

Shielded ground grid program

→ Grounding grid production diagram

✳ This section describes practices for grounding and shielding to protect a plasma cutting system against radio frequency interference (RFI) and electromagnetic interference (EMI) (also called noise).

Proper grounding and shielding is the cheapest way to reduce EMI inside the system and is one of the most effective methods.

1、 Create a good high frequency ground plane.

2、 It is recommended that the rack be made of conductive material and that all sections be bonded together.

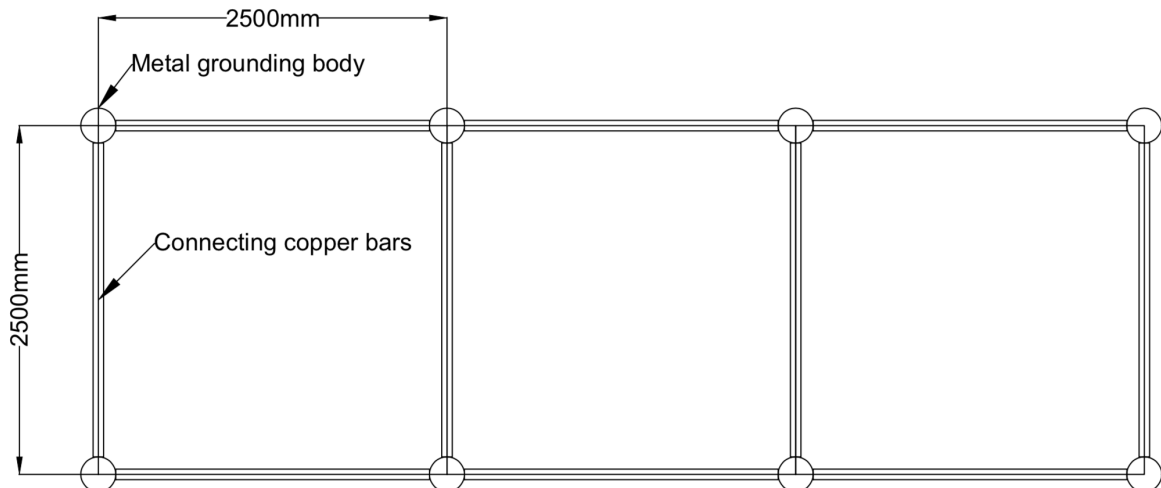
3、 For best results, the bond connection for high-frequency current must meet any of the following:

4、 Good metal-to-metal contact ---Thin stranded wire ---braided wire ---Protects metals from corrosion.

If the control unit must be mounted on a painted surface, the paint should be scraped off and replaced with a conductive coating or Vaseline for corrosion protection.

Please scrape off any anodized material on the joint surface and prevent corrosion.

Ground grid production diagram:



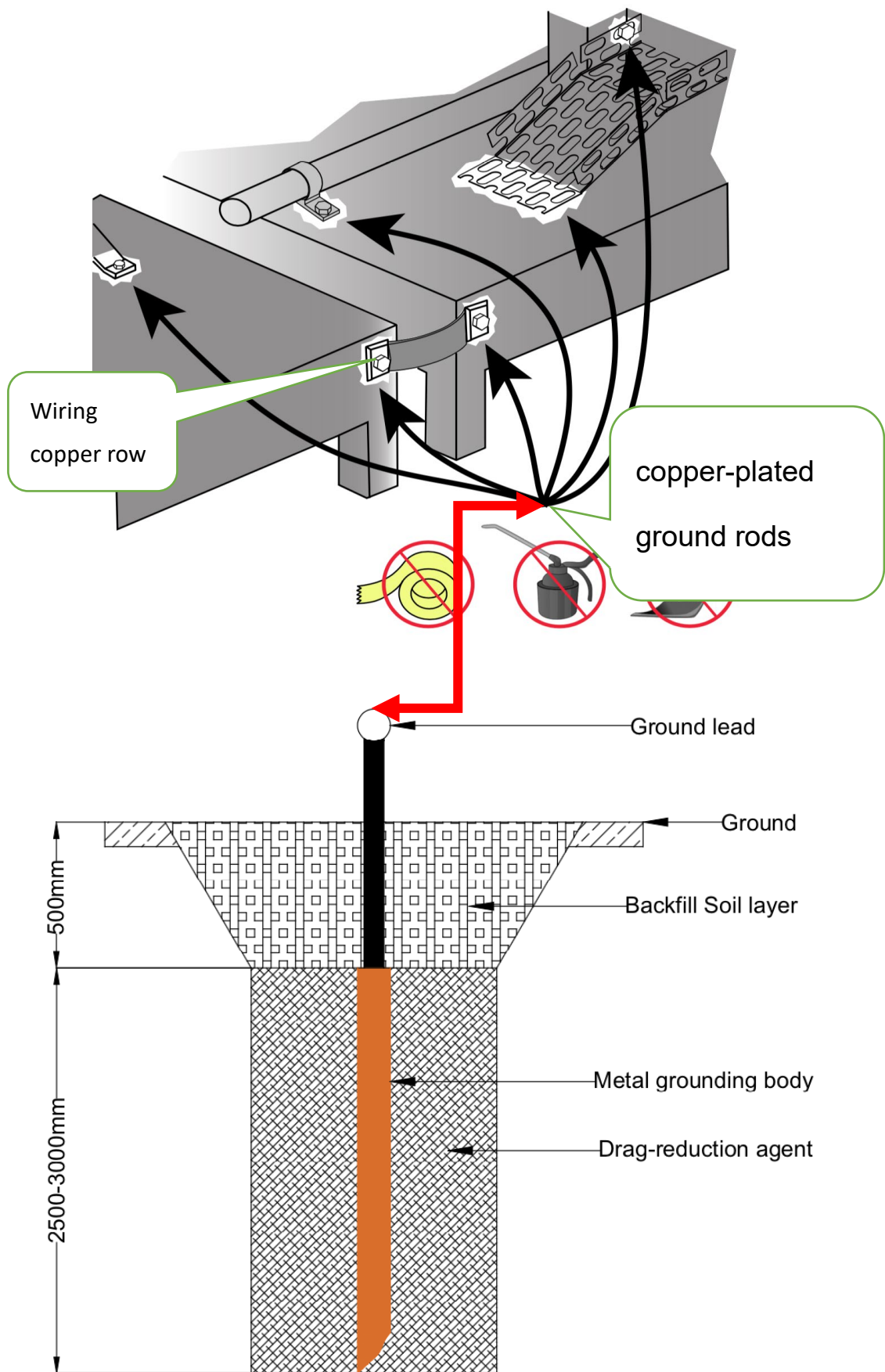
Note: 1. This grounding setting uses a grounding net composed of copper-plated ground rods and copper-plated strands/ connecting copper bars;

