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## Better health and productivity in the orthopaedic workplace

For over 60 years now we have been working on improvements for orthopaedic workshops and have gained extensive knowledge in the field of orthopaedics and orthopaedic footwear technology in the process. We have come to understand that the needs and conditions found in workshops can vary greatly depending on their location around the world.

Our development engineers are often inspired by existing global technologies as they search for solutions, for example, in the area of dust and vapour extraction systems.

Based on these technologies, we develop workshop solutions and machines.

In this way, we have introduced remarkable innovations and assisted our partners around the world in establishing optimal environments in their workshops.

After all, it is the wish of everyone in the workshop to be able to carry out their work in an ergonomic, clean and efficient working environment.





## 1.1 Plaster processing

The fit of a prosthesis or orthosis is largely dependent on the precision and quality of the plaster model. Both an orderly and well-organised plaster working area as well as the optimal machines and tools contribute to a perfect end result.

## 701Z150 Plaster dosing unit

The plaster dosing unit makes it easier to establish a uniform mixing ratio. This way, you can achieve consistently high quality plaster – without wasting materials.

#### Here's how it works:

Once the plaster/water mixing ratio is selected, the desired amounts of plaster and water are added to the provided container. After connecting the plaster mixer to the integrated Schuko socket outlet, the plaster can be stirred. The plaster storage container, stainless steel splash guard and removable filter grate make the plaster dosing unit an ideal workstation for storing and processing plaster.

#### The plaster dosing unit at a glance:

- Three pre-programmed and three individually storable plaster/water mixing ratios
- · Operating languages: DE, EN, FR, NL
- Dimensions: WxDxH 750 x 1,655 x 1,270 mm
- Electrical connection in V/Hz/kW: 3x 400/ 50/ 1.2
- Water supply via mains water (without pump)
- Plaster storage container: 175 l





## 699G4=25 Alabaster modelling plaster

High plaster consumption is one of the common features of orthopaedics workshops. Reason enough to choose the best product for the job.

Our alabaster modelling plaster is an extremely fine-grained mineral plaster with a high purity grade and bright white colour. It is ideal for casting and moulding models and yields a smooth surface after curing which can be easily modelled.



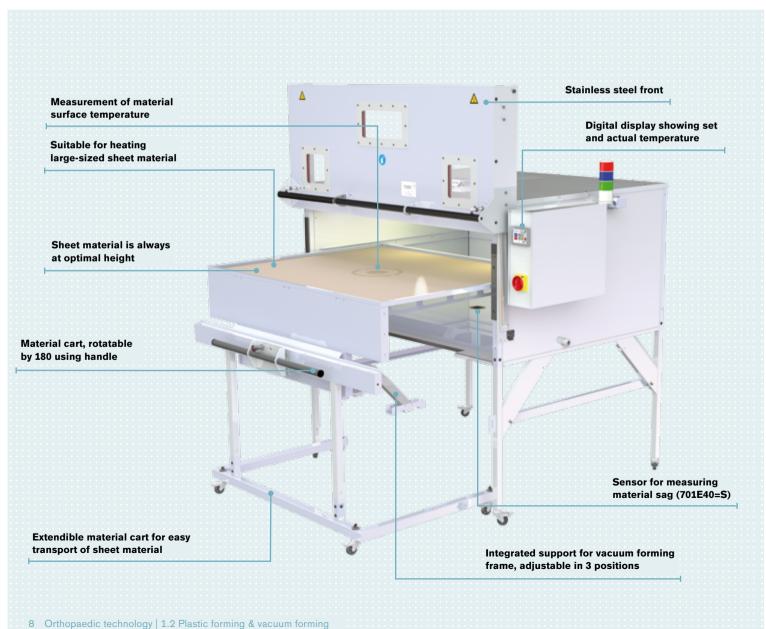
### 756B15 Plaster mixer

Make the process of mixing plaster easier with an electric plaster mixer.

With this user-friendly plaster mixer you can convert up to 90 litres of viscous pastes and liquids into a homogenous mixture, helping you achieve the best possible product.

## 1.2 Plastic forming & vacuum forming

Thermoplastic material is costly, and processing it is labour-intensive. To obtain a substance that can be easily moulded, the sheets need to be heated as uniformly as possible until the optimal temperature for the material is reached. Our infrared ovens support you in this process.







### 701E40=S/ 701E40=WS Infrared oven with rotatable material cart

With an infrared oven, you can warm thermoplastic material to temperature from the inside without preheating.

### An infrared oven that thinks for you

The highlight of the infrared oven is the rotatable material cart, which comes fitted with a Tefloncoated work surface on one side, and a rack for mounting three vacuum frame sizes on the other side. A sensor also measures how low a material is sagging. This can prevent the material from flowing too much and soiling the oven. An optical and acoustic signal indicates when a previously defined height has been reached.

