

# Datasheet for 500 W Generator PlasMaster PCU-L500.1

## Characteristics

- Compact generator with output power between 1 W and 500 W in the ISM frequency band at 2.45 GHz
- Worldwide-patented control circuit for generation of microwave plasmas over wide range of power level, gas pressure and gas flow
- Monitors the incident and reflected power during operation
- Suitable for a large variety of plasma jets, especially the PS and PC series
- Highly efficient and quiet water cooling
- Ideal for development in the laboratory or small series production

## Introduction

The PlasMaster generators of Heuermann HF-Technik GmbH (HHF) are designed to enable an efficient operation of our diverse plasma jets and couplers, as well as other microwave applications, where an **automated frequency adjustment** is required to ensure an optimal energy transmission into the load.

With a maximum output power of over 500 W in the ISM frequency band between 2.4 and 2.5 GHz, the PlasMaster generators are easy to use and offer all necessary process parameters required to monitor and optimize the application or small series production such as forward power, reflected power, or application frequency.

The generators can be in a semi-automated mode via analog voltages (e.g. over an SPS system) through a connector at the back. All relevant process parameters can be monitored via analog voltages supplied through the same connector.

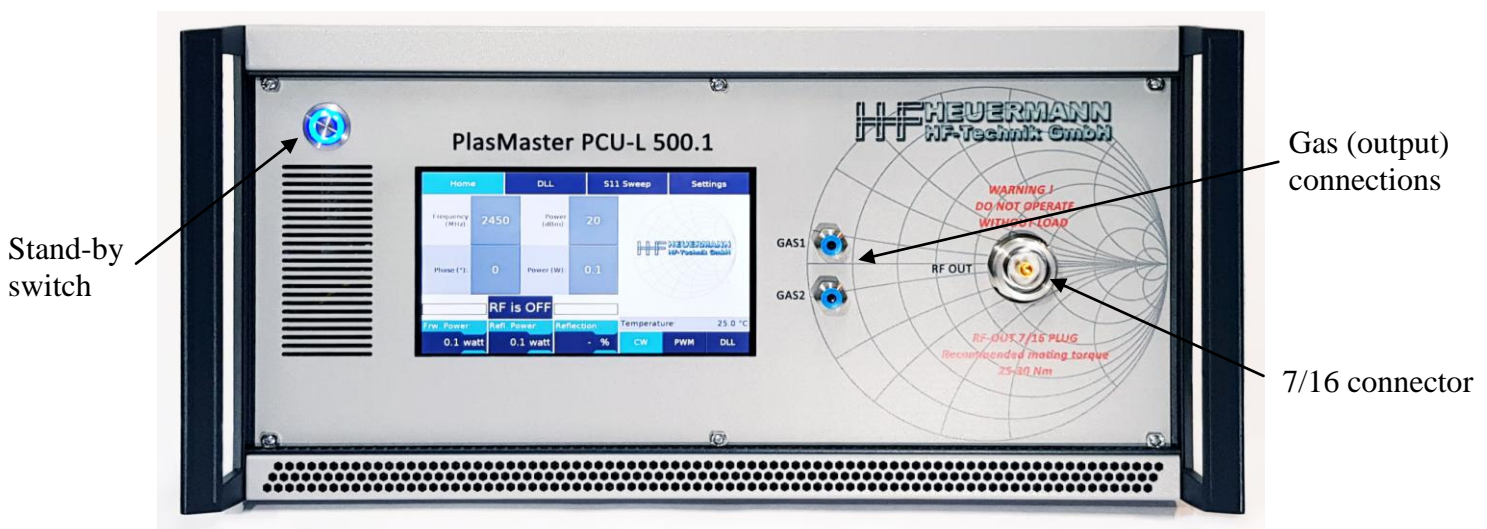


Fig. 1: Front view of the PlasMaster PCU-L500.1 with the control display.

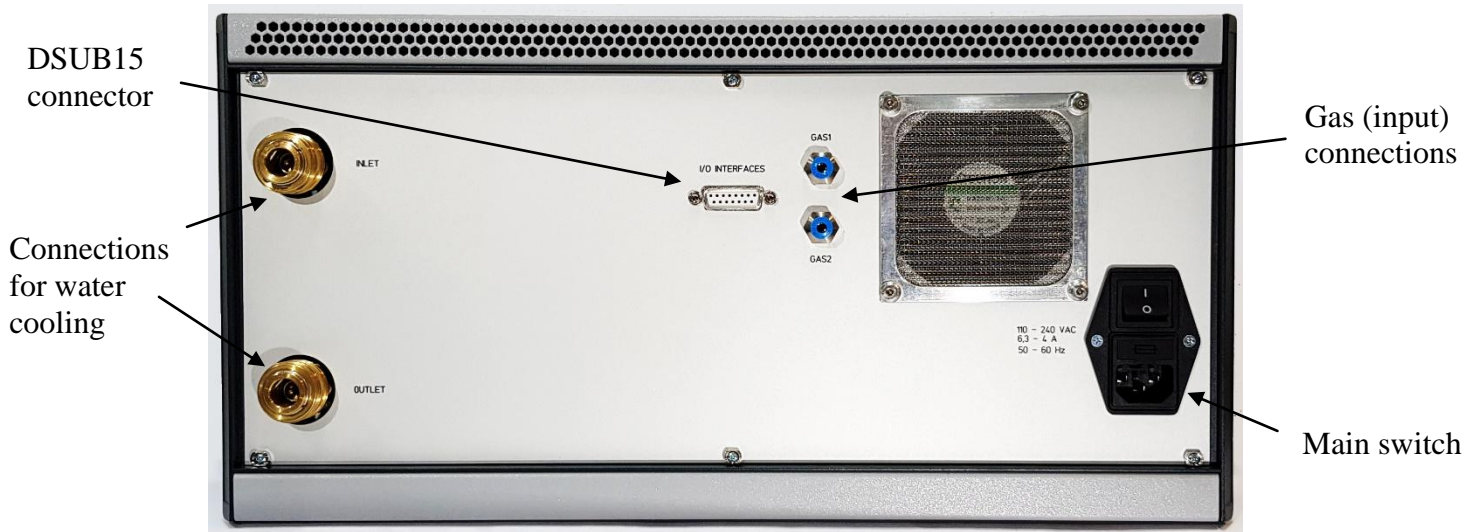


Fig. 2: Rear view of the PlasMaster PCU-L500.1.

## Features and Specifications

Below is an overview of the features of the PlasMaster PCU-L500.1:

### Features

- Frequency range: 2400 MHz – 2500 MHz
- Maximum RF power output  $\geq$  500 Watt
- Hard- and software based "Safe Operating Area" protection against thermal and RF overstress as well as lack of process gas (in the case of plasma jets)
- Operational modes:
  - Continuous Wave (CW)
  - Digital Locked Loop (DLL)
- Integrated digital frequency matching and energy delivery optimization (DLL)

The mechanic specifications are as follows:

### Specifications

- Size: 23 cm x 46.5 cm x 42 cm (h x w x l)
- Weight: 19 kg
- Gas flow rates
  - Gas 1: Cooling gas (e.g. air or nitrogen) 5 – 30 sl / min
  - Gas 2: Process gas (e.g. argon) 0,2 – 2 sl / min
- Diameter of gas hose: 4 mm

## For further information, please contact

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