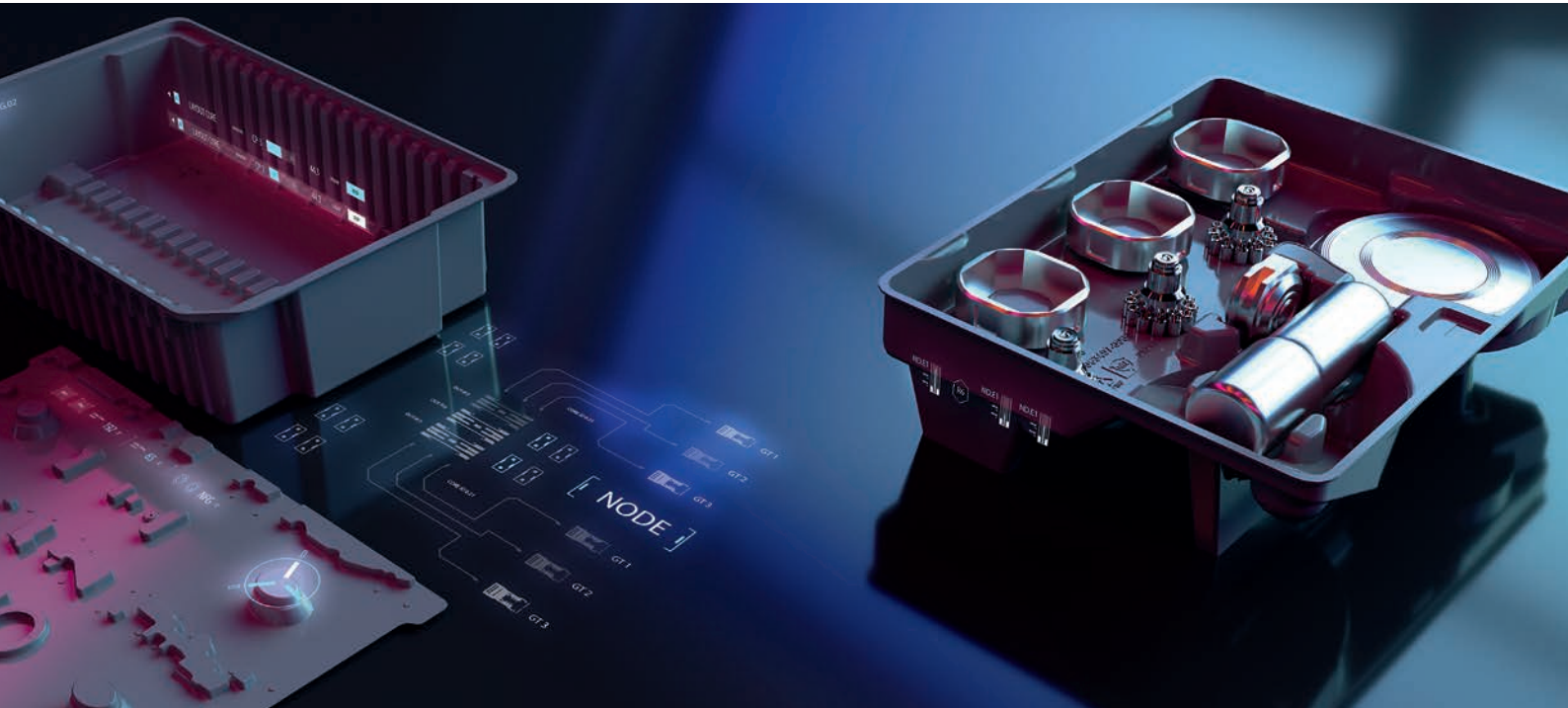


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Thermoformed component holders

