The **MDC Micro DataCentre DC-ITSafe Family**

HighDens Edition

Office Edition

MDC Micro Data Centre **DC-ITSafe:** protection against all physical threats

SYSTEM-TESTED

Made in Germany

Fire

Fire-fighting water

Corrosive gases

Vandalism

Unauthorized access

Eavesdropping / Radiation

Explosion

Noise

Dust

Debris

MDC Micro Data Centre **DC-ITSafe:** Technical details

Redundant power and cooling

Modular (can be interconnected up to 4 MDC)

Protection and Certification against:
Fire / Burglary / Water / Dust / Smoke / Gas / Debris / EMP / Explosion

Energy-efficient inverter technology

19“ early fire warning and extinguishing system

Monitoring- and energy-efficiency systems

Fast delivery time (4 to 6 weeks)

Plug & play and fast installation time (5 days)

MDC Micro Data Centre **DC-ITSafe:** Design Features

Modular Micro Data Center

Made of steel (made in Germany) sheet cassettes, finish RAL 9006 (aluminium white), doors RAL 3020 (traffic red)

Inside the elements is this fire protection material

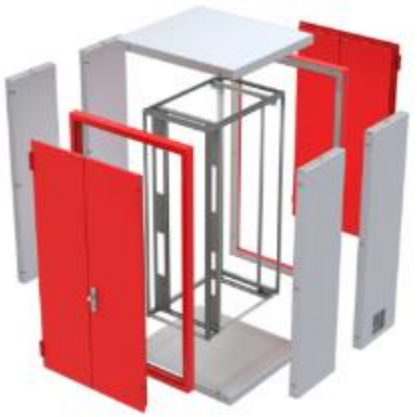
Scalable (interconnect up to 4), even movable and replaceable

Patented – from the inside - "click" assembly method

Self-locking, automatic locking with best German quality swing bolts and seal

Increased insurance cover by automatic multiple locking of VdS* class B

Proprietary technology with German Based Research & Development



*** VdS is the German National Insurance Companies Association**

MDC Micro Data Centre **DC-ITSafe:** Design Features

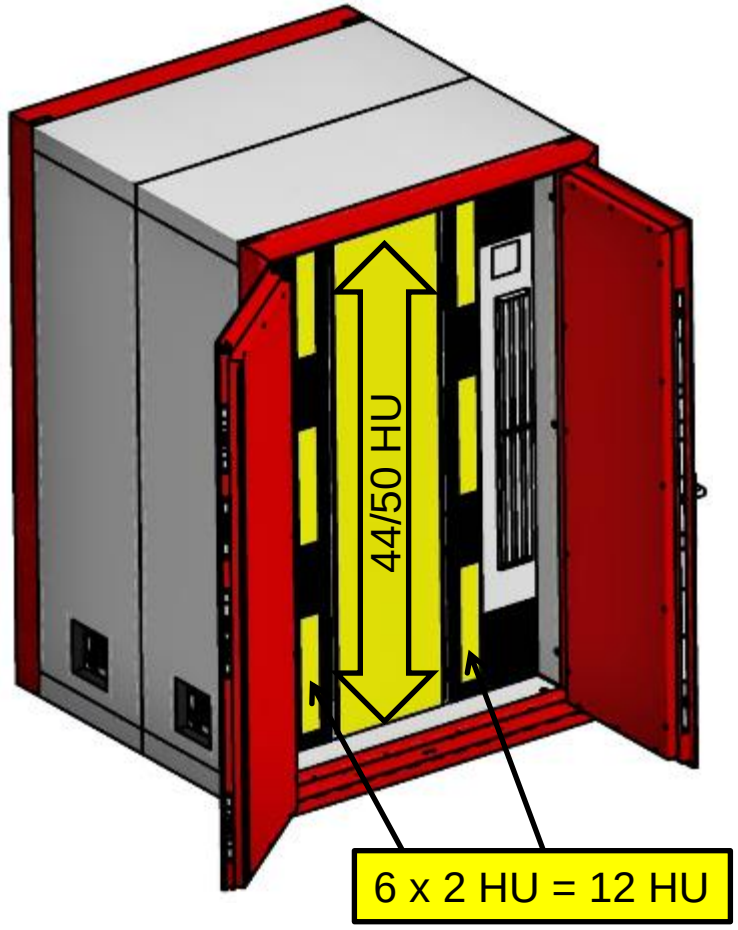
- **Dimensions:**
  - **W 1452 x H 2185 (56 HU) x D 1470 mm**
  - **W 1452 x H 2425 (62 HU) x D 1470 mm**

- **For rack dimensions 800 (D) x 1200 (W) mm:**
  - **50 HU horizontal + 12 HU vertical = 62 HU**
  - **44 HU horizontal + 12 HU vertical = 56 HU**

- **Space-saving double-door system**

- **4 pcs. soft ducts, hard ducts DN 200 as option**

- **Specials such as:**
  - **Various access control options**
  - **Special sizes upon request**
  - **Special colour doors**
  - **Colocation racks**
  - **Other options upon request**

