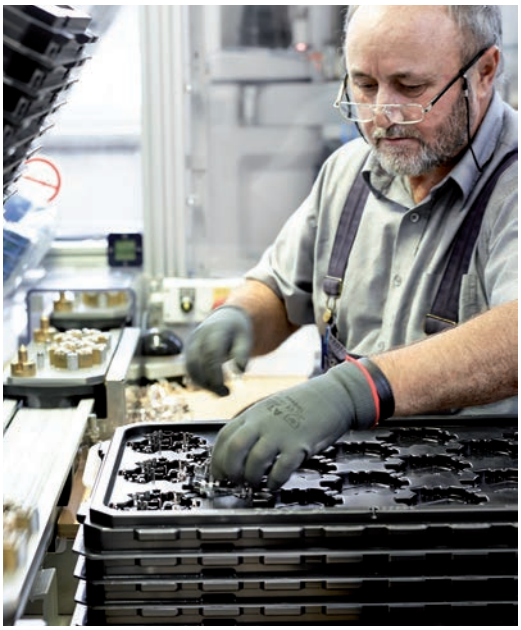
Accurate perfection.

VACUUM FORMED COMPONENT HOLDERS

Accurate perfection.

Vacuum formed component holders

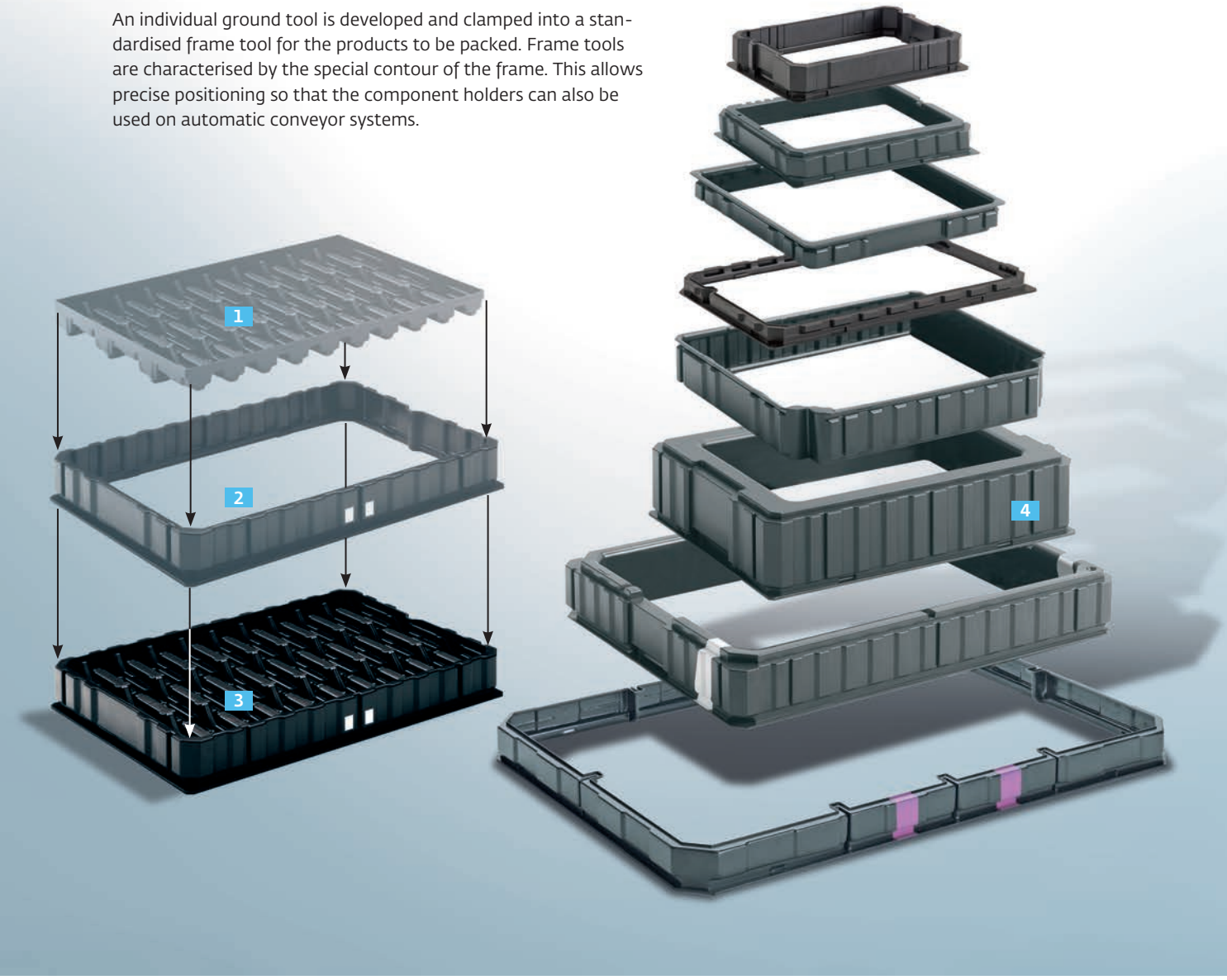
Vacuum forming is a manufacturing process which reforms thermoplastic synthetics. The resulting load carriers are called component holders. Component holders are able to perfectly incorporate products. There are stackable and rotary stackable component holders consisting of frame tools or as intermediate layers. Examples of component holders manufactured according to individual customer specifications follow below.