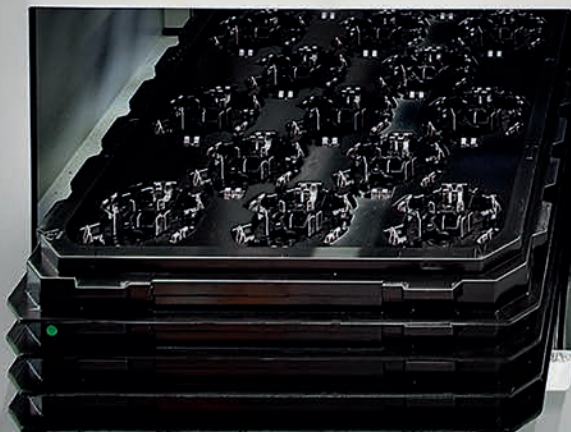
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THERMOFORMED COMPONENT HOLDERS



Thermoformed component holders

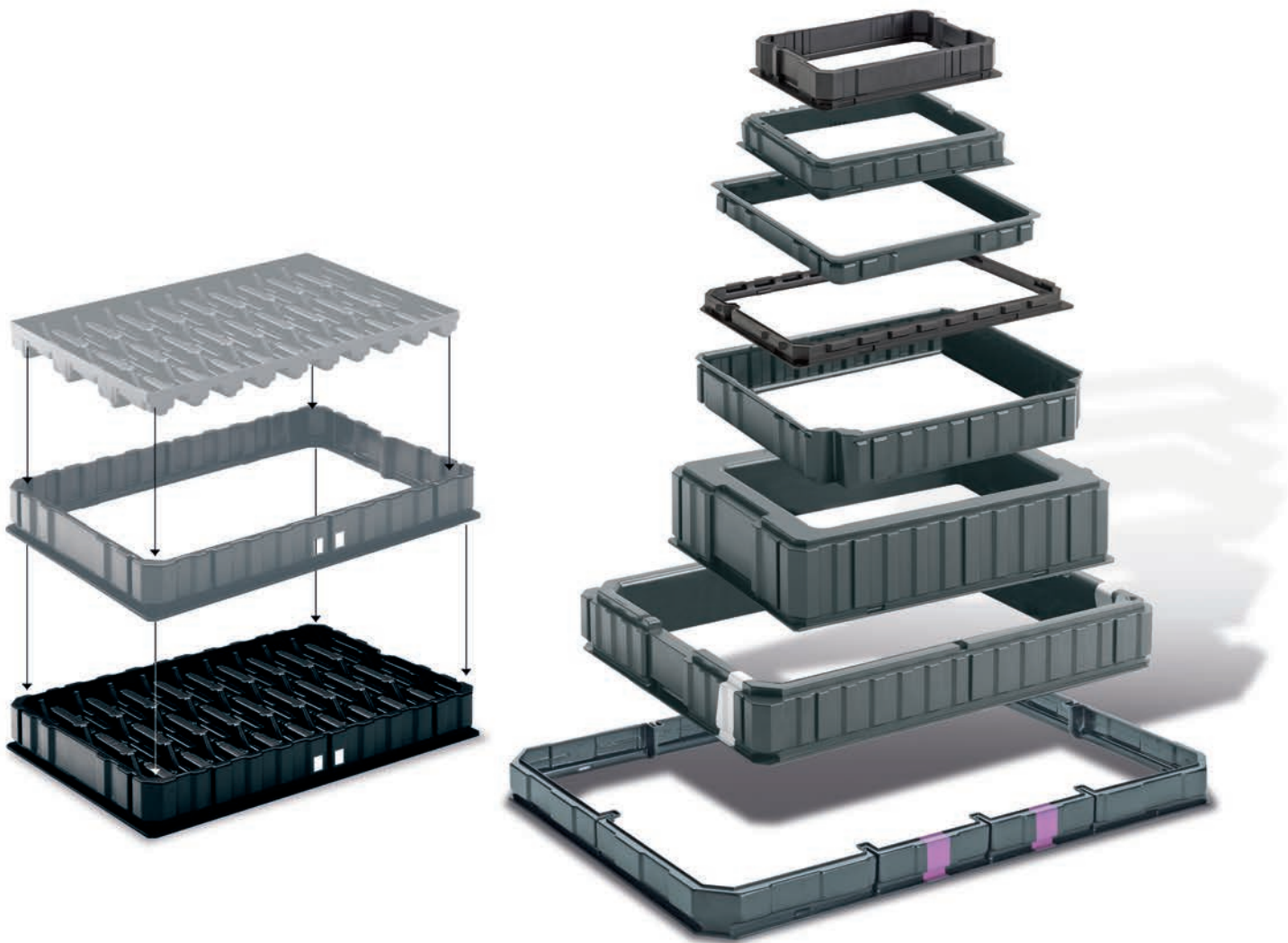
Vacuum forming is a manufacturing process which reforms thermoplastic synthetics. The resulting load carriers are called component holders. Component holders are able to perfectly incorporate products. The smallest component holders, which we produce on our machines, have a basic size of 100 x 80 mm, the largest are up to 1200 x 1000 mm.



