



MOTORIZED FOLDING MACHINE
MAKV/MAKV S

MAKV and MAKV S – motorized series production

The MAKV is a motorized folding machine with a reinforced drive which has been perfected over the years and offers you an easy entry into motorized sheet metal processing.



MAKV can optionally be acquired with the software control POS 2000 Professional



MAKV S with segmented tools on clamping-, bottom-, and folding beam and nano-touch software – this machine is already extremely versatile in its standard version.

Many fast growing plumber workshops, smaller sheet-metal businesses and roofing companies come to a point when folding sheets is not anymore efficient by hand. As a specialized partner Hans Schröder Maschinenbau GmbH offers a perfect entry into motorized sheet metal processing up to 3 mm at a working length of 1 000 mm respectively 1 mm at a working length of 4 000 mm.

The MAKV is an easy to operate, robust swivel bending machine with little tool costs and a wide range of options and equipment. The well-developed machine is a safe investment in motorized sheet metal working – and in the future of your company. For companies that rely on highest flexibility the version MAKV S with segmented tools is available and can handle complex folding tasks with ease. Thanks to its adaptability the MAKV S is also often applied in industrial thin sheet metal processing.

Standard equipment

MAKV	MAKV S
Positioning control „nano Touch“ to control folding and clamping beam, 5,7 Zoll monitor turnable on switch cabinet	
45° clamping beam with 50 mm free space	45° clamping beam
	Patented quick clamping device with eccentric for quick changing of clamping and folding beam tools
Tinsmith blade 30°, sharp, foot width 27 mm, clearance 8 mm, for hems, directly screwed	Goat's foot tool, H = 130 mm, 30°, 130 mm high, foot width 39 mm segmented, incl. corner parts, 700 N/mm ²
Manual folding beam adjustment 30 mm	Manual folding beam adjustment 15 mm
Folding blades 10 and 25 mm (from MAKV 3200: 15 and 25 mm) 700 N/mm ²	Segmented folding blade 20 mm, clearance 68 mm incl. corner parts
Bottom beam blade, one-piece	Segmented bottom beam blade, clearance 55 mm, incl. corner parts
	Segmentation of tools for 1000 mm: 30/40/50/55/60/65/70/100/2x 200 mm 2 x 75 mm corner parts plus 500 mm segments for larger lengths
	Folder also usable with sharp-nose blade and radius blades
	Sheet support table 750 mm
Piece counter	
Foot switch	
Anchor plates incl. dowels	

Special equipment

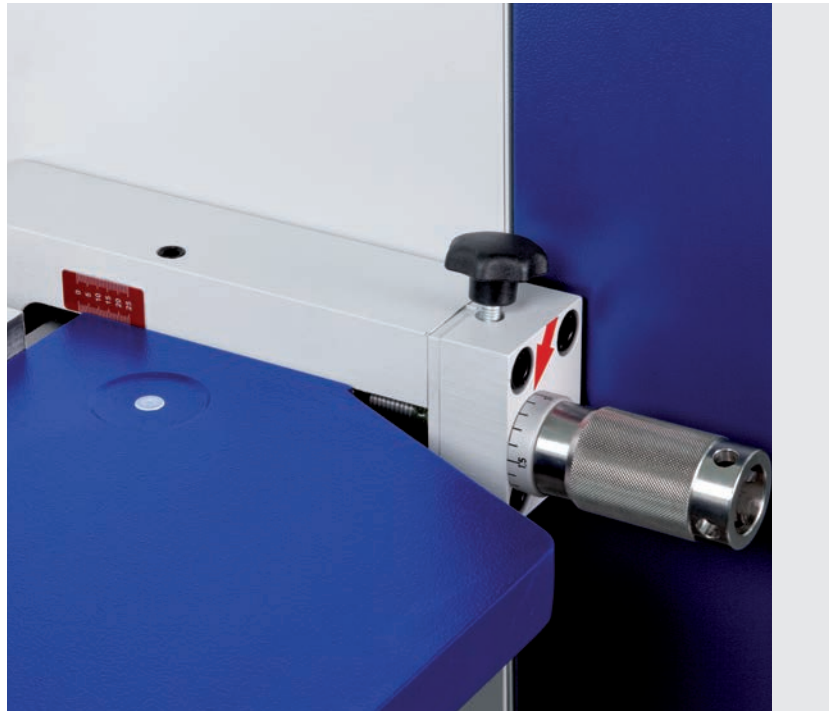
MAKV	MAKV S
Manual back gauge 10 - 750 mm	
Sheet support table incl. manual back gauge 10 - 750 mm with movable table support arms	
nano Touch control with simple back gauge system motorized, 10 - 1000 mm incl. sheet support table	nano Touch control with simple back gauge system motorized, 45 - 1000 mm incl. sheet support table
POS 2000 Professional software control with motorized back gauge 10 - 1 000 mm or 10 - 1 500 mm incl. sheet support table and gauge finger	POS 2000 Professional software control with motorized back gauge 45 - 1 000 mm or 45 - 1 500 mm incl. sheet support table and gauge finger
Folding beam crowning device	
Cutting device incl. linear guide for max. sheet thickness 0.8 mm St37	
Profiling- and flattening device	
Additional equipment for 2-man-operation control in accordance with accident prevention rules required	
Footswitch on rail for lateral movement	
Tool cart for blades, and segmented tools	

