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# Planning & Equipping, Materials

One stop - all around the workshop

News and highlights

## Planning & Equipping example

ISEK University in Brussels, Belgium

## **Product highlights**

Tabaluga thermopaper and socket decor • Drying plaster with compressed air • Vacuum forming device for the orthopaedic technology and orthopaedic footwear specialism • Contact adhesive • Pedilen rigid foam • TP.C carbon fibre cloth Ipso Cast • Biplatrix<sup>®</sup> quick plaster bandage • Cellona<sup>®</sup> plaster bandages





Project example ISEK University



#### 8....

Tabaluga thermopaper and socket decor

9

Vacuum forming device for orthopaedic technology and orthopaedic footwear specialism





10

Contact adhesive

11 Pedilen rigid foam 700



12 TP.C carbon fibre cloth

20 Quick plaster bandage Biplatrix®

20 Cellona® plaster . bandages

16

Ipso Cast





24

Drying plaster with compressed air

2

## The wait is over: new Ottobock YouTube channel for professionals is online

We have compiled a wide range of valuable information for you in the "Workshop Equipment and Orthopaedic Materials" playlist that will enhance and facilitate your day-to-day work in the workshop and with your customers.

We want to provide you with helpful tips and tricks, starting with practical advice for processing materials. Users and technicians also report on their everyday experiences as well as challenges and the best ways to overcome them. Plus, you can learn about the latest products from the "Planning & Equipping, Materials" area so you can always offer your customers the latest trends.

Keep up to date on all the latest from our company. We hope you enjoy browsing our new YouTube channel!

Enter the search term "Ottobock professionals" on YouTube to see the "Workshop Equipment and Orthopaedic Materials" playlist.









Planning and equipping example

ISEK University Brussels, Belgium

## The best possible education – thanks to equipment from Ottobock

A bright functional building on the Rue de Bourgogne in Brussels is one of the most important addresses for budding O&P professionals in Belgium. This is where the Haute École Bruxelles-Brabant, known simply as "HE2B" to most students, maintains its campus specialising in paramedical training courses.

The ISEK Institute is the leading training facility for French-speaking students. Four subjects are taught here, with the primary focus consisting of training opportunities for O&P professionals and orthopaedic footwear technicians in addition to physiotherapy, occupational therapy and an interdisciplinary specialisation in geriatrics and geriatric psychiatry. A three-year bachelor's course is offered for qualification as an orthotist, O&P professional or orthopaedic shoemaker.

These young people need to acquire a great deal of theoretical knowledge in order to graduate, including in the fields of anatomy, physiology, biometrics, biomechanics and pathology. But the practical element is at least as important as the theory. After all, the proper use of the specific techniques and materials can only be learned in the workshop. The Dutch-speaking students in Belgium had an advantage here for some time. This was because Thomas More University of Applied Sciences in Geel has had well-equipped work rooms for several years already. This was not the case at ISEK for a long time.





## There used to be an acute shortage of workshop space.





Tabaluga thermopaper and socket decor

There used to be an acute shortage of workshop space at ISEK. For instance, there was hardly any room for vacuum forming and lamination. Only a small grinding machine was available, and students had to take turns using a 25-year-old socket router. The situation was far from ideal.

Only recently was the university able to set up really well-equipped work rooms, in part thanks to financial support from the BBOT (Beroepsvereniging voor Orthopedische Technologieën), a trade association for orthopaedic technologies.

#### **Tabaluga thermopaper**

- 623P110
- Length: 2m or 5m / width: 75cm
- Colours: red, green, blue and white

#### Tabaluga socket decor

- 623S110
- Length: 1.5 m / width: 15 cm or 20 cm
- Colours: red, green, blue and white



Vacuum forming device

## Vacuum forming device for the orthopaedic technology and orthopaedic footwear specialism

The vacuum forming device for the orthopaedic footwear specialism and orthopaedic technology is the ideal solution for fabricating insoles, footbeds and small orthoses. Thermoplastic materials can be moulded in no time with the help of infrared radiant heaters and the reliable vacuum system. The integrated cooling unit shortens the final cooling process by up to 75%.

#### Benefits at a glance

- Automatic vacuum
- Electronic time-controlled quartz panel heating
- Workstation lighting
- Integrated 10 m<sup>3</sup>/h vacuum pump (oil-free) with fully integrated cooling system

## The attractive, well-equipped rooms feature an appealing mix of the old and new.





Contact adhesive

In addition to Belgian students, there are also students from France on campus – and you can tell there's a good atmosphere here. The university is warm and welcoming from the moment you arrive. We are welcomed by Nibal Kabbara, one of the instructors on campus who is also the owner of NK Orthopedics. Nibal used to be a student at ISEK herself. There was only one socket router, one drill and one sewing machine for seven students when she was completing her studies.

