



HETTICH BENELUX PRODUCT RANGE

HETTICH BENELUX

MORE THAN 79 YEARS

Hettich Benelux originated from a merger between the companies Dépex and Elbanton. We specialize in the design, manufacture, installation and maintenance of climate control equipment worldwide. In addition to our custom build projects, Hettich Benelux also supply standard laboratory equipment which can be adapted to your application, thanks to our own engineering department.

Our Business Office & Production departments supervise custom projects from drawing to delivery and installation of a customer's order. Products that were previously known under the name Elbanton are now supplied by Hettich Benelux.

Before products leave the factory, they are extensively tested and subject to a final inspection. All temperature tests take place in our own climate chamber. The Service & Installation department, together with our Business Office & Production department, is responsible for all our service and installation activities. In Geldermalsen, we have a well-equipped workshop. This allows us to carry out repairs and testing in house.

POWER & FOCUS

Our strength lies in producing single units to larger quantities for other brands (OEM) and adjusting standard equipment to your specific requirements.

Hettich Benelux mainly focuses on products in the medical, agro, food, pharma and life science sectors.

CERTIFICATION

The Hettich Benelux products are designed and manufactured in accordance with current safety standards.

Hettich Benelux is certified to ISO 9001, ISO 14001 and STEK.

Our hypothermia cabinets (Hettich ESP Hettherm) are ISO 13485 certified.

In addition, we are a member of Sedex (Supplier Ethical Data Exchange).

SERVICE

Hettich Benelux has its own service department. Our technicians are in the possession of a valid VCA-certificate and are regularly trained on the products.

Maintenance and repairs can be done at your location, however, repairs can also be carried out in our internal workshop.

QUALITY

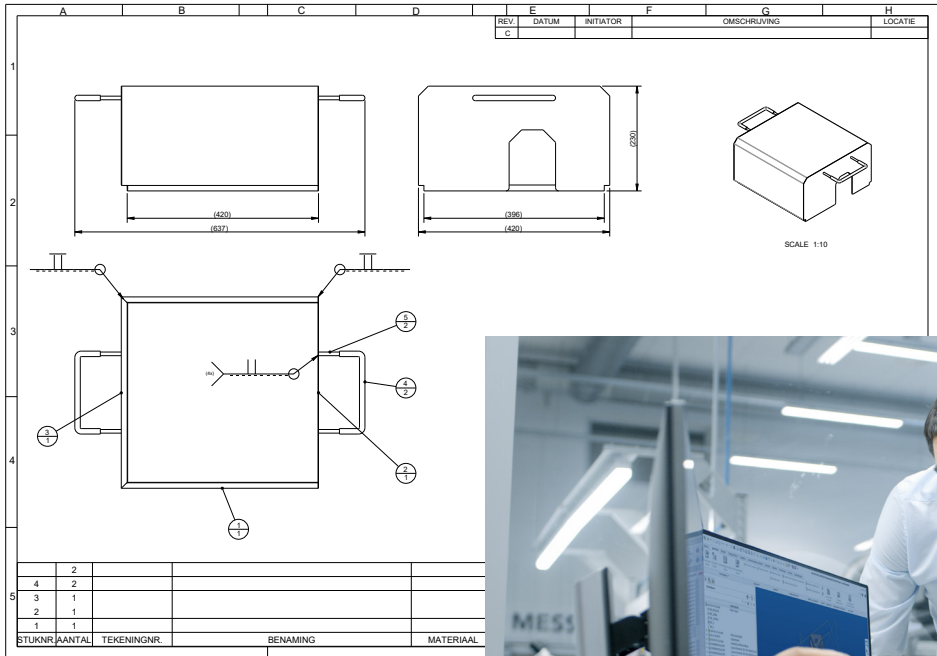
In order to provide our customers with good advice, our sales team has a laboratory training in various disciplines.

Hettich Benelux cooperates with the professional education to give students the best practice management; we are a recognized training company.

