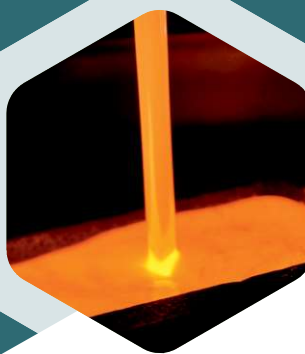


Argenta[®]



CATALOG



VACUUM-PRESSURE CASTING MACHINES

■ Agatronic W

■ Agatronic K i M



The vacuum-pressure casting machines of the Agatronic W, M and K series are combined devices with a built-in low frequency induction furnace for casting jewellery with the use of the investment casting method. A special microprocessor controller constructed on the basis of the latest solutions in the field of industrial automation watches over the course of the process. The controller communicates with operators via a 7 inch TFT touch screen. In this fully automatic machine the casting process is carried out according to a programmed algorithm, also called a foundry programme, and the operating activities are limited only to filling the crucible with an alloy, placing the proper flask in the chamber and pressing the START key. After about 3-4 minutes the device opens the casting chamber itself and informs you about this fact with an audible signal. In addition, 15 minutes after the flask has been filled, the machine controller will remind you to insert the flask into the water. Thanks to this solution the machine can be operated by employees after a short, maximum 15-minute training, without any experience in the jewellery casting industry. The user can also use the vibrator function. While filling the flask with liquid metal, the casting chamber vibrates at a constant frequency, which accelerates the process of filling the flask and increases the homogenization of the alloy.

The Agatronic M and K casting machines are equipped with the strongest in this section 10kW low-frequency generator ensuring melting of the full crucible in 1-2 minutes. At the same time, a powerful generator ensures strong mixing of all the components of the liquid alloy with the electromagnetic field. The same devices operate graphite crucibles, in which the bottom stopper of the crucible is moved away from the axis towards its wall. Thanks to this solution the user gains more space for placing large pieces of foundry alloy in it. This is of great importance in the case of 50/50 casting, i.e. 50% of pure metal and 50% of scrap obtained from the casting tree cores. Increased space in the crucible allows you to omit the process of metal preparation, cutting or briquetting of the casting material.

Another facility in the Agatronic M and K casting machines is a mass calculator that allows you to quickly measure the mass of the alloy components. By giving the test and the total weight of the casting tree, we get a mass of pure metal and a mass of alloy additives.

Agatronic K casting machine differs from the M model only in terms of the method of controlling the casting process. In the automatic model - the Agatronic K, the user's action is limited only to pressing the START key. In the Agatronic M casting machine, the caster must initiate consecutive process functions manually by pressing the keys on the operator's panel.

	Agatronic W	Agatronic M	Agatronic K
Type of operation:	manual	semi-automatic	automatic
Rated voltage:	220-240V/50-60Hz	380-400V/50-60Hz	380-400V/50-60Hz
Rated power:	4kW	10kW	10kW
Electrical installation:	single-phase	three-phase	three-phase
Working temperature:	1200°C	1200°C +1400 °C	1200°C +1400°C
Interface type:	key	colorful touch screen	colorful touch screen
Crucible capacity:	75cm ³ (1,1kg Au18ct)	280cm ³ (4,3kg Au18ct)	280cm ³ (4,3kg Au18ct)
Vibration function:	-	option	option
Electromagnetic field mixing:	in standard	in standard	in standard
Maximum flask:	Ø100x220mm	Ø120x300mm	Ø120x300mm
Number of casting programs:	-	-	30
Funkcja wibracji:	-	option	option
Granulator:	option	in standard	in standard
External dimensions:	50x40x103cm	65x80x120cm	65x80x120cm
Weight:	85kg	195kg	195kg

VACUUM CASTING MACHINES

■ Agatronic G



■ Agatronic H



■ Agatronic R

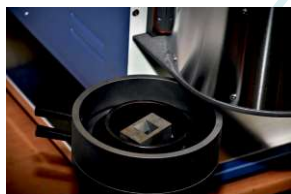


Agatronic G, H and R series devices are vacuum casting units combined with an induction furnace. The machines have been designed to fulfill three basic functions. Small structural modifications enable the user to quickly adapt the device to make high quality castings using the investment casting method, to make grain with a small ball structure and to use the machine as an ordinary melting furnace.

An undoubted advantage of the bottom drain casting is the difference in the densities of metals and impurities present in them. As soon as the metal goes into the liquid phase, the impurities flow to the surface. While pouring metal from the so-called "hand" these pollutants get into the die and are closed in the structure. By pouring the metal through the hole in the bottom of the crucible, the impurities remain in the crucible or they pollute only the entrance of the die. The obtained product gains a more cohesive structure and is easier to be processed further. An additional advantage is a certain, uniform and uninterrupted stream of metal.