#### **Contact adhesive**

- For bonding flexible materials (profiled rubber, wooden materials, laminated boards, veneer and plastic edges, rubber, leather, felt, fabric, cork, flexible foam, hard PVC, metal and ceramics)
  Short drying time
- Cood registered to age



Pedilen rigid foam 700 for foot lasts

The extent of the investments that have been made in the machinery soon becomes apparent during her tour. The attractive, well-equipped rooms feature an appealing mix of the old and new. While the old workbenches are still there, they have now been equipped with extractor hoods and high-performance vapour extraction systems. Nibal says: "We were very short of machinery, and the situation was also unsafe because dust and vapours weren't extracted adequately. Topics like occupational health and safety were not really a focus at the time. Looking at the new workshop now, the difference is like a dream come true!"

#### Pedilen rigid foam 700

- For fabricating heel lifts and shoe lasts
- Fast and safe processing with hanc mixing procedure
- Precise taking of impressions
- · Screw and nail-resistant
- Thermally stable
- No shrinkage
- Easy to refinish in cured condition, e.g. through sanding, lamination

## "The setup went really quickly; the Ottobock delivery team had everything installed and ready in five days."





TP.C carbon fibre cloth

Nibal is proud as she recalls the time when the work rooms were refurbished: "The setup went really quickly; the Ottobock delivery team had everything installed and ready in five days." The students, many of whom live on campus, came by every day during the project so they could see the progress being made. Their enthusiasm was obvious, and there was a sense of anticipation across campus before the machines were put into operation.

Since the location on the Rue de Bourgogne is only temporary, plans are already being made for the relocation five years from now. "We learned a lot while equipping the current rooms and gained important insights that will help us the next time around. In retrospect, we would have used a different room for storage, for example," Nibal explains.

#### **TP.C** carbon fibre cloth

- For high-strength and thin orthoses on a thermoplastic material basis
- Can be thermoformed under pressure
- High tensile strength
- Can be painted and glued
- Can be welded with components of the same matrix
- No special storage requirements (e.g. no cooling necessary)
- Moderate thermoforming temperature: approx. 220 °C



Aside from the new workstation equipment, Ottobock also provided tool starter packages for the first semester students. Which makes this project a great example of how Ottobock Planning & Equipping, Materials puts the motto "One stop – all around the workshop" into practice.

The relaxed interactions between instructors and students are also apparent during a tour of the university. But don't let that fool you; the requirements are very strict. The number of students in each study year bears witness to that: while 48 students started in the first academic year, 35 continued in the second year and only 25 students remained in the third. "We're not interested in quantity, but quality," Nibal says.











Product highlights

Ipso Cast and drying plaster with compressed air



With the Ipso Cast, you can save time during the fabrication of a transtibial prosthetic socket while simultaneously improving its quality. The new technology consists of a bi-axially woven stockinette attached to the Ottobock plaster device with an adapter. During plaster casting, the woven stockinette's special structure lets it simulate the appropriate pressure conditions that later occur in the prosthetic socket.

The technician can intervene directly during casting and apply additional targeted pressure.

An optimised impression is produced so a perfectly fitting plaster model can be cast. As a result, the Ipso Cast can considerably reduce the time required to fabricate a check socket. At the same time, the user receives a perfectly fitting prosthetic socket for enhanced safety, improved wearer comfort and more physiological movements.

#### Benefits at a glance

- Time required for plaster modelling of a TT prosthetic socket is reduced
- Higher quality due to simulation of the pressure conditions in the subsequent prosthetic socket
- Detailed optimisation thanks to direct intervention during plaster casting



#### Ipso Cast – main product

	Ipso Cast
Article number	743G15
Retaining ring dimensions, Ø x H	255 mm × 35 mm
For	Mounting on 743A11 Ottobock plaster device
Intended use	Taking plaster negatives under load for the fabrication of a TT socket.
Scope of delivery	1x adapter for connection to 743A11 Ottobock plaster device, 3x retaining ring for casting tube (Ø 110 mm, Ø 140 mm, Ø 180 mm), 1x 743Y760=90 casting tube (Ø 90 mm), 1x 743Y760=110 casting tube (Ø 110 mm), 1x 743Y760=140 casting tube (Ø 140 mm)

#### Ipso Cast – consumables

	Casting tube			
Article number	743Y760=90	743Y760=110	743Y760=140	
Scope of delivery	1 pc.	1 pc.	1 pc.	
Article number	743Y760=90-5	743Y760=110-5	743Y760=140-5	
Scope of delivery	5 pcs.	5 pcs.	5 pcs.	
For	743G15 Ipso Cast			
Diameter	90 mm	110 mm	140 mm	
Material	Polyamide	•••••••••••••••••••••••••••••••••••••••		



Biplatrix<sup>®</sup> quick plaster bandage

#### Biplatrix<sup>®</sup> quick plaster bandage

- Latex-free
- Very easy moulding
- Minimised dipping losses
- · Easy to process
- Ensures high final strength, even with few layers
- Also available as 669G21 longuette for individual cutting
- Dipping water temperature: 20 °C to 25 °C
- Working time: approx. 2 minutes
- Load bearing capacity: partial load after 30 minutes, full load after 48 hours



Cellona<sup>®</sup> plaster bandages

#### Cellona<sup>®</sup> plaster bandages

- Easy moulding
- The bandage is ready for loading or transportation after only approx. 30 minutes and fully cured after approx. 24 hours
- Coated plaster bandage that leads to less plaster waste, is easier and faster to work with, can take loads earlier and results in a higher final strength of the bandage



## Benefits for the user – interview with Ralf Triebel

Ralf Triebel has been wearing a lower leg prosthesis for 20 years. He has tried numerous prosthetic sockets during this time. Only two have fit on the first try. One of them was based on the new plaster casting technique with the Ipso Cast.

