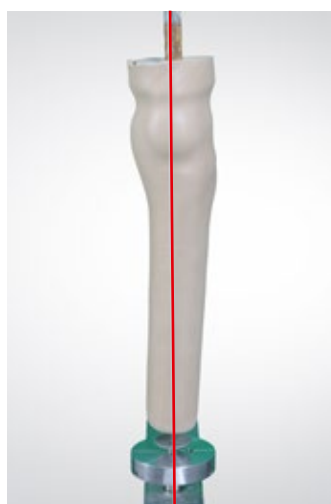


Fig 24

On the lateral view:

The plumb line should pass from the middle of the condyle to the middle of the heavy duty nut (Fig 25).

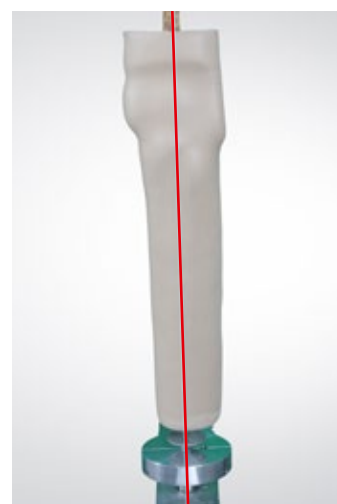


Fig 25

When the plaster has set, smooth it (Fig 26).



Fig 26

Cover the soft liner with a lady's nylon stocking or tubular cotton stockinette. Remove the nylon covering the heavy duty nut (Fig 27).



Fig 27

Manufacture of the socket

(Using 4 mm or 5 mm polypropylene depending on the service user's weight).

Measurements

- Add 10 cm to the circumference measurement taken at patella level (Fig 28).
- Add 10 cm to the circumference measurement taken at the distal part (Fig 29).
- Add 15 cm to the measured length of the socket (Fig 30).
- Fix a round piece of EVA foam (12 + 6 mm) with a nail inside the opening of the cup (Fig 31).



Fig 28



Fig 29



Fig 30



Fig 31

- Cut a sheet of 4 mm or 5 mm PP (depending on the service user weight). Clean the PP sheet and the teflon in the oven with thinner.

Draw a line with a permanent marker in the middle of the PP sheet, it will facilitate the thermoforming operation. This line must be placed in the extension of the vacuum pump cone axis (Fig 32).

Heat the PP in an oven between 6 to 18 minutes (4 mm), and 8 to 20 minutes (5 mm) at 180° depending on the type of oven used (see the guideline on "Polypropylene thermoforming for Prosthetics-Orthotics" for a detailed explanation).

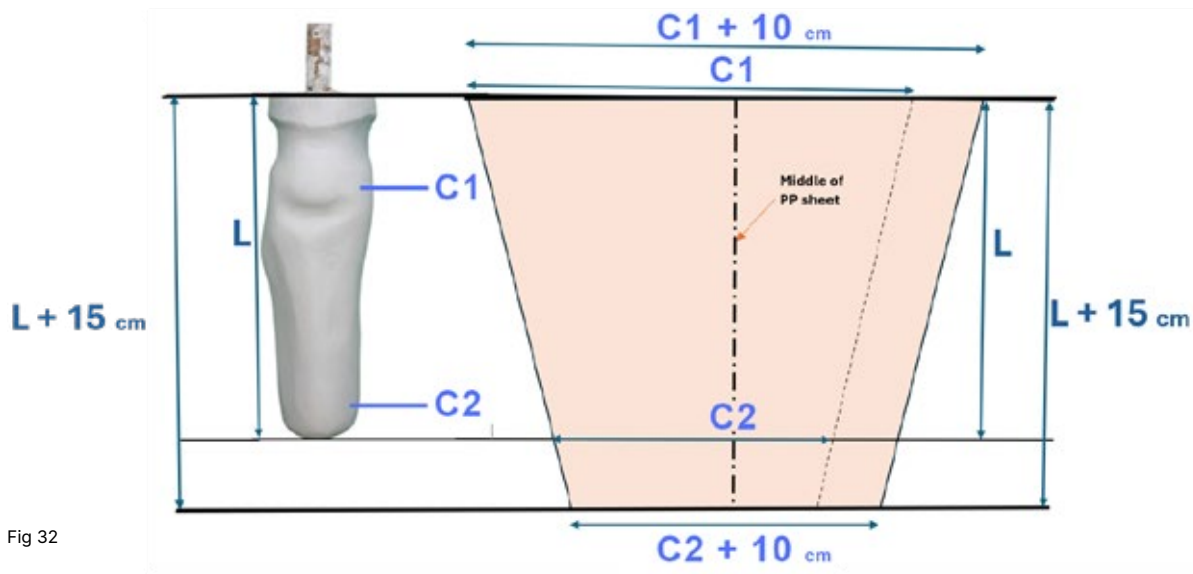


Fig 32

- Drape the PP around the socket (Fig 33); switch on the vacuum pump.

