

AIRplus® - Air Cushions for Working Comfort®





Storopack - Your International Partner for Protective Packaging

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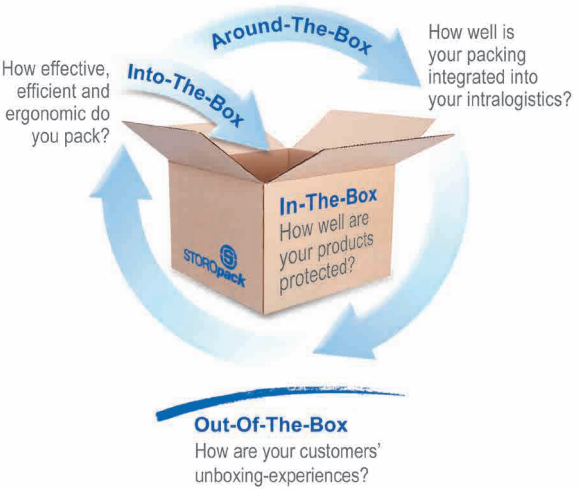
You will find a general overview of customised and flexible protective packaging solutions at www.storopack.com.

The Packaging business segment offers flexible protective packaging solutions. Complete consulting optimises the protective packaging, the protective packaging process and its integration in a company's internal logistics for maximum productivity and sustainability. A fourth dimension includes the customers of the customers: They should experience the protective packaging solution in a positive way during unpacking. The result is perfect protective packaging.

Storopack continuously improves the productivity of customers' protective packaging process.

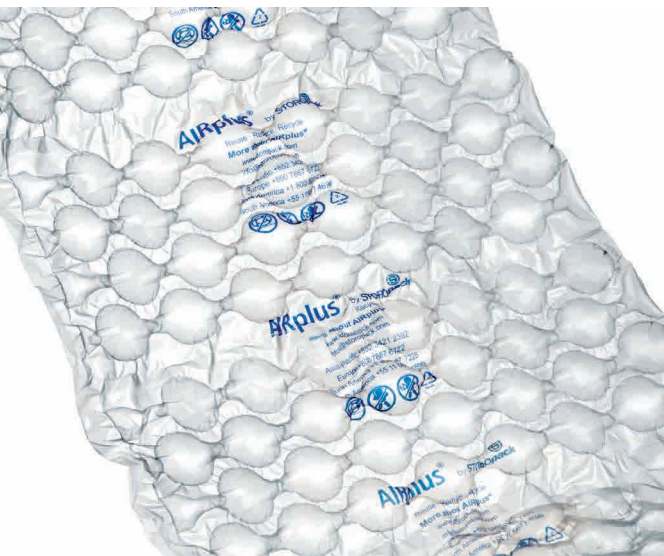
Storopack offers four flexible protective packaging solutions: The air cushions AIRplus®, the paper cushioning pads PAPERplus®, PU foam cushions FOAMplus® and the packaging chips PELASPAN® and PELASPAN® BIO. The 'Working Comfort®' consultative approach ensures ergonomics, efficiency and effectiveness in the packaging area. Our specialised application engineers can provide customised solutions ranging from equipment for the individual packaging desk to the design and implementation of entire packaging lines. Storopack integrates semi and fully automatic packaging systems to support intralogistics.

Working Comfort® by STOROPACK



The globally active corporate group is represented throughout locations in North and South America, Europe and Asia. Storopack's protective packaging can be purchased through our extensive distribution network in over 40 countries.

Picture 1 AIRplus® Void Recycle film



The general protective functions: A pathfinder

This overview provides the general functions of the protective packaging. In the following pages, the pathfinder will show the functions that the individual protective packaging application specifically offers.

- Cushion:** Absorbs impacts and protects fragile products.
- Void Fill:** Fills empty spaces and prevents products from colliding into each other.
- Block & Brace:** Stabilises heavy objects or individual articles in their position.
- Wrap:** Covers product surfaces to avoid contact damage and provides optimal protection against scuffing and scratches.



Picture 1 AIRplus® Void film
Picture 2 AIRplus® Cushion film
Picture 3 AIRplus® Bubble film
Picture 4 AIRplus® Wrap film

AIRplus® - Air Cushions for Working Comfort

The air cushion formats AIRplus® Void, AIRplus® Cushion, AIRplus® Bubble and AIRplus® Wrap offer a broad range of air cushion types. This means diverse application options for the protection of goods in packages.