The devices are equipped with a process controller monitoring the generator power, the temperature regulation and the device status itself. The messages are displayed on the LCD display in several available languages.

These casting machines are designed to operate in small jewellery companies for casting of individual products, casting of metals with a high content of zinc, especially in the bronze industry.



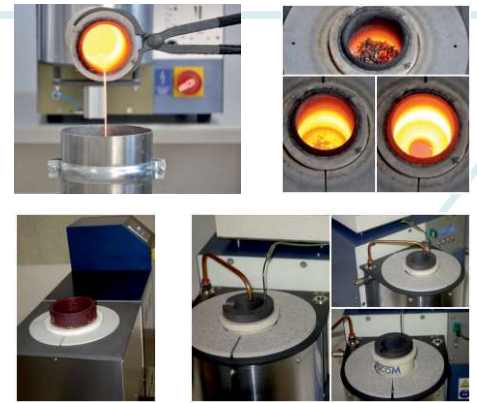
	Agatronic G	Agatronic H	Agatronic R
Type of operation:	manual	manual	manual
Rated voltage:	220-240V/50-60Hz	380-400V/50-60Hz	380-400V/50-60Hz
Rated power:	4kW	10kW	12kW
Electrical installation:	single-phase	three-phase	three-phase
Working temperature:	1200°C *1400 °C	1200°C *1400 °C	1200°C *1400°C
Interface type:	keypad, LCD	keypad, LCD	keypad, LCD
Crucible capacity:	150cm ³ (2,3kg Au18ct)	280/300cm ³ (4,5kg Au18ct)	800cm ³ (12,2g Au18ct)
Electromagnetic field mixing:	in standard	in standard	in standard
Maximum flask:	Ø100x220mm	Ø120x280mm	Ø190x320mm
Placed on:	workbench	workbench	flor
Granulator:	in standard	in standard	in standard
External dimensions:	37x60x47cm	40x56x91cm	50x64x91cm
Weight:	35kg	50kg	116kg

INDUCTION MELTING ALLOY

■ AFI 02 / AFI 03



■ AFI 07



	AFI 02	AFI 03	AFI 05	AFI 06	AFI 07
Rated voltage:	220-230V/50-60Hz	380-400V/50-60Hz	380-400V/50-60Hz	380-400V/50-60Hz	380-400V/50-60Hz
Electrical installation:	single-phase	three-phase	three-phase	three-phase	three-phase
Rated power:	4kW	10kW	12kW	15kW	25kW
Crucible capacity:	150cm ³ (2,3kg Au18ct)	300cm ³ (4,6kg Au18ct)	800cm ³ (12,3kg Au18ct)	1900cm ³ (29,2kg Au18ct)	4200cm ³ (64,6kg Au18ct)
Crucible material:	graphite	graphite	graphite	SiC	SiC
Maximum temperature:	1500°C	1500°C	1500°C	1500°C	1500°C
Melting time of full crucible:	6min	1-2min	6min	15min	26min
Placed on:	workbench	workbench	flor	flor	flor
External dimensions:	60x37x34cm	83x40x35cm	64x50x80cm	72x68x97cm	43x110x95cm 40x60x53cm
Weight:	25kg	32kg	80kg	115kg	180kg

GRANULATION

■ AFI-05plus



The devices are used in the production of gold and silver grain in the precious metals recycling industry and metallurgy laboratories. The smaller AFI-03plus model enjoys great popularity - in this model the ratio of generator power to the crucible capacity ensures instant melting of the full input in approximately 1-2 minutes.

	AFI 03 plus	AFI 05 plus
Rated voltage:	380-400V/50-60Hz	380-400V/50-60Hz
Rated power:	10kW	12kW
Electrical installation:	three-phase	three-phase
Maximum temperature:	1200°C *1400 °C	1200°C *1400 °C
Interface type:	keypad, LCD	keypad, LCD
Crucible capacity:	280/300cm ³ (4,6kg Au18ct)	800cm ³ (12,3kg Au18ct)
Electromagnetic mixing:	in standard	in standard

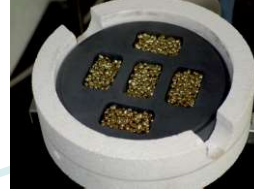
* The stand is not included in the set and is ordered separately

BULLION BARS CASTING

An induction furnace adapted for melting bullion bars of a precisely defined mass. The precisely weighed material is poured into dies of the desired shape and melted by the electromagnetic field in the shortest possible time. The temperature measurement takes place in the middle of the graphite die and it is conducted by the K type thermocouple. The AFI-03BC-2 model is equipped with a lower die feeder ensuring continuous work of the device. In this solution, the inductor is located in the lower part of the chamber and the electromagnetic field acts on the top die. In the case of the AFI-03BC-1 model, the die is placed manually on top of the inductor chamber, and the field has an impact on the die from the bottom. After melting the input, the die stays in place until the metal clots.

