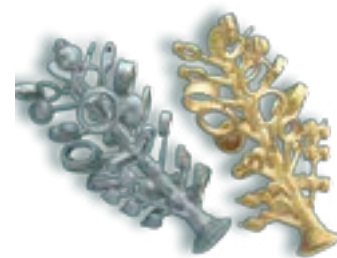
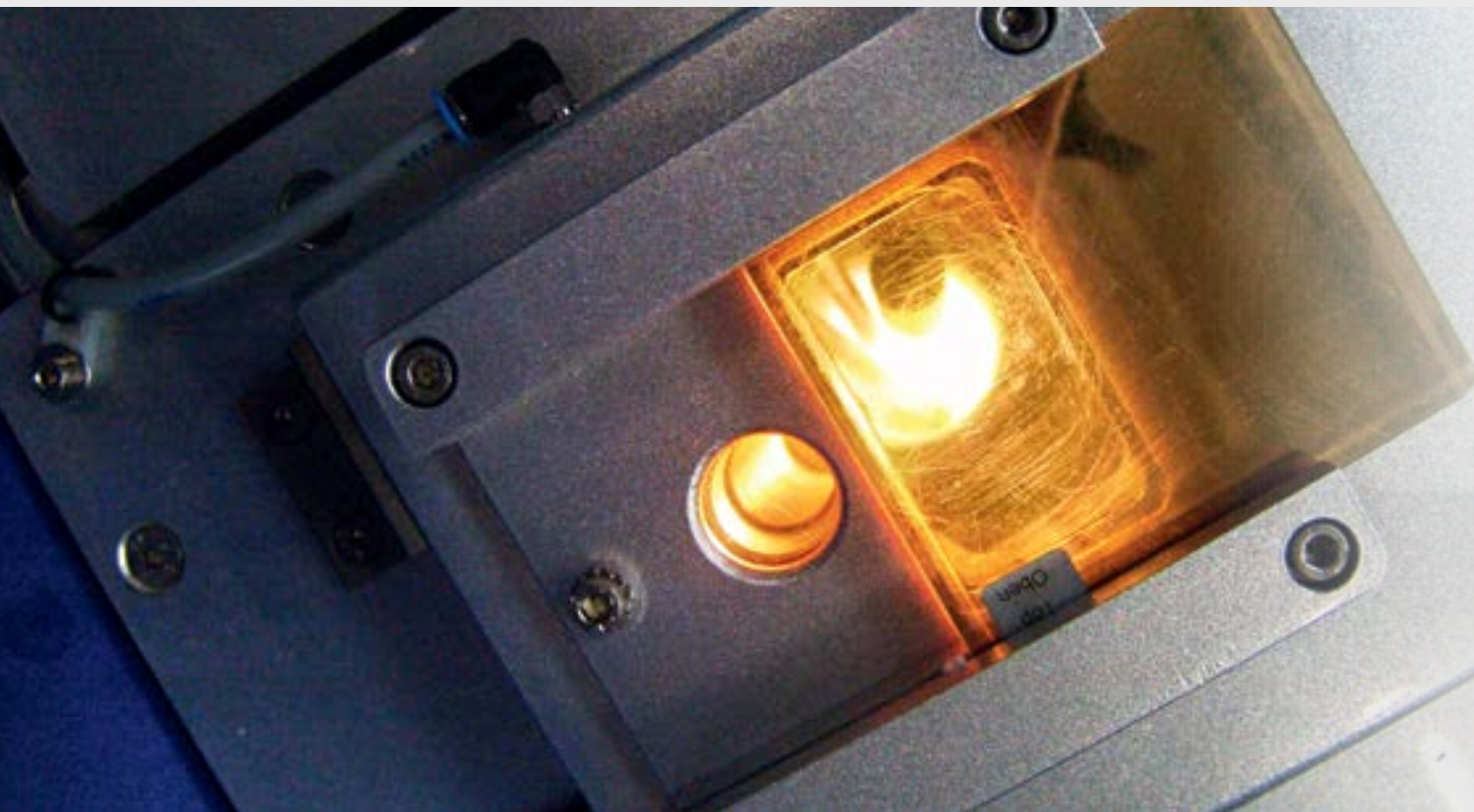


The VTC series: for every metal or alloy you want to cast



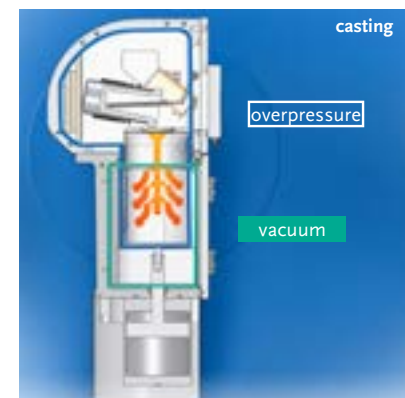
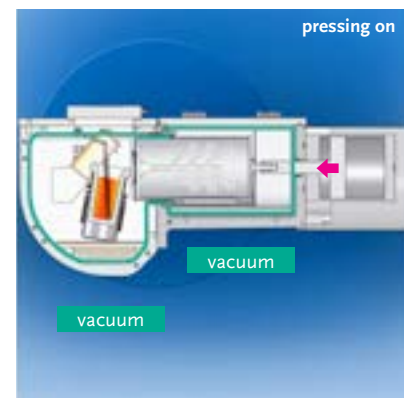
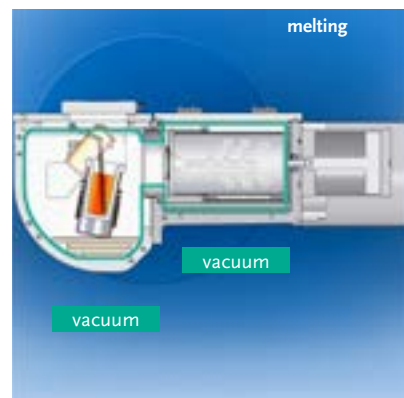
Casting trees in steel and in gold

VTC vacuum/pressure casting machines

The VTC 100 V – VTC 800 V are extremely versatile casting machines suitable for a wide range of applications. While the VTC series was originally designed as a high-temperature casting machine for casting steel, palladium, platinum etc. (max. 2,100°C), large flasks also make it suitable for economically producing castings in gold, silver and other materials.