Cut off the excess PP while it is still hot and tie an elastic strap around the proximal portion of the PP (Fig 34).

Leave the vacuum on until the PP cools down completely (6 hours duration minimum): See the guideline on "Polypropylene thermoforming for Prosthetics-orthotics" for a detailed explanation.



Fig 33



Fig 34

- Cut the PP according to the trim lines (Fig 35), remove the plaster without damaging the socket liner and PP socket, and grind the welding seam down to 3 mm (Fig 36).



Fig 35



Fig 36

- Once the plaster is removed, use a screwdriver to remove the piece of EVA foam (Fig 37 and 38).

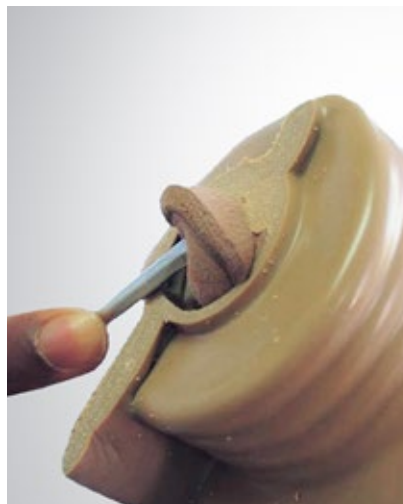


Fig 37

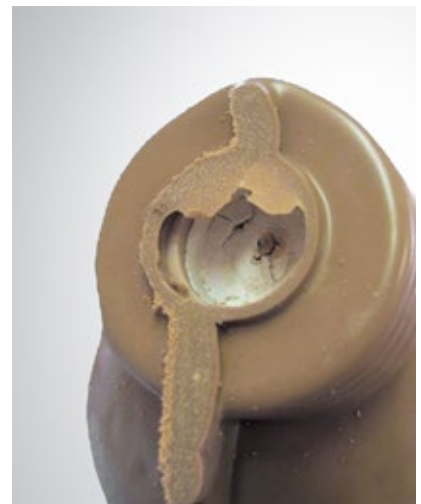


Fig 38

- Grind the distal part (Fig 39) and check that the surface is flat (Fig 40).

For maximum strength, keep a minimum PP thickness of 2 to 3 mm under the cup.



Fig 39

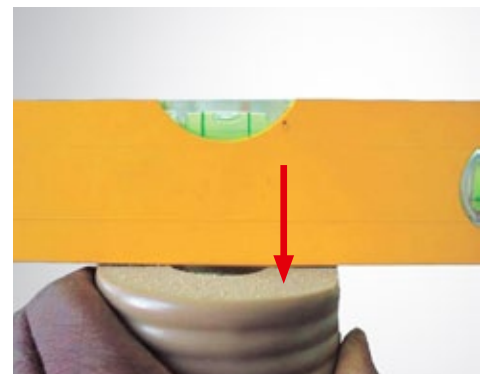


Fig 40

4. Assembly and bench alignment

All the following steps must comply with the best P&O practices. Taking into account the heel height of the service user, the length of the stump, and any potential deviations.

Steps to follow:

- Ankle-foot assembly and alignment
- Socket assembly
- Adjustment of length and welding of concave cylinder
- Final bench alignment

The foot, the convex ankle washer and the concave cylinder are attached together:

Fig 41 (adult) and Fig 42 (child).

The Rehab'Impulse logo at the bottom of the concave cylinder must be anterior.

Note: Regardless of which Rehab'Impulse foot is used (SACH foot 2.0 or Dynamic K3 foot), the assembly and bench alignment process remain the same.



Fig 41



Fig 42

Ankle-foot alignment

■ Preparation before fixation

The heel height is adjusted according to the service user's shoe; the concave cylinder must be perpendicular to the ground.

The recommended heel height for Rehab'Impulse feet is 10 mm, however, a heel height of 0 to 20 mm is possible.

- The ankle alignment system allows plantarflexion and dorsiflexion adjustments.
- This alignment system is used to adjust the angulation of the prosthesis according to the heel height.
- In any event, the concave cylinder must remain perpendicular to the ground.

■ The foot is positioned in about **5° external rotation** (Fig 43).

■ Check the alignment once again with the service user's shoe on the foot (Fig 44).