MAKV – solid basis – well-developed equipment

Our concept for this machine class: every standard folding task can be fulfilled with the standard version MAKV. For specific folding requirements, we offer suitable options for you.



Standard equipment with firmly screwed tinsmith blade and folding blade 25 mm



Manual folding beam adjustment

The MAKV is a typical Schröder machine: compact and clearly designed, a torsion-free, rigid welded construction, strong main assemblies such as clamping-, bottom-, and folding beam. The folding beam drive with two drives assures torsion-free bending over the whole working length. The clamping beam with eccentric drive clamps the sheet quickly and exactly. The adjustment of the folding beam can be done quickly by hand without any problems.

Industrialise your workshop

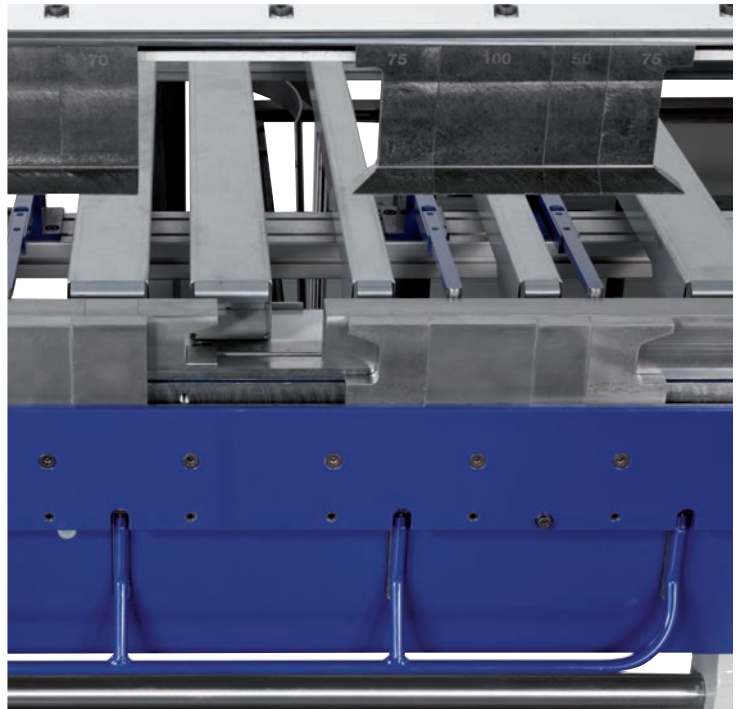
If you choose the MAKV for your workshop, you'll get the know-how of industrial engineering. Schröder folding systems are extremely durable and with low maintenance, and are geared to continuous operation with consistent high quality. You produce faster and reduce your unit costs. Thus you are able to increase your competitiveness not only by quick small series production, but you are also able to fulfill short-term sophisticated individual orders with utmost precision. The quick tool clamping device enables short set up times and increases you efficiency in addition.

MAKV S – incomparably versatile

For special requirements, flexibility is necessary. The motorized folding machine MAKV S offers a lot of possibilities for complex work pieces.



