KKT chillers

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

KKT chillers

PRODUCTS AND **SERVICES**

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

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.

Our location in the USA

KKT CHILLERS **WOOD DALE**

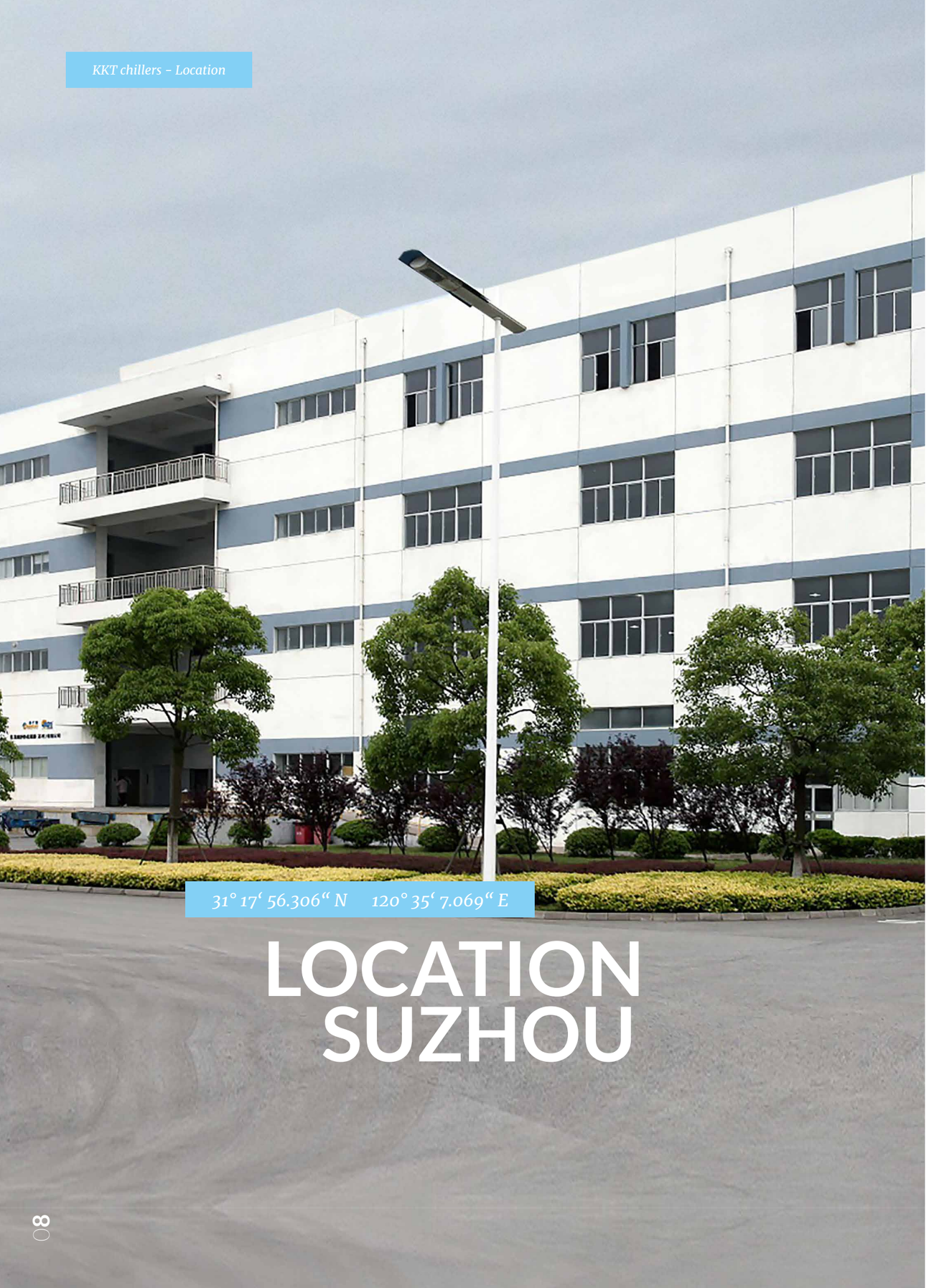
A team of dedicated sales and service professionals takes care of strengthening and further expanding business relations in the Americas.

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



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.