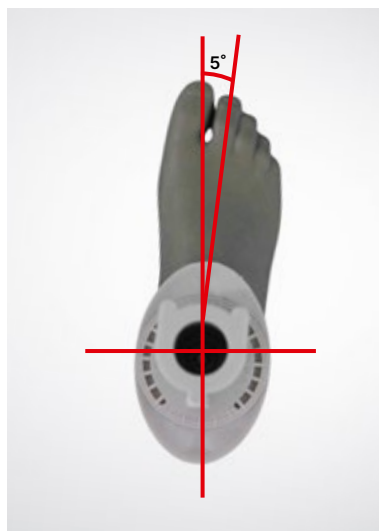


Fig 43



Fig 44

■ The socket is attached to the cylinder with the convex disc in between (Fig 45).

■ The Rehab'Impulse logo at the bottom of the concave cylinder should remain facing in front. The alignment system should be in the neutral position for the first fitting (Fig 46).



Fig 45



Fig 46

- Adjust the length according to the measurements taken on the service user (Fig 47).

Mark the concave cylinders.

Cut the concave cylinders to the required length and at an angle of 90°, adding 5 mm extra for each cylinder to account for the material exuded during the welding process.



Fig 47

- Set the temperature of the mirror welder between 180° and 200° C (Fig 48). See the guideline on "Polypropylene welding techniques for Prosthetics-Orthotics" for a detailed explanation.



Fig 48

- Hold the concave cylinders on the mirror welder until a roll of melted PP forms (Fig 49 and 50).



Fig 49



Fig 50

- Carefully bring the cylinders together and apply slight pressure, ensuring the cylinders remain in line in both the sagittal and frontal planes (Fig 51 and 52).
- Make sure that cylinders are well aligned during the welding and cooling stages to obtain a perfectly straight assembly. See the guideline on "Polypropylene welding techniques for Prosthetics-Orthotics" for a detailed explanation.



Fig 51



Fig 52

Concave cylinders **correctly** welded

(Fig 53 and 54)



Fig 53



Fig 54

Concave cylinders **incorrectly** welded

(Fig 55 and 56)



Fig 55



Fig 56

Socket alignment

The socket is connected to the concave cylinder with a convex disk in between. The connection is secured by a countersunk head bolt and flat washer inside the socket, with the nut inside the concave cylinder.

Shifting can occur in all directions: anterior (Fig 57), posterior (Fig 59), medial, lateral and combined movements, with a range of 10 mm in all directions.

Anterior shifting



Fig 57

Initial position

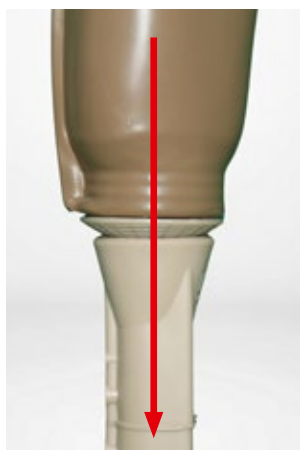


Fig 58

Posterior shifting



Fig 59

- The alignment system also allows flexion (Fig 60), extension (Fig 61), abduction, adduction and rotation.



Fig 60



Fig 61

- Bench alignment is performed according to P&O practice and adjusted during fitting and during the gait training period.

The bench alignment should be performed according to the service user's shoes before fitting (Fig 62 and 63). A heel height of 10 mm is recommended.

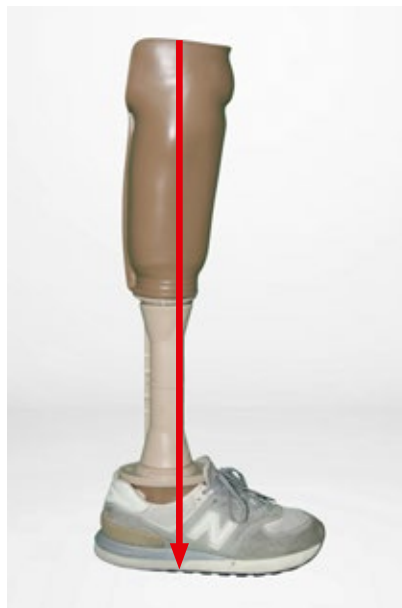


Fig 62



Fig 63

- After the fitting and the gait training period is validated by the multidisciplinary team, all the components must be welded together (See the guideline on "Polypropylene welding techniques for Prosthetics-Orthotics" for a detailed explanation) - (Fig 64, 65 and 66).

The M8 × 60 (for child) or M10 × 60 (for adult) screw must be tightened to 30 Nm.



Fig 64



Fig 65



Fig 66

5. Cosmetic finishing

There are two methods of cosmetic finishing, both of them only use PP. The EVA foam cosmetic method is no longer recommended, the strength of the device only meets ISO quality standards when it is finished with PP.

