

Technical description of the Polysoude P4 Orbital Welding Machine

Polysoude P4 is an orbital welding machine which can be programmed by time or angular degrees calibrated in mm/min or inch/min. It is provided by a comprehensive real-time welding data acquisition and error-diagnostic system.

It is equipped with an automatic welding head recognition system and a built-in printer for welding procedure archiving and documentation.

It has a closed loop regulation of torch rotation and wire speed and a safety valve to control the welding and the backing gas.

A built-in closed loop water cooling system with a safety valve prevent overheating of the welding head and torch.

Technical specifications are enlisted in the below table.



Technical Specification

Welding method	TIG - DC with or without Filler Wire
Input power (Auto-range)	Single phase 100 V / 115 V / 200 V / 230 V \pm 10 % - 50 / 60 Hz
Open circuit voltage	100 V
Insulation class	H
Protection class	IP 23 (touch screen closed)
Welding current standard (steps of 1 A)	Range 170 A: 3 to 170 A (200 V / 230 V)
High precision (steps of 1/10 A)	Range 50 A: 3 to 50 A (100 / 230 V)
Welding current precision	\pm 1 A when $I \leq 100$ A and \pm 1% when $I > 100$ A
Duty cycle	170 A / 25 % at 230 V • 130 A / 40 % at 115 V 110 A / 100 % at 230 V • 100 A / 100 % at 115 V
Motion controls	Torch rotation: constant or pulsed Wire feeder: constant or pulsed / automatic wire retract
Shielding gas control	Welding gas, backing gas with flow safety valve
Power source cooling	Forced ventilation
Welding torch cooling	Built-in closed loop water cooling system with flow safety valve
Display / recording (non-volatile) of real values during welding	Arc Voltage, welding current, electrode position in angular degrees, welding speed and wire speed
Welding program storage/ transfer	Hard disc / USB memory stick
Dimensions L x W x H	630 x 320 x 500 mm
Weight	32 kg
Standards	EN 60974-1 / EN 60974 -10

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