

Inspired by **temperature**



Temperature Control for botanical extraction and processing

huber

Precise solutions for the complete cannabinoid isolation process



Temperature control for botanical extraction and processing

Welcome to the forefront of cannabis extraction, where the delicate dance of temperature and technology transforms the cannabis experience. Our cutting-edge temperature control solutions empower extraction processes, ensuring the preservation of essential compounds and the delivery of superior, consistent results.

Cannabis extraction is the process of isolating and removing the active compounds, such as cannabinoids and terpenes, from the cannabis plant to create concentrated forms of these substances. The primary goal of extraction is to obtain a more potent and versatile product that can be used for various purposes, including medicinal, recreational, or industrial applications.

There are several methods of cannabis extraction, each with its own advantages. The extracted cannabis compounds are often used to produce products like oils, tinctures, concentrates, edibles, and topicals. These products can offer different consumption methods and potencies, catering to a diverse range of preferences among consumers. Additionally, cannabis extraction plays a crucial role in the development of pharmaceuticals.

As the cannabis industry continues to evolve, advancements in extraction technologies and techniques contribute to the production of high-quality and standardized cannabis extracts for both medical and recreational purposes.

Our mission: make your work easier

Our temperature control technology makes work in research and industry easier and more efficient. This is our mission and our products and services follow this concept.

Our products have proved themselves through experience and are recognised as technology leaders in the field of Temperature Control in experimental, research facilities and industrial production processes. A typical application is process temperature control in the chemical and pharmaceutical industry.

In other industries, our temperature control units are used to carry out material and stress tests, temperature-dependent testing of food and beverage, cosmetic products and building materials and the simulation of environmental conditions and ageing processes.

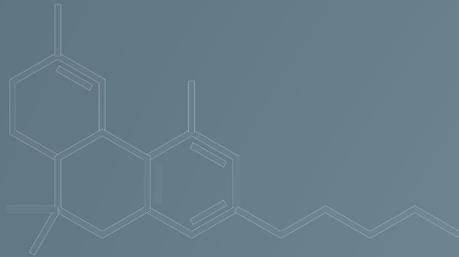
Please do not hesitate to contact us if you need an individual temperature control solution. We would be happy to advise you personally and show you suitable solutions or completed reference projects.



Applications

- Hydrocarbon Extraction
- Ethanol Extraction
- CO₂ Extraction
- Ice Water Extraction
- Winterization
- Filtration
- Decarboxylation
- Solvent Recover
- Short-Path Distillation
- Thin / Wiped Film Distillation
- Recrystallization
- Formulations

Get the most out of your extraction and distillation process



Solvent Recovery

The solvent is distilled off and thus separated from the extract. Solvent recovery generally calls for condenser temperature of between -20°C to 0°C . The ideal unit will depend on the volumes of solvent to be recovered.

Winterization/Filtration

Winterization is a crucial step in the cannabis extraction process, a meticulous technique that elevates the quality and purity of cannabis extracts. This transformative process is designed to refine crude extracts, removing undesirable components and enhancing the overall clarity and potency of the final product.

Extraction

Cannabis extraction is the process of isolating and removing key compounds like cannabinoids and terpenes from the cannabis plant.

Common methods include:

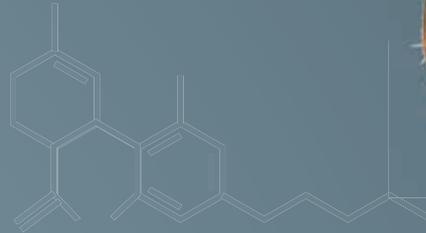
- Hydrocarbon extraction
- Ethanol extraction
- CO₂ extraction

All of which require a specific set of temperature control zones and settings.



Decarboxylation

Decarboxylation is vital for "activating" THC and CBD in cannabis. Applying heat removes the carboxylic acid (via the release of CO₂), and unlocks their psychoactive and therapeutic effects, crucial for smoking, cooking, or making cannabis-infused products. Temperature control is essential for maintaining potency and reducing degradation.



Distillation

In this stage crude oil is further purified through the process of fractional distillation. It involves heating the extract beyond its boiling point, causing it to evaporate. Once re-condensed it is in a much more pure concentration.

