

Industrial continuous flow coolers  
LT\_DK series



# 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.

This includes:

- 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 DELTATHERM® machines



# LT\_DK 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 continuous flow cooler generation was designed.

The **DAIKIN - DELTATHERM®** industrial cooling systems of the LT\_DK series consist of the following components: cold water circuit, medium circuit and electrical technology, completely fitted in one housing. The cooling of the circulation medium 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 functional principle

### The cooling circuit

The cold fluid circuit mainly consists of a compressor, an air-cooled condenser, expansion valve and evaporator. In accordance with the process requirements, also radial condensers (for the air duct connection), split condensers (outer/inner unit) and a water-cooled condenser version are available. We only use CFC-free coolants such as e.g. R134a and R407C. All cooling components are made by renowned brand manufacturers and guarantee reliability, long service life and global availability. The entire cold fluid circuit is designed for the optimal and most economic function of the industrial cooler and corresponds to the most recent Standards of the CE directive and of DIN EN 378.

### The electronics circuit

The entire electronics circuit is designed for the optimal function of the industrial cooler and corresponds to the most recent Standards of the CE directive and of DIN EN 60204. In all models of the LT\_DK series, precise temperature control is carried out by a microprocessor-controlled digital temperature controller. All LT\_DK industrial continuous flow coolers are suitable for indoor installation and can optionally also be installed outside.

### The medium circuit

The components of the medium circuit are made as standard from stainless material and completely fitted in the stable industrial housing. The complete medium circuit is fitted in the device with a complete pipework as well as a diffusion-proof and highly efficient insulation. The continuous flow cooler is optionally available with circulation pump, pump manometer, pump overflow valve for pump protection. The medium circuit (piping, evaporator and pumps) is designed for a defined flow and pressure. Different pumps are available for special requests (more pressure and/or higher flow volume). Circulation media other than water (e.g. oil) are, of course, also feasible.

### 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\_DK 4.5 - 6.5)
- Painted in RAL 7012
- Air-cooled condenser with copper pipes and aluminium lamellae, extremely efficient
- Axial fan, extremely low-noise and maintenance-free, with contact protection
- CFC-free coolant
- Hermetic compressor, 100% suction gas-cooled
- Evaporator as a plate heat exchanger or optionally as pipe coil heat exchanger
- Thermostatic expansion valve for optimum coolant injection
- High and low-pressure pressure switch
- Piping of the medium circuit made from stainless material (iron-free)
- Digital controller with target and actual value display
- Switching and control elements completely wired
- Automatic power adjustment
- CE-compliant
- Refrigeration technology designed according to DIN EN 378, part 2
- Electronics designed according to DIN EN 60204
- RoHS and REACH-compliant

### Available options

- Outdoor installation
- Air filter mat
- Radial fans
- Split design
- Water-cooled condenser
- Low-noise design
- Refrigeration gauge for high and low-pressure sides
- Temperature stability  $\pm 0,5$  K /  $0,1$  K /  $0,02$  K (0 - 100%)
- Cold fluid outlet temperature  $< +8$  °C
- Overflow valve
- Fixed bypass
- Multi-circuit system
- Heat recovery
- Flow monitor with analog or digital signal
- Medium filter
- Gate valves in flow and return
- Medium temperatures up to 40 °C
- Heating for temperature control
- Pump made from bronze or optionally stainless steel
- Pump switch-off
- Air filter mat monitoring
- Continuously variable speed regulation of the fans
- Wire marking
- External on/off switch
- Heavy-duty connector (e.g. Harting)
- 24V AC/DC control voltage
- Special voltages and frequencies (50/60 Hz)
- Limit temperature monitoring
- Differential temperature regulation
- External temperature sensor
- Cabinet heating
- Cabinet fan
- Bus connection, e.g. Profibus DP
- Individual fault indicators (in the plain text display or as bit technology)
- RAL special colours upon request
- Mobile version (LT Mini\_DK / LTK\_DK)

### Continuous flow cooler with optional pump for water / emulsion up to 8% and oil up to 32cSt

Series type LT mini_DK / LTK_DK / LT_DK		LT Mini 09.5_DK	LTK 1.4_DK	LTK 2.4_DK	LTK 3.4_DK	LT 4.5_DK	LT 5.5_DK	LT 6.5_DK
Cooling capacity at medium inflow temp.	W							
+10 °C		800	1200	1800	2200	3500	4900	5000
+15 °C		1000	1600	2300	3000	4200	6000	6500
+20 °C		1050	1800	2400	3200	5100	7200	7500
Compressor drive	W	480	700	990	1090	940	1300	1650
Number of fans		1	1	1	1	1	1	1
Air capacity	m <sup>3</sup> /h	500	1150	1150	1150	2600	2600	2600
required flow rate for water	l/min	5	10	10	10	20	20	20
required flow rate for emulsion min. 8%	l/min	5	10	10	10	20	20	20
required flow rate for oil	l/min	10	20	20	20	50	50	50
Pressure loss in flow cooler approx.	bar	1	1	1	1	1	1	1
Particle size max.*	µm	50	50	50	50	50	50	50
Water connections DN	Zoll	1/2	3/4	3/4	3/4	1	1	1
Width (W)	mm	443	650	650	650	600	600	600
Length (L)	mm	555	650	650	650	600	600	600
Total height (H)	mm	360	500	500	500	1165	1165	1165
Weight when empty approx.	kg	42	80	90	90	110	110	110

Medium temperature range: from +8 °C to +25 °C (other ranges on request).

Type of cooling: air-cooled with axial fan (water-cooled or with radial fan on request).

Electrical connection: LT mini\_DK, LTK\_DK in 230 V/50 Hz, LT\_DK 4.5 - LT 6.5 in 400 V N PE 50 Hz (other voltages and frequencies on request).

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

Application range of the industrial cooler: from +8 °C to + 42 °C ambient temperature (higher and lower temperatures on request).

Circulation medium: Drinking water / emulsion up to 8% / oil up to 32cSt (sulphur-free) with a spread of approx. 5 K between medium inlet and outlet (other ranges on request).

\* depending on degree of pollution

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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