#### You've tried plaster casting with the lpso Cast. What do you think?

I'm really impressed by plaster casting with the Ipso Cast. The result is a socket that lets me walk really well – on stairs, slopes or up and down ramps.

### What's different compared to your previous experiences?

I'm familiar with vacuum and manual casting methods in all their variations. They usually require extensive rework. With the Ipso Cast, on the other hand, the check socket fit me on the first try.

### What exactly has improved in terms of walking?

With the new check socket, I don't have any sensitivity to pressure at the end of the residual limb anymore. It feels like specific areas are adapted more precisely to the respective bony structures of my residual limb.

### Are you going to have a socket modelled for yourself with the new technique?

Yes, I would like to be fitted with such a prosthetic socket! I am currently wearing a prosthetic socket with an inner socket only. With the Ipso Cast, I'd like to even walk without an inner socket in the future.



"I'm really impressed by plaster casting with the Ipso Cast. The result is a socket that lets me walk really well."

> Ralf Triebel User

## Interview with the technician Tino Hartmann

#### What are the benefits of the Ipso Cast?

Every O&P professional knows how challenging it is to take a plaster cast quickly and cleanly. With the Ipso Cast, you can produce a plaster cast easily and quickly under load. The device simulates the actual pressure redistribution of a total surface weight-bearing socket. This means less reworking during the subsequent fabrication of a plaster model and the check socket.

## Is working with the Ipso Cast complicated, and does it require a long training period?

The technician only requires a short period of training before preparing a plaster cast with the Ipso Cast. The process during plaster casting is very similar to conventional methods. The subsequent process steps are the same as well. This makes it really easy to integrate the new plaster casting technique into my usual workflow.

### What are the differences while taking the plaster cast compared to conventional casting methods?

The Ipso Cast supports me while taking a plaster cast. After all, I only have two hands, while the casting tube is everywhere on the residual limb at once. That makes full contact plaster casting possible. However, I can still apply additional pressure to specific areas during plaster casting in order to model them individually.

### What do you find especially helpful when working with the Ipso Cast?

You can see the pressure conditions while taking the plaster cast by looking at the casting tube, depending on whether the spaces between the fibres are more opened or closed. Based on my experience, I can then make subsequent corrections to specific areas by using my hands a bit more.



"The Ipso Cast supports me while taking a plaster cast. After all, I only have two hands, while the casting tube is everywhere on the residual limb at once. "

> Tino Hartmann, Technician





## Drying plaster with compressed air – success through shorter drying times



Ottobock's sets for drying plaster with compressed air help you save valuable time when drying plaster models. This technique involves a 5-m-long porous hose and a compressed air hose with a ball valve, quick couplings and five heat-resistant adapters. The hose is cut to the appropriate length to fit the plaster model and embedded in the plaster model with the compressed air adapter.

When compressed air flows into the hose via the ball valve, the porous structure of the hose distributes the compressed air evenly in the plaster. This lets excess water flow out of the plaster in a controlled manner without causing cracks in the plaster.

#### Benefits at a glance

- Saves time when drying a plaster model
- Heat-resistant components (up to 130 °C) so plaster model can be processed further in an oven

	Starter set for drying plaster with compressed air	
Article number	756G9	
Intended use	Drying plaster with compressed air	
Suitable for	Ottobock plasters (stucco plaster, alabaster modelling plaster, porous plaster)	
Scope of delivery	5-m compressed air hose including quick couplings and ball valve with lever handle 756Y91=1 Plaster lamination adapter, 5 pcs. 756Y91=2 Hose, porous, 5 m 756Y91=3 Plugs for porous hose, 5 pcs.	

	Consumables kit for drying plaster with compressed air	
Article number	756Y90	
Scope of delivery	756Y91=1 Plaster lamination adapter, 5 pcs. 756Y91=2 Hose, porous, 5 m 756Y91=3 Plugs for porous hose, 5 pcs.	
	756Y91=3 Plugs for porous hose, 5 pcs.	





This process can significantly reduce the time required for drying a plaster model. As the components are heat-resistant to 130 °C, the plaster model can later be used in the Ottobock plaster drying oven or Ottobock convection and prepreg ovens for further drying and for processing carbon and prepreg materials.

#### **Practical application example**

Plaster: 87G4=25 plaster, porous Prosthesis: above-knee (TF) Weight of plaster model: 8 kg

Drying time without compressed air drying: 3-4 days in a convection oven at 65 °C Drying time with compressed air drying: 15 hours in a convection oven at 65 °C

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