KKT chillers

OUR **VISION** IS YOUR **PROGRESS**

KKT chillers

PRODUCTS **CATALOG**

Your professional partner for thermodynamic processes.

KKT chillers

OUR VISION IS YOUR PROGRESS

OUR VISION
IS YOUR PROGRESS

Making progress means changing perspectives, anticipating changes and recognizing the demands of tomorrow as an opportunity today.

This is why KKT chillers is taking a different perspective, transforming from product provider to solution provider.

The focus: skill sets that make KKT chillers a reliable partner for customized cooling solutions. In future, KKT chillers will be strengthening collaborations and working with customers to develop innovations that go far beyond the product itself.

Learn more about the KKT chillers vision.

kkt-chillers.com/en/vision

Our location in the USA

KKT CHILLERS **WOOD DALE**

A team of dedicated sales and service professionals takes care of strengthening and further expanding business relations in the Americas.

The top-quality service network is continuously being expanded to Central and South America by the qualified team in North America. This way, KKT chillers USA ensures trouble-free cooling of the growing number of over 4,000 installed chillers in the market.

+ Approx. **30 employees** do their best every day to provide you with fast and reliable service in maintenance, commissioning, turnkey solutions, training and troubleshooting.
+ The **company's total** premises cover **2,138 m²**.
+ This includes the **1,277 m² warehouse** and the **office building** with a floor space of **650 m²**.
+ At a **211 m² training center**, experienced instructors share technical expertise about the entire product portfolio.