The AIRplus® range features a variety of machine types designed for different packaging processes. Perfectly fitting equipment is offered to every company using our extensive range of machines designed for small, medium and high performance packaging needs.

The advantages of AIRplus® for protective packaging:

- **Reliable:** constant film quality from the company's own production facilities
- **Diverse:** there is an air cushion type for every application
- **Economical:** Reduction in raw materials due to multi-layer CO extrusion
- **Durable:** excellent mechanical properties
- **Environmental:** AIRplus® film types can be recycled and AIRplus® Bio film is compostable in accordance with DIN Certco EN 13432
- **Saves space:** on-demand system for minimal storage
- **Integrates:** compact, user-friendly devices for key packing areas
- **Practical disposal:** one step and all that remains is the empty film

The special plastic expertise

The know-how, development, expertise and the practical experience of own production facilities means constant quality, delivery, security and progress through innovation. Storopack implements new ideas for customers: e.g. air cushions with personalised marketing message.

AIRplus® films

Co-extruded film quality for extra durability and reliability

AIRplus® BIO films

Can be composted, certified in accordance with DIN Certco EN 13432 (EU)

AIRplus® ESD films

ESD film for the protection of electronic components against electrostatic discharging

You will find more information about AIRplus® film types on page 17.



AIRplus® Void air cushions:
Uses in box

The AIRplus® Void air cushions are excellently suited for quickly and economically filling empty space in one simple step. Equipped with this protective packaging, the goods are fixed in the package preventing migration. Our void fill air cushion application is an ideal solution for pre-packaged products with minimal risk of breakages.



Picture 1 Void Fill with AIRplus® void cushions
Picture 2 Void Fill with AIRplus® void cushions
Picture 3 Block & Brace with AIRplus® void cushions

AIRplus® Void air cushions

Performance profile:
Exceptional empty space filler

- Individual cushions
- Cushion sizes to suit varying applications
- Example: suited for the dispatch of pre-packaged products
- Example: excellent for shipping of products with minimal risk of breakages

Protective functions of
AIRplus® Void air cushions

- Void Fill
- Block & Brace

AIRplus® Void air cushions: Available film types

AIRplus® films, AIRplus® BIO films, AIRplus® ESD film and AIRplus® Recycle film

Storopack has offered a film type from compostable plastic since 2008 with AIRplus® BIO. The raw material is a plastic compound on the basis of polylactic acid (PLA) with copolyester.

AIRplus® Void air cushions:
Cushion formats and roll lengths

Film type	pad width in mm	pad length in mm	roll length in m
Void film	200	65, 120, 175, 300	1125
Void film	300	120	754
Void film	400	110, 135	563
Void film Extra Light	200	120, 175	1500
Void film Heavy	200	120, 175	750
Void film Recycle	200	65, 120, 175	1125
BIO Void film	200	100, 200	535



Also available are AIRplus® Void air cushions made with at least 50% recycled material.



**AIRplus® Cushion film - air cushion:
Uses in box**

AIRplus® cushion is the perfect solution for wrapping and cushioning products. Perforated inflated cushions produce varying lengths for maximum utilisation. The smaller or greater the contours of the object are, the more flexible the form of the pad strand must be. Because of this we offer variations in the number of air chambers per film section and the product can also be used for void fill and blocking & bracing.



AIRplus® Cushion - air cushions

Performance profile: The diverse solution

- 2, 4, 16 or 28 air chambers per perforated section
- Filling small to medium-sized empty spaces
- Enclosing and wrapping products
- Example: Products that need extra padding, unpackaged products
- Example: Filling empty spaces between products

**Protective functions of
AIRplus® Cushion air cushions**

- Wrap
- Cushion

AIRplus® Cushion air cushions: available film types
AIRplus® films and AIRplus® ESD films

AIRplus® Cushion - air cushions:
cushion formats and roll lengths

Film type	pad width in mm	pad length in mm	roll length in m
Cushion film 2p	400	150	500
Cushion film 4p	400	150	500
Cushion film 16p	400	250	500
Cushion film 28p	675	250	300
Cushion film Heavy 2p	400	150	322
Cushion film Heavy 4p	400	150	322
Cushion film Heavy 16p	400	250	380
Cushion film Heavy 28p	675	250	220



Protective function: Wrap



Protective function: Cushion

Picture 1 Cushion with AIRplus® cushion film
Picture 2 Cushion with AIRplus® cushion film



