

ECOtec.chiller

Customised high-performance
cooling concepts



Your strong partner in thermal management



50 years partner in the printing industry

Many years of expertise in the printing industry



Modern lasers, precise and powerful machines

Highly accurate solutions for laser and machine tools



Plastics, polymers allrounders

Strong partner of the plastic industry

power to transform

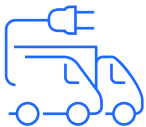
From the printing industry to laser technology applications

Products made by the technotrans group can be used in all types of areas where temperature and fluids play an important role during the production processes. Our cooling and temperature control systems as well as other solutions are used worldwide in a wide range of industries. The spectrum is vast: From the printing and plastics industry to electromobility applications as well as from the food and beverages industries to measuring and metalworking applications requiring a high level of

precision up to important security applications. Every industry has its own specific requirements and every application is a new and exciting challenge. The technotrans group transfers its vast expertise from well-established core industries to new areas. Because every industry needs this: Reliable, precise and energy-efficient solutions. In addition, technotrans creates tangible value by developing applicationspecific innovations.

If there is a challenge in the field of thermal management, we develop and build the better solution.

technotrans Vision



Advanced concepts for e-mobility

Pioneer in the field of cooling solutions in e-mobility



Customised systems for extremely precise devices

Safety for scanner/medical technology



24/7 Customer Service

Worldwide technical support. Around the clock.

ECOtec.chiller for uncompromising cooling solutions

The modular platform for cooling systems

The new modular cooling system ECOtec.chiller is an example of customised cooling and sustainable energy efficiency.

The wide-ranging cooling system consumes less power at a consistently high power density - and thereby reducing the carbon footprint of the system users.

Cooling solutions of 1.5 bis 370 kW
Modular equipment options
Customised configuration



Cooling capacity of 1.5 to 4 kW (example)



Cooling capacity of 6 to 120 kW (example)



Cooling capacity of 140 to 280 kW (example)

One system, two series

In order to meet the growing demand for modularity and flexibility, technotrans has developed the new ECOtec.chiller, a platform for the configuration of customised cooling systems based on standardised modules and assemblies.

Two versions of the system are available: **pure** is the cost-optimised and compact standard version while **xtend** can be individually adapted to the customer's requirements by adding numerous options.

pure.line

Pure Cooling

- **Economic**
efficient thanks to moderate procurement and operating costs
- **Fast, worldwide**
of systems and components, worldwide thanks to extensive standardisation
- **Reliable**
through proven technology, optimised with the experience from many areas of application
- **Compact**
form factor - footprint reduced by up to 20%

xtend.line

Thermal Management

- **Perfect adaption**
to all types of cooling and temperature control situations with numerous configuration options and an ongoing power adaptation
- **Sustainable + minimal operating costs**
Speed control of all active components so that the current intake does not exceed what is actually needed
- **Highest energy efficiency class**
showcased by excellent SEPR values as per the Ecodesign Directive
- **Optimal monitoring and handling**
Innovative control system with a multitouch display and bus interfaces for the external verification and adaptation of the cooling process parameters



Efficient

Reduced energy and operating costs thanks to power-controlled drives for compressors, pumps and fans as well as the smart use of waste heat, for example, all play an important role.



Sustainable

Our customers and the climate benefit from a sustainable, resource-saving operating concept. Efficient cooling and temperature solutions reduce the operating costs and protect the environment.



Reliable

High process and operational reliability coupled with proven technology ensure high quality, availability and reproducibility - for example, extremely precise temperature control ensures stable processes.



Innovative

High-performance cooling systems ensure performance and service life - low-vibration, smooth-running and efficient cooling solutions tailored to the application with a low footprint.

pure.line

The quickly available standard cooling solution with cost-optimised, modular equipment.



Connect, set and run:

The cost-optimised **pure.line** systems are configured using state-of-the-art technology and an easy-to-use microprocessor control panel. This considerably speeds up the system start-up process.

Even the standard version of the technotrans **pure.line** series is equipped with an easy-to-clean aluminium fabric air filter. A filter monitoring system indicates when the air filter needs to be cleaned. As a result, sensitive assemblies are effectively protected against soiling and the service life of the cooling medium is increased.

Thanks to the space-saving design in a modular housing, it was possible to reduce the footprint by up to 20%. The unit is characterised by a small footprint and high power density.