- Vacuum distillation
- Short-path distillation
- Thin / Wiped film distillation

Recrystallization

Recrystallization purifies isolates by dissolving impurities in a solvent at high temperature, allowing the substance to recrystallize as it cools. The purified crystals are then separated, resulting in a higher-purity isolate. This method is widely used in cannabis extraction for obtaining pure cannabinoids CBN, THCV or CBG.

For these applications, thermal cycling and temperature ramps are often utilized in the range of -40°C to +140°C.



Extraction

high volume production



There are many ways to perform an initial extraction, but all these methods have one thing in common – Huber. Whether it be ethanol extraction or butane, CO₂ or propane, ice water or heptane, Huber TCUs play a vital role in the cooling of solvent and the regulation of extraction temperatures.

Hydrocarbon Extraction

For hydrocarbon extraction, operators often utilize Huber CC and Unistat series to cool down solvent tanks, material columns, and various components. The target temperature range is generally -40°C to -80°C. Huber heating units, such as the KISS 202 and CC-315B are often used on the solvent evaporation side of these closed loop systems.

Ethanol Extraction

In ethanol extraction, Unistats and Cool Smart CS Chillers are routinely used. Ethanol is generally brought down to temperature in a holding tank and then transferred to the process. Heat exchangers and flow through chillers can also allow for the cooling of ethanol. These applications generally call for large process volumes to be cooled quickly, requiring a high cooling capacity in the -20°C to -80°C range.

CO₂ Extraction

In the CO₂ extraction process temperature control plays a crucial role. Columns are heated and chilled, as are feed and solvent lines, all in order to ensure extraction temperatures as well as maintain solvent pressure and flow. The Unistat T305 heating unit and Cool Smart CS Chillers are routinely paired with these units.

Ice Water Extraction

Huber Chillers are not commonly seen, but sometimes utilized in the process of ice water extraction. Jacketed tanks are chilled down to temperature, in order to increase efficiency and reduce resource consumption.

With higher production goals comes larger equipment requirements; with the associated increase in cooling and heating powers. The Huber standard product range starts at cooling powers of 280 watts at 15°C up to 130 kW at 15°C. Operation remains simple from the smallest to the largest.

Interfaces facilitate automation, monitoring and recording. Production demands are crucial and flexibility is a highly desirable option, especially with varying production goals. For this reason it is simple to run Huber machines in parallel as “redundant systems”. This also gives a dimension of security in always having spare capacity if needed.

At the industrial scale, Huber units offer high flow pumps along with robust heating and cooling. These large Temperature Control Units (TCU's) can be integrated into high volume production facilities with ease.

Huber's large scale TCU's are capable of providing efficient temperature control to process tanks and reactors with volumes of up to 2,000 liters. Such large volumes can be cooled to low temperatures without the use of liquid nitrogen.

Huber products that are commonly seen in these large scale applications include units that have 60 kW at -40°C (Unistat 680) and units that have 25 kW at -60°C (Unistat 950).

Examples





Winterization / Filtration

Winterization is a process used in cannabis extract production to remove impurities like fats and waxes. After extraction, the crude extract is mixed with a cold solvent, typically ethanol, causing undesired compounds to solidify. Filtration or centrifugation separates the solids, and evaporation removes the solvent. This results in a purer cannabis extract, enhancing clarity and potency.

Decarboxylation

Decarboxylation is a vital process in preparing cannabis for consumption. It involves applying heat to convert non-psychoactive cannabinoids like THCA and CBDA into their active forms, THC and CBD. This transformation unlocks the psychoactive and therapeutic properties of the cannabinoids, making it essential for smoking, cooking, or creating cannabis-infused products. Proper temperature control is crucial to preserve potency while avoiding the degradation of other beneficial compounds in the plant.

Recrystallization

Cannabis recrystallization is a refinement process used to purify cannabinoids extracted from the cannabis plant. This technique involves dissolving the extracted cannabinoids in a solvent, typically a hydrocarbon or ethanol, and then allowing them to slowly crystallize as the solvent evaporates. The slow crystallization process encourages the formation of larger, more pure crystals, effectively removing impurities and undesirable compounds.

The goal of cannabis recrystallization is to enhance the purity of the cannabinoids, such as THC (tetrahydrocannabinol) or CBD (cannabidiol), resulting in a more refined and concentrated product. This process is often employed in the production of high-quality cannabis extracts and concentrates, ensuring a cleaner and more potent final product for medicinal or recreational use. Proper control of temperature, solvent ratios, and crystallization conditions is crucial to achieve optimal results in cannabis recrystallization.