The maximum size of the casting die is determined by the outer diameter of Ø150mm and the height of 30mm. This means that we can make any size of the die within these dimensions.

■ AFI 03 BCx2



	AFI 03 BC-1	AFI 03 BC-2
Rated voltage:	400V/50Hz	400V/50Hz
Rated power:	10kW	10kW
Working temperature:	1200 °C, 1400 °C	1200 °C, 1400 °C
Number of ingots:	1	2
Rotary feeder:	no	yes
Position of the form:	top	bottom
Working size ingot:	Ø150x30mm	Ø150x30mm
External dimensions:	40x90x37cm	40x100x37cm

PLATINUM MELTING

■ AFI 02 PT

The induction furnace AFI-02Pt was designed for melting platinum obtained in the process of chemical recycling of metals and melting of platinum scrap. The tilted furnace section allows the liquid metal to be poured into the die without interrupting the metal heating. It takes about 20-30 seconds to melt the full crucible input. The device works with crucibles made of Al₂O₃ material. The furnace is designed for continuous operation.



	AFI 02 PT
Rated voltage:	220-230V/50-60Hz
Rated power:	4kW
Maximum temperature:	2200°C
Crucible capacity:	17cm ³ (260g Pt)
Crucible material:	Al ₂ O ₃
External dimensions:	36x62x50cm

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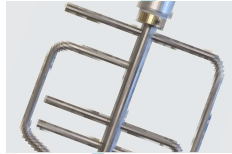
The manufacturer reserves the right to carry out technical changes.

DISTRIBUTOR



INVESTMENT MIXERS

AMX-1



This vacuum mixer is used in the jewellery casting process based on the lost wax method. The device allows the user to mix the investment powder and fill the flask in the atmosphere of controlled vacuum and vibrations significantly accelerating the release of air bubbles. The rotational speed of the agitator is adjusted as needed, and its current speed is indicated by a built-in LED display. The mixing time is controlled by an electronic timer which indicates the elapse of the set time by an audible alarm. The device is equipped with a system of automatic dosing of precisely measured water to the mixture. The whole process is clearly visible thanks to the transparent design of the device. The vacuum pump is controlled with the use of the desktop buttons, and the vacuum value is indicated by the built-in vacuum gauge. Washing the device after finished work is limited only to rinsing the container under running water, which significantly shortens and facilitates its maintenance.

The kit does not include a vacuum pump which is supplied separately. The minimum recommended capacity of the vacuum pump in the AMX-1 mixer is 5m³/h.

AMX-5



This foundry mixer is used in the jewellery casting process based on the lost wax method. The device allows the user to mix the investment powder and pour it to five flasks simultaneously in a vacuum atmosphere. Simultaneous filling of all flasks, not "one after another", optimally shortens the process itself and causes that each flask is filled immediately after the mixing time recommended by the powder producer. The vacuum pump and the built-in vibrator enable precise degassing of the mixed casting powder, which significantly affects the quality of founding products. The mixer mechanism is built on the basis of a mechanical parallel transmission and it is powered by a vector inverter which allows you to control the speed of the mixing process. The design of the device allows quick cleaning of the mixing chamber, without the need for dismantling the components of the entire mixer. The operating valves have a special sealing design resistant to the harmful effects of compounds contained in the powder. In addition, if you need to clean the valve, you do not need to unscrew and remove it from the device.

The kit does not include a vacuum pump which is supplied separately. The minimum recommended capacity of the vacuum pump in the AMX-5 mixer is 20m³/h.

	AMX-1	AMX-5
Rated voltage:	220-240V/50-60Hz	380-400V/50-60Hz
Rated power:	200W	400W
Maximum power of the connected pump:	600W	1500W
Maximum investment capacity:	2kg	15kg
Maximum flask numbers:	1	5
Maximum flask diameter:	100mm	125mm
Maximum flask high:	200mm	300mm
External dimensions:	38x30x82cm	109x54x148cm
Weight:	18kg	150kg

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