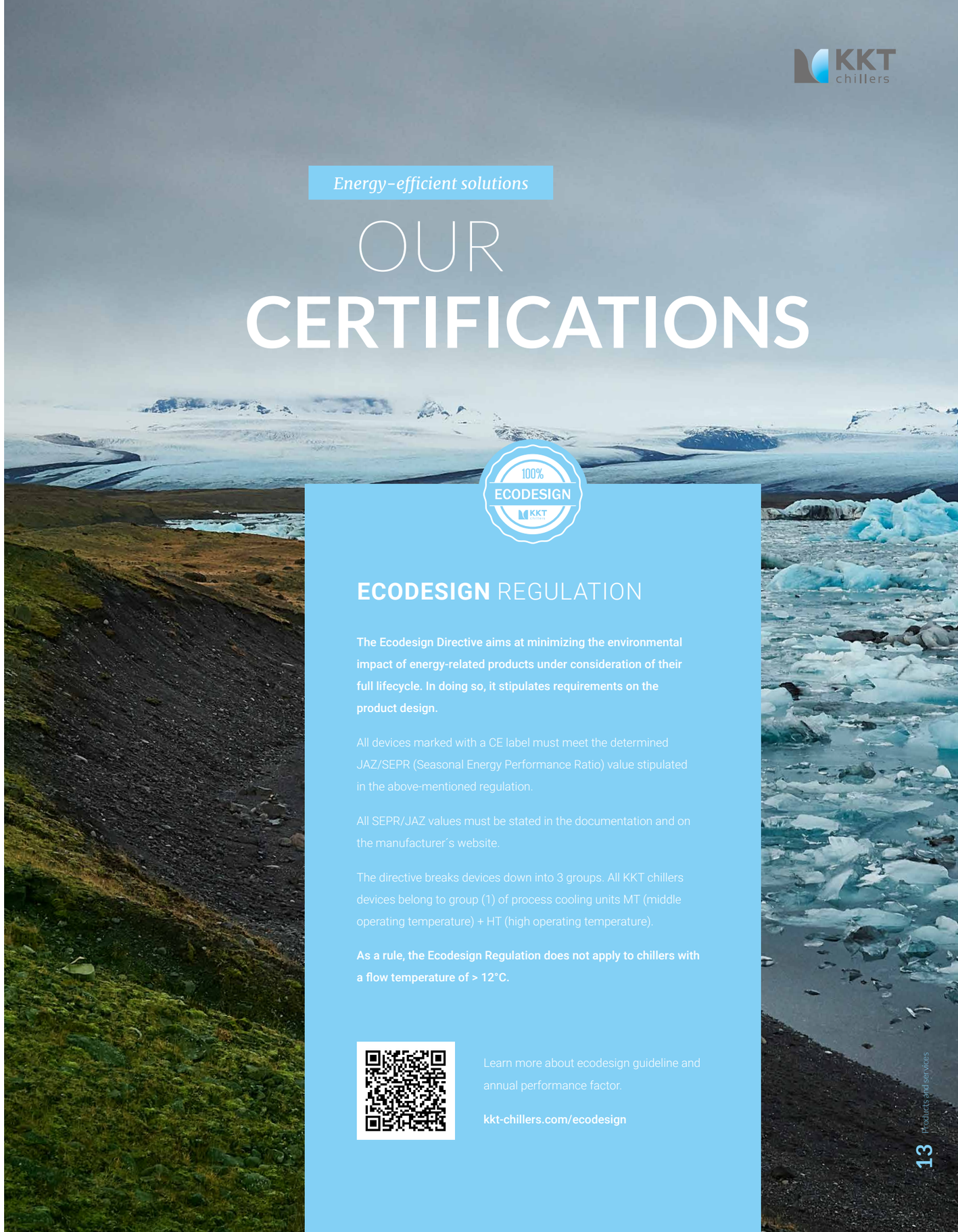
Certification

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

KKT chillers Service

OUR **SERVICES** AT A GLANCE

AFTER SALES SERVICE
Expert service technicians.

START-UP
ChillStart – A professional start to efficient cooling.

MAINTENANCE
ChillCare – guaranteed availabilty and success.

TRAINING
ChillLearn – expertise straight from the manufacturer.