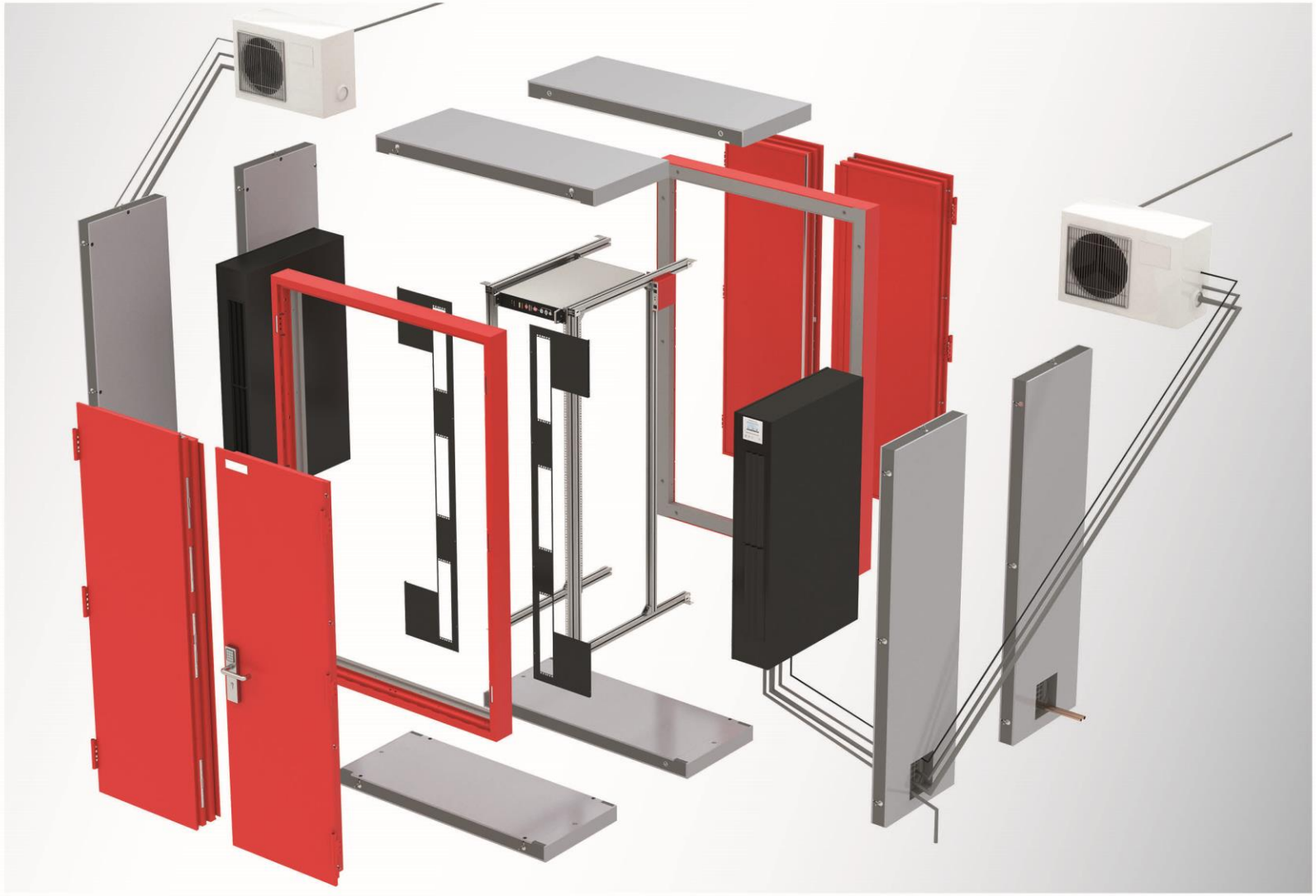


MDC Micro Data Centre **DC-ITSafe:** Interconnecting up to 2, 3 or 4 times

MDC Micro Data Centre **DC-ITSafe:** Test Certificates

- **EI 90 as free-standing system test fired from 5 sides within EN 1363 with at least 40 minutes compliance within limit values (50 K temperature increase and rel. humidity <85%) within EN 1047-2.**
- **Burglary protection RC 2 following EN 1627**
  - **Can be upgraded to RC3 or RC4 according EN 1627**
- **Smoke/water protection IP 56 acc. to EN 60529**
- **Smoke/gas protection following EN 1634-3**
- **Explosion protection**
- **Protection against debris**
- **Basic EMP protection**
  - **can be upgraded to full EMP protection**