5.1. Cosmetic with upper part of socket removed (Fig 67 and 68)

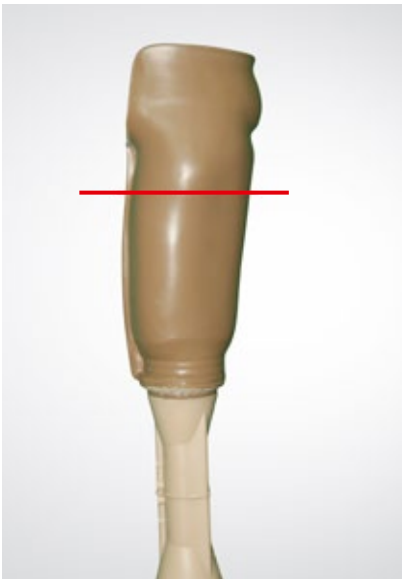


Fig 67

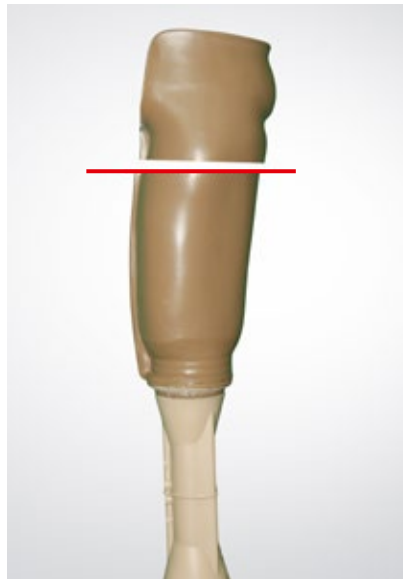


Fig 68

Adjustment of ankle part

- Draw a line following the shape of the foot (Fig 69), then disassemble the foot.



Fig 69

- Check your mark and grind it carefully (Fig 70 and 71).

Check once more against the foot.

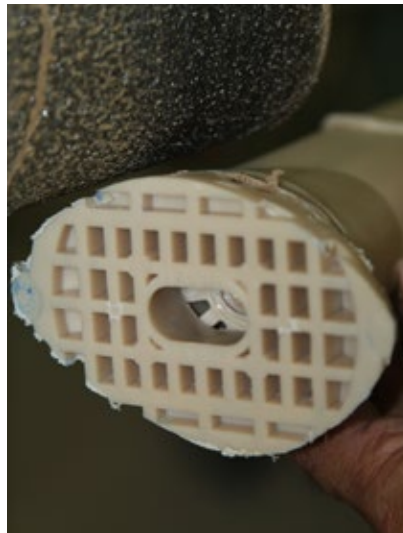


Fig 70



Fig 71

- Stick adhesive tape on the foot and draw a line with a permanent marker on the top of the convex ankle washer and on the tape (Fig 72).

- Disassemble the foot and draw a line all around the underside of the convex ankle washer 3 or 4 mm from the edge (Fig 73), depending of which thickness of PP is used for the cosmetic (prosthesis for a child or for an adult).

Grind the edge carefully.



Fig 72



Fig 73

- Check again with the foot and grind/adjust again carefully if necessary (Fig 74).



Fig 74

Manufacture of cosmetic shell

- Cut around the socket below the level of the hamstring tendons (Fig 75) and remove the upper part (Fig 76).



Fig 75



Fig 76

- Skive the PP edge carefully (Fig 75, 77 and 78)



Fig 77



Fig 78

- Cover the concave cylinders with adhesive tape (Fig 79).



Fig 79

- Add plaster to shape the shank (Fig 80).



Fig 80

- Reduce the circumference of the shank by 3 cm to allow for the thickness of the 3 mm (child), 4 mm (adult medium size), or 5 mm (adult big size) PP sheet (Fig 81, 82 and 83).

Smooth the plaster.

Leave the ankle edge free of plaster for the final welding.



Fig 81



Fig 82



Fig 83

- Fix a 4 mm PP reinforcement plate at the popliteal level with **2 nails** (Fig 84).

Allow the plaster to dry, preferably overnight.

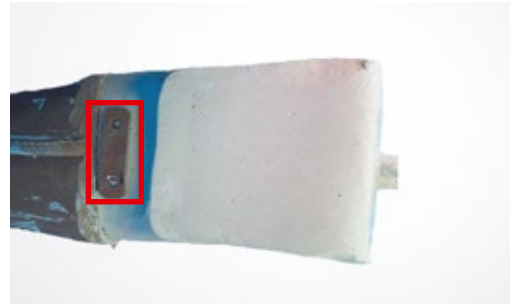


Fig 84

- Draw a nylon lady's stocking or cotton tubular stockinette over the plaster (Fig 85).
Add talcum powder.

According to the body weight of the service user, heat the PP in an oven between 5 to 15 minutes (3 mm), 6 to 18 minutes (4 mm), and 8 to 20 minutes (5 mm) at 180° depending on the type of oven used (see the guideline on "Polypropylene thermoforming for Prosthetics-Orthotics" for a detailed explanation).