Consisting of frame tools, stackable

Frame tool system

An individual ground tool is developed and clamped into a standardised frame tool for the products to be packed. Frame tools are characterised by the special contour of the frame. This allows precise positioning so that the component holders can also be used on automatic conveyor systems.



1

An individually designed ground tool ...

2

... is clamped into a standardised frame tool, ...

3

... so that the frame can be reused for other ground tools.

4

Sizes:

350 x 250 mm
400 x 300 mm
400 x 400 mm
590 x 390 mm
600 x 400 mm
600 x 500 mm
800 x 600 mm
1200 x 800 mm

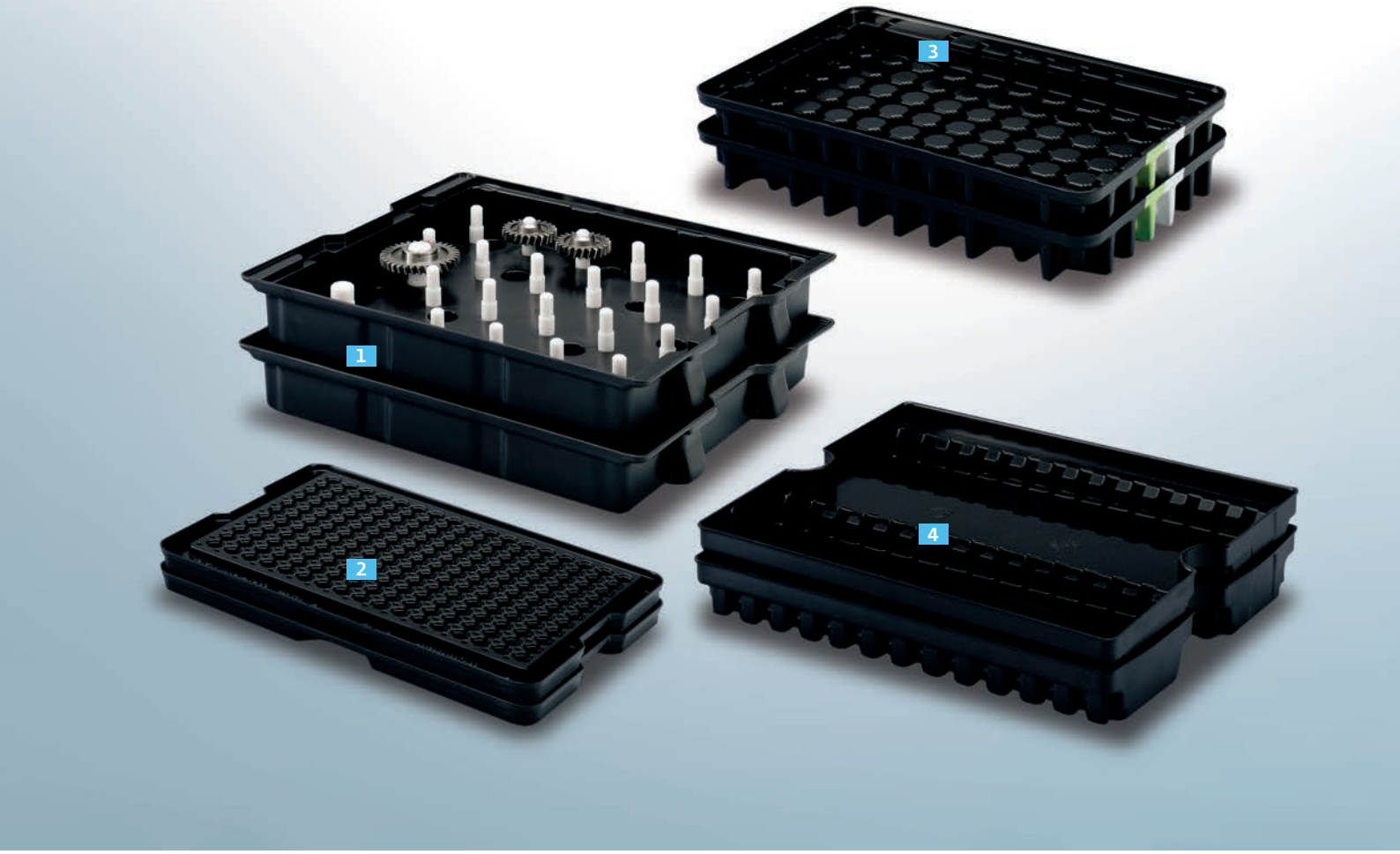
Component holders, stackable

Highly efficient

Vacuum formed component holders can be constructed so that they can be stacked on top of each other. This means: more stored products per surface area.

Pollution prevention

Sensitive parts stored in stacked component holders are protected from dust and pollution, whereby only the top-most layer needs to be covered with a lid.



1

With plastic pins

Stackable component holders with plastic pins to hold gear wheels of various diameters.

2

With handles

When stackable component holders are transported in a container, handles simplify the removal of the component holders from the container.

3

With coloured labels

Stackable component holders with a coloured label as misorientation protection.

4

Electrically conducive ESD

Stackable ESD component holders are vacuum formed load carriers consisting of electrically conducive material.

Refer to chapter "Electrically conducive products ESD".

