

(Note: Dimensions written in red must be modified according to the customer's project requirements.)

DATACENTER SERVER HOSTING AND NETWORK CABINETS

TECHNICAL SPECIFICATION (Applicable to All Manufacturers)

1. DOCUMENTS AND CERTIFICATION

- **Quality Certificate:** The manufacturer shall hold an ISO 9001:2015 quality management system certificate for the production of 19" Datacenter Server Hosting and Network Cabinets, as well as a TSE certificate encompassing EN IEC 61587-1:2022, IEC 60917, and IEC 60297 standards.
- **UL Certificate:** Datacenter cabinets shall hold a UL certificate under the UL 2416 standard.
- **Seismic Test Certificate:** Datacenter cabinets shall have been subjected to seismic testing at the NEBS GR-63-CORE Telcordia Zone 4 level. In addition, seismic testing shall have been conducted in accordance with IEC 61587-2:2011 and IEC 60068-3-3 standards. Successful test results must have been obtained under a minimum load of 500 kg. These certificates shall be submitted as part of the tender documentation.
- **CE Certificate:** The cabinets shall hold a CE certificate in compliance with directives 2014/35/EU and 2014/30/EU.
- **RoHS:** All materials shall comply with the RoHS 2011/65/EU directive.

2. DIMENSIONS AND CAPACITY

- **IEC 60297 Compliance:** The internal usable U capacity of the cabinets shall be (42U / 45U / 47U).
- **External Dimensions:** The external width shall be a net **600 mm or 800 mm**; the depth shall be a net **1000 mm, 1100 mm, or 1200 mm**.

3. STRUCTURAL FEATURES

- **Main Frame and Profile Structures:** The cabinet shall be manufactured and tested to provide axial (x, y, z) strength in accordance with EN IEC 61587-1:2022 / 5.2.1 and 5.2.2, and resistance to external impacts per EN IEC 61587-1:2022 / 5.3.3. Dynamic load, vibration, and mechanical shock test results (IEC 60068-2-6, IEC 60068-2-27) shall be certified by TSE or an accredited organization.
- **Main Profile Structure:** The profile shall be a closed-section structure for increased rigidity, with corner pieces interlocking on 3 (three) axes; minimum load-bearing capacity shall be **1000 kg or 1500 kg**. Extrusion aluminium profile construction may be used when required.



- **19-Inch Mounting Rails:** A total of 4 mounting rails shall be provided — 2 at the front and 2 at the rear — adjustable along the full cabinet depth without removal, supported by a total of 6 horizontal profiles (right and left). "U" positions shall be marked by screen printing; minimum thickness shall be 2 mm.
- **Cabinet Base Frame:** The base frame shall be completely open and reinforced with a robust floor-mounting kit enabling secure floor anchoring.

4. DOORS AND ACCESS PANELS

- **Front Door:** Single-swing, opening 130° to the left or right; removable, lockable, one-piece (monobloc), convex, 80% perforated in honeycomb pattern. Front door lock: ergonomic half-cylindrical handle with espagnolette rod system, locking at 4 points.
- **Rear Door:** 80% perforated, split (2-leaf), openable left and right, removable, and lockable. Rear door lock: ergonomic half-cylindrical handle with espagnolette rod system, locking at 3 points.
- **Side Panels:** Openable, removable, and lockable; manufactured in two separate horizontal sections for ease of access.

5. LOCKS AND SECURITY

- **Locks:** The front door shall lock at 4 points, the rear door at 3 points — both with handle-operated locking systems; side panels shall feature "O"-type locks. All doors shall operate with the same keyed cylinders. The cabinets shall comply with the EN IEC 61587-6:2021 security standard.
- **Joining:** All cabinets shall be capable of being bolted side-by-side — secured through the main profiles and from the exterior — either with or without removal of the side joining panels.

6. CABLE MANAGEMENT

- **Top Cable Entry Openings:** The minimum number of cable entry openings per cabinet type shall be as follows:
 - 600×1000 mm cabinets: 4 × (70×316 mm) and 1 × (70×140 mm)
 - 800×1000 mm cabinets: 5 × (70×316 mm)
 - 600×1100 mm cabinets: 4 × (70×316 mm) and 3 × (70×140 mm)
 - 800×1100 mm cabinets: 7 × (70×316 mm)
 - 600×1200 mm cabinets: 4 × (70×316 mm), 1 × (70×140 mm), and 2 × (120×127 mm)
 - 800×1200 mm cabinets: 5 × (70×316 mm) and 2 × (120×127 mm)