Learn more about the
KKT chillers Academy

academy.kkt-chillersusa.com

50° 2‘ 13.389“ N 11° 21‘ 10.839“ E

LOCATION KASENDORF

A brand of ait-deutschland GmbH

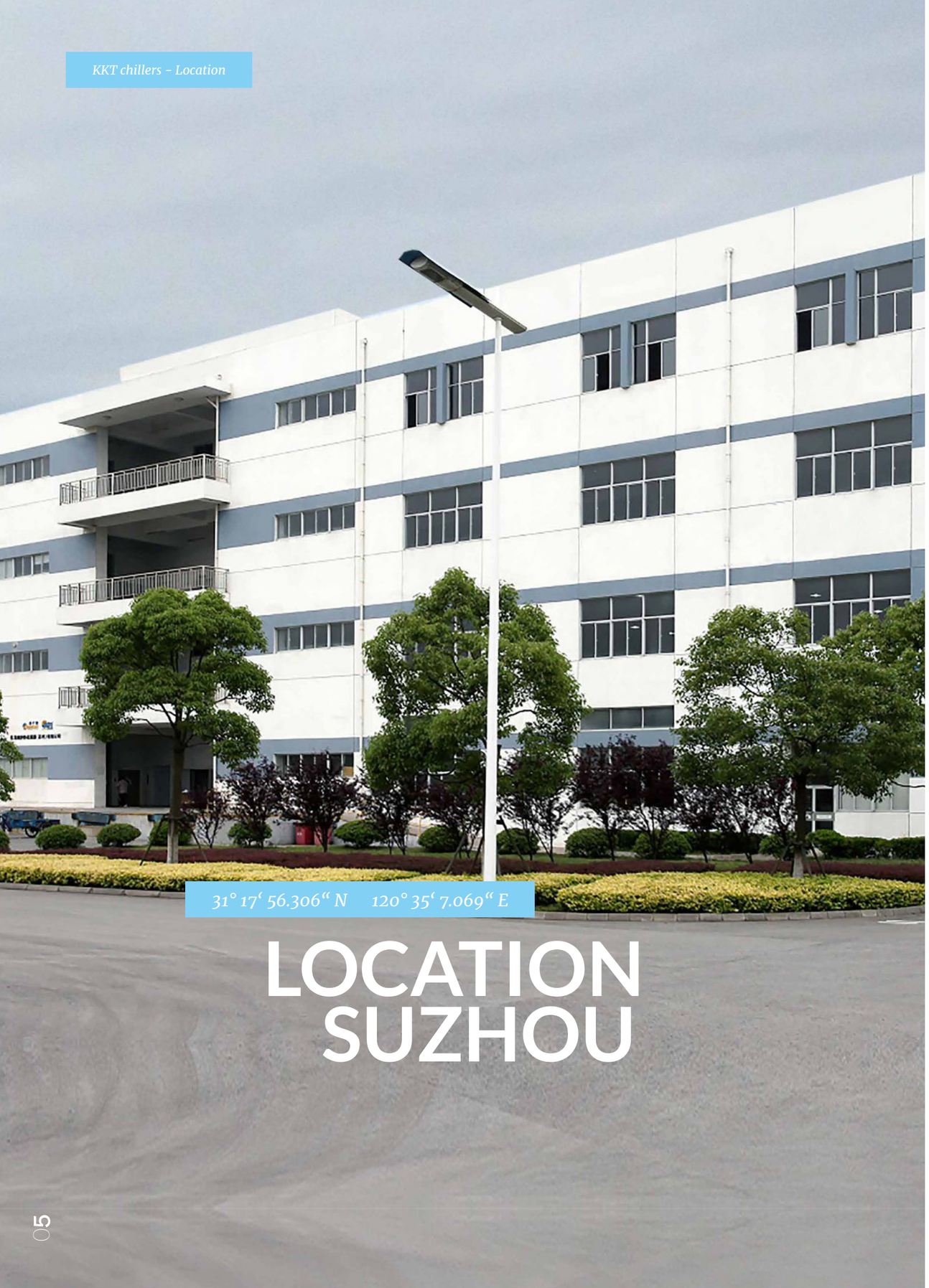
KKT CHILLERS **KASENDORF**

The chiller solutions of KKT chillers are always customized to fit your technological application. This way you can be sure that your facilities are cooled reliably and energy-efficiently. The resulting product portfolio ranges from serial production-oriented devices with a cooling capacity of 1 to 500 kW to customized products.

A high degree of innovation, customer-oriented approach, **and development and production ‘made in Germany’** – these factors are the basis of the global success in the cooling sector.

The Technology Center located in Kasendorf is at the cutting-edge of development laboratories and test institutes. Products can be tested according to current standards and guidelines.

+ Approx. **500 employees** work on creating energy-efficient solutions.
+ The **company’s total** premises cover over **24,600 m²**.
+ On a **production area of 15,000 m²**, the highest quality standards are maintained.
+ Additional flexibility is provided by **4,000 m² of storage space** and an **office building** with a floor space of **3,000 m²**.
+ **At our 1,000 m² Training Center, we train partners and customers** and deal with all current topics, standards and guidelines.
+ Our **Technology Center covers 1,600 m²**, comprising 8,400 m³ of interior space, 32 test stations, five brine storage tanks with a capacity of 21,000 liters, six climatic chambers, two acoustic chambers, a control room, a creativity room, a test room for storage downtime losses, an initial sample test room, an electronics workshop and two storage rooms.



31° 17‘ 56.306“ N 120° 35‘ 7.069“ E

LOCATION SUZHOU

Our location in China

KKT CHILLERS **SUZHOU**

The project and service engineers at KKT chillers East Asia and several service points ensure fast and smooth operations in Asia.

The team of experienced service engineers can fix malfunctions on short notice. Furthermore, KKT chillers East Asia also offers commissioning services and complete turnkey solutions.
These are increasingly ordered together with a chiller, for instance in the healthcare sector.

The turnkey package includes the following services: creating technical layouts, planning and installing all piping, as well as commissioning the chiller with or without system separator – the full service package for you.

- With currently approx. **6 employees**, the KKT chillers East Asia team is continuing to grow.
- The **total floor space** for the office and warehouse is **74 m²**.
- The **55 m² training center** offers additional opportunities to interact with customers and partners.
- Developed in Germany – made in China: The OCLC MED is the first chiller series specifically designed for the asian market and manufactured directly in Suzhou.

Group development

KKT CHILLERS **HISTORY**

For more than 40 years, KKT has offered its customers appealing and highly-specialized solutions in refrigeration technology.

Since 2010, KKT chillers has contributed its experience and core competences to the Kasendorf location and developed joint projects for energy-efficient resource utilization within ait-group by means of the brands alpha innotec and NOVELAN.

As part of the Swedish NIBE-Group, ait-deutschland GmbH with its brand KKT chillers has become one of the leading manufacturers of heating and cooling systems.

KKT chillers History

IDENTIFY TRENDS SHAPE THE FUTURE

1978
Founding of KKT Kraus in Lauf/Germany

1993
Creation of the KKT Kraus Industriekühlung

2005
Takeover of all shares in KKT Kraus by the Swiss Schulthess Group

2007
Formation of the KKT Kraus USA Corp. subsidiary in Chicago

2010
Relocation from Lauf to Kasendorf

2011
Integration into the Swedish NIBE Group

2012
Integration into Alpha-InnoTec GmbH and changing its name to KKT chillers

2013
KKT chillers becomes a brand of ait-deutschland GmbH

2014
KKT chillers wins the Red Dot Design Award 2014 with the cBoxX

2015
Official opening of the ait Technology Center

2016
Opening of the KKT chillers East Asia sales and service office in Suzhou, China

2017
KKT chillers USA celebrates its 10th anniversary

2018
KKT chillers USA: Relocation from Elk Grove Village to Wood Dale

2019
Introduction: Our vision is your progress.

Certification

YOUR **RELIABLE** PARTNER

KKT chillers has been internationally recognized as being a reliable partner and quality-conscious manufacturer of energy-efficient solutions in refrigeration technology.

