THE FACTS

BSA technical data.

		BSA 63	BSA 100
Motor axis height	mm	36 / 40 / 48 / 63	63 / 80 / 100
Motor length	mm	189 / 144 / 177 / 213	240 / 361 / 442
Motor cooling		Air-cooled	Liquid-cooled
Motor performance	kW	0,9 – 2,30	5 – 20
Gearing (optional)	i	5:1	5:1
Drive torque (with gears)	Nm	1,4 – 7,3 (7,0 – 36,5)	16 – 125 (80 – 625)
Safety function, standard		Safe stop (STO)	Safe stop (STO)
Number of integrable servo axes according to type of stamping machine, standard	BSTA 200 – 510 BSTA 810 – 2500	1 – 6 1 – 2	1 – 3 1 – 2
Number of integrable servo axes for machine retrofitting, standard	All BSTAs with B2-control and BSVs from 2018 onwards	1 – 2	1 – 2
Additional servo axes, special applications plus extension and safety solutions		Available on request	Available on request

All the advantages at a glance.

Fully integrated solution in one package.

- More constructive freedom in tool construction.
- More design freedom in the process flow.
- Integration of all functions in the BRUDERER user interface.
- Less space required as it is built into the BRUDERER control cabinet.
- Perfect interplay between all of the components.
- The ultimate in productivity and process reliability thanks to BRUDERER's time-tested quality.
- Cost savings generated by greater process efficiency and improved throughput.
- Single point of contact for support and training.
- Global presence via our own subsidiaries and expert partners.

Are you interested in finding out more about BRUDERER's new integrated servo axis technology?

We wil be happy to outline your individual possibilities.

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BRUDERER
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BRUDERER
PRECISION – SWISS MADE

BSA servo axis technology

Driving your productivity.

THE TECHNOLOGY

Servo axes can do so much more!

In stamping technology, servo axes have made a significant contribution to the optimisation of stamping processes for almost 20 years now. Servo axes are electrical drives with electronic position, speed or torque control which enable movements with extraordinary dynamics and the highest precision. The advantages they bring are clear to see – the significantly reduced masses that need to be moved thanks to the implementation of servo drives mean that machining and tooling can be simplified while maintaining high levels of performance and efficiency. Depending on the design, servo axes also ensure less wear and tear, and this reduces maintenance costs, while retooling is also much simpler with servo technology.

Servo axes comprise three basic elements:

- A servo inverter with power electronics (active component for generating torque) and control electronics (adjustment, monitoring, actual value tracking)
- Servo motor with sensor and measuring device for angle and speed feedback and a brake to maintain position at standstill
- Gears for speed and torque conversion

THE USES

The new BRUDERER BSA servo axis technology.

BRUDERER's new servo axis technology is setting new standards in terms of servo drive technology for stamping processes. It combines the advantages of servo axes over mechanical drives with the benefits of the fully integrated technology of experienced manufacturers across the entire stamping process, providing more flexibility and efficiency and a whole host of new possibilities within the production chain and in tool manufacturing.

Increased possibilities

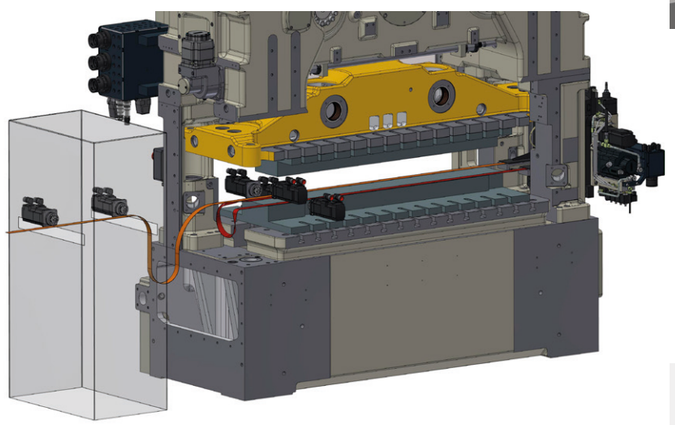
With up to six servo axes that can be integrated in combination with BRUDERER feed systems, more comprehensive processes and thus simpler tools become a possibility. Each servo axis can also carry out different functions that are freely programmable and based on the tool.