AIRplus® Bubble air cushions:
Uses in box

Anyone who wraps fragile products in AIRplus® Bubble air cushions ensures protection on all sides of the object. The products are padded and cannot be scratched. The on demand solution is an efficient alternative to conventional air pad film or pre-inflated bubble wrap. AIRplus® Bubble offers product protection at the push of a button. The smart tear off quality perforation lets you quickly tear the material off without looking for the perforation. One single section has a length of just 160 mm. This makes the protective packaging for small products significantly more material and volume efficient than the market standard of 250 mm. A compact device with the film roll replaces the large and cumbersome bubble wrap, saving both storage space and reducing the handling costs. Compared to conventional bubble wrap, AIRplus® Bubble also offers advantages for the end user. With one cut, the air escapes the air cushions, leaving only a small amount of film for disposal or recycling. The AIRplus® Bubble is one of the most low cost solutions on the market.



Picture 1 Wrap with AIRplus® Bubble air cushions
Picture 2 Wrap with AIRplus® Bubble air cushions

AIRplus® Bubble air cushions

Performance profile: efficient wrapping

- 29 or 53 round air chambers per perforated section
- Suited for small products: small individual section avoids waste
- Quality perforation 'Smart Tear Off' allows the packer to tear the material quickly without searching for the perforation
- Enclosing and wrapping products
- Example: padding around fragile objects
- Example: protect packaged objects from impact and scratches
- Example: individual film section for small objects

**Protective functions of
AIRplus® Bubble air cushions**

- Wrap



Protective function: Wrap

AIRplus® Bubble air cushions: available film types
AIRplus® films and AIRplus® ESD films

AIRplus® Bubble air cushions:
Cushion formats and roll lengths

Film type	pad width in mm	pad length in mm	roll length in m
Bubble film 29b	400	160	500
Bubble film 53b	700	160	286
Bubble film Heavy 29b	400	160	380
Bubble film Heavy 53b	700	160	215



AIRplus® Wrap air cushions:
Uses in box

Our AIRplus® Wrap film can be used to wrap your fragile and delicate products even more tightly to protect them, thanks to its innovative wavelike structure. Another advantage is its on-demand production, with the packer creating the air cushions according to their needs directly at the packing station. AIRplus® Wrap film is therefore a space-saving alternative to conventional air bubble film.

AIRplus® Wrap air cushions

Performance profile: flexible wrapping and optimum protection

- 28, 56, 140 or 259 rhombs per perforated section
- Allows items to be wrapped even more tightly
- Quality “Smart Tear Off” perforation: allows the packer to tear the material quickly without searching for the perforation
- Enclosing and wrapping items
- Example: protect unpacked items from knocks and scratches
- Example: padding around fragile objects
- Example: individual film sections as intermediate layer

AIRplus® Wrap air cushions: available film types
AIRplus® films and AIRplus® ESD films

AIRplus® Wrap air pillows:
pillow formats and roll lengths

Film type	pad width in mm	pad length in mm	roll length in m
Wrap film 28d	400	180	500
Wrap film 56d	700	180	286
Wrap film 140d	400	175	500
Wrap film 259d	710	175	280
Wrap film Heavy 28d	400	180	380
Wrap film Heavy 56d	700	180	215

**Protective functions of
AIRplus® Wrap air cushions**

- Wrap



Picture 1 Wrap with AIRplus® Wrap air cushions
Picture 2 Wrap with AIRplus® Wrap air cushions
Picture 3 Individual film sections of AIRplus® Wrap
air cushions as intermediate layer





AIRplus® machine types

Performance profile:
quick, compact and always ready for use

- Compact and portable with conventional plug
- Saves electricity: energy-efficient operation
- Can be flexibly integrated: one device supplies multiple packaging areas or stands directly at the workplace station
- On demand thanks to sophisticated technology
- Always ready to go: no loss of cushion after start/stop
- Air filling and speed are variable
- Self-explanatory: intuitive operating system
- Quickly refilled: easy to change rolls



AIRplus® GTI

Named after one of the most popular cars in the world, AIRplus® GTI shares two of the most attractive features of the car: the sporty high-performance motor and a high degree of reliability. AIRplus® GTI processes up to 24 metres of air cushion film per minute. Due to the short start-up time, the device is ideally suited for start and stop operations.