### The infrared oven at a glance:

- 701E40=S with integrated sensor for measuring the sag depth
- 701E40=WS without sensor
- · Panel heating via 18 infrared quartz tubes with individual reflectors ensures that the material is heated evenly
- Outer dimensions WxDxH: 1,600 x 1,270 x 1,430 mm
- Inner dimensions WxDxH: 1,300 x 1,090 x 500 mm
- Usable area of material cart WxD: 1,260 x
- Electrical connection in V/Hz/kW: 3x 400 N/PE/ 50-60/8.5







### 616T112 ThermoLyn supra flexible EVA

This thermoplastic material truly lives up to its name. It remains permanently flexible and offers a high level of wearer comfort.

The material can be used for liners - both for test sockets as well as definitive sockets for the upper and lower extremities. It is also suitable for producing waterproof orthoses.

#### Here's how it works:

When heating the material in an infrared oven, you can limit the temperature to just 80–100  $^{\circ}$ C / 175-212 °F to obtain an easy-to-process substance. Components can be simply joined together when warm, and can be welded later on as well.

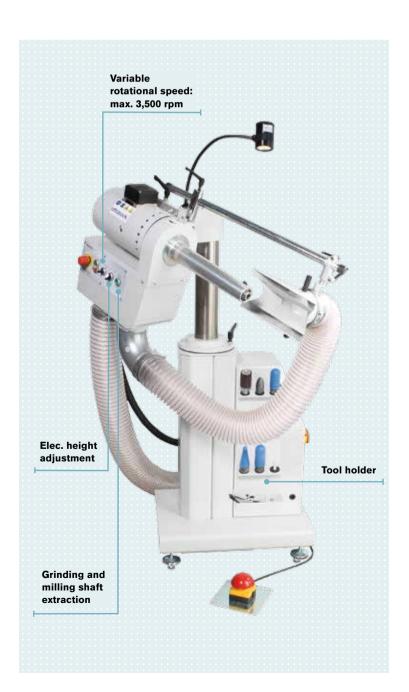
### ThermoLyn supra flexible EVA at a glance:

- · Stable, even over large surfaces
- High resistance to abrasion
- · Easy processing of edges
- · Large choice of colours
- Washable
- · Recommended temperatures: heating plate: 100-130 °C / 212-266 °F infrared oven: 80-100 °C / 175-212 °F convection oven: 100-120 °C / 212-248 °F
- ThermoLyn supra flexible is available in various thicknesses

## 1.3 Machine room

A healthy work environment is of paramount importance. If you are thinking about purchasing individual new machines or updating your machinery, please consider which equipment would be beneficial to the health of your employees.





### 701F41 Pro-Fit 3000 grinding and milling machine

Despite its familiar appearance, this new product development offers a range of surprising features.

The new grinding and milling machine from Ottobock enables processing speeds to be adjusted continuously so the workpiece can be processed in the best possible manner. The practical tool holder is located within easy reach so tools can be quickly exchanged. The new grinding and milling machine is also designed to minimise health risks. Fine dust is optimally extracted on the milling shaft and on the multi-position suction arm. Plus, the integrated shut-off valve makes the costly installation of a corresponding external device unnecessary.

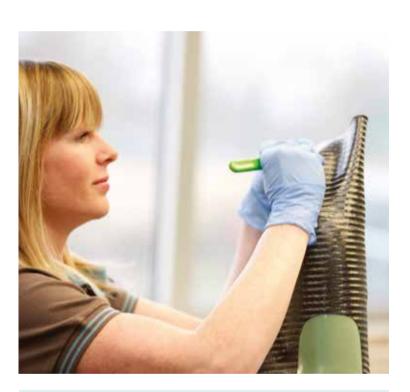
#### The Pro-Fit 3000 grinding and milling machine at a glance:

- Short and long milling shaft guard
- Adapter for 5/8" and M16 tools
- Stable steel structure for very smooth operation
- · Electric height adjustment
- Grinding and milling motor can be tilted 180° and rotated 170°
- Space requirements WxDxH: 2,450 x 1,825 x 2,200 mm
- Electrical connection in V/Hz/kW: 1x 230/50-60/2.2

#### Optional accessories:

- 702F191 LED lamp
- Tools







### 617R15=5 TP.C carbon fibre cloth mats

With the help of the user-friendly TP.C carbon fibre cloth mats, you can produce solid yet very thin orthoses using thermoplastic techniques.

The mats consist of an optimal ratio of resin and carbon fibres. This material not only contributes to a high-quality end product but can also be cleanly processed. Reworking with a Pro-Fit grinding and milling machine in connection with a V80 dust collector guarantees that loose carbon fibres and dust particles are cleanly extracted.

