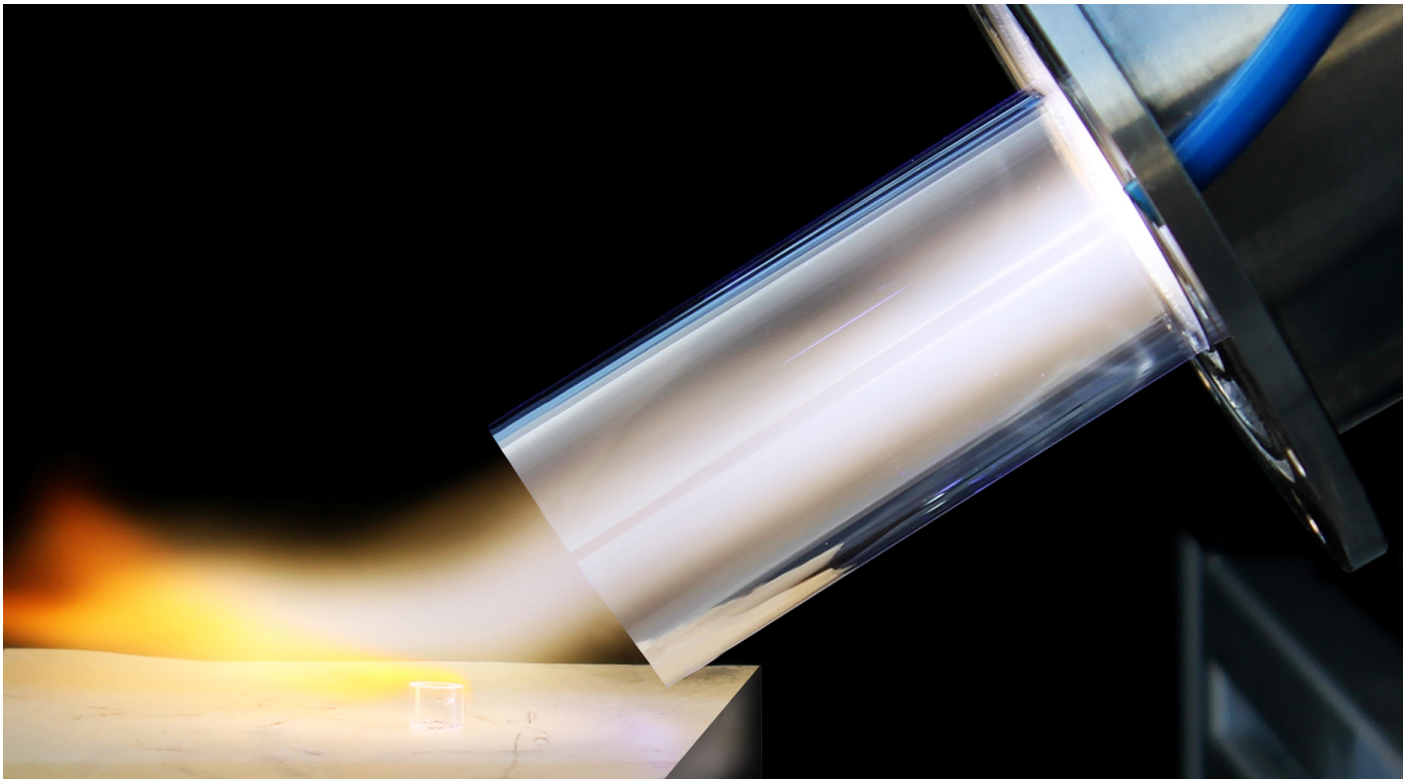
PLASMA JET 6kW
2450 MHz



GENERAL INFORMATION

In a microwave plasma reactor natural gas is directly converted to pure carbon and hydrogen. This is also the main benefit of the dry methane reforming reaction in a microwave plasma reactor over for example conventional steam methane reforming: no carbon dioxide is formed in the process. While steam methane reforming comes with the disadvantage of carbon dioxide emissions and needs expensive carbon capture and storage technologies, this extra step can be spared with a microwave plasma reactor. Additionally, the pure carbon adds value to the process as an extra revenue, since this chemical is desired for e.g. tire manufacturing, gaskets or simply for shoe soles.