Our customers value the quality of our products and the high technical expertise of the employees. With all our products, the highest quality, operational safety, sustainability and an ecologically and financially well-balanced concept are of prevailing importance to us. Each chiller is tested and certified according to customer requirements in cooperation with renowned institutes.

+ **Certified according to the DIN EN ISO 9001:2015** Quality Management System
+ **Certified according to the DIN EN ISO 14001:2015** Environmental Management System
+ **„Accredited Disposal Operations for Cooling Equipment“** according to the quality seal Kältemittelentsorgung (QSK) e.V.
+ Certified according to **§ 6 ChemKlimaSchutzV**. The company is authorized according to the regulation (EG) 303/2008, Category I to operate tasks like installations, maintenances and services to all refrigerating and air conditioning devices as well as heat pumps.
+ **AEO authorisation** „Customs simplifications“ (AEOC)
+ **CE labeling** according to EU regulation no. 765/2008
+ **Ecodesign according** to EU regulation 2015/1095 + 2016/2281
+ **ETL Certification** – in cooperation with Intertek, KKT chillers has its cooling equipment tested and registered for the North American market; by doing so, KKT chillers has the know-how to develop and fabricate refrigeration products specifically for the USA and Canada.
+ **Seismic approval** to ensure that hospital buildings are safe, certified by the OSHPD, California's Office of Statewide Health Planning and Development
+ **GB standard** (Chinese national standard) approved by the Standardization Administration of China (SAC), which serves as the basis for the CCC certification.
+ **EAC** Certification for the Eurasian Economic Union (Russia, Belarus, Kazakhstan, Armenia, Kyrgyzstan)
+ **RoHS according** to 2011/65/EU
+ **REACH according** to (EG) 1907/2006

Energy-efficient solutions

OUR CERTIFICATIONS

100% ECODESIGN

ECODESIGN REGULATION

The Ecodesign Directive aims at minimizing the environmental impact of energy-related products under consideration of their full lifecycle. In doing so, it stipulates requirements on the product design.

All devices marked with a CE label must meet the determined JAZ/SEPR (Seasonal Energy Performance Ratio) value stipulated in the above-mentioned regulation.

All SEPR/JAZ values must be stated in the documentation and on the manufacturer´s website.

The directive breaks devices down into 3 groups. All KKT chillers devices belong to group (1) of process cooling units MT (middle operating temperature) + HT (high operating temperature).

As a rule, the Ecodesign Regulation does not apply to chillers with a flow temperature of > 12°C.

Learn more about ecodesign guideline and annual performance factor.

kkt-chillers.com/ecodesign

Applications

YOUR APPLICATION – OUR CHILLER

Energy-efficient chiller solutions for medical and industrial applications.

In this field, KKT chillers encounters interesting projects and masters a multitude of requirements and needs.

The locations of the facilities are proof that all our solutions can withstand extreme environmental conditions – be it in Siberia, Vietnam or Oman.

+ **Healthcare** – Cooling of MRI's, CT's, X-Ray's, coils and helium compressors

+ **Food & Packaging** – Cooling of blow molding machines, their forming tools such as preforms and blow-forms, as well as their actuators, film lines, cutting stations for blister packaging and film converting machines.

+ **Laser Technology** – Cooling of resonators, optics and laser heads for CO_2, disk, diode and fiber lasers.

+ **Surface Technology** – Cooling of flame spray systems, coating machines, as well as the double jacket of hardening ovens and its diffusion pumps.

+ **Plastics Industry** – Cooling of rollers, granulation lines, tools and hydraulics of injection molding machines.

+ **Welding Machines** – Cooling of welding tools, welding heads, as well as the work pieces and the weld seams itself.

+ **Filtration** – Cooling of water treatment systems and filter production processes.

+ **Machine Tools** – Cooling of actuators, spindles, generators, tools, power modules, drive shafts, mills and hydraulics.

+ **Chemical & Pharma** – Cooling of production processes for pharmaceutical articles as well as laboratory equipment.

+ **Printing Industry** – Cooling of color decks, UV lamps, spindles and actuators.

+ **Electronic Industry** – Cooling of generators, frequency transformer, high power CPU's and measurement.

An overview of our reference projects you can find here:

kkt-chillers.com/en/applications

Our Chiller Series

OUR **PRODUCT PHILOSOPHY**

In the performance range from 1 to 500 kW, KKT chillers offers a sophisticated model series concept, which can satisfy most customer requirements due to its wide range of options. Based on decades of experience in developing cooling systems for a variety of different applications, KKT chillers knows what is important in process cooling.

Flexibility.

To ensure that you get exactly what you need, the products in the KKT chillers model portfolio come with a great variety of options and special equipment. The configuration options cover various applications to select the required equipment package specifically for the respective customer demands.

Reliability.

