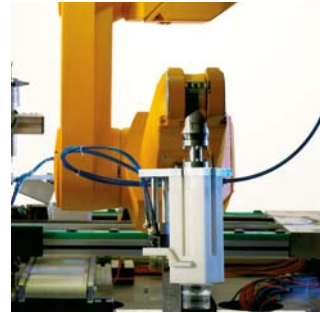
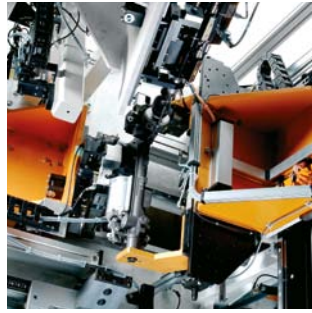


Precision meets innovation –
custom-made assembly systems



Bremer Werk für
Montagesysteme GmbH



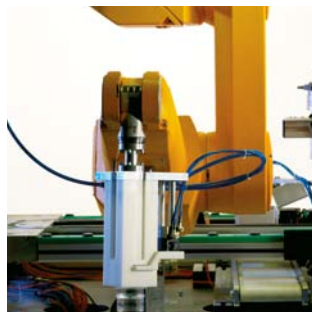
bwm line concept

bwm assembly lines enable different versions of complex components to be produced, with the option of increasing component variety as required. The modular design and combination of standard bwm components means that systems can be easily extended to include additional variants and larger quantities.



bwm revolving transfer and linear transfer concept

For short cycle times, large quantities and minimal space requirement for production equipment, we provide you with fixed-speed machines – combined with manual or fully automatic workplaces.



bwm robot cells – P3 module

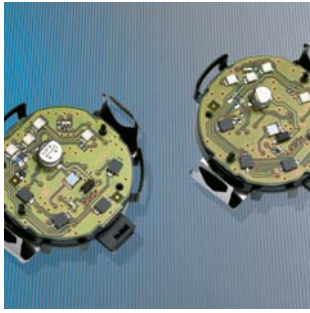
The cell concept can be adapted to changing production requirements with a maximum of flexibility, either as closed cells or in a system comprised of several modularly organised cells. Your sales department can define the parameters online and in this way achieve effortless variant production with a 100 % quality guarantee, without tooling or storage losses.

Depending on the specific requirements of the assembly process, portals, Scara or six-axle robots are integrated with image processing for robot control and inspection. bwm is partnered with all the leading robot manufacturers. Design, programming and commissioning are ensured by the experienced robotics team at bwm.



bwm flexible assembly systems

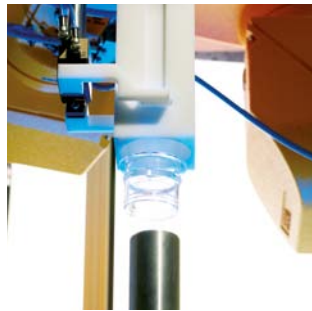
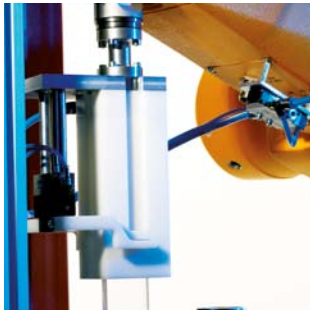
For small and medium-sized series for which a fully automated solution is uneconomical, bwm has developed the Flexible Assembly System. Ergonomic workplaces and automatic cells are combined to form an assembly system that allows you to customise your production start-ups with versatile deployment of your assembly personnel. Fluctuations in quantity are managed effortlessly, additional variants or new products can be added quickly and economically.



bwm MDE/MES/BDE, MO/P/S[®] production control systems

MO/P/S[®], the modular inspection system, controls and monitors the most different production processes. It meets the special requirements for flexibility, reliability and efficiency of inspection procedures, up to and including 3-shift production.

Modular bwm software applications for the acquisition of machine and operating data enable high availability for your production. The software order tracking module ensures quality and on-time delivery, for batch sizes or sequences. It handles job controlling and tracks the data of components. The module operates as a closed system, including data archiving, or an interface to your particular data network.



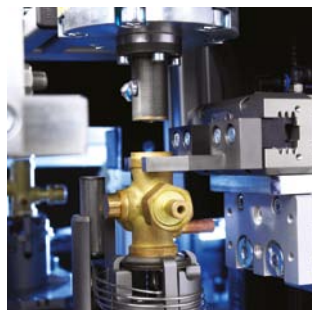
bwm in-line plastics processing

bwm in-line plastics processing enables plastic parts to be processed straight from the injection moulding machine to the finished end-product.

One or indeed several parts can be taken from an injection moulding machine by a robot and processed in the required assembly steps to form the finished product. Alternatively, parts can be placed in the injection moulding process and subsequently refined. The process is also suitable for combining with machine tools and/or processing centres.

Sample applications:

- Plastic screens for the automotive industry
- Syringes for medical technology
- Wind tunnels for automotive



bwm joining module

The bwm joining module enables high-precision joining or shaping of components.

Accuracies of ± 0.03 mm are achieved with a joining force of up to 100kN.

Joining force and joining travel are measured using external sensors.

