

BLOKSMA

The future of your **production logistics**



WORKPIECE CARRIERS

Precision for automated manufacturing



Dirk Bloksma, Dipl.-Ing. (FH)
qualified Lean Management
Expert

INDIVIDUAL HOLISTIC INTERDISCIPLINARY

„Success does not come from technology alone, but from trust, experience, and genuine partnership.

At BLOKSMA, we think in terms of solutions, not products – and support our customers with reliability, vision, and modular concepts tailored to our customers.“

A CENTURY OF LOGISTICS EXPERTISE

- 1920** Foundation of BLOKSMA in the Netherlands.
- 1949** BLOKSMA GmbH is brought to Germany by Hendrik Marinus Bloksma focusing on repairing water coolers for automobiles.
- 1972** Herman A. Bloksma develops the first products to optimize material flows.
- 1978** Patent of the first container-tipping devices – a milestone for the industry.
- 1992** Dirk Bloksma becomes part of the family business.
- 2004** Dirk Bloksma takes over the management of BLOKSMA Engineering GmbH. Together with his team, he consistently drives forward the vision of comprehensive services for production processes.
- 2015** Establishment of the U.S. subsidiary BLOKSMA Corp. and the French joint venture Groupe Lean France, together with long-standing partners K. Hartwall and Movexx.
- 2019** Following the expansion to Daimlerstraße 3, the adjacent warehouse is now also being officially opened.
- 2026** Establishment of BLOKSMA India to strengthen the presence and better support the growing Asian market.

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BLOKSMA WORKPIECE CARRIER

From small and light to large and heavy, BLOKSMA offers custom-designed workpiece carrier systems for your automated manufacturing-tailored to your specific needs, with over 2,000 already designed variants.

Workpiece carriers have become indispensable for automated manufacturing. As component sizes continue to shrink, they can no longer be handled by human hands. Workpiece carriers are used to hold workpieces, transport them safely to their destination and ensure the necessary precision during further processing of the components. The geometry of the workpieces/components determines the design of the carrier systems.

That is why BLOKSMA's workpiece carriers are custom-designed to suit the specific task and the component to be gripped. The process of rapid prototyping ensures the highest possible precision right from the development stage of your system.

At BLOKSMA, we also tailor the solution to our customers needs: Depending on the requirements of the components to be transported, you can choose between various materials—naturally in your required dimensions and with fixed or variable part removal.

BLOKSMA WORKPIECE CARRIER

100th Anniversary

of BLOKSMA was celebrated in 2020

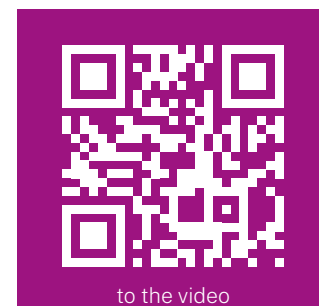
38 years of experience

with workpiece carriers and involvement in the development of the DIN standard

2,000 different workpiece carriers

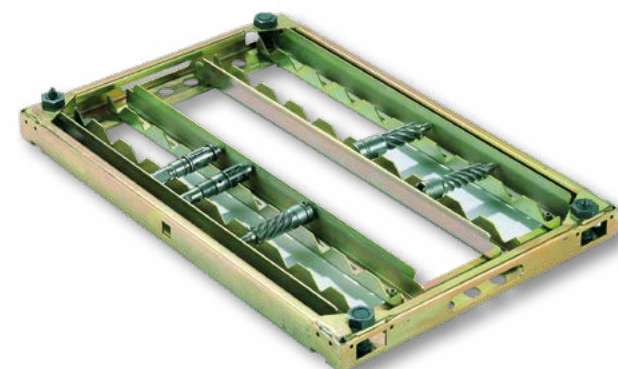
were developed and manufactured by BLOKSMA already

Basic construction types



to the video

The shaft



Workpiece carriers for this basic configuration are designed to hold rotationally symmetric parts. The length of the parts is generally greater than their diameter and the diameter may vary.

These include for example camshafts, drills, and tubes. Workpieces are transported in a horizontal position. The picking up and handling of the parts is carried out on the outer contour.

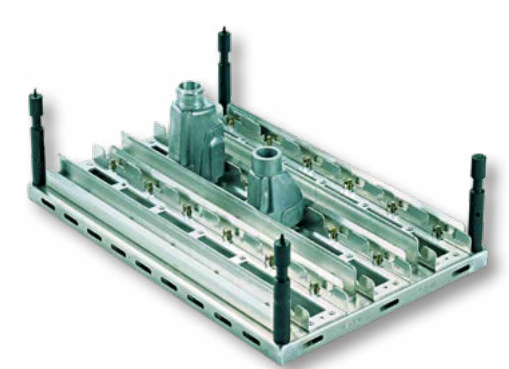
Disc-shape parts



Workpiece carriers for this basic configuration are designed to hold rotationally symmetric parts. The diameter of the parts is generally greater than their diameter and the diameter may vary.

These include for example, gears and brake discs. Workpieces are transported in a vertical position. Parts can be gripped and handled along both their outer and inner contours.

Individual geometry



These workpiece carriers accommodate asymmetrical parts such as castings, assemblies, brackets and cubic shapes.

The workpiece can be picked in a vertical, suspended or horizontal position.

Picking up and handling of the parts on the inner and outer contour is possible.

DEVELOPMENT OF WORKPIECE CARRIERS

1

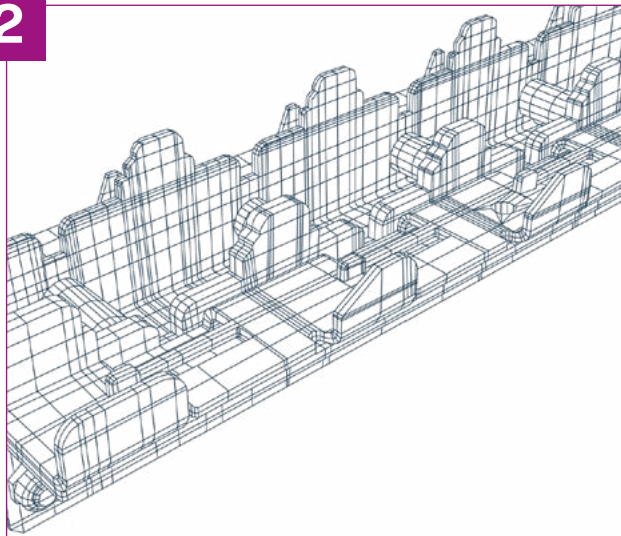


Analysis & needs assessment

Every component is different, which is why we provide personalized advice on your specific requirements for workpiece carriers in terms of material, design and mounting type.

We rely on over 40 years of experience to do so.