KKT chillers focuses on the highest quality. Thanks to the cooperation with the most renowned component manufacturers and a consistent quality management, KKT chillers guarantees maximum product quality. With the products from KKT chillers, you can always keep a cool head.

Energy efficiency.

As industrial processes frequently show load variations, the thermal load is usually not constant either. Consequently, today's chillers are often bigger than actually necessary for a major share of load profiles. Up to now, this has often entailed relatively high emissions and excessive energy costs. KKT chillers applies RPM-regulated components and a control system developed in-house to automatically adapt the cooling capacity to the application's current load profile. This means that the system generates only as much capacity as is needed.

Innovation.

RPM-regulated compressors, microchannel technology, EC Blue Owlet ventilators, electronic injection valves, higheffi-ciency cooling agents and digital data management – thanks to the combination of these state-of-the-art components as well as innovative ideas, the use of KKT chillers products gives you a competitive edge.

Cost effectiveness.

Nobody likes to pay more than absolutely necessary. Thanks to their great energy efficiency, the chillers from KKT chillers allow you to reduce the operating costs to the absolute minimum. Moreover, maintenance, service and logistics costs are significantly reduced due to the low filling levels.

See for yourself and discover the benefits of the chiller model ranges from KKT chillers!

Chiller Configurator

THE PERFECT **SOLUTION**

Please find our chiller configurator under:

kkt-chillers.com/en/chiller-configurator

Chiller Series

INNOVATIVE **EFFICIENT** CUSTOMER-FOCUSED

Our products

CUSTOMER-SPECIFIC FLEXIBLE VARIETY OF OPTIONS AND ACCESSORIES

	LASER	MACHINE TOOLS	HEALTHCARE	FOOD & PACKAGING	PLASTICS INDUSTRY	WELDING MACHINES	FILTRATION	SURFACE TECHNOLOGY	ELECTRONIC INDUSTRY	CHEMICAL & PHARMA	PRINTING INDUSTRY
PRODUCTS	Vario Line Compact Line	Nano Line (Vario Line)	Nano Line Vario Line Compact Line	Compact Line	Compact Line	Nano Line (Vario Line)	Vario Line Compact Line	Compact Line	Nano Line (Vario Line)	Nano Line (Vario Line)	Vario Line Compact Line
CAPACITY	5 - 100 kW	1 - 10 kW	5 - 100 kW	50 - 200 kW	50 - 200 kW	5 - 15 kW	5 - 15 kW	50 - 200 kW	1 - 5 kW	1 - 10 kW	5 - 50 kW
OPTIONS	Integrated desalination cartridge including conductivity measurement and control	–	High pressure pump	Overflow valve, special colour	Overflow valve	Integrated desalination cartridge including conductivity measurement and control	Integrated heat exchanger for hydraulic separation between process water and filtrate	Automatic water replenishment	Temperature constancy < ± 1 K	Temperature constancy < ± 1 K	Outdoor installation package
	Separate circuit with second setpoint temperature (e.g. for optics)	–	Outdoor installation package	Outdoor installation package	Outdoor installation package	Water circuit free of non-ferrous metals	Water circuit free of non-ferrous metals	Overflow valve, special colour, high pressure pump up to 16 bar	Phase monitoring and voltage monitoring	–	high pressure pump
	Water circuit free of non-ferrous metals	–	Phase monitoring and voltage monitoring	High pressure pump	Insulation of cold pipes	Temperature constancy < ± 1 K	Temperature constancy < ± 1 K	Water circuit free of non-ferrous metals	Overflow valve, special colour, 5 bar pump	–	–
	Overflow valve, special colour, 5 bar pump	–	Stepless hot gas bypass regulation	Insulation of cold pipes, tank and pump	High pressure pump	Overflow valve, special colour, 5 bar pump	Overflow valve, special colour, 5 bar pump	Integrated desalination cartridge including conductivity measurement and control	–	–	–
ACCESSORIES	Air filter mat	Air filter mat	* CIP/water filter	Levelling feet	Levelling feet	Air filter mat	Air filter mat	Levelling feet	Air filter mat	Air filter mat	Air filter mat
	Castors or levelling feet	Castors	Remote control panel with display	Shut-off valves	Shut-off valves	Castors or levelling feet		Shut-off valves	Shut-off valves	Remote control panel with display	Remote control panel with display
	Gateway solutions (BUS interfaces)	–	Gateway solutions (BUS interfaces)	Remote control panel	Gateway solutions (BUS interfaces)	Gateway solutions (BUS interfaces)	Gateway solutions (BUS interfaces)	Gateway solutions (BUS interfaces)	Gateway solutions (BUS interfaces)	Gateway solutions (BUS interfaces)	Gateway solutions (BUS interfaces)
	Strainer	Strainer	Switch over cabinet	Strainer	Strainer	Strainer	Strainer	Strainer	Strainer	Strainer	Strainer

* Chiller Interface Panel: Emergency cooling for helium compressor

Small chiller – big effect

NANO LINE

With the small but robust stand-alone chillers from the Nano-Line, KKT chillers takes the heat off your industrial cooling needs. The easy-to-read level indicator reliably indicates the min. and max. levels of the coolant. Preassembled lifting lugs ensure easy transport. Equipped with a programmable control module, every nBoxX enables high temperature stability of the cooling medium. Therefore, the chillers of the Nano-Line represent the all-round solution for a large variety of applications in the 1.9 - 7.0 kW power range.