KEY FEATURES I TECHNICAL DETAILS

- Atmospheric plasma
- Compact plasma source device
- 99% energy coupling in the microwave plasma reactor (incl. 3-Stub-Tuner)
- Intuitive operation via touchscreen

POTENTIAL APPLICATIONS

- Research at universities and industrial labs
- Rapid heating (alternative to melting processes)
- Methane pyrolysis
- CO2 decomposition
- Surface treatment

:fm Fricke und Mallah Microwave Technology GmbH
Werner-Nordmeyer-Str. 25 I 31226 Peine I Germany
Tel.: +49 (0) 5171 54 57-0 I Fax: +49 (0) 5171 54 57-26
info@microwaveheating.net I www.microwaveheating.net

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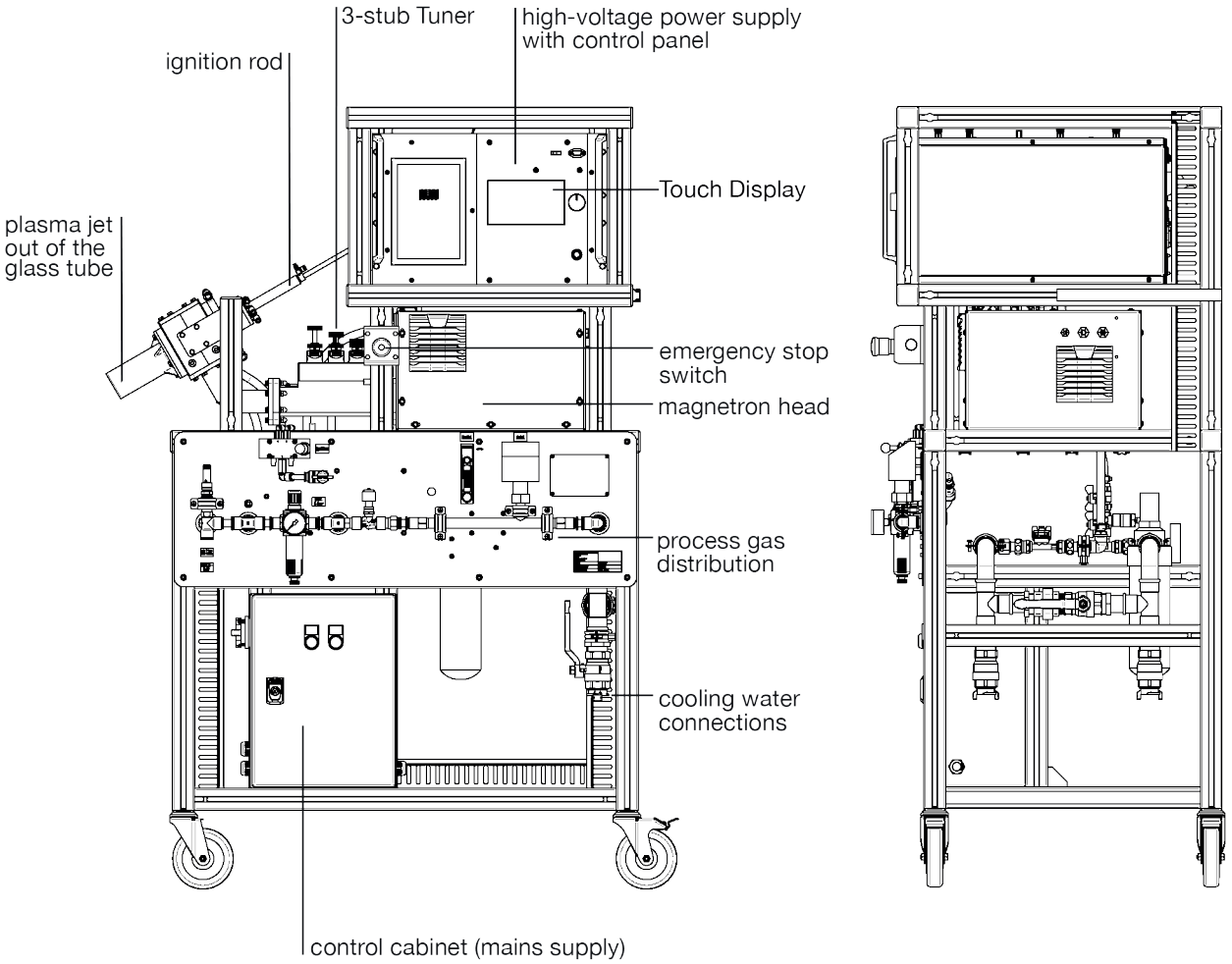

SPECIFICATION

Plasma Components and Condition

Type of Gas	Air, Ar, N2, He, H2, CO2, CH4 3-5 Bar
Gas Pressure	3 - 5 Bar
Gas Flow	minimum 100 L/min for max power
Type of tube	Quartz
Tube diameter	20 - 50 mm
Tube thickness	2 mm
Tube length	More than 200 mm
External dimension	Max. 730 X 1300 X 1610 mm (W x D x H)
Torch Length	Up to 300 mm

Technical Data of Magnetron

Frequency	2450 MHz +/-10 MHz
Output power	6000 W
Line input	3 phase 400 V_{AC} 3 phase 440 V_{AC} 3 phase 575 V_{AC}
Line frequency	50/60 Hz
Input Power	9.92 kVA @ 400 V_{AC}
Power adjustment signal range	0-10 V_{DC}
Interface	Profinet or analog PLC

Cooling Water Quality

Water Flow	12 l/min
Temperature	17 °C - 28 °C
Water pressure	3.5 - 5 Bar

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