

ASM 30

Die-casting machine

ASM 30 casting machine is a new generation, fully Automatic pressure vacuum casting machine. The entire casting process is made up of very simple steps: vacuum production, inverting, compression and cooling, with no human intervention required. Thanks to its special resistance, it can melt any type of alloy, precious, Palladian, base, semi-base as well as alloys containing titanium. ASM 30 is equipped with an SD card for recording and filing casting data.



Unique characteristics



Following casting temperature requirements

Keeping control over the casting temperature is the most important requirement for maintaining the metallic features of the alloy. Compliance of the casting data avoids the sublimation of the low melting point metals contained in the alloy. A metal melted at the appropriate temperature will have all the features prescribed by the manufacturing company, otherwise modifications to the metallic structure may occur and create technical changes and cause problems during the subsequent processes.



Casting with omnidirectional pressure

Dental alloys are composed of different metals, each with their own density. By using centrifugal injection techniques a monodirectional pressure will be produced, which first introduces the high density components into the cylinder followed by the others. With Tecno-Gaz pressure die-casting systems, the metal enters the cylinder statically, then constant omnidirectional pressure occurs on the cylinder, allowing the metal to be perfectly layered.



Vacuum casting

To achieve high mechanical resistance and accuracy the casting must take place in an air free environment. This ensures that air does not get into the product, guaranteeing non-porous alloy casting.



Ask the expert

Who needs this?

A qualsiasi laboratorio odontotecnico.

Why ASM 30

- Working temperature of 1600°
- Works fully at low voltage
- It is fitted with a printer that certifies the casting cycle.
- It has a reserve air system that ensures the success of the casting, even if the compressor is interrupted during supply.



Art. 6185F
ASM30 without Argon

Art. 6185FA
ASM30 with Argon

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New



New software for total machine control

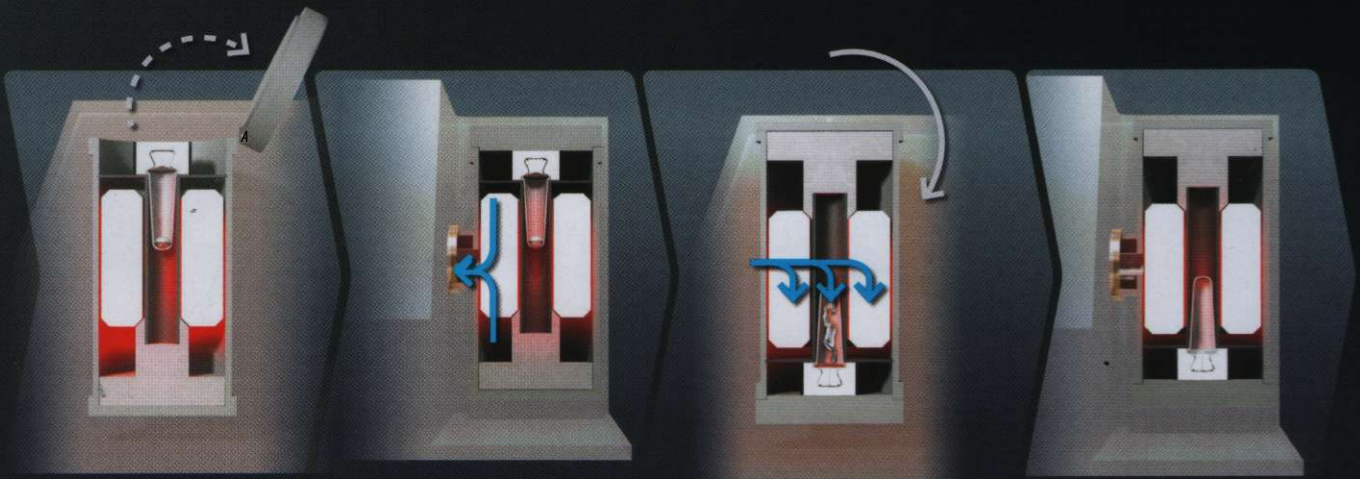
- Intuitive menus and controls
- Multifunctional switches
- Clear information
- Large display



Odontotecnica Laboratory

The Tecno-Gaz die-casting system

Tecno-Gaz casting machines are the logical evolution from traditional die-casting machines. The Tecno-Gaz die-casting system is very advanced and thoroughly tested. All the systems used and the components included have passed functional and operational tests over 4 years. Tecno-Gaz die-casting machines ensure an entirely, automatic process throughout the casting cycle.