BASIC CONFIGURATION

+ **Overflow valve** for free adjustment of the pressure in the water circuit
+ **Tank level switch** for monitoring the water level in the tank and dry running protection of the pump.
+ **Flow switch** – adjustable flow monitoring (minimum permissible flow)
+ **Error indication** on the display
+ **Temperature difference control** – freely adjustable flow temperature via display
+ **Wire labeling**
+ **Potential-free contact** for collective fault message

OPTIONS

+ **Hot gas bypass** to improve the temperature accuracy to ± 1K
+ **Aluminium air filter kit**
+ **Castors**
+ **Contact for remote control**

TECHNICAL DATA

Nano Line	nBoxX 1.7	nBoxX 3.5	nBoxX 5.0	nBoxX 6.5
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 32 °C	1,9 kW	3,8 kW	5,3 kW	7,0 kW
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 40 °C	1,6 kW	3,3 kW	4,7 kW	6,2 kW
Refrigerant	R134a			
GWP	1430			
Refrigerant filling	0,8 kg	1,5 kg		
CO_2 equivalent	1,14 t CO_2	2,15 t CO_2		
Ambient temperature range	15 °C – 45 °C			
Max air flow rate	1.300 m³/h	2.300 m³/h		
Coolant	Water or Water/Glycol			
Tank volume	10 l	26 l		
Coolant outlet temperature	13 °C - 35 °C			
Temperature constancy	± 2 K			
Coolant flow	0,3 m³/h	0,8 m³/h	1,0 m³/h	1,1 m³/h
Pumping pressure	3 bar			
Sound pressure level [2]	<62 dB(A)			
Operating voltage (± 10%)	230 V / 1Ph / 50 / 60 Hz	400 V / 3 Ph / 50 Hz or 460 V / 3 Ph / 60 Hz		
Operating current	6,5 A / 7,5 A	6,5 A / 7,0 A	8,0 A / 8,5 A	9,5 A / 10,0 A
Power consumption (Pump)	1,3 kW / 1,5 kW	2,5 kW / 3,1 kW	3,4 kW / 4,2 kW	4,1 kW / 5,0 kW
Protection class	IP 54			
Water connection	IG ½"	IG ¾"		
Dimension (LxBxH)	600 x 546 x 634 mm	600 x 727 x 983 mm		
Weight [3]	67 kg	109 kg	111 kg	114 kg
Color	RAL 7035			

[1] with pump | [2] at 50 Hz, according to EN ISO 3741 | [3] without packaging and charge of coolant

THE TWO SIZES AT A GLANCE

Machine Tools
Healthcare
Welding Machines
Electronic Industry
Chemical & Pharma

nBoxX 1.7

nBoxX 3.5 - 6.5

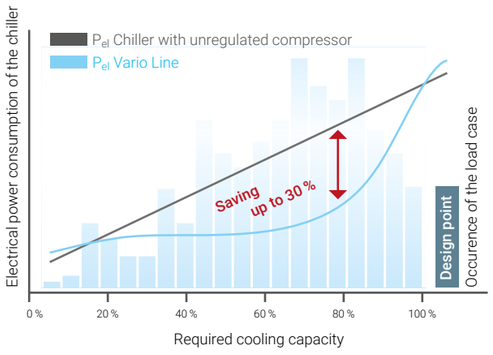
Custom made performance

VARIO LINE

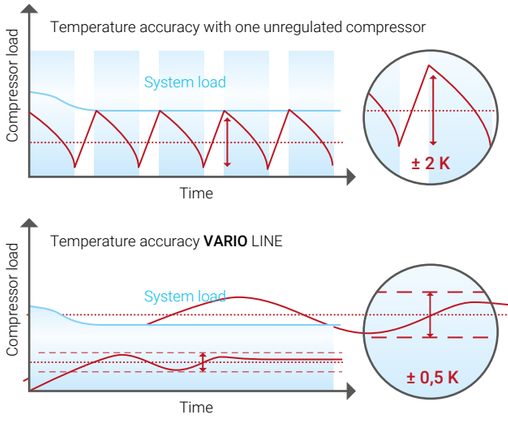
With the performance-enhanced chillers of the Vario-Line, KKT chillers set new standards in process cooling and simultaneously offers its clients a variety of interesting advantages:

More efficiency, lower operating costs.

