FOAMplus® – Foam padding for optimum product protection
FOAMplus® – Perfect product protection and optimum logistics processes

An optimum packaging solution will benefit your company in two ways at the same time. It will provide protective packaging for shipped products that fits like a glove and provides maximum resistance against vibrations. At the same time it will optimize your logistics processes by integrating into existing processes quite easily.

Save time
FOAMplus® foam pads can be produced quickly and individually at the press of a button, directly at the packing station.

Reduce costs
FOAMplus® foam pads are produced on demand – allowing valuable storage space to be used for other purposes. Padding can also be reused for return shipments of the same products.

Make FOAMplus part of your logistics process
FOAMplus® systems can be integrated in existing packaging processes quite easily.

Produce packaging of a consistently high quality
FOAMplus® polyurethane foam produces foam of a consistently high quality: The pads always expand to the same volume. Pad sizes can also be stored in the system, enabling your optimum packaging solution to be retrieved quickly at any time.

Protect the environment
Providing optimum yet lightweight product protection not only saves on resources but also on transport and disposal costs.

FOAMplus® foam pads provide protection that is tailor-made, efficient and lightweight. The packaging foam produced on demand forms a perfect fit around any product. The physical properties of the expanded foam continuously and reliably protect the packaged product from being damaged during transportation. The foam padding is extremely lightweight and also extremely impact-resistant and robust – so the recipient can also appreciate this high-quality protective packaging.

The FOAMplus® foam padding system includes two types of machines: the Bag Packer® foam-in-bag system and the Hand Packer for direct injection.

The benefits of FOAMplus®

- Highly efficient: extremely impact-resistant, excellent padding effect
- Superior foam quality: the same padding effect using up to 45 per cent less material than alternative foam padding systems
- Robust: even for sharp or very heavy items
- Individual: when formed, fits perfectly around the contours of the product
- Universal: protects items of almost any size, shape and weight
- Versatile: can be used on a case-by-case or regular basis
- Space-saving: on-demand systems for minimum storage
Packed securely using FOAMplus® foam pads

FOAMplus® packaging foam immediately encloses the products, thereby holding them firmly in place. It is almost impossible for the goods to move around in the box. The foam padding also provides a highly efficient padding effect. The polyurethane expands automatically and ensures that any voids are completely filled within the desired area.

Protective functions of FOAMplus®

- Cushion
- Void-fill
- Block and brace

Protective packaging solutions using FOAMplus® foam padding also provides maximum resistance.

Areas of application

- Return shipments (reverse logistics)
- Spare parts logistics
- Alternative to the original protective packaging
- Alternative to moulded parts made from EPS (Styropor®), EPP and PE
- Shipments containing both heavy and fragile products
- Art trade
- Shipping of medical devices
Packing using FOAMplus® Tubes

The FOAMplus® Tubes foam padding chains are used when packaging in the form of a padded tube is the best protective packaging solution and the high-quality protection of polyurethane is required at the same time. The foam padding chains provide quick and reliable protection for products.

FOAMplus® Tubes are produced using the FOAMplus® Bag Packer foam-in-bag system. The length of the padded tube, as well as the size and filling quantity of the individual pillows, are freely selectable. The foam padding chains are ideally suited for pre-production.

- FOAMplus® Tubes for smart packing options
- For example, lining a box with two padded tubes
- Sections of film without filling are another option — foam padding just where it is needed.

Pre-forming using FOAMplus®

Storopack provides advice on pre-forming protective packaging padding using the FOAMplus® systems and supplies all the components required. When pre-forming, the packaging foam is positively moulded into the shape of the required foam padding. Storopack can produce this mould on request. Models available for moulding range from simple tabletop models made from wood to a dual station on a mobile stand.

- Pre-produce the required quantity of foam padding at any time
- For example, as a replacement for the original protective packaging
- Ideal if the number of parts moulded from EPS and EPP is too low

Direct injection with FOAMplus®

If the products to be packaged are particularly large or heavy or have a complicated geometry, then the packaging foam can be injected directly into the box using the FOAMplus® Hand Packer. So in a matter of seconds, you can produce form-fitting foam padding that will provide perfect protection during transportation – even with difficult product contours.
FOAMplus® machine types

FOAMplus® Bag Packer² produces foam pads at the press of a button

The FOAMplus® Bag Packer² is your reliable partner for the on-demand production of foam padding. The foam-in-bag system is used for filling film bags with foam directly at the packing station and is individually controlled according to the type of product being shipped, based on timed series production or manual operation.

