

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

SERVER 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" Server Rack Cabinets, as well as a TSE certificate encompassing EN IEC 61587-1:2022, IEC 60917, and IEC 60297 standards.
- **UL Certificate:** Cabinets shall hold a UL certificate under the UL 2416 standard.
- **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 (12U / 26U / 36U / 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.

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.
- **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 8 horizontal profiles (right and left). "U" positions shall be marked by screen printing; minimum thickness shall be 2 mm.

4. DOORS AND ACCESS PANELS

- **Front Door:** Single-swing, opening 130° to the left or right; removable, lockable, one-piece (monobloc), convex, 63% perforated in honeycomb pattern.
- **Rear Door:** 63% perforated, split (2-leaf), openable left and right, removable, and lockable.
- **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 — either with or without removal of the side joining panels.

6. CABLE MANAGEMENT

- **Cable Entry:** The cabinet shall feature a dust-proof sliding cable entry section measuring **350×250 mm**; the sliding mechanism shall include a heavy-duty gasket to secure cables and prevent damage upon entry into the cabinet.

7. VENTILATION

- **Ventilation:** The top chassis shall accommodate a minimum 6-fan group connection and a ventilation panel for air exhaust.

8. 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.

9. 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 IEC 60707 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

10. 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



11. ACCESSORIES

- **Fan Unit:** A ball-bearing fan unit with 2 or 4 fans shall be used. The unit shall include a thermostat to control the temperature inside the cabinet. Fan units shall hold CE certification. Each fan shall provide a minimum airflow of 2.3 m³/min and a maximum noise level of 47 dBA. A CE declaration shall have been issued under the following directives and standards, with test reports from accredited bodies (CE declaration alone is not acceptable): ISO 9001:2015; 2006/42/EC (Machinery Directive); 2014/35/EU (Low Voltage Directive); 2014/30/EU (EMC Directive); EN ISO 12100:2010; EN 55032:2015/A1:2020; EN IEC 62368-1:2023; EN 60204-1:2018; EN IEC 61000-6-1:2019; EN IEC 61000-6-3:2021.
- **PDU (Power Distribution Unit):** The housing shall feature an aluminium profile body with protective enclosure; 6-outlet (1U) or 9-outlet (2U) configuration with 1×16 A circuit breaker protection; CE certified.
- **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.

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