



BIMERIC BM

Servo production and
assembly system

Production system

Assembly system

Complete system
production and assembly

1000 tasks – one solution

The BIMERIC servo production and assembly system is the ideal solution platform for your cost-effective assembly production. The modular system shows its benefits especially for small and medium batch sizes and if you require a large number of different versions. With the powerful flow-production from raw material to installation-ready assemblies, you achieve the highest manufacturing quality.

State-of-the-art servo and control technology ensure maximum process reliability and shortest set-up times so you can react even more flexibly to customer requirements. In addition, you have the freedom to adapt the BIMERIC to your specific requirements at any time.

BIMERIC – multi flexible system for your success.

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Servo production and assembly system

All-in-one servo system
for a variety of tasks



Highlights at a glance

- Universal all-in-one servo system for highly efficient assembly production solutions
- Very fast and 100% reproducible setup – ideal for short production runs
- Simple integration of standardised process modules for extended applications
- Highest production quality thanks to continuous component handling
- Comfortable operation with central VariControl VC 1 control system

Small batch sizes and a large number of different versions

The trend in assembly manufacturing is towards smaller batch sizes. For manufacturers with a wide range of assemblies or assembly versions and hence frequent change-over processes, set-up times become the decisive factor for an economic production.

With the BIMERIC you master these challenges with ease. Powerful servo technology in combination with intuitive control technology guarantee the fastest set-up with 100% repeatability. For product or version changes, in most cases you only need to exchange the active tool parts, call up the programmed data in the controller and restart the production.

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Modular system

A matching module for every application

With the BIMERIC, you can cover a wide range of components. With Bihler servo technology, it is also possible to adapt the BIMERIC to your individual applications. You can rely on the options of our modular system.

The modular system offers a comprehensive portfolio of process modules for all forming, assembly, handling and joining applications. You benefit from having one contact person for all processes, devices and control systems. If you have special requests, we modify the modules according to your individual requirements.

The three basic BIMERIC modules

● Control system

The central VariControl VC 1 machine and process control system allows a safe and comfortable operation of your BIMERIC.

○ Process modules

Depending on your application you can select from a comprehensive portfolio of Bihler NC process modules for all forming, assembly, handling and joining applications.

● Mounting block

The modular base platform of the system: Depending on the project requirements, several machine base units can be combined in linear, L, T or any other form. Grid holes allow a fast and exact positioning of the NC process modules.



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BIMERIC SP

Servo press / BIMERIC

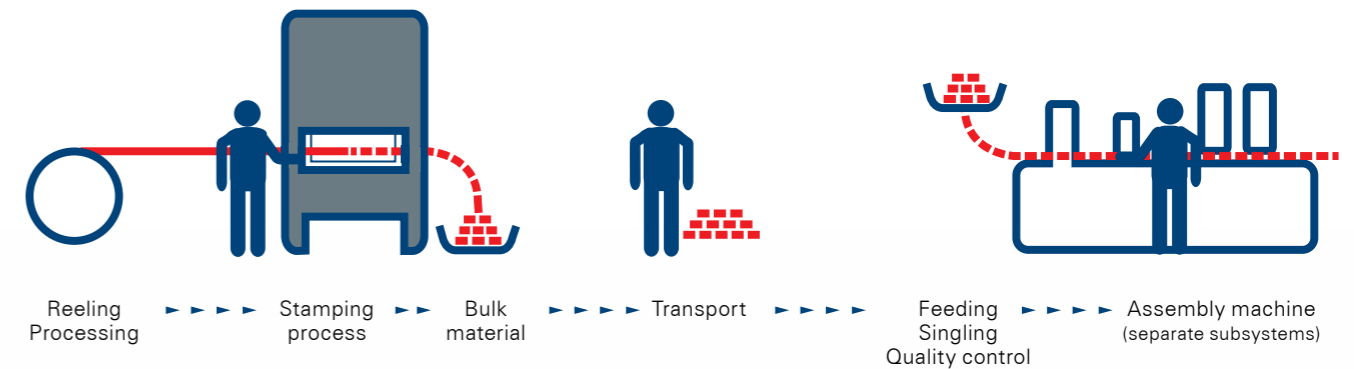
More efficient assembly manufacturing with progressive equipment

The BIMERIC can be combined with the SP 500 (resp. SP 800) servo press. This innovative machine combination solves the problem of sequential assembly manufacturing in subsequent groups. You now machine the stamped and formed parts produced in the SP 500 directly at the carrier strip on the BIMERIC platform and assemble them to finished assemblies.

