

EMISSION MONITORING SYSTEMS

We *care* about the environment

MULTI-PURPOSE
in top design



MFplus

The versatile instrument
around the flue gas measurement

ALL IMPORTANT MEASUREMENTS WITH ONLY ONE INSTRUMENT

MF plus

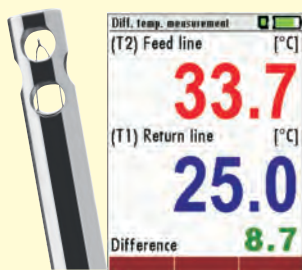
PRESSURE measurement



high precision, by using either internal or external sensors

Measurement	Value
Differ. pressure	9.28
Gas flow pressu	0.00
Pressure 3	0.00
Pressure 4	0.00


TEMPERATURE measurement



using thermocouples with 2 standard K-type sockets

Measurement	Value
(T2) Feed line	33.7 °C
(T1) Return line	25.0 °C
Difference	8.7

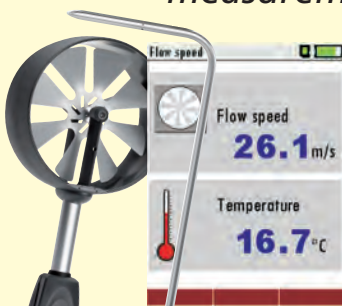
GAS LEAKAGE detection*



using HC-sniffer with cable and flexible detector head

Measurement	Value
HC environment	97 ppm

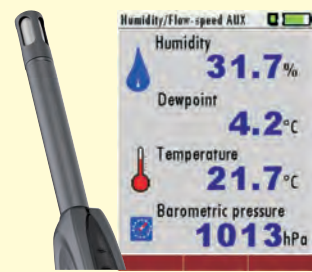
FLOW-SPEED measurement*



using vane probe or Pitot tube with flow rate calculation

Measurement	Value
Flow speed	26.1 m/s
Temperature	16.7 °C

HUMIDITY measurement*

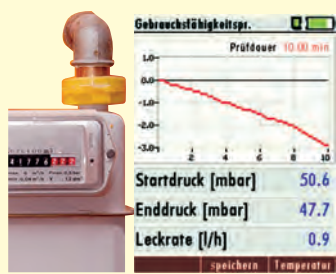


measurement of relative humidity, temperature and barometric pressure

Measurement	Value
Humidity	31.7 %
Dewpoint	4.2 °C
Temperature	21.7 °C
Barometric pressure	1013 hPa

special options for German measuring applications

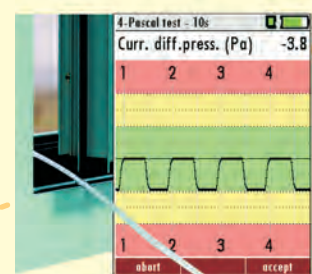
PIPE tests*



at gas installations according to TRGI. (load- and gas tightness tests as well as amount of leakage detection)

Parameter	Value
Startdruck [mbar]	50.6
Enddruck [mbar]	47.7
Leckrate [l/h]	0.9

4-Pa test*



checking of combustion air supply at ambient air depended heat systems

Measurement	Value
Curr. diff.press. (Pa)	-3.8

* option

OUTSTANDING ADVANTAGES:

- well-designed, light-weight, robust enclosure
- super bright, color 3,5" TFT display
- dirt and moisture resistant keypad
- Robust stainless steel connectors
- High energy NiMH battery
- Measuring data storage
- Data logging function (2 GB SD card)
- Data transfer to PC using USB or Bluetooth connections
- Print-outs with IR-Speedprinter



4 connectors *

Model PRESSURE/TEMPERATURE



Standard functions:

- Pressure / Diff. pressure measurement
- Temperature measurement
- Differential temperature measurement
- SD card and data logging software
- Transfer of measuring results to PC using USB interface
- Print-out of measuring results with IR-speedprinter

Optional functions:

- Simultaneous measurement of 2 differential pressures (4 connectors)
- Gas leakage detection using HC-detector (HC-sniffer)
- Flow speed measurement (Pitot tube or vane probe)
- Measurement of relative humidity, temperature and barometric pressure
- 4 Pa-test
- External connector press. sensors >1 bar
- Bluetooth wireless data transfer to PC

Model TRGI*



Standard functions:

- Pipe test according TRGI
- Loading test (TRGI)
- Tightness test (TRGI)
- Pressure / Diff. pressure measurement
- Temperature measurement / differential temperature measurement
- SD card and data logging software
- Transfer of measuring results to PC using USB interface
- Print-out of measuring results with IR-speedprinter

Optional functions:

- Gas leakage detection using HC-detector (HC-sniffer)
- Flow speed measurement (Pitot tube or vane probe)
- Measurement of relative humidity, temperature and barometric pressure
- 4 Pa-test
- External connector press. sensors >1 bar
- Bluetooth wireless data transfer to PC

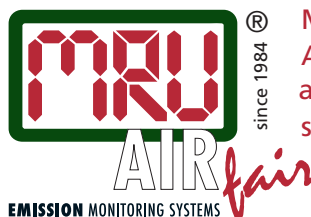
TRGI* = technical regulations for gas installations in Germany

Technical specifications

MFplus Multi-purpose instrument	Instrument with up to 7 functions	
Measurement components:	<i>range</i>	<i>accuracy</i>
Pressure measurement (internal)	± 100 hPa ± 250hPa ± 1 bar	± 0,25 % reading ± 2 % reading ± 2 % reading
Pressure measurement (external)	0 ... 5 bar 0 ... 25 bar 0 ... 40 bar	±10 mbar or 1 % reading* ±50 mbar or 1 % reading* ±100 mbar or 1 % reading*
Leakage amount	0 ... 8 l/h	± 0,2 l or 5 % reading*
Loading test	0 ... 1.500 hPa	± 4 hPa or 2 % reading*
Tightness test	0 ... 200 hPa	± 0,5 hPa or 3 % reading*
Humidity	3 ... 98 %	± 3% RH
Barometric pressure	300 ... 1.200 hPa	± 3 hPa
Ambient temperature	- 20 ... + 80 °C	± 1°C
Flow speed		
– with Pitot tube	1 ... 40 m/s	± 1 m/s or 1 % reading*
– with vane probe	0,25 ... 3 m/s 3,1 ... 35 m/s	± 0,1 m/s or ± 3 % reading* ± 0,3 m/s or ± 1 % reading*
Leakage detection	5 ... 20.000 ppm	
Differential temperature	up to 650 °C or up to 1.300 °C (with suitable probes)	± 1 °C or 1 % reading*
General specifications:		
Operation temperature	+ 5 ... + 45 °C, max. 95 % RH, none condensing	
Storage temperature	- 20 ... + 50 °C	
Ambient conditions	not in aggressive, corrosive or high dust ambience, not for use in hazardous areas	
Power supply	NiMH battery, 15 h operation	
Mains	wall-plug grid power supply 100 ... 240 Vac / 50 ... 60 Hz, 12 V DC/5A	
Type of protection	IP 20	
Weight	approx. 470 g	
Dimensions	(B x H x T) 90 x 205 x 38 mm	

* which ever is larger!

MFplus –
Numerous functions and versatility
in conjunction with high convenience



MRU –
Always a safe
and
sustainable decision