Motorized back gauge, converter controlled



Ingenious patent: with the fast eccentric clamping device tool changes can be done with ease.

The powerful folding machine for the industry and crafts

Motorized folding machine, reinforced, segmented – this is what characterizes the name of MAKV S. With its easy to operate nano Touch software control the machine is the ideal tool for crafts and small industrial businesses. The MAKV S is robust and powerful enough for series production and offers all possibilities to produce also complicated single parts.

Operating the MAKV S the sheet metal working specialist can show everything he wants – supported by powerful drives and intelligent machine control. The machine equipped with segmented clamping-, bottom- and folding beam blades reveals many possibilities and tackles also complex tasks. Suitable for series production, but also equally prepared for unique productions because with the patented quick eccentric clamping device from Schröder you can easily change tools on the clamping- and bottom beam manually.

Tools

For every job the suitable tool – with the high quality segmented Schröder-tools you are able to fold exactly and to bend radii with utmost precision.

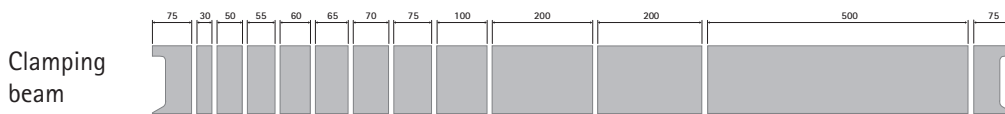


The MAKV with a popular tool option: the segmented goat's foot tool.



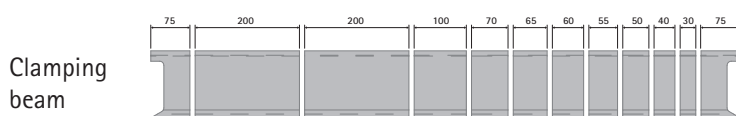
The MAKV S with its patented quick eccentric clamping device enables an easy and fast change of clamping beam tools.

MAKV – Example: Segmentation of tools



Segmentation of tools for 1500 mm, with greater lengths the set is filled up by using 200 mm and 500 mm tool segments

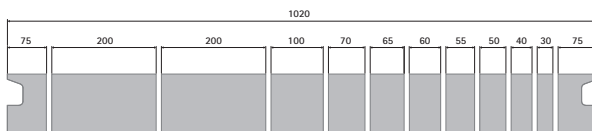
MAKV S – Segmentation of tools



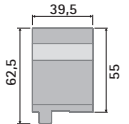
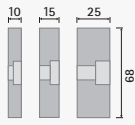
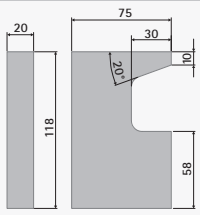
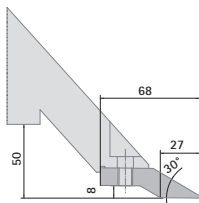
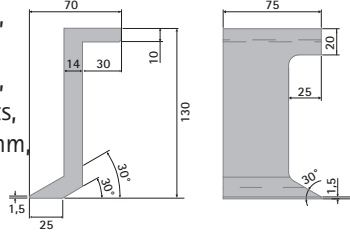
Segmentation of tools for 1000 mm – with greater lengths the set is filled up by using 500 mm tool segments



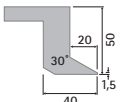
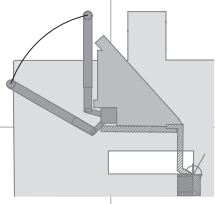
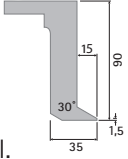
Folding beam



