



°LAUDA

LAUDA ULTRACOOOL

Energy-efficient process circulation chillers

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LAUDA Ultracool

Energy-efficient process circulation chillers from -10 to 35 °C

-10 °C  35 °C

LAUDA Ultracool circulation chillers with an energy saving of up to 50 percent

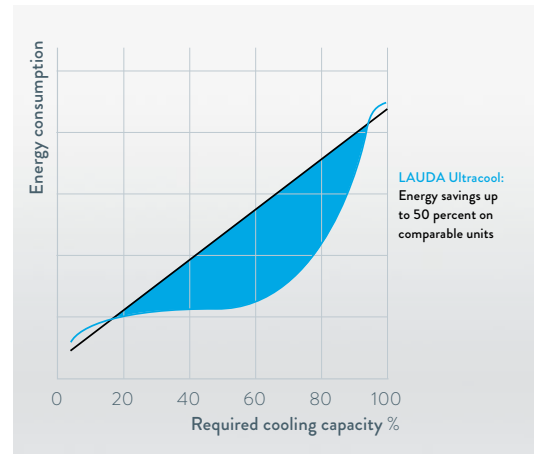
Developed with a focus on energy efficiency, the new LAUDA Ultracool circulation chillers make a pivotal contribution to reducing your operating costs. Depending on the operating conditions, the new devices make it possible to reduce energy costs by up to 50 percent, with payback times of less than one year. With the innovative operating concept, the LAUDA Ultracool circulation chillers can be conveniently monitored and controlled from a distance - via a connected remote control or the integrated web server. This allows convenient operation via mobile devices such as tablets or smartphones, and the relevant data can be stored in the LAUDA Cloud via an internet connection as an option.



Energy efficiency

High energy saving and a short payback time

Depending on the operating conditions, the new circulation chillers are up to 50 percent more energy-efficient than conventional circulation chillers which are not Ecodesign-compliant.



Energy savings

Compliant with the Ecodesign Directive

The new LAUDA Ultracool circulation chillers comply with the Ecodesign Directive 2009/125/EC. This defines energy efficiency values (SEPR) for which process circulation chillers must fulfill.

Payback times of less than one year

The energy consumption and procurement costs of the new Ultracool models are compared with conventional circulation chillers of the same rated output, in order to determine the payback times. The example calculations for the new UC 24 show the achievable energy and cost savings and thus the payback times based on the mentioned temperature profile.



LAUDA Ultracool UC 24

Temperature profile (annual average temperature)	Oslo/Helsinki/Stockholm (10 °C)	Amsterdam/London/Paris (15 °C)	Barcelona/Milan/Athens (20 °C)
Required cooling capacity		22 kW	
Outlet temperature		10 °C	
Energy costs		0,12 €/kWh	
Working hours per year/day		12 hrs / 260 days	
Energy savings	7913 kWh/year	5384 kWh/year	2716 kWh/year
Cost saving/year	950 €	646 €	326 €
Payback time	11 months	1 year, 4 months	2 years, 7 months

Connectivity

Optimized for Industry 4.0

The new process circulation chillers are equipped with an LCD remote control as standard. An Ethernet interface for connection to a computer or local network (LAN) is also integrated as standard. In addition, the Ultracool devices can be controlled by means of a web server via a PC or even mobile device – an internet connection is not necessary. All you need to do is to configure an IP address for the circulation chiller, which must be in the same network as the terminal device. The LAUDA Cloud also enables data exchange and monitoring from any computer with an Internet connection – irrespective of the location.

LCD remote control

- Complete function control
- Ergonomic and user-friendly
- Cable connection with a length of 5 m



Internal web server

- Connection to a computer or internal network (LAN)
- Complete function control
- The same user interface as the remote control
- Standard Ethernet connection
- Possibility of data acquisition
- No Internet connection necessary



LAUDA Cloud

- Gateway for high flexibility
- Storage and evaluation of numerous device parameters
- Support and troubleshooting via remote access from any computer with an internet connection



Technical Characteristics

Extensive range of functions and many advantages

- High energy efficiency results in lower operating costs
- Ingenious connectivity concept offers flexible operating options



Suitable for outdoor installation (IP 54)



Fan control as standard allows operation at ambient temperatures down to $-15\text{ }^{\circ}\text{C}$ and reduces the noise emission

