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DK 7998.206

RiMatrix S

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ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

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SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



DK 7998.206 - RiMatrix S Standard container

The standardised data centre is implemented in a container solution and can therefore be sited outdoors if required.



Features

Model No.	DK 7998.206
Product description	The standardised data centre is implemented in a container solution and can therefore be sited outdoors if required.
Supply includes	Robust sheet steel container with reinforced frame structure for optimum weight distribution Housed interior wall structure with thermal insulating materials Advice and ROI calculation Delivery and integration into the customer infrastructure Documentation, training and instruction Hotline and service/service agreements
Clearance depth	7,000 mm
Clearance height	2,700 mm
Clearance width	2,750 mm
Climate control (ZUCS)	60 kW + 10 kW n+1 redundant
Number of low-voltage main distributors	1
No. of PDU Basic	14
Serverracks (600x2000x1200mm)	6

Features

Combined network/server rack (800 x 2000 x 1200 mm)	1
Protection standards	Vandal-proof interior in accordance with Resistance Class II to DIN EN 1631 EMC basic protection Dust- and watertight to IP 55 to IEC 60 529
Design burglar protection	Yes
Humidification and dehumidification system	optional
Room extinguisher system	optional
Design UPS	60 kW + 20 kW n+1 redundant
Version	Single 6
Dimensions	Width: 3,000 mm Height: 3,000 mm Depth: 7,250 mm
Packs of	1 pc(s).
Customs tariff number	85371098
EAN	4028177702486
ETIM 9	EC002499
ECLASS 8.0	27180207

Tender text

Standard data centre 60 kW, 6+1 racks,
including cooling and UPS, installed in a container,,

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 a rack suite (depth
1200 mm) with 6 server racks and a network rack, 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.

The data centre is enclosed by an accurately
dimensioned IT container.

It is designed in the form of a steel
container with water-tight, welded steel frame and
zinc-plated sheet steel panelling.

The IT container permits outdoor installation
and eliminates potential physical threats. A
partition which passes over the rack systems achieves
targeted separation of the climate zones.

The following qualities are achieved in
accordance with the specified requirements:

Fire protection EI30 to EN 1363 (wall, ceiling)

Burglar resistance RC2 to EN 1627

Dust ingress IP5X to EN 60529

Water ingress IPX4 to EN 60529

Electromagnetic compatibility (EMC) as per test
certificate in respect of high-frequency interference
and susceptibility

The container is sealed all round. The underside is
provided with a protective coating of two-component
liquid plastic. Alongside an adhesive primer and an
intermediate coat of two-component PUR single-layer

paint, the container is painted in accordance with the corrosion category C4 long to EN 12944 (coating system no. A4.09). Two pockets for the forks of a lift truck, each 360 mm wide and 120 mm high, are provided at the standard spacing of 2050 mm. The container frame is provided with 8 corner pieces to ISO 1161.

The minimum dynamic load-bearing capacity of the container is 6 tonnes. The static load-bearing capacity is 12 tonnes. The minimum roof load capacity is 100 kg/m².

The insulation of the container comprises a mineral wool core with zinc-plated sheet steel sandwich panels on both sides, attached to sheet metal profiles at the roof and base. The inside floor in the form of plain sheet steel is bolted permanently to the underfloor construction. All-round edging of the same serves to produce a water-tight weld. An earthing point is provided.

The outer skin of the cell is realised such as to avert external influences from the building and thus eliminate damage to the insulation materials.

An access door is supplied and assembled as a single-door system hinged on the right-hand side (DIN definition).

The door system is certified in accordance with the aforementioned test criteria. Corresponding proof is to be furnished by the supplier.

The double-panelled security door is provided with an all-round seal. It features an electric security lock, top door closer, locking monitoring (bar contact), opening sensor (reed switch) and panic release.

Nominal door dimensions:

Width,,1125 mm

Height,,2125 mm

The 600 mm wide hot aisle and the 950 mm wide cold aisle are partitioned within the container 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 cooling output of 12 kW; the average heat load capacity per rack is thus 10 kW, taking into account n+1 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

pipings; 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 a modular UPS system with 20 kW modules. The system provides for n+1 redundancy, and thus four UPS modules are supplied to cover the possible connected load of 60 kW for the ITC hardware.

The 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 switchgear with fused feeders for the installed 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 switchgear, 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 scope of supply includes delivery and installation of the cable and piping bulkhead to bring the data, control and supply cables into the IT container (without IT cabling; connection to the chiller and mains power supply are to be ordered separately).

Standard data centre version with 6+1 racks in container

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Outside dimensions,,Inside dimensions,,
Length:,,7250 mm,,Length:,,7000 mm,,
Width:,,3000 mm,,Width:,,2750 mm,,
Height:,,3000 mm,,Height:,,2685 mm,,

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