



Termico – the new circulation unit for Nautilus® T / Nautilus® CC plus

Nautilus® CC plus The intelligent cooling system

Nautilus® CC plus is designed for the connection to a tap water supply and for the operation with the new BEGO cooling water circulation unit Termico, deliverable as accessory.

If Nautilus® CC plus is connected to Termico, the casting can be performed

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: 02.05.07.

Nautilus® CC plus

Technical data:

Height	420 mm
Height with optical waveguide	650 mm
Width	700 mm
Depth	665 mm
Rated voltage	230 V, 50/60 Hz
Special voltages	200/210 V, 240 V
Power at rated voltage of 230 V	14 A
Compressed air connection (connection thread 1/4")	at least 5 bar (0.5 MPa)
Air consumption	approx. 180 l/min
Water supply (connection thread 3/4")	at least 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
Rated voltage	230 V, 50/60 Hz
Power consumption at rated voltage 230 V	0.3 kW
Weight empty	approx. 15 kg
Weight filled with 30 l water	approx. 45 kg

CE 0044

consecutively up to 50 times, depending on the ambient temperature. In case of direct connection to water intake and drainage, the casting sequence is unlimited.

The machine control of Nautilus® CC plus 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 switched off. That saves fresh water and power, and the noise level is also reduced.

Compressed air tank – ideally with insufficient compressed air conditions

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.



Availability and accessories:	Unit	Piece	Order No.
Scope of delivery:			
Nautilus® CC plus 230 V, 50/60 Hz			26220
NautiCard	1 package	3	16265
Card reader and writer, external	1 package	1	16266
BEGO CastControl	1 package	1 CD	16259
Ceramic crucible	1 package	4 crucibles with 2 halves each	52466
Plastic handles for ceramic crucibles	1 package	2	52436
Ceramic handles for ceramic crucibles	1 package	2	52467
Graphite cylinder	1 package	6	52468
Glass carbon cylinder	1 package	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 dispenser, 65 g		1	52525
Base socket mould former for sizes 3, 6 and 9		1 each	
Partial denture funnel former		1	
Accessories:			
Termico cooling water circulation unit		1	26230
Printer for casting logs		1	16267
Compressed air tank with wall bracket		1	16260
Mould tongs, 55 cm long		1	39754
Glass carbon cylinder	1 package	4	52473
Base socket mould former	Size 3	1 set	52627
	Size 6	1 set	52628
	Size 9	1 set	52629
Partial denture funnel former	1 package	10	52066
Wiro-melt melting powder (non-precious metal) tin, 80 g		1	52526
Special steel shelf for casting utensils		1 set	52469

Nautilus® CC plus

Intelligent casting of dental alloys

An overview of the highlights:

- > Proven BEGO casting concept – fully automatic vacuum pressure casting – expanded by innovative user convenience with data interface and NautiCard
- > Touch-free 2-channel temperature measuring system positively controls the automatic casting process
- > NautiCard enables the data transfer between Nautilus® CC plus and the PC
- > With NautiCard, up to 640 casting logs stored in Nautilus® CC plus can be transferred to the office PC for further processing
- > Up to 10 casting diagnosis logs can be transferred per e-mail or regular mail to the BEGO hotline with the help of NautiCard
- > Convenient update service by control software or casting programs is supported by NautiCard
- > Integrated printer interface for the direct printout of casting logs without PC, important for quality assurance
- > The new BEGO software CastControl is supplied at now charge to help determine the casting temperatures of "Non-BEGO alloys"
- > Compatible to the new circulation unit **Termico**

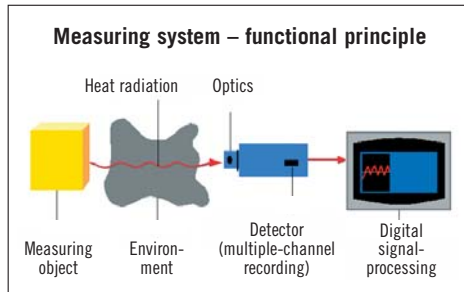
Conclusion: The best Nautilus® CC plus that ever existed, intelligent casting and secure working are guaranteed.



