

Requirements for Welding Machine Distribution Box Configuration



AI Overview

A welding machine distribution box must be structurally robust, electrically safe, and compliant with standards, with proper grounding, insulation, and protection against environmental hazards.

Structural and Mechanical Requirements The distribution box should be firmly welded or bolted, with welds uniform, bright, and free of defects such as air holes or cracks, and bolts equipped with flat and spring washers for secure connections. Internal parts and edges must be smooth and burr-free. Doors should open at least 90 degrees, with concealed, reliable locks and metal chrome-plated hinges. For doors longer than 1.2 meters, three hinges are recommended; shorter doors require two. Hinges must support at least four times the door weight without deformation.

Electrical and Safety Requirements The box must operate under three-level pollution conditions with a protection rating of IP3X. All insulation should be made of self-extinguishing materials. Grounding is essential: the metal box, electrical installation board, and appliance casings must be properly grounded, and the protective neutral wire should be securely connected. A leakage protector is recommended for additional safety. Wiring should use high-temperature resistant copper wire with cross-sectional areas suitable for the load, and all cable inlets and cover joints must be sealed to prevent exposure.

Environmental and Operational Considerations The distribution box should be installed in a dry, well-ventilated area away from humidity, corrosive substances, or flammable gases to prevent overheating and damage. The bottom edge is typically 1.5–1.8 meters above the ground for convenient operation and inspection. The box must withstand environmental stresses such as dust, vibration, and temperature variations, and be suitable for the rated load and voltage of the welding machine.

Compliance with Sta...

Article Content

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The distribution box has the characteristics of small size, simple installation, special technical performance, fixed location, unique configuration function, not limited by the site, relatively common

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The distribution box has the characteristics of small size, simple installation, special technical performance, fixed location, unique configuration function, not limited

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Welding and protection requirements of distribution box

The internal parts and opening edges of the distribution box shall be flat and smooth without burrs and cracks. The movable parts of the distribution box can be

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