The areas requiring maintenance are all arranged at the front and a fill level indicator which can be checked from the outside ensures the easy handling, operation and maintenance of the unit.

Powerful, individual cooling concepts

Benefits at a glance

- Space-saving design in a modular housing
- Easy handling, operation and maintenance
- Easily accessible maintenance areas
- Fill level indicator visible from the outside
- Excellent availability – fast order turnaround
- Environmentally friendly R 513A refrigerant

Functions and features

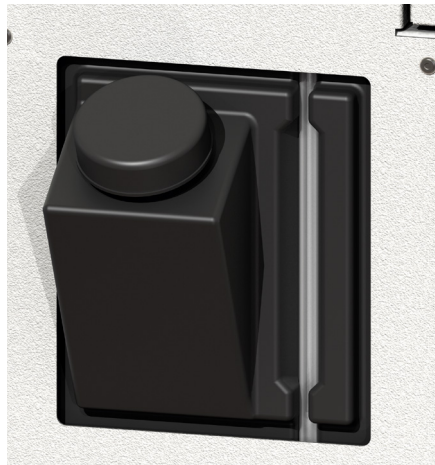
- Process medium temperature 13°C to 25°C
- Refrigerant R 513A
- AC compressor and fan
- Integrated circulation pump
- Indoor setup
- Spacious, open tank system
- Small footprint and high power density
- Variable hose configuration

Additional options

- Increased control accuracy up to +/- 1 K
- Active heating for quick operational readiness
- Alternative current, voltage and frequency variants
- UL main components/approval
- Different types of cooling media (water/glycol, Di water, etc.)
- Process medium filtration system accessible from the outside

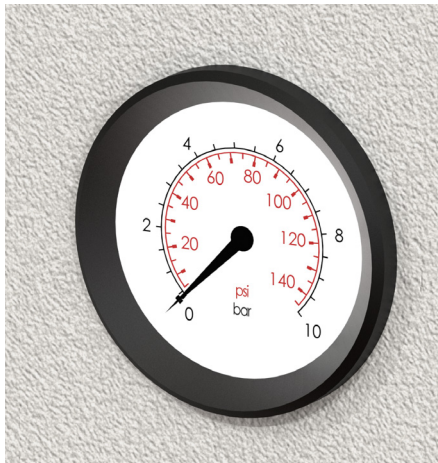


- › 4-line character display, cost-optimised and covers minimum requirements
- › Optional multi-colour, high-resolution 7" multi-touch display available

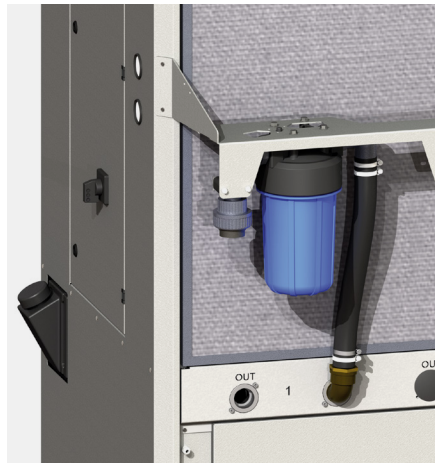


- › Easy tank filling from the outside for excellent accessibility
- › Fill level visible from the outside for a quick overview


-20%
 Reduced CO₂ footprint



- › Front display for pump pressure and function check



- › Fine filtration accessible from the outside, easy to maintain

xtend.line

The particularly energy-efficient solution, adaptable to the process, in customised equipment



Highly flexible for your requirements

Energie efficient solution

The xtend series is equipped with highly efficient plate heat exchangers for general liquid cooling. Combined with microchannel technology, it can reduce the use of refrigerants by up to 40 % compared to conventional solutions. The energy costs can also be reduced considerably: Depending on the ambient temperature, the xtend system automatically adjusts the optimum operating point (SEPR value) of the complete system in terms of its energy efficiency.

Cost efficiency and operational safety

Due to the reduced use of refrigerants combined with the hermetically sealed refrigeration system, units with a refrigeration capacity of up to 33 kW do not have to undergo annual leakage testing. This, in turn, leads to maintenance cost savings for the owners.

Another striking feature of the **xtend.line** is its high level of operational reliability. Additional sensor systems in the refrigeration circuit as well as in the cooling medium circuit ensure continuous process monitoring. Numerous options, such as additional cooling circuits, different types of media or a free cooling function, enable the precise customisation of the new process chiller. In addition, the ecological footprint of the cooling solution has been reduced.