Specifications

GTI VS (200 mm rolls): 400 x 330 x 510 mm
GTI VL (300 / 400 mm rolls): 550 x 330 x 510 mm
GTI C (400 mm Cushion 16p/Bubble 29b rolls): 550 x 330 x 510 mm
GTI XL (up to 800 mm Cushion 28p/Bubble 53b rolls): 927 x 330 x 510 mm

Weight: 15-25 kg
Voltage: 95-250 V (AC)
Energy consumption: 163 watts in continuous operation, 14 watts in idle operation
Speed: 23 m per minute
Air supply: room air

A coiler-table is available for winding GTI XL 700mm rolls of Cushion or Bubble film.



AIRplus® Mini

Light and compact: AIRplus® Mini is the ideal equipment for every workplace. Integrated with a silo or as a table top device, the machine can also be mounted on a stand. A coiler-table is available for winding rolls.

Specifications

Size: 354 x 670 x 370 mm
Weight: 10,5 kg
Voltage: 95-250 V (AC)
Energy consumption: 65 watts in continuous operation, 3 watts in idle operation
Speed: 12 m per minute
Air supply: room air



Picture 1 AIRplus® Mini
Picture 2 AIRplus® Mini



The air cushions from AIRplus® come in three film types. They are developed and produced in the company's own production facilities.



AIRplus® film types

AIRplus® film:

Advantages of multiple layers

The AIRplus® film is a co-extruded film. Just by touch it is possible to feel the distinctive quality: The material is soft and does not crackle. The outer film layers are slip-resistant and support the fixing of goods. The middle layer ensures the good mechanical properties of the film and its high elasticity. It cannot be easily punctured by sharp objects, corners or edges. The inner layers ensure a good seal, making the air cushions very elastic and thus resistant to package content with corners and edges. AIRplus® film is transparent and provides a free view of the products in the package.

AIRplus® BIO film:

Truly uncompromising

Storopack has offered a film type from compostable plastic since 2008 with AIRplus® BIO. The raw material is a plastic compound on the basis of polylactic acid (PLA) with copolyester. Storopack has used this material on the basis of renewable raw materials out of conviction and due to the company's values. Storopack rejects environmentally harmful oxo-degradable plastics that call themselves 'biologically degradable' as well as other compromises that give themselves a 'bio' seal of approval, as 'green washing' does not really improve the environmental balance. The ability to compost AIRplus® Bio film is certified according to the European standard DIN EN 13432.

AIRplus® ESD film:

Antistatic for electronic components

Since 2011, AIRplus® ESD has provided film quality for the protective packaging of electronic components. The plastic is statically conductive, which means it prevents electrostatic discharge (ESD). AIRplus® ESD meets the requirements of DIN EN 61340-5-3.