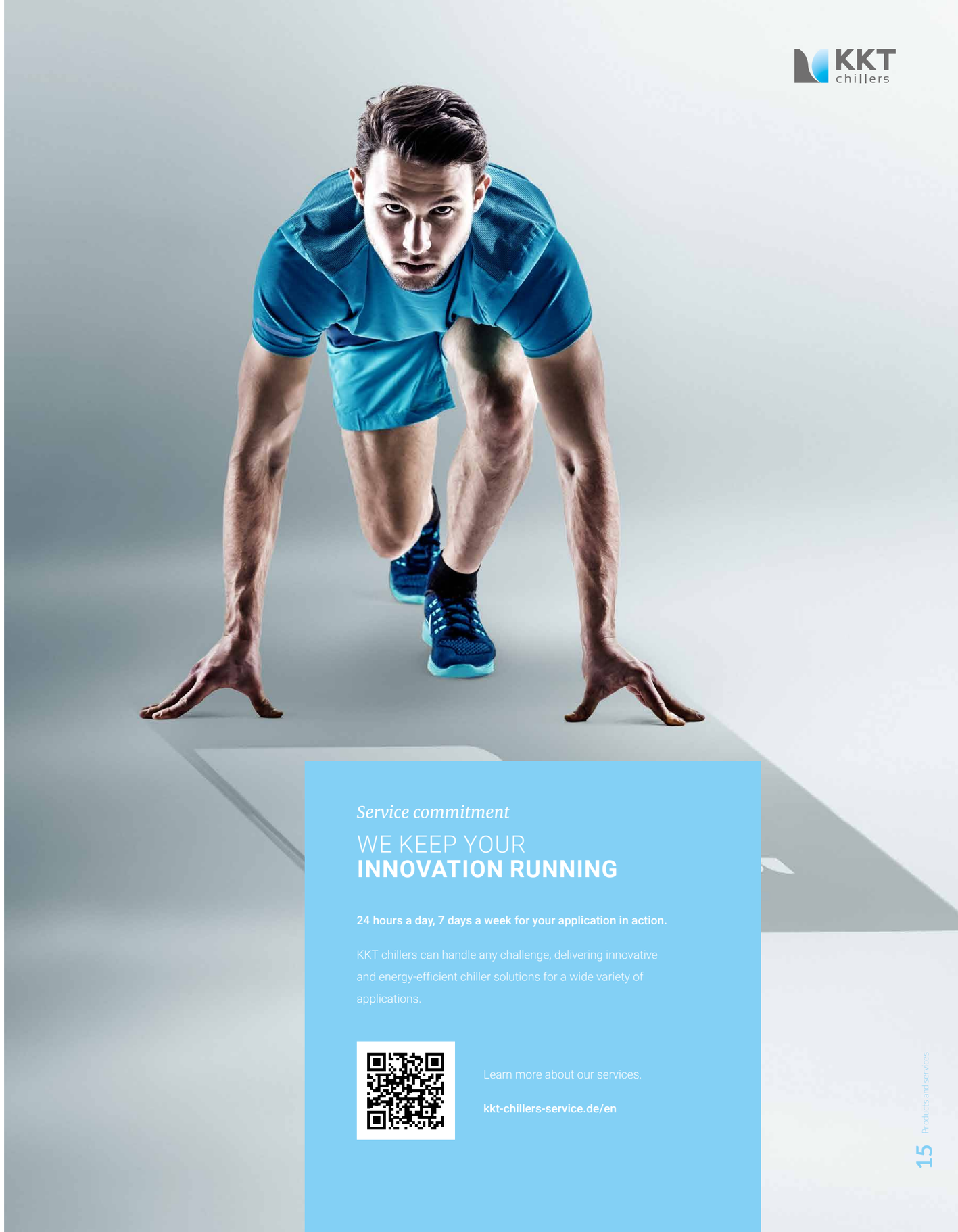
AUGMENTED SUPPORT
Augmented reality allows us to see through your eyes.

SPARE PARTS MANAGEMENT
ChillParts – equipped for any situation.

FACILITY OPTIMIZATION
ChillTune – making your system perfect.

RETURNS MANAGEMENT
Hassle-free return to the manufacturer.

PRODUCT REGISTRATION
Your direct line to KKT chillers.



Service commitment

WE KEEP YOUR **INNOVATION RUNNING**

24 hours a day, 7 days a week for your application in action.

KKT chillers can handle any challenge, delivering innovative and energy-efficient chiller solutions for a wide variety of applications.

Learn more about our services.

kkt-chillers-service.de/en

After Sales Service

QUALIFIED **SERVICE TECHNICIANS** IN OPERATION

After Sales Service

SERVICE NETWORK **WORLDWIDE**

For frequently updated contact information of the individual service locations, please see:

kkt-chillers-service.de/en/service-locations

KKT chillers

24/7
Customer Support

After Sales Service

SERVICE – **AROUND THE CLOCK**

System malfunctions cannot be foreseen. But thanks to KKT chillers' many years of experience and well-structured service organization, we can guarantee fast response and repair.

Should you require help with one of your chillers, you can reach KKT chillers **365 days a year, 7 days a week, 24 hours a day**.