MDC Micro Data Centre DC-ITSafe: Equipment and Options



early fire alarm system

monitoring

482,6 mm (19")rack

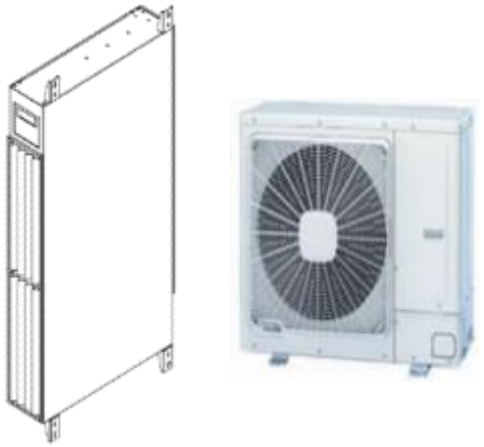
access control

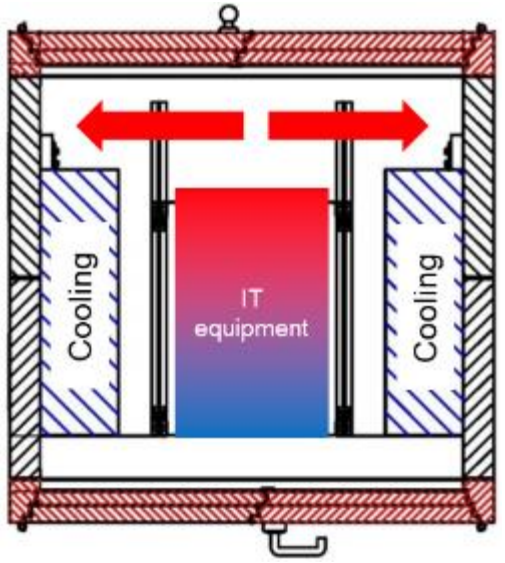
compact split cooling unit

hard/soft cable duct

MDC Micro Data Centre **DC-ITSafe:** Cooling systems

- **Compact split cooling units consisting of one inner unit in the DC-ITSafe and one outer unit for outdoor positioning / fresh air.**
- **100% redundancy by 2 inner- und outer units for rack widths 800mm possible (recommended)**
- **DX-Inverter technology, refrigerant R410A.**
- **Improved isolation enabling directed air flow – cold side // hot side**
- **Energy-efficient, savings of 20 – 30 %**
- **Cooling capacities:**
  - **1,6 kW – 4,5 kW**
  - **2,7 kW – 6,7 kW**
  - **3,3 kW – 8,1 kW**
- **Additional solutions or capacities (e.g. DX-/CW side cooler)**



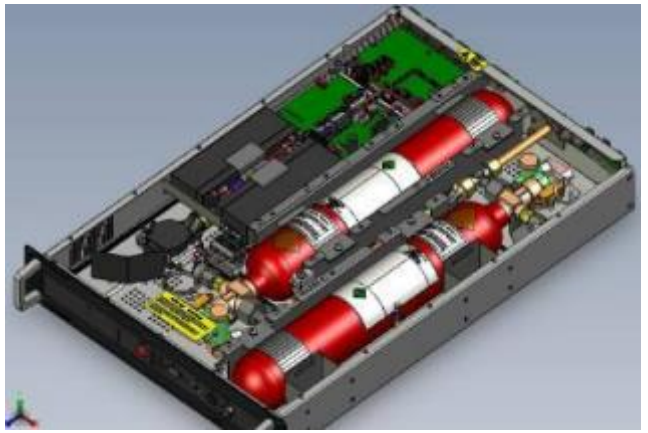


MDC Micro Data Centre **DC-ITSafe:** Fire detection and extinguishing system

- **Early fire warning and extinguishing system (2 U space utilization).**

- **3-step security concept:**
  1. **Early, highly sensitive smoke detection**
  2. **Automatic system shut-down**
  3. **Extinguishing**

- **Extinguishing process with Novec 1230 inert gas**



- **Units including power supply and battery buffer**

- **Master slave for extinguishing capacity of up to 4,4 m³.**

- **Modular, expandable with slave units (max. 4 pcs. per master), ea. with 4,4 m³ extinguishing capacity**

MDC Micro Data Centre **DC-ITSafe:** UPS and battery management

- **Proprietary design for battery gas risk management**
- **Special solution for storing batteries in the safe while managing any potential gas emanating from the batteries.**
- **19“UPS placed horizontally in 19“-rack.**
- **Batteries placed below the inner air conditioning units in special steel-boxes.**
- **All batteries are connected to a hose system for extraction of any potential battery gas.**

MDC Micro Data Centre **DC-ITSafe:** UPS and battery capacities

- **Options**:

Version	Power	HU	Number of battery	Autonomy time (approx.)
UPS 3300	3300 VA / 2300 W	4 HU	9 blocks	120 min.
UPS 4000	4000 VA / 2400 W	4 HU	9 blocks	100 min.
UPS 5000	5000 VA / 4500 W	4 HU	16 blocks	120 min.
UPS 6000	6000 VA / 5400 W	4 HU	16 blocks	90 min.
UPS 8000	8000 VA / 7200 W	4 HU	20 blocks	90 min.
UPS 10000	10000 VA / 9000W	4 HU	20 blocks	60 min.

Attention: Maximum (standard) number of batteries per safe:
DC-ITSafe Single: 20 blocks
DC-ITSafe Duo: 40 blocks
DC-ITSafe Triple: 60 blocks

MDC Micro Data Centre **DC-ITSafe:** Additional options.

- **Monitoring and energy management system**
- **482.6 mm (19“) uninterruptible power supply (UPS)**
- **Power supply**
- **Power distribution units (PDU‘s)**
- **482.6 mm (19“) rack accessories**

MDC Micro Data Centre **DC-ITSafe:** Unique selling points

Modular, expandable, removable and replaceable DC-ITSafe.

System tested! Free-standing system test fired from 5 sides!

40 minutes compliance with the limit values according to EN 1047-2!

Standard double-doors! (IT operator side, Technical service side)

More high units (HU) available compared with competitors!

100% redundant air conditioning!

1200 mm rack depth standard!

Air conditioning units comply with industrial standard and are thus designed for permanent operation!

Extremely fast realization = „Time is Money“!