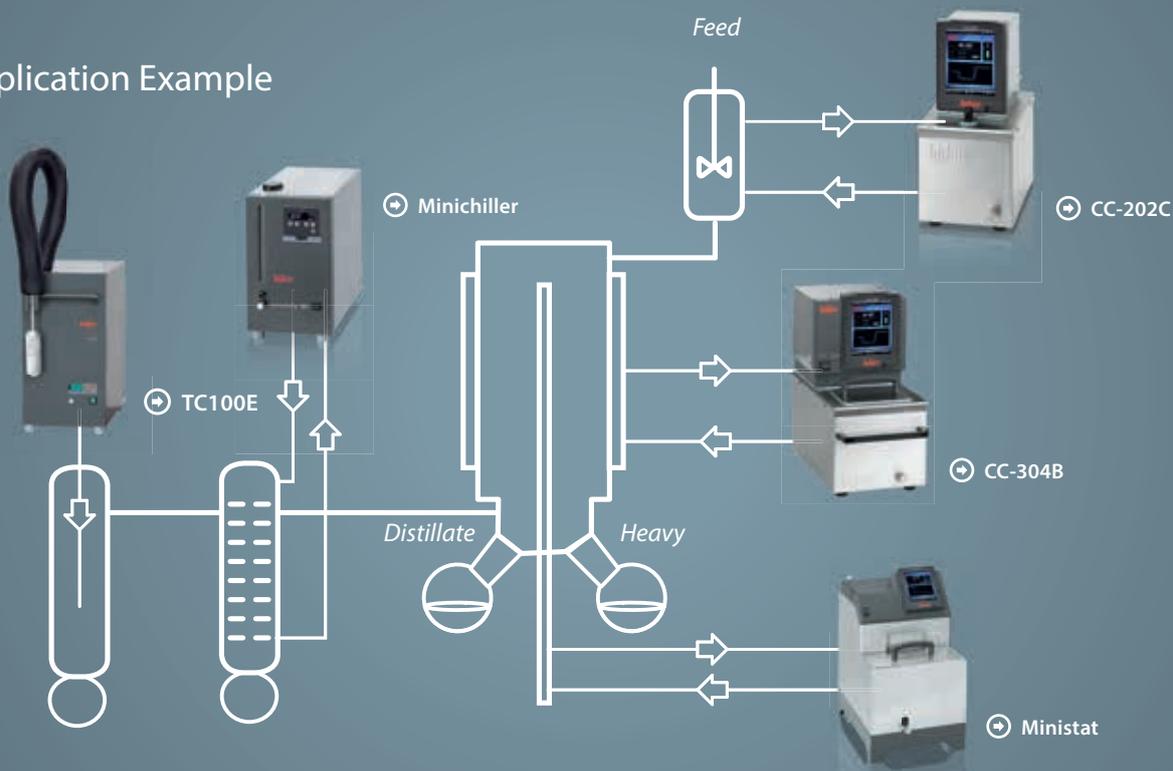
Fractional Distillation

The wiped film evaporator (WFE) and short path distillation apparatus are the most common methods for refinement of crude oil. In this stage of purification, temperature stability & control are integral to process efficiency. Molecular distillation can take many forms, some more complex than others,

but they all require heating and cooling in varying zones; at varying set points. To maximize automation, our Pilot ONE system will allow all of the temperature control units to be controlled from a central point. Below are some examples of OEM pairings.



Application Example



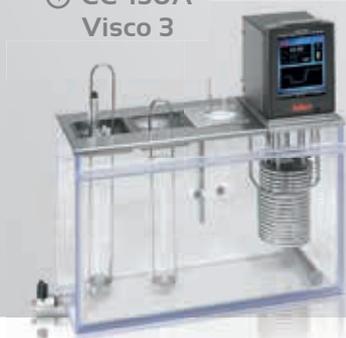
Isolation Processing



Recrystallization

The recrystallization of cannabinoids is most commonly done within a jacketed reactor. In order to maximize productivity, precise and responsive temperature control is essential. Automation is easily attainable with the Pilot ONE programmer allowing for custom cycles and temperature ramps to be created, and if required, saved onto a USB thumb drive. With the Unistat series, isolate production has never been easier or more efficient. Operators most commonly use the CC-508, Unistat 410, or Unistat 525 for these processes.

