



# The right solution for every application.

## Today's innovations for tomorrow's tasks.

The trend towards more efficient applications is making greater demands on the materials being processed. The ultimate in precision is required of stamping tools as well as maximum flexibility, particularly when it comes to strip feed systems. High feed accuracy means longer tool life.

## BRUDERER is setting the standard with the latest generation in servo, roller and gripper feed units.

Whether it is for thin strips with sensitive surfaces or heavy sheet metal, for high speeds or wide material, we can deliver the right feed units for your production process.

The feed units will guarantee maximum precision and the utmost in flexibility for your manufacturing technology as well as providing the kind of reliability that has become synonyms of the BRUDERER name throughout the world.

## The advantages of BRUDERER feed units.

## First class quality:

BRUDERER stamping presses in combination with BRUDERER feed units ensure optimum strip feed pitch with the utmost in precision, stroke after stroke.

## Flexible implementation:

Our feed units can be mounted on the left or the right side of the press and utilised as a push or pull feed, individually or in tandem (parallel or longitudinal) one pushing and the second pulling.

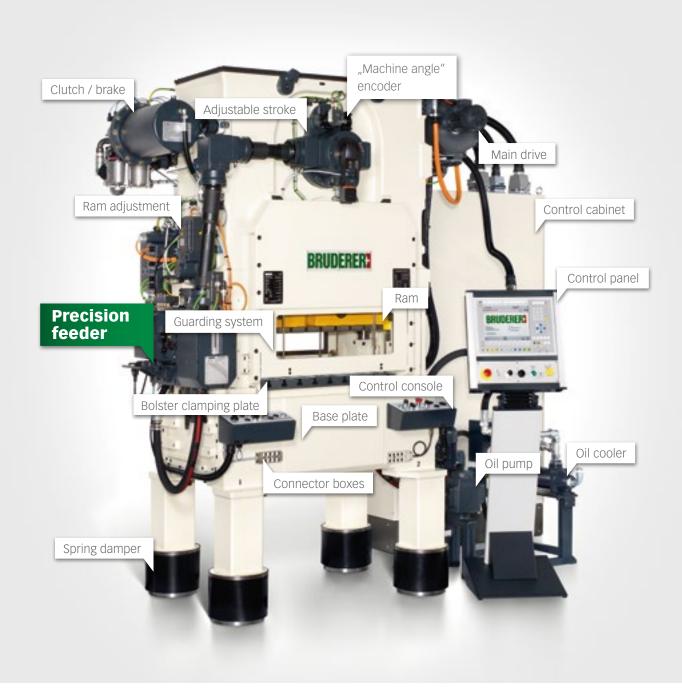
## Low maintenance:

Since our feed units are fitted to the central oil lubrication system of the stamping press, they provide high performance with minimum maintenance.

## **Customer-specific:**

BRUDERER has the right feed unit for every production process.

# A BRUDERER feed unit turns your stamping press into a high-performance stamping press.



## Servo feed units - more flexibility.

The BRUDERER BSV servo feed unit is particularly suited to sensitive strip materials and for applications where long or variable feed lengths are required.

It is fully integrated into the control system and offers a high degree of automation. Tool and parts data are stored in the memory and can be called up quickly and easily in the event of retooling, thus reducing changeover times to a minimum.

The multi programmable axes open up completely new options in terms of manufacturing. For example, staggered multi feed lengths in one and the same stamping process are made possible. The pilot release can be adjusted via the user interface of the control system, while the latest BSV generation has the further advantage of variable pilot release selections which can be fitted as standard.

The BRUDERER servo feeder is universal, and thus is a stand-alone unit, it can also be fitted onto stamping presses from other manufacturers.

## Your advantages at a glance.

## Variable feed angle:

For a more usable working stroke in a whole host of applications.

## **Variable feed length:**

Increased productivity thanks to optimum tool and machine utilisation.

## **Tandem attachment:**

The ideal solution for tandem (parallel or longitudinal) feed applications (wide and or delicate strip).

## **Complete integration:**

Both into BRUDERER B control systems and as an upgrade version (stand-alone) to existing stamping presses.

## **Quick and error-free retooling:**

Tool and component data storage as well as fully automated feed roller contact pressure and adjustable axes will increase your productivity as well as repeatability.

## Easy-to-replace feed rolls:

The patented BRUDERER quick roller-change system makes the feed rollers easy to access for maintenance and flexibility.