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Hettich Benelux can manufacture customized products that are often unavailable from any other manufacturer. Products such as 2000L water baths, 1500L shaking water baths with fast cooling, biological safety cabinets with heated chambers and pass through incubators. If you have a difficult equipment requirement that involves temperature, humidity and light, water, clean air you can contact Hettich Benelux to discuss a solution.



Curious to know our customer journey map for your custom build products? You can get in contact with our export manager or sales person to address your problem. After discussing your problem in detail, together we will come to the solution. Our project engineers will evaluate the solution on technical possibilities. If it is possible, we will send you a quotation. If not, we will get back to you with another solution. After your order, our mechanical engineer will start making the drawing. The drawing will be send to you to make sure it is correct. If so, you will give us the 'go ahead'. We will plan your order, inform you about the estimated time of delivery and then the production of your product starts!

A FAT, SAT or IQ/OQ for your special product is also a possibility.

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Plant growth cabinets

Hettich Benelux has developed a range of flexible plant growth chambers which can be used for general plant growth studies, tissue culture research, seed germination studies, drosophila research, entomology and in vitro plant studies. All the plant growth chambers use a patented dimmable, broad spectrum white LED lighting system with independently controlled far red led lighting. Thanks to the minimal heat generation of the shelves, there is a better and more stable temperature homogeneity in the cabinets; a low cooling capacity results in a low energy consumption. Because of a homogeneous light coverage of the effective work surface, there are no edge effects and the growth shelf area can be used completely.

The plant growth chambers consist of the following models:

- PRC 600 WL - net volume 575 liters, growth surface 1 m² using 3 growth layers.
- PRC 1200 WL - net volume 968 liters, growth surface 1,65 m² using 3 growth layers.
- PRC 1200 SL - net volume 968 liters, growth surface 9 m² using 15 growth layers.
- PRC 1700 WL - net volume 1522 liters, growth surface 2,34 m² using 3 growth layers.
- PRC 3200 WL - net volume 3075 liters, growth surface 4,68 m² using 6 growth layers.

The WL models are flexible with 1, 2 or 3 height-adjustable LED shelves, which can be independently programmed. In each model the height between the LED lighting and the platform can be set between 40 - 50 centimeters (when using 3 light platforms). Available light intensities: 200 µMol up to 1100 µMol. A four colour fully programmable LED shelf system is also available. With the 1200 SL (Sidelight) the lighting is on both sides and a maximum of 15 shelves, giving a total surface area of 9 m², can be installed. The SL is available as standard with 200 µMol, optionally 400 µMol.

As we use LED plates instead of tubes and the light area is the same as the shelf area, edge effects are eliminated. We guarantee homogeneous light at 31 mm below the LED's (91 mm for 1100 µMol). Options include: humidity control, CO₂ control (up or down) and stainless steel evaporator.

We keep improving our plant growth cabinets, check with our Sales department for the latest possibilities.

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Climate cabinets & rooms

Hettich Benelux is a manufacturer of both standard and custom build climate chambers and rooms.

For stability testing of drugs we manufacture the PSC (Pharmaceutical Stability Cabinet), for plant growth we manufacture the PRC range (Plant Research Cabinet) and for general purpose use we have the MPC (Multi Purpose Cabinet) range. Being the manufacturer of these products, allows us to make modifications to suit the customer. Some of our chambers have a visual alarm system, which is visible at a large distance through red and green LED lighting. You can also receive alerts via e-mail or potential-free contact.

Our climate chambers and rooms are used for various applications such as incubation, plant growth, germination and tissue culture, stability tests (pharmaceuticals and the food industry), freeze-thaw testing concrete, seed storage and drying. The cabinet (or room) has an air circulation system with a low air speed. The speed of the air has been optimized to create a stable and homogeneous climate in the climate room. Special fans ensure that the noise is kept to a minimum.