➔ CC-130A
Visco 3



Formulations & Quality Control

In the final stages of processing, extracts are often blended or mixed into formulations. Whether to facilitate a reaction, aid in homogenization, or encourage an emulsification, temperature control is often needed in the final stages of formulation. Huber has a solution for every application, at every temperature.

➔ BFT5



As standards are developed, quality control will become more common place in the cannabis sector. Huber recirculating chillers and heated baths regularly play an integral role in analytical and quality assurance labs across the world.



Weed be good together



www.acrossinternational.com



www.agrify.com



www.ampequip.com



www.apical.info



www.agiusaonline.com



www.beakerandwrench.com



www.bizzybee.com



shopbv.com



www.chemglass.com



www.decimalengineered.com



elevatedequipmentsupply.com



www.extractiontek.com



www.growinglabs.com



www.heidolphna.com



www.labdepotinc.com



www.machtechnologies.com



www.pacificcombustion.com



www.usalab.com



www.vitaliset.com



www.xtractordepot.com



www.710sci.rmreagents.com

Technology leader in temperature control

Huber is the technology leader for high precision and responsive temperature control solutions for research and industry. Our expansive product line offers solutions for all temperature applications ranging from -125°C to $+425^{\circ}\text{C}$. The product range includes highly dynamic temperature control systems with cooling capacities of up to 250 kW as well as chillers and heating/cooling circulators for applications in R&D laboratories, pilot plants, and production facilities.

Huber has pioneered the technological development in the field of fluid temperature control with several innovative products. A revolution in temperature control technology was the introduction of the Unistat temperature control systems in 1989. 30 years later, Unistats still set the pace when it comes to highly dynamic temperature control processes.



Advantages



Responsive thermodynamics for fast control behavior for chemical processes.



Extremely fast heating and cooling rates due to small internal volumes.



Process stability, predictable and reproducible results at any time for solid research and production.



Intelligent TAC function continually monitors performance for optimum control.



Wide range of models covering different temperature ranges with varying cooling/heating capacities.



Broad working temperature ranges without liquid change and working life of the HTF.



Data communication standards and data recording. Interfaces: e.g. Profibus, Modbus, TCP, Ethernet, OPC-UA, RS232, RS485, USB, Analogue.



Selected models for precise temperature control

Unistat T – high temperature closed loop systems

Chili and Unistats of the T300 and T400 series control temperatures in a highly precise and space-saving manner up to +425 °C. They set the standard for safety, ease of use, and temperature control speed.

HT models are equipped with stepper motor controlled water cooling.



➔ Unistat T305

Model	Working temperature range (°C)	Pump max. VPC		Heating power (kW)	Cooling power (kW) at (°C)				Dimensions WxDxH (mm)
		(l/min)	(bar)		400	300	200	100	
Chili	65...300	45	0,9	2,7 - 3,0	–	–	–	–	240x427x393
Unistat T305	65...300	45	0,9	2,5 - 3,0	–	–	–	–	425x250x631
Unistat T305 HT	65...300*	45	0,9	2,5 - 3,0	–	3,2	2,3	0,6	425x250x631
Unistat T305w HT	(15) 65...300	45	0,9	2,5 - 3,0	–	10,0	10,0	10,0	425x250x631
Unistat T320	65...300	96	3,5	10,5 - 12,0	–	–	–	–	540x678x1174
Unistat T320w HT	(15) 65...300	96	3,5	10,5 - 12,0	–	10,0	10,0	10,0	540x678x1174
Unistat T330w HT	(15) 65...300	96	3,5	21,0 - 24,0	–	18,0	18,0	10,0	540x678x1174
Unistat T340w HT	(15) 65...300	90	5,5	43,0 - 48,0	–	20,0	20,0	12,0	800x1060x1600
Unistat T402	80...425	45	0,9	6,0	–	–	–	–	505x400x765

* lowest working temperature 15 K above ambient temperature

Chili – Powerful Heating Circulation Thermostat

Chili is the latest heating circulator for closed systems in the Unistat product family. The powerful unit guarantees highly accurate, reproducible temperature control results with short heat-up times and wide temperature ranges without fluid change. The closed circuit prevents oil vapors and oxidation, which increases the service life of the thermofluid. Chili is the smallest heating thermostat suitable for Malotherm. Perfect for Thin / Wiped Film Evaporator.