The machine combines a dual-chamber differential pressure system with a tilting mechanism. The casting process is achieved by rotating the entire melting-casting unit by 90°. One benefit of the tilting system is

the use of economically priced graphite or ceramic crucibles instead of crucibles with holes and sealing rods; these tend to have a longer service life. Some alloys, such as copper beryllium, quickly cause crucibles with holes and sealing rods to become untight and therefore useless, and for this reason, many users have so far processed such alloys only in open systems – which means they can't choose to optimise the process with overpressure or vacuum. With the VTC series, these handicaps no longer apply. A vacuum can be produced in the melting chamber and the casting chamber to avoid oxidation processes during melting and air pockets in the casting mould. The flask is automatically pressed against



Sweep mode vibration system for perfect results even in Pt and Pd

the melting chamber for casting, making it possible to switch to overpressure during casting for better mould filling; in addition, the vibration technology optimises the process even further. As well as casting with flasks, casting into ingot moulds is also possible.

Due to the vibration technology (see page 20) and the sophisticated vacuum/pressure system, this machine is perfectly suited to casting platinum and palladium – and all without an elaborate and sensitive centrifugal mechanism. The VTC machines are equipped with the advanced sweep mode vibration system. It considers that each casting tree and even each item of a tree has a different resonance frequency, depending on its shape and size. Generating variable frequencies the sweep mode vibration ensures that the optimum frequency is covered.

Handling and control

Operation is simple and safe thanks to a clearly arranged and easy-to-use LCD display. All parameters, right down to the variable tilting speed, can be individually set and saved to ensure that recurring castings always produce consistent results.

The high vacuum casting systems VTC 100 V Ti - VTC 800 V Ti

The VTC Ti series is a cost-effective solution for casting highly reactive metals such as titanium, copper beryllium, amorphous steel etc. Following numerous modifications, such as completely reconstructed valves and hose connections, special seals and an evacuation and inert gas flushing process tailored to the machine, the prerequisites for the required vacuum of 10⁻³ mbar were met. Furthermore, special crucibles and inductors were developed, as the ceramic crucibles that are normally used also react with titanium. They also reduce melting times – and the shorter the melting time, the less time there is for a possible reaction.



Graphite crucible and ceramic crucible

The VTC series Vacuum Pressure Casting Machines



The new control system with LCD Display

The casting process is achieved by rotating the entire melting-casting unit by 90°.

Flask size
Ø125 mm x 220 mm



	VTC 100 V / Ti	VTC 200 V / Ti		VTC 400 V / Ti	VTC 800 V / Ti
performance			performance		
power max. / electrical connection	12 kW 3x400 V	15 kW 3x400 V	power max. / electrical connection	20 kW 3x400 V	20 kW 3x400 V
temperature max.	2100° C	2100° C	temperature max.	2100° C	2100° C
capacity			capacity		
volume graphite crucible	25 ccm = 450 g Au 18 ct	145 ccm = 2.0 kg Au 18 ct	volume graphite crucible	300 ccm = 2.5 kg Cu	600 ccm = 4.0 kg Cu
volume ceramic crucible	30 ccm = 600 g Pt / 250 g steel	180 ccm = 2.5 kg Pt / 1 kg steel	volume ceramic crucible	300 ccm = 2.0 kg steel	600 ccm = 4.0 kg steel
for use of flasks up to	■ 125 mm / 220 mm h ○ 125 mm / 350 mm h	■ 125 mm / 220 mm h ○ 125 mm / 350 mm h	for use of flasks up to	■ 125 mm / 220 mm h ○ 125 mm / 350 mm h	■ 125 mm / 220 mm h ○ 125 mm / 350 mm h
handling+control			handling+control		
vibration technology	■ sweep mode	■ sweep mode	vibration technology	■ sweep mode	■ sweep mode
automatic tilting with motor drive	■	■	automatic tilting with motor drive	■	■
automatic flask fixing	■	■	automatic flask fixing	■	■
casting programs	100	100	casting programs	100	100
temperature measurement	thermocouple up to 1,300°C optical pyrometer up to 2,000°C	thermocouple up to 1,300°C optical pyrometer up to 2,000°C	temperature measurement	thermocouple up to 1,300°C optical pyrometer up to 2,000°C	thermocouple up to 1,300°C optical pyrometer up to 2,000°C
quality management			quality management		
RS 232, Ethernet, USB interface, diagnostic system	■	■	RS 232, Ethernet, USB interface, diagnostic system	■	■
data printer	■	■	data printer	■	■
GSM-modem for remote service	■	■	GSM-modem for remote service	■	■
accessories			accessories		
pyrometer with video output	○	○	pyrometer with video output	○	○
vacuum investment mixer Indumix 4+	○	○	vacuum investment mixer Indumix 4+	○	○
furnace AK 135	○	○	furnace AK 135	○	○
vacuum pump	○	○	vacuum pump	○	○