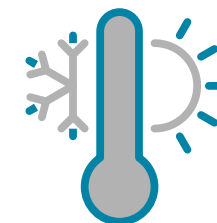
The Hettich Benelux climate cabinets & rooms are energy efficient with respect for the environment. The programmed 'neutral zone' in our cabinets ensures maximum energy-saving. This means a proportional cooling or heating until the set value is reached followed by an energy-neutral interval during which time no cooling or heating takes place. This technique does not only guarantee a constant temperature, but it is also many times more eco-friendly than conventional methods. Environmentally friendly water based foam is used to insulate the incubators.



Scan me



Scan me



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Stability cabinets

Pharmaceutical, chemical and cosmetic products are subject to very stringent requirements for durability and stability. Hettich Benelux has manufactured 'Pharmaceutical Stability Cabinets' (PSC) in-house for many years. All cabinets comply with the ICH Q1A directive. The stability cabinets are available in two standard versions, PSC 600 & PSC 1400. Other variations can be custom-made. Units can be placed together in any combination to make a complete wall with floor and ceiling finish. A wide variety of options and accessories are available.

The PSCs have a small footprint and due to the unique air circulation system the entire shelf can be used as a validatable surface.

For maximum energy savings the control systems have been programmed with a so-called 'neutral zone'. This is proportionally cooled or heated to the set value, followed by an energy-neutral interval in which no heating or cooling takes place. An ultrasonic air humidifier and a well insulated housing are used, this results in low energy consumption.

Due to the unique air circulation system, an inner door on the PSC is not required. This makes all areas of the cabinet to be easily accessible. The optional drawers run on telescopic pull-out rails and the shelves are on fixed guides. The alarm and monitoring are clearly visible through a green and red LED light line on the front. Integration with our SYCL temperature registration system is optional.

The stability cabinets are suitable for, among others, the following applications:

- pharmaceutical stability;
- cosmetics;
- foods;
- aging tests.

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Incubators

Hettich Benelux has manufactured Multi Purpose Cabinets (MPC) for several years. The MPC models are available as incubator, cooled incubator, refrigerator and freezer.

There are 3 standard sizes, MPC 225/225, MPC 600 and MPC 1400. Other variants and sizes such as a pass through incubator can be delivered as custom unit. The MPC units do not need space on the sides to open the door. As the door on the MPC does not increase the width of the unit, MPC units can be placed almost anywhere, in a corner or directly next to other laboratory equipment. This also offers possibilities to build a complete wall when multiple incubators, coolers or freezers are placed next to each other. The wall is then of course neatly finished, from floor to ceiling.

The alarm and monitoring are clearly visible through a green and red LED light line on the front. Integration with our SYCL temperature registration system is optional. The internal guide system, drawers and shelves are made of stainless steel and can very easily be taken out to thoroughly clean the interior. Minimal dehydration by application optimal air circulation system.

The MPC units have unique properties such as

- a very low noise level;
- reduced energy consumption;
- a homogeneous temperature in the cabinet;
- a unique air circulation system;
- a very favourable work surface/floor area ratio.

Due to the wide variety of options and accessories, the MPC can be assembled according to your wishes. In addition to standard models, we also produce tailor-made reach-in and roll-in incubators. Depending on the application we can build in a simple controller or a touch screen controller.



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Cooling & Freezing

Valuable samples must be safely stored with a constant temperature of -86 °C. Hettich Benelux freezers offer the optimal environment for your sensitive samples. Our ULT freezers are manufactured with high quality materials of European origin and have the most comprehensive security and control functions. Our ULT freezers guarantee optimal conditions for your samples for many years. The Hettich Benelux freezers are user-friendly, energy-efficient, safe, ice free and equipped with an advanced controller. (Note: only available in the Netherlands).

Hettich Benelux also manufactures Multi Purpose Cabinets (MPC) based on our many years of experience. The MPC models are available as:

- refrigerator;
- freezer;
- incubator;
- cooled incubator.