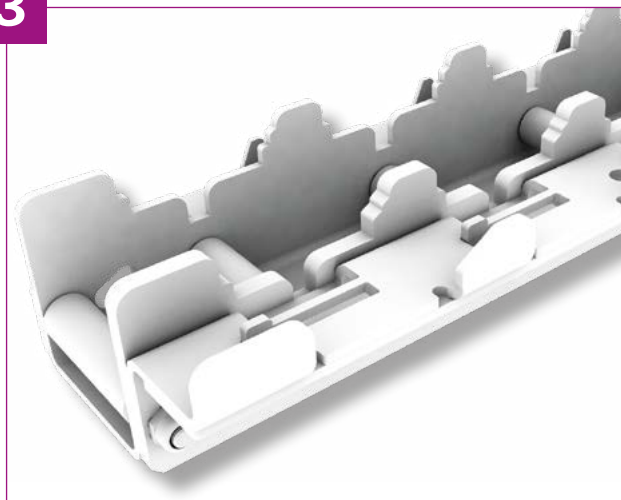
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Development of the model and design

Based on the briefing and specifications of workpiece and process, our in-house design department will create a draft or model of your workpiece carrier.

3

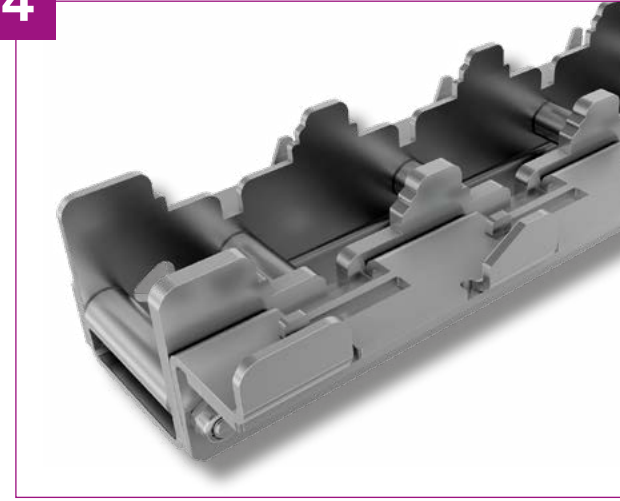


Rapid Prototyping

The model we create serves as the basis for the next step: rapid prototyping. With Prototyping we print a sample of your component as a true-to-scale prototype. This way you can see how your component is positioned and whether the model precisely meets your requirements and is compatible with your existing handling systems.

DEVELOPMENT OF WORKPIECE CARRIERS

4



Sample and prototype development

In the next step, the prototype is manufactured from the defined target material. In this prototype we can place your component on a trial basis and analyze the handling, the material selection, as well as any potential friction points.

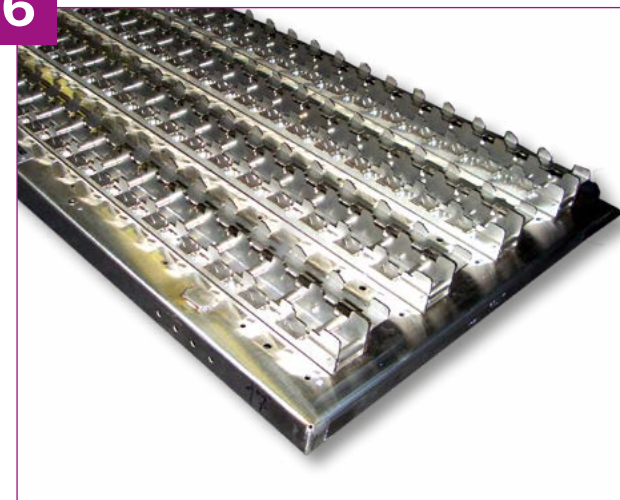
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Trail run

Following a successful prototyping phase, a complete workpiece carrier is manufactured from the specified target material and tested in conjunction with peripheral systems such as robots or a washing line. The optimization potential identified during this process is then incorporated into series production. For small quantities this step may be omitted.

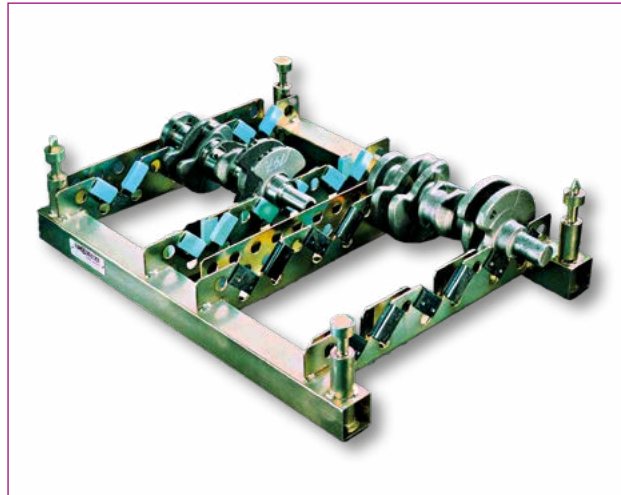
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Batch production

Once the workpiece carrier has passed all tests, batch production will begin upon approval. Should you require further consultation, modifications, repairs or other services, we will be happy to assist you at any time.

CONSTRUCTION METHOD

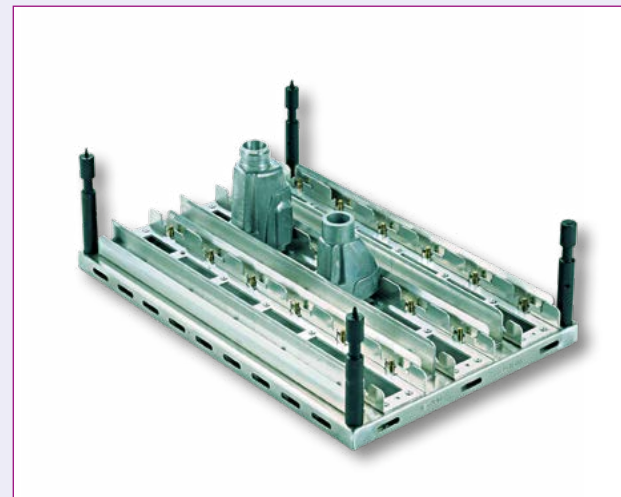


Workpiece carrier tube frame construction

- capable of reproducing any contour or geometry
- high positioning accuracy
- Ideal for large dimensions
- especially for heavy, large components

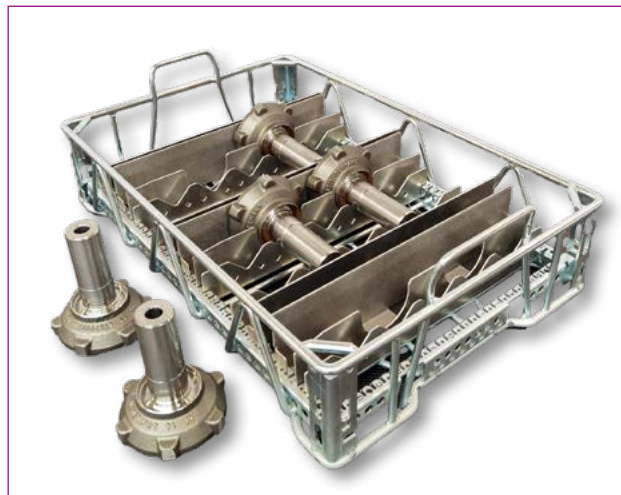
Workpiece carrier sheet metal

- capable of reproducing any contour or geometry
- absolute accuracy
- ideal for automation
- for lightweight, small and precision components