Model	Working temperature range (°C)	Pump max. VPC (l/min)	(bar)	Heating power (kW)	Dimensions WxDxH (mm)
Chili	65...300	45	0,9	2,7 - 3,0	240x427x393

* lowest working temperature 15 K above ambient temperature

➔ Chili



Cooling and Heating Bath Circulators

Classic open bath and circulation thermostats are used for many heating and cooling applications. There are more than 70 models in the series, available with Pilot ONE or KISS controller.



Model	Working temp. range (°C)	Heating power (kW)	Bath			Pump data				Cooling power (kW) at (°C)			Dimensions WxDxH (mm)
			opening (mm)	depth (mm)	volume (ltr)	max. pressure (l/min) (bar)	max. suction (l/min) (bar)	20	0	-20			
CC-202C	(-30)* 45...200	1,5 - 2,1	Ø 25	150	3,5	27	0,7	22	0,4	-	-	-	178x260x355
CC-304B	(-20)* 28...300	2,2 - 3,0	130 x 100	155	5,0	25	0,7	18,5	0,4	-	-	-	210x335x392
CC-308B	(-20)* 28...300	2,2 - 3,0	130 x 110	155	7,6	25	0,7	18,5	0,4	-	-	-	242x404x392
CC-315B	(-20)* 28...300	3,0 - 3,5	270 x 145	200	15,6	25	0,7	18,5	0,4	-	-	-	335x382x433
CC-K6	-25...200	1,6 - 2,1	140x120	150	4,5	27	0,7	22	0,4	0,20	0,15	0,05	210x400x546
KISS K6	-25...200	1,6 - 2,1	140x120	150	4,5	14	0,25	10,5	0,17	0,20	0,15	0,05	210x400x546

* Auxiliary cooling device required Temperature stability: CC ±0,02 K ; KISS ±0,05 K

Ministat 240

Ministat 230

Ministat 125



Ministats – smallest Heating and Cooling Bath Circulators

Ministats are the smallest cooling circulators in the world and permit operation in small spaces, for example in a fume hood or within a short path distillation skid. The devices have a wide range of features and are ideally suited for the temperature control of botanical distillation.

Model	Working temp. range (°C)	Heating power (kW)	Bath		Pump data				Cooling power (kW) at (°C)				Dimensions WxDxH (mm)
			volume (ltr)	depth (mm)	max. pressure (l/min) (bar)	max. suction (l/min) (bar)	20	0	-20	-30			
Ministat 125	-25...150	0,9 - 1,0	2,7/1,3*	120	22	0,7	16	0,4	0,30	0,21	0,05	-	225 x 370 x 429
Ministat 230	-40...200	1,6 - 2,1	3,5/1,7*	135	22	0,7	16	0,4	0,42	0,38	0,25	0,14	255 x 450 x 476
Ministat 240	-45...200	1,8 - 2,1	5,5/2,8*	157	22	0,7	16	0,4	0,60	0,55	0,35	0,125	300 x 465 x 516

* with displacement insert

Powerful Cooling Bath Circulators

Cooling bath circulators are equipped with insulated baths made from high-grade stainless steel and offer low working temperatures down to -90°C up to +200°C. The devices are ideally suited for integration into extraction.



Model	Working temp. range (°C)	Heating power (kW)	Bath		Pump data				Cooling power (kW) at (°C)						Dimensions WxDxH (mm)
			volume (ltr)	depth (mm)	max. pressure (l/min) (bar)	max. suction (l/min) (bar)	100	20	0	-20	-40	-60			
CC-505	-50...200	1,3 - 1,6	5	150	25	0,7	18,5	0,4	1,2	1,2	1,0	0,6	0,15	-	410 x 480 x 764
CC-508	-55...200	2,7-3,0	5	160	25	0,7	18,5	0,4	1,5	1,5	1,5	1,0	0,3	-	410 x 480 x 764
CC-902	-90...200	1,5	5	200	25	0,7	18,5	0,4	1,2	1,2	1,2	1,1	0,9	0,6	550 x 600 x 911

Selected models for precise temperature control



➔ Unichiller 500Tw

➔ Minichiller 600-H OLÉ

Minichiller & Unichiller

The Minichiller and Unichiller series offer environmentally friendly and economic cooling solutions. The circulating chillers offer better efficiencies than cooling water as well as stable pressure and flow rates and a constant operating temperature. They are suitable for a wide range of applications such as removing heat from chemical processes or cooling scientific equipment.