With the new **xtend.line** process chiller, technotrans already complies with the EU regulation that will apply from 1 January 2021. This applies to the energy efficiency and sustainability of the devices.

Powerful, individual cooling concepts

Benefits at a glance

- Improved energy efficiency (SEPR value)
- Refrigerant consumption reduced by up to 60 %
- Inverter technology for pumps, compressors and fans
- Proven microchannel technology
- Intuitive, easy navigation via the multi-touch display
- Operating costs reduction (up to 30 % during partial load operation)

Functions and features

- Process medium temperature 0 °C to 35 °C
- Ambient temperature between -25 °C and 50 °C
- Refrigerant R 410A
- Energy-efficient, power-controlled compressor and fan
- Control accuracy up to +/- 0.5 K
- 2-circuit-version possible
- Indoor and outdoor setup
- Small footprint and high power density
- Optimised SEPR value
- Complies with the Ecodesign Directive LOT 21 (ERP)

Additional options

- Increased control accuracy up to +/- 0.1 K
- Active heating for quick operational readiness
- Alternative current, voltage and frequency variants
- UL main components/approval
- Different types of cooling media (water/glycol, Di water, etc.)
- Integrated media filtration
- Boosted pumps
- Radial fan
- Outdoor setup (extended temperature range)



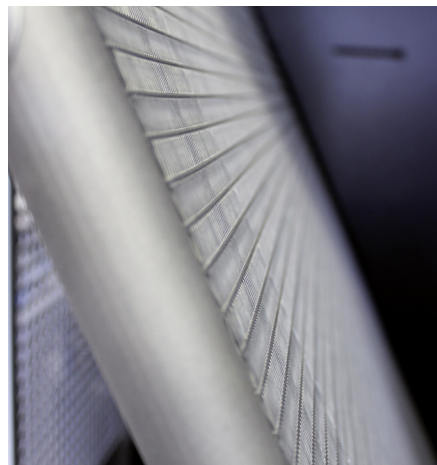
- › Multi-colour high-resolution 7" multi-touch display with gesture control
- › Clear operating mode visualisation with all the setpoints and actual values at a glance



- › Energy-efficient, power-controlled fans for optimum adaptation to the process
- › Low noise emissions combined with a high control accuracy and long service life



- › Highly efficient, speed-controlled compressor



- › Proven microchannel technology

pure.line

Model	Einheit	pure 15	pure 28	pure 38	pure 60	pure 80
Cooling capacity $T_{inlet} 20^{\circ}\text{C}/T_{amb.} 32^{\circ}\text{C}$	kW	1.5	2.8	3.8	6	8
Cooling medium control range	$^{\circ}\text{C}$	15 bis 25				13 bis 25
Control accuracy (under constant load)	K	+/- 0.5				
Refrigerant		R 134A				R 513A
Ambient temperature	$^{\circ}\text{C}$	5 bis 45				
Pump capacity	l/min	7		11	19	28
(adaptable)	m^3/h	0.42		0.66	1.17	1.7
Supply voltage	Hz, V, Ph	230, 50, 1 240, 60, 1			400, 50, 3 460, 60, 3	
Dimensions (wxdxh)	mm	450x450x1145			550x550x1387	650x650x1390
Weight	kg	80	85	90	110	180

xtend.line

Model	Einheit	xtend 150	xtend 120	xtend 160	xtend 200	xtend 250
Cooling capacity $T_{inlet} 20^{\circ}\text{C}/T_{amb.} 32^{\circ}\text{C}$	kW	15	13	17	20	26
Cooling medium control range	$^{\circ}\text{C}$	5 bis 25				
Control accuracy (under constant load)	K	+/- 0.5				
Refrigerant		R 513A		R 410A		
Ambient temperature	$^{\circ}\text{C}$	-25 bis 45				
Pump capacity	l/min	52	45	60	68	87
(adaptable)	m^3/h	3,1	2,7	3,6	4,1	5,2
Supply voltage	Hz, V, Ph	400/460, 50/60, 3				
Dimensions (wxdxh)	mm	650x650x1390		800x800x1900		
Weight	kg	195		260		
SEPR EU 2016/2281		5,15	5,28	5,23	5,25	5,45

