4

Sheet Metal Machines

Machines for decorative surface finishing and rolling of sheet metal – prepared for perfect welding on our VSV machines.

4.1 Decorative Sheet Polishing Machine • PA 2001 **40**

4.2 Two-Roll Bending Machine • DV 10/2.5 **41**

4.3 Conical Plate Rolling Machine • VK 1/0.6 **42**







4.1 Decorative Sheet Polishing Machine

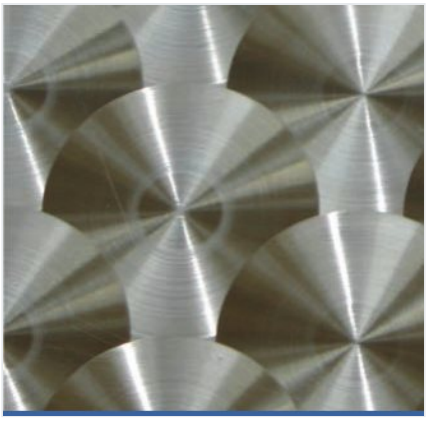
PA 2001

PA 2001: decorative swirl (marbled) surface finish on stainless steel sheets with rotating grinding stones – 31 heads, 2,000 mm working width, automatic feed.

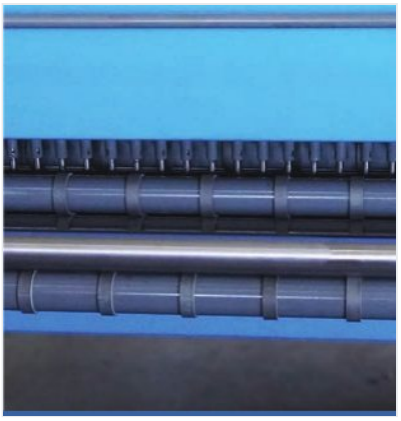
Applications Stainless steel wine tanks with a decorative finish.



PA 2001



Decorative pattern



PA 2001 (rollers)

Description

The PA 2001 is a machine for decorative surface finishing of sheet metal – a polishing machine. It achieves a high-quality surface finish using rotating grinding stones. Marbling is a surface finishing process for sheets of various materials; it is most commonly used on stainless steel sheets.

The machine has four electric motors that drive the rotating grinding stones. Each motor controls one section of the machine, and each section can be switched off separately. The standard section width is 500 mm. The spindles carry the grinding head holders, which contain special springs that let the heads compensate for different levels of wear. The sheet is fed automatically through the machine while the grinding stones move transversely and rotate to create the desired pattern on the surface. Two pairs of vulcanized rollers move the sheet through the machine. Polishing speed depends on the decorative pattern settings and ranges from 0.25 to 0.75 metres per minute. Grinding heads up to 60 mm in diameter can be used, in various grits, to suit the user's requirements.

Sensors detect the entry and exit of the sheet, so the machine operates automatically.

Additional equipment

- Automatic loading and unloading of sheets
- Mechanism for automatic application of protective PVC film
- Dust-cleaning brush with adjustable speed
- Infeed and outfeed table
- Dust extraction system

Technical data

Working width	mm	2,000
Machine length	mm	2,500
Machine width	mm	2,500
Number of grinding heads		31
Grinding head diameter	mm	max. 60
Rated voltage	V/Hz	400 V / 50 Hz
Rated power	kW	10
Air connection		1/2"; 6 bar

4.2 Two-Roll Bending Machine

DV 10/2.5

DV 10/2.5: the polyurethane lower roll bends sheet up to 2.5 mm in one pass – no flat ends, ideal roundness, ready for welding on VSV machines.

Applications Boiler shells, fire extinguishers, pipes, air tanks and pressure vessels.



DV 10/2.5



Two-roll design

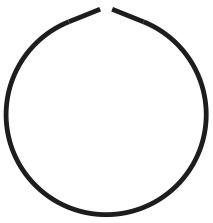
Description

This machine solves a common problem of plate rolls: poorly curved (flat) start and end of the sheet. It achieves this with a special polyurethane material on the lower roll. The lower roll is raised hydraulically, and a positioning device that holds and positions the workpiece can be added above the rolls. The machine opens hydraulically from the side, so the rolled part is easy to remove. It is often used for rolling steel products such as boiler shells, fire extinguishers, tubes, air tanks, pressure vessels and the like.

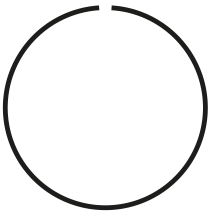
It is also an ideal aid for preparing tubes for welding on our VSV machines.

Advantages

- Rolling in one pass, no corrections needed
- Ideal roundness, without flat starts and ends
- High productivity



Rolling with a conventional plate roll



Rolling with the DV 10/2.5

Technical data

Working width	mm	1,000
Max. sheet thickness	mm	2.5
Min. diameter	mm	200
Rolling speed	cm/min	900
Rated power	kW	5.5
Mass	kg	1,400

4.3 Conical Plate Rolling Machine

VK 1/0.6

VK 1/0.6: rolls pre-cut sheets up to 2 mm into cones of the desired dimensions. Servo-driven main roll, mechanical angle setting, NC control.

Applications Cones and conical sheet-metal parts of the desired dimensions.



VK 1/0.6



VK 1/0.6

Description

The VK is a roll machine for bending (rolling) sheet metal into cones of the desired dimensions. It is designed for sheets that are pre-cut to size. The angle of the main roll is adjusted simply by a mechanical setting. Several smaller support rolls below the main roll ensure that the surface of the product remains undamaged. The main roll is driven by a servo motor; during rolling, two levers push the table upward by means of pneumatic cylinders.

To use the machine, the sheet is inserted from the front with the help of a positioning device, rolled automatically and then pulled out from the side. A door on the side is opened manually after the workpiece has been rolled. If required, the main roll can be replaced to suit different diameters or a different cone angle (option).

Speed and direction are set via the NC control, and the parameters can be stored using the touchscreen. A foot switch can be used for easier work during rolling. The machine is also equipped with a safety switch – a safety rope pull switch.

Technical data

Working width	mm	600
Max. sheet thickness	mm	2
Rolling speed	cm/min	20 – 1,500
Pneumatic pressure	bar	6
Rated power	kW	0.8
Mass	kg	400