Picture1 AIRplus® film
Picture 2 AIRplus® ESD film
Picture 3 AIRplus® BIO film

Working Comfort® - being more productive with ergonomic packaging stations

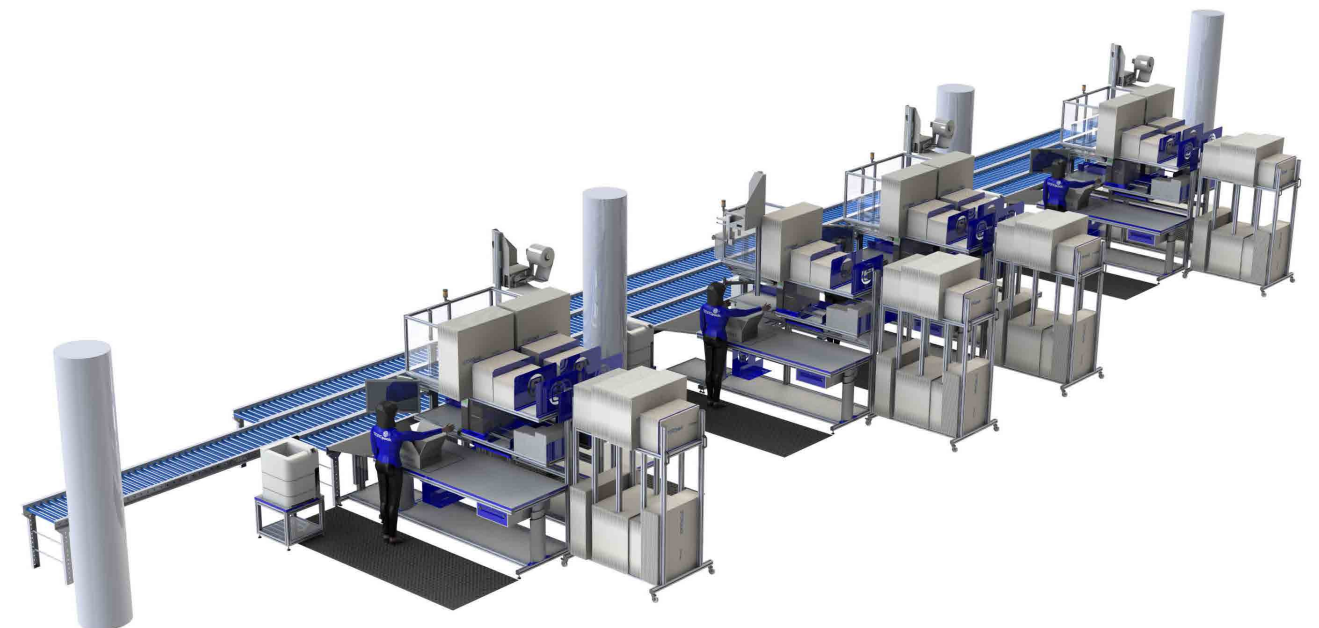
Ergonomic workspaces and efficient operations solutions. Storopack help increase the productivity of your protective packaging process with Working Comfort®. Every unnecessary movement when packaging your products costs the packer time and energy. This can be avoided with the right processes and workstations. Our experts analyze your existing packaging processes and provide the right solution, taking into account ergonomic aspects. The focus here is on the efficiency of the processes and the well-being of the packer in equal measure: Unnecessary tasks are eliminated; all packaging material is always conveniently on hand for the packer at the workstations, which are designed in line with the Working Comfort® principle.

In order to ensure that Storopack achieves the best possible result for you, we supply everything from one single source: Our engineers design and produce 3D drawings that show precisely how the systems will fit into your existing equipment and packaging processes. The specialists at Storopack then manufacture a bespoke solution in the service centres in Europe and the USA. In the final phase, our service engineers integrate the systems into your logistics process and assist you with the commissioning operation.

Working Comfort® leads to:

- Increased productivity
- Fatigue being avoided
- Well-being of the packer at the workstation is increased