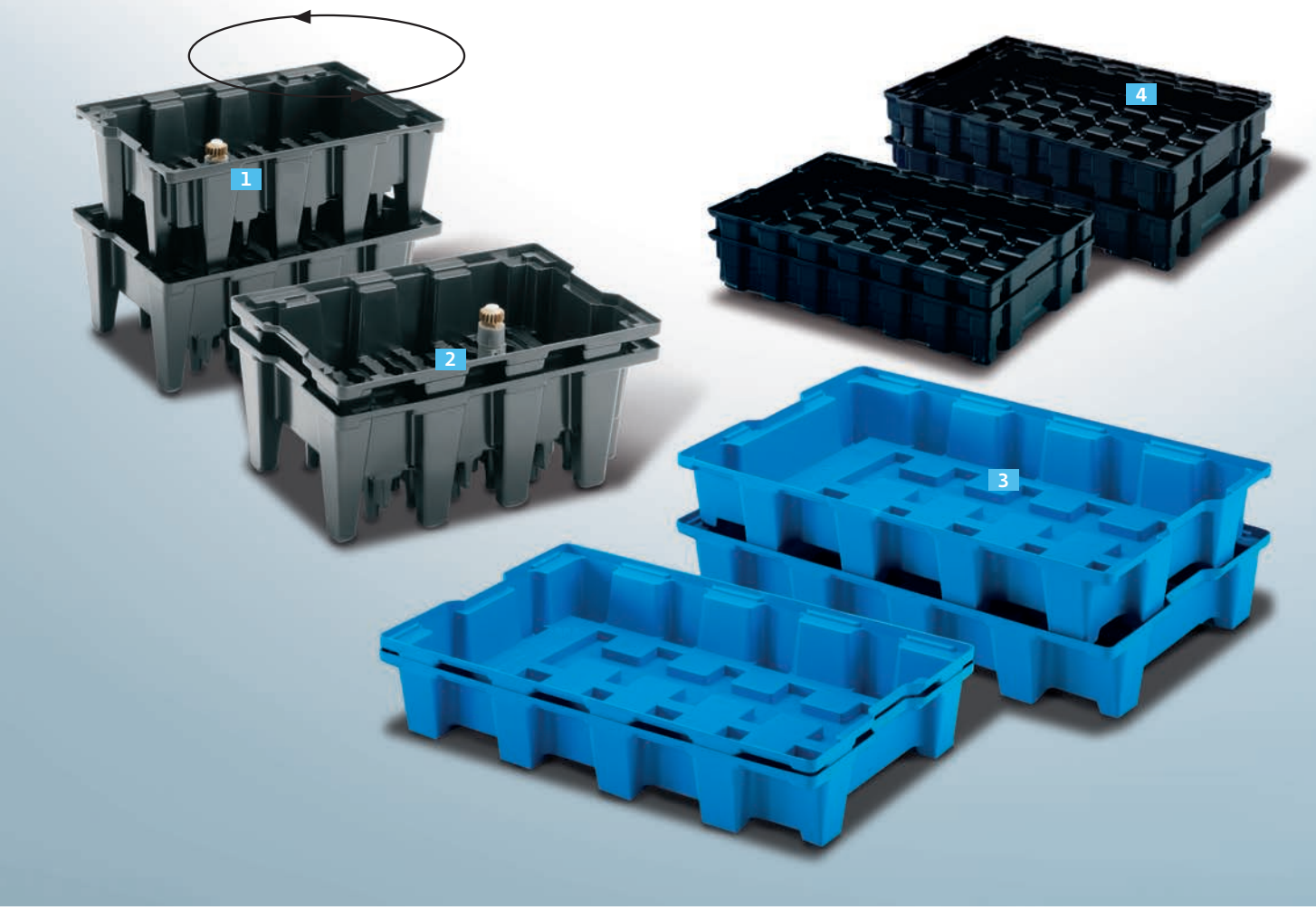
Component holders, rotary stackable

Stackable – nestable

Rotary stackable component holders are stacked in a full condition. Once the products are removed, the empty component holders can be nested by a 180 degree rotation.

Space-saving effect

This enables up to 80% of saved space during empty transport.



1

Stacking

The component holders are stackable in this position.

2

Nesting

The empty component holders can be nested by a 180 degree rotation.

3

From coloured material

Rotary stackable component holders can also be manufactured in different colour tones.

4

Electrically conducive ESD

Rotary stackable ESD component holders are vacuum formed load carriers consisting of electrically conducive material.

Refer to chapter “Electrically conducive products ESD”.

