Flow

The basic principle of Pneumatech's flow meters is calorimetric measuring. This means, while measuring the thermal mass flow or standard volume flow, no additional temperature and pressure compensation is required. The standard volume is a common volumetric unit used to compare gas quantities at different pressures and temperatures. To meet various standards, the reference conditions can be set directly on the display of each flow meter. Thus, our reliable flow meters grant consumption and flow measurement according to the individual standard our customers wish to use them.

All flow measurement devices come with a factory calibration certificate.

Flow Check Universal - Flow meter for compressed air and gases

Features & Benefits

- Incl. temperature measurement
- RS 485 interface, Modbus-RTU as a standard
- Integrated display for m³/h and m³
- Usable from 1/2“ to DN 1000
- Easy installation under pressure
- 4-20 mA analog output for m³/h resp. m³/min
- Pulse output for m³ or M-Bus (optional)
- Inner diameter adjustable via keypad
- Total counter resettable
- **Adjustable via keys at the display:** Reference conditions, °C and mbar, 4-20 mA scaling, pulse weight
- Option: Bi-directional measurement. Blue or green arrows in the display indicate the flow direction. A meter reading is available for each flow direction
- Inner diameter adjustable via keypad

Options

Bi-directional measurement. Blue ~~or~~ green arrows in the display indicate the flow direction. A meter reading is available for each flow direction

Description	Order no.
Flow Check Universal flow sensor in basic version: Standard (92.7 m/s), probe length 220 mm, without display	2255332455
Option: Bi-directional measurement - includes 2 x 4 - 20 mA analog outputs and 2x pulse outputs. These are not available for Ethernet (PoE) and M-Bus interface	2255332627
Options for Flow Check Universal :	
Display	2255332628
Max version (185 m/s)	2255332629
High Speed version (224 m/s)	2255332630
Low speed version (50 m/s)	2255332631
1 % Accuracy of m.v. ± 0,3 % of f.s.	2255332632
Ethernet-Interface for Flow Check/ Flow Check Universal	2255332633
Ethernet-Interface PoE for Flow Check/ Flow Check Universal	2255332634
M-Bus board for Flow Check/ Flow Check Universal	2255332635
Probe length 120 mm	2255332636
Probe length 160 mm	2255332637
Probe length 300 mm	2255332638
Probe length 400 mm	2255332639
Probe length 500 mm	2255332640
Probe length 600 mm	2255332641
ISO calibration certificate (5 calibration points) for Flow sensors	2255332642
Gas type: ___ (specify type of gas when ordering)	2255332643
Gas mixture: ___ (specify gas mixture when ordering)	2255332644
Real gas calibration	2255332645
Special cleaning oil and grease-free (e. g. oxygen application)	2255332646
Silicone-free version incl. cleaning free of oil and grease	2255332647
Additional calibration curve stored in the sensor (selectable via display)	2255332648
Certificate of origin	2255332649

Technical data flow check universal	
Parameters	m³/h, l/min (1000 mbar, 20 °C) in case of compressed air resp. Nm³/h, Nl/min (1013 mbar, 0 °C) in case of gases
Units adjustable via keys at display	m³/h, m³/min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min, g/s, lb/min, lb/h
Adjustable via keypad	Diameter for volume flow calculation, counter resettable
Sensor	Thermal mass flow sensor
Measuring medium	Air, gases
Gas types are adjustable over PMH service software or PMH data logger	Air, nitrogen, argon, helium, CO_2, oxygen, vacuum
Measure range	See table page 75
Accuracy (m.v.: of meas. value) (f.s.: of full scale)	± 1.5 % of m.v. ± 0.3 % of f.s. on request ± 1.0 % of m.v. ± 0.3 % of f.s.
Operating temperature	-30-110 °C probe tube -30-80 °C housing
Operating pressure	-1-50 bar
Digital output	RS 485 interface (Modbus-RTU), Optional: Ethernet-Interface PoE), M-Bus
Analog output	4-20 mA for m³/h e. g. l/min;
Pulse output	1 Pulse per m³ or per liter galvanically isolated. Pulse value can be set on the display. Alternatively, the pulse output can be used as an alarm relay
Supply	18-36 VDC, 5 W
Burden	< 500 Ω
Housing	Polycarbonate (IP 65)
Probe tube	Stainless steel, 1.4301 Mounting length 220 mm, Ø 10 mm
Mounting thread	G 1/2“
Ø Casing	65 mm
Mounting position	any

Further accessories see pages 54 to 58

Easy installation and removal under pressure

- Even under pressure, the flow sensor Flow Check Universal is mounted by means of a standard 1/2“ ball valve. During mounting and dismounting the circlip ring avoids an uncontrolled ejection of the probe which may be caused by the operating pressure.