2. The vertical grounding consists of 8 copper-plated grounding rods with a diameter of 40mm and 10 connecting copper bars, using 70 square copper-plated copper stranded wires;

3. All joints are exothermic welded, with strong electrical conductivity and strong corrosion resistance;

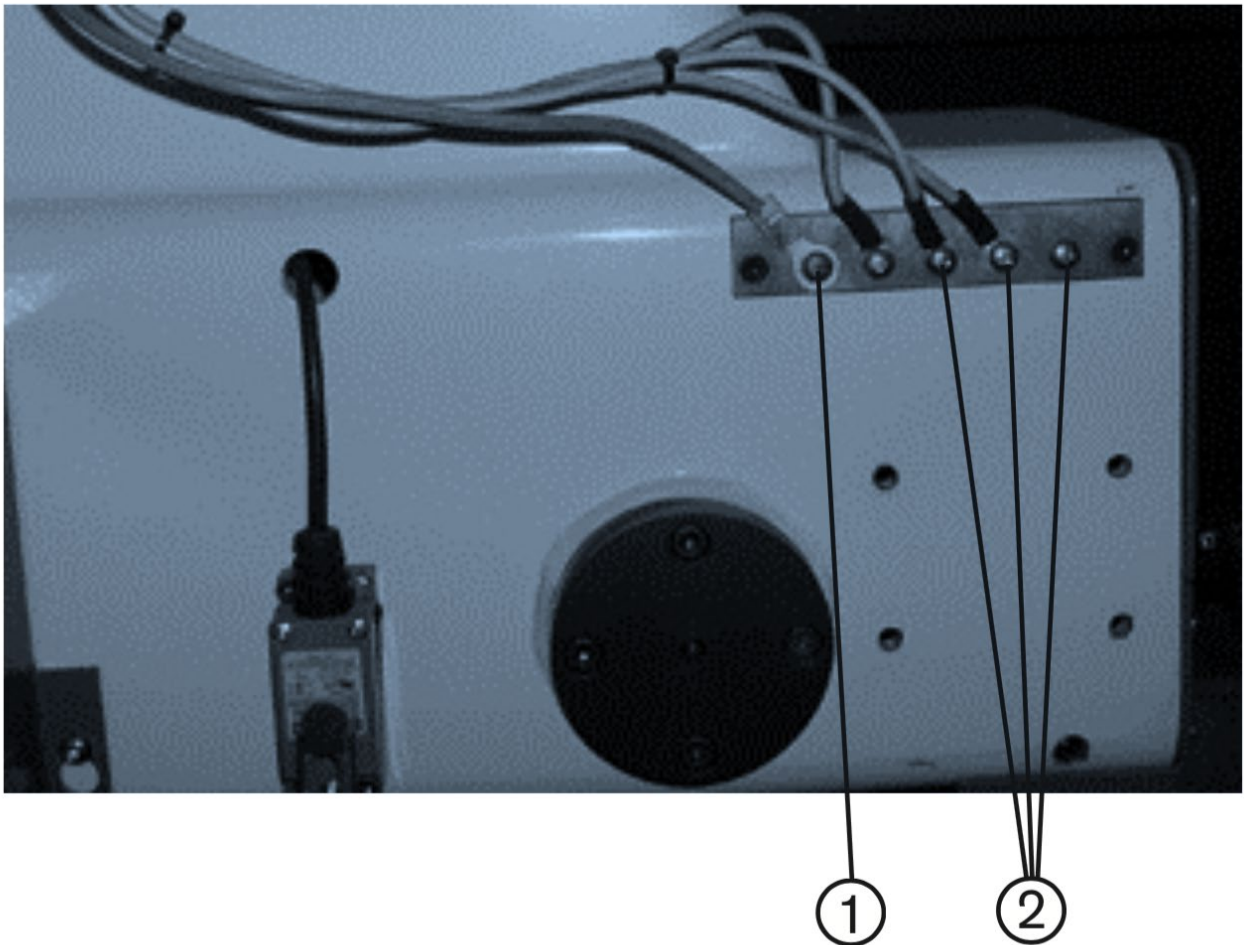
4. Appropriate increase of resistance reducing agent or saturated brine;

5, the grounding resistance is not more than 1.5 ohms



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→ The following picture shows an example of a gantry ground bus. It is bolted to the gantry, close to the motor. All of the individual ground cables from the components mounted on the gantry connect to the bus. A single heavy cable then connects the gantry ground bus to the table ground bus.



- 1、 Cable to the cutting table ground bus.
- 2、 Ground cables from components on the gantry.

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- Plasma and cooling box require a separate grounding terminal to prevent interference from being transmitted to the machine;