More flexibility

The patented and variable torque adjustment constantly ensures optimum strip tightening and/or intermediate lifting in the stamping process.

More room

Thanks to the fully synchronised servo feed, tools can be manufactured to be more compact yet at the same time more complex. The servo inverter can also be integrated into the existing machine control cabinet, saving on space, and easily controlled via the machine's user interface.



More process reliability

Ultra-modern control technology as well as integrated measuring and monitoring functions make it easy to use and ensure micro-scale tolerances. The interlinked controlling of the machine, the feed and the servo axis guarantee harmonised process interventions at all times.

More productivity

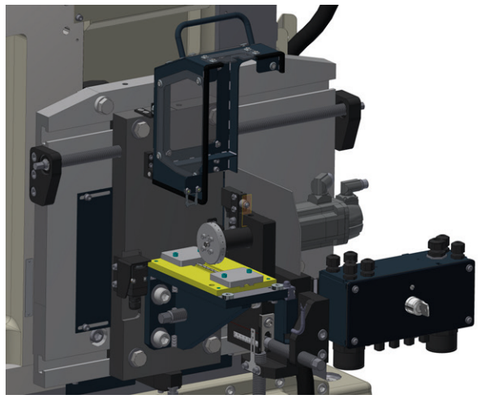
For the first time ever, the new BRUDERER servo axis technology gives clients a high-performance stamping press with a servo feed, servo axes, controlling and global maintenance all in one package, with one point of contact, as well as all the benefits of maximum precision, efficiency and economy.

THE USES

Better stamping processes thanks to BRUDERER servo axes.

All around the world, a host of leading companies have come to rely on all of the many advantages that BRUDERER stamping presses and feeders can provide, using them to leverage their manufacturing expertise to create first-class products. The new BRUDERER servo axis technology once again sets the standard in this respect, and demonstrates how the stamping process can be still further improved via perfectly integrated servo axis technology with the addition of up to six servo axes, all of which can have their own individual functions based on the needs of the tool. It means that we can guarantee optimum precision and the utmost flexibility for your production processes, combined with the kind of reliability that has made BRUDERER's reputation worldwide.

The versatility of BRUDERER servo axes can be seen in the various ways in which they can be put to use, placed either inside the tool (in-die design), inside the tool loading area (internal design) or outside the stamping machine (external design). Depending on the application, the servo axes can be configured and laid out individually, with servo drives of different dimensions, performance and torque levels available. As an option, each servo axis can feature an additional transmission gear unit and hand-held control.



Class 1: processing modules

(speed-controlled)

Control of tools such as milling spindles, thread cutters, drills etc.

Class 2: positioning modules

(position-controlled)

Simple adjusting axes with or without dynamic correction.

Class 3: synchronous modules

(synchronisation-controlled with the machine or feed speed)

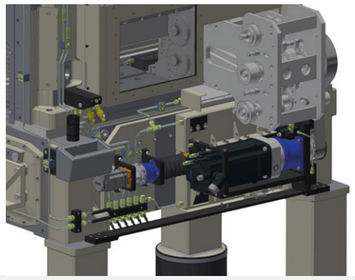
- Transport and conveyor units (feeder or de-stacking units)
- Tool functions and movements (assembly or cross slider, ejector, pawl feeder etc.)
- Strip and feed tightening (additional feed or sprocket wheel – solo or in combination with a BRUDERER BSV servo feed)

Combination modules

All usage modules are flexible and can be combined with others. Combinations of up to six BSA servo axes and two BSV servo feeds are possible and can be used for example for the processing, assembly and checking of multi-component products.

Special usages

Liquid-cooled servo drives are used to create movement or power combined with high performance. Please contact us for solutions for cutting, levelling, bending and positioning.



BRUDERER BSA servo axes at a glance:

- Up to six servo axes for standard integration into the machine control cabinet (machine types: BSTA 200, BSTA 280, BSTA 410, BSTA 510)
- Up to two servo axes for standard integration into the feed control cabinet
- Basic specification: "Safe stop (STO)" safety function
- Servo motor axis height: 36 mm – 63 mm (drive torque: 1.4 Nm – 7.3 Nm)
- High-torque servo drives available as options (drive torque: 16 Nm – 125 Nm)
- Gearing (5:1) and hand control available as options