The alarm and monitoring are clearly visible through a green and red LED light line on the front. Integration with our SYCL temperature registration system is optional. The internal guide system, drawers and shelves are made of stainless steel and can be very easily taken out to thoroughly clean the interior. For all cooling equipment we can deliver custom-made solutions. Volumes from 50 litres to complete rooms. Customer-specific equipment is possible.

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Ovens

Hettich Benelux manufactures a range of ovens. The standard ovens are available as:

- glass dryer, type DMV;
- granulate dryer, type TS.

The drying cabinets of Hettich Benelux have a wide variety of applications. In addition to drying glassware, these drying cabinets are used in microbiological laboratories for drying plates, tools and products. In pharmacy, the drying cabinets are used for drying granules and at various research laboratories for drying plants. The standard systems start with a volume of 50 liters up to complete custom drying rooms.

Hettich Benelux also manufactures a range of hot air sterilizers. The principle is to sterilize all kinds of cleaned products by making warm dry air sterile. This effect is extremely suitable for products or tools that dry after the sterilization process must be. Some examples are glassware, ampoules and instruments. An advantage of hot air sterilizers is that these can sterilize a larger volume for a lower budget.

In addition to standard models, we also produce tailor-made reach-in and roll-in ovens. These can be equipped with manual or automatic ventilation. Depending on the application we can build in a simple controller to a touch screen controller.



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Hypothermia cabinets

The Hettich Benelux hypothermia cabinet is registered with the Ministry of Health, Welfare and Sport as class 1 medical device (Hettich ESP Hettherm NL-CA002-2012-25728) and meets the 93/42 EEC requirement. The hypothermia cabinets are developed and manufactured in house. Any modifications can be easily made.

The hypothermia cabinets are used for conditioned storage of:

- infusion liquids;
- irrigation fluids;
- dialysis fluids;
- filled syringes;
- (synthetic) blankets;
- towels;
- medication;
- other specific application areas.

Freestanding hypothermia cabinets are available in volumes 575 liters, 1250 liters or 2x 250 liters (other volumes on request). These models have fast recovery times due to the unique air circulation system and a temperature accuracy of $\pm 0.5\text{ }^{\circ}\text{C}$ at $37\text{ }^{\circ}\text{C}$. We also supply combination cabinets with compartments that work independently of each other. It is possible to make any desired combination of heated or cooled compartments.

Hypothermia cabinets are also available as built-in units. These are always tailor-made according to the customer's wishes. The exterior consists of coated stainless steel or brushed stainless steel. For the interior you can choose from 316 stainless steel or 304 stainless steel (standard). In addition, you can choose drawers or doors and cool and/or heat. The built-in models are fully integrated into the wall and have a low noise level. Temperature accuracy is $\pm 0.5\text{ }^{\circ}\text{C}$ at $37\text{ }^{\circ}\text{C}$ or $\pm 2\text{ }^{\circ}\text{C}$ at $4\text{ }^{\circ}\text{C}$. A dust filter is standard for the built-in model when used for blankets.

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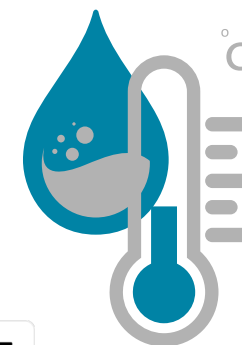
Oil, water & fermentation baths

Hettich Benelux produces standard and customer-specific oil, water, process, fermentation and shaking baths. The fermentation and shaking baths are specially designed for the laboratory and pilot plant. The fermentation baths are used for fermenting dairy products such as yoghurt, cheese and ice cream. All our fermentation baths are made internally from stainless steel 316, ensuring a high chemical resistance. Exterior is optionally made in stainless steel 304 or 316. The metalwork is almost completely seamless and each compartment is supplied with a drain as standard for ease of cleaning.

