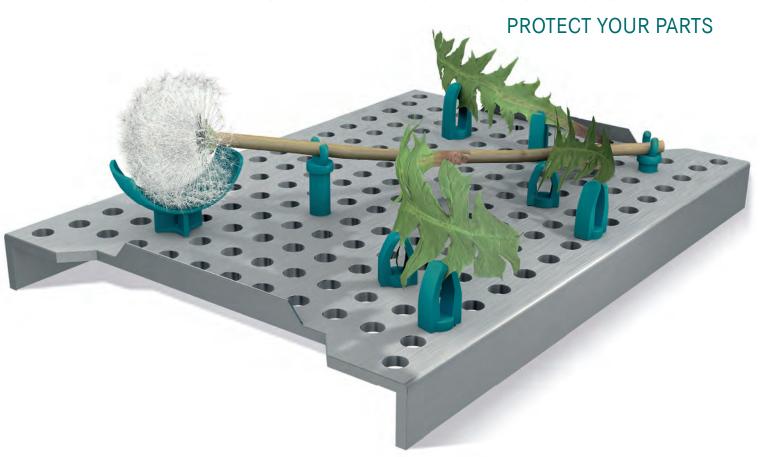


SAFETY FOR YOUR QUALITY



work processes optimization

reduction of litication costs

maximum protection for your parts

best placement efficiency

sustainable and stable value system solution

compatible with existing systems

OPTIMIZATION AND PROTECTION

ALWA smartPINS - The Original since 25 years

Your products have to be securely protected and stored for further processing, transporting, cleaning and storage. For this, our carrier systems provide best fitting customized solutions. The matched part geometry of our pins assumes rotationally symmetric and asymmetrical products on an precise position.

smartPINS - the intelligent solution for applications such as

- the cleaning of components
- the safe transport of parts, internal and external, even with difficult geometries
- · the undamaged and stackable storage
- · the simplified handling in assembly
- the flexible use in the whole production range

With unique advantages that convince.

- · automated and stackable system
- partially patented recording via Pins
- high flexibility through a wide variety of fixing possibilities
- great stability at low weight
- · optimated parts management
- precision manufacturing for automation
- optimum cleaning results through better flushing of the components

We develop

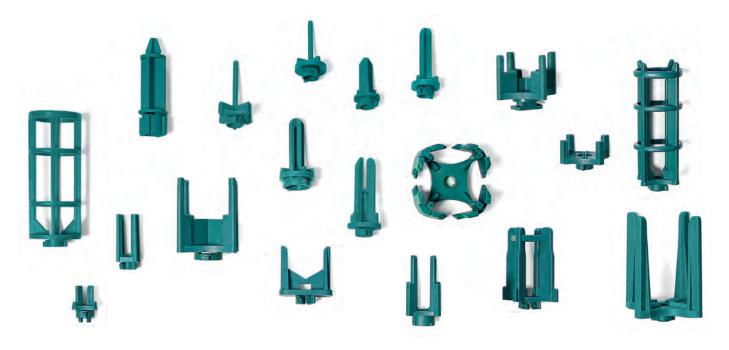
individual solutions for automotive, medical, electronics metal processing. We also develop support systems and pins, matched to the parameters you specify.



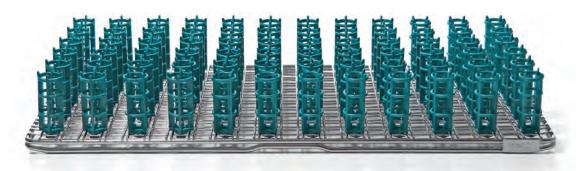


STANDARD VARIANTS

We provide a product portfolio of more than 400 different Pins,



which can be used versatile and modular in our patented carrier systems.



FLEXIBLE USAGE UND STABLE

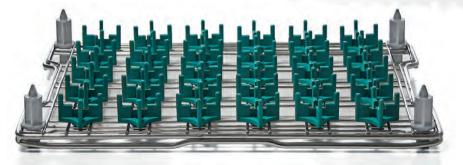
WORKPIECE CARRIER SYSTEM

The carrier system is build with high-quality stainless steel and plastic components - protected against high temperatures and made for long lifecycles. In addition to our standard carriers we also manufacture special solutions for your specific applications.

The special properties of our workpiece carriers are

- the variable features of grids and plate sizes
- the optional embodiment of the support of high-quality stainless steel in galvanize or in aluminium version
- the possibility of the carrier plate with proven bayonet lock or use of a solution with wire
- the resistance of our materials for all market cleaning agents, cutting oils, emulsions, etc.





