

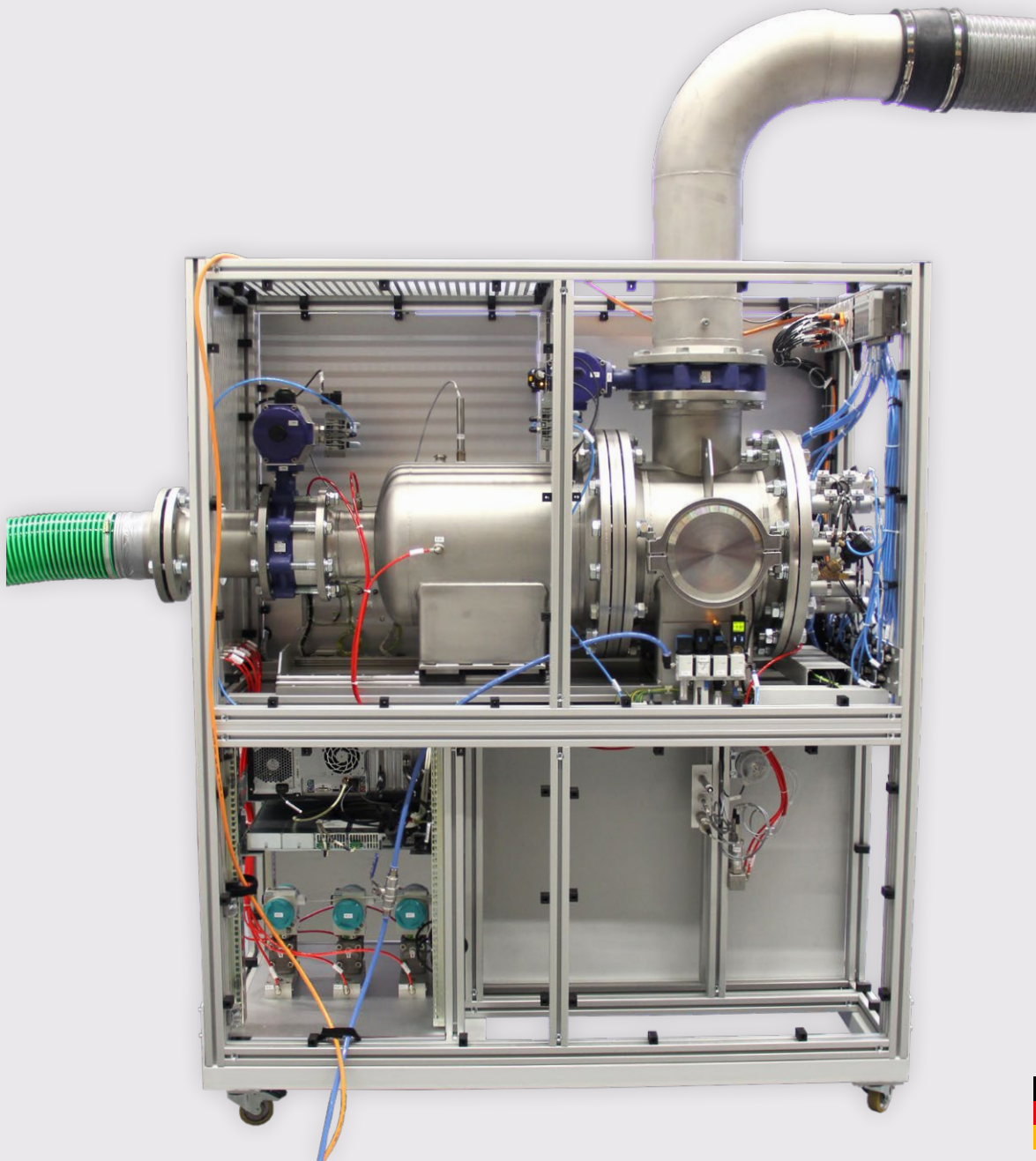
Perfection in fluids.

The right *flow*
by German engineering.



