

MDC40 Container Data Center



Data sheet

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Infotech

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MDC40 Data sheet

ISO Container

Type	40 Feet High Cube
Measurement	12,192 m × 2,438 m × 2,896 m (L × W × H)
Weight (without IT)	Circa 30 tons
Construction	Steelframe
Infill	Steelsheet, double-walled, insulated
Resistance Grade	Body shell, doors and ventilation grids RC3. Interior doors RC2.
Coating	2-layer-corrosion-protection-coating with 2-K-varnish system (dry film thickness outside 110 µm, inside 80 µm). RAL colour on request (standard outside 7035 – lightgrey semi-gloss, inside 9001 – creamwhite semi-gloss).
Transport	Worldwide via ocean vessel, rail and truck. Custom seal options for the container openings are provided.
Installation Area	Floor loading capacity appropriate for weight
Installation	on the 4 corners of the container
Certification	CSC. Approval number D-HH-8588/GL 9749 TÜViT. Certificate ID 66493.18
Description	<p>The MDC40 is a one-container-solution for data centers. All system parts are located inside the container.</p> <p>Connecting several containers in series achieves extension of performance to any desired level and/or realization of so-called “Dual-Site-locations”.</p>

The outside walls of the container are smooth. All openings can be sealed with deadlights for transport. Side and front walls form a flush optic that way. They fall 5 mm behind the corner fittings. The doors have interior hinges. Their handles are designed as recessed grips. Flush-mount profile cylinder locks with latch lever function are positioned separately.

IT area

Rack height units	224
Maximum installation depth for IT equipment	With installed PDUs: 107 cm Without installed PDUs: 120 cm
	Enough space for cable mangement must be considered, additionally.
IT power uptake	up to 60 kW
Connections to power mains per rack	A/B supply. 2 × 400 V CEE (fusing 2 × 32 A, power uptake 2 × 20 kW)
Description	The racks are special designs tailored to the spatial conditions (feasible with or without shock absorber).

Cooling/ air supply

IT area

Precision air conditioning Systems	redundant (n + 1)
Room temperature	18-27 °C
Humidity	35-60 %

UPS room

Split air conditioning unit	
Room temperature	22-25 °C

Battery room

Split air conditioning unit

Room temperature 20-25 °C

The system is cooled according to the direct evaporator principle.
Under full load, the cooling system is designed for an external temperature of up to 35 °C.

Supply connections

Power grid Usually 400 V rotary current at 50 Hz.
The container can be customized according to country-specific regulations for power supply.

Water network Pressure 1.0 to 8.0 bar

Network Any common wire-based media

The ports for power, water and network connection are located in the container floor and are equipped with watertight sealing.

Backup power supply

Modular UPS system redundant (n + 1)

Battery backup 15 minutes under full load

Diesel genset Start-up time: max. 15 seconds

Fuel supply 1.000 l

Fuel reach > 40 hours without refuelling under full load.
Refuelling possible without operational interruption.

Safety management

Access control system	<p>Main entrance and IT area (with escape door control). Autonomous server in the container.</p> <p>Authentication by transponders with PIN code. Access to the IT area is additionally secured:</p> <ul style="list-style-type: none"> - the door only opens if all the subsequent doors in the lock are closed and - a third person gives their approval after convincing himself by video and audio transmission, that the person who desires access is alone inside the lock (separation).
Monitoring system	<p>Operational monitoring and fault detection. Autonomous server in the container. Android client for the presentation (iOS, Windows and Windows Phone in preparation).</p> <p>The monitoring system provides information on the status of all system parts, various air parameters and the door states. In addition, the system is equipped with video and audio channels. The communication between client and server is encrypted.</p>
Intruder alarm system	<p>DIN VDE 0833 VdS class C</p> <p>Intruder alarm system in ring bus technology with through-connection to security services. Room monitoring by motion detectors of VdS class C. Door monitoring by magnetic contacts and bolt switch contacts of VdS class C.</p>
Fire alarm system	<p>According to all applicable DIN and VDE regulations, especially DIN 14675 and VDE 0833-1+ 2</p> <p>Fire alarm system in ring bus technology with optional through-connection to the Fire Brigade. For container extensions, it can be set up as main fire alarm system (optical fibre ring). Two VdS interfaces for the activation of an extinguishing system. Area-wide monitoring by automatic fire detectors (multi-criteria detector). Additional aspirating smoke detector system to ensure fires are detected as early as possible on the IT area.</p>

Fire extinguishing system	<p>According to all applicable provisions, especially VdS 2380</p> <p>Automatic nitrogen extinguishing system (N₂) with an extinguishing range covering the entire closed container area. The extinguishing is handled by two control centrals (standard flooding and backup flooding, n+1 redundancy). Activation by the central fire alarm system via VdS interface. Additional possibility for manual activation. Indoor alarm via pneumatic and electric horns and beacons.</p> <p>The extinguishing procedure is residue-free and non-corrosive.</p>
Lightning protection system	<p>Lightning protection class 1 according to DIN EN 62305-3 and VDE 0185-305-3</p> <p>Installation of insulated lightning rods (H = 5 m) at the four corners of the container (distance \geq 0.5 m) on frost-resistant concrete supports. Connection to the earth rod.</p>
Earthing system	<p>Earth rod and surface rod</p> <p>According to the soil conditions at the installation area, earth rods must be provided for the four container corners and connected by a ring line. All metal systems are connected to this line.</p>