- All openings shall be fitted with removable plastic covers; brush-type or sliding cable entry inserts shall be installable in their place.
- **Vertical Cable Managers (Front):** Datacenter cabling cabinets with **800 mm** width shall feature deep cable channels with covers and plastic cable inlets running the full height of the cabinet on both left and right sides at the front.
- **Vertical Cable Managers (Rear):** Datacenter cabinets with **1200 mm** depth shall feature cable channels with plastic cable inlets running the full cabinet height on the left or right side at the rear.
- **PDU and Cable Manager Mounting:** In **1200 mm** depth cabinets, vertical PDUs and vertical cable managers shall be flush-mountable within a minimum **200 mm** section; at least 2 PDUs shall be installable side by side while maintaining required safety clearances.
- **Top Canopy and Cable Routing:** Separators shall be mountable on top of the cabinets to segregate data and power cables. The front and rear of the cabinets shall feature a fascia/canopy section for logo display and cabinet identification labelling.

7. GROUNDING

- **Grounding:** All metallic components inside the cabinet shall be electrically bonded to each other; grounding resistance shall not exceed 0.1 ohm in compliance with IEC 61010-1 / 6.5.1.3.

8. COLD / HOT AISLE CONTAINMENT FEATURES

- **Aisle Structure:** Cold and/or hot aisle containment shall be achievable between cabinets to enable effective cooling of active equipment installed in the server room. Aisles shall be **1200 mm** in length and available in **600 mm, 800 mm, 900 mm, and 1100 mm** widths, constructed with metal frames and manufactured from transparent, flame-retardant material. The aisle ceiling height shall be at least **100 mm** above the top of the cabinets.
- **Aisle Doors:** Sliding-type doors providing full visibility into the corridor interior; highly transparent, fully aluminium-framed, single or double leaf, with double glazing (insulated glass). Options for manual or electric motor operation; equipped with keypad, fingerprint, or proximity card reader access systems; compatible with building automation systems. Modular and demountable construction.



9. BLANKING PANELS (HORIZONTAL AND VERTICAL)

- **Horizontal Blanking Panels:** 6U snap-in, tool-less, easy-to-install blanking panels shall be used.
- **Vertical Blanking Panels:** Vertical blanking panels running the full cabinet height shall be used in cold/hot aisle containment applications for cabinets of **600 mm and 800 mm** width to prevent air bypass.

10. SEISMIC ANCHORING KIT

- **Seismic Anchoring Kit:** In datacenter infrastructures with raised floors, one seismic anchoring kit per cabinet shall be installed between the cabinet and the raised floor. The kit shall be structurally independent of the raised floor support pedestals. It shall be manufactured from robust steel construction using minimum **3 mm** thick galvanized sheet metal. The kit shall be height-adjustable and suitable for use in the range of **300 mm to 700 mm**.

11. SURFACE TREATMENT AND COATING

- **Paint Finish:** Cabinets shall be coated with electrostatic RAL 9005 Texture Black powder coat or RAL 7035 White powder coat to provide high impact resistance. The manufacturer's powder coating process shall have achieved a minimum 1000-hour salt spray test performance from an accredited laboratory. The powder coat used shall be non-ignitable and flame non-propagating per TS EN 13501-1+A1 standard.
- **Paint Test Standards:**
 - TS EN ISO 9227 and ASTM B117 — Salt Spray Test
 - TS EN ISO 2409 and ASTM D3359 — Cross-Cut Adhesion Test
 - TS 2311 EN ISO 2178 and ASTM B499 — Coating Thickness Measurement

12. MATERIALS USED IN CABINET MANUFACTURING

Component	Standard / Specification
Sheet Steel	DKP – DIN EN 10130-99, Ereğli DC-01 6112/7122, RoHS compliant
Powder Coat	ISO 9001:2015, ISO 2178, ISO 2813, ISO 6272, ISO 8130-5, ISO 8130-3, RoHS – RAL 9005 Texture Black or RAL 7035 Wrinkle White
Glass (where applicable)	ISO 9001:2015, EN 12150-1:2015 Tempered, Secure
Fasteners (bolts, nuts, washers, etc.)	DIN 7985, DIN 965, DIN 7981, DIN 934, DIN 985, DIN 933, RoHS compliant
Lock Cylinder	DIN 1743, DIN 53571, RoHS compliant



13. ACCESSORIES

- **Caster Wheel Set:** 4 castor wheels, directly attached to the cabinet chassis. Minimum load-bearing capacity per wheel: 250 kg. Standards: TS EN 12530, TS EN 12532, RoHS compliant.
- **Levelling Feet:** (Used when caster wheels are not installed.) Height-adjustable design; minimum load-bearing capacity per foot: 250 kg.

(Note: Dimensions written in red must be modified according to the customer's project requirements.)