Deployed by global companies as part of their own Compliance and IT Security Policy

PARTNERSHIP

DC-ITSAFE - HIGH DENSITY

*statista.com

SCHLÜSSELFERTIGE KOMPLETTLÖSUNG

DC-ITSAFE - HIGH DENSITY

POWER DENSE & EFFICIENT

CERTIFIED & SECURE

TURNKEY READY & FROM ONE HAND

TECHNISCHE DATEN

DC-ITSAFE - HIGH DENSITY

- 20 kW water cooling & 15 kW air
- (60/40°C flow/return temperature)
- 48 HE can be used for IT equipment
- 19" inch standard
- Including pre-installed servers
- Redundant pump system with hydraulics
- Dust-proof & ambient air independent
- Comprehensive monitoring
- Scalable and fast installation
- Waste heat recovery (optional)

PARTNERSHIP

DC-ITSAFE - HIGH DENSITY

POWER DENSITY & HIGH EFFICIENCY

- Up to 50 kW Cooling power in 2 m²
- 20 kW water cooling & 30 kW air cooling
- 62 U in total, up to 51 U useable
- for 19" IT-equipment

*statista.com

PARTNERSHIP

DC-ITSAFE - HIGH DENSITY

CERTIFIED & SECURE

- Modular & linkable
- Redundant cooling system
- Ambient air independent
- System tested EI 90 acc. to EN 13501-2
- Burglar protection RC 2 acc. to EN 1627/EN 1630
- Dust/water protection IP 56 according to EN 60529

*statista.com

PARTNERSHIP

DC-ITSAFE - HIGH DENSITY

ONE STOP SOLUTION

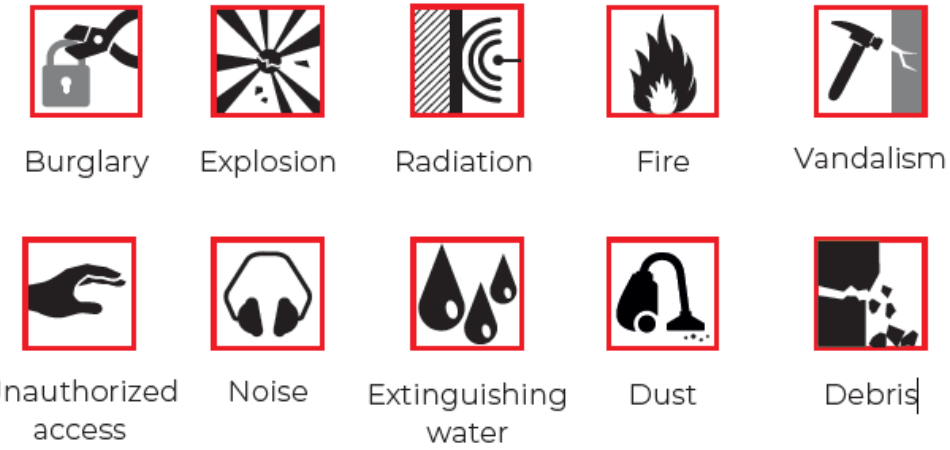
- Ready for immediate use - available ex stock
- Deployable within 2 weeks
- Pre-configured Monitoring
- Operation & Lifecycle-Management

*statista.com

PARTNERSHIP

DC-ITSAFE - HIGH DENSITY

- Protection against:



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PARTNERSHIP

DC-ITSAFE - HIGH DENSITY

Advantages of the direct hot water cooling

- High Energy effiency
- Low AC & power costs
- Optional Heat-Recovery
- Low CO2 footprint

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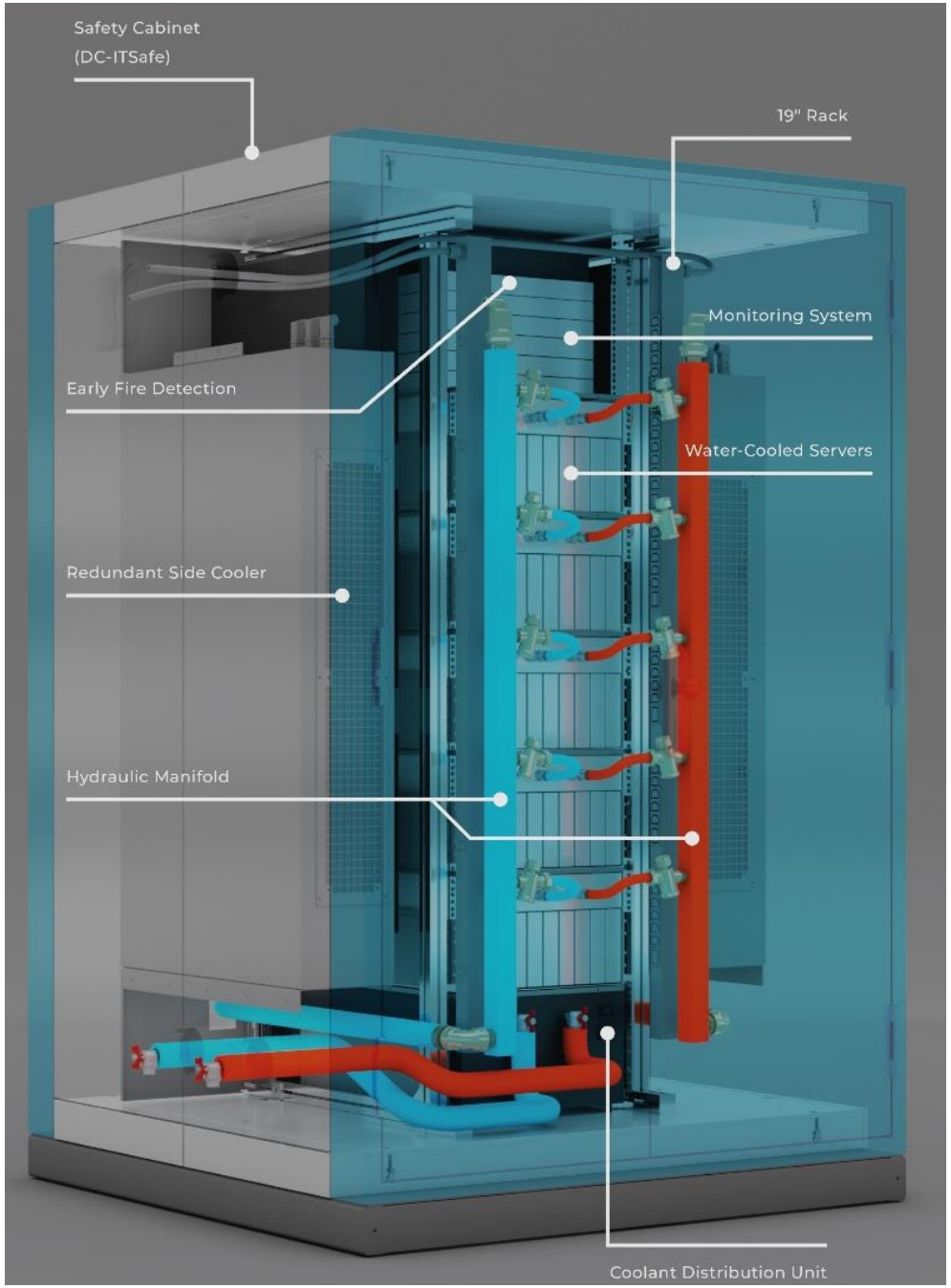
CLOUD & HEAT