SERVICE – **AROUND THE WORLD**

To ensure quick and reliable maintenance and repair services, KKT chillers runs a close-knit global service network, which is continuously optimized and expanded. KKT chillers constantly adapts its service network to your requirements and plant locations.

KKT chillers Germany

ait-deutschland GmbH
Industriestraße 3
95359 Kasendorf

T +49 9228 9977 7190
E service@kkt-chillers.com

KKT chillers USA

KKT chillers, Inc.
765 Dillon Drive
IL 60191 Wood Dale

T +1 833 558 4357
E techsupport@kkt-chillersusa.com

KKT chillers East Asia

Sales and Service Office
No. 108, Xinglin Street
SIP Suzhou 215026
Jiangsu, P.R. China

T +86 512 6790 3091
E service@kkt-chillerscn.com

Start-up

CHILL**START**

The smooth interaction of all the individual parts of a system and its alignment with specific requirements and requests is crucial to both its efficiency and reliability in future operations.

The KKT chillers service team will be happy to help you choose the right package for your requirements.

YOUR **BENEFITS**

+ The professional start-up of your installation is handled by experienced and highly qualified service technicians.
+ Preset parameters are adjusted to reflect actual conditions and optimized in line with these considerations.
+ You will be provided with an expert instruction and handover of the new chiller.

	Start-up (in acc. with check-list)	Operator-instruction	Facility log book*	Discount on start-up**	Leakage testing	Filling with operating materials
ChillStart PLUS	x	x	(x)	15%	x	(x)

x included
(x) optional at a surcharge
* Comprehensive inspection log book for cooling facilities in appealing design, including important files detailing service contacts, regulations and certificates
** Discount on start-up if you conclude a maintenance agreement for the respective installation

Start-up

A PROFESSIONAL START TO EFFICIENT COOLING

CHILLSTART **PLUS**

+ Start-up following the completion of the check list
+ Creation of a system protocol for cooling facilities
+ Operator training (1–5 people) covering the basic functionalities of the control unit as well as methods to identify and repair small malfunctions
+ Readjustment of parameters on demand as well as maintenance in accordance with the applicable technical regulations

Maintenance

GUARANTEED **AVAILABILITY** AND **SUCCESS**

CHILLCARE **BASIC**

+ Preservation of desired condition and functionality

+ Removal of any operations-related contamination (not water/liquids)

+ Compliance with legal requirements and documentation

CHILLCARE **PLUS**

The ChillCare BASIC services are included.

+ Service calls (repairs) to maintain or restore the operability of the installation (during regular working hours; excluding materials and repairs in case of damage caused by the customer)

CHILLCARE **PREMIUM**

ChillCare BASIC and PLUS services included.

+ Spare parts/materials (excl. consumables and operating materials, e.g. additives, filter mats and water filter insets. A discount of 15% applies.)

Maintenance

CHILL**CARE**

Frequent customized maintenance appointments help you increase your installation's productivity and simultaneously reduce repair and operating costs.

YOUR **BENEFITS**

+ Maximum safety in operations, protection of people's health and the environment

+ Responsibility and liability reduced to a minimum

+ Considerable reduction in downtime and maximum productivity

+ Highest reliability and availability of the installed equipment

+ Full compliance with safety norms and regulations

	Material	Service	1. Maintenance /year	2. Maintenance /year	Discount on spare parts*	Leakage testing	Spare parts storage	Augmented Support
ChillCare BASIC			x	(x)	10%	(xx)	(x)	(x)
ChillCare ** PLUS		x	x	(x)	15%	x	(x)	(x)
ChillCare ** PREMIUM	x	x	x	x	inkl. 15%	x	(x)	x

x included
(x) optional at a surcharge
(xx) dependent on CO^2 equivalent and refrigerant filling volume
* Spare part discount valid only for units covered by maintenance agreement
** Only bookable for new units 2 months after commissioning or max. 6 months after delivery.

Training

CHILL**LEARN**

KKT chillers' training courses have been devised for qualified staff who work with the KKT chillers products and are responsible for their start-up, maintenance and repair. Experienced trainers share exactly the expertise participants require – at your location or at the state-of-the-art training center in Kasendorf.

YOUR **BENEFITS**

+ You expand your technical product expertise.

+ You achieve a sustainable level of knowledge and are able to handle KKT chillers products with confidence.

+ You learn to analyze situations more efficiently and to identify complex malfunctions more quickly.