Model	Einheit	xtend 1400	xtend 1700	xtend 2000	xtend 2400	xtend 2800
Cooling capacity $T_{inlet} 20^{\circ}\text{C}/T_{amb.} 32^{\circ}\text{C}$	kW	140	170	200	240	280
Cooling medium control range	$^{\circ}\text{C}$	5 bis 25				
Control accuracy (under constant load)	K	+/- 1,0				
Refrigerant		R 513A				
Ambient temperature	$^{\circ}\text{C}$	-25 bis 45				
Pump capacity	l/min	400	483	600	683	783
(adaptable)	m^3/h	24	29	36	41	47
Supply voltage	Hz, V, Ph	400/460, 50/60, 3				
Dimensions (wxdxh)	mm	3020x1850x2230			4240x1850x2230	
Weight	kg	2020	2060	2250	2820	2950
SEPR EU 2016/2281		5,28	5,43	5,18	5,8	5,7

Technical data

pure 100	pure 120	pure 150	pure 160	pure 200	pure 250	pure 300	pure 350
10	12	15	16	19	25	29	40
13 bis 25							
+/- 0.5				+/- 2.0			
R 513A							
5 bis 45							
35	44	53	60	68	87	98	08
2.1	2.6	3.2	3.6	4.1	5.2	5.9	6.5
400, 50, 3 460, 60, 3							
650x650x1390		800x800x1900		1000x1000x1900			
190		260		400			

xtend 350	xtend 450	xtend 600	xtend 750	xtend 900	xtend 1200
32	45	60	77	92	120
5 bis 25					
+/- 0,5					
R 410A					
-25 bis 45					
108	152	197	260	305	395
6,5	9,1	11,8	15,6	18,3	23,7
400/460, 50/60, 3					
1000x1000x1900		2080x1000x1955			
400	415	900			
5,12	6,11	5,85	5,67	5,57	5,86

xtend 3200	xtend 3700
320	370
5 bis 25	
+/- 1,0	
R 513A	
-25 bis 45	
883	1083
53	65
400/460, 50/60, 3	
5620x1850x2230	
3600	3700
5,91	5,65

Please see the technical data sheet for additional technical data.

Modular system control

The adaptive operating concept with user-friendly application, for efficient system control.



All units of the pure and xtend.line are equipped with a user-friendly modular control system.

Cooling and temperature control with a system

The self-explaining menus offer a quick and clearly structured overview of the system functions and parameters. The control via a 4-line plain-text display is cost-efficient and in compliance with the minimum requirements. Additional functions and extensions of use are covered by the optional multi-touch display.

Unique usability

The user-friendly and intuitive structures of the innovative **logotherm** operating panels enables an easy control and analysis of the process.

Thanks to the responsive and adaptive design, specific pieces of information as well as favourite functions can be displayed in a concentrated and clear manner on the dashboard according to the operator's needs.

Safety through long-distance visibility

Even from a distance, the operator can see the most important key figure on the screen. The colour coding signals the status and he can intervene even before a higher reject rate occurs. Optimised for use in poorly lit work situations, the dark background is easy on the eyes and at the same time ensures good legibility.

Condition monitoring

The high-resolution and gesture-enabled multi-touch displays, in combination with a controller, enable previously unrealisable data visualisations as well as help and assistance functions. Temperature and flow rate developments can be viewed and monitored even at later times (across shifts). The system structure offers the freedom to integrate additional functions, such as monitoring the machine status for condition-oriented maintenance.

Powerful, individual cooling concepts

Benefits at a glance

- Self-explaining menus for a clear overview
- User-friendly and intuitive operating panel
- Responsive and adaptive design with a customisable dashboard
- Setting and saving of user-specific parameters
- Easy monitoring of the machine status
- High level of process safety thanks to uncomplicated diagnostics and analyses



- › Extremely flexible operating concept (human-machine interface) for a wide range of applications and monitor sizes.



- › Keeping an eye on the essential parameters.
- › Attention-grabbing messages increase the process safety and ensure a high level of sustainability.
- › Status monitoring, processes analyses and diagnostics have never been easier.
- › Ergonomic keyboard for comfortable data input.



- › Gestures familiar from everyday life ensure a particularly easy operation.
- › Users can intuitively zoom, drag and swipe.



Multitouch functions

The logotherm display unit can be controlled with the same finger gestures known from using smartphones and tablets.