Fig 85

- Glue or nail 5 mm PP under the convex ankle washer plate to compensate for retraction of the PP after opening (Fig 86).



Fig 86

- Drape the PP under vacuum (Fig 87 and 88).



Fig 87



Fig 88

- Cut off the excess PP at the welding seam (Fig 89). Keep the vacuum on until the plastic cools down (6 hours duration minimum).



Fig 89

- Grind the posterior seam down to 2 to 3 mm. In three places, leave a wider overlap of PP for holding the prosthesis during welding (Fig 90).

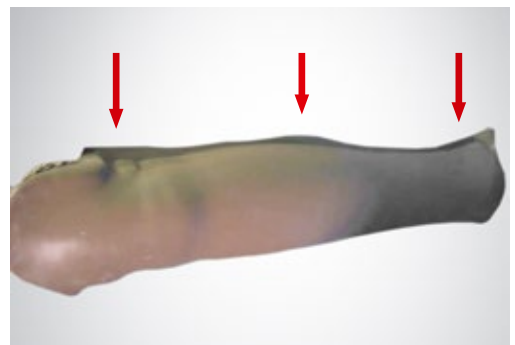


Fig 90

- Open the seam carefully with an oscillating saw to avoid breakage (Fig 91).



Fig 91

- Remove the PP shell from the prosthesis and remove the plaster. Clean the prosthesis thoroughly to ensure that no pieces of plaster remain. Put the prosthesis back into the shell (Fig 92 and 93).



Fig 92



Fig 93

- Hold the prosthesis in a bench vice with EVA foam or rubber protection between the vice jaws and the cosmetic shell. Close the two sides of the posterior seam with lock grips and/or other suitable tools (Fig 94).

Before welding, make V-shaped indentation along the seam with a welding iron.



Fig 94

- The final welding is done with a hot-air welding gun and a 4 mm PP welding rod (Fig 95). See the guideline on "Polypropylene welding techniques for Prosthetics-Orthotics" for a detailed explanation.



Fig 95

- Weld the distal end of the shell (Fig 96). After welding, carefully grind the ankle surface to ensure it is flat.



Fig 96

- Polish with a rasp (Fig 97) and/or a sharp piece of glass.



Fig 97

- Attach the 4 mm PP reinforcement to the shell with tubular rivets (Fig 98).



Fig 98

The last step is to fix the foot on the prosthesis.

5.2. Cosmetic with complete PP socket



Fig 99

Adjustment of ankle part

- Draw a line following the shape of the foot (Fig 100), then disassemble the foot.



Fig 100

- Check your mark and grind it carefully (Fig 101 and 102).

Check once more against the foot.

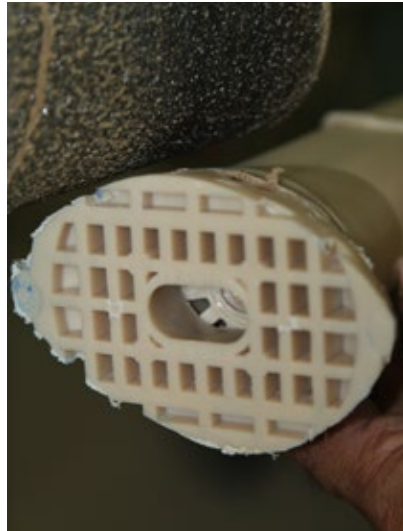


Fig 101



Fig 102

- Stick adhesive tape on the foot and draw a line with a permanent marker on the top of the convex ankle washer and on the tape (Fig 103).
- Disassemble the foot and draw a line all around the underside of the convex ankle washer 3 or 4 mm from the edge (Fig 104), depending of which thickness of PP is used for the cosmetic (prosthesis for a child or for an adult).

Grind the edge carefully.



Fig 103



Fig 104

- Check again with the foot and grind/adjust again carefully if necessary (Fig 105).



Fig 105

- Roughen the surface of the socket (Fig 106).



Fig 106

- Cover the concave cylinders with adhesive tape (Fig 107).



Fig 107

- Shape the shank with plaster (Fig 108). Allow the plaster to dry, preferably overnight.



Fig 108

- Draw a lady's nylon stocking or cotton tubular stockinette over the prosthesis (Fig 109).



Fig 109

- Glue or nail 5 mm PP under the convex ankle washer to compensate for shrinkage of the PP after thermoforming (Fig 110).



Fig 110

- Drape a sheet of 3, 4 or 5 mm PP (depending of the size of the user) and switch on the vacuum.
- Grind the posterior seam down to 2 to 3 mm. In three places, leave a wider overlap of PP for holding the prosthesis during welding (Fig 111).