Standard equipment

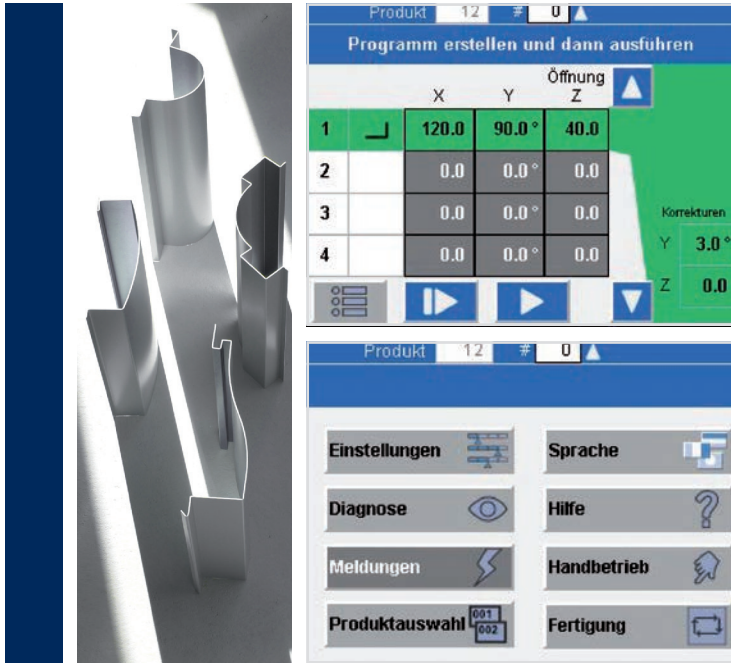
	MAKV	MAKV S
Bottom beam tools	Bottom beam blade, one-piece	Bottom beam blade, segmented clearance 55 mm, incl. corner parts 
Folding beam tools	Folding blade 10 and 25 mm, with MAKV 3200: 15 and 25 mm 	Folding blade, segmented 20 mm, clearance 68 mm, incl. corner parts 
Clamping beam tools	Tinsmith blade 30°, sharp, foot width 27 mm, clearance 8 mm, for hems, directly screwed to clamping beam 	Goat's foot tool, 130 mm high, 30°, segmented, incl. corner parts, foot width 39 mm, 700 N/mm ² 

Special equipment

	MAKV	MAKV S
Oberwangenwerkzeuge	Goat's foot tool 50 mm, 30° sharp, foot width 40 mm, clearance 20 mm, segmented incl. corner parts, 1 100 N/mm ² With ordering ex. works: fast eccentric clamping device incl. 	Folder also usable with sharp-nose blade and radius blades 
	Goat's foot tool 90 mm, 30° sharp, foot width 35 mm, clearance 15 mm, segmented incl. Eckstücke 1 100 N/mm ² With ordering ex. works: fast eccentric clamping device incl. (With subsequent order only adaptor rail applicable) 	

nano Touch

The most clearly laid-out alphanumeric control



Easy to understand icons and alphanumeric data describes the bending program.

The nano Touch is a modern alphanumeric touch screen control. Self-explanatory and very easy to operate. Machine axes are controlled through a path measurement system, programming from flange to flange. A clearly laid out user interface with easy to understand icons with text and numeric displays eases the operator through his day of running jobs.

Corrections for angle and flange length are entered per part or per bend for even more accuracy control. The nano Touch is proof positive that sometimes simpler is better. Schröder Maschinenbau is setting new control standards for companies needing the advantages of folding as a process, but does not need the sophistication of a high end control system.