	Start-up	Operation	Troubleshoo-ting	Maintenance/ Repair	Cooling Technology	Hydraulics	Electrical engineering
ChillLearn * BASIC	+	+	+	+			
ChillLearn ** PLUS	++	+	++	++	++	++	++
ChillLearn EXPERT	++	+	+++	+++	+++	+++	+++

+ Basic knowledge
++ Extended basic knowledge
+++ Expert knowledge
* Specific work on the electronics and refrigeration circuit is not discussed in this course.
** Specific work on the refrigeration circuit is not discussed in this course.

Training

EXPERTISE STRAIGHT FROM THE MANUFACTURER

CHILLLEARN **BASIC**

+ **Prerequisites**
Technical training/experience

+ **Target Group**
Machine operators Mechanical maintenance staff (metal workers)

CHILLLEARN **PLUS**

+ **Prerequisites**
Training/experience in electrical engineering

+ **Target Groups**
Service technicians (OEM customers)
Maintenance staff responsible for electrical engineering issues (electrical mechatronics technicians)

CHILLLEARN **EXPERT**

+ **Prerequisite**
Training/experience in cooling technology

+ **Target Group**
Maintenance staff responsible for cooling technology issues (refrigeration mechatronics technicians)

Augmented Support

AUGMENTED **REALITY**

With the AR software, KKT chillers' service team can support you remotely in real time via video stream with fault location and repair.

By using a smartphone, tablet or smart glasses with a corresponding app, the person on site is supported and instructed audibly and visually.

This approach does away with unnecessary wait and travel times.

The revolution is the ability to provide remote support shortly after a malfunction has occured, directly from the Kasendorf service office.

Take advantage of the support provided by our remote service team!

YOUR **BENEFITS**

+ Reduction in downtimes and malfunctions
+ Simple and fast troubleshooting in record time
+ Travel costs reduced to a minimum
+ Relevant instructions, videos and images displayed directly on the screen of your mobile device
+ Hands-free working possible with smart glasses

Basic requirement for the use is a KKT chillers maintenance contract with remote support option and relevant requirements such as internet access or mobile device.

Augmented Support

AUGMENTED **REALITY** ALLOWS US TO SEE THROUGH YOUR EYES

Augmented Support

STATE-OF-THE-ART **TECHNOLOGY**

Further information you will find under:

kkt-chillers-service.de/en/augmented-support

Spare Parts Management

CHILL**PARTS**

You can preserve your chiller's high quality, reliability and efficiency by using original KKT chillers spare parts when the installation is serviced or repaired.

YOUR **BENEFITS**

+ Components are checked via the precise quality management system at the manufacturer's plant
+ Swift availability guaranteed thanks to a large spare parts warehouse
+ 100% conformity with the technical specifications of the manufacturer's plant

Downtimes due to faults can be significantly reduced with a spare parts package that matches your facility and requirements. Generally, nonproductive times generate higher costs than the storage of spare parts on site.

Spare Marts Management

EQUIPPED FOR **ANY SITUATION**

Online form for spare parts inquiries and orders:

kkt-chillers-service.de/en/spare-parts-management

Facility Optimization

CHILL**TUNE**

With a large number of applications used, the individual parameters and components are not aligned ideally with the conditions on site. Another common problem is that the application's cooling requirements might have changed over the years. A facility optimization or modernization of the control technology carried out by KKT chillers ensures the renewal of efficient operations.

YOUR **BENEFITS**

+ Opening up a significant energy savings potential
+ Reduction in facility downtimes thanks to improved operating conditions

Facility Optimization

MAKING YOUR **SYSTEM PERFECT**

Learn more about the possibilities of plant optimization.

kkt-chillers-service.de/en/facility-optimization

Returns Management

HASSLE-FREE RETURN TO THE MANUFACTURER

Returns management

RETURN **REGISTRATION**

Would you like to send a chiller or individual component back to the manufacturer's plant for repair or fault analysis? After you have registered your shipment (including a detailed error message), we will assign a return number to the case as soon as possible. Please include this number in the shipping documents.

Online form for return registration:

kkt-chillers-service.de/en/returns-management

Product Registration

REGISTER **YOUR CHILLER**

YOUR **BENEFITS**

+ Assurance of service availability on site
+ Targeted compilation of spare parts packages (ChillParts)
+ Automated maintenance reminders
+ Frequent expert tips
+ Quick troubleshooting in case of a malfunction

Product Registration

YOUR DIRECT LINE **TO KKT CHILLERS**

Register your chiller now and enjoy the full extent of these benefits:

kkt-chillers-service.de/en/product-registration

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 Opti CLC Med Systemtrenner	Compact Line Evo Line	Compact Line Evo Line	Nano Line (Vario Line)	Vario Line Compact Line	Compact Line Evo Line	Nano Line (Vario Line)	Nano Line (Vario Line)	Vario Line Compact Line
CAPACITY	5 - 100 kW	1 - 10 kW	5 - 100 kW	50 - 300 kW	50 - 300 kW	5 - 15 kW	5 - 15 kW	50 - 1.000 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