RZproducts

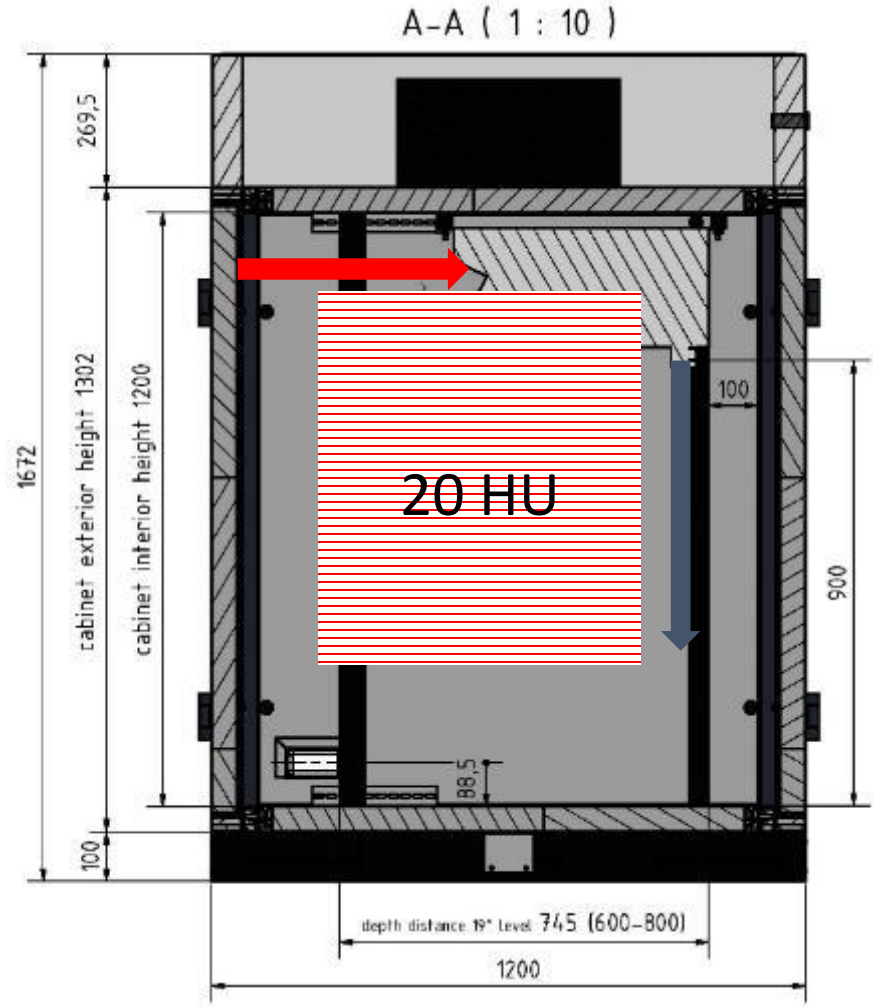
*statista.com

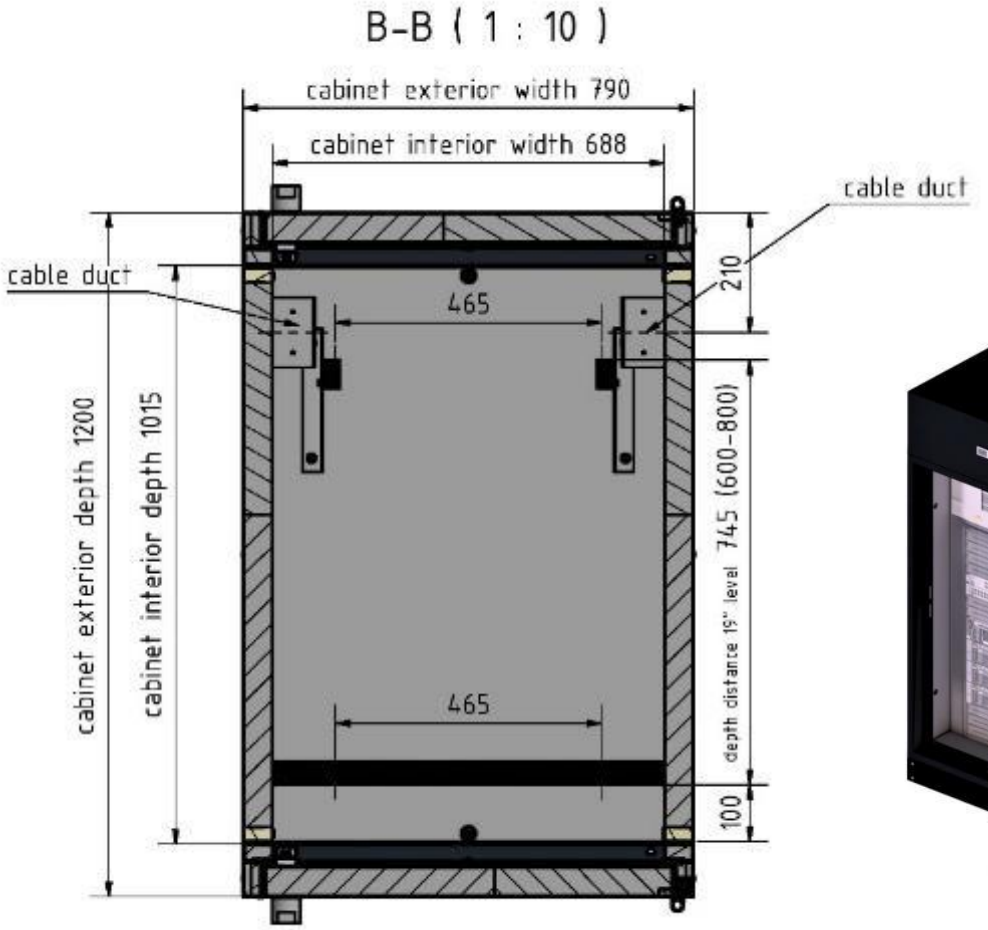
DC-ITSafe Office Edition

DC-ITSafe Office Edition: **Product features**

- **Plug & Play IT security safe including cooling**
- **Compact and perfectly designed**
- **2 cable ducts**
- **Basic protection against physical dangers**
- **Low noise level, suitable for installation in open-space offices.**
- **Energy efficient by directed cooling and air flow with 20 – 30% saving**
- **Operator and service friendly two-door system (operator and service side).**
- **Easy transport by 4-way steel base structure.**

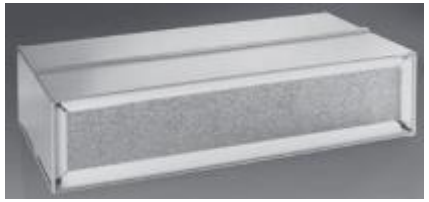
DC-ITSafe Office Edition: **Dimensions**





Weight approx. 450-500 kg

DC-ITSafe Office Edition: **Cable box / access control**



- **Two cable boxes for the introduction of data cables.**
- **Free cross-section 93 x 33 mm.**
- **100% usable, cable changes or retrofitting are possible if and when required.**
- **Standard key lock system with profile half-cylinder.**
- **Replaceable profile half-cylinder.**
- **Optional: Electronic profile cylinder**

DC-ITSafe Office Edition: **Cooling**

- **External unit (compressor) positioned on top of the safe, indoor unit (evaporator) within the safe.**
- **Cooling split solution, hermetic separation of outdoor and indoor unit to ensure the physical protection level (smoke gas, fire, etc.).**
- **Cooling capacity 0,6 - 1,6 kW non-redundant.**
- **Special sound-insulated version for the installation in open-plan offices.**
- **Modern control with individual temperature alarm values.**
- **Temperature and malfunction indication.**

DC-ITSafe Office Edition: **Equipment**

- **Monitoring: DCM-Detection**
- **PDU‘s (passive or intelligent)**
- **Early fire detection**
- **Early fire detection and extinguishing**
- **UPS up to 3 kVA**
- **482,6 mm rack equipment**