  For the mounting into different pipe diameters Flow Check Universal is available in the following probe lengths: 120, 160, 220, 300, 400 mm. So the flow sensors are being mounted into existing pipelines with inner diameters of 1/2“ upwards.

  The exact positioning of the sensor in the middle of the pipe is granted by means of the engraved depth scale. The maximum mounting depth corresponds with the resprective probe length. Example: Flow Check Universal with probe length 220 mm has a maximum mounting depth of 220 mm.

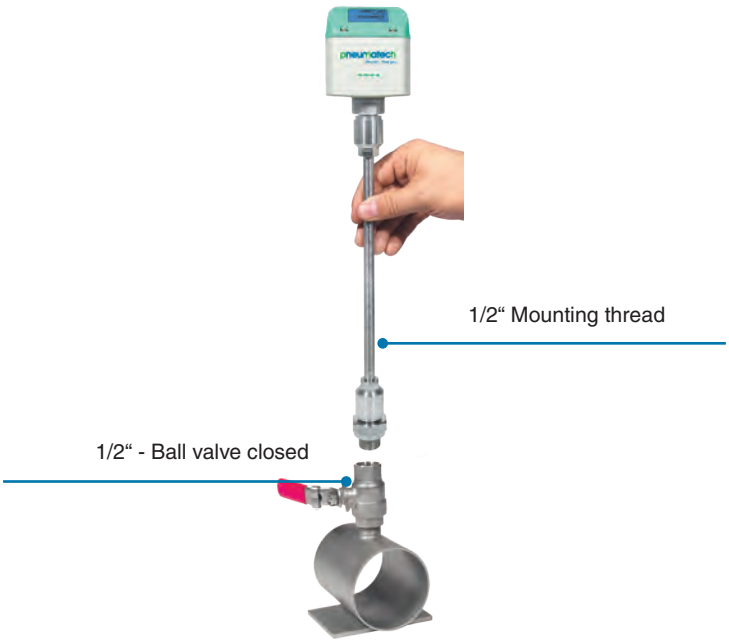
- If there is no suitable measuring point with 1/2 “ball valve, there are two easy ways to set up a measuring point:
  A. Weld on a 1/2“ screw neck and screw on a 1/2“
  ball valve

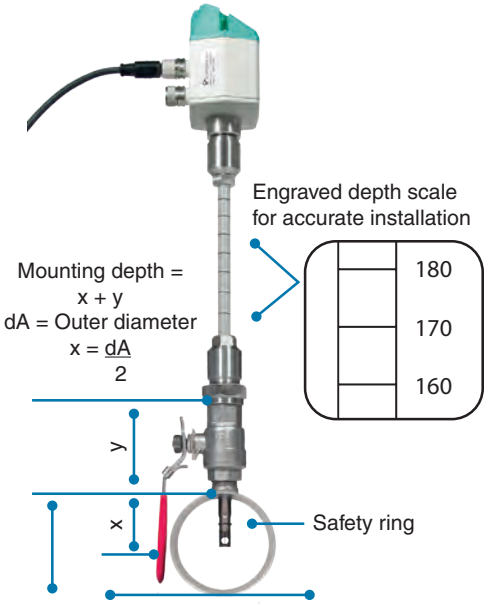
  B. Mount spot drilling collar incl. ball valve (see accessories)

  Drill holes can be drilled through the 1/2” ball valve into the existing tubing with the help of the drilling device, the drill chips are collected in a filter, then the probe is installed as described under 1).

- Due to the large measuring range of the probe even extreme requirements to the flow measurement (high volume flow in small pipe diameters) can be met.

  The measuring range is depending on the pipe diameter - see table on the right hand side.