Workpiece carrier wire-sheet combination

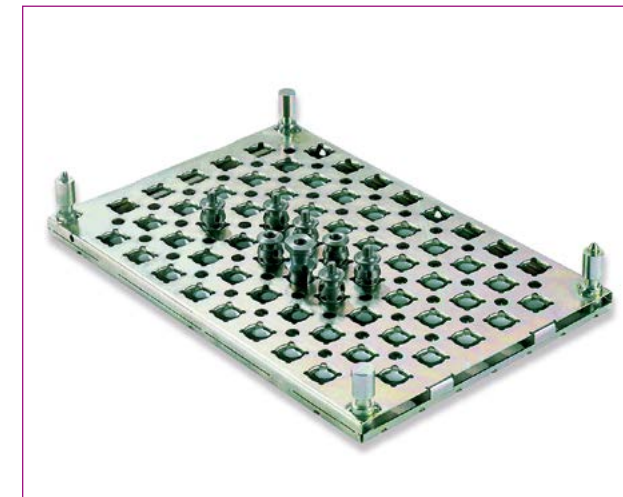
- capable of reproducing any contour or geometry
- absolute accuracy
- ideal for automation
- for high-precision and sensitive components
- for light to medium-weight components
- suitable for washing
- the best of both worlds



MATERIALS AND THEIR ADVANTAGES

Workpiece carrier aluminium

- easy to wash
- particularly sturdy
- custom colors available through anodizing
- easily recyclable
- environmentally friendly, as no surface protection is required



Workpiece carrier steel

- durable
- by forming the material sharp edges can be avoided and the components to be handled are protected.
- ideal for holding rotationally symmetrical parts

Workpiece carrier stainless steel

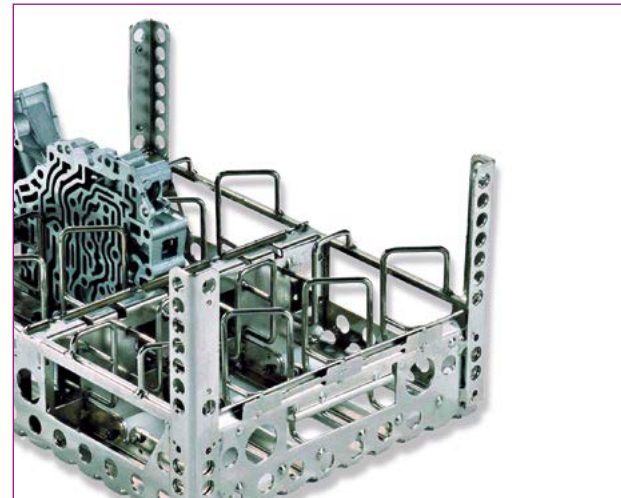
- corrosion-resistant
- ideal for use with aggressive cleaning agents
- heat-resistant
- particularly durable and low-maintenance
- ideal for use in the food or pharmaceutical/medical sectors



FIXED OR FLEXIBLE SYSTEMS

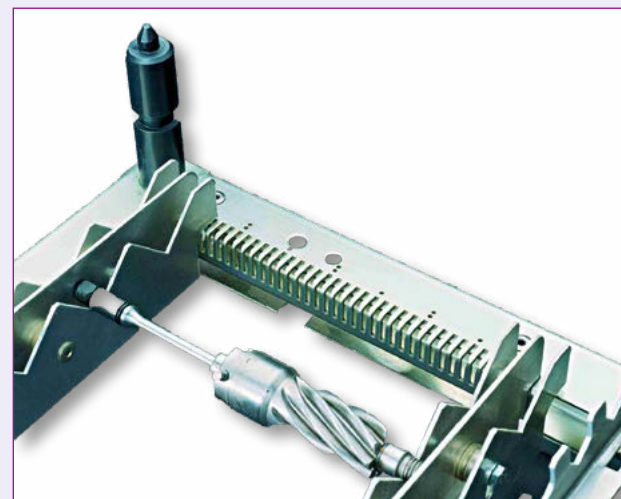
Fixed workpiece carriers

- Permanently installed elements
- Precisely and individually designed for the component to be measured
- Ideal for batch production
- More user-friendly and robust for use in the manufacturing process
- At the end of the component's service life it can be disposed of in an environmentally responsible manner



Flexible workpiece carriers

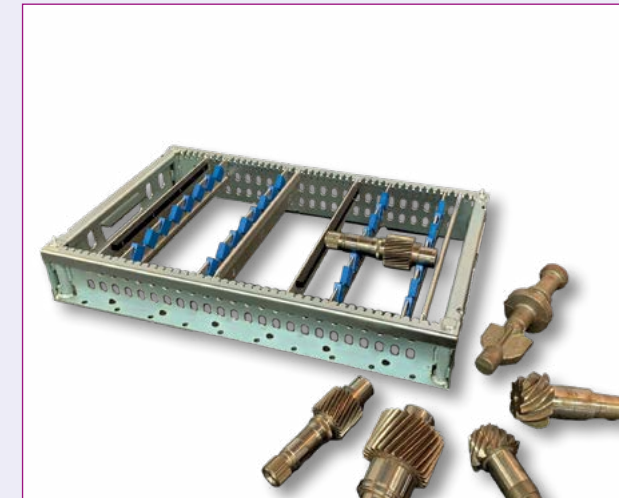
- Modular principle
- Easily interchangeable workpiece holding elements
- Easily adjustable (grid, continuously adjustable or interchangeable inserts) deal for small and medium-sized production runs
- Can be adapted to future product lines of all basic designs
- High variability
- Can be easily supplemented or converted



FIXED OR FLEXIBLE SYSTEMS

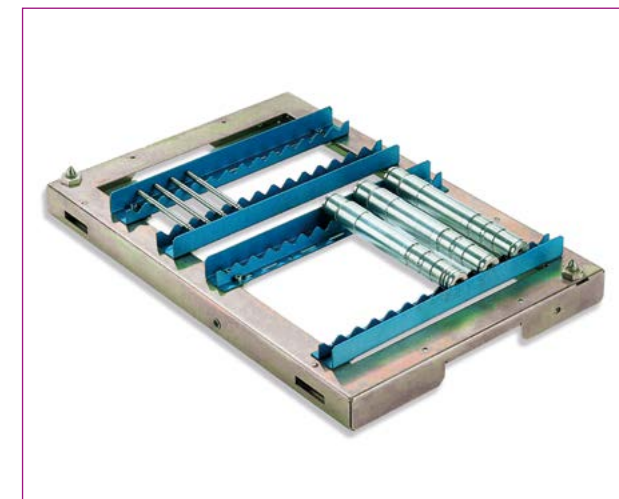
Gridded

- Gridding in predefined steps
- Single-sided (lengthwise, crosswise) or double-sided printing
- Simple, quick conversion possible
- Setting increments can be read using the laser-etched numbering system; alternatively, a ruler can be attached to the workpiece carrier



Stepless

- Extremely flexible
- Adjustable with millimeter precision
- For adjustment a setting gauge or a pre-setting device is generally recommended