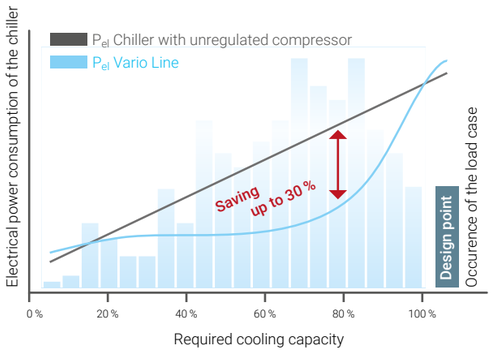
Custom made performance

VARIO LINE

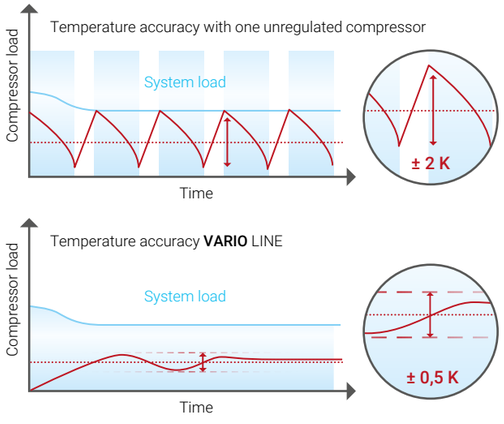
With the performance-enhanced chillers of the Vario-Line, KKT chillers set new standards in process cooling and simultaneously offers its clients a variety of interesting advantages:

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 ½"				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

Perfect Balance

HIGH PERFORMANCE & LOW OPERATING COSTS

A performance masterpiece for tight spaces

EVO LINE

With the EVO LINE's optimized air-cooled chillers, every single eBoxX offers up to 528 kW cooling capacity. Plus, they require little energy and help protect the environment. Fitted in a compact and corrosion-resistant housing, this high-performance system is the answer to the latest requirements in process cooling and offers users a great number of benefits:

Digital data management.

The chillers' display is easy to use thanks to the simple and user-friendly menu guidance. Sensors automatically record all relevant manipulated and controlled variables, such as temperature or pressure, ready for the customer to process all data further. The built-in alarm notification with an associated error code additionally ensures the highest possible safety level.

Greater efficiency – lower operating costs.

The technology used accommodates the simultaneous operation of up to four scroll compressors with two cooling circuits – efficiently and quietly, even at partial load. These compressors are designed and engineered to provide greater control flexibility and energy efficiency. Consequently, only the amount of power actually needed is generated. The output-controlled EC fans also reduce operating costs, lowering the electricity demand by 20% thanks to special EC motor technology. On top of that, a precisely aligned coolant flow through innovative distributor pipes ensures minimum pressure loss.

Environmentally friendly and ecological.

The EVO LINE has been developed to meet the new and increasingly strict regulations limiting greenhouse gas emissions. To this end, a microchannel is used as a heat exchanger: Compared to conventional technology, it reduces the coolant filling level by up to 30%. The use of R410A, a non-flammable and non-toxic highly efficient refrigerant, makes the units perfectly suitable for applications in the food and packaging industries or in surface engineering. This means that additional operator obligations, as those for A2L coolants (flammable/toxic), do not apply.

Highly flexible – suitable for many uses.

The EVO LINE's numerous combination options and accessories include an innovative hydraulic module that can further reduce energy costs. With its modern industrial design, the EVO LINE can be installed in small spaces and offers an output of up to 70 kW/m^2. Further benefits include low maintenance costs due to straightforward maintenance and easy cleaning.

Experience the perfect balance of high performance and low operating costs with our EVO LINE.