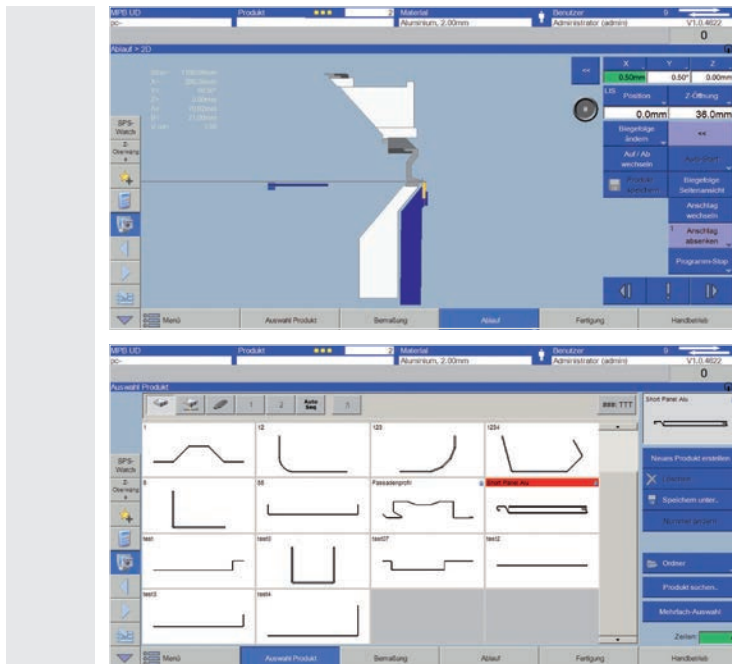
nano Touch

- Store up to 9,999 programs, each program up to 99 bends
- Icon based programming
- Part corrections per bend, or per program
- Current processing step in the list of bends is highlighted
- Piece counter for series production
- Monitor turnable on switch cabinet

And for those companies needing that extra level of sophistication, the MAKV or MAKV S can optionally be configured with the finest graphical control ever developed for precision metal folders.

POS 2000 Professional

Intelligent graphic control for efficient processing



Graphic control POS 2000 Professional:
the result always in front of you eyes – from the first steps to
simulation

With the graphic control POS 2000 Professional you extend the possibilities of MAKV and MAKV S in terms of industrial sheet metal processing. For complex parts requiring graphical assistance to program and manipulate through the bending sequence, the POS 2000 Professional provides a visual interface for the operator and programmer. Through it, every step of the bending process is clearly shown. The graphics show the part as it is formed around the tooling and machine. The product is confirmed in a virtual mode prior to putting the sheet on the back gauge table, so the operator can form the part with 100% confidence.

Part processing is as simple as following the on screen visual and written queues. From loading the sheet in the proper orientation, through each and every bend, the POS 2000 shows how to progress through each and every step of the part.



POS 2000 Professional

- Windows 7 operating system
- Unlimited profile storage
- Automatic cut length calculation
- Unlimited tool storage and materials library
- Accurately scaled virtual bending simulation
- Zoom function
- Infinitely variable machine speed

Options

- Radius-Step-feature (add. crowning device recommended)
- Pneumatically lowerable gauge fingers
- External programming (POS 2000 Professional PC-Version)
- Remote maintenance

Dimensions and technical data



Ingenious patent: with the fast eccentric clamping device tool changes can be done with ease.

MAKV	1 000 x 3,0	1 500 x 2,5	2 000 x 2,0	2 500 x 1,5	3 200 x 1,5	4 000 x 1,0
Working length (a)	1 020 mm	1 520 mm	2 020 mm	2 520 mm	3 220 mm	4 020 mm
Sheet thickness (400 N/mm ²)	3,0 mm	2,5 mm	2,0 mm	1,5 mm	1,5 mm	1,0 mm
Machine length (b)	2 030 mm	2 530 mm	3 030 mm	3 530 mm	4 230 mm	5 030 mm
Length of working area (c)	1 354 mm	1 854 mm	2 354 mm	2 854 mm	3 554 mm	4 354 mm
Machine height (d)	1 193,5 mm					
Working height (e)	870 mm					
Weight	1 170 kg	1 220 kg	1 410 kg	1 950 kg	2 230 kg	2 580 kg
Machine width						
without gauge (f)	705 mm					
Back gauge, manual 750 mm (f)	1 430 mm					
Back gauge, motorized 1000 mm (f)	1 800 mm					
Clamping beam						
Stroke	120 mm					
Drive power	0,55 kW					
Speed	25 mm/s (65 mm/s)					
Folding beam						
Adjustment	30 mm					
Drive power	0,75 kW					
Speed	1,7 s/90° (0,9 s/90°)					