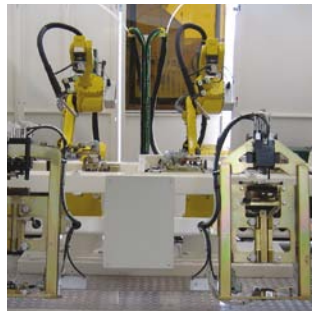
Sample applications:

- Joining two heated plastic parts
- Calibrating a valve seat
- Precision crimping of sockets
- Calibrating a pressure regulator
- Tensioning springs



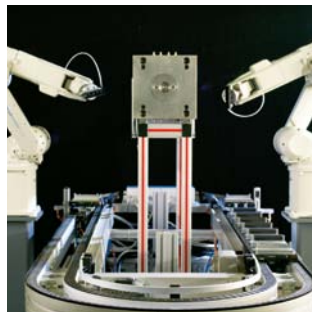
bwm manual workplaces/jigs

bwm manual workplaces/jigs are suitable for small-scale or advanced prototype production. Components are manually inserted into, or removed from the respective receptacles. When the machine is started, the production process runs automatically, including process and quality control. The experience gained in this field can later be applied to a fully automatic system.



bwm welding systems

We create custom-made solutions for all types of welding, from **electric arc** to **resistance welding**. Our product range also includes **plasma welding** and **laser welding**, semi- or fully automatic as a robotic system, and **hot plate welding** for plastics.



bwm assembly system technology



The MST division at bwm operates separately in the market as a BOSCH REXROTH authorised dealer.

From north Germany's biggest warehouse you can obtain:

- All components in the aluminium profile construction kit
- Aluminium frames tailored to your needs
- Individually planned manual production systems
- Kanban rack systems for the materials supply chain
- TS1, TS2, TS4, Varioflow, Ecoflow mechanical transfer systems
- Adapted protective equipment as components or turn-key

bwm service

bwm caters to every requirement for production facilities when servicing your plant, be it with maintenance support, handling all maintenance and repair work, or analysing your plant for optimisation. This is an important factor for ensuring your ability to deliver.



Bremer Werk für Montagesysteme GmbH

From idea to turn-key plant

... we're your partner for system solutions!

Your requirements are translated by our experienced project team into detailed turn-key concepts. The expertise of our employees is a guarantee for professional implementation: by taking every factor of relevance for the product into consideration, the ideal solution in terms of engineering and profitability is developed.

Our project management system ensures end-to-end implementation of the concept. For the entire duration of the project, you have a contact who brings your needs and requirements into the project team and who is responsible for implementation.

With cutting-edge CAD systems, our designers turn ideas into practicable applications. The bwm PPC system is another building block in the implementation chain. The high quality standards you require are assured through continuous development and refinement of our processes. bwm is certified in accordance with DIN EN ISO 9001.

The assembly system is manufactured and brought online on schedule by our skilled mechanics, electronics engineers and software specialists. We can also build and test complex assembly systems in our 5,500 m² production building.

Installation and commissioning in your own plant is handled by our skilled bwm start-up teams. In very little time, your system is brought online and the key handed over.

We have been designing and producing assembly technology for production lines for more than 50 years.

Our solutions cover the following processes:

- **Clinching**
- **Drilling**
- **Gluing**
- **Labelling**
- **Loading and unloading**
- **Marking**
- **Metering (1-/2-component)**
- **Milling**
- **Mounting**
- **Packaging**
- **Pressing**
- **Riveting**
- **Testing (mechanical & electronic variables, visual checks)**
- **Screw fastening**
- **Soldering**
- **Sorting**
- **Welding**

Our customers from many different fields of industry set us tough challenges that we are able to master with the successful solutions developed with the skill, expertise, dedication and commitment of our employees.

Our wealth of experience as a supplier to the automotive, electronics, electronic engineering and telecommunications industries and in the field of measuring and inspection technology ensure high innovational potential in accomplishing the tasks you set.

Request further information or set us a challenging task.

Did we not mention your particular industry? Do none of the concepts match your products? Then come and talk to us, because our range of products and services also extends to classical mechanical engineering. We'll find the right solution for your specific task!

Our performance profile

- Engineering**
 - Customer advisory services
 - Project planning
 - System optimisation
- Design**
 - Mechanical design at CAD workstations in 2D/3D using CADRA, SOLID-WORKS and AUTOCAD
 - Electronic circuit diagram production using EPLAN and ELCAD
- Production control**
 - MDE/MES systems
 - Interfaces for PPS, CAD, CAQ and CAM data
- Inspection technology**
 - Modular microcontroller-based inspection systems (MO/P/S®), up to and including industrial PCs as standalone computers or as a server-based network.
 - High-level language programming
 - Laboratory and ICT test beds
 - bwm camera systems
- Robotics**
 - Assembly, inspection and logistics applications with all standard makes (e.g. ABB, Adept, Epson, Fanuc, Kuka, Mitsubishi, Motoman, Denso, Stäubli)
- Laser technology**
 - From all leading manufacturers, such as Baublys, Foba, JENOPTIK, Limo, Rofin Sinar, Trumpf
- Control engineering**
 - Software engineering for different makes of control system (e.g. Allen Bradley, Beckhoff, Mitsubishi, Moeller, Omron, Siemens)
 - Process visualisation
 - Implementing interfaces to superordinate systems
- Field bus systems**
 - In test engineering, robotics and control engineering, all the common field bus systems, such as Profibus, ASI-bus and Ethernet are used.
- Installation and commissioning**
 - Worldwide service with experienced specialist fitters, technicians and engineers
 - Online service
- Instruction and training**
 - Operator and service personnel are trained in Bremen and your production sites
- Service**
 - 24-hour service
 - Remote maintenance
 - Service-level agreements
 - Hotline

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