1

The first phase is heating, which is carried out by irradiation. A resistor transmits heat to the crucible, which in turn then heats the mass that is being cast. The temperature is constantly monitored and controlled thanks to a sophisticated system with cross-reference controls between the electronic, resistance, electrical and thermocoupling areas.

2

The second phase is the vacuum production. After the crucible has been introduced and the casting chamber has been closed, the casting machine will begin the vacuum phase, which is also controlled and managed by the microprocessor system.

3

The third phase is inversion and compression, followed by the molten metal falling statically into the cylinder and automatically controlled compression, which will propel the metal inside the cylinder. This process produces a vacuum casting, with maximum omnidirectional compression, ensuring:

- consistent results
- perfect edge closing
- thorough protection of the metallurgic features
- alloy saving

4

The fourth phase is that of the automatic cooling of the metal through enforced immobilisation. The muffle will then return to its original state.



Increasingly improved efficiency and performance from the heating component

This is the core of the entire die-casting machine, a decisive component on which Tecno-Gaz has concentrated its investments. The heating component has undergone various updates over the years and has now attained its maximum level of technical efficiency and reliability. Our heating components have always been extraordinarily successful at melting base metals, chrome cobalts, steel etc..., but now we can also guarantee long life and absolutely durability during use and resistance to thermal stress. This is a combination of chemical and mechanical technology that has required in-depth studies by various companies who have contributed to the projects and the attainment of an extraordinary final result, both in terms of service and reliability. **All the electrical contacts are handled by an aluminium rod system, that unlike normal electrical cables, avoids expensive cooling systems and regular maintenance.** The resistor has a safe set-up system, designed to absorb shocks and not to yield at high temperatures. **The heating element is formed of a single closed block containing the resistor, isolated by a ceramic muffle that ensures its isolation and protection.** The lower part contains the connections, blocks and the muffle fixing system. The upper part contains the compartment for the insertion of the crucible.

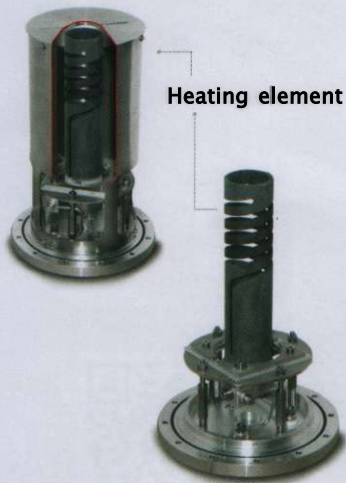


ASM 30

Width	550 mm
Height	630 mm
Depth	600 mm
Weight	115 Kg
Main voltage	230V - 50/60 Hz
Air pressure	6 bar
Vacuum	0,7 bar
Temperature	0-1600 °C
Cylinders' height	60 mm
Power absorption	3,5 Kw



Photo gallery



Casting chamber



Accessories



SD card as standard

The die-casting machine is fitted with an SD Card as standard. All the data relating to the casting cycle is archived on the SD card. This device is indispensable for a computerised archive of data relating to the operation of the equipment.



Vacuum pump Art. 6081-F2

In compliance with EC directives, the casting machines are equipped only with Tecno-Gaz vacuum pump.



Support cabinet Art. 6047-F

The cabinet is an important accessory because it has been specially designed to display the inside of the pot. The cabinet is equipped with pot-holders, pump housing and accessories shelf.

Spare parts



Crucibles

The crucible is an essential component for a die-cast casting machine, since it is the element that ensures correct irradiation and heating of the mass to melt. A non original pot can damage the heating element beyond repair or cause quality and casting problems.



Steel cylinders

The cylinders are made from special stainless steel and are 60mm tall. They are available in different measurements.



Rubber bases

The rubber bases have been designed to host the air injection channels and the forced positioning slot for the crucible. They are available in different measurements, corresponding to the cylinders.

Free expansion technique

The die-casting machine can be used with free expansion technique. We have created special silicon cylinders and rigid plastic bases.