Exchangable inlets

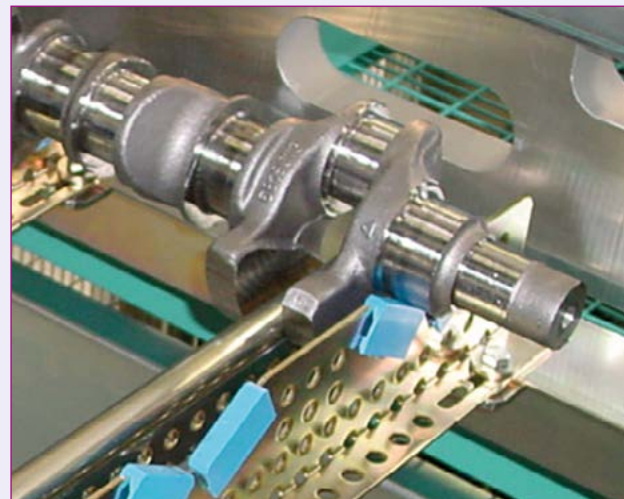
- The base workpiece carrier can be used with various inserts
- Quickly modifying by exchanging the complete inlet
- Modular principle



STORAGE AND TRANSPORT

Holding sleeves

- Holding sleeves are designed to protect the component being inserted from damage and dirt

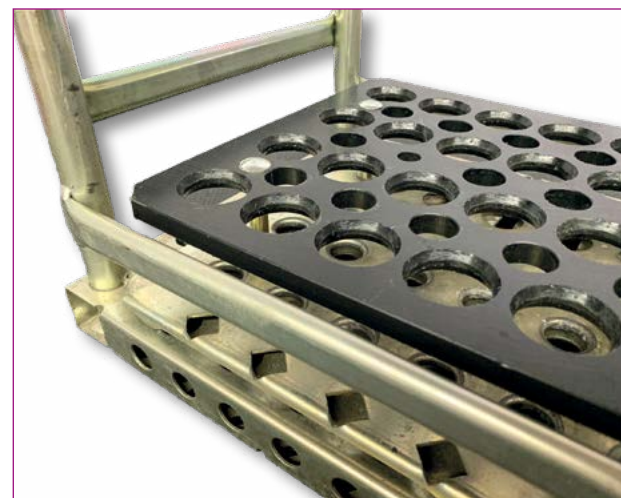


Support clips/spikes

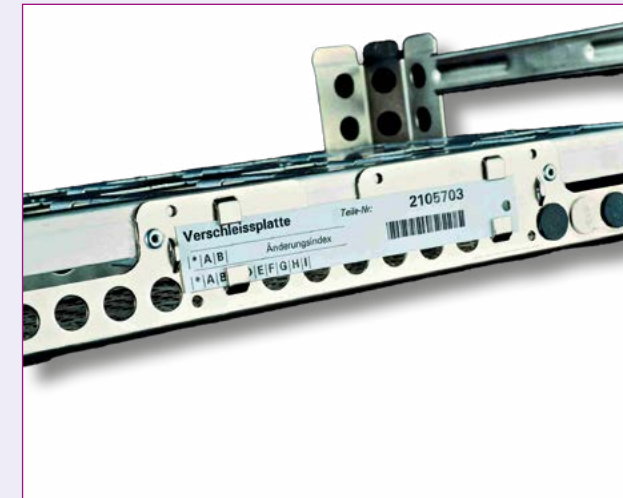
- The contact points and surfaces of the component are protected from damage by the support clips
- There are countless different types of clips and mounting elements. We recommend the right one for your component

Holding plates and strips

- Strips are used when too many clips would otherwise be required
- Holding plates and strips can have various shapes
- Plastic plates protect the component along its outer diameter



LABELING AND CODING

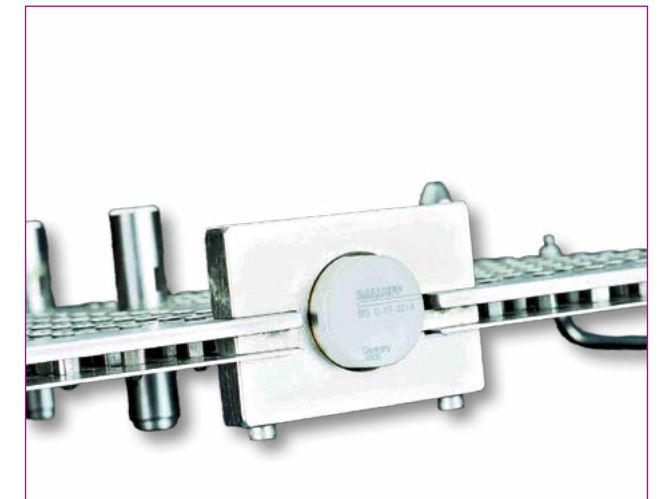


QR-Code/Barcode

- Can store up to 2,500 characters
- QR-codes can be up to 10 times smaller than a barcode and still be readable
- Figure: a combination of code and text, as this makes it easier for humans to use (because it is readable)

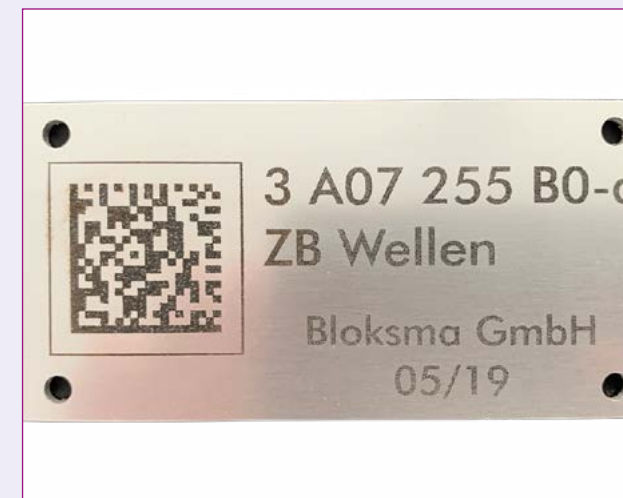
RFID-Chip

- Automatic and contactless identification using electromagnetic waves
- The desired information is stored on the rewritable chip
- Data can be deleted with minimal effort for example, a production status report on process progress