Processes such as contact welding, thread forming, adding screws, etc. can simply be outsourced from the press now. This reduces the tool length in the press and creates a much better accessibility to the individual processing stations. With this continuous component handling, you streamline your process chain, constantly produce assemblies of the highest quality, and save cost regarding subsequent machines and logistics.



Problem: Conventional throughput with composite tool technology



Your key to success: All-in-one-solution on one system

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Applications



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Applications

BIMERIC BM 3000: Highly efficient manufacture of completely different assemblies (tool change within 1/2 h)



Application - „Contact component“

Output 80 components per minute



Contact component

- The NC feeder RZV 2 feeds the bronze strip from the coil to the machine.
- The contact welding unit D2KQ welds a bimetal contact onto the strip.
- The strip is then introduced into the 150 kN press which stamps the spring part's geometry.
- This process is followed by forming operations in the forming tool.
- The separating tool cuts off the spring part from the carrier strip.
- The 1st pick & place unit PPE 2 places the angle part coming from the compactor onto the transporting belt's component carrier.
- The 2nd PPE 2 unit places the spring part onto the angle part. The part is riveted and transported.
- The 3rd PPE 2 unit ejects the finished contact component.



Lamp holder

Application - „Spool carrier“

Output 40 parts per minute.



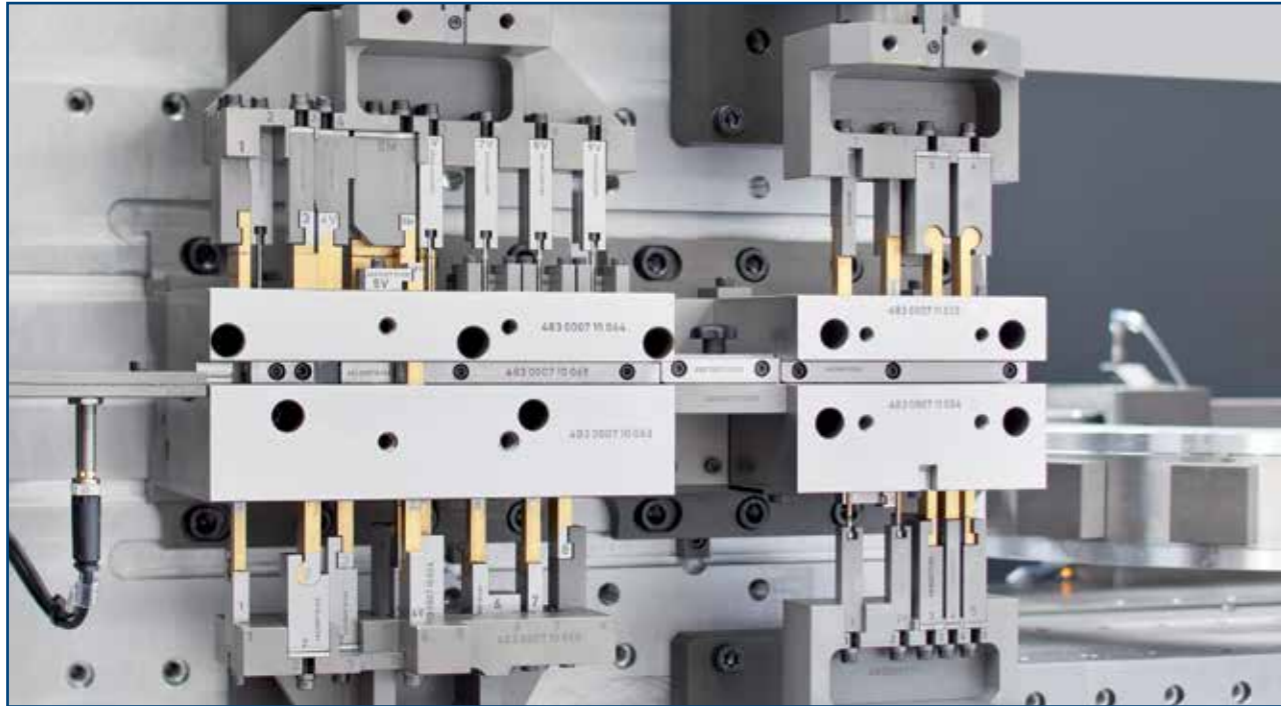
Spool carrier

- The NC radial gripper feeder RZV 2 feeds the bronze strip directly from the coil to the machine.
- The 150 kN press cuts the filigree geometry out of the strip.
- This process is followed by forming operations in two forming tools.
- Inside the separating tool the part is then cut off the carrier strip.
- The plastic parts coming from the compactor system are placed by the 1st pick & place unit PPE 2 onto the transport belt's component carriers.
- The 2nd PPE 2 places subsequently two filigree parts onto each plastic part. Placing the second part, the gripper is turned by 180°.
- At the end of the process the 3rd PPE 2 ejects the complete component.



