CUSTOM FABRICATION SERVICES



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All Flyshape products bearing the CERTITUDE engagement have been mechanically tested and validated on test bench, according to ISO 10328 norm.

Production on our industrial printers specially designed for orthopedics guarantees delivery times and product quality.

* Delivery times are indicated excluding transport and for information purposes only.

OUR SERVICES

PROTEOR offers a full range of custom-made manufacturing services.

This innovative range is made available thanks to our digital solutions, which allow you to maintain control over the design of all your orthopedic devices.

More than 30,000 custom-made devices are produced each year in our Fab Centers.



- · Benefit risk-free from the latest, constantly evolving technologies
- Optimize your time with patients and increase productivity every day
- · Help reduce waste in the orthopedic activity

Our team is here to support you in your technological transition an to answer to all your questions.



3D PRINTED SOCKETS

TEMPORARY TRANS-TIBIAL SOCKET



Introduction

PROTEOR's temporary socket is printed in Polypropylene (PP). This material carefully selected enables us to guarantee product quality and durability.

The socket contains a 4-hole metal connector directly integrated during the printing process, to reinforce the junction between the prosthesis and the socket, as well as the distal part.

Our wire deposition prints are produced on printers designed for the needs of orthopedics, and whose settings have been defined to meet the demanding challenges of our activity.

This temporary polypropylene socket can be modified using a heat air gun, has no size limit, and is supplied with the appropriate screws.

BENEFITS

- Over 300 patients equipped
- · Lighter than a traditional thermoformed socket
- Possibility of refining areas at the collar, tibial crest and fibula to increase flexibility

 \triangle Caution: The screws supplied with the socket must be used to secure the prosthesis.



The PROTEOR polypropylene socket achieves 3750N in the case 2 rupture test according to ISO 10328 norm, exceeding the recommended value for an active patient weighing 100kg.

8C030



How to order ?

Order the socket from Flyshape



Lead time*: 3 Days

DEFINITIVE TRANS-TIBIAL SOCKET



Introduction

Once you've delivered your temporary socket, you can order the definitive one, printed by powder bed fusion on a HP MultiJet Fusion printer.

This printing technology enables us to print the sockets in Polyamide 12, a material that is both light and extremely resistant.

The design of your definitive socket will be made directly on Flyshape, based on the data of the temporary socket. You can reduce its weight by adding perforated areas.

BENEFITS

Lightweight
No size limit

 Δ It is imperative to use 1X07 nuts in order to fix the socket to the prosthesis in the expected strength conditions.



The PROTEOR socket in polyamide 12 achieves 7150N in the case 2 rupture test according to ISO 10328 norm, which exceeds the recommended value for an active patient weighing 100kg.

8C031



How to order ?

Order the socket from Flyshape



Available shop-proteor.fr





Lead time*: 5 Days

3D PRINTED SOCKETS

TEMPORARY TRANS-FEMORAL SOCKET



Introduction

PROTEOR is one of the first orthopedic companies to supply 3D-printed AK sockets with an integrated 4-hole connector, thus considerably reinforcing the distal part.

As with the BK socket, the temporary AK socket is designed thanks to Flyshape.

This temporary polypropylene socket can be modified using a heat air gun, has no size limit, and is supplied with the appropriate screws.

BENEFITS

- · Lighter than a traditional thermoformed socket
- · Possibility of refining collar areas to increase flexibility

 \triangle Caution: The screws supplied with the socket must be used to secure the prosthesis.

8C011



How to order ?

Order the socket from Flyshape



Lead time*: 3 Days

DEFINITIVE TRANS-FEMORAL SOCKET



Introduction

Once you've delivered your temporary socket, you can order the definitive socket, printed by powder bed fusion on a HP MultiJet Fusion printer.

This printing technology enables us to print the sockets in Polyamide 12, a material that is both light and extremely strong.

BENEFITS

Lightweight

No size limit

⚠ It is imperative to use 1X07 nuts in order to fix the socket to the prosthesis in the expected strength conditions.

8C012



How to order ?

