

MACHINERY FOR LOW-MELTING ALLOYS ELECTROFORMING



**Vulcanizer stamp-press
VM/P36**



**Eutectic low-temperature
melting furnace VM/VS**



**Low-melting alloy centrifugal
injector VM/MIV**



**Low-melting alloy emptying
machine VM/SCG**

Electroforming is a kind of **galvanoplasty** where the mold is first formed from the model ; a metal skin is built up on it and then removed in order to be as self-supporting structure. Main advantages of this technology are the likeness to the object obtained and the possibility to cold-manufacture the metal without melting it again. Electroforming can be used in different sectors : in industrial sector to realize plates or objects for other products, and in artistic sectors like jewelry and sculpture.

Violi srl has developed a line of very accurate machines dedicated to the manufacturing of eutectic alloys typically used in the electroforming process in goldsmith sector. These systems are used in the first step of the working cycle, to realize stamps, and in the last step, to empty and finish.

The range of products includes :

- **Vulcanizer stamp-press mod. VM/P36**
- **Eutectic low-temperature melting furnace VM/VS**
- **Low-melting alloy centrifugal injector mod. VM/MIV**
- **Low-melting alloy emptying machine mod. VM/SCG**

All these machinery have been projected in order to grant high quality standards and repeatability, as requested from the electroforming process.

The cycle starts from the **vulcanizer stamp-press VM/P36** for the manufacturing of rubbers needs for the production of molds ; molds can be made from the **centrifugal injector VM/MIV** inside which the melted eutectic allow will be drained in the **eutectic low-temperature melting furnace VM/VS**. Once the electroforming process is finished, the low-melting will be removed by the **emptying machine VM/SCG** that allows to obtain products for the finishing process.

SPECIFICS OF THE MACHINES



VULCANIZER STAMP-PRESS VM/P36

VM/P36VM/VS has been projected for the industrial vulcanization of natural and silicon rubbers. The process is simple and allows to produce high-quality and easy-repeatable objects. The temperature can be set by the control panel and can reach up to 250°C ; the pressure on the rubber can be set according to the outcome to obtain and to the materials, is granted by an manual hydraulic group and is provided with an automatic rough valve. The working cycle is timed. VM/P36 complies with the latest regulations.

Technical specifics

- Dimensions mm	740x550x1250
- Plate dimensions mm	360x360
- Weight	360 kg
- Max temperature	250°C
- Max pressure	8000 Kg
- Electrical power required	100 ATM 4.0 kW 230V/50 Hz

Technical specifics

- Dimensions mm	490X490X900
- Weight	85 kg
- Max temperature	350°C
- Electrical absorption	3.0 kW
- Electrical supply	230V/50 Hz

**EUTECTIC LOW-TEMPERATURE MELTING FURNACE
VM/VS**

VM/VS is an electric furnace used to melt eutectic low-temperature alloys used in the electroforming process. Metal is melted inside a stainless steel container of 35 liters. Temperature can be set by the control panel and maintained thanks to a thermocouple ; the working cycle is timed. VM/VS complies with the latest regulations.



**LOW MELTING ALLOY CENTRIFUGAL
INJECTOR VM/MIV**

VM/MIV has been projected to produce objects in low- melting alloy or wax. Once the materials are melted, they will be drained inside the centrifugal injector through a channel and pushed inside the rubber stamps thanks to the rotation of the motorized group placed inside a warmed chamber. Working parameters can be set through the control panel and the working cycle is timed. VM/MIV complies with the latest regulations.

Technical specifics

- Electrical power required	1,1 kW
- Rubber diameter	230 V 50/60Hz 300 mm
- Speed rotation	Changeable by inverter
- Dimensions mm	810x620x1000
- Weight	175 kg



Technical specifics

- Dimensions mm	900x700x1200
- Weight	235 kg
- Max temperature	350°C
- Electrical absorption	6.0 kW
- Feeding	400V/50 Hz

LOW-MELTING ALLOY EMPTYING MACHINE VM/SCG

VM/SCG is patented and has been projected to empty the low-melting alloy from objects realized by electroforming process. The objects have to be arranged in layers into a circular basket with the exiting hole to the outside. The working cycle is divided in two steps : preheating time and first centrifugation, second pre-heating time and second centrifugation time in the opposite way of the first. The outcoming alloy is collected in a container ; the process grants the perfect emptying of all objects, even for complex-shaped objects. VM/SCG complies with the latest regulations.