## No clamping bars:

During the stamping process, the feed rollers carefully maintain the strip's positioning. BRUDERER servo feeds are ideal for pre-plated, pre-stamped, thin or sensitive strips.



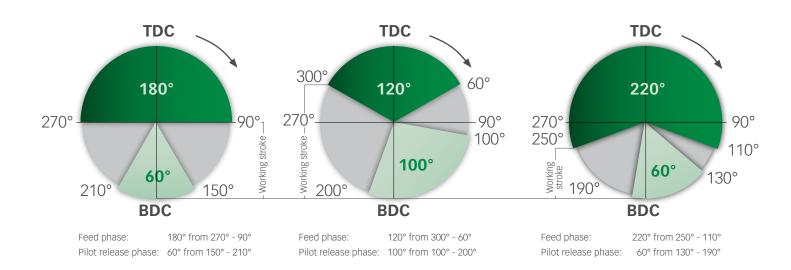
## Better ideas for better servo feed units.

## Variable feed angle.

The ultimate in flexibility: the feed start, feed angle, and pilot release can be programmed and adapted to the tool and stamping operation.

## Variable pilot release section from 60° - 120°.

The latest BSV generation provides an even bigger, individually adjustable and recordable pilot release selection which is particularly useful during deep-drawing and forming. The pilot release operation is controlled by a mechanical cam which provides perfect repeatable accuracy and guarantees precise execution of the operation.

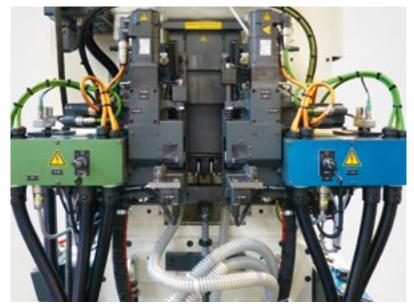


## Programmable feed direction.

The BSV can be programmed for a push or pull feed, as required.

## No dynamic feed pitch growth.

Thanks to the acceleration-free motion profile at the start and end of the feed, there is no dynamic feed growth guaranteeing full control of feeding operation during the stamping operation.







Full integration - the BRUDERER stand-alone solution.

## Full integration.

Whether they are integrated into existing BRUDERER B control systems or used as stand-alone versions for less modern presses, our servo feed units provide high levels of flexibility and also significantly lower change-over times thanks to their data storage device

## Tandem attachment.

The BSV 75 and 75T feed types are designed as tandem units which are very compact and can be controlled independently from one another. The tandem layout enables two strips to be advanced individually.

## No clamping / gripper bars.

The strip is held during the stamping process by two driven feed rollers.

## Stop angle-optimised feed window.

This function is particularly useful for sensitive tools. It maintains the feed angle as small as possible so that the feed and strip position can be controlled at an early stage before the relevant tool components (i.e. the punch and the pilot pin) come into contact with the strip and cause any damage due to incorrect positioning.

## Simplified initial stamping.

There is a help menu in the control system which enables the feed rollers to be activated in the TDC position of the press via a switching command, which allows the machine operator to feed the current strip length slowly forwards and backwards – with an unobstructed view of the tool! The control system ensures that the right feed length is always advanced at the beginning of the stamping, and that the initial stroke movement occurs at the right point thus the pilot pin and other tool components are not damaged.

## **Easy-to-change rollers.**

The drive rollers are clamped centrally between conical bolts. By loosening the outer screws, the bolts are put back and the rollers can be changed in and out in the shortest possible timeframe, giving users the possibility to go from full to profile rollers and back. Even regular changes mean no significant loss of time.

## Online support.

BRUDERER customer services offers rapid help and support in the event of faults via a webbased diagnostics tool which provides remote diagnosis and support, keeping down time to a minimum.

## Programmable pneumatic roller contact pressure.

Never before has setting to another press tool been so simple. The saved data is automatically recalled during set up giving optimum strip pressure for production.

## Motorised strip thickness adjustment.

The set-up is carried out in the roller lifting system via an adjustment spindle, which can be adjusted either by hand or using a servo motor. In the case of the latter, the data can be stored for individual tools, thus reducing retooling time.