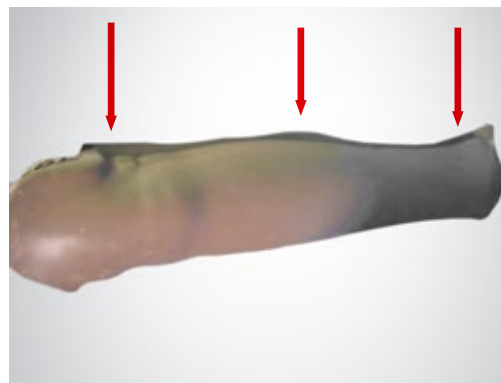


Fig 111

- Open the seam carefully with an oscillating saw to avoid breakage (Fig 112).
- Remove the PP shell from the prosthesis and remove the plaster. Clean the prosthesis thoroughly to ensure that no pieces of plaster remain.



Fig 112

- Hold the prosthesis in a bench vice with EVA foam or rubber protection between the vice jaws and the cosmetic shell. Close the two sides of the posterior seam with lock grips and/or other suitable tools (Fig 113).

Before welding, make V-shaped indentations along the seam with a welding iron.



Fig 113

- The final welding is done with a hot-air welding gun and a 4 mm PP welding rod (Fig 114). See the guideline on "Polypropylene welding techniques for Prosthetics-Orthotics" for a detailed explanation.



Fig 114

- Weld the distal end of the shell (Fig 115). After welding, carefully grind the ankle surface to ensure it is flat.



Fig 115

- Grind the seam down to 2 to 3 mm. Polish with a rasp (Fig 116) or a piece of glass.



Fig 116

- Weld the proximal part of the prosthesis (Fig 117 and 118), smoothing the edge (fig 119).



Fig 117

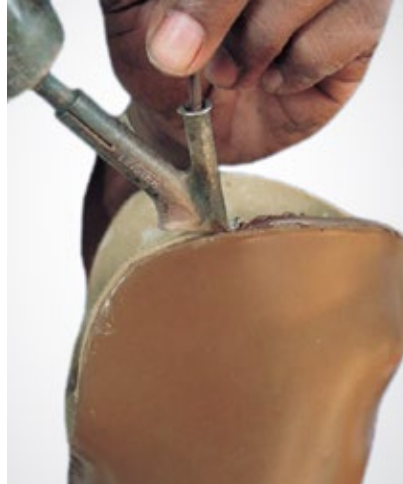


Fig 118



Fig 119

- The last step is to fit the foot back on the prosthesis using the foot screw and Loctite glue. Check the flatness of the ankle.



Fig 120

The trans-Tibial prosthesis is now complete (Fig 120).

List of materials, consumables and accessories

Components: Trans-Tibial Alignment Kit, Child

Rehab/Impulse Code	Size	Side	Colour	User Weight	Description
74-00221	Child	Right/Left	Beige	≤ 60 kg	1× PP Cup, TTC
					1× PP Convex disc
					2× PP Concave cylinder, M8, child
					1× PP Convex ankle washer
					1× Screw, countersunk head, FT, stainless steel, M8 × 60
					1× Flat washer, stainless steel, 10.5/40/1.5

Please note: Foot not included in the kit. To be ordered separately.



Components: Trans-Tibial Alignment Kit, Adult

Rehab/Impulse Code	Size	Side	Colour	User Weight	Description
74-00137	Adult	Right/Left	Beige	≤ 80 kg	1× PP Cup, TTA
					1× PP Convex disc
					2× PP Concave cylinder, M10, adult
					1× PP Convex ankle washer
					1× Screw, countersunk head, FT, stainless steel, M10 × 60
					1× Flat washer, stainless steel, 15/44/3

Please note: Foot not included in the kit. To be ordered separately.



Components: Trans-Tibial Alignment Kit, Long Stump, Child

Rehab/Impulse Code	Size	Side	Colour	User Weight	Description
74-00404	Child	Right/Left	Beige	≤ 60 kg	1× PP Cup, LS
					1× PP Convex disc
					1× PP Concave ankle washer, child
					1× Flat washer, stainless steel, 15/44/3

Please note: Foot not included in the kit. To be ordered separately.



Components: Heavy Duty Nut for TT Long Stump, Child

Rehab/Impulse Code	Size	Material	Interface	User Weight	Description
74-00879	Child	Stainless steel	M8	≤ 60 kg	10× Heavy Duty Nut Child

Please note: Foot not included in the kit. To be ordered separately.



