SK 3312.250

Liquid Cooling Package

State: 5/07/2025 (Source: rittal.com/au-en)

SK 3312.250 - Liquid Cooling Package LCP Rack CW, LCP Rack CWG

Cooling via high-performance compact impellers. The LCP draws in the air at the sides at the rear of the server enclosures and blows the cooled air back into the front part of the server enclosure at the sides.

Features

Model No.	SK 3312.250
Benefits	Maximum energy efficiency due to EC fan technology and IT-based control
	Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
	Control of the server inlet temperature
	With redundant temperature sensor integrated at the air end as standard
	Optimum adaptability due to dynamic, continuous control of the cold water volume flow
	By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
	Targeted cooling output due to modular fan units
	Fan modules configurable as n+1 redundancy
	Standard 3-phase connection for electrical redundancy
	The separation of cooling and enclosure prevents the ingress of water into the server enclosure
	A footprint of max. 0.36 m² for all cooling services
	Improved heat recovery, thanks to high water return temperatures when using LCP CW glycol variants, for example in combination with a heat pump
	Optimum access for maintenance and servicing from the front and rear
	Tool-free replacement of the fan modules
Function principle	The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides
Material	Sheet steel, spray-finished

Features

Colour	RAL 7035
Options	Fully integrated fire detection and extinguisher system Automatic server enclosure door opening Direct connection of additional CMC III sensors is supported Racks 2200 mm high
Design	Rack cooling
Monitoring	Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage Direct connection of the unit via SNMP over Ethernet Integration into RiZone
Total cooling output/Number of fan modules	30 kW/4 32 kW/5 35 kW/6
Air throughput (unimpeded air flow)	At 50 Hz: 4,800 m³/h
Number of fan modules in supplied state	4
Dimensions	Width: 300 mm Height: 2,000 mm Depth: 1,200 mm
To fit enclosure type	TS IT
Installation in bayed enclosure suite	Flush
Rated operating voltage	230 V, 1~, 50 Hz/60 Hz 400 V, 3~, 50 Hz/60 Hz
Max. cooling output	35 kW
Type of electrical connection	Connector
Duty cycle	100 %
EC fan	Yes
Fans may be exchanged with the system operational	Yes

Features

Temperature control	Linear fan control Two-way control valve
Water connections	DN 40 (G 1½" external thread)
Permissible operating pressure (p. max.)	10 bar
Water inlet temperature	15 °C
Protection category to IEC 60 529	IP 20
Optimized condensate management even at low water flow temperatures	Yes
Options	Fully integrated fire detection and extinguisher system Automatic server enclosure door opening Direct connection of additional CMC III sensors is supported Racks 2200 mm high
Packs of	1 pc(s).
Net weight	242.5
Gross weight	252.5
Customs tariff number	84186900
EAN	4028177811638
ETIM 9	EC002515
ETIM 8	EC002515
ECLASS 8.0	27180712

Approvals

Certificates	EAC

Tender text

LCP Rack CW, 3312.250 WHD (mm) 300 x 2000 x 1200

LCP Rack CW, 3312.250:
Construction of the device optimised for data centres.
The integrated air/water heat exchanger ensures a cooling output of up
to 30 kW and has been specially designed for a high cooling output
during operation with a water/glycol mixture.
Due to the design of the heat exchanger, the unit is ideal for the
downstream operation of a heat pump for heat recovery.

The heat exchanger is mounted laterally on the rack.
The LCP Rack CW offers an enclosure-based and room air-independent
cooling system that also reduces the noise level.
The device is able to cool either one or two server racks.
Maximum efficiency is achieved and the consumption of electrical energy
is minimised by using four
built-in EC fan modules (cooling output up to 30 kW).
The maximum cooling output of 35 kW is achieved by installing two
additional fan modules (accessories).
This provides investment security if the full cooling output does not
need to be used at the beginning of the installation.
The device is ready to take a maximum of six EC fan modules. A full fan
configuration is therefore possible for reasons of redundancy or to
minimise electrical power consumption.

The air/water heat exchanger and server rack are arranged in rows though
access is separate in each case. This prevents water penetrating into
the server rack and makes installation and service easier.
Access to the adjacent IT rack via the LCP is not possible.
A leak detection feature is integrated. A sensor installed in the
condensate tray detects leaks, the main controller then issues an alarm
message and/or interrupts the supply of cooling medium into the device.
A completely new and patented condensate management system means that it
is also possible to operate the device with water flow temperatures
below the dew point.
All the components in the condensate section are made of stainless steel
to prevent corrosion.

The water connection can be made optionally downwards or upwards by
means of an accessory kit
(1 1/2" external thread).
Short device commissioning time, thanks to simple and fast venting.

The fans can be replaced extremely quickly at any time.

A highly developed network-integration software concept for monitoring/setting all the technical parameters is integrated as d efault.
Should the controller fail, an integrated fail-safe operation mode ensures reliable cooling.
Up to eight additional sensors (temperature, humidity, etc.) can be connected.

Technical details:
Sensitive cooling output with four/five/six fans: 30/32/35 kW
Installed fans: 4 (max. 6 possible)
Volumetric air flow: max. 4,800 m³/h (4 fans)
Cooling output (three fans): 30 kW
Max. air inlet temperature 24°C
Inlet temperature: 15°C
Medium: Water/glycol (67/33)
Cooling medium throughput: approx. 50 l/min
Pressure loss: approx. 0,8 bar
Water connection: 1 ½" external thread
Voltage: 230 V, 1~, 50/60 Hz, 400 V, 3~, N, 50/60 Hz
Max. connected electrical load: (four fan modules): 2.000W
Server air inlet temperature control via flow rate control and EC fan fitted with linear speed controller
Colour: RAL 7035
Dimensions: W x H x D: 300 x 2000 x 1200 mm
Weight as delivered: approx. 280 kg

Controllers/interfaces:
Network interface (RJ 45) Ethernet as per IEEE 802.3 via 10/100BaseT with PoE
Front USB interface: Mini USB for system setting
Rear USB interface: for USB stick, for data recording up to 32 GB
Front SD-HC slot: 1x up to 32 GB, for data recording
Alarm relay output: change-over contact for safety extra-low voltage (24 V DC, 1 A)
Digital inputs: 2x (terminal)
Protocols, Ethernet:
TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, (S)FTP, HTTP (S), NTP, DHCP, DNS, SMTP (S), Syslog
Eight additional sensors (temperature, humidity, etc.) can be connected.

Software
Control based on server inlet temperature
Automatic or manual control can be selected
Remote control via SNMP is possible
Water-side delta-T control for efficient chiller operation can be
selected
The programming of logical links (tasks) to automate specific processes
is possible

Special features:
Simple maintenance of the device from the front and rear, so that cable
routes and aisle containments can be laid above the unit.
The fans can be replaced without using any tools
Integrated software with water-side delta-T control for efficient
chiller operation

Optional:
Fan module for cooling power expansion: 3312.016
Touchscreen display, colour: 3311.030
Connection hose, bottom/top: 3311.040
Condensate pump 3312.012