Stackable component holders made of a frame tool

Frame with interchangeable insert

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.



Practical reuse

In frame tools, individually designed ground tools can be clamped with the appropriate basic dimensions. Special advantage: The frame can also be reused for other ground tools.

Extensive range of sizes

Frame tools are available in standard sizes from 350 x 250 mm up to 1200 x 800 mm.

Stackable component holders

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.



With coloured marking

Stackable component holders with colour marking as anti-twist protection.

With handle recess

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



Stackable component holders with fixed support elements

Thermoforming with additional elements

Sometimes there are requirements for the exact fitting of products which cannot be solved by thermoforming alone.

From two to one

In such a case, specially shaped plastic or metal mounting elements are integrated into the thermoforming process so that they can be firmly attached to the actual component holder. Component holder and the corresponding mounting element then form a stable unit.

With plastic pins

Stackable component holder with plastic pins as additional elements for holding gear wheels.



Shadowboard

For ergonomic mounting of different components. Also available with QR code and coloured marking.

Tray

with metal inlays.



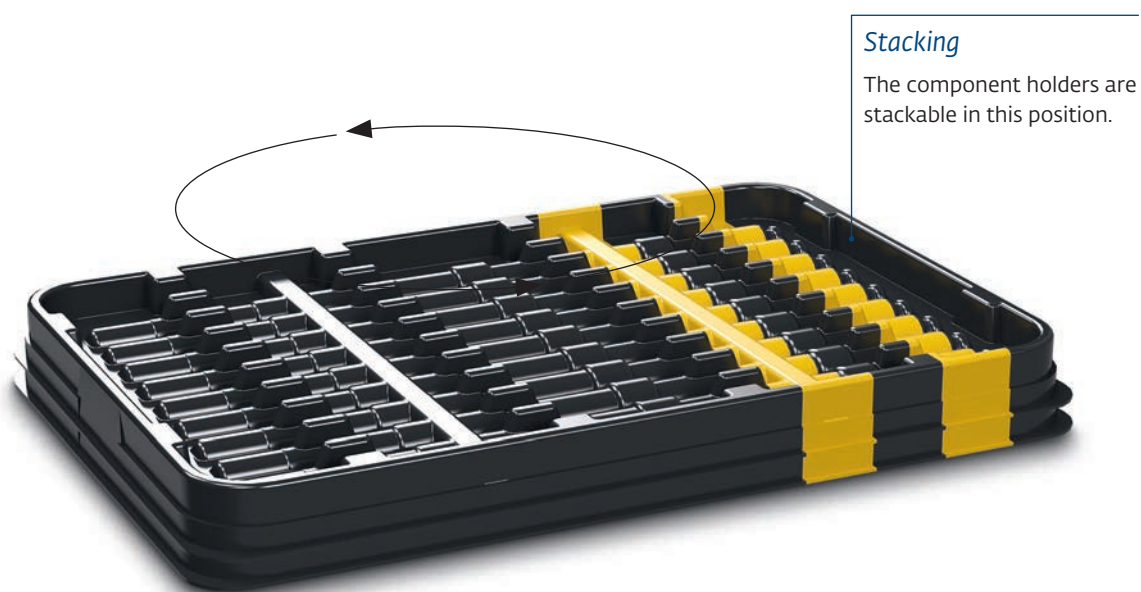
Stack/nest and nestable component holders

Stackable – nestable

Stack nest 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.