Examples of ergonomic AIRplus® packing stations





Everything to Hand – Ergonomic Processes with SMARTline Packing Stations

Ergonomic and efficient

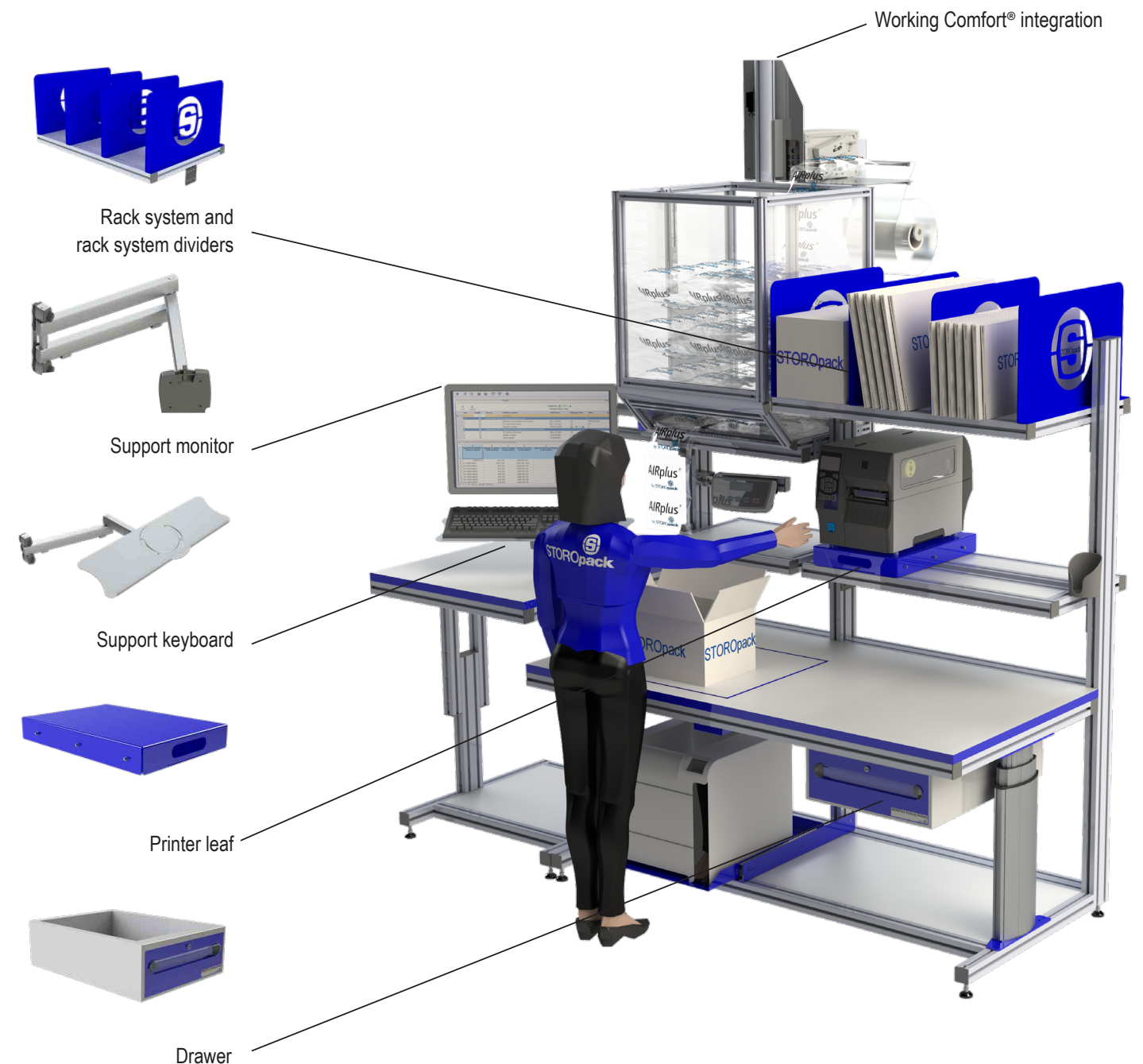
Efficient processes and comfortable workflow – the SMARTline Packing Stations offer both: unnecessary movements are avoided, as the packer always has all of the packaging materials conveniently to hand. The individually customised packing stations are ergonomically designed in line with the Storopack Working Comfort® principle and not only increase the productivity of your processes, but also the well-being of your employees.

Future-proof packing processes

The modular concept of the packing stations prepares your packaging processes for the future: thanks to the modular principle, the packing stations can be expanded at any time and thus tailored to the packer's individual needs and the requirements of your packing process, seamlessly integrated into any process, and applied to any packaging material: whether it's AIRplus®, PAPERplus®, FOAMplus®, or Loose Fill, SMARTline Packing Stations offer just the right comprehensive solution.

The benefits of the SMARTline Packing Stations at a glance

- Comprehensive solution for all of Storopack's packaging materials: AIRplus®, PAPERplus®, FOAMplus®, and Loose Fill
- Seamless integration into your packing process
- Ergonomically designed in accordance with the Working Comfort® principle
- Can be expanded at any time thanks to the modular concept and extensive accessories
- Visually appealing smart aluminum construction



Sustainability & environmental protection

Storopack's own commitment to the responsible handling of our environment and society is derived from the corporate philosophy, 'Vision & Guidelines' and includes formally agreed principles for all Storopack employees. Managers are responsible for the motivation and promotion of the employees so that the awareness of society, culture and the environment continues to develop.

Resources are necessary for the production of protective packaging. Without protective packaging or in the case of too little or incorrectly used protective packaging, the transported products will be damaged, however, new production of these goods is a waste of resources. For this reason, Storopack advocates the effective and efficient use of protective packaging.



RECYCLE means that ...

production waste can be converted to new materials replacing raw materials.

- AIRplus® film is fully recyclable. The disposal via the existing recycling cycles contributes to the reduction in the use of primary raw materials.

RENEW means that ...

this product is produced from renewable raw materials, e.g. from wood or plants.

- AIRplus® BIO film consists of a biologically degradable plastic compound on the basis of the renewable raw material polylactic acid (PLA) with copolyester.

REUSE means that...

this product can be reused multiple times for its original purpose.

- Due to the exceptional quality of AIRplus®, the air cushion can be used multiple times.

REDUCE means that ...

this product and the related production process are designed to keep the use of natural resources as low as possible.

- The polyethylene film of AIRplus® contains reclaimed raw materials from production recycled materials.
- The production technology of the three-layered co-extruded films reduces the use of raw material and improves the quality of the air cushions.
- The low weight of AIRplus® protective packaging leads to fuel savings during transport.



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