## Interval / progressive stamping.

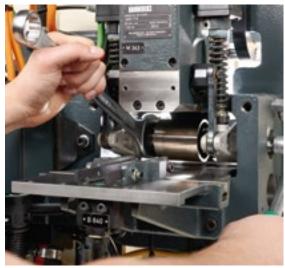
This function makes it possible to have various feed lengths in one stamping process and to stamp different patterns. It is also possible to vary between increasing and decreasing feed lengths from stroke to stroke.

## Remote operation.

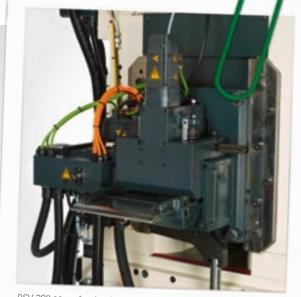
This gives the machine operator optimum freedom of movement around the feed with no loss of functionality.



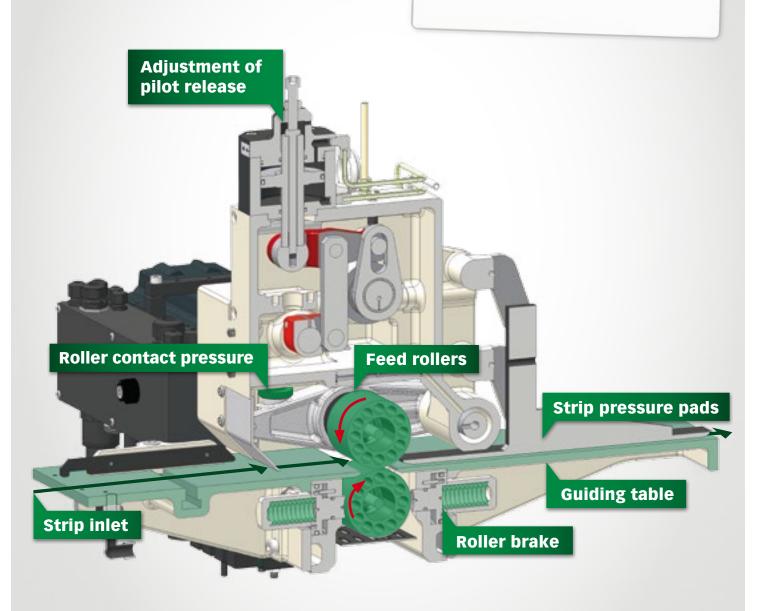
Remote operation, pneumatic contact pressure.



Easy-to-change rollers.



BSV 300 servo feed unit.



## Roller feed units – power that can be implemented anywhere.

The BRUDERER BBV roller feed unit stands out from the crowd thanks to its high precision and feed specification. It is driven by the crankshaft of the stamping press and is ideally suited for a majority of feeding applications be the strips thick or thin, wide or long, and also capable of working at high speeds with excellent reliability.

- Automatic strip thickness adjustment
- 180° feed angle
- Manual adjustment of the feed length during operation

## **Options:**

- Digital feed length measurement
- Motorised feed length adjustment during operation
- Motorised strip run height adjustment with hydraulic clamping

## Your advantages at a glance.

### Can be implemented anywhere:

Ideal roller feed unit for a wide variety of usages and materials.