Options


A Screw neck


B Spot drilling collar


Drill under pressure with the PMH Drill

Measuring ranges Flow Flow Check Universal for compressed air (ISO 1217: 1000 mbar, 20°C) Measuring ranges for other types of gas see pages 70-73

Inner diameter of pipe			**Flow Check Universal Standard (92,7 m/s)**		**Flow Check Universal Max. (185,0 m/s)**		**Flow Check Universal High Speed (224,0 m/s)**	
Inch	mm		Measuring range m³/h	(cfm)	Measuring range m³/h	(cfm)	Measuring range m³/h	(cfm)
1/2“	16,1	DN 15	759 l/min	26	1516 l/min	53	1836 l/min	64
3/4“	21,7	DN 20	89 m³/h	52	177 m³/h	104	215 m³/h	126
1“	27,3	DN 25	148 m³/h	86	294 m³/h	173	356 m³/h	210
1 1/4“	36,0	DN 32	266 m³/h	156	531 m³/h	312	643 m³/h	378
1 1/2“	41,9	DN 40	366 m³/h	215	732 m³/h	430	886 m³/h	521
2“	53,1	DN 50	600 m³/h	353	1197 m³/h	704	1450 m³/h	853
2 1/2“	68,9	DN 65	1028 m³/h	604	2051 m³/h	1207	2484 m³/h	1461
3“	80,9	DN 80	1424 m³/h	838	2842 m³/h	1672	3441 m³/h	2025
4“	110,0	DN 100	2644 m³/h	1556	5278 m³/h	3106	6391 m³/h	3761
5“	133,7	DN 125	3912 m³/h	2302	7808 m³/h	4594	9453 m³/h	5563
6“	159,3	DN 150	5560 m³/h	3272	11096 m³/h	6530	13436 m³/h	7907
8“	200,0	DN 200	8785 m³/h	5170	17533 m³/h	10318	21229 m³/h	12493
10“	250,0	DN 250	13744 m³/h	8088	27428 m³/h	16141	33211 m³/h	19544
12“	300,0	DN 300	19814 m³/h	11661	39544 m³/h	23271	47880 m³/h	28177

Flow Check - Inline flow meter

Easy installation into the existing pipeline due to integrated measuring section and weld neck flange (according to EN 1092-1 PN 40)

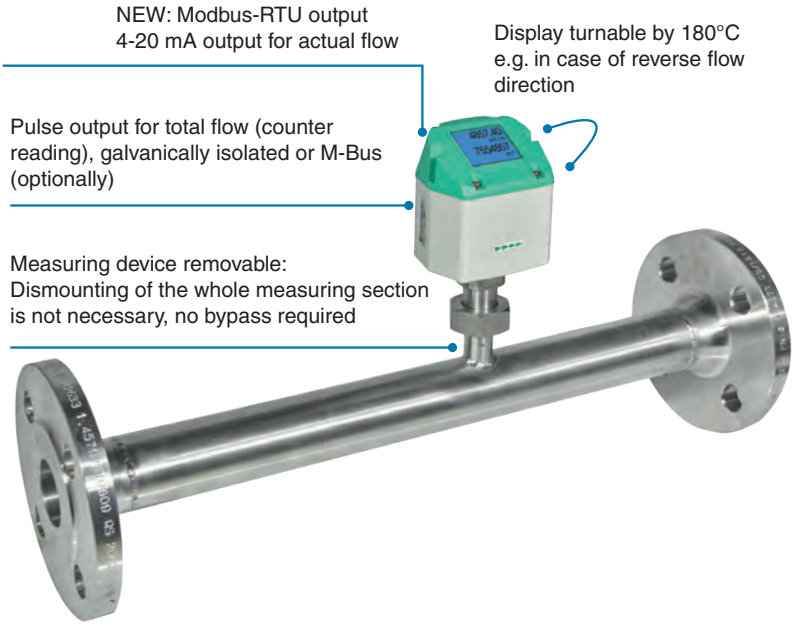
High measuring accuracy due to defined measuring section (inlet and outlet section)

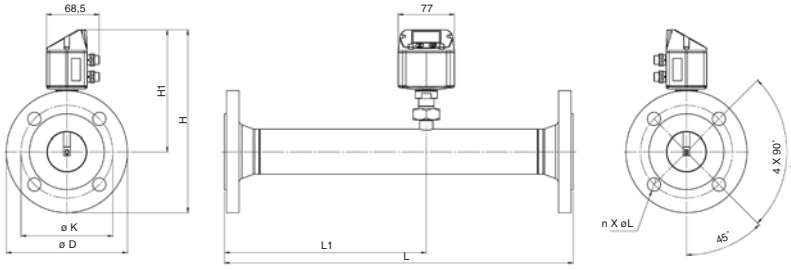
Display shows 2 values at the same time:

- Actual flow in m³/h, l/min
- Total consumption (counter reading) in m³, l resp. temperature measurement
- Values indicated in the display turnable by 180°C, e.g. in case of overhead installation

Application-technological features of the flow meters Flow Check:

- Digital interfaces such as Modbus RTU, Ethernet (PoE) and M-Bus enable connection to higher-level systems such as energy management systems, building management systems, SPS
- Easy and affordable installation
- Units freely selectable via keys at the display m³/h, m³/min, l/min, l/s, kg/h, kg/min, kg/s, cfm
- Compressed air counter up to 1.999.999.999 m³. Resetable to „zero“ via keypad
- Analogue output 4-20 mA, pulse output (galvanically separated)
- High measuring accuracy also in the lower measuring range (ideal for leakage measurement)
- Negligibly small loss of pressure
- Calorimetric measuring principle, no additional pressure and temperature measurement necessary, no mechanically moved parts
- Comprehensive diagnosis functions can be read out at the display or by remote access via Modbus-RTU like e. g. exceeding Max./Min values °C, calibration cycle, error codes, serial number. All parameters can be read out and changed via Modbus





Options

Zero-point adjustment, leak flow volume suppression

Bi-directional measurement. Blue or green arrows in the display indicate the direction of flow. A meter reading is available for each flow direction.

Measuring ranges flow Flow Check (Max version 185 m/s) for compressed air (ISO 1217: 1000 mbar, 20°C). Measuring ranges for other types of gas see pages 74 - 77									Flange DIN EN 1092-1		
Measuring section	**Outer pipe dia. mm**	**Inner pipe dia. mm**	**Measuring range m³/h**	**(cfm)**	**L mm**	**L1 mm**	**H mm**	**H1 mm**	**ØD mm**	**ØK mm**	**n x ØL**
DN 15	21,3	16,1	90	50	300	210	213,2	165,7	95	65	4 x 14
DN 20	26,9	21,7	170	100	475	275	218,2	165,7	105	75	4 x 14
DN 25	33,7	27,3	290	170	475	275	223,2	165,7	115	85	4 x 14
DN 32	42,4	36,0	530	310	475	275	235,7	165,7	140	100	4 x 18
DN 40	48,3	41,9	730	430	475*	275	240,7	165,7	150	110	4 x 18
DN 50	60,3	53,1	1195	700	475*	275	248,2	165,7	165	125	4 x 18
DN 65	76,1	68,9	2050	1205	475*	275	268,2	175,7	185	145	8 x 18
DN 80	88,9	80,9	2840	1670	475*	275	275,7	175,7	200	160	8 x 18
*Attention: Shortened inlet section! Please observe the recommended minimum inlet section (length = 15 x inner diameter) on site											

Description	**Order no.**
Flow Check 2F Flow meter with integr. DN 15 measuring section with Flange	2255332650
Flow Check 3F Flow meter with integr. DN 20 measuring section with Flange	2255332651
Flow Check 4F Flow meter with integr. DN 25 measuring section with Flange	2255332652
Flow Check 5F Flow meter with integr. DN 32 measuring section with Flange	2255332653
Flow Check 6F Flow meter with integr. DN 40 measuring section with Flange	2255332654
Flow Check 7F Flow meter with integr. DN 50 measuring section with Flange	2255332655
Flow Check 8F Flow meter with integr. DN 65 measuring section with Flange	2255332656
Flow Check 9F Flow meter with integr. DN 80 measuring section with Flange	2255332657
Bi-directional measurement - includes 2 x 4 - 20 mA analog outputs and 2x pulse outputs. These are not available for Ethernet (PoE) and M-Bus interface	2255332627
High-pressure version PN 40	2255332658
ANSI flange 150 lbs (instead of DIN flanges)	2255332659
ANSI flange 300 lbs (instead of DIN flanges)	2255332660
Measuring ranges	
Low Speed (50 m/s)	2255332661
Standard (92,7 m/s)	2255332662
High Speed (224 m/s)	2255332663
Options	
Special measuring range for Flow Check according to customer requirements	2255332664
1 % Accuracy of m.v. ± 0,3 % of f.s.	2255332632
Ethernet-Interface for Flow Check/ Flow