Data center solutions

Containment, integrated micro data centers, cooling and backup power.



Contained server aisle



Integrated micro data center

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DATA CENTER SOLUTIONS

Cold aisle containment

Two rows of server cabinets enclose the supply-air aisle between them.



Installed system with sliding end doors and perforated rack doors.

Rack and aisle configuration

Design element	Configuration
Server cabinet width	600 or 780 mm
Server cabinet depth	1000, 1100 or 1200 mm
Rack construction	Perforated front and rear doors, side-by-side baying and floor fixing
Aisle roof	Polycarbonate, acrylic or tempered glass
End-door access	Automatic sliding doors with card, key or fingerprint access options



Perforated doors along an installed rack row.



Mounting rails and cable routing inside a rack.

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Co-location & rack layouts

Specify separate rack compartments, the number of cabinets and the aisle footprint.

Compartment options



Two compartments



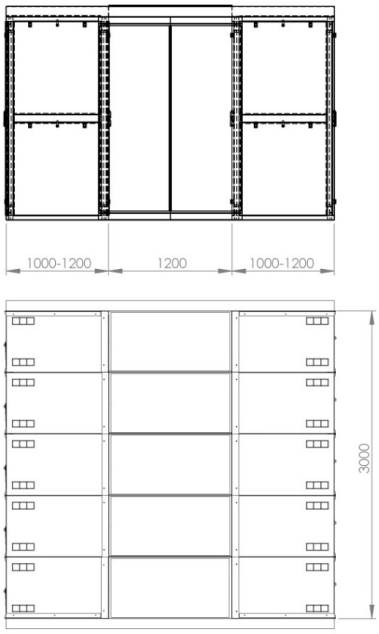
Four compartments

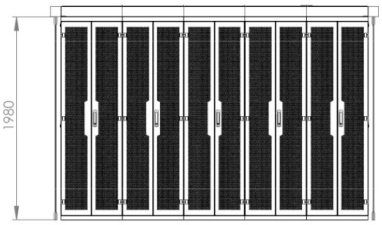


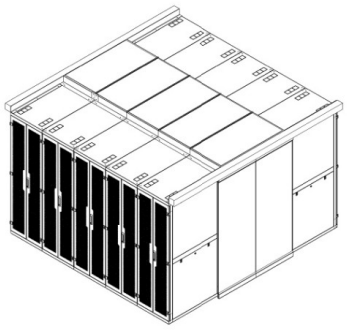
Mesh partition around an installed rack area.

Divide shared racks into two or four compartments. Set the cabinet count, aisle width and end-door clearance on the layout. The tops of the racks have fixing points for cable channels.

Aisle layout drawing







Reference layout with end, side, plan and isometric views.



Aisle roof and end-door assembly.



Alternative rack and aisle arrangement.

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Micro data centers

An IT rack and adjacent cooling bay combine power, monitoring and protection in one system.



Dark finish, front closed and open.



Red finish, front closed and open.

Integrated systems

Design element	Configuration
IT equipment bay	600 or 800 mm-wide server cabinet
Cooling bay	300 mm-wide in-row unit alongside the IT rack
Power	UPS and intelligent rack PDU
Site monitoring	Environmental monitoring and access control
Fire protection	Integrated detection and suppression
Expansion	Additional cabinets can be included in the layout

PROJECT SIZING

Specify the usable rack space, equipment depth, IT load and required backup time. Cooling duty and UPS capacity follow the project load.

Reference dimensions and expanded layouts



Display and lock



Rack PDU

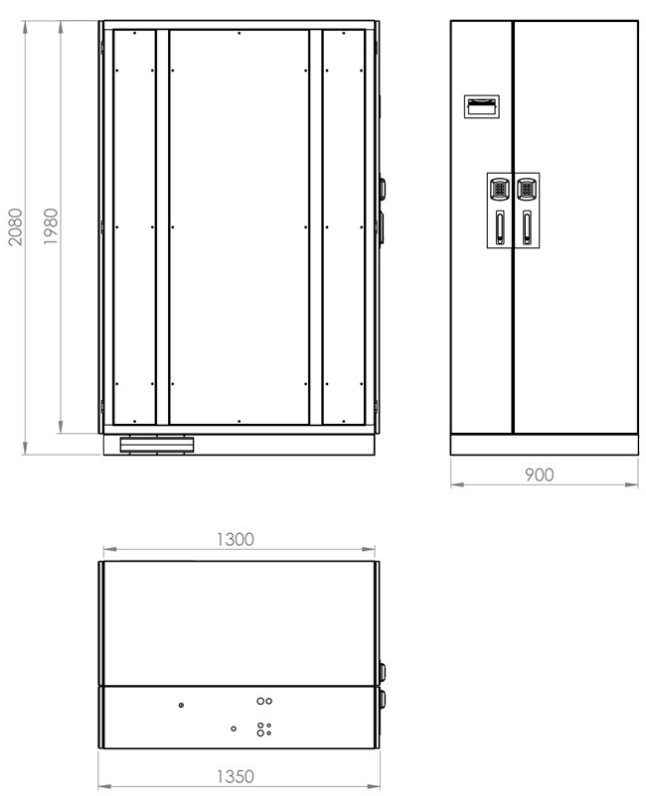
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DATA CENTER SOLUTIONS