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Set-up

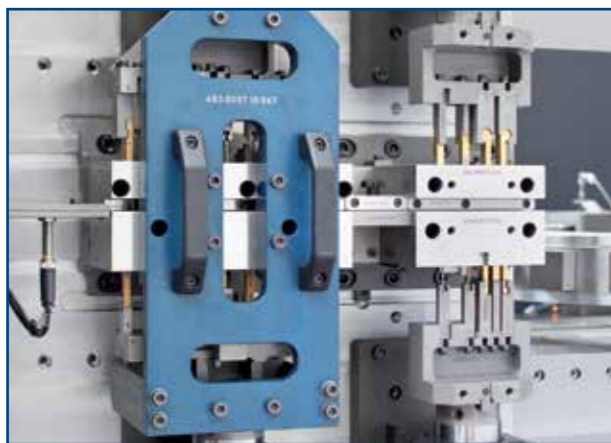


Linear tool in modular design

Fast, easy setup

With intelligent Bihler servo technology, your setup is simple, fast and 100% reproducible. You program all unit movements in the central machine and process control system. When changing tools, you simply call up the relevant parameters with the push of a button.

Rapid tool change systems on all units and quick change devices allow for a fast and safe tool change and removal. The excellent accessibility of all modules facilitates your setup and maintenance operations even further.



Easy removal of the whole forming module using clip-on rapid change device



Highlights of the control system

- Easy, flexible machine setup without external programming device
- NC processing units are programmed directly via a simple input screen
- Customised menu-driven entry for fast setup and retooling
- Multi-media diagnostics and online help system
- Freely configurable, individually adaptable production menus and user interfaces
- Integrated recording of measurement and production data
- Remote maintenance for rapid support

Comfortable operation

The central machine and process control unit VariControl VC 1 supports you like a second operator on the machine. You operate the machine via a comfortable swivel terminal with touch screen and other control elements. The bASSIST integrated multimedia diagnostic and online help system supports you with videos, images, manuals, etc. and allows you to easily optimise your processes.



System design	Standardized modular system (individual design possible)
Stroke rate	Max. 250 strokes/min. (depending on the application)
Drive	Fully NC
Control system	Machine and process control system VariControl VC 1. Separate switching cabinet with power supply unit and electronic control and monitoring system; movable operating unit with 15" TFT touch screen, keyboard and operating controls; machine controller with I/O bus module for the complete machine control system; tool controller with I/O bus modules; 4 freely programmable modules as standard with 8 channels each that can be programmed for input or output; 2 programmable bus modules with 16 inputs and 16 outputs; pressing force and slide force monitoring optional
Integrated supply	Pneumatics, hydraulics and central lubrication (depending on the application)
Feed	NC radial gripper feeder RZV 2; feed length from zero to infinity
Servopress SP 500	Max. cycle rate 400 1/min.; nominal power 500 kN; steplessly adjustable stroke range 15 mm – 63 mm; steplessly adjustable stroke position range 0 – 60 mm; tool mounting plate (L×W) 1000 mm × 560 mm
Presses	NC two point eccentric press: max. nominal force 150 kN, max. stroke 8 mm NC two point eccentric press: max. nominal force 150 kN, max. stroke 12 mm NC two point eccentric press: max. nominal force 200 kN, max. stroke 12 mm NC two point eccentric press: max. nominal force 300 kN, max. stroke 16 mm
Slide units	NCA-2: max. nominal force 0.4 kN / 0.8 kN, max. stroke 60 mm and 120 mm NCA-3: max. nominal force 2.5 kN / 5 kN, max. stroke 120 mm NCA-4: max. nominal force 10 kN / 15 kN, max. stroke 120 mm NCA-5: max. nominal force 40 kN, max. stroke 100 mm
Assembly line - standardised workpiece carrier distance	100 mm, 150 mm, 200 mm (individual operational profiles and increments are possible within this range); special lengths possible up to 450 mm
Assembly line - positioning accuracy	+/- 0.10 mm
Mounting block - working range	On 3 sides with pattern drillings and on 2 ends of the mounting block
Mounting block - dimensions	Length 1,500 mm (combined up to 4,500 mm), width 500 mm, height 500 mm
Upper edge of material	1,230 mm above the ground (if stamping and forming module is inserted)
Protective device	Protective fence, personal protection or sound enclosure

You can find more information on the individual NC process modules in the product flyers/brochures.



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