Components: Trans-Tibial Alignment Kit, Long Stump, Adult

Rehab/Impulse Code	Size	Side	Colour	User Weight	Description
74-00229	Adult	Right/Left	Beige	≤ 80 kg	1× PP Cup, LS
					1× PP Convex disc
					1× PP Concave ankle washer, adult
					1× Flat washer, stainless steel, 15/44/3

Please note: Foot not included in the kit. To be ordered separately.



Components: Heavy Duty Nut for TT Long Stump, Adult

Rehab/Impulse Code	Size	Material	Interface	User Weight	Description
74-00880	Adult	Stainless steel	M10	≤ 80 kg	10× Heavy Duty Nut Adult

Please note: Foot not included in the kit. To be ordered separately.



Components: Feet for prosthesis

Foot SACH 2.0, Child & Adult

Rehab/Impulse Code	Size	Side	Colour	Heel height	User weight
from 74-00120 to 74.00219 (according to the size)	Child (14 to 21)	Left / Right	Olive Terra	5 mm (14 & 15)	≤ 45 kg: size 14 to 17 ≤ 60 kg: size 18 to 21
	Adult (22 to 28)			10 mm (16 to 28)	≤ 80 kg: size 22 to 28

With all child 2.0 SACH feet a socket head cap screw, stainless steel, M8 × 80 mm + a ribbed lock washer M8 are included.
With all adult 2.0 SACH feet a socket head cap screw, stainless steel, M10 × 80 mm + a ribbed lock washer M10 are included.



Dynamic K3 Foot, Adult (only)

Rehab/Impulse Code	Size	Side	Colour	Heel height	User weight
from 74-02157 to 74.02293 (according to the size)	Adult (22 to 28)	Left / Right	Olive Terra	10 mm (22 & 28)	≤ 80 kg: size 22 to 28

With all adult Dynamic K3 foot a socket head cap screw, stainless steel, M10 × 80 mm + a ribbed lock washer M10 are included.



Raw materials

Rehab/Impulse Code	Item Description	Used for
74-01079	Polypropylene welding rod, 4 mm, beige colour, roll	Welding cosmetic shell
74-01080	Polypropylene welding rod, 4 mm, olive colour, roll	Welding cosmetic shell
74-01081	Polypropylene welding rod, 4 mm, terra colour, roll	Welding cosmetic shell
74-01083	Homopolymer, 3 mm × 1 m × 2 m, 5.5 kg, beige colour	Cosmetic shell
74-01086	Homopolymer, 3 mm × 1 m × 2 m, 5.5 kg, olive colour	Cosmetic shell
74-01082	Homopolymer, 3 mm × 1 m × 2 m, 5.6 kg, terra colour	Cosmetic shell
74-01084	Homopolymer, 4 mm × 1 m × 2 m, 7.5 kg, beige colour	Hard socket / Cosmetic shell
74-01087	Homopolymer, 4 mm × 1 m × 2 m, 7.5 kg, olive colour	Hard socket / Cosmetic shell
74-01089	Homopolymer, 4 mm × 1 m × 2 m, 7.5 kg, terra colour	Hard socket / Cosmetic shell
74-01085	Homopolymer, 5 mm × 1 m × 2 m, 9.2 kg, beige colour	Hard socket
74-01088	Homopolymer, 5 mm × 1 m × 2 m, 9.2 kg, olive colour	Hard socket
74-01090	Homopolymer, 5 mm × 1 m × 2 m, 9.2 kg, terra colour	Hard socket
74-00825	EVA Foam, 3 mm × 0.95 m × 0.95 m, 0.90 m ² , beige colour	Soft socket
74-00828	EVA Foam, 3 mm × 0.95 m × 0.95 m, 0.90 m ² , olive colour	Soft socket
74-00831	EVA Foam, 3 mm × 0.95 m × 0.95 m, 0.90 m ² , terra colour	Soft socket
74-00826	EVA Foam, 6 mm × 0.95 m × 0.95 m, 0.90 m ² , beige colour	Soft socket
74-00829	EVA Foam, 6 mm × 0.95 m × 0.95 m, 0.90 m ² , olive colour	Soft socket
74-00832	EVA Foam, 6 mm × 0.95 m × 0.95 m, 0.90 m ² , terra colour	Soft socket