### The TP.C carbon fibre cloth mats at a glance:

- Matrix: TPU
- No special storage or cooling required
- Formable at approx. 220 °C / 428 °F
- Can be remodelled under pressure
- Can be welded with similar materials
- 12 sheets at 1,000 mm x 430 mm per package
- Also available in other package sizes:
  - 617R15=3: 3 sheets at 1000 mm x 430 mm per package
- 617R15=2: 6 sheets at 1000 mm x 430 mm per package

## Planning and equipping example: Creteur Orthopédie, Belgium

Since its founding in 1900, familyowned Creteur Orthopédie in the Belgian province of Hainaut has grown from a medical supply shop into a leading orthopaedic company with locations in Mons, Hornu, Tournai and Frameries.

Current CEO Marc Creteur is now the fourth generation of the family to put his heart and soul into the practical combination of skilled craftsmanship and high-tech materials that is orthopaedics. He initially worked together with his father Michel Creteur before taking over the company in 1998.

Under Marc Creteur's leadership, the company's staff has grown from 20 to over 40 employees.

Marc Creteur and his wife Taïna Weymeels agree that Creteur Orthopédie's strength lies first and foremost in the first-class service it provides. And Marc and Taïna are always on the lookout for potential improvements in their shops and workshops.

To that end, they continually invest in the latest technologies and materials to create optimal working conditions for their employees as well.

They are quite satisfied with the design of their location in Mons, and therefore used it as a starting point for setting up their branch in Frameries, where they moved into a new building in Parc d'Aventures Scientifiques at the beginning of the year.

Because the company grew continually, Marc and Taïna decided to relocate the shop, the company's mobility unit and part of its orthopaedic technology unit to Frameries. This made room for the orthopaedic footwear unit in Mons, while prostheses and orthoses are largely produced in Frameries.

Marc is impressed by the enormous improvements: "The new branch is in a great location and offers enough parking spaces and storage facilities. We can provide our patients with better care in the large treatment rooms and even have space for an extra room which is equipped with the latest technology for gait analyses and a test slope for wheelchairs."





## Focusing on people: a healthy working environment

Together with Ann Craenen, the head of the workshop, Marc and Taïna visited various orthopaedic workshops and the showrooms at Ottobock | Jos America in Nieuwkuijk to help them plan the new rooms and the workshop. Marc and Taïna know they are in good hands with Ottobock | Jos America as a partner that provides them with the latest technology and best service. Their top priority is the health and safety of their employees. Marc believes that a comfortable workplace is a key factor in efficient production.

With this in mind, underfloor heating maintains a comfortably warm temperature underfoot, while modern dust and vapour extraction systems ensure that employees can carry out their work in a clean and safe environment.

Taïna is still impressed by the relaxed working atmosphere in the workshop while the new machines were being set up. The singing and whistling of the employees from Ottobock | Jos America during the installation put everyone involved in a good mood.





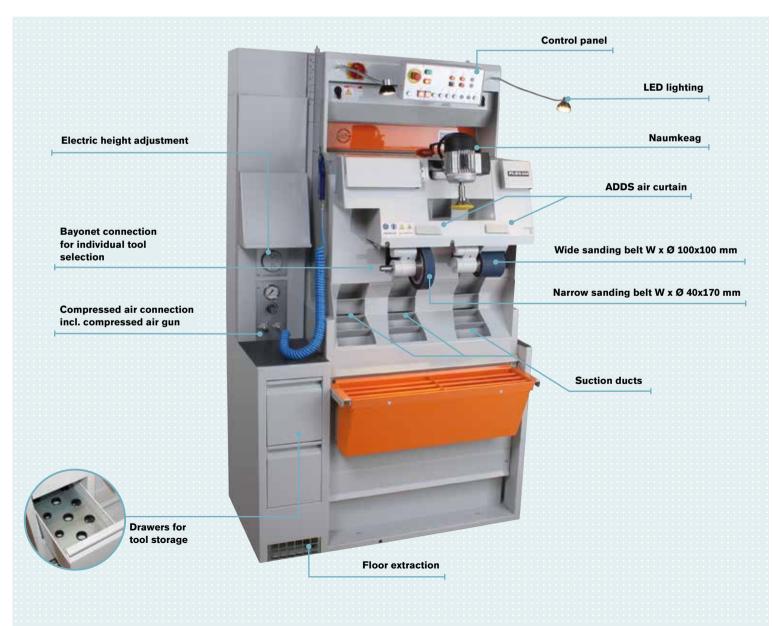


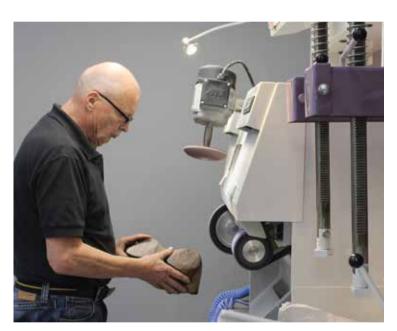
A wide range of work steps are required to complete an orthopaedic shoe. These steps become considerably more efficient when the equipment used in the various departments is well coordinated with each other.