The fermentation baths are custom made according to user specifications and requirements. They can have one or more compartments and height-adjustable boilers for various diameters. If required, we can provide the fermentation baths with a fully programmable intuitive touchscreen controller. With the fully programmable controller it is possible, independently of each other, to control the temperature of different compartments, to measure pH, to automatically start / stop stirrers and to monitor. The baths are designed and produced by ourselves; this way we are able to manufacture the bath you have requested. The shaking movement in our baths can be either linear or orbital with adjustable shaking stroke.

All type of baths are equipped with an overheating protection as standard. Many options are possible, including shaking, tilting, tilting rack, circulation pump system or lid. Some applications for these baths are: the heating of samples and materials, stability and aging tests.

All Hettich Benelux baths are made internally from stainless steel 316, ensuring a high chemical resistance. Exterior is optionally made in stainless steel 304 or 316. The drain can be installed in the desired location. The heating elements of the oil baths are not in contact with the oil. Temperature range of the oil baths: room temperature $+10\text{ }^{\circ}\text{C}$ to $200\text{ }^{\circ}\text{C}$ and for the water & shaking baths $0\text{ }^{\circ}\text{C}$ to boiling point.



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Dairy analysis

The most reliable (IDF/ISO) reference method for the determination of fat / solid content in dairy products is the Mojonnier process. The Hettich Benelux MoPlant has been designed to save valuable time and has been extensively tested and validated by an independent French QA laboratory. The test results can be downloaded from our website. The analytical extraction method according to Röse-Gottlieb and Schmid-Bondzynski achieves a high accuracy of more than 0.02%.

By using the Hettich Benelux MoPlant all the necessary steps (dissolving, extracting, centrifugation, pouring off, evaporating, drying, cooling and weighing) can be performed in one place within reach. It minimises the risk of explosions (extraction system) and saves time; it only takes about 80 minutes to do all tests. The MoPlant is available in a single (8 samples) and a double (16 samples) model. The double model has two hot plates, two vacuum ovens, two cooling chambers and one centrifuge. The single model has one of each.

Benefits of the MoPlant:

- fast, easy and efficient;
- validated;
- reliable and long life;
- safe to operate (exhaust and over-pressure systems);
- ergonomic design;
- all-in-one mobile unit;
- complete, universal and versatile;
- easy replaceable spare parts;
- vacuum side tables for placing samples;
- standard 2 year manufacturer's warranty.

Also common used equipment is an oil bath with internal rocking device with tube rack for heat stability testing of skimmed milk powder.



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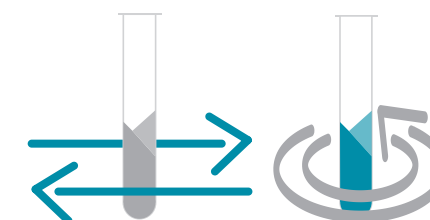
Thermomixers & Block thermostats

In 2016 Hettich Benelux purchased the rights to manufacture 3 Ditabis product lines. These products are now entirely manufactured and serviced by Hettich Benelux. They include aspiration systems (see page 14), thermomixers and block thermostats.

The Thermomixers (available with 1 or 2 blocks) can heat/cool and heat only with an orbital motion of 3 mm. They can have up to 9 programs each with up to 30 steps and temperature curves. A short mix (pulse) function is also available for rapid vortexing. One model is available with heated double block and linear shaking.

Block thermostats are also part of the range, available with 1 or 2 blocks. They can heat/cool and heat only. Both the thermomixers and block thermostats have more than 40 different blocks available as well as the ability to provide custom made blocks for those awkward tubes. All blocks have an outside dimension of 145 x 102 mm. The height varies per block. Switching blocks is very easy, it only takes 10 seconds. Various accessoires are available and are detailed in the brochure.

Hettich Benelux Thermomixers and Block Thermostats are suitable for the Life Sciences, Pharma, Medical Diagnostics, Food sciences and Chemistry markets.