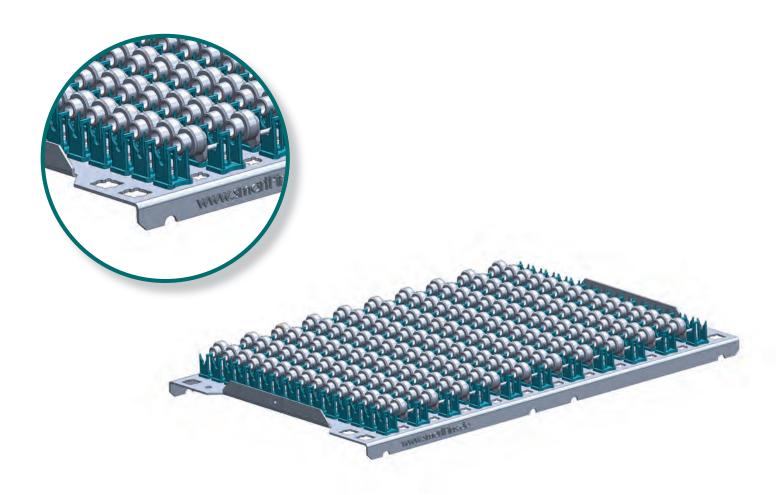
Picture: Standard carrier system from our program.



CUSTOMIZED WORKPIECE CARRIER SYSTEM

The manufacturing of customized workpiece carrier systems is always a competition we want to face - but only in terms of your processes.

We develop solutions for transport and storage of your components and to support you in the production optimization in workpiece carrier systems.



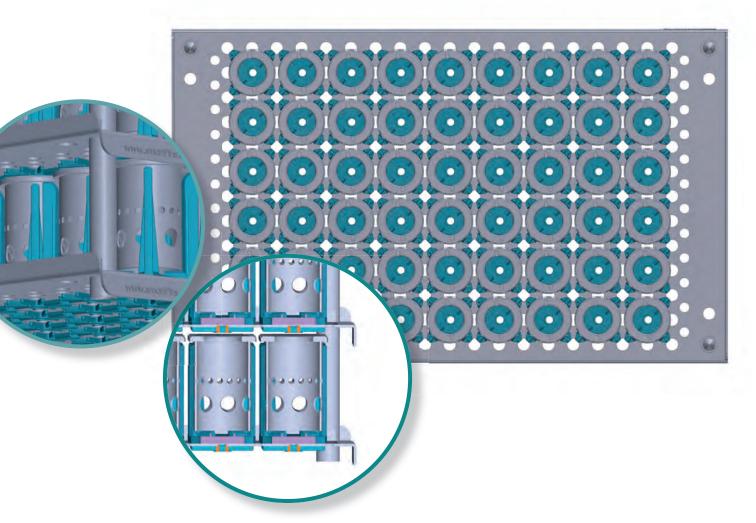
Picture: Customized carrier system with an enlarged view.

SUITABLE PROTECTION

PROTECT YOUR PARTS

Your parts are always fixed so that an absolute protection is about ensuring and therefore damage can be excluded.

This is not only a guarantee for high quality, it also reduced your quality and scrap costs at the same time.

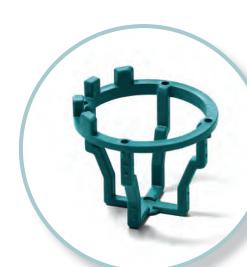


Picture: Stacking of components with protection and space for improvement.



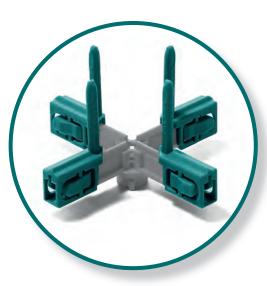
PINS

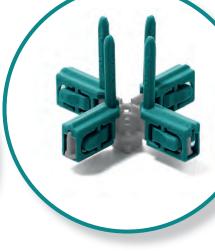
Our pins are partly patented and guarantee optimal positioning and location of the parts. Fitted into the pins, your valuable parts in the best possible protection during storage and transport. For individual customer requirements we develop the appropriate recording shapes and sizes.