DC-ITSafe Office Edition

Easy transport by
4-way base construction

Outdoor unit (compressor)
positioned on top of the safe

UPS up to 3 kVA

2 Cable ducts

DC-ITSafe Family

Customer References

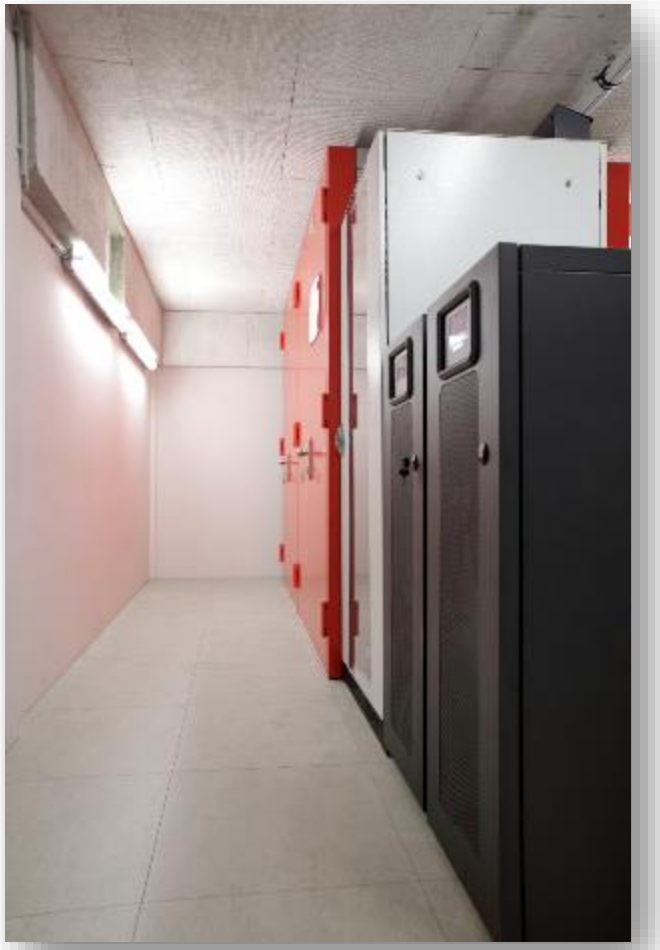
DC-ITSafe: Inficon (Industrial Equipment), Germany

DC-ITSafe: Mubea (Automotive & Aeronautics), Germany

DC-ITSafe: Hess Druck (Paper & Print), Switzerland

DC-ITSafe: Solvay (Chemicals), Germany

DC-ITSafe: Scania Finance Deutschland GmbH, Germany



DC-ITSafe: SMP (Automotive), Beijing, China

DC-ITSafe: Paar IT, Germany

DC-ITSafe: Bäumer Machinery, Germany

Key facts

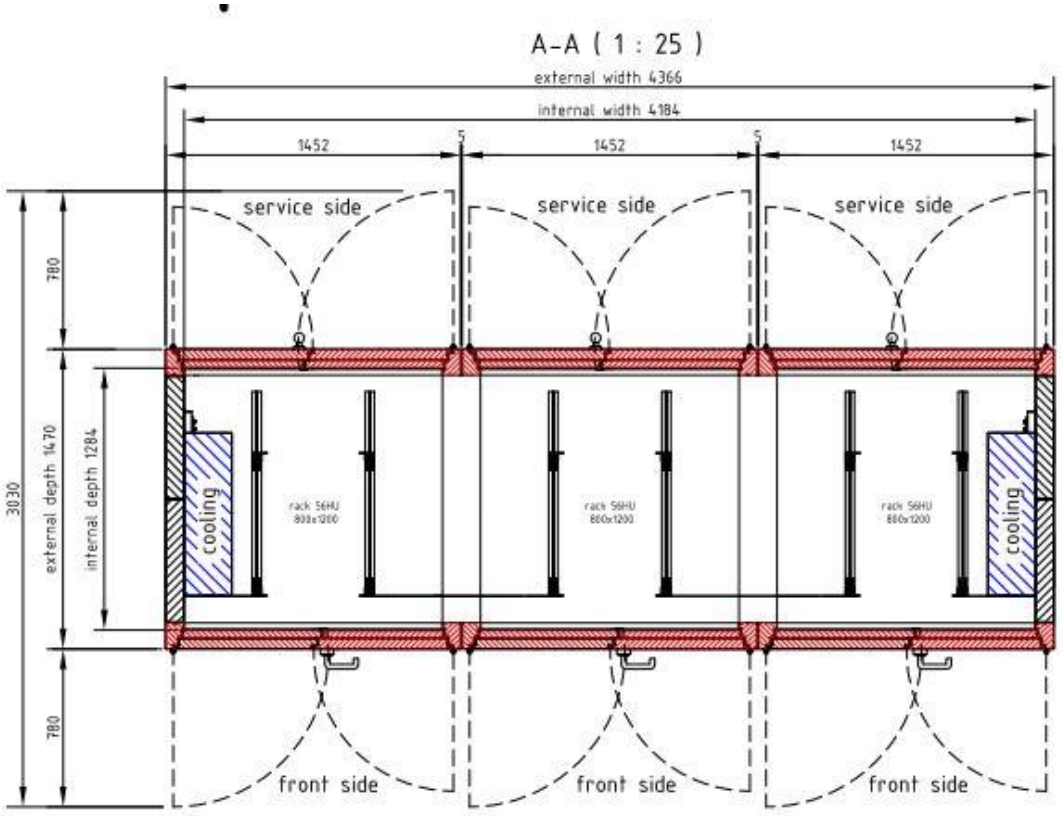
- **Single DC-ITSafe**
- Industrial company for machine engineering
- Installed in 2019
- Replacement of an old server room

DC-ITSafe: SBB, Swiss National Train Company

Key facts

- **Double DC-ITSafe (interconnected)**
- First enquiry in April 2019
- Delivery and installation September 2019
- Installation through our Swiss partner
- **Site used to manage AI / forecast of train tracks predictive maintenance and data management**