Nesting

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



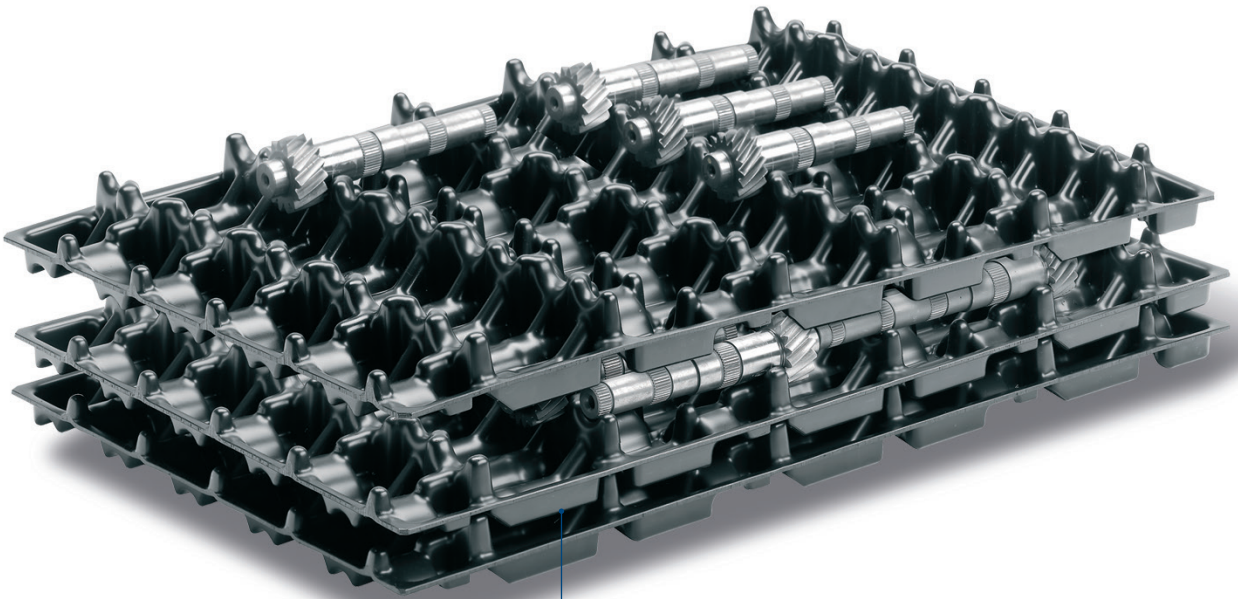
Component holders as intermediate layers

The sandwich principle

The products to be packaged are placed in the nests of a component holder. A component holder, the bottom of which is leaked onto the lower layer of workpieces, is stacked on top of it again.

Special requirements

The construction of intermediate 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.



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 as container inserts

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.

RAKO

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

Stackable component holders

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



Thermoformed containers

Containers – manufactured by thermoforming process

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

Container with lid

for the transport of pharmaceutical products



Blisters

Component holders for short-term use

Blisters are thermoformed workpiece carriers made usually of thin material, which are predominantly used only for short periods (e.g. for one-way transport).

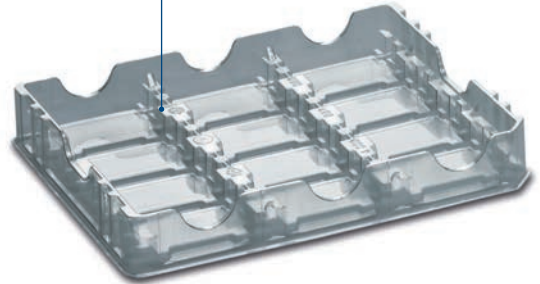
Collapsible blister

with clip knobs for locking purposes.