### **High-performance:**

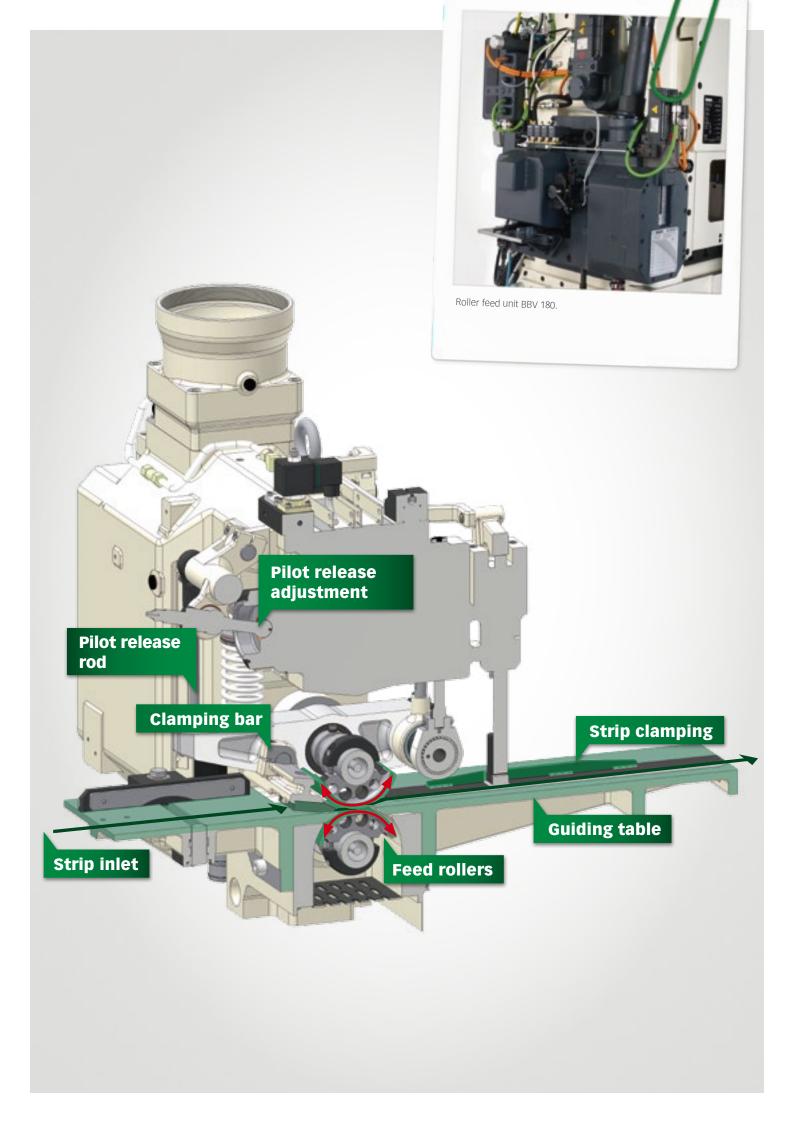
The BBV is suitable for feeding heavy strips in and out, even at high speeds.

## **Robust and reliable:**

The BBV's robust construction ensures high levels of pitch accuracy.

## Easy to use and low-maintenance:

The BBV is constructed in such a way that all the main elements are easily accessible. This enables rollers to be changed quickly and thus makes the BBV incredibly low-maintenance.



## Gripper feed units – sensitive mechanisms at work.

The BRUDERER BZV gripper feed unit was specially designed with sensitive and thin metal strips in mind. It protects the surface of the strip thanks to the large support surface of its clamps.

- No rolling movement over the stamped strip during feeding
- High pitch accuracy
- Automatic strip thickness adjustment
- Fixed feed angle of 180°
- Simple profiling of the feed clamps for optimum component contact

## **Options:**

- Digital feed length measurement
- Motorised feed length adjustment during operation with BZV 80

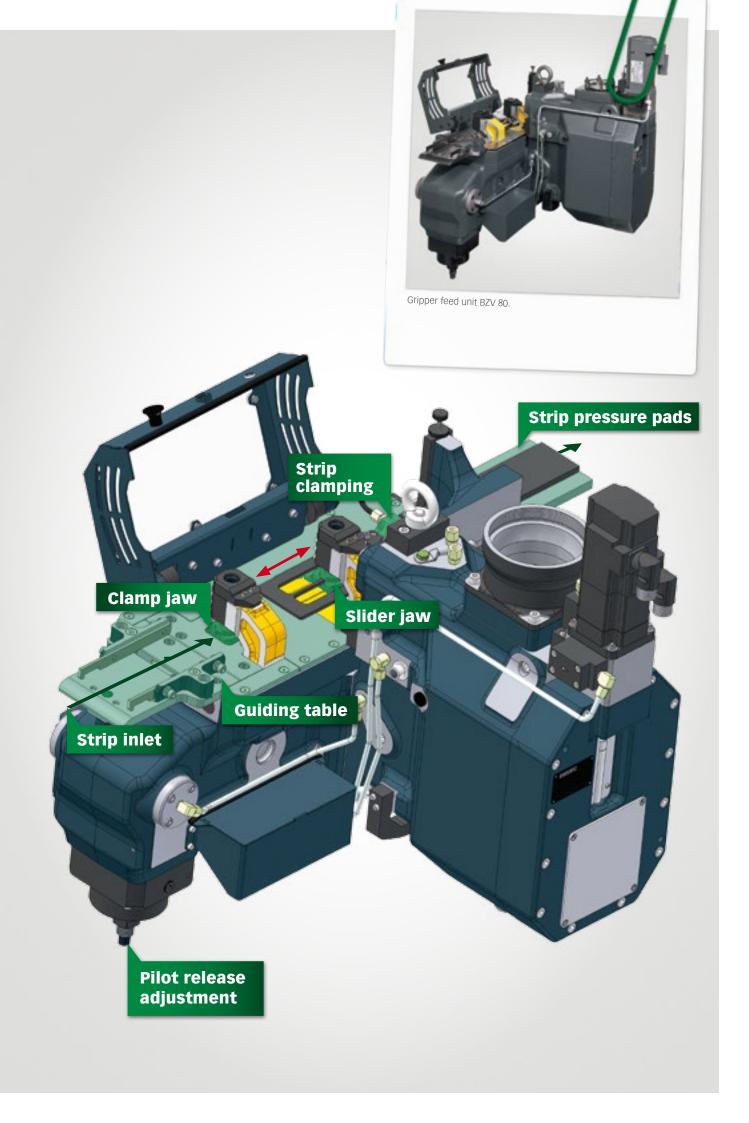
## Your advantages at a glance.