Through standard usage of speed-controlled compressor and ventilator, as well as a constantly regulating expansion valve, the refrigerating capacity of the Vario-Line is automatically adjusted to the existing load profile of the respective application. Thus, only the output, which is actually needed, will be effectively generated.



As a result, not only the reduced noise emission is noticeable. Due to the lower power consumption when operating under partial load, use of the Vario-Line can lower operating costs significantly.



High control precision at zero cost.

In addition to the energy-related advantages, it is possible to guarantee a control precision of ± 0.5 K due to this method of capacity control, even in the basic configuration and without additional components.

Digital data management with plain text display.

Due to the sensor data acquisition of all the relevant control-variables such as temperatures, pressures, conductivity or tank fill levels and the controller-software that was developed in-house, all data can be processed further by the customer. With its intuitive menu navigation, the plain text display offers a high level of user comfort. Additionally, a broad range of interface protocols provides the option for remote diagnostics via web and app.

Low maintenance costs.

The synergy between the innovative microchannel-technology and the highly efficient refrigerant R410A, tried and tested worldwide, is not only an asset when it comes to energy efficiency. The filling quantity in the hermetically sealed cooling circuit has been reduced to the point where an annual leak-test is no longer necessary for any of the Vario-Line equipment.

Great flexibility, broad range of application.

In the standard version, the Vario-Line is suitable for installation both in- and outdoors and ensures safe operation in ambient temperatures of up to 50°C without additional precautionary measures. Due to the use of speed-controlled components, varying voltage supply is not a problem. Furthermore, the Vario-Line has a wide range of options and accessories at your disposal. Thus, highly variable configuration options are created so that each vBoxX can be individually adapted to the needs of each respective client.

100% Ecodesign

Up to 21% more efficient than required by the Ecodesign Regulation.

Make use of the Vario-Line's edge on technology!

TECHNICAL DATA

Vario Line	vBoxX 6	vBoxX 8	vBoxX 10	vBoxX 12	vBoxX 15	vBoxX 18	vBoxX 24	vBoxX 28
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 32 °C	6,2 kW	8,2 kW	10,2 kW	12,4 kW	15,3 kW	18,3 kW	24,5 kW	28,5 kW
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 40 °C	6,2 kW	8,2 kW	10,2 kW	10,7 kW	14,3 kW	18,3 kW	24,3 kW	25,9 kW
Refrigerant	R410A							
GWP	2088							
Charge of refrigerant	1,6 kg		1,8 kg		2,5 kg	3,2 kg	3,4 kg	
CO_2 equivalent	3,3 t CO_2		3,8 t CO_2		5,2 t CO_2	6,7 t CO_2	7,1 t CO_2	
Ambient temperature range	- 25 °C - 50 °C							
Max. air flow rate	4.400 m³/h				8.200 m³/h			
Coolant	Water or Water/Glycol							
Tank volume Tank 1	100 l				160 l			
Coolant outlet temperature	- 10 °C - 30 °C						5 °C - 30 °C	
Temperature constancy	± 0,5 K							
Coolant flow	1,1 m³/h	1,4 m³/h	1,8 m³/h	2,1 m³/h	2,6 m³/h	3,1 m³/h	4,8 m³/h	4,8 m³/h
Pumping pressure	3 bar							
Sound pressure level [2]	54 dB(A)				59 dB(A)			
Operating voltage	400 V / 3 Ph / 50 Hz or 480 V / 3 Ph / 50 Hz or 400 V / 3 Ph / 60 Hz							
Power consumption [1.1]	2,6 kW	3,4 kW	4,3 kW	5,1 kW	4,8 kW	5,5 kW	8,5 kW	9,9 kW
Protection class	IP 44							
Weight [3]	265 kg				340 kg			
Water connection	Rp 1"				Rp 1 ½"			
Length	800 mm				1.000 mm			
Width	800 mm				800 mm			
Height	1.385 mm				1.500 mm			

[1] 50Hz, without pump | [1.1] 50Hz, without pump, at operating point t_{w2} = 20 °C, t_{amb} = 40 °C | [2] in 5m distance without reflection at full speed, without airfilter
[3] net, without charge of coolant

THE TWO SIZES AT A GLANCE

Laser
Healthcare
Filtration
Printing Industry

100% ECODESIGN

Developed for more performance

COMPACT LINE

With its Compact Line, KKT chillers provides maximum performance at minimum space requirements. The modern industrial design immediately gives away the variety of innovations included in this powerful device.

Innovation is our standard – this means for you:

User-friendly surface with plain-text display of temperature, pressure, tank level and all status notifications – thanks to a controller board developed in-house specifically for this application. Including a variety of data links for all important Fieldbus- and Industrial-Ethernet- Networks for example CANopen, DeviceNet, Modbus or Profibus. The new line also allows for remote maintenance and updates via web and app or USB.