Consumables

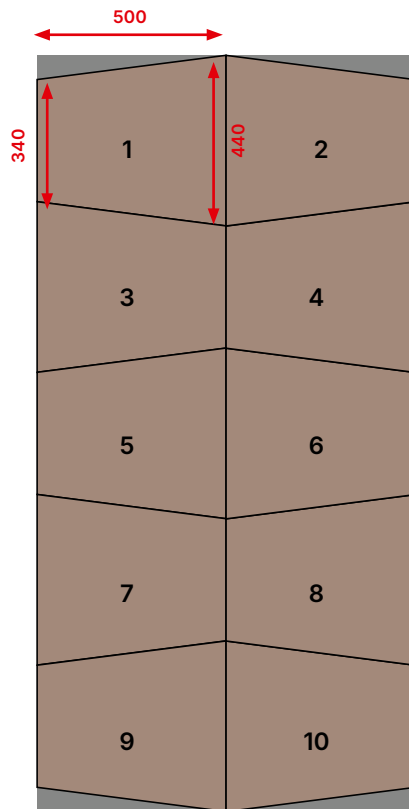
Rehab/Impulse Code	Item Description	Used for
74-00792	Bandage, Plaster of Paris, 10 cm × 3 m	Cast taking
74-00793	Bandage, Plaster of Paris, 15 cm × 3 m	Cast taking
74-01950	Examination glove, latex, non-steril, M (7-8), Pack of 100 pcs	Cast taking
74-01949	Examination glove, latex, non-steril, XL (10-11), Pack of 90 pcs	Cast taking
74-00846	Pencil, blue, indelebile, for marking on moist surface	Cast taking
74-01754	Plaster of Paris, Powder	Positive model / PP Cosmetic
74-01431	Glue, neoprene contact, Drum of 4 kg	Finishing
74-01108	Glue, Loctite 290, thread lock, btl. 50 ml	Finishing
74-01432	Solvent thinner, drum of 5 L for glue neoprene contact	PP Cleaning
74-01430	Talc powder, conform to pharmacopoeia (asbestos fibres free)	Thermoforming
74-00707	Tubular stockinette, cotton, 60 mm, roll of 25 m	Cast taking / Soft socket
74-00708	Tubular stockinette, cotton, 80 mm, roll of 25 m	Cast taking / Soft socket
74-00699	Tubular stockinette, cotton, 100 mm, roll of 25 m	Cast taking / Soft socket
74-00700	Tubular stockinette, cotton, 120 mm, roll of 25 m	Cast taking / Soft socket
74-00788	Lady stocking, nylon, for cast taking and thermoforming, pair	Cast taking / Thermoforming
74-00913	Rivet, tubular, brass nickel plated, 13 × 12 mm	Posterior reinforcement fixation
74-01817	Stump sock, transtibial, flat width 10 cm, length 35 cm, Pack of 10	Stump sock
74-01818	Stump sock, transtibial, flat width 10 cm, length 45 cm, Pack of 10	Stump sock
74-01819	Stump sock, transtibial, flat width 10 cm, length 55 cm, Pack of 10	Stump sock

Accessories

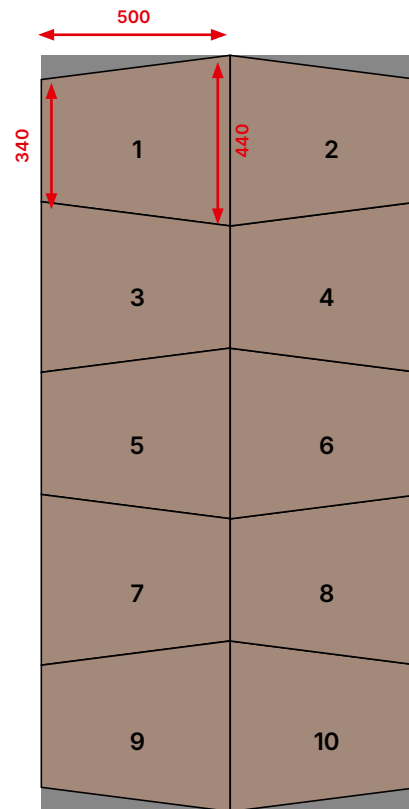
Rehab/Impulse Code	Item Description	Used for
74-00805	Spare blade, for "Stanley Surform" round file 250 mm	Positive model rectification
74-00790	Spare blade, for "Stanley Surform" half round, 250 mm	Positive model rectification
74- 00901	Spare blade, for "Stanley Surform" std flat file, 250 mm	Positive model rectification

Standard cuts of polypropylene sheets for lower-limb prostheses

Polypropylene sheet: 2000 mm x 1000 mm



Trans-tibial socket 4 mm



Trans-tibial cosmetic 3 mm or 4 mm

Acknowledgements

Didier Cooreman
Jean François Gallay
Pierre Gauthier
Denver Graham
Leo Grasser
Franck Joumier
Jacques Lepetit
Marc Liandier
Madeshanaika
Bernard Matagne
Joel Nininger
Guy Nury
Karng Phanith (Exceed Worldwide)
Peter Poetsma
Prasithy Prom (PWDF Battambang PRC)
Subhabrata Samal
Hmayak Tarakhchyan
Phearsa Thor (Exceed Worldwide)
Edward Wafula Wasike

and all prosthetists-orthotists who have worked in ICRC-assisted physical rehabilitation centres.



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