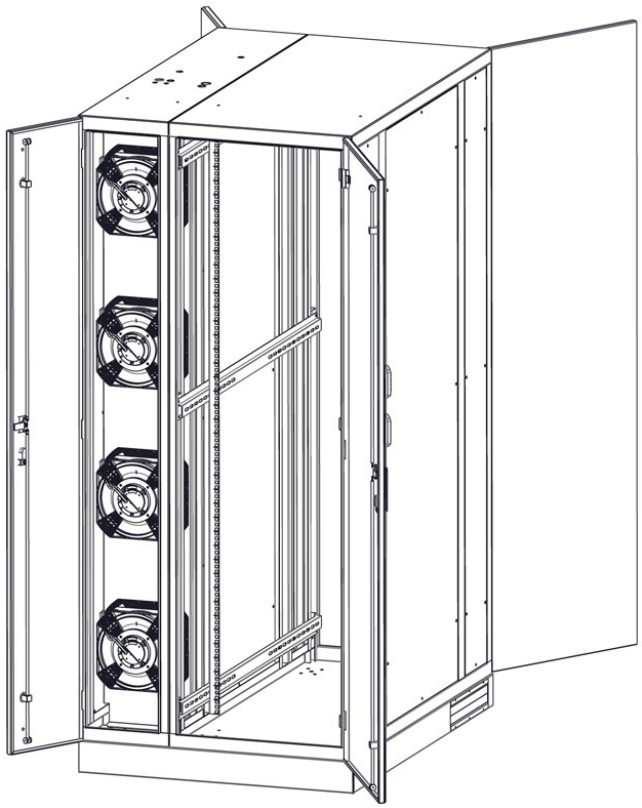
Micro data center layouts

Use the reference assembly to plan the footprint and access to the IT and cooling bays.

Single-rack reference assembly



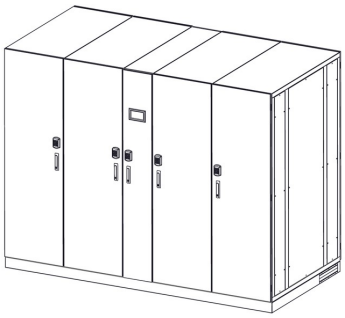
Dimensioned side, front and plan views.



Cooling bay on the left and 19-inch rails on the right.

900 × 1350 × 2080 mm

Overall W × D × H of the assembly shown.



MULTI-CABINET LAYOUT

Adding equipment bays

The rack count can increase as the installation grows. Set the bay sequence, cooling duty and service clearances on the project drawing.

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Precision cooling

Select the air delivery arrangement and the cooling technology for the server room.



Supply-air grilles in the floor of a contained aisle.



Wide precision cooling cabinet.



Narrow cooling cabinet for row installations.

Cooling selection

Design element	Configuration
Air delivery	In-row or under a raised floor
Cooling technology	Air-cooled direct expansion (DX) or chilled water (CW)
Product range	20–150 kW across the precision cooling range

DESIGN CONDITIONS

Size the unit for the heat load and design temperatures. For DX, state the outdoor design temperature. For CW, state the chilled-water supply and return temperatures.

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Modular UPS

A modular uninterruptible power supply supports the protected IT load during a power interruption.



Example frame with power modules beneath the display.



Example frame with switchgear below the modules.

Power and autonomy

Selection input	How to specify
Protected load	Specify the IT load in kW and kVA, including planned growth.
Battery runtime	Specify the required minutes at the stated protected load.
Redundancy	Select the module count for the required spare capacity.

OPERATION AFTER A MODULE FAULT

The remaining modules continue to supply power. To carry the full load after one module fails, their combined available capacity must cover the protected load.

EFFICIENCY

The published efficiency figure is 97%. Confirm the figure at the proposed load and operating mode when selecting the UPS.

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KVM & monitoring

Access rack-mounted servers and monitor environmental conditions across the installation.

Rack-mounted KVM console



LCD console with the drawer open.

1U DRAWER

The LCD, keyboard, touchpad and KVM switch share a single rack unit. Choose an 8-port or 16-port switch to match the server count.

IP-capable models also support remote access.

Environmental monitoring

MONITORING POINTS

Temperature and humidity

Smoke, water and vibration

RACK-MOUNTED CONTROLLER

Select sensor types and quantities for the locations to be monitored. Conditions can be viewed remotely through a mobile application.

Sensor type	Application
Temperature and humidity	Track room or rack conditions at the selected points.
Smoke and water	Monitor smoke and water at the specified sensor locations.
Vibration	Include vibration sensing where required.

PROJECT INFORMATION

For server access, specify the port count and local or IP access. For environmental monitoring, list the sensor type, quantity and position for each rack or room.

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