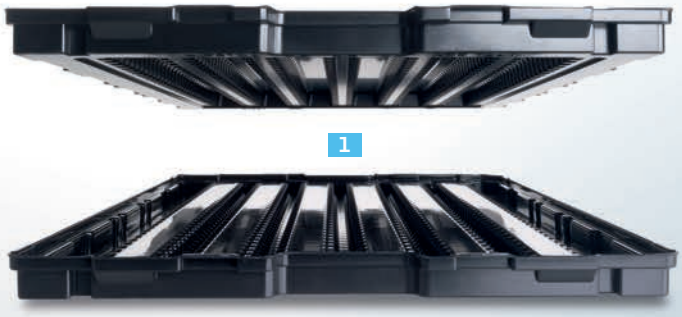
Component holders as interim layers

The sandwich principle

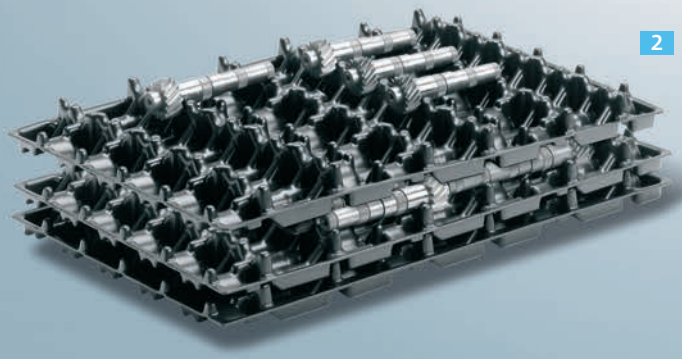
The packable products are placed inside the nests of a component holder. A further component holder is then placed directly onto the products, whereby the base contour of the carrier must be accurately fitted to the surface of the products below.

Special requirements

The construction of interim layers is challenging: Firstly, the nests must be designed for accurately fitted acceptance of the workpieces. Secondly, the base of the component holders must be designed in such a way that it can be stacked onto the subjacent parts.



1



2

1

Stackable component holders

Interim layers are initially stackable component holders with products inserted into their nests.

2

Egg carton principle

The base contour of this interim layer accurately fits onto the subjacent workpieces like an egg carton, so that the component holders can be stacked on top of each other in an interconnected manner.

Component holders in the container

Transport safety

If precision parts need to be delivered in a plastic container, it makes sense to first secure these parts in a component holder which is then inserted into the appropriate container.

Reusable packaging

The plastic containers can still be used even if the series should change at a later stage. Only the insert needs to be replaced.

1

Stackable component holders

can be layered and stacked on top of each other in one container.

2

RAKO

with openings on the long sides, into which a vacuum formed component holders can be clipped as insert.

3

EUROTEC

with vacuum formed component holders insert.

4

Folding box

with vacuum formed component holder as insert.

5

Special R-KLT

is an R-KLT, into which a component holder is inserted. For identification purposes, the container must feature a colour deviating from VDA specifications.

6

Medium containers

The interior of the panels of a Medium container feature grids, so that vacuum formed component holders can be flexibly connected to the container.

Vacuum formed containers

Container – manufactured by vacuum forming process

The vacuum forming process enables not only the production of component holders but also the manufacture of plastic containers.

A few examples follow below:

1

Rotary stackable containers

to store tablets in the pharmaceutical industry.

2

Container with lid

for the transport of pharmaceutical products

3

Airmail container

for global delivery of mail via national postal agencies.