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Aspiration systems

A liquid aspiration system is available for every budget, varying from a simple to an automatic system. The system is easy to install and can optionally be fitted with a hand piece with Luer-Lock adapter for i.e. attaching a Pasteur pipette. There are attachments available to extract 1, 4 or 8 channels. A foot switch is also available.

The following models are available:

- Standard aspiration system (A02/04). Pump housing dimensions: 170 mm (l) x 220 mm (w) x 160 mm (h). Weight 5,5 kg.
- Compact aspiration system (AZ 02/04) suitable for occasional use. Supplied as standard with diaphragm vacuum pump, 1 bottle of 2 or 4 liters with quick connection, 1x 3m hose with HEPA filter and required closures for the bottle. Pump housing dimensions: 170 mm (l) x 105 mm (b) x 60 mm (h). Weight 0.9 kg.
- Automatic aspiration system (AA 02/04 or AA 24), which automatically switches off when the vacuum has reached the desired level. Supplied as standard with diaphragm vacuum pump, 1 bottle of 2 or 4 liters with quick connection, 1x 3m hose with HEPA filter and necessary closures for the bottle, handle with accessories, Luer Lock 90° angle adapter, 1x adapter for a hose of 6.6 mm diameter, 1x adapter for a 6 mm hose, 1 Luer Lock metal connector with hose to connect optional accessories.

The extraction speed is 8 (AZ), 17 (AO) and 25 (AA) liters per minute. The automatic aspiration system can be connected to several (up to 4) bottles and extraction points. With all aspiration systems, the bottles are fitted with a quick coupling, which makes it easy to remove the vacuum hoses and to easily empty and clean the bottle.

Applications: extraction of liquids from, for example: cuvettes, microtiter plates, culture bottles, tubes and petri dishes.

Various accessories are available for the systems. For the 'standard' and 'automatic', an extension set AE & AK is available for connection to an existing vacuum system.

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Monitoring

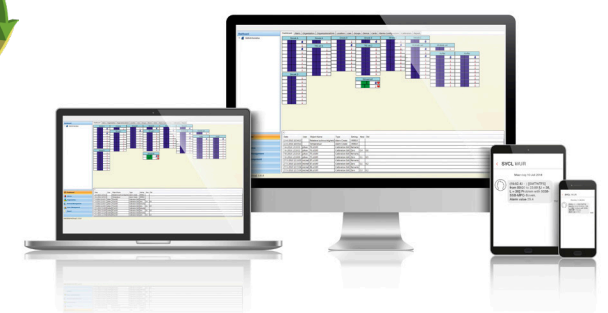
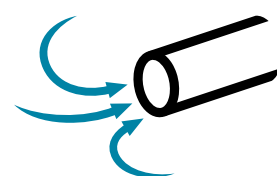
SYCL is applicable for real-time monitoring of your laboratory or production environment for pressure, CO₂, temperature, relative humidity, air speed. SYCL is the successor of the Elbanton Temperature Registration System, adapted to the requirements of our time.

SYCL is a wired system, however, it is also possible to combine it with wireless sensors. It is our preference to use SYCL as a wired system (especially for critical processes) because it is more stable compared to a wireless system.

For every measuring point you can set your own alarm limits, if it is outside the limits the system will create an alarm by means of sms, e-mail, sound or visual signal.

Most important features:

- wired and/or wireless available;
- up to date software;
- traceability through Audit Trail;
- call & bulletin statistics with own text;
- web-based (stand alone computer, network or via VPN)
- SYCL has been developed to support you for the following GMP, FDA CFR 21 part 11, JACIE, ISO 15189, ISO 17025, GAMP-5m standards.



Hettich Benelux supplies (custom) products
in the following categories:

Plant Growth cabinets
Climate cabinets & rooms
Stability cabinets
Incubators
Cooling & Freezing
Ovens
Hypothermia cabinets
Oil, water & fermentation baths
Dairy analysis
Thermomixers, Block thermostats
Aspiration systems
Monitoring

