

# PRESSOVAC



The system used by our Pressovac series casting machines was specially developed for dental labs where casting perfection is absolute: casting pieces have a very smooth surface, a very dense molecular structure and without defects like improper filling, porosity and shrinkage.

Metal is inserted into the crucible and the flask positioned on the cradle inside the casting chamber. Casting cycle is fully automatic. The casting chamber is fully evacuated by vacuum before melting, followed by helium gas supply to create an inert atmosphere.

Helium gas has an excellent gas fluidity which provides a cleaning effect of the molten metal and mould and guarantees a smooth filling of metal even of the most intricate patterns.

The casting temperature is attained and low frequency pulses are given to vibrate and mix the molten metal by keeping it homogeneous. Temperature is controlled by an optical pyrometer up to 2100°C for platinum and steel and by an immersion type "S" thermocouple inside the graphite crucible up to 1450°C for gold, silver and bronze.

At this stage, just by pushing a button, the whole crucible/flask system will automatically rotate 90° and the metal, once poured in an homogeneous and controlled way into the flask, it is automatically pressurized to 4 bars by argon gas.

This high and quick pressurization is indispensable to obtain a proper and homogeneous filling, even at low metal/flask temperatures, for gold, silver and bronze alloys and, above all, for platinum and special steels which have a very narrow melting interval, thus a very quick solidification.

This results in a very smooth surface due to the effect of the vacuum and a dense, well compacted casting due to the "over pressure" of 4 bars, which benefits both thick and thin sections.



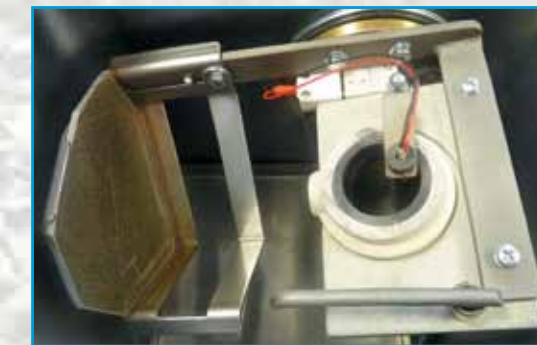
On request, an "universal cradle" is available fitting any flask diameter (between 50 mm ø minimum and 90 mm ø maximum) but reducing the flask height down to 80 mm

## PRESSOVAC AND PRESSOVAC DUAL PYROMETER TECHNICAL FEATURES

ELECTRICAL	singlephase 230 V 50/60 Hz - 3 kW
FLASKS SIZE	between 50 mm and 90 mm ø max. x 90 mm h max.
WATER COOLING	2 litres/min. 3~4 bars with closed circuit water pump
COMPRESSED AIR	6~7 bar
MULTIPLE INERT GAS SUPPLY	Helium, Argon, Nitrogen
EXTERNAL VACUUM PUMP	8 m³/h - 0,005 mbar
DIMENSIONS AND WEIGHT	600 x 500 mm x 580 mm h. - 90 kg

In compliance with CE regulation - Warranty 24 months only if Galloni original consumables are used

# PRESSOVAC DUAL PYROMETER



The "DUAL PYROMETER" version of our well-proven Pressovac machine features:

- Optical infrared pyrometer for platinum and steel casting up to 2100 °C
- Immersion-type "S" thermocouple for gold and silver casting up to 1450 °C



**EXAMPLE OF FILIGREE CASTING FROM RAPID-PROTOTYPING MODELS (cast by DWS)**



## EXAMPLE OF MINISTRUCTURE

This compact machine, complete with oven and investment mixer, occupies no more than a space measuring 60 x 160 cms on a bench top and offers the facility of performing their own casting to goldsmiths, jewellery designers and small studios. An ideal way to produce individual castings from rapid-prototyping.

A metal wheeled bench is available which accommodates the PRESSOVAC together with its closed circuit water pump and vacuum pump.



# PRESSOVAC MAX



The "MAX" version of our Pressovac machine is free-standing and offers the same proven features and functions as the standard Pressovac but accepting a larger flask and with an enhanced casting capacity (flask size up to 100 mm ø x 150 mm h.) All functions are touch-screen controlled.

A three-phase version is also available and recommended for large envisaged productions.

The machine features:

- Optical infrared pyrometer for platinum and steel casting up to 2100 °C
- Immersion-type "S" thermocouple for gold and silver casting up to 1450 °C

## FEATURES OF THE PRESSOVAC SERIES

- Extremely robust water-cooled casting chamber
- Automatic tilt
- Rapid pressurization up to 3 bar, permitting lower metal and flask temperatures

## COMPETITORS

Most of our competitors' machines have relatively weak casting chambers which cannot, thus, be pressurized up to 4 bar; gas pressure has to be applied slowly to the molten metal after pouring. This necessitates significant raising of both flask and metal temperatures in order to achieve adequate

filling, leading to porosity and rough surface problems due to these high temperatures. Also - the manual tilt which is also a feature of other machines can lead to inadequate filling due to slow pouring or, alternatively, metal spillage due to this being too rapid.



WATER PUMP



VACUUM PUMP

## PRESSOVAC SERIES ACCESSORIES

- External high VACUUM PUMP
- WATER PUMP supplied complete with water recirculating cooling tank

## PRESSOVAC MAX TECHNICAL FEATURES

ELECTRICAL	singlephase 230 V 50/60 Hz - 5 Kw on request threephase 380 V 50/60 Hz - 6 kW
FLASKS SIZE	between 50 mm and 100 mm ø max. x 150 mm h max.
WATER COOLING	3 litres/min. 3~4 bars with closed circuit water pump
COMPRESSED AIR	6~7 bar
MULTIPLE INERT GAS SUPPLY	Helium, Argon, Nitrogen
EXTERNAL VACUUM PUMP	8 m³/h - 0,005 mbar
DIMENSIONS AND WEIGHT	680 x 490 mm x 1200 mm h. - 160 kg

In compliance with CE regulation - Warranty 24 months only if Galloni original consumables are used