SMF[®]4000 - DD SonicMasterFlow[®]

Data sheet EPE-145249



Made in
GERMANY

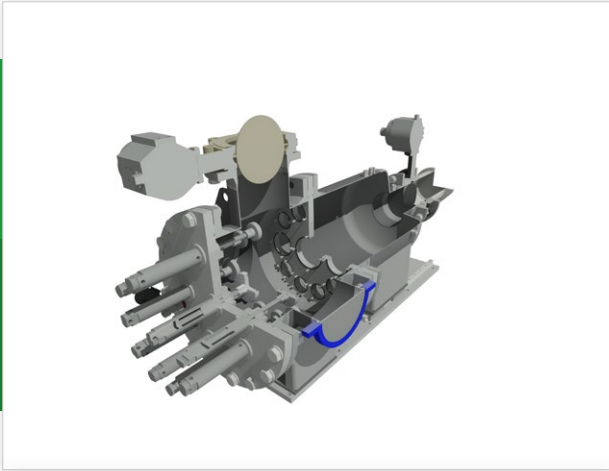


SMF[®] 4000 - DD SonicMasterFlow[®]

EPE-145249



Made in
GERMANY



Similar to figure

Calibration rig with sonic nozzles Drum Design

Calibration rig with up to 13 sonic nozzles
Flow generation up to 4000 m³/h
Nozzle equipment according to customer requirements

Description

The series of SMF[®] nozzle test rigs has been specifically designed for calibration with air. Depending on customer requirements, up to 13 sonic nozzles can be combined. The different circuits resulting therefrom allow a flow generation of 2¹³ = 8192 different flow rates. A precise flow can be adjusted in a very short period of time (about 500 ms). The register is made of drum configuration and equipped with appropriate sensors (temperature, pressure and humidity) for density determination. A calibration assembly provides an atmospheric suction through the test item and the nozzle barrel. A vacuum pump, or the connection to the house vacuum power, ensures the necessary sonic pressure ratio downstream of the nozzles. Alternatively, operation can also be realised with overpressure, according to customer requirements.

The system is controlled by a PC with precise data acquisition hardware and control software in LabVIEW.

Advantages

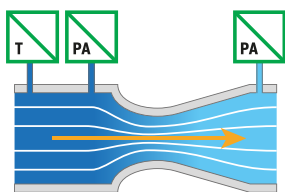
- ✓ Compact design
- ✓ Integrated inlet section
- ✓ Highest accuracy – up to 0.15%
- ✓ Approved by the PTB as a calibration standard
- ✓ Representation of the volume flow or mass flow
- ✓ Flexible nozzle adjustment per customer requirements
- ✓ Gas meter calibration up to G 2500
- ✓ Excellent long-term stability - recalibration period up to 10 years for sonic nozzles

Technical data

Volume flow	0.1..4000 m ³ /h
Medium	atm. air, compressed air
Dimensions (D x W x H)	1000 x 1600 x 2000 (mm)
Weight	approx. 900 kg

Measurement parameters

Absolute pressure – ambient	p _{amb}
Temperature - ambient	T _{amb}
Absolute pressure – in front of nozzles	p _{NOZZLE UP}
Temperature – in front of nozzles	T _{NOZZLE}
rel. humidity - in front of nozzle	rH _{NOZZLE}
Absolute pressure - downstream from nozzle	p _{NOZZLE DOWN}



Measurement principle



Standard solutions Application examples:



Gas and flow measurement technology:
Calibration rig for gas meters, MFM, MFC, LFE, Venturi nozzles



Automotive: Balance stand for valves, actuators, flow meters, HFM, ...



Filtration technology: Characteristic test for intake filters



Valve technology: Characteristic test for valves



Top-Innovator
2016

For special requirements we are happy to advise you. Subject to change. / EPE-145249 / Last update: 01/2018 / V02
© EP Ehrler Prüftechnik Engineering GmbH, Wilhelm-Hachtel-Str. 8, D-97996 Niederstetten

TOP-INNOVATOR 2016: EP Ehrler Prüftechnik is one of the most innovative companies in the German SME segment.

+49 (0) 79 32 . 6 06 66 - 0 / +49 (0) 79 32 . 6 06 66 - 11 / info@ep-e.com / www.ep-e.com