

EMISSION MONITORING SYSTEMS

We *care* about the environment

MULTI-PURPOSE
in top design



Pipe tests

Gas leakage

2 channel
diff. pressure

Temperature

Humidity

Barom. pressure

Flow speed



MFplus

The versatile instrument
around the flue gas measurement

ALL IMPORTANT MEASUREMENTS WITH ONLY ONE INSTRUMENT

MF *plus*

PRESSURE measurement

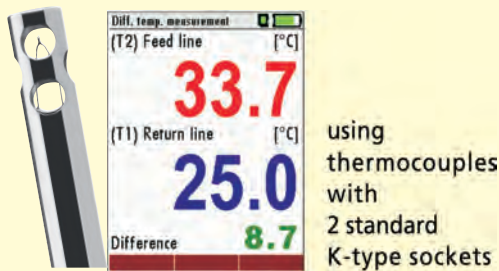


high precision, by using either internal or external sensors

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

99.9

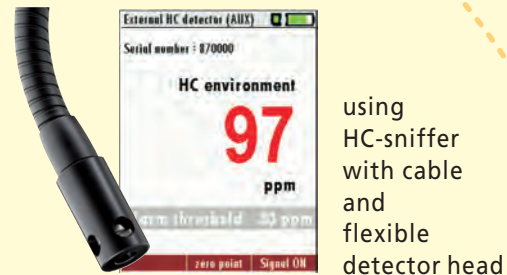
TEMPERATURE measurement



using thermocouples with 2 standard K-type sockets

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

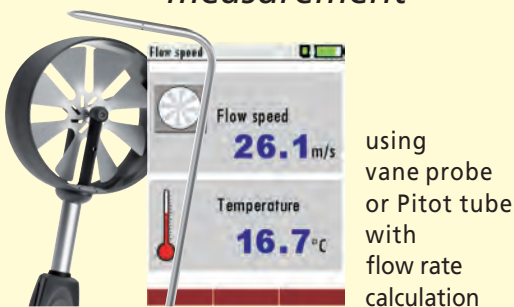
GAS LEAKAGE detection*



using HC-sniffer with cable and flexible detector head

Measurement	Value
HC environment	97
ppm	

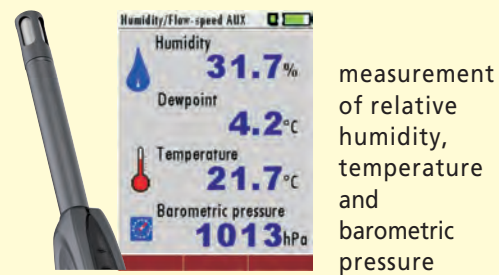
FLOW-SPEED measurement*



using vane probe or Pitot tube with flow rate calculation

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

HUMIDITY measurement*

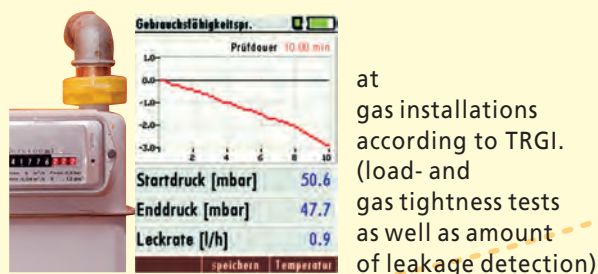


measurement of relative humidity, temperature and barometric pressure

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

special options for German measuring applications

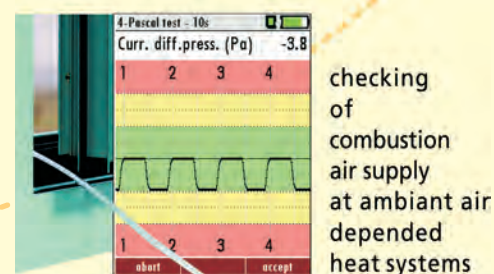
PIPE tests*



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

Measurement	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

EMISSION MONITORING SYSTEMS

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IW-6405GB-KID-XX-012