Reduction in operating costs due to 20% less electrical power consumption. This improvement is achieved thanks to the efficient scroll compressor technology and enhanced by the perfect combination with the R410A refrigerant as well as frequency controlled EC fans.

Efficiency benefits optimization of partial-load response thanks to the application of an infinitely variable electronic expansion valve with selfclosing characteristics.

Logistics and maintenance benefits: Up to 75% less refrigerant filling thanks to the use of innovative heat exchanger technologies like microchannel and asymmetric plate heat exchangers, arranged at the smallest footprint.

Setting new benchmarks

100% **ECODESIGN**

The Compact Line is up to 21% more efficient than required by the Ecodesign Regulation. **See for yourself and discover the benefits of the innovative Compact-Line by KKT chillers!**

TECHNICAL DATA

Compact Line	cBoxX 30	cBoxX 40	cBoxX 50	cBoxX 60	cBoxX 70	cBoxX 80
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 32 °C	34 kW	41 kW	53 kW	67 kW	76 kW	83 kW
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 40 °C	30,3 kW	36,7 kW	47,0 kW	59,0 kW	67,8 kW	74,7 kW
Refrigerant	R410A					
GWP	2088					
Charge of refrigerant	6 kg			7 kg	8 kg	
CO_2 equivalent	12,5 t CO_2			14,6 t CO_2	16,7 t CO_2	
Ambient temperature range	- 25 °C - 50 °C					
Max. air flow rate	9.350 m³/h		12.600 m³/h	20.000 m³/h	23.270 m³/h	
Coolant	Water or Water/Glycol					
Tank volume	300 l				500 l	
Coolant outlet temperature	- 10 °C - 30 °C					
Temperature constancy	± 1 K					
Coolant flow	5,5 m³/h	7,2 m³/h	9,2 m³/h	11,1 m³/h	12,4 m³/h	14,3 m³/h
Pumping pressure	3 bar					
Sound pressure level [2]	62 dB(A)		55 dB(A)	69 dB(A)	59 dB(A)	
Operating voltage	400 V / 3 Ph / 50 Hz or 460 V / 3 Ph / 60 Hz or 400 V / 3 Ph / 60 Hz					
Operating current max [4]	21,1 A	27,4 A	34,0 A	44,3 A	46,6 A	54,9 A
Power consumption max [4]	12,4 kW	15,4 kW	19,7 kW	26,5 kW	27,4 kW	30,9 kW
Protection class	IP 54					
Weight [3]	540 kg		550 kg	620 kg	650 kg	
Water connection	IG 1 ¼"				IG 2"	
Length	1.240 mm				1.840 mm	
Width	830 mm					
Height	2.030 mm					

[1] 50Hz, without pump | [2] in 5m distance without reflection at full speed, without airfilter | [3] net, without charge of coolant | [4] 50 Hz, without Pump

Compact Line	cBoxX 90	cBoxX 100	cBoxX 120	cBoxX 160	cBoxX 180	cBoxX 200
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 32 °C	92 kW	100 kW	131 kW	159 kW	187 kW	204 kW
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 40 °C	82,3 kW	89,2 kW	116,6 kW	141,0 kW	166,3 kW	180,4 kW
Refrigerant	R410A					
GWP	2088					
Charge of refrigerant	8 kg		17 kg		23,5 kg	
CO_2 equivalent	16,7 t CO_2		35,5 t CO_2		49,1 t CO_2	
Ambient temperature range	- 25 °C - 50 °C					
Max. air flow rate	23.270 m³/h		45.550 m³/h		49.100 m³/h	
Coolant	Water or Water/Glycol					
Tank volume	500 l		700 l		900 l	
Coolant outlet temperature	- 10 °C - 30 °C					
Temperature constancy	± 1 K					
Coolant flow	16,1 m³/h	18,2 m³/h	21,5 m³/h	27,2 m³/h	32,2 m³/h	35,4 m³/h
Pumping pressure	3 bar					
Sound pressure level [2]	59 dB(A)		67 dB(A)			
Operating voltage	400 V / 3 Ph / 50 Hz or 460 V / 3 Ph / 60 Hz or 400 V / 3 Ph / 60 Hz					
Operating current max [4]	59,2 A	67,2 A	84,8 A	103,2 A	118,4 A	134,4 A
Power consumption max [4]	35,0 kW	39,2 kW	48,8 kW	61,4 kW	71,4 kW	80,0 kW
Protection class	IP 54					
Weight [3]	700 kg	720 kg	1.100 kg	1.200 kg	1.300 kg	1.400 kg
Water connection	IG 2"		DN 65			
Length	1.840 mm		2.660 mm		3.960 mm	
Width	830 mm		1.200 mm			
Height	2.030 mm					