Stackable blister

with misorientation protection.



Stackable blister

as insert in small load carriers.



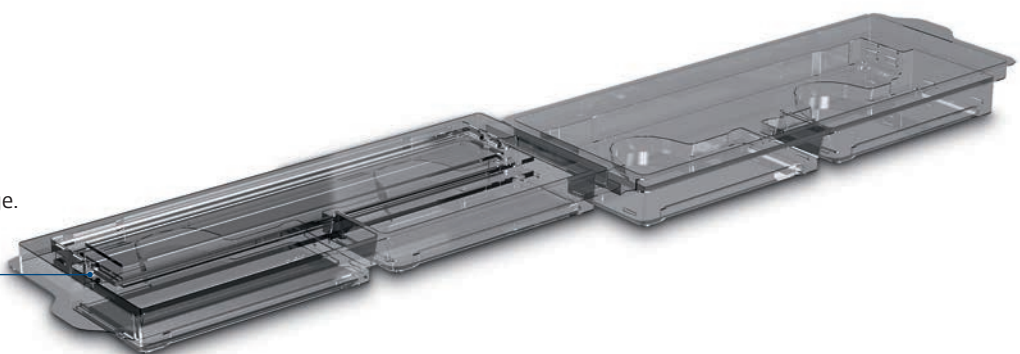
Nestable blister

stackable over the applicable parts.



Collapsible blister

with an integral hinge.



Electrically conductive component holders



Vacuum formed ESD component holders for protection against electrostatic discharge

Electronic components can be damaged by electrostatic discharges. To protect against such damage, electronic assembly parts are often transported or stored in vacuum formed component holders made of electrically conductive plastic.

Essentially, all vacuum formed component holders can be made of electrically conductive material in the ESD version (Electro Static Discharge). If desired, production using static dissipative materials is also possible.

Specific resistance values are not given for conductive or dissipative thermoformed articles.

Component holder ESD
made of a frame tool.



Stackable component holder ESD
with visual identification.



Stackable component holder ESD
with handle recess.