Model	Working temperature range (°C)	Pump Data				Heating power (kW)	Cooling power (kW) at (°C)				Dimensions WxDxH (inch)
		max. pressure (l/min)	max. pressure (bar)	max. suction (l/min)	max. suction (bar)		15	0	-10	-20	
Minichiller 300 OLÉ	-20...40 (80)*	14	0,25	10,5	0,17	–	0,3	0,2	0,14	0,07	225 x 360 x 380
Minichiller 300-H OLÉ	-20...100	14	0,25	10,5	0,17	0,9 - 1,0	0,3	0,2	0,14	0,07	225 x 360 x 380
Minichiller 600 OLÉ	-20...40	24	0,7	18,0	0,4	–	0,6	0,5	0,35	0,15	280 x 490 x 424
Minichiller 600-H OLÉ	-20...100	24	0,7	18,0	0,4	1,6 - 2,1	0,6	0,5	0,35	0,15	280 x 490 x 424
Unichiller 025 OLÉ	-10...40	29	1,0	–	–	–	2,5	2,0	1,2	–	460 x 590 x 743
Unichiller 160T	-10...40	96	5,6	–	–	–	16,0	8,8	4,0	–	904 x 1582 x 1902
Unichiller 300T	-20...40	210	4,7	–	–	–	30,0	18,0	11,0	6,0	905 x 2172 x 1900
Unichiller 500Tw	-20...40	234	4,9	–	–	–	50,0	30,0	24,0	14,0	1000 x 1100 x 1635

* Permissible return temperature +80°C Optional heating on request

CS Chillers

The CS chiller range offers air-cooled models in different performance classes. They combine cool and smart technology in one unit and further reduce water consumption and lower the operating costs for many applications. H = Heating

Model	Working temperature range (°C)	Pump Data		Cooling power (kW) at (°C)					Noise Level (dB)	Dimensions WxDxH (mm)
		(l/min)	(bar)	15	10	0	-10	-20		
CS 20 by VDH	-20...15	10	3,5	2,2	2	1,3	0,9	0,5	58	530 x 580 x 750
CS 25 by VDH	-20...15	40	4,5	3,5	2,5	1,6	0,98	0,7	60	580 x 660 x 820
CS 50 by VDH	-20...15	70	3,7	8	5	4,2	3,5	2	63	680 x 730 x 1520
CS 75 by VDH	-20...15	70	3,7	9	7,5	5,5	3	2,4	66	800 x 850 x 1665
CS 100 by VDH	-20...15	70	3,7	18	10	9,5	7,5	4,5	70	800 x 850 x 1665
CS 125 by VDH	-20...15	70	3,7	17	12,5	12	9	6	75	1400 x 1000 x 1800
CS 200 by VDH	-20...15	105	4,7	28	20	18	15	9,5	78	1400 x 1000 x 1800

-H models (heating) available



➔ CS25

from -125 °C to +425 °C



➔ Unistat 815
aircooled

➔ Unistat 815w
watercooled

Unistats – Dynamic Temperature Control

Unistats are ideal for rapid and very precise temperature control of externally connected applications. There are more than 60 models available, with cooling capacities from 0,7 to 130 kW.

Model	Working temperature range (°C)	Pump max. VPC		Heating power (kW)	Cooling power (kW) at (°C)					Dimensions WxDxH (mm)
		(l/min)	(bar)		250	0	-20	-40	-80	
Unistat 405	-45...250	55	0,9	3,0	1,0	1,0	0,6	0,15	–	426x327x631
Unistat 410	-45...250	56	0,9	3,0	1,3	1,5	0,8	0,17	–	460x554x1201
Unistat 510	-50...250	112	1,5	6,0	5,3	5,3	2,8	0,9	–	560x754x1457
Unistat 525	-55...250	79	1,5	6,0	10,0	7,0	4,2	1,5	–	1290x795x1377
Unistat 615	-60...200	60	1,5	12,0	–	9,5	8,0	4,0	–	1290x735x1596
Unistat 650w	-60...200	343	4,0	48,0	–	65,0	56,0	28,0	–	2210x1300x2160
Unistat 680w	-60...200	600	4,0	96,0	–	130,0	80,0	59,0	–	4500x2160x2250
Unistat 815	-85...250	40	0,9	2,0	1,3	1,5	1,5	1,4	0,2	460x604x1465
Unistat 825	-85...250	40	0,9	3,0	2,3	2,2	2,0	2,0	0,3	460x604x1465
Unistat 905	-90...250	48	0,9	6,0	4,0	3,6	3,5	2,2	0,7	540x654x1500
Unistat 915w	-90...250	110	1,5	6,0	6,5	11,0	11,0	8,2	1,3	630x704x1565
Unistat 950w	-90...200	240	4,0	36,0	–	36,0	36,0	36,0	10,0	2630x1300x1980

air- or water cooled models available

TC – Immersion coolers

Immersion coolers are a flexible solution for numerous applications. Not only are they invaluable for dewar style cold traps, but they also work great for counter cooling of heating circulators, as well as rapid cooling of liquids.