TECHNICAL DATA

Evo Line	eBoxX 260	eBoxX 300	eBoxX 350	eBoxX 400	eBoxX 490	eBoxX 530
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 32 °C	260 kW	292 kW	348 kW	395 kW	489 kW	528 kW
Net cooling capacity [1] t_{w2} = 20 °C, t_{amb} = 40 °C	232 kW	264 kW	313 kW	354 kW	436 kW	476 kW
Refrigerant	R410A					
GWP	2088					
Charge of refrigerant	20,5 kg	22,5 kg	19 kg	23 kg	32 kg	
CO_2 equivalent	42,9 t CO_2	47 t CO_2	39,7 t CO_2	48,1 t CO_2	66,9 t CO_2	
Water outlet temperature	5 - 25 °C					
Temperature constancy	± 2,5 K					
Coolant	Water or Water/Glycol					
Coolant flow	44 m³/h	50 m³/h	60 m³/h	68 m³/h	84,5 m³/h	91 m³/h
Air flow rate	46.500 m³/h	62.000 m³/h	79.500 m³/h		119.500 m³/h	
Sound pressure level [2]	58 dB(A)			60 dB(A)	61 dB(A)	62 dB(A)
Ambient temperature range	- 15 - 45 °C					
Water connection	DN 80				DN 100	
Operating voltage	400 V / 3 Ph / 50 Hz					
Power consumption, ca. [3]	65,7 kW	73,1 kW	79,7 kW	102,1 kW	108,2 kW	125,1 kW
Operating current, ca. [3]	152 A	166 A	198 A	239 A	250 A	280 A
Protection class electrical cabinet	IP 54					
Length	3.594 mm	4.544 mm	2.526 mm		3.626 mm	
Width	1.350 mm		2.260 mm			
Height	2.440 mm		2.453 mm			
Weight (net)	1.510 kg	1.670 kg	1.700 kg	2.050 kg	2.550 kg	2.565 kg

[1] without consideration of pump performance losses; 400V / 3 Ph / 50 Hz | [2] in 10 m distance without reflection, without pump | [3] at operating point see [1]

HYDRAULIC

Evo Line	eBoxX 260	eBoxX 300	eBoxX 350	eBoxX 400	eBoxX 490	eBoxX 530
Pump type	Grundfos NB 97839225 NB 40 - 250 / 245, AF2ABAQE 50 Hz		Grundfos NB 96125030 NB 50 - 250 / 254, AF2ABAQE 50 Hz			
Free pump pressure max.	6 bar					
Pump power input	18,5 kW		30,0 kW			
Tank water content	450 l		500 l		700 l	
Weight in addition (netto)	520 kg		680 kg		810 kg	
Weight in sum (netto)	2.030 kg	2.190 kg	2.380 kg	2.730 kg	3.360 kg	3.375 kg

DEVICE INCLUDING HYDRAULICS

Power consumption, approx. [3]	84,2 kW	91,6 kW	109,7 kW	132,1 kW	138,2 kW	155,1 kW
Operating current, approx. [3]	152 A	166 A	198 A	239 A	250 A	280 A
Weight (netto) incl. hydraulic module	2.030 kg	2.190 kg	2.380 kg	2.730 kg	3.360 kg	3.375 kg

100% ECODESIGN

THE FOUR SIZES AT A GLANCE

Food & Packaging

Plastics Industry

Filtration

Surface Technology

eBoxX 260

eBoxX 300

eBoxX 350 - 400

eBoxX 490 - 530

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.

Medical Chillers

SAFE COOLING
FOR IMAGING SYSTEMS

Rely on the expertise of KKT chillers when it comes to cooling systems for imaging equipment.

For over 20 years, chillers made by KKT chillers have been applied to cool highly sensitive imaging systems. The medical coolers are tailored to the individual products and product series of medical device manufacturers. Series-oriented devices in the power range of 5 - 100 kW have a modular design and can be optimally adapted to your requirements.

KKT chillers

TECHNICAL DATA

Medical Chiller	OCLC MED 25 *	cBoxX 60	cBoxX 70	cBoxX 80	cBoxX 100	cBoxX 120	cBoxX 160
Net cooling capacity [1]	26 kW	36 kW	41 kW	49 kW	59 kW	72 kW	86 kW
Refrigerant	R410A						
GWP	2088						
Charge of refrigerant	5,1 kg	7 kg	8 kg			17 kg	
CO_2 equivalent	10,6 t CO_2	14,6 t CO_2	16,7 t CO_2			35,5 t CO_2	
Ambient temperature range	- 25 °C - 45 °C (optional - 40 °C and 55 °C)	- 25 °C - 50 °C					
Max. air flow rate	17.000 m³/h	20.000 m³/h	23.270 m³/h	36.500 m³/h		45.550 m³/h	
Coolant	Water with 35 Vol.-% Glycol	Water or Water/Glycol					
Expansion vessel	25 l	40 l					
Coolant outlet temperature	6 °C - 14 °C	- 10 °C - 30 °C					
Temperature constancy	± 2 K						
Coolant flow	3,0∑Ω6,0 m³/h	5,5 m³/h	6,2 m³/h	7,1 m³/h	9,1 m³/h	10,7 m³/h	13,6 m³/h
Pumping pressure	4 bar	3 bar (optional 5 bar)					
Sound pressure level [2]	55 dB(A)	68 dB(A)	59 dB(A)	71 dB(A)		66 dB(A)	
Operating voltage	400 V / 3 Ph / 50 Hz or 400 V / 3 Ph / 60 Hz or 460 V / 3 Ph / 60 Hz						
Operating current max [4]	36,0 A	43,0 A	58,0 A	66,7 A	81,5 A	88,7 A	108,5 A
Power consumption max [4]	11,2 kW	22,7 kW	23,2 kW	29,8 kW	38,5 kW	39,8 kW	53,2 kW
Protection class	IP 54						
Weight [3]	530 kg	620 kg	650 kg		700 kG	1.100 kg	1.200 kg
Water connection	IG 1 ¼"	IG 1 ½"		IG 2"			
Lenght	1.925 mm	1.240 mm	1.840 mm			2.660 mm	
Width	1.003 mm	830 mm				1.200 mm	
Height	1.750 mm	2.030 mm					

