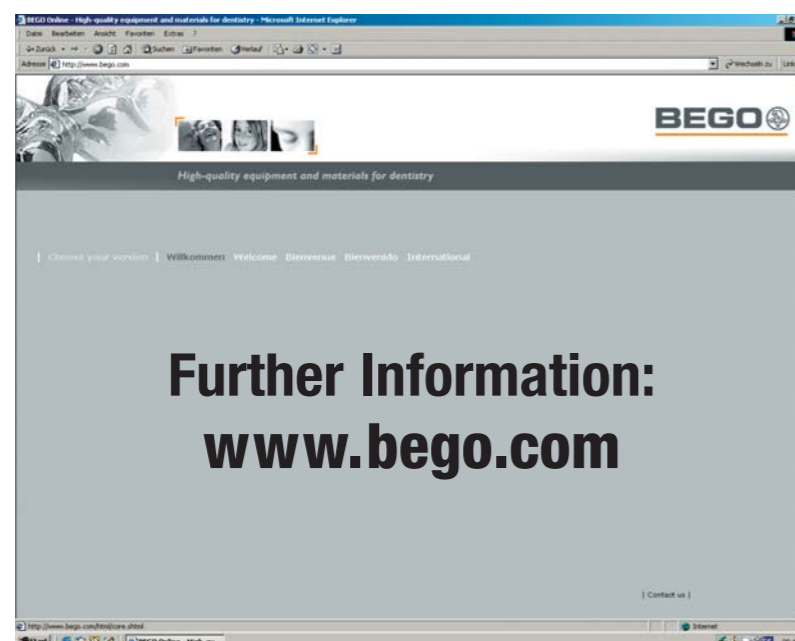


Subject to modifications in design, scope of delivery and composition. Whether given verbally, in writing or through practical instructions, our process-related data and recommendations are based upon our own experience and trials and can only be regarded as standard values. Status as at: 2.11.05.

Technical Data:	
Nautilus® T	
Height	420 mm
Height with cover open	520 mm
Width	700 mm
Depth	553 mm
Rated voltage	230 V, 50/60 Hz
Special voltages	200 – 240 V, 50/60 Hz
Power at rated voltage of 230 V	14 A
Compressed air connection (connection thread 1/4")	at least 5bar (0.5 [MPa])
Air consumption	approx. 180 l/min
Water supply (connection thread 3/4")	min. 3 l/min
Water discharge	wash-basin or siphon
Weight	70 kg
Termico Cooling water circulation unit	
Height	450 mm
Width	390 mm
Depth	490 mm
Power at rated voltage of 230 V, 50/60 Hz	0.3 kW
Weight empty/filled with 30 l	approx. 15/45 kg
CE	

Availability and accessories:	Unit	Pieces	Order No.
Scope of delivery:			
Nautilus® T 230 V, 50/60 Hz			26240
Ceramic crucible (with 2 halves each)	1 pack	4	52466
Plastic handles for ceramic crucible	1 pack	2	52436
Ceramic handles for ceramic crucible	1 pack	2	52467
Graphite ingot	1 pack	2	
Glass carbon cylinder	1 pack	1	
Tweezers		1	30002
Mould holder plate, ceramic		1	30259
Mould holder (ceramic) for sizes 1 and 9		1	12257
Mould holder (ceramic) for sizes 3 and 6		1	13362
Mould holder grid for partial denture work (25 mm high)		1	37618
Mould holder grid for partial denture work (15 mm high)		1	10073
Auromelt HF melting powder	1 dispenser for 65 g		52525
Base socket mould former size 3, 6 and 9		1 each	
Partial denture funnel former		1	
Accessories:			
Termico Cooling water circulation unit			26230
Compressed air tank with wall bracket			16260
Mould tongs, 55 cm long		1	39754
Base socket mould former size 3	1 set	4	52627
size 6	1 set	4	52628
size 9	1 set	4	52629
Partial denture funnel former	1 pack	10	52066
Wiromelt melting powder	tin, 80 g	1	52526
Special steel shelf for casting utensils	1 set		52469
Lolipot Crucible engobe for ceramic melting crucibles	spray bottle 100ml		52477



**Further Information:
www.bego.com**

E-mail: info@bego.com

Nautilus® T

**The compact vacuum pressure casting machine
with induction melting device**

**Small, compact, but offering enormous
performance**

- ◆ Proven BEGO vacuum pressure casting technique with state-of-the-art induction melting device
- ◆ Lifting crucible technology for reliable filling of the mould with the alloy
- ◆ Easy handling and excellent accessibility thanks to drawers with very compact dimensions
- ◆ Determination of casting moment by means of timer and characteristic data control
- ◆ Multi-function display for very easy operation
- ◆ Very economical use of casting alloys, rapid melting up to 1550 °C according to specific material
- ◆ Compatible to the new BEGO circulation unit Termico



The innovative concept – Nautilus® for benchtop use

Nautilus® T is more than only an entrance into the vacuum pressure casting technique. The compact benchtop unit assures you of excellent reproducible casting results which will convince everyone.