Order the socket from Flyshape



Available shop-proteor.fr





Lead time*: 5 Days

CTM SCOLIOSIS TRUNK BRACE



Introduction

A large ecosystem of skills around PROTEOR in additive manufacturing and our expertise in scoliosis devices have enabled us to develop an innovative 3D-printed CTM brace.

3D printing offers many advantages for scoliosis. The brace is flexible in selected areas, light and less visible under clothing. Strap loops are also printed, making them more resistant than traditional fastening systems.

This technology allows you to optimize the time you spend with your young patients by reducing your production times and limiting your waste production.

BENEFITS

- CTM-type brace
- Can be modified with hot air gun
- Maximum size: 700mm



The PROTEOR corset printed in polypropylene exceeds 1095 opening/closing cycles, resists an impact equivalent to 12J, and its loops resist tearing up to 750N.

8C014



How to order ?

Order the brace from Flyshape



Lead time*: 5 Days

3D PRINTED PLAGIOCEPHALY HELMET

KINOO



Introduction

Kinoo is a plagiocephaly helmet developed in collaboration with medical teams, parents and orthoprosthetists. HP MultiJet Fusion technology has enabled us to develop a light, ventilated helmet with a scientifically tested fastening system for total child safety.

The areas in contact with the child's skull are made up of fabric and foam pads. Their thickness can be modified as the patient's skull evolves. The expansion zones are made of holes.

To order a 3D-printed helmet, use the dedicated KINOO software following the child's clinical examination.

Because the way you look at your child is important, the helmet can be customized using a hydro-dipping process.

BENEFITS

- · Progressive helmet thanks to pad system
- Secure locking system
- Customization possible

Includes:

Helmet Stuffed toy Kinoo bag 2nd pad covers Access to Kinoo app for parents

8C020



How to order ?

Order the helmet directly from the KINOO software.



Lead time*: 5 Days without hydro-dipping / 10 Days with hydro-dipping

PROSTHESIS COVER



Introduction

Your patients' perception of disability is very important in their process of accepting the loss of their limb. PROTEOR covers aim to change the perception of disability by adding an aesthetic touch to the prosthesis.

Thanks to its innovative design and choice of materials, the PROTEOR cover is the most resistant on the market, restoring the anatomical shape of the prosthesis as close as possible to the residual limb.

Printed in TPU (Thermoplastic Polyurethane), it has been mechanically tested under extreme conditions. Patients can use their cover in all circumstances, whether for manual activities, extreme sports or in sea environment.

We offer interchangeable fasteners for prolonged exposure to salt water, so you don't need to order a new one.

BENEFITS

- Highly impact-resistant
- Compatible with tibial and femoral amputations
- · Several designs and colors available in our Eshop
- Easy to install, with easy access to prosthesis components

Item. n°	Designation
8C040	3D PRINTED COVER BK - PLAIN MODEL
8C041	3D PRINTED COVER BK - PERFORATED MODEL
8C042	3D PRINTED COVER AK - PLAIN MODEL
8C043	3D PRINTED COVER AK - PERFORATED MODEL



How to order ?

From the PROTEOR Shop, enter the information required to design the covers. Your order will be confirmed by our customer service department.



Lead time*: 10 Days



POLYURETHANE BLOCKS



Introduction

We also offer a block milling service, so that you can manage your production by thermoforming or lamination. We place particular emphasis on milling quality: smooth blocks, with no through-holes for boots and sockets, in the right rigidity for the orthopedic device to be manufactured.

BENEFITS

Density 84 or 110 kg/m3 depending on device

Item. n°	Designation
8C001	PREFORM HELMET
8C002	PREFORM NECK AND TRUNK BRACE
8C003	PREFORM NECKBRACE
8C004	PREFORM AFO
8C005	PREFORM KAFO
8C006	PREFORM PROSTHESIS BK/AK
8C007	PREFORM TLSO
8C008	PREFORM KNEE ORTHOSIS



How to order ?

Send form to o-milling@proteor.com



Lead time*: 24 à 48h



CUSTOM MADE

If you would like our Centrale fab to manufacture other types of custom devices, please send your requests to: o-milling@proteor.com.

We'll get back to you as soon as possible regarding feasibility, production time and pricing.





6 rue de la redoute 21850 SAINT APOLLINAIRE FRANCE

www.proteor.com