Data-Matrix

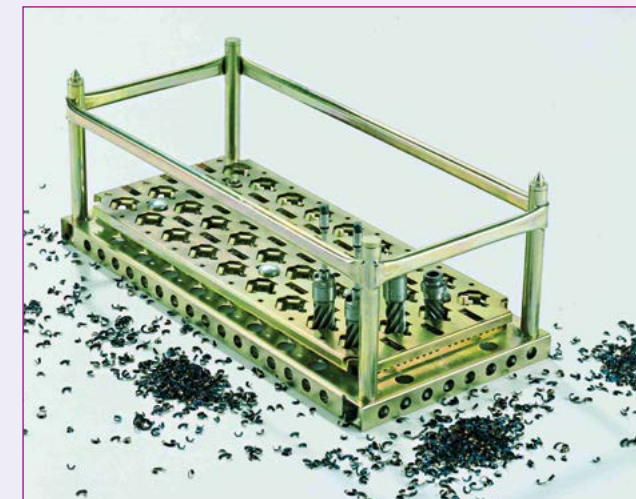
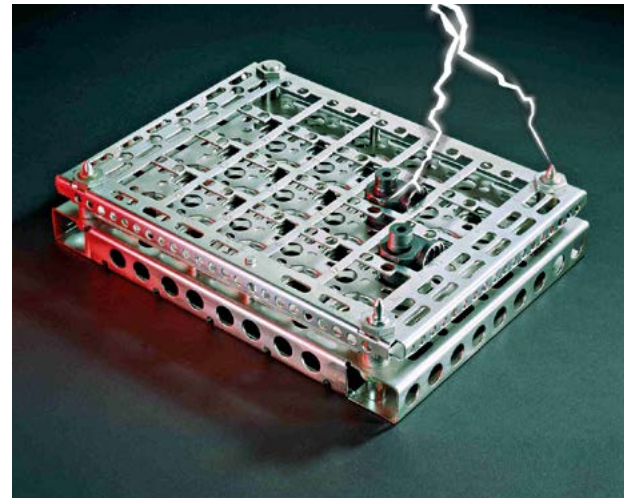
- Encodes the data in the form of a surface
- Takes up little space
- Can be read in any orientation



FEATURES

Electrically conductive or non-conductive

- Components must be protected from discharge
- For this purpose, appropriate materials are used on the workpiece carrier



Non-magnetic or antistatic

- For very small components, the workpiece carriers can not be magnetic so that the parts can be removed by the robot
- Advantage regarding residual dirt: grinding dust should be washable off after machining (to prevent friction or damage to the components)

Suitable for use with corrosive median

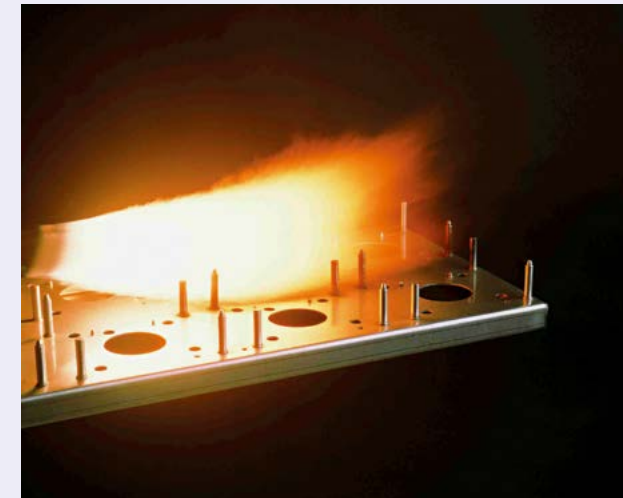
- For certain applications, components must be washed with aggressive media (e.g., TRI/PER)
- The workpiece carrier is therefore constructed and pretreated to be resistant to these media



FEATURES

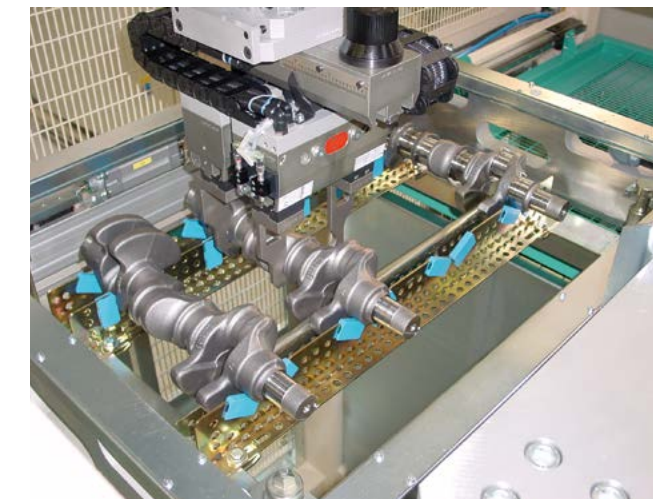
Heat-resistant

- Components often need to be cured, tempered or “baked”
- Our workpiece carriers can therefore withstand high temperatures of over 300°C



Robot and cobot compatibel

- As components continue to shrink in size, manual handling is reaching its limits. Our workpiece carriers are therefore designed for automated use
- The smallest workpiece carrier BLOKSMA has built to date can hold turned parts measuring 2.5 x 2.6 mm



Stackable

- Space requirements and space constraints in production are minimized
- An important feature for automated manufacturing
- Ideally with anti-rotation protection (Poka Yoke)



RELATED PRODUCTS

Trolley

Durable, customized, with or without additional elements.

BLOKSMA trolleys are available in a wide variety of designs, sizes and load capacities. Trolleys form the foundation of modern “rolling” production.

Goal: forklift-free production.



Transport pallet

The transport pallet is designed for the fast and safe transportation of containers or goods—both indoors and outdoors. It is primarily used for transport between facilities. Transport pallets are particularly necessary when stacks are so heavy that they can no longer be moved by hand. Transportation is carried out using industrial trucks such as forklifts, pallet jacks (under certain conditions), pallet trucks, AMRs or AGVs.



Lifting and crane gear

Moving large and heavy workpiece carriers can be an immense physical effort, or in some cases, simply impossible. To prevent workplace accidents and to enable the movement of these carriers, appropriate lifting slings and crane gears are available.



RELATED PRODUCTS

Presetting device

A presetting device is particularly recommended for flexible workpiece carriers. This makes it easy for anyone to adjust the flexible mounting strips to the correct positions. Ideal for switching to a new part holder as well as for checking and correcting the current setting.



Gauge

Using a gauge, employees can check all relevant dimensions of the workpiece carrier. It is recommended to perform this check before or after each use, especially when working with robots. The system checks whether the workpiece carrier is deformed and whether stacking and alignment accuracy are still maintained.



Turning station for workpiece carriers

Turning stations for workpiece carriers are used primarily in conjunction with automation or robots. At this station, workers use the turning station to rotate the workpiece carrier by 180°. Without any physical effort at all – ergonomics and process optimization play a major role.

