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DK 7998.107

RiMatrix S

State: 25/05/2026 (Source: rittal.com/ie-en)

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

DK 7998.107 - RiMatrix S Standard room

The standardised data centre is assembled at your premises within the context of hot aisle / cold aisle containment.

Features

Model No.	DK 7998.107
Product description	The standardised data centre is assembled at your premises within the context of hot aisle / cold aisle containment.
Benefits	Enhanced energy efficiency Aisle containment is a combination of door and roof components which allow consistent separation of the hot and cold air
Supply includes	Advice and ROI calculation Delivery and integration into the customer infrastructure Commissioning and handover Documentation, training and instruction Hotline and service/service agreements Precise-fit aisle containment
Clearance depth	7,000 mm
Clearance height	2,722 mm
Clearance width	4,774 mm
Climate control (ZUCS)	120 kW + 20 kW n+2 redundant
Number of low-voltage main distributors	2
No. of PDU Basic	28

Features

Serverracks (600x2000x1200mm)	12
Combined network/server rack (800 x 2000 x 1200 mm)	2
Design burglar protection	Yes
Humidification and dehumidification system	optional
Room extinguisher system	optional
Design UPS	2 x (60 kW + 20 kW) n+1 redundant
Version	Double 6
Dimensions	Width: 4,839 mm Height: 2,750 mm Depth: 7,070 mm
Packs of	1 pc(s).
Customs tariff number	73089059
ETIM 9	EC002499
ECLASS 8.0	27180207
Product description	DK RiMatrix S Standard room, Double 6

Tender text

Standard data centre 120 kW, 12+2 racks, including cooling and UPS, installed in a standard room„

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Fully functional data centre comprising an ITC climate zone for the server and network systems, and a separate technical climate zone for the UPS equipment and low-voltage switchgear.

The ITC climate zone comprises two rack suites (depth 1200 mm) with 6 server racks and a network rack each, and is fully isolated from the climate zone for the electrical equipment by way of self-closing sliding doors in the cold and hot aisles.

Both climate zones are enclosed by a complete housing of double-panelled, foamed wall and roof elements with a total thickness of 30 mm.

The 600 mm wide hot aisle and the 1200 mm wide cold aisle are partitioned within the standard room and are to this end provided with a partitioning panel which passes over the server/network racks.

The standard data centre incorporates a fully functional raised-floor construction, with air intake and outlet grilles in the form of dip-galvanised gratings.

Air-circulating cooling units (CRAC systems) are installed in the cavity space of the raised floor. The CRAC systems do not occupy space within the rack (Zero U-Space Cooling Systems)

A CRAC system is installed under each server rack. Each CRAC system offers a nominal output of 12 kW; the average heat load capacity per rack is thus 10 kW, taking into account n+2 redundancy over the total number of CRAC systems.

The intake temperature for cooling is 20°C, observing temperature limit values according to ASHRAE 2008 (max. 27°C) within the cold aisle.

The UPS climate zone possesses a further CRAC system to dissipate the UPS heat loss. Through direct injection of the UPS cooling air, a temperature level of max. 22°C is maintained within the climate zone, in accordance with the Eurobat guidelines on the environment for 10-year batteries.

The cooled intake air is blown into the cold aisle by EC fans under the floor gratings. Flat filter fleeces are fitted between the fan grilles and the floor gratings to filter the circulating air.

The intake temperature and speed of the EC fans are regulated by a controller in the standard data centre, which communicates with the controller of an optional chiller station via a system bus for purposes of energy efficiency optimisation. The controller is not accommodated in the IT racks and thus does not occupy rack installation space.

The standard data centre is equipped ready for use with a cold piping system comprising polypropylene piping; the individual heat exchangers are connected by way of high-pressure hoses.

Required chiller set provided by the customer:
The standard data centre must be equipped with a straight ball valve to regulate the air intake temperature to the target value, a flowmeter and two temperature sensors to measure the coolant flow volume and the feed and return temperatures, as well as to calculate the heat output.

Required chiller set must be supplied:
The standard data centre must be supplied without ball valve and sensors for the coolant.
The volume of the medium is regulated by the

variable-speed pump of the chiller station of the standard data centre, and the sensors are fitted in the chiller station.

The standard data centre is equipped with two modular UPS systems with 20 kW modules. Each system provides for n+1 redundancy, and thus each UPS system is supplied with 4 modules
to cover the possible connected load of 2 x 60 kW for the ITC hardware.

Each UPS system possesses 10 battery strings with 28 Ah batteries, which are assigned jointly to all UPS modules and ensure autonomy for a period of 13 minutes.

The standard data centre incorporates two switchgear systems with fused feeders for the allocated rack suite. The switchgear spreads the feeders over two panels to establish an A/B power supply. The UPS system feeds supply path A.
Supply path B must be connected to the mains supply via overvoltage protection.

From the two switchgear systems, the distribution busbars of the individual racks are wired ready for use and comprise Power Distribution Units with 24 C13 and 6 C19 sockets. Each rack is provided with two PDUs to establish an A/B power supply.

The power supply is routed above the racks. The data cables are routed to the IT racks separately from the power supply cables. The installation of the data cables is to be performed by the site operator/customer.

Lighting and service socket are protected by way of an RCCB. Emergency lighting is installed.

The standard data centre is equipped with an early fire detection system. To this end, air is drawn from the raised floor of the hot aisle via a perforated

plastic pipe. The alarm is given by a monitoring system with Web access and SNMP interface.
The standard data centre is installed and commissioned ready for use (with the exception of data cabling), including installation of the operating power supply and cooling system.

Standard data centre version with 12+2 racks, UPS, in a standard room
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Outside dimensions„Inside dimensions„
Length:„7060 mm„Length:„7000 mm„
Width:„4840 mm„Width:„4780 mm„
Height:„2740 mm„Height:„2710 mm„
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Walls without door require an assembly clearance of 100 mm to the building walls. The roof of the enclosures requires an assembly clearance of 200 mm to the building ceiling.„