[1] at t_{wo}=10°C, t_{amb}=45°C, 50Hz, without pump | [2] in 5m distance without reflection | [3] incl. charge of refrigerant, without charge of coolant | [4] 50 Hz, without pump
* Further chillers of the OCLC MED series with a cooling capacity of 44 kW and 69 kW without CE label please see www.kkt-chillers.com/en/downloads/brochures

Accessories	CIP	CIP 2
Designed for	OCLC MED 25 cBoxX 60 - 80	cBoxX 100 - 160
Weight (net, empty)	ca. 56 kg	ca. 70 kg
Weight (transport)	ca. 95 kg	ca. 109 kg
Dimensions (D x W x H)	ca. 346 x 610 x 1.100 mm	
Dimensions (W, incl. mounting screws)	ca. 644 mm	
Dimensions (H, open valves)	ca. 1.352 mm	
Dimensions (D x W x H, transport)	ca. 570 x 740 x 1.480 mm	
Pressure difference (min/max)	4 - 6 bar	
Temperature tap water *	6° C - 20° C	
* Tap water quality in accordance to specification of application		

Chiller Interface Panel (CIP) for emergency cooling.

The CIP is mainly designed as an emergency cooling system for the helium compressor. It is connected between chiller, heat exchanger cabinets and city water and can be directly installed in the installation room.

TECHNICAL DATA

System Separator	MRI (Scan room)	MRI (Equipment room)	Helium compressor
Operating voltage (Input power)	208 V / 3 Ph / N / PE / 50 - 60 Hz		–
Sound pressure level at 1 m distance (w/o fans)	67,7 dB(A)		–
Net | gross weight	473 kg | 573 kg		–
Height | Width | Depth	2.025,5 mm x 830 mm x 830 mm		–
Cooling circuits	2	1	–
Cooling medium	Deionized water	Deionized water	Glycol/Water ≤ 50%
Required electrical conductivity	10 to 450 µS/cm	10 to 450 µS/cm	–
	≥ 400 inhibits scanning	≥ 400 inhibits scanning	
Cooling circulation, nominal	125,1 l/min	39,9 l/min	–
Min. low pressure	1,8 bar	1,8 bar	–
Max. high pressure	5 bar	10,5 bar	10 bar
Heat removal (low flow application)	18 kW	12 kW	7 kW
Heat removal (high flow application)	45 kW	47 kW	7 kW
Cooling loop temperature (low flow applications)	31,5 °C	19 °C	–
Cooling loop temperature (high flow applications)	30 °C	17 °C	–
Flow rate	–	–	7 - 10 l/min

Requirements for the installation area	Scan room	Equipment room
Temperature	15 - 21 °C	–
Temperature gradient	± 3 °C/hr	–
Humidity	30 - 60% RH	–
Humidity gradient	± 5% RH/hr	–
Temperature	–	15 - 32 °C
Temperature rate of change	–	max. ± 3 °C/hr
Humidity (non-condensing)	–	30 - 75% RH
Humidity change (non-condensing)	–	max. ± 5% RH/hr
Altidude	- 30 m - 2.600 m	
Magnetic field	max. 50 Gauss	
Relative elevation (relative to magnet)	–	± 5 m

Best Water Quality

SYSTEM SEPARATOR

The system separator guarantees safe heat transfer from the MRI system to the central cold water supply and protects the cooling water circuit from contamination through environmental impacts.

If the central cold water supply should fail, tap water can be used to cool the MRI system via the emergency cooling connections.

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