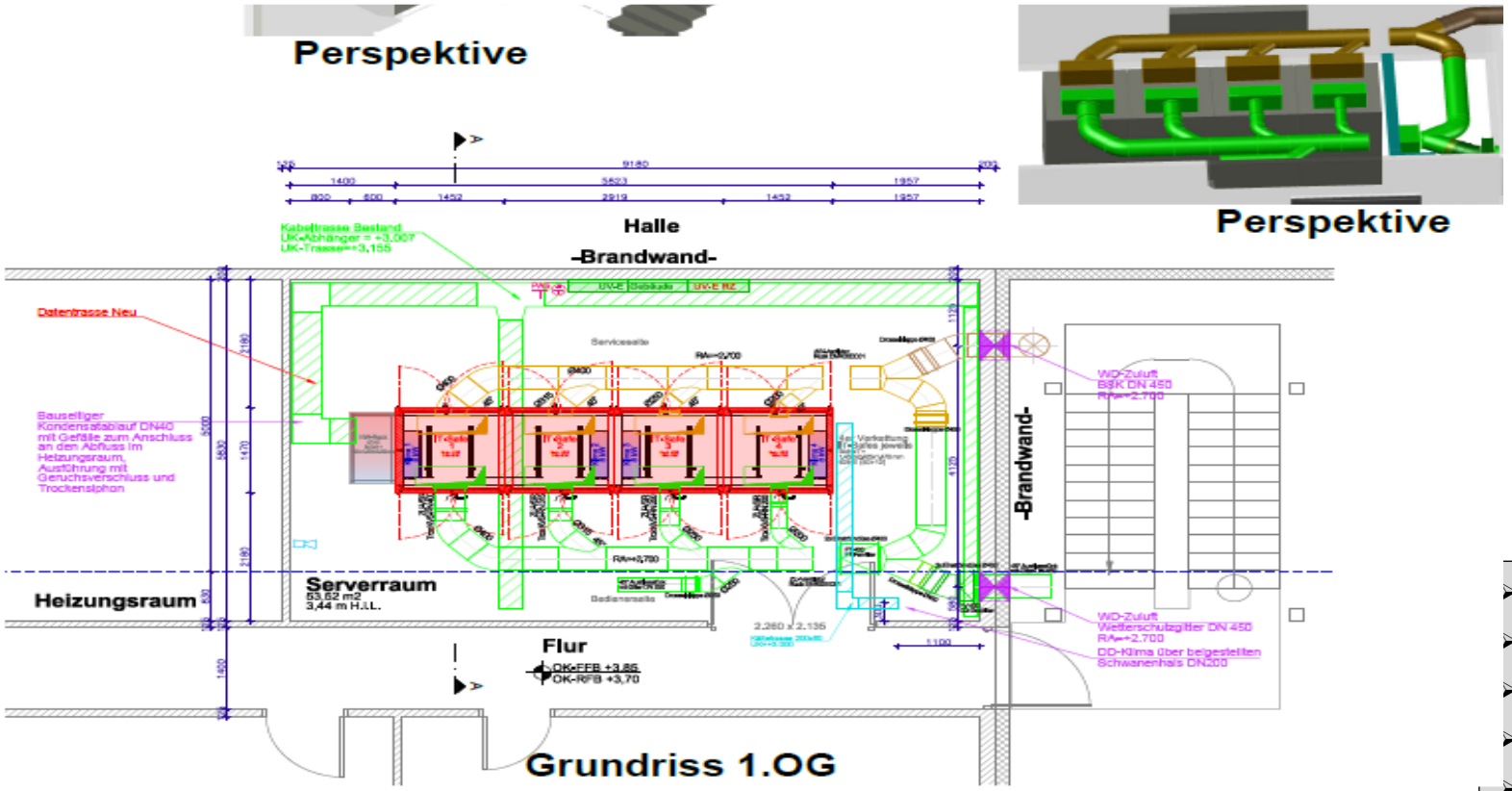
DC-ITSafe: Utility Company, Hungary



Key facts

- **Triple DC-ITSafe (interconnected)**
- Order in November 2019
- Installation in January 2020
- Installation in Budapest City Centre
- Application = Disaster Recovery Site

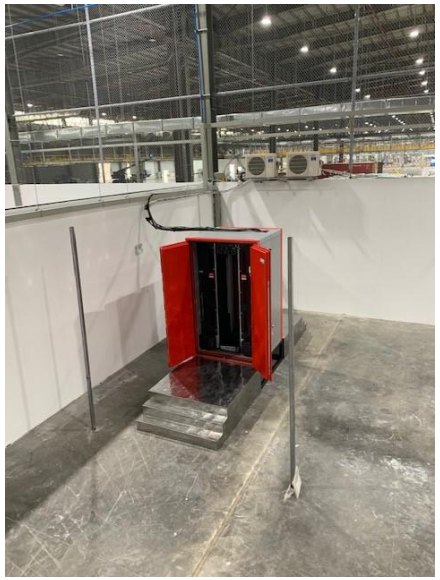
DC-ITSafe: Pharmaceutical Company, Germany



Key facts

- **Quattro DC-ITSafe (interconnected)**
- Order in November 2019
- Installation in February 2020
- Installation for a Pharma Konzern
- This project has a **KRITIS classification**.

DC-ITSafe: Delivery to Global Industrial Companies



Key facts

- Global framework agreements
- Clients pushing an **Edge MDC Micro DataCenter Strategy**
- Worldwide deliveries
- Installation through our local partners, worldwide
- **The DC-ITSafe is integral part of the Customer's compliance policy**.

DC-ITSafe

Thank You!