Model	Working temperature range (°C)	Cooling power (kW) at (°C)				Dimensions WxDxH (mm)
		0	-20	-30	-90	
TC45	-45...100	0,24	0,18	0,1	–	190x295x360
TC45F	-45...100	0,24	0,18	0,1	–	190x295x360
TC50	-50...50	0,3	0,26	0,2	–	260x330x415
TC50E	-50...50	0,3	0,26	0,2	–	260x330x415
TC100	-100...40	0,16	0,15	0,14	0,07	295x500x570
TC100E	-100...40	0,16	0,15	0,14	0,07	295x500x570

Options on request: various other special cooling probes available



➔ TC100E

➔ TC50

➔ TC45-F

Powerful flow through solution for recirculating

Unistats for direct operation with heat exchanger

Unistat are ideal for the rapid and precise temperature control of externally connected applications. When paired with the Huber heat exchanger, a reliable and robust flow through system is created. These systems are capable of producing chilled solvent on demand, as well as recirculating solvent/solute mixtures.

Model	Working temperature range (°C)	Pump max. VPC		Heating power (kW)	Cooling power (kW) at (°C)					Dimensions WxDxH (mm)
		(l/min)	(bar)		200	0	-20	-40	-60	
Unistat 650w	-60...200	343	4,0	48,0	65,0	65,0	56,0	29,0	10,0	2210x1300x2160
Unistat 680w	-60...200	600	4,0	96,0	130,0	130,0	80,0	60,0	15,0	4500x2160x2250

air- or water cooled models available

outdoor setup available

Heat exchanger with pump and flow control for recirculating or on-demand cooling

Model	for Unistat 650w	for Unistat 680w
	Temperature range	-60...+200 °C
Min. flow rate	0,9 l/min [0.26 gal/min]	0,9 l/min [0.26 gal/min]
Max. flow rate	95 l/min [25 gal/min]	95 l/min [25 gal/min]
Pump connection primary	M38 x 1,5 male	M38 x 1,5 male
Primary side	DW-Therm M90.200.02	DW-Therm M90.200.02
Pressure pump max. secondary circuit	110 l/min / 3 bar	110 l/min / 3 bar
Secondary side	Ethanol 100%	Ethanol 100%
Pump connection secondary	M30x1,5 male	M30x1,5 male
Power supply	460V 3~ 60Hz	460V 3~ 60Hz
Dimensions WxDxH (inch)	39,4 x 59,1 x 59,1	39,4 x 59,1 x 59,1
Specifications		
Primary side inlet	-40°C	-40°C
Primary side outlet	-20°C	-15°C
Primary side flow rate	59 l/min [15.6 gal/min]	89 l/min [23.5 gal/min]
Secondary side inlet	+25°C	+25°C
Secondary side outlet	-35°C	-35°C
Secondary side flow rate	19 l/min [5 gal/min]	36 l/min [9.5 gal/min]

Application Example

Unistat 650w



or on-demand cooling



Sensor options

A selection of Pt100 sensors for temperature measurement and regulation at relevant points.