## **Controlled feed pitch operation:**

Feed material clamps provide sufficient contact surface grip to hold the strip in place whilst protecting it at the same time.

## **Quick and easy retooling:**

The clamps can easily be adapted to a variety of strip profiles and are easy to adapt.



## Technical data.

## Servo feed unit

		BSV 75/75T1)	BSV 170	BSV 300	BSV 500
Strip width	Max. mm	70/75	170	300	500
Strip thickness	Max. mm	2	2	5	8
Feed length <sup>2)</sup>	Max. mm	0 - 1000	0 - 1000	0 - 1000	0 - 1000
Roller contact pressure	N	1000	2000	4500	6000/10000
Strokes per minute	Max. min-1	2000	2000	1200	900
Pilot release angle		variable	variable	variable	variable
Feed angle		variable	variable	variable	variable
Weight (mass)	kg (c.)	80	85	200	550
Can be fitted to		BSTA 180 BSTA 200 BSTA 280 BSTA 510	BSTA 180 BSTA 200 BSTA 280 BSTA 510 BSTA 810	BSTA 510 BSTA 810 BSTA 1250 BSTA 1600	BSTA 1250 BSTA 1600 BSTA 2500

<sup>&</sup>lt;sup>1)</sup> The BSV 75T is only available as a tandem feed. <sup>2)</sup> See performance diagram.

## **Roller feed unit**

		BBV 180	BBV 260	BBV 450	BBV 455
Feed angle	0	180	180	180	90
Feed length	mm	0-100	0-80 6-120 12-150	0-150 10-210 20-250 0-360 25-500	10-210
Roller width	mm	70	120	200	200
Strip inlet width	mm	200	300	500	500
Strip thickness	mm	4	6	12	12
Weight (mass)	kg (c.)	160	340	1200	1200
Can be fitted to		BSTA 200 BSTA 280 BSTA 510	BSTA 510 BSTA 810 BSTA 1250 BSTA 1600	BSTA 1250 BSTA 1600 BSTA 2500	BSTA 1250 BSTA 1600 BSTA 2500

## **Gripper feed unit**

		BZV 61	BZV 80
Feed angle	۰	170	180
Feed length	mm	0-60	0-80
Gripper width	mm	45	36
Strip inlet width	mm	70	80
Strip thickness	mm	2	4
Weight (mass)	kg (c.)	200	210
Can be fitted to		BSTA 200 BSTA 280 BSTA 510 BSTA 810	BSTA 200 BSTA 280 BSTA 510

Your customer service representative will be delighted to inform you about the various possibilities. Options and retrofit versions are also available on request. Subject to technical alterations.

## BRUDERER feed units complement your stamping presses.



Servo feed unit BSV.



Roller feed unit BBV



Gripper feed unit BZV.

All BRUDERER feed systems have both excellent technical designs and flexible attachment options, meaning that feed units can easily be combined with stamping presses from other manufacturers. A high-quality feed system can provide significant improvements in performance in terms of quality, speed and flexibility. This is also the case when retrofitting a feed unit onto one of the latest generation of BRUDERER stamping presses or onto a previous series or from other manufacturers.

## **Centres of competence:**

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