Intuitive gestures, such as zooming, dragging and swiping*, facilitate the orientation and analysis, especially when viewing trends.

*depending on the variant



Facts and figures

The interface, which was developed with web technology, responsively adapts to the monitor size of the device that is used.

The information units adaptively react to the available space in terms of their number and shape.

As a result, the modular layout can be used in and scaled from compact devices up to system control panels.



Easy management

Process-specific parameters can be stored and retrieved as a recipe together with user-specific comments.

The comfortable on-screen keyboard considerably facilitates data input compared to standard device displays.

One brand. Six strong competence centers.

Die Marke für Thermomanagement

The future technotrans Group will comprise five innovative competence centres for thermal management under one umbrella brand. This also includes gds, the expert for technical documentation. Together, they we are a highly diversified technology partner full of energy and excellence.

In addition to five German cities, we are also represented in the most important sales markets with locations in Europe, America, Asia and Australia. The headquarters of technotrans SE is in Sassenberg, Münsterland.

Competent technotrans employees are available to our customers at a total of 17 production, sales and service locations. In this way, we are on site wherever we are needed. We are therefore able to deal with service enquiries quickly and in a targeted manner - and we are also familiar with the respective regional conditions and requirements.

Chicago (US)



10 Sales and service sites

Indaiatuba (BR)	Colchester (GB)
Kobe (JP)	Saint-Maximin (FR)
Singapore (SG)	Legnano (IT)
Melbourne (AU)	Hünfeld (DE)
Chennai (IN)	Berlin (DE)

Wherever you are

technotrans | Sassenberg

The specialist for fluid technology solutions with a strong competence in the fields: cooling and temperature control, filtration and separation as well as pumping and spraying systems. With innovative solutions tailored to specified installation situations, technotrans paves the way to the future for its customers.

klh | Bad Doberan

High-performance cooling systems for industrial production processes: klh is your system partner with long-standing experience. Efficient cooling systems for energy and drive applications or customised concepts for laser and machine tools – klh always has the perfect solution.

gds | Sassenberg

Many years of experience in all fields of technical communication. gds is a full service provider of technical documentation with a strong focus on increasing the efficiency and optimising the processes of its customers.

gwk | Meinerzhagen

Passion for the plastics processing industry: The solutions of gwk cover the entire production process of plastic products – from the cooling system and a temperature control concept up to a water preparation solution.

termotek | Baden-Baden

Maximum precision for applications in the laser and medical technology sector: termotek is the ideal partner for the cooling and temperature control of sophisticated applications in small power ranges. Lean production of small batches with almost unlimited variety.

reisner | Holzwickede

Outstanding process cooling solutions, including the control systems, peripheral equipment and infrastructure: Reisner stands for high-performance cooling solutions, covering a wide power range – optimally adapted to all types of production scenarios.



Sassenberg HQ (DE)

Meinerzhagen (DE)

Holzwickede (DE)

Baden-Baden (DE)

Bad Doberan (DE)

Taicang (CN)



technotrans means service on principle.

High level support

Around the globe, we control sensitive processes in the field of fluid technology. Our focus: to ensure the maximum reliability of our solutions for you at all times.

On site in person or virtually

Our professional and flexible full-service concept supports you not only in the classic repair and maintenance of equipment and system solutions, but also in the planning of your projects: from the assembly drawing to the turnkey installation.

The technotrans service technicians assist you worldwide in person on site or virtually via a licensed support app. Our multilingual Customer Service Support also ensures optimum support, even outside normal office hours. In training courses, we can use real-life systems to show you everything you need to know about the operation and maintenance of these systems.

Maximum operational safety

If certain components of a technotrans system need to be replaced, we will reliably prepare individual spare parts and filter packages for you. Is your cooling system displaying a fault message? The technotrans team of the In-house Repair department first carries out a fault analysis. It then develops the appropriate solution: a repair, a general overhaul or an upgrade of the equipment to the latest standard.

tt.service

24/7, worldwide technical support

technotrans support app

In-company service

Further benefits at a glance:

- Project planning, configuration, and design
- Plant planning and relocation, recommissioning and testing
- Extension and retrofitting for the optimisation of devices and systems
- Project and site management
- Turn-key installation, commissioning and acceptance
- Training and production support
- Adherence to schedules, quality-focused planning and execution