



PMI - 350 AC/DC TL3 Factsheet

The AC / DC welding device is used for joint and build-up welding. In addition to steel, nickel, titanium, zirconium and copper, weldable materials are also aluminum alloys. With the plasma taphole process, it is possible to weld in one layer without processing edges, material thicknesses of up to 12mm.

TECHNICAL DETAILS

An arc, which burns between a non-melting tungsten electrode, around which plasma gas flows, and the workpiece, is geometrically constricted by a copper nozzle. A plasma arc (beam) is created, which has a significantly higher energy density than a comparable free-burning arc. Thanks to the concentrated arc, in conjunction with the controllable plasma gas, high welding speeds and welding depths can be achieved with narrow heat-affected zones, which saves time and money. The high welding speed means 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

OPTIONS:

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

Applicable Welding Methods

- PLASMA Seam Welding
- PLASMA Brazing
- PLASMA Keyhole Welding
- PLASMA Spot Welding
- PLASMA Coating
- PLASMA Powder
- 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

AC or DC or AC/DC Mix (for Al welding)

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)

230A

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

5 – 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 cooling
- Integrated welding program memory
- 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
- Parking area for 20L gas bottle
- Mobility by wheels
- Foot control of the current
- Remote Control RC-S
- 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

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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 inverter 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.