- Increased temperature stability of $\pm 0.5\text{ K}$
- Operational in ambient temperatures down to $-15\text{ }^{\circ}\text{C}$
- Reduced tank volume results in reduction in installation and operating costs
- Reduced footprint compared to comparable previous models
- Extended working temperature range from -10 to $35\text{ }^{\circ}\text{C}$
- Bi-frequency power supply allows the same model types to be used worldwide
- Ethernet interface included as standard
- $^{\circ}\text{C}$ or $^{\circ}\text{F}$ selectable via menu
- Menu language selection: German, English, Spanish and French
- Premium quality centrifugal pumps with an internal bypass
- Water circuit consisting of flexible industrial hoses
- Numerous options and accessories for customer-specific adaptations, e.g. speed-controlled pumps, flow meters
- Suitable for outdoor installation (IP 54)

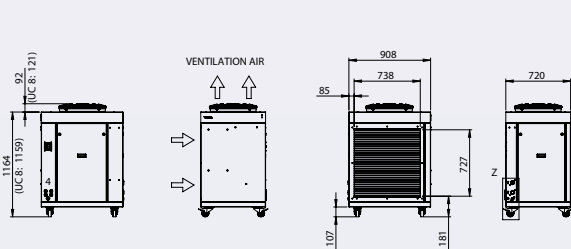
LAUDA Ultracool Device Overview

Technical data

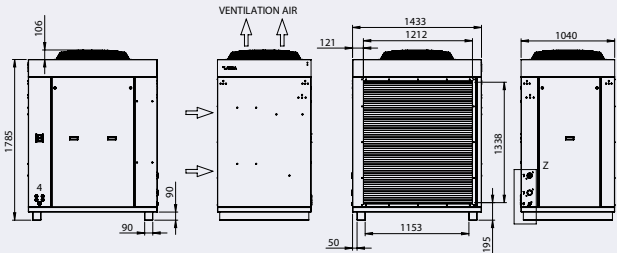
Device type	Working temperature range °C	Temperature stability ±K	Ambient temperature range °C	Cooling output at water outlet temperature ¹ kW					Pump connection thread	Volume water tank L	Noise level dB(A)	Weight kg	SEPR*	Cat. No.
				25 - 35 °C	20 °C	10 °C	0 °C	-10 °C						
LAUDA Ultracool - 400 V; 3/PE; 50 Hz & 460 V; 3/PE; 60 Hz														
UC 8	-10 ... 35	0.5	-15 ... 50	13.3	13.3	10.2	7.0	4.4	Rp1	35	61.2	150	6.44	L002853
UC 14	-10 ... 35	0.5	-15 ... 50	22.4	20.3	15.8	11.1	7.6	Rp1	35	61.3	175	6.41	L002854
UC 24	-10 ... 35	0.5	-15 ... 50	34.0	30.9	24.3	17.3	12.0	Rp1	35	61.3	180	5.63	L002855
UC 50	-10 ... 35	0.5	-15 ... 50	67.5	65.6	51.2	36.4	25.2	Rp1½	210	60.8	410	5.37	L002856
UC 65	-10 ... 35	0.5	-15 ... 50	87.5	85.2	66.9	47.8	33.3	Rp1½	210	62.5	440	5.16	L002857

¹at 25 °C ambient temperature

*SEPR = Seasonal Energy Performance Ratio



LAUDA Ultracool device types UC 8, UC 14, UC 24



LAUDA Ultracool device types UC 50, UC 65

Pump characteristics

Device type	50 Hz		60 Hz		50 Hz		50 & 60 Hz	
	Max. pump pressure bar	Max. flow rate L/min	Max. pump pressure bar	Max. flow rate L/min	Nominal pump pressure bar	Nominal pump pressure bar	Nominal flow rate L/min	Nominal flow rate L/min
LAUDA Ultracool								
UC 8	4.2	130	6.6	167	4.0	6.4		26.6
UC 14	4.2	130	6.6	167	3.7	6.1		43.8
UC 24	4.2	130	6.6	167	2.7	5.3		84.1
UC 50	4.6	230	6.8	300	3.3	5.5		150.0
UC 65	5.0	250	7.2	300	3.3	5.7		196.0