The FOAMplus® Bag Packer² is designed for three sizes of film and comes in three different models. The system can be installed as a stand-alone machine or integrated inline into packing lines by means of a conveyor belt.

An intuitive 10-inch display offers additional functions: these include bag size and filling level setting options, programmable bag sequences and the facility to store pre-defined pad sizes in the system by means of barcodes.

The software-controlled FOAMplus® Bag Packer² offers a reliable process and transparent costs.

<table>
<thead>
<tr>
<th>Model options</th>
<th>Tabletop model</th>
<th>Individual device</th>
<th>Height-adjustable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (h x d x w)</td>
<td>1060 x 1000 x 1600 mm</td>
<td>2030 x 1102 x 1600 mm</td>
<td>2420/1920 x 1200 x 1600 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>185 kg</td>
<td>263 kg</td>
<td>281 kg</td>
</tr>
<tr>
<td>Voltage</td>
<td>380 V, 16 A</td>
<td>380 V, 16 A</td>
<td>380 V, 16 A</td>
</tr>
<tr>
<td>Speed</td>
<td>up to 23 film bags per minute</td>
<td>up to 23 film bags per minute</td>
<td>up to 23 film bags per minute</td>
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</tbody>
</table>
Pack smart with the FOAMplus® Barcode

Barcodes for foam padding of defined sizes and filling quantities are stored in the software database. When the package arrives at the packing station, the packer records the identification on the transport packaging and activates the release of the individual foam-filled bag by pressing a button. At the same time, photographs on the computer screen show him how to position the packaging and products in the box.

The FOAMplus® Bag Packer comes with a touchscreen PC and, if requested, a barcode scanner too.

If the relevant system requirements are met, the software can also be integrated into the existing network.
FOAMplus® Hand Packer for shipping complicated products

The FOAMplus® Hand Packer is the ideal solution when shipping particularly large and heavy products or packing several different products in the same box. Packaged products with challenging contours can also be securely held in place and protected using this system.

Foam can be manually injected directly into the box using the foam gun. By doing this, you can produce perfectly fitting foam padding in a matter of seconds, ensuring tailor-made protection that will hold your products in place during transportation. With the FOAMplus® Hand Packer, foam padding can also be pre-formed quite easily.

The FOAMplus® Hand Packer is microprocessor-controlled, particularly efficient and produces foam of a consistently high quality. The integrated diagnostic software guarantees smooth, efficient foam production while the self-cleaning mixing chamber keeps maintenance costs to a minimum.

Last but not least, the demand-oriented production of foam pads and the compact dimensions of the FOAMplus® Hand Packer enable you to save on storage space and thus reduce the costs of your protective packaging.
FOAMplus® – Films, foam types and containers

Storopack produces all its films at its own production facilities. This guarantees a consistently high product quality and reliable delivery.

**FOAMplus® foam types**

All machines produce FOAMplus® foam padding based on the same principle: the device mixes two liquid components to produce (H)CFC-free polyurethane which expands and hardens in a matter of seconds. The types of foam vary in terms of (bulk) density, firmness and padding effect. With density qualities of 4 to 30 kg/m³, FOAMplus® provides a solution for almost any application.

FOAMplus® universal foam has a much lower density than other foams on the market but this lightweight product is extra strong. So this type of foam reduces the costs of protective packaging and shipping and saves on resources.

FOAMplus® 5504R consists partly of a material obtained by recycling polyurethane. And with just 4.2 kilogram per cubic meter, FOAMplus® 5504R delivers reliable product protection at your fingertips, is extremely lightweight while providing optimum performance for void fill applications and cushioning of lightweight items.

Storopack will be happy to advise you on which level of density is best for the products that you are going to be packaging and transporting.

