Industrial cooling systems LT

DAIKIN

DELTATHERM

DAIKIN Fluid Technology GmbH

Partner of the industry for over 55 years

DAIKIN Fluid Technology GmbH combines the technological heritage and more than 55 years of experience of DELTATHERM®, founded in 1971 in Much, Germany, with the global expertise of the DAIKIN Group. Since 2026, the company has entered a new era as part of Daikin Industries, offering industrial cooling and temperature control solutions that unite maximum efficiency, reliability, and sustainability.

Since its foundation, the company has been supplying a wide range of industries – including machine tool manufacturing, laser technology, chemical and food processing industries, and environmental testing – with high-quality and durable cooling systems. The high level of vertical integration and flexibility in customer-specific design developed by DELTATHERM® are now complemented by advanced control technology, energy-efficient solutions, and the global quality standards of the DAIKIN Group.

The portfolio includes industrial chillers, heat exchanger systems, process temperature control units, heating systems, and a variety of cooling components. From standard units to customized special solutions, systems are developed that are optimally tailored to customers' individual production processes. A nearly complete in-house manufacturing depth – from engineering and software development to control cabinet construction, assembly, painting, and comprehensive functional testing – ensures the highest quality standards and fast response times. All core components are sourced exclusively from globally renowned manufacturers to guarantee maximum reliability.

With the commitment "High Quality, High Efficiency, High Reliability," DAIKIN Fluid Technology GmbH develops solutions that ensure maximum temperature stability, safeguard production processes, and at the same time support the transition toward a sustainable industrial future. The company combines technological strength with global competence, creating a new generation of industrial cooling and temperature control systems together with its customers.

In the field of after-sales service, DAIKIN Fluid Technology GmbH provides reliable, globally supported customer service. In addition to the long-established international DELTATHERM service network spanning more than 60 countries, customers now benefit from the expanded service infrastructure of the DAIKIN Group.

These include:

- Global plant service
- Service hotline to our experts, in German and English
- All standard components in stock and available globally in the shortest time by express mail
- Replacement part availability > 95 %
- An expanding worldwide network of service partners with locations on 6 continents – in Europe, North America, South America, Africa, Asia and Australia
- Online service, through which we can check and maintain your systems
- Ensuring the productivity of your **DAIKIN - DELTATHERM®** machines

Made
in
Germany

LT series

Compact cooling units and cooling systems for low capacities

This model series was developed on the basis of comprehensive research and many years of practical experience by **DAIKIN - DELTATHERM®** and further improved upon. Through a series of measures cooling capacity, efficiency and operational reliability were further improved and in this way a trend-setting cold water heat exchanger generation was designed.

The **DAIKIN - DELTATHERM®** industrial cooling systems of the LT series consist of the following components: cold water circuit, water circuit and electrical technology, completely fitted in one housing. The cooling of the circulation medium (normally water, optionally also antifreeze, oil or deionised water) is carried out by a heat exchanger, which is known as the evaporator.

The **DAIKIN - DELTATHERM®** industrial coolers, which are ready for connection and have been tested by our in-house performance testing equipment are already completely equipped in the basic version. For customer-specific requirements a comprehensive option package is available, with which we are able to fulfil all of our customers' technically feasible wishes.

The devices are designed for indoor installation as standard and can also be optionally designed for outdoor installation.

The functional principle

The refrigeration cycle

The refrigerant cycle consists of a compressor, air-cooled condenser, expansion valve and evaporator. Various equipment options are available depending on the process requirements. Only modern refrigerants with low global warming potential, such as R454C, are used. All refrigeration components are sourced from brand-name manufacturers and are designed for high operational reliability, long service life and worldwide availability. The entire refrigeration cycle is designed for efficient, economical and sustainable operation and meets the applicable requirements of the CE directives and DIN EN 378.

The electronics circuit

All electrical equipment is designed for safe and reliable operation of the industrial cooling system and complies with current standards. Precise temperature control is achieved in all models of the LT series via a microprocessor-controlled digital temperature controller.

The water circuit

The water circuit is fully integrated into the sturdy industrial housing and is made of corrosion-resistant materials as standard (depending on the medium). The water tank is made of highly stable, water-neutral plastic and is equipped with a tank cover ; a stainless steel version is available as an option.

The hydraulic decoupling of the water and refrigerant circuits opens up an extremely wide range of applications. The water circuit is completely pre-assembled and its design – consisting of piping, evaporator and pumps – is tailored to a defined volume flow and operating pressure. Pumps for higher pressures and/or larger volume flows are available for special requirements. In addition, alternative circulation media such as oil can be used. A continuous flow cooler version is also available as an option, either without a tank or without a pump.