The universal casting unit with intelligent temperature measuring system

Except for pure titanium, all precious metal and precious metal free alloys can be cast with casting temperatures between 700 °C and 1550 °C and that always with the lowest possible casting temperature. The melt can never be overheated.

The casting time determination occurs fully automatic through a multi-channel temperature control. This means: Material specific fluctuations of the hot melt through reflection and emission are recorded in short time sequences in the ms range and automatically compensated by the system, whereby deviations in the measuring accuracy far below 1% can be assumed.



The optics of the measuring system routes the measuring data to the digital signal processing



The connection of the measuring system to the Nautilus® CC plus occurs through a flexible optical waveguide that is integrated in the multi-functional retractable blind. The core of the measuring system is connected with the control of the Nautilus® CC plus through a detachable plug connection and can be easily separated from the rear panel for servicing purposes.

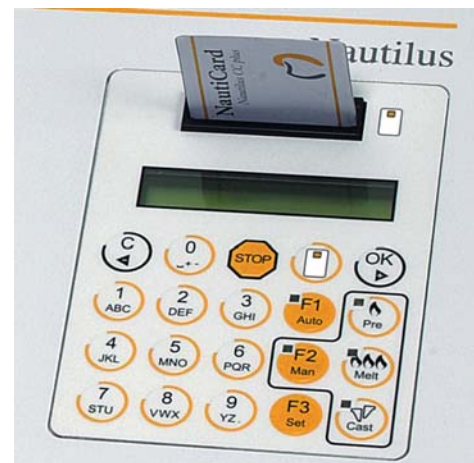


The hot casting mould on the mould holder is simply placed behind the lower cover

When uncoupling the integrated measuring system, work with the Nautilus® CC plus, similar to the Nautilus® T, can continue. The casting is triggered fully automatically and can also be optically controlled through the monitoring window. Of course, a manual operation and casting activation (casting time can be manually set) is also possible.

The data entry through the alphanumeric keyboard

An easy to handle operating concept thereby constitutes the focus of the philosophy. It is particularly easy to process BEGO alloys. All the casting programs of BEGO alloys are already stored in the memory of the Nautilus® CC plus. "Non-BEGO alloys" and their parameters can be simply and easily entered via the touchpad – similar to a mobile phone – even with names, if this alloy is regularly cast.

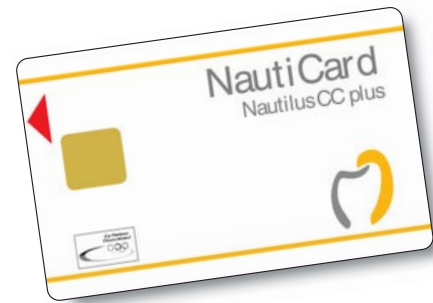


Easy-handling operating panel

NautiCard and CastControl The consistent continuation of the concept Intelligent and safe casting

The new Nautilus® CC plus has a data interface in the form of a chip-card reader at its disposal.

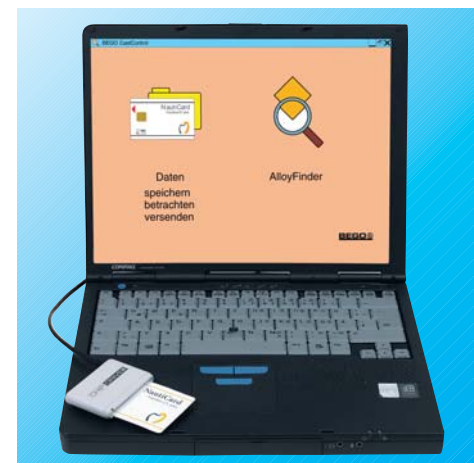
A memory chip that can receive the data from the "memory" of the Nautilus® CC plus, for instance up to 640 casting logs for the archiving on the PC, or that transfers the data from the card to the Nautilus® CC plus is placed on the NautiCard.