Automation

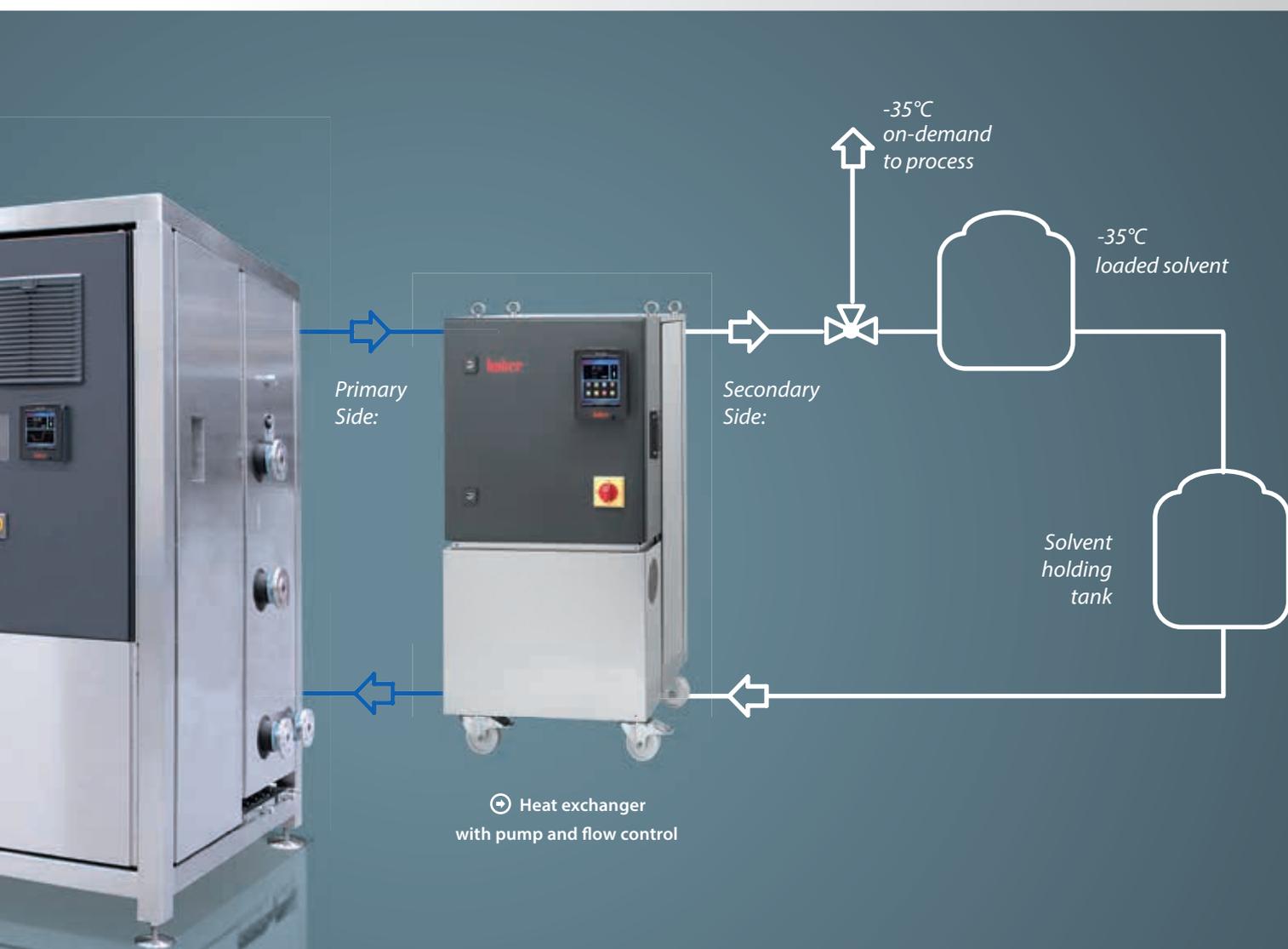
Support for common data communication standards and software solutions for data recording, remote operation and programming. Interfaces: e.g. Profibus, Modbus TCP, Ethernet, OPC-UA, RS232, RS485, USB, Analogue.



SpyControl

Using the free software SpyControl the process-relevant data can be visualised and documented. Communication is achieved via RS232, RS485, USB or TCP/IP.

SpyControl is characterised by a low consumption of PC resources and easy operation. The recorded data can be displayed over time. The axes of the diagram are freely scalable and a zoom function simplifies the graphical evaluation of individual time periods.





 @huber_inspiredbytemperature

 @huber_king_of_temp

 @huberOG

Technical details and dimensions are subject to change. No liability is accepted for errors or omissions.

Peter Huber Kältemaschinenbau SE

Werner-von-Siemens-Str. 1 · 77656 Offenburg / Germany

Phone +49 (0)781 9603-0 · Fax +49 (0)781 57211

info@huber-online.com · www.huber-online.com

Sales +49 (0)781 9603-123 · sales@huber-online.com

Technical Service +49 (0)781 9603-244 · support@huber-online.com

Order Processing +49 (0)781 9603-109 · orders@huber-online.com