Short specification of the standard equipment

- Compact device tested by us in-house, in test run lasting several hours
- Compact industrial housing for indoor installation
- Device standing on wheels (LT 4.6 LC - LT 6.6 LC)
- Painted in RAL 7012
- Air-cooled condenser with microchannel technology
- Axial fan, extremely quiet and maintenance-free, with contact protection, Depending on performance class, with EC technology
- CFC-free refrigerants with low global warming potential
- Hermetic compressors, 100% suction gas cooled
- Evaporator as plate heat exchanger (from LTK series)
- Expansion device for optimum refrigerant injection
- Intrinsically safe refrigeration circuit
- Air filter mat (LT 4.6 – LT 6.6)
- Pump bypass valve for system protection (from LTK series)
- Manual medium filling via filler neck
- Visual medium level indicator (LT 4.6 – LT 6.6)
- Piping of the medium circuit made of corrosion-inhibiting materials (depending on the medium)
- Medium container made of plastic, thermally insulated
- Pump made of stainless steel (from LTK series) or brass (LT Mini)
- Digital temperature controller with setpoint and actual value display
- Switching and control elements fully wired
- External on/off switch (LT 4.6 – LT 6.6)
- Potential-free collective fault signal (LT 4.6 – LT 6.6)

Available options

- Outdoor installation
- Air filter mat (LT Mini – LTK)
- Fans with air duct connection
- Split design
- Water-cooled condenser
- Noise-reduced design
- Refrigeration pressure gauge for high and low pressure sides
- Medium temperature < +8 °C
- Medium temperature up to 40°C
- Increased temperature stability ± 0.5 K/ 0.1 K/ 0.02 K
- Overflow valve (LT Mini)
- Multi-circuit system
- Heat recovery
- Fixed bypass
- Pump pressure gauge
- Flow monitor with analog or digital signal
- Medium filter
- Shut-off valve in flow and return
- Automatic tank filling via mechanical float switch
- Automatic tank filling via solenoid valve
- Optical medium level indicator (LT Mini – LTK)
- Tank heating for temperature control
- Check valve and solenoid valve for the water circuit (consumer higher than cooler)
- Reinforced pump
- Stainless steel or PVC water circuit for deionized water
- Conductivity monitoring
- Air filter mat monitoring
- Stepless speed control of the fans
- Optical medium level indicator (LT Mini – LTK)
- External on/off switch (LT Mini – LTK)
- Potential-free collective fault signal (LT Mini – LTK)
- Wire destination labeling
- Heavy-duty connectors (e.g., Harting)
- 24V AC/DC control voltage
- Special voltages and frequencies (50/60 Hz)
- Limit temperature monitoring
- Reference temperature control
- External temperature sensor
- Control cabinet heating
- Control cabinet fan
- Bus connection, e.g., Profibus DP/Ethernet/Profinet/Modbus TCP
- Individual fault indicators (in plain text display or as bit technology)
- RAL special color of your choice
- Level monitoring with signal contact and/or optical signaling
- Installation feet
- Mobile version (LT Mini / LTK)

Series type LT mini / LTK / LT		LT Mini 09.6	LTK 1.6	LTK 2.6	LTK 3.6	LT 4.6 LC	LT 5.6 LC	LT 6.6 LC
Cooling capacity at water inflow temperature	W							
+10 °C		800	1200	1800	2200	3500	4900	5200
+15 °C		1000	1500	2300	3000	4200	6000	6500
+20 °C		1200	1600	2400	3200	5100	7100	7500
Compressor drive	W	480	600	1100		1900	1520	
Number of fans		1	1			1		
Air capacity	m³/h	500	900			2600		
Pump capacity	l/min	5	18			20		
Pump drive capacity	kW	0,21	0,65			0,9		
Pump pressure	bar	2,0	3,0			3,0		
Connection capacity*	kW	0,75	1,3	1,8		3,7	3,0	
Maximum connected load	kW	0,8	1,4	2,4		4,0	3,9	3,9
Electrical connection**		230 / 50 Hz	230 V / 50 Hz			400 V / 50 Hz | 460 V / 60 Hz		
Tank contents	l	6	30			30		
Water connections	Inch	1/2	1/2			1		
Width (W)	mm	443	650			600		
Length (L)	mm	555	650			600		
Total height (H)	mm	350	550			1180		
Weight when empty about	kg	42	80	90		110		

* at 15°C medium and 32° ambient temperature / ** other voltages and frequencies on request

Water temperature range: from +10 °C to +25 °C (other ranges on request)

Type of cooling: Air-cooled with axial fan (water-cooled or with air duct connection on request)

Designed ambient temperature: +32 °C (higher and lower temperatures on request)

Range of application of the industrial cooler: LT Mini: from +10 °C to 32 °C ambient temperature; **from Series LTK:** + 8 °C to + 42 °C ambient temperature (higher and lower temperatures on request)

Circulation medium: drinking water (according to specification) with a spread of about 5K between water inlet and outlet (other ranges on request)

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Further products from our product range

Industrial series cooling towers with open or closed circuits from 80 to 18,000 kW cooling capacity

Dry and hybrid coolers for water, oil or emulsion from 0.5 to 15,000 kW cooling capacity

Rack chillers in the power range from 0.15 to 3 kW cooling capacity; as heat exchanger up to 10 kW

Industrial cooling machines for water, oil and emulsion from 0.2 to 5,000 kW cooling capacity

Temperature control systems for water up to 160 °C and oil up to 350 °C

Immersion chillers for water, oil and emulsion from 1.7 to 115 kW cooling capacity

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