Apart from the quality assurance, another more important and useful aspect of the NautiCard is the capability to update control or casting program software.

With the new BEGO CastControl software as well as the NautiCard and the integrated chip-card reading unit/writing device, there is a connection of the Nautilus® CC plus to the desktop environment of your laboratory.

Casting data can be transferred, archived or individual casting diagnosis logs can be sent as e-mail to the BEGO hotline.



AlloyFinder in CastControl (Laptop is not included in the scope of delivery)

BEGO CastControl provides support when:

- > Determining the casting temperature for "non-BEGO alloys"
- > Creating an individual casting program tables with the entry of your own alloy names
- > Transferring casting program data to NautiCard
- > Viewing the NautiCard content
- > Transferring casting diagnosis logs to the e-mail program via the integrated interface

With the Nautilus® CC plus, you always have an overview of all the relevant data and parameters for the perfect dental casting.

Casting log = Quality assurance

Through the additional printer interface of the Nautilus® CC plus, a casting log can be printed directly for each casting with the printer offered under the accessories of the device. In addition, all the casting logs can also be archived.



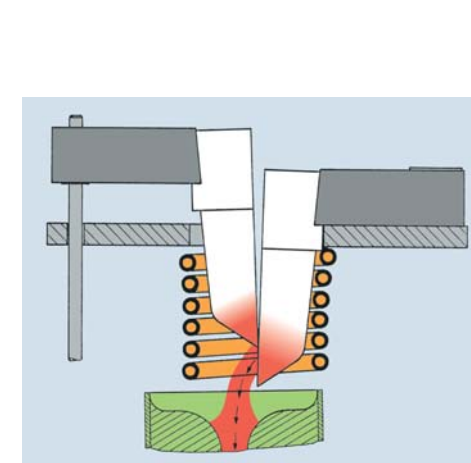
Model of the printer for casting logs (only as an example)

The proven concept of the BEGO vacuum pressure casting

The whole casting chamber is brought in a short period of time from a very efficient vacuum pump to a heavily reduced oxygen level and the alloy is melted by means of a high-frequency magnetic field; pre-heating can be used to reduce the casting delay time.

The Nautilus® CC plus combines the advantages of the high-frequency melt with those of the vacuum pressure casting: The alloy is melted in the area of the crucible opening.

It can then directly flow under vacuum from the hot area into the mould without temperature loss. In split seconds, the alloy, that is still fluid, is then pressed in the finest crevices of the object. For the casting of precious metal alloys, a graphite or glass carbon cylinder which binds the remaining oxygen, is used in the ceramic crucible. The very economical use of the alloy is thereby particularly advantageous. After 25 seconds, the pressure is removed; the melt has solidified.



The melt flows directly from the hot area of the mould into the casting mould

Operation and functions

The operation and control of Nautilus® CC plus is done through an operating panel with touchpad functions resembling those of a mobile phone and a two-line digital display for the display of clear text instructions. With the function buttons F1 and F2, the desired process type, automatic or manual casting, is preset, whereas with the set button F3, specific adjustments such as the language of Nautilus® CC plus, for instance, are specified. The user receives additional assistance for a flawless process sequence through signal LEDs.

The overall process sequence is accompanied by handling recommendations shown in the display to ensure that the orientation is always ensured. The option for the intervention in the melting process during the melt can be considered as a particularly technical "delight". If the visual impression of the melt leads to desire a casting temperature higher or lower than the preset one, a correction can be made at any time during the melting process. Each current process status can be disrupted at any time – to avoid stress at any time.



Lifting crucible with inserted graphite cylinder for the oxygen reduction during gold casting