
HFTD 600-Y

Medium Frequency Diffusion Welding Machine

Professional Copper Flexible Busbar Welding Equipment



Fig. 1 Medium Frequency Diffusion Welding MachineMachine (Reference)



SPECIFICATION

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1. EQUIPMENT COMPOSITION, PURPOSE & WORKING CONDITIONS

2.1 Equipment Composition: 4-Column Hydraulic Welding Workbench, Haifei Welding Machine Control System, and related electrical accessories.

2.2 Equipment Purpose: Diffusion welding of flexible busbars and copper strips.

2.3 Working Conditions:

- ▶ Ambient Temperature: 1~45℃
- ▶ Humidity: 35~90%
- ▶ Supporting utilities: cooling water, electricity, and compressed air.

2. MAIN TECHNICAL PARAMETERS

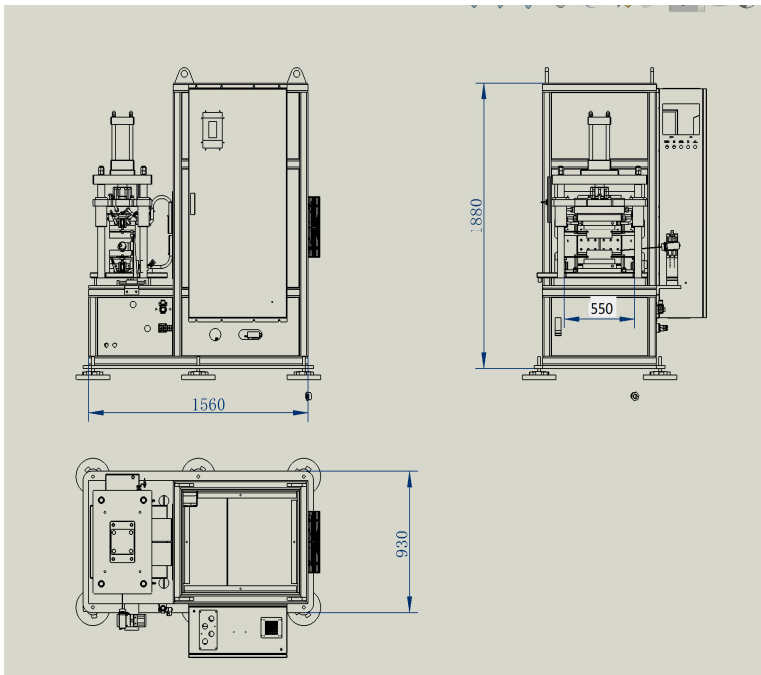
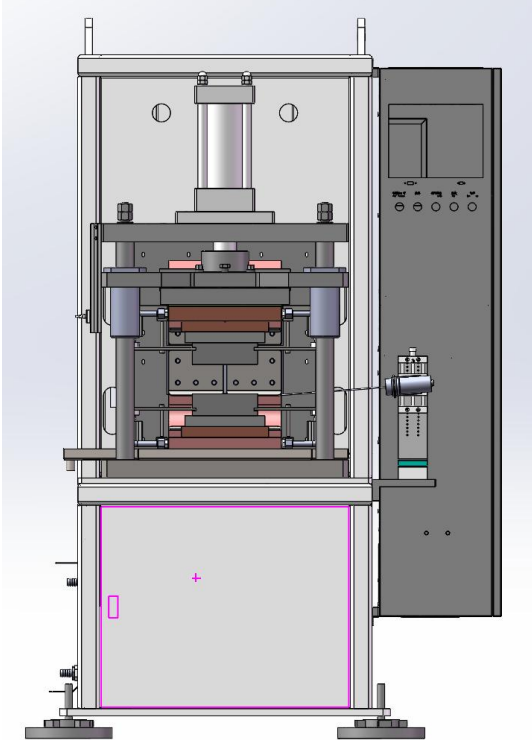
Parameter	Specification
Structure Type	4-Column Hydraulic Welding Workbench
Control Method	Variable Frequency Inverter, Haifei Copper Welding Machine Control System
Temperature Measurement Range	300-1200℃, Repeatability: $\pm 0.5\%$ TH. Temperature can be set and displayed on the touch screen.
Operating Ambient Temperature	5-45℃
Pressurization Method	Max. Output Pressure: 20T, Initial Pressure: 0.5T
Workbench Travel Range	150mm, Ram Positioning Repeatability: ± 0.05 mm
Electrode Installation Area	240mm × 180mm
Effective Welding Area	150mm × 150mm (Smaller area enables faster welding speed) (Customizable)
Single Welding Area	150mm × 150mm (Smaller area enables faster welding speed)
Weldable Material Range	Copper-Copper, Copper-Nickel, Hard Copper-Soft Copper
Welding Material Thickness Range	0.03-5mm
Welded Product Thickness Range	0.5-25mm
Welding Control Functions	1. Output Frequency: 15-400Hz 2. Up to 64 programmable welding schedules 3. Programmable I/O: 3-stage programmable output for better integration with PLC, robots, etc. 4. Weld spot counting function
Protection Functions	Abnormal water flow alarm & shutdown, abnormal current alarm & shutdown, abnormal pressure alarm & shutdown



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3. EQUIPMENT LAYOUT *(For reference only; actual product shall prevail)*





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4.MAIN COMPONENT CONFIGURATION & BRANDS

No.	Component	Brand / Model
1	Solenoid Valve, FRL Unit	SMC / AIRTAC
2	Hydraulic Cylinder 20T	Haifei Customized
3	Touch Screen	FanYi / 7-inch
4	Water Flow Switch	Anchao / CATO
5	Special Welding Main Cylinder	Haifei
6	Medium Frequency Welding Transformer	Haifei / 600kVA (100% Duty Cycle, Welding Current 60kA)
7	IGBT Module	Fuji / 2800A
8	Welding Controller	Haifei / HF2800
9	Low-Voltage Electrical Components	OMRON / SCHNEIDER / Garnor



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5. INSTALLATION PREPARATION

5.1 Power Supply

No.	Parameter	Value
1	Power Cable	Three-phase AC, five-wire system: $3 \times 90\text{mm}^2 + 2 \times 35\text{mm}^2$
2	Voltage (V)	380V +10%
3	Power Switch	400A / 3P
4	Frequency (Hz)	$50 \pm 1\%$
5	Grounding Method	TN-S
6	Lighting Power	Single-phase AC
7	Voltage (V)	$220\text{V} \pm 10\%$

5.2 Cooling Circulating Water

Item	Requirement
Cooling Water Requirements	$0.2 \sim 0.3\text{MPa}$, 40-micron filtration, Resistivity $\geq 5\text{ k}\Omega \cdot \text{cm}$, Flow rate $\geq 150\text{L/min}$, Inlet temperature $\leq 35^\circ\text{C}$.