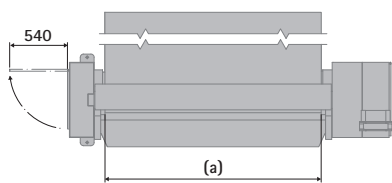
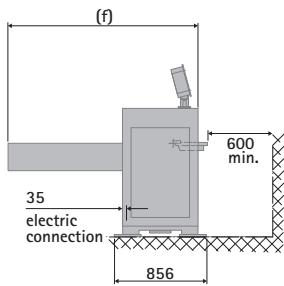
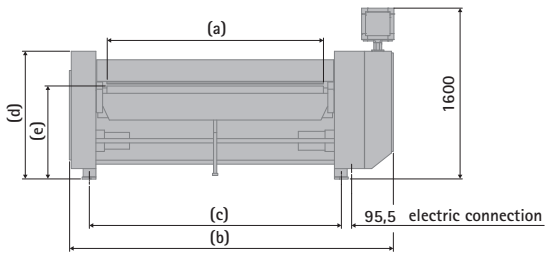
MAKV S	1 000 x 2,5	1 500 x 2,0	2 000 x 1,5
Working length (a)	1 020 mm	1 520 mm	2 020 mm
Sheet thickness 400 N/mm ²	2,5 mm	2,0 mm	1,5 mm
Machine length (b)	2 030 mm	2 530 mm	3 030 mm
Length of working area (c)	1 354 mm	1 854 mm	2 354 mm
Machine height (d)	1 193,5 mm		
Working height (e)	869 mm		
Weight	1 445 kg	1 645 kg	1 850 kg
Machine width			
without gauge (f)	1 535 mm		
Back gauge, motorized 750 mm (f)	1 535 mm		
Back gauge, motorized 1000 mm (f)	1 800 mm		
Clamping beam			
Stroke	120 mm		
Drive power	0,55 kW		
Speed	25 mm/s (65 mm/s)		
Folding beam			
Adjustment	15 mm		
Drive power	0,75 kW		
Speed	1,7s/90° (0,9 s/90°)		

* Technical data with POS 2000 Professional control are specified in brackets.

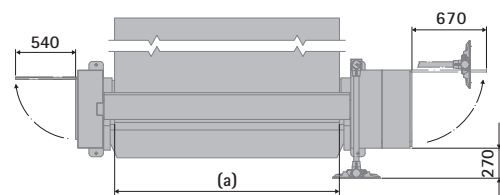
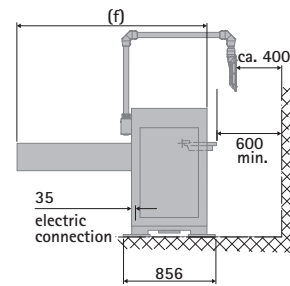
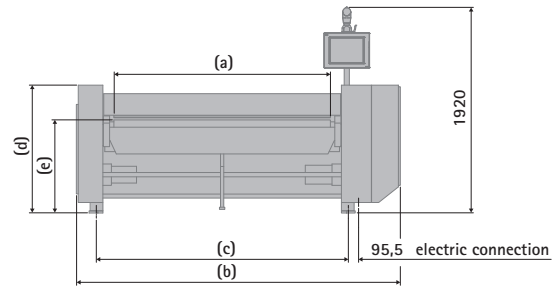
All specifications are considered as guidelines and may be subject to changes at any time.

Dimensions MAKV/MAKV S

nano Touch-control



POS 2000 Professional control



All dimensions in mm

Standard colour: RAL 7035 light grey, RAL 5003 sapphire blue. Special painting at an extra charge



Schröder Group

The Schröder Group consists of Hans Schröder Maschinenbau GmbH, which is located in Wessobrunn, Germany, and SCHRÖDER-FASTI Technologie GmbH, which is located in Wermelskirchen, Germany.

Founded in 1949, Hans Schröder Maschinenbau GmbH unifies traditional and modern approaches in machine building: Successfully managed as a quality and customer-oriented, family-owned company, Hans Schröder Maschinenbau is specialized in the development of modern machine concepts for bending and cutting sheet metal.

The successful integration of the Fasti Company in 2006 and its worldwide presence make the Schröder Group one of today's leading providers of machines for bending, cutting, beading, flanging, and circular bending all types of sheet metal. The company's precision machines range from proven solutions for craftsmen to innovative, high-performance machines for automatic industrial production processes. Overall, the Schröder Group currently employs more than 240 people at various locations at home and abroad.

All information provided as a guide only
and subject to change at all times.
14-1833-HSM 141031ENv01

Schröder Maschinenbau GmbH
Feuchten 2 | 82405 Wessobrunn-Forst | Germany
T +49 8809 9220-0 | F +49 8809 9220-700
E info@schroedergroup.eu
www.schroedergroup.eu

SCHRÖDER
GROUP