[1] 50Hz, without pump | [2] in 5m distance without reflection at full speed, without airfilter | [3] net, without charge of coolant | [4] 50 Hz, without Pump

THE FOUR SIZES AT A GLANCE

- Laser
- Healthcare
- Food & Packaging
- Plastics Industry
- Filtration
- Surface Technology
- Printing Industry

cBoxX 30 - 60

cBoxX 70 - 100

100% ECODESIGN

cBoxX 120 - 160

cBoxX 180 - 200

TECHNICAL DATA

Heat exchanger stations	Realisation area	WTS Food [1]	WTS Surface [2]
Installation site	Indoor or optional Outdoor installation	Indoor installation	Indoor installation
Transmission power	1 - 1.000 kW	18 kW	350 kW
Flow refrigerant at	4 °C - 80 °C	4 °C	max. 34 °C
Cooling water temperature inlet	0 °C - 70 °C	2 °C	max. 28 °C
Volume flow cooling water	0,5 m³/h - 100 m³/h	7 m³/h	66 m³/h
Refrigerant	DI water | Water | Glycol | Oil	Water with 25 vol.% AFL	Water with 34 vol.% AFN
Ambient temperature min./max.	- 20 - 50 °C	5 - 45 °C	5 - 45 °C
System with tank or closed	Project-specific	250 l	600 l
Power supply	400 V / 3 Ph / 50 Hz or 400 V / 3 Ph / 60 Hz	380...415 V / 3 Ph / 50 Hz	400 V / 3 Ph / 50 Hz
Dimensions and colour	Project-specific	1530 mm x 902 mm x 1500 mm	2880 mm x 905 mm x 1455 mm

[1] Realized project for a customer in the food & packaging sector
[2] Realized project for a customer in the surface sector

CONFIGURATION

+ **Overflow valve**
+ **Pressure gauge 0 - 10 bar**
+ **Float switch**
+ **Filling manual**
+ **Temperature control** via 3-way valve
+ **Insulation of piping**
+ **Insulation of pump**
+ **Insulation of tank**
+ **Remote control** potential-free contact
+ **Collective fault signal** on terminal
+ **Voltage/phase monitoring**
+ **Sheet metal cladding**
+ **Control valve** in flow pipe

OPTIONS

+ **Pressure sensor**
+ **Automatic water feed**
+ **Wooden crate packaging**
+ **Seaworthy crate packaging**
+ **Pump for pipe length** between 15 - 100 mtr.
+ **Special voltage:**
  480V (±10%) / 3Ph / 60Hz
  460V (±10%) / 3Ph / 60Hz
  440V (±10%) / 3Ph / 60Hz
  380V (±10%) / 3Ph / 60Hz
+ **Filter assembly 250 µm**
+ **Required components** in UL version
+ **Level package**
+ **Control cabinet heating** for ambient temperature < +5°C or relative humidity > 90%.
+ **Interface** Profinet, Profibus, Ethernet, Modbus or TCP
+ **Remote control**
+ **Special painting**
+ **Leveling feet**

Top water quality

HEAT EXCHANGER STATIONS

Lower maintenance costs without compromising on the cleanliness and operational reliability of the equipment? Our compact KKT chillers heat exchanger stations do not require a separate cooling circuit to cool fluids, but use cooling water provided by the customer, for instance from facilities in the food and packaging industries or surface technology. This approach keeps fresh water consumption to a minimum and makes expensive water treatment unnecessary.

Further benefits: The stations meet many safety aspects and prevent the contamination of fluids. KKT chillers makes these systems for all performance classes, with open and closed cooling circuits.

Developed for you

OEM **SOLUTIONS**

Besides the chiller model series, KKT chillers also develops customer-specific systems solutions for various industries in cooperation with its OEM partners. These solutions can also be integrated into the overall system at a later point.

When it comes to highly complex and long-term development projects, it makes great sense to consider the issue of process and component cooling early on.

To this end, KKT chillers offers its customers a **'Resident Engineering'** services: From the very beginning, the engineers at KKT chillers contribute their cooling expertise to your development process.

This often helps to achieve substantial savings for the complete facility.

Invite KKT chillers into the earliest planning stages of your projects!

KKT chillers

OEM Solutions

WHERE INNOVATION BEGINS **RESIDENT ENGINEERING**

Trust-based partnership

IOT

Services
Partners and customers are extensively trained on all products at the KKT Academy and continuously supported. Intelligent control technology also provides a consistent overview of the chiller's operating status, offering greater reliability.

Reliability

Production
Processes optimized to meet your needs ensure fast and smooth production times as well as the maximum uptime of your chiller.

Quality

Development
Taking current guidelines, standards and serviceability, we develop intelligent and energy-efficient solutions tailored to your application.

Innovation

Project consultation at the beginning of your development process
Together with you, we discuss your requirements and focus on flexibility for individual customer solutions from the outset while never losing sight of the budget.

Customization

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