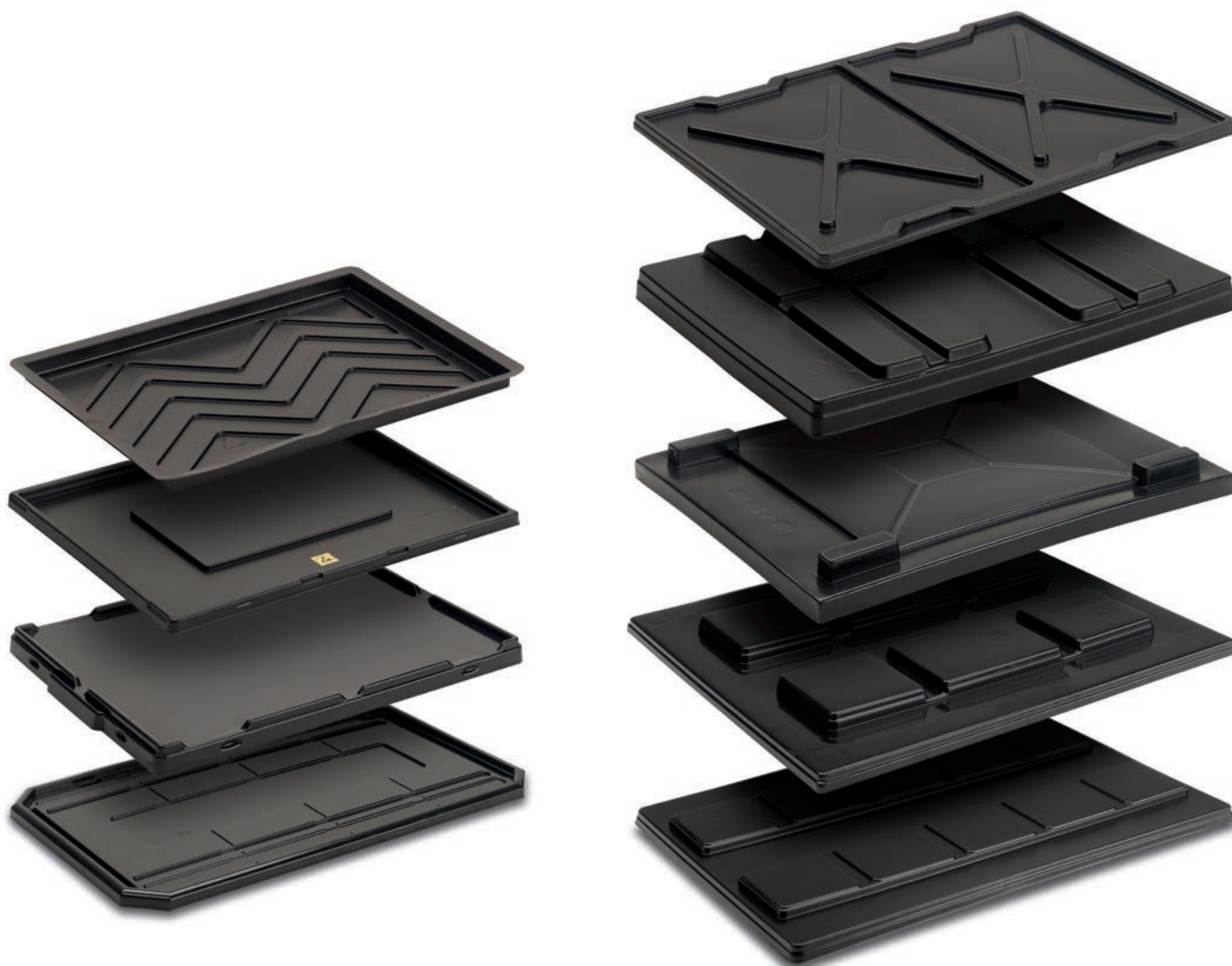


Stackable component holder ESD



Lids and covers

Examples of thermoformed lids and covers for a container or whole transport units:



Accessories

Material

The starting material for thermoforming is plastic sheets, which are heated in the production process and then pulled over a tool with the aid of a vacuum. Utz produces these plastic sheets on its own extrusion line.

In thermoforming we use the following materials:

- ABS virgin and regenerated material
- ABS TPU TPU only virgin material
- PE virgin and regenerated material
- PE conductive virgin and regenerated material
- PS virgin and regenerated material
- PS conductive virgin and regenerated material
- PS Nanotubes virgin material

The material thickness of the plates used in thermoforming can be variably adapted to requirements: from 1.5 - 10 mm.

Customer specific accessories

Component holders are individual products, each tailored to the requirements of a customer. Accordingly, the equipment of a thermoformed component holder with accessories must also be adapted to the special situation. For this purpose, appropriate consulting is indispensable, so that only a few examples of the possibilities of equipping with accessories are shown here:

Anti-twist protection

Visual identification.

Anti-twist protection

Bevelled or differently designed corner.



Identification

Can be positioned individually.

Execution

- Barcode(frame)
- Transponders / RFID-Chips
- Inmould label

Individual marking

For individual designs a template is required.

Execution

- hot stamping
- pad printing
- thermotransfer printing
- script inserts
- Inmould labeling
- foil embossing

Color strips available in the following colors (without obligation):

RAL 1001	RAL 1018	RAL 2004
RAL 3020	RAL 4006	RAL 5015
RAL 6029	RAL 6037	RAL 7001
RAL 7042	RAL 8001	RAL 8008
RAL 9016		

Anti-twist protection

Co-extruded color strip for marking.

Handle slot



Label pockets

With border on two or three sides.

Execution

- to weld on
- to rivet on
- to glue on

Visual identification



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