Our Pins are

- by their temperature resistance used in common cleaning media
- resistant to oils, ehernieals and drilling water
- durable due to high quality materials
- modular and can be used individually as weil as interchangeable
- · available in various colors



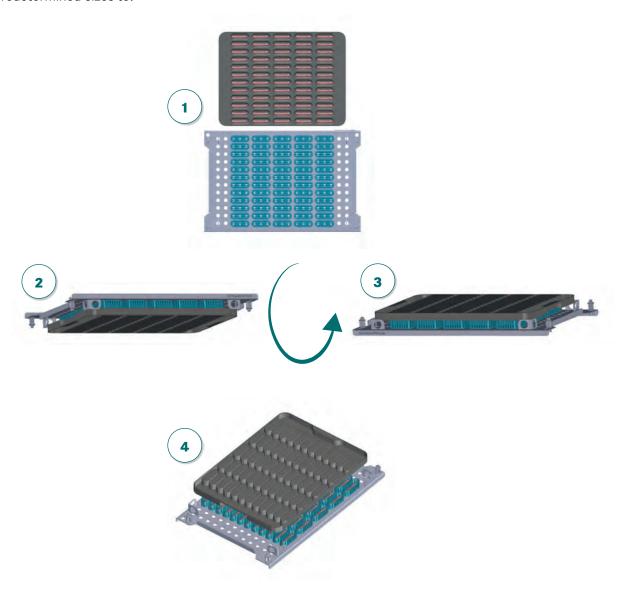


Picture: Special solutions

STAPELN. REINIGEN. TRANSPORTIEREN.

SWITCH SYSTEM

To avoid unnecessary handling, we fit your workpiece carrier also like to predetermined sizes to.



Picture: Fitting support carrier (black) for quick filling in workpiece carrier systems.

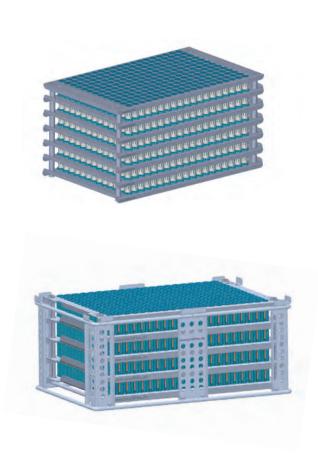


USEFUL SUPPLEMENTS

With smartPINS solutions tyou have the possibility to wash your parts without the use of washing baskets (depends on your cleaning system).

We configure our system for your needs - without any changes to your current processes.

A huge relief on your daily handling with workpiece carrier systems is our functional trolley. This is available on request individually adapted to your needs.





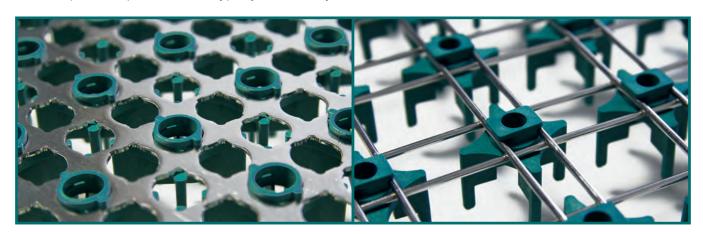
Pictures (left): smartPINS solutions shown with and without basket for washing.

Pictures (right): Trolley for workpiece carrier system.

TAILORED TO YOUR NEEDS

CLOSURES

With our patented partial closure types you are always on the safe side.



SERVICE

In addition to our standard solutions, we develop and manufacture specifically to your needs tailored workpiece carrier systems and pins as well as cleaning and transport baskets to.

Profit from:

- individual advice also at your site
- many years of experience in developing and CAD design
- the control and audit by prototypes
- the possibility of serial production

We advise you in:

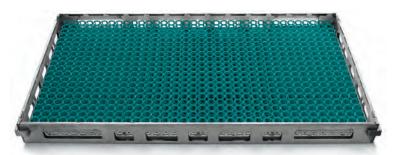
- planning based on your specific parts request
- CAD design and drawing creation and support by our project management
- support at automatisation



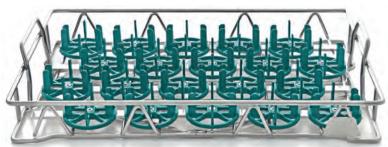


SPECIAL MODEL / SPECIAL SOLUTION

... for small and sensitive parts



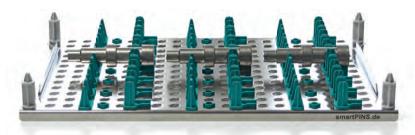
... for big and heavy parts



... for special automation



... for curved parts and parts with many different geometries





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