4

Tray container with inserts

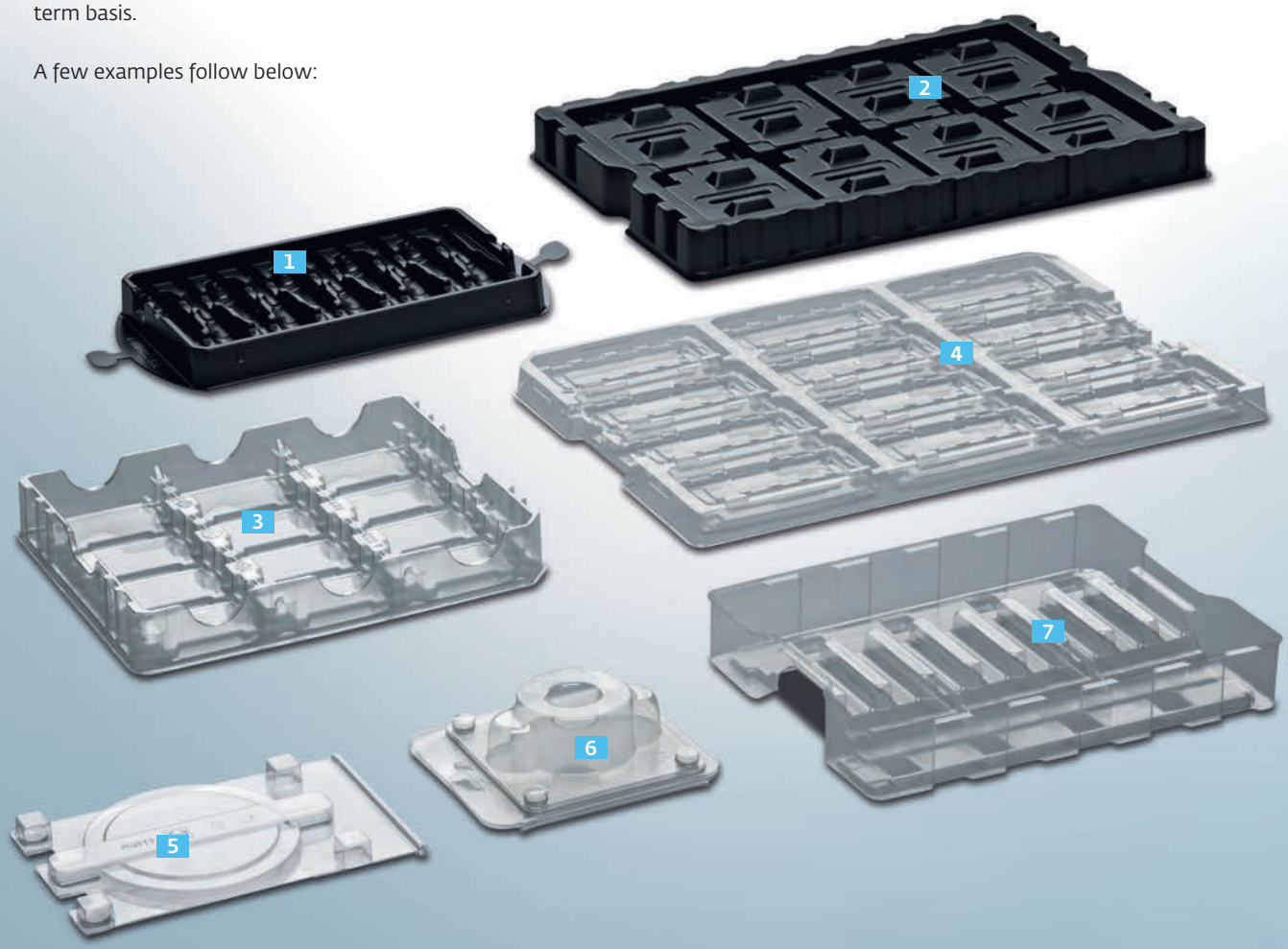
for sorting small parts. The vacuum formed tray containers are used in paternosters.

Blisters

Component holders for short-term use

Blisters are vacuum formed component holders, usually consisting of thin material which is predominantly used on a short-term basis.

A few examples follow below:



1

Stackable blister

with punched carrier straps

2

Stackable blister

as insert in small load carriers.

3

Stackable blister

with misorientation protection.

4

Nestable blister

stackable over the applicable parts.

5

Collapsible blister

with clip knobs for locking purposes.

6

Collapsible blister

with clip knobs for locking purposes.

7

Rotary stackable blister

as insert in small load carriers.

Lids and covers

Some examples of vacuum formed lids and covers below.

1

Vacuum formed lids

2

Vacuum formed covers

Accessories

Customer-specific accessories

Component holders are individual products, each tailored to customer requirements. Accordingly, the equipment of a vacuum formed component holder with accessories must also be adapted to the specific situation. In this case, appropriate consultation is imperative, so only a few examples of optional accessories have been displayed here:

1 *Misorientation protection*

upon request	co-extruded colour strip for labeling

2 *Misorientation protection*

upon request	visual identification

3 *Misorientation protection*

upon request	bevelled or differently designed corner

4 *Individual labeling*

an individual version requires a template	**Version**
	hot stamping
	pad printing
	screen printing
	script inserts
	inmould labelling
	foil embossing

5 *Identification*

can be positioned individually	**Version**
	barcode labels
	transponders / RFID
	inmould label

6 *Label pockets*

label holders with two- and three-edge rim	**Version**
	for welding
	for riveting
	for gluing

7 *Handle slot*

8 *Visual identification*