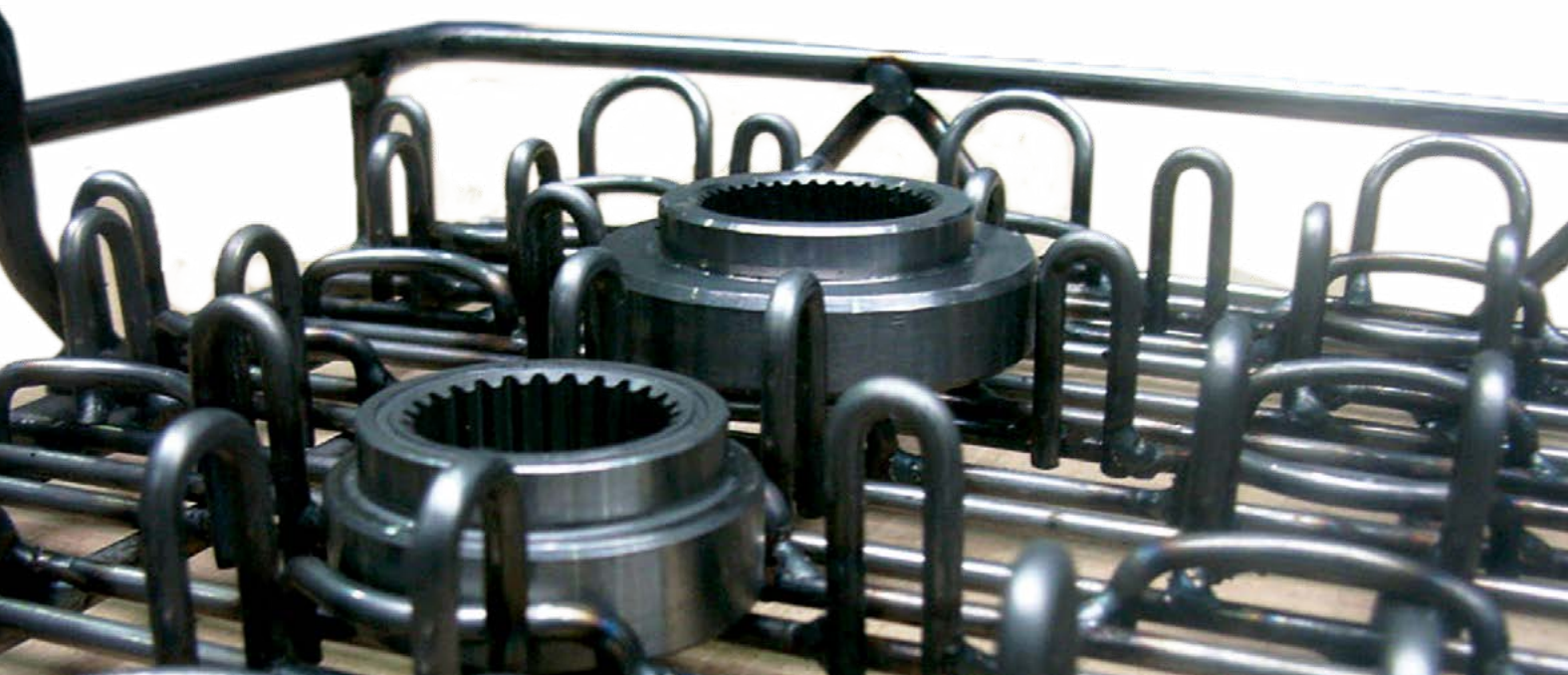


APPLICATIONS

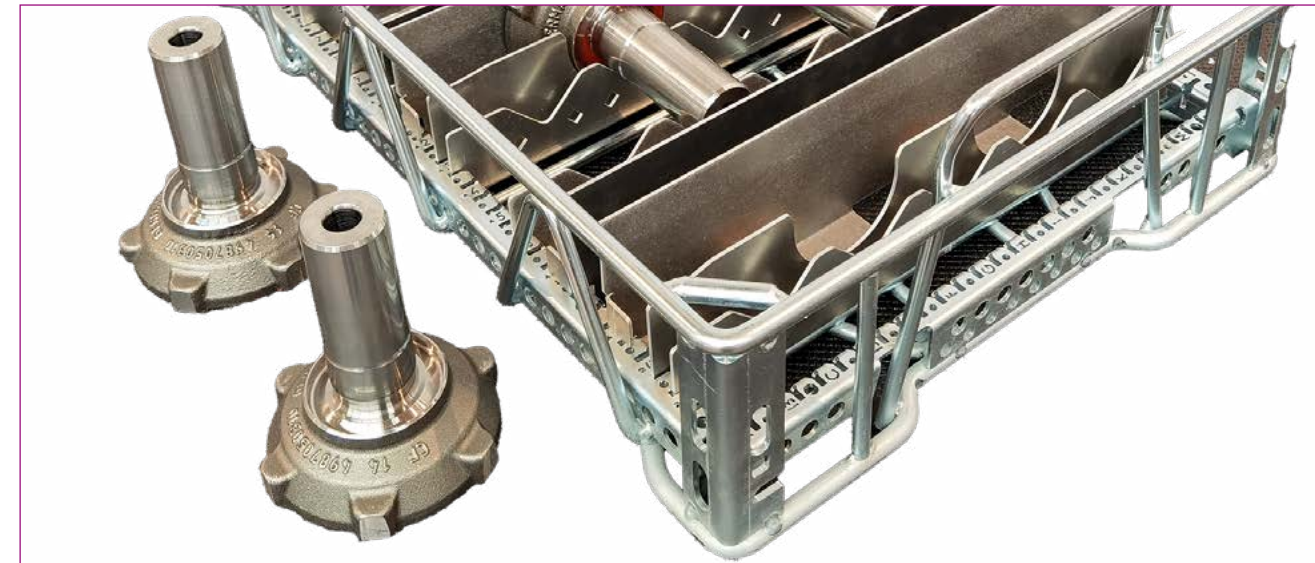


Wire and sheet-metal workpiece carrier

Wire-Sheet Metal Combination: Precision meets washability. For delicate components that require both, the highest precision and optimal cleanability, our wire-sheet metal combination combines the strengths of both materials. Wire components ensure gentle support and perfect washability, while precision sheet metal elements guarantee positioning accurate to the millimeter.

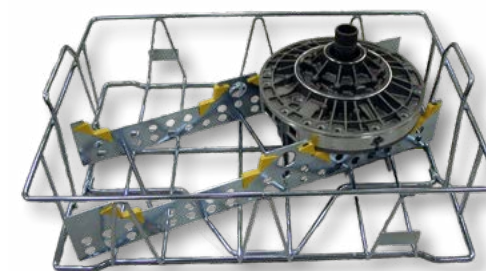


APPLICATIONS



Wire components for optimal washing performance:

- Complete flushing of all areas
- No dirt residue in corners or along edges
- Gentle handling of delicate surfaces
- Interchangeable sheet metal components for maximum precision
- Millimeter-precise positioning for automation
- Quick replacement in case of product change or wear and tear
- Customization to accommodate various component geometries
- Long-term cost savings through modularity

