PMI - 350 TL3 Factsheet

The soft plasma welding machine is used for sheet metal up to 6mm. Mainly used materials for plasma welding are stainless steels, steels, titanium, zirconium and copper.

TECHNICAL DETAILS

The arc is constricted by a copper nozzle, which results in a high power density. The concentrated arc, in conjunction with the controllable plasma gas, enables higher welding speeds and deeper penetration (root welding) to be achieved, which saves time and money. The strong bundling of the arc and the welding speed mean that only a narrow heat-affected zone is formed, which results in less thermal distortion in the component.

- high quality of the seam
- high procedural security
- high degree of automation
- high productivity due to high welding speed

OPTIONEN:

PGR-05: electr. Plasma gas regulation, range 0.1 ÷ 5 l / min
SGR-20: electr. Shielding gas control, range 0.5 ÷ 20 l / min
MCU-MI: Motor control card for controlling one or two wire/powder feeders

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Applicable Welding Methods	• PLASMA Coating • PLASMA Brazing • PLASMA Keyhole Welding • PLASMA Seam Welding • PLASMA Powder • PLASMA Spot Welding • TIG Welding
Range of suitable material thickness (Plasma seam welding)	~ 0.5 – 8 mm
Range of suitable material thickness (Plasma spot welding)	~ 0.5 – 3 mm
Automation	• Capable for automation
Operating modes	DC
Supply Voltage	3 × 400 V-460 V ±15 % 50/60Hz
Phase	3 Phase
Power connection	4 × 32 A CCE plug, 6 mm²
Max. welding current at 35 % duty cycle (40 °C)	350A
Max. welding current at 100 % duty cycle (40 °C)	260A
Adjustment range welding current	3 – 350 A
Max. pilot current at 35 % duty cycle (40 °C)	50A
Max. pilot current at 100 % duty cycle (40 °C)	30A
Adjustment range pilot current	0.5 – 50 A
Adjustment range TIG mode	3 – 350 A
Cooling	Liquid
Degree of protection	IP 21 S
Length	1200mm
Width	520mm
Height	940mm
Weight	105kg
Features	• Power source with HF-ignition • USB interface • Ethernet interface • Integrated welding program memory • Integrated cooling • Integrated monitoring / gaging of cooling medium • Integrated electronic gas regulation (PGR) • Integrated control of wire feeder and free wheel encoder (MCU-MI) • Integrated control of 2 wire feeders and free wheel encoder (MCU-MSI) • Integrated automation interface • Software for external controlling via computer (diagnostics, parameter setup, documentation) • Flowmeter plasma gas • Flowmeter shielding gas • Remote Control RC-S • Foot control of the current • Mobility by wheels • Parking area for 20l gas bottle • HPP1 - High Pressure Pump (1 circuit) • HPP2 - High Pressure Pump (2 circuits) • Plate Heat Exchanger • Touch Screen 7,0" • Integrated ECO - emergency cut off • Pilotinverter with HF-ignition
Automation Interface "Tiny"	• Included

Digital Inputs	4 × 24 V
Digital Outputs	4 × 24 V
Analog Inputs	2 × 0 – 10 V
Analog Outputs	2 × 0 – 10 V
CAN Bus (SBI protocol)	• Included
Automation Interface “AS/AD Basic”	• Included
Digital Inputs	10
Digital Outputs	10
Analog Inputs	4
Analog Outputs	4
KTY Input	1
CAN Interface	• Included
Capability for / availability of specific bus interfaces	• Included

Torches Recommended for Use

About SBI GmbH

SBI was founded in 1999 with the aim of developing rapid prototyping technologies. SBI has therefore developed its plasma technologies and built welding solutions. From automated solutions for coating technologies to the repair of forging dies or plasma arc deposition machines for the maintenance of aircraft turbines, SBI has established world-renowned references in the field of arc deposition plasma. Since 2009, SBI has established itself as the main supplier of its plasma-based technology for the 3D manufacturing of aeronautical parts.

Besides its renown portfolio of superior plasma invertor systems and plasma welding equipment, SBI has been developing its own additive manufacturing machines. The manufacturer put the metal additive manufacturing system M3DP on the market in 2019.