The basic concept of easy handling has again been implemented in Nautilus® T. The lifting crucible technique as the basis for economical and reliable casting provides for a high degree of efficiency. The crucible is inserted behind the upper drawer and the alloy is then inserted as well. This work step is carried out without any problem thanks to the easy handling of the spring-supported drawer system. The lower chamber contains a swivelling mould holder for the casting moulds.

The entire casting chamber is brought down to an extremely oxygen-reduced level in a very short time by means of a highly efficient vacuum pump and the alloy is melted using a high-frequency magnetic field. If necessary, preheating is also possible.

For casting precious-metal alloys a graphite or glass carbon ingot that bonds the residual oxygen during melting is additionally inserted in the ceramic crucible.

The proven vacuum pressure casting principle

Nautilus® T combines the advantages of high-frequency melting with those of vacuum pressure casting. The alloy is melted in the area around the crucible opening. In this way it can flow directly into the mould from the hot zone under vacuum conditions without temperature loss. In fractions of a second the still molten alloy is then pressed into the tiniest areas of the object. An outstanding feature of this process is the very economical use of the alloy. After approx. 20 seconds the pressure is eliminated and the melt solidifies.



The hot casting mould on the mould holder is simply placed behind the rear drawer



Lifting crucible with inserted graphite ingot to reduce oxygen during gold casting

Reliable casting moment determination

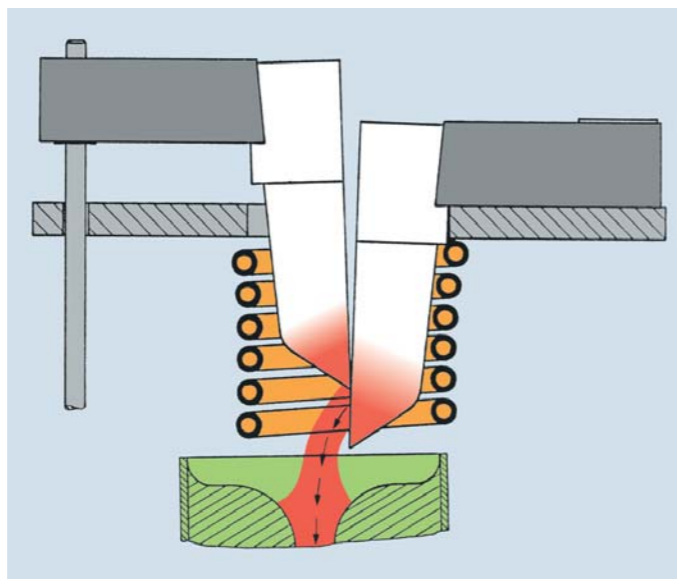
A distinctive number is entered in the display for each alloy via the keyboard. The four-digit distinctive number contains the control of the heating output at 6 levels: a variable with 8 levels to take into

account individual melting characteristics of different alloy types and 2 places for entering a further heating time.

These distinctive numbers are listed in a table for all BEGO alloys. For other alloys these numbers are easy to calculate.

The simple principle of distinctive number control using an example:

A precious-metal metal-to-ceramic alloy with a high gold content such as Bio PontoStar® is to be cast. In this case the first digit of the distinctive number is **6** for the melting capacity, the second digit is **6** for a very freeflowing gold alloy as well as **16** for further heating for 8 seconds after all alloy pieces have melted. The entire distinctive number is then: **6 6 1 6**.



The molten mass flows from the hot zone of the crucible directly into the casting mould



Preheating, distinctive number input, trigger casting – all control panel functions are easy to operate

The melting process

Now preheating can be carried out if required and then the casting moulds are inserted. The alloy pieces melt during final heating. This can be perceived without any problem through the inspection window. Once this process is completed, the timer that was programmed prior to casting is triggered by pressing a button. After the time preset through the distinctive number has elapsed, an acoustic signal sounds. The distinctive number entered contains the heating capacity, which depends on the type of alloy, and the length of time from pressing the button to the sounding of the signal. After a brief visual assessment of the melt the casting process is triggered by pressing a button and the melting crucible opens.

With Nautilus® T all dental alloys can be cast reliably, with the exception of pure titanium and alloys containing beryllium. The latter produce very tough oxides during melting so only around half of the amount can be used for casting. The melting crucible is subject to very severe wear with such alloys.

Nautilus® T with water circulation cooling system or circulation unit

Nautilus® T is designed both for connection to a water supply system and for operation with the circulation unit Termico available as an accessory.

If Nautilus® T is connected to the circulation unit, up to 50 casting operations can be carried out in succession. If it is connected directly to the water feed and discharge line, the casting sequence is unlimited. Further accessories for Nautilus® T are listed in the table entitled "Availability and accessories".

The machine control of Nautilus® T ensures very economical handling of resources; shortly after a casting, the water circulation is switched off in case of direct connection to the water line, and when operating with Termico, the circulation as well as the internal fans are



It is possible to work with a rapid casting sequence independently of a water feed and discharge line by means of the circulation unit Termico as an accessory.

switched off. That saves fresh water and power, and the noise level is also reduced.

Compressed air tank

In case of doubtful compressed air conditions or a laboratory compressor unit that is possibly too small, the BEGO compressed air tank system can be installed as a precaution. The compressed air reservoir supports the compressor unit and ensures a secure casting sequence.



Compressed air tank – Ideally with insufficient compressed air conditions