## 3.1 Supplements

Supplements are typically milled one after another in large quantities. Using the most suitable machine for the job gives the operator a significant advantage here in terms of efficiency.







### 701L21=SB85 Flexam SB85 Executive

This machine requires little space yet offers a surprising amount of comfort.

The machine is ideal for processing insoles and for milling supplements in series. It features a sanding belt with a small diameter for processing small curvatures. You'll also benefit from the high-quality fittings of the machine. The standard scope of delivery includes LED lighting, floor extraction, automatic height adjustment, moveable control panel, ADDS air curtain between operator and extraction, sensor-controlled extraction, individually adjustable sanding belt tension, spacious, removable collection container, 2 compressed air connections, compressed air gun, pressure gauge, pressure reducer, internal cleaning of the engine compartment, tool storage, cabinet with two drawers, paper shelf and many other features which make your everyday work easier.

### The Flexam SB85 Executive at a glance:

- Dimensions: WxDxH 1,175 x 750 x 1,980 mm
- Working height: 1,020 1,220 mm
- Sound intensity level: 73 dB(A)
- Electrical connection in V/Hz/kW: 3x 400/50/1.35
- 1x floor extraction
- 1x bayonet connection
- 1x sanding belt, narrow, LxW: 1,650 x 40 mm
- 1x sanding belt, wide, LxW: 1,480 x 100 mm
- Distance between sanding belts: 225 mm
- 1x naumkeag
- 1x port for external extraction system
- Colour: light grey (RAL 7035)
- · Accent colour: orange (RAL 2008) or as selected

## Planning and equipping example: DHTA in Utrecht, the Netherlands

At the Dutch HealthTec Academy (DHTA), technology and health are at the heart of all training courses. Teaching in all disciplines focuses on the production of devices such as hearing aids, eyeglasses, dentures and orthopaedic adjustments.

All training profiles have a common denominator: "hear, see, laugh, move".

The "move" department offers fouryear specialist training courses for orthopaedic footwear technology and orthopaedic technology, among others. Ing. Lambert Klaus, lecturer and director of studies for the "move" faculty, explains that instruction at DHTA follows a dual system.

This means that students work four days a week at an orthopaedic or orthopaedic footwear company and attend lectures one day a week.

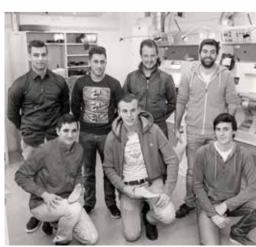
Their professional training is largely carried out at their training company. Lambert Klaus sees it as one of DHTA's tasks to communicate and develop the skills that enable trainees to make independent decisions, develop an entrepreneurial spirit and grow to become qualified advisors, in addition to gaining professional expertise. He considers guest lectures from expert practitioners and company

visits to be beneficial in this regard. "At the end of the day, it's not an exact science and we need to always be ready to learn from one another," says Lambert, explaining this approach.

When it comes to workshop facilities, DHTA is once again in step with actual practice. Some time ago, the academy moved into its new furnished classrooms in Utrecht, which were set up with the help of Ottobock | Jos America from Nieuwkuijk, the Netherlands.

Thanks to the move, DHTA has been able to make yet another connection between theory and practice: Professionals can learn to use Flexam machines during their training.









### Health promotion in the workplace: an attractive criterion for young professionals

The school is naturally interested in offering the latest technology in the area of extraction and noise reduction. Trainees are very impressed by the facilities at the school. The prospect of a safe and clean workplace is very appealing particularly at the beginning of professional training. The students, who travel from all corners of the country, already have a long trip behind them before lectures begin. But they are happy to take it in their stride for the course of their choice.

Some of them are already in the fifth generation of an orthopaedic footwear producing family and have been familiar with the craft since early childhood. Others have chosen the training course because they like working with their hands and enjoy the trade. All of them have learned about the Flexam machines as well as the Ottobock brand from their training company. At the very least, they know these suppliers from company visits.

We finish our visit with a photo shoot. The trainees from the orthopaedic footwear course are delighted to participate in the photo reportage. They will remember being part of a real photo shoot during their training for their whole lives, says lecturer Peter Kok. "It's really quite wonderful when the spotlight is on the career you've chosen."

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