



# PMI - 500 TL3 Factsheet

Device for tap hole applications and higher power densities such as e.g. Sheets with a thickness of up to ~ 12mm.

## 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

## 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 Keyhole Welding
- PLASMA Brazing
- PLASMA Coating
- PLASMA Powder
- PLASMA Spot Welding
- TIG Welding

### Range of suitable material thickness (Plasma seam welding)

~ 0.5 – 10 mm

### Range of suitable material thickness (Plasma spot welding)

~ 0.5 – 4 mm

### Automation

- Capable for automation

### Operating modes

DC

### Supply Voltage

3 × 400 V ±15 % 50/60Hz

### Phase

3 Phase

### Power connection

4 × 32 A CCE plug, 6 mm<sup>2</sup>

### Max. welding current at 35 % duty cycle (40 °C)

500A

### Max. welding current at 100 % duty cycle (40 °C)

300A

### Adjustment range welding current

5 – 500 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 – 500 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 control of 2 wire feeders and free wheel encoder (MCU-MSI)
- Integrated control of wire feeder and free wheel encoder (MCU-MI)
- Integrated electronic gas regulation (PGR)
- Integrated automation interface
- Software for external controlling via computer (diagnostics, parameter setup, documentation)
- Flowmeter plasma gas
- Remote Control RC-S
- Foot control of the current
- Parking area for 20l gas bottle
- Flowmeter shielding gas
- Mobility by wheels
- 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

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