**FOAMplus® standard film**

Co-extruded, heavy-duty film quality in three roll widths

**FOAMplus® ESD film**

Antistatic FOAMplus® film, meets the requirements for electrostatic dissipative materials

**FOAMplus® separating film**

Separating films in various widths for the Hand Packer

**FOAMplus® containers**

Storopack offers three sizes of container: 60-litre metal drums, 200-litre metal drums and 1000-litre containers. Foam is produced using components A and B. An additional benefit for you: Storopack will pick up and dispose of your empty containers.

**FOAMplus® reference project**

**Effective transport protection for a direct sales company**

<table>
<thead>
<tr>
<th>Products</th>
<th>Workshop supplies, assembly and fastening products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machines</td>
<td>15 FOAMplus® Bag Packers</td>
</tr>
<tr>
<td>Packing station performance</td>
<td>Approximately 20 seconds per package</td>
</tr>
<tr>
<td>Overall performance</td>
<td>10,000 packages per day</td>
</tr>
</tbody>
</table>

The challenge

An efficient packaging process and perfectly protected products – those were the requirements of a leading provider of workshop supplies, assembly and fastening products for trade and industry. In order to prepare the packages for shipment as quickly as possible after commissioning, the packer had to be able to achieve fast processing speeds using the protective packaging system. The wide range of products and therefore also the contents of individual shipments handled by the major retailer meant that it was possible for fragile items and heavy items to be packed together in the same box. So products had their own packaging protection requirements when it came to holding them in place and securing them in the box.

The solution

FOAMplus® foam padding in the form of foam-filled bags meets the requirements perfectly. The bags block and brace all the items in the package and also provide optimum padding for heavy products and increase the compression strength of the box. 15 Bag Packers fill the bags quickly and cleanly, simply "at the press of a button". In addition, the company now has the optimum set-up for future expansion projects and all products are packed securely and effectively for transportation. Only recently, the company expanded the capacity of its central warehouse by more than fifty per cent.

What the customer says:

"FOAMplus® has given us a rapid and reliable protective packaging system for transporting our products safely to our customers. In addition, the system requires hardly any storage space and our work areas remain clean. FOAMplus® has improved our transport safety."
Saved resources with FOAMplus®

Resources are required in order to produce protective packaging. Indeed without protective packaging or if too little is used or it is used incorrectly, the products being transported will be damaged. Having to produce new goods is then a waste of resources. That is why Storopack advocates the effective and efficient use of protective packaging: A small quantity of foam can give you maximum protection.

To produce the packaging foam, two liquid components which are free from CFCs (chlorofluorocarbons) and HCFCs (hydrochlorofluorocarbons) combine to form polyurethane. The foam is also highly economical as it expands up to 280 times its liquid volume.

REUSE means that...

FOAMplus® foam padding can be reused for multiple shipments of the same product.

REDUCE means that...

FOAMplus® foam padding and the associated production process have been designed to reduce the use of natural resources. This lightweight packaging results in fuel savings during transportation.

RECYCLE means that...

Post-consumer or production waste from FOAMplus® foam padding can be used to replace primary raw materials. As part of the general waste stream, FOAMplus® foam is an excellent source of fuel for modern plants for generating energy from waste materials.

Added comfort for a manufacturer of fridges and freezers

The challenge

To pack heavy compressors. The various models often have a challenging geometry, with protruding parts. The new protective packaging solution was to reduce the number of packaging types stocked, without increasing the costs for the inner packaging.

The solution

At an ergonomically optimised packing station equipped with the FOAMplus® Bag Packer® foam-in-bag system, workers can produce the appropriate upper and lower padding on demand. The customer is also able to produce tailor-made inner packaging in complex shapes via pre-forming. Because the FOAMplus® universal foam used has a very high padding to density ratio, the overall costs for the protective packaging have remained constant.

What the customer says:

FOAMplus® represents real progress for our protective packaging system. Storopack’s solution gives us reliability, attractive overall costs and added convenience.

Products
- White goods

Equipment
- A FOAMplus® Bag Packer®
- Positive moulds for pre-forming

Packing station performance
- Approximately 20 seconds per pre-forming cycle
- Approximately 240 shipments per day

In this reference project, Storopack achieved up to 30% savings on transportation costs. The customer was so satisfied that they extended the use of the FOAMplus® system to other products.
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