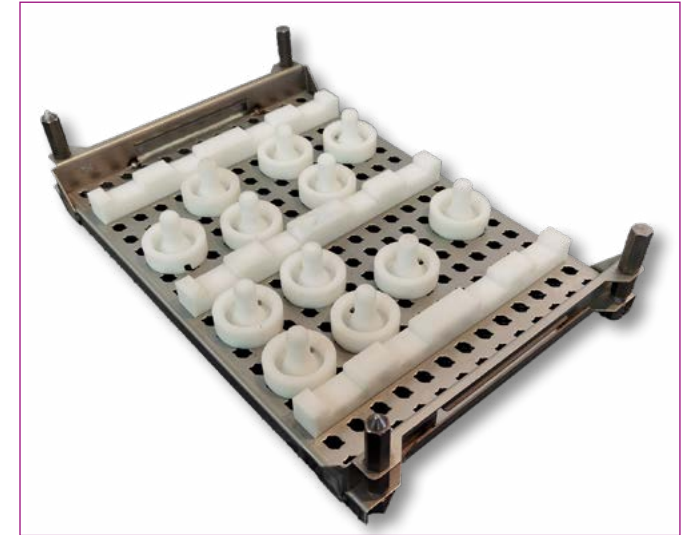
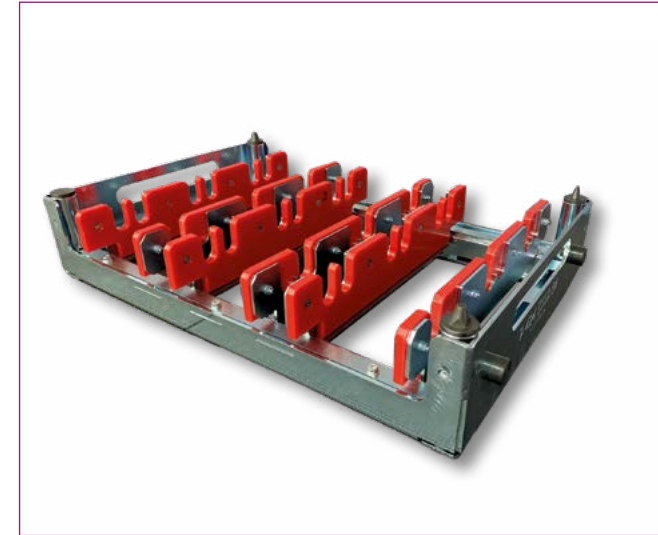


APPLICATIONS

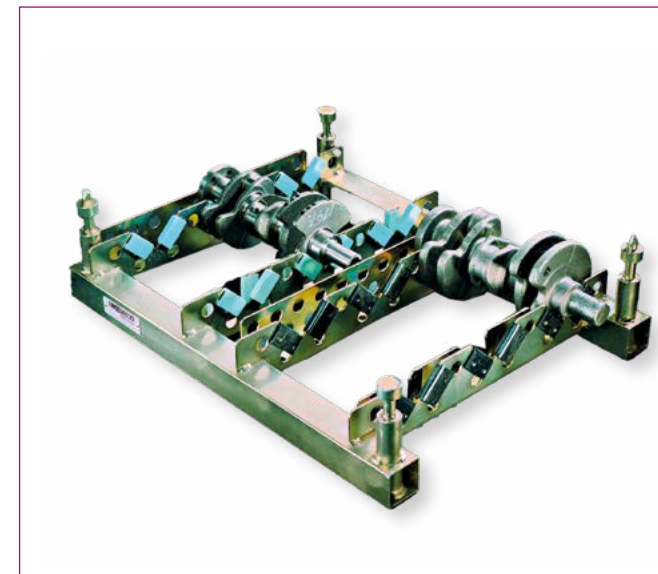
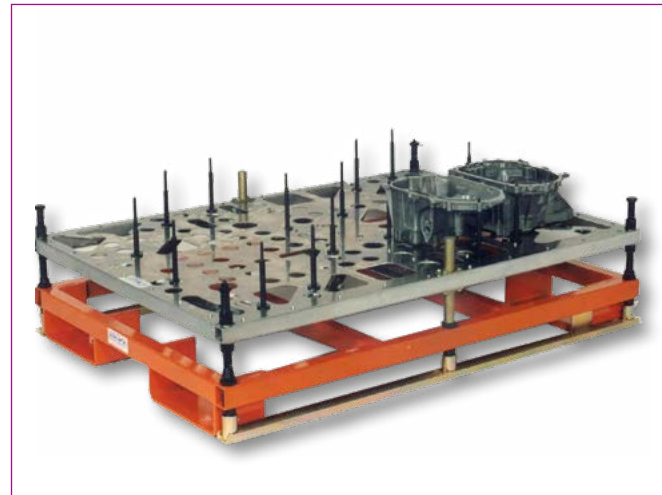
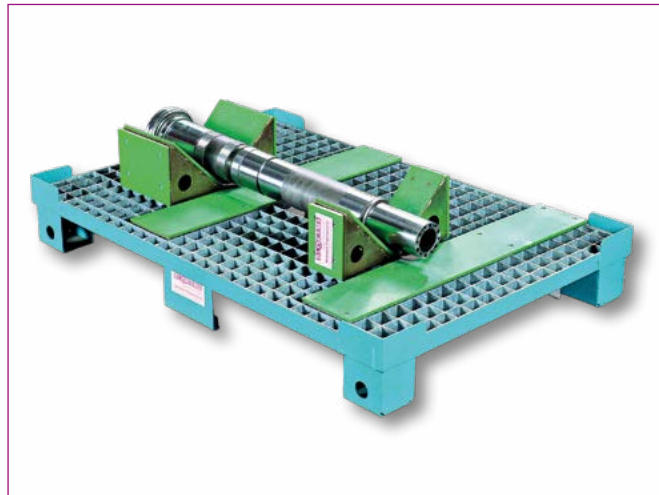
Flexible workpiece carriers



Vulnerability & anti-twist protection



For heavy components



Inlets



APPLICATIONS

Workpiece carrier with a handling system for automated transport



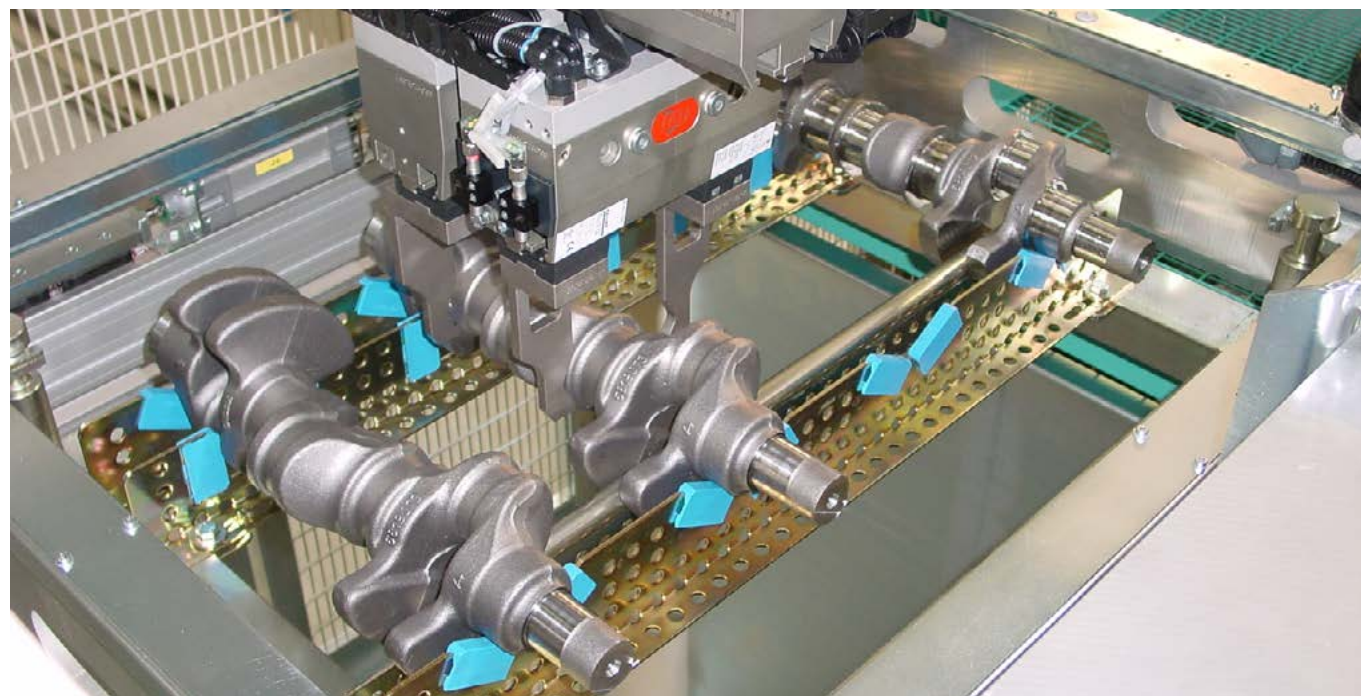
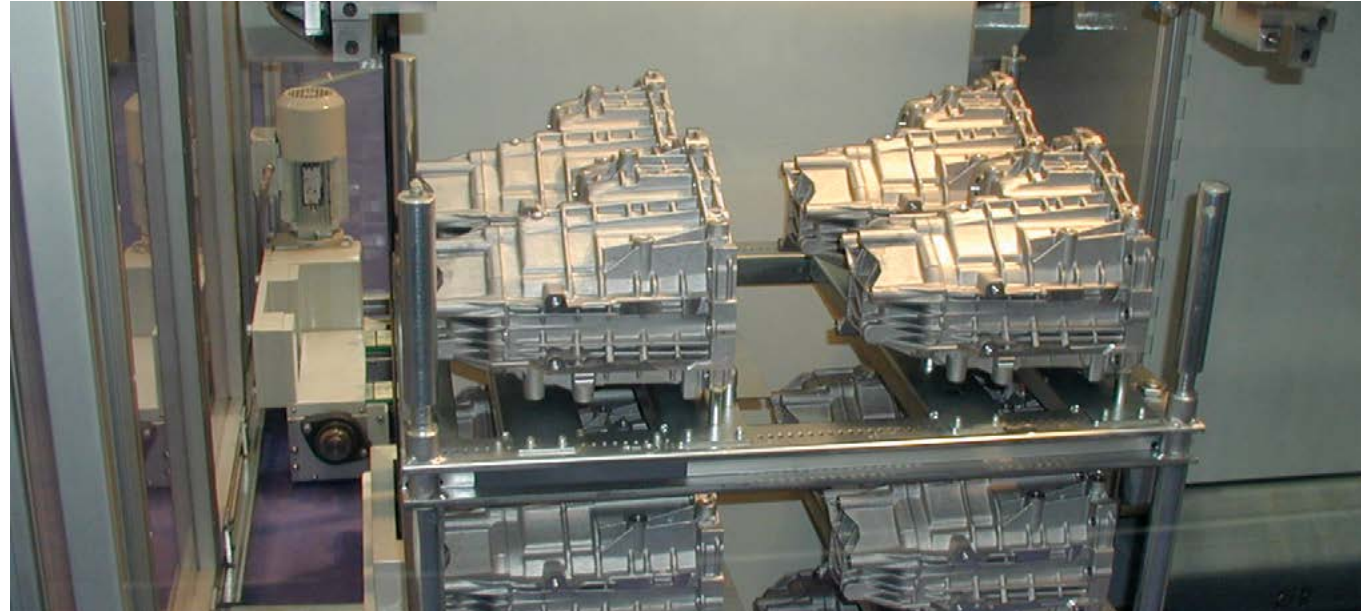
APPLICATIONS

Workpiece carriers for robotics and cobot applications



APPLICATIONS

Stackable or buffer workpiece carriers



Trust, that inspires...

Many well-known companies rely on solutions from BLOKSMA

AEG • Allweiler • AMG • Arburg • Atlas Copco • Audi • Behr • Benzinger • Beru • Bitzer • BMW
Boge • BorgWarner • Bosch • Brose • BRP-Rotax • BSH • Bürkert • Caterpillar • Continental •
Daimler Truck • Danfoss • Eaton • Eberspächer • ebm-papst • EMAG • FAG
Faurecia • Federal-Mogul • Fein • Felsomat • Festo • Ford • Gardenia • Gemü
Georg Fischer • Getrag • GKN • Grob Güdel • Hanning • HandlingTech

APPLICATIONS

Workpiece carriers for intralogistics



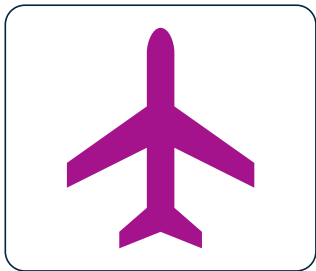
Hansgrohe • Hatz • Heidelberg • Hella • Hoerbiger • Husky • IFA • IMS Gear
John Deere • Knipex • Kärcher • KUKA • Liebherr • LUK • Lütze • Magna Steyr
Mahle • MAN • Mannesmann • Mercedes Benz • Metabo • Miele • Nidec • Opel
Parker • Pierburg • Porsche • Promot • Schaeffler • SEW • Siemens • Stihl
Thyssenkrupp • Trelleborg • Valeo • Vibracoustic • Volkswagen • Vorwerk • Wabco • ZF



INDUSTRIES WE SERVE



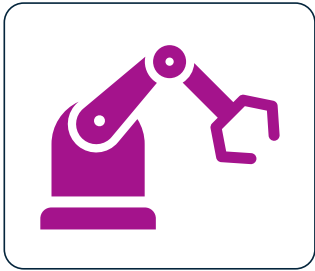
AUTOMOBILE / TIER I & II



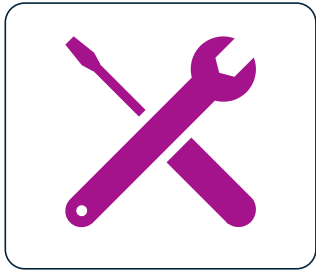
AERONAUTICS AND SPACE



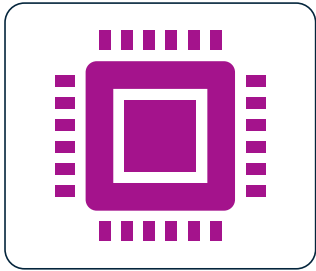
LOGISTICS



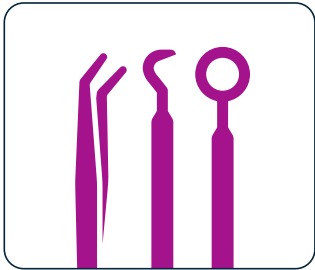
AUTOMATION



TOOLS



ELECTRONICS



MEDICAL TECHNOLOGY



PHARMA



PLUMBING / FITTINGS



AGRICULTURE / FARMING



FOOD



BEVERAGES

COMPLETE SOLUTIONS FROM BLOKSMA



1 | TROLLEYS



2 | LIFTERS



3 | SUPERMARKET



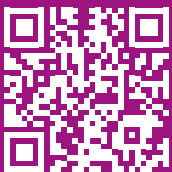
4 | TRANSPORT-LOGISTICS



5 | FLOW RACKS



6 | WORKPIECE-CARRIERS



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