



# PMI 350 AC/DC TL 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

**MCC:** Motor control card for controlling an SBI wire case

**Applicable Welding Methods**

- PLASMA Seam Welding
- PLASMA Brazing
- PLASMA Keyhole 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 mm<sup>2</sup>**Max. welding current at 35 % PMI50; duty cycle (40 °C)**

350A

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

290A

**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**

1120mm

**Width**

450mm

**Height**

935mm

**Weight**

115kg

**Features**

- Power source with HF-ignition
- Pilotinverter with HF-ignition
- Touch Screen 5,4"
- 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 / powder feeder (MCC)
- Integrated control of wire feeder / powder feeder (MCU-M)
- 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

**Automation Interface "Tiny"**

- Included

<b>Digital Inputs</b>	2 × 24 V
<b>Digital Outputs</b>	3 × 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>Connection cable</b>	5m
<b>Capability for / availability of specific bus interfaces</b>	• Included

## Torches Recommended for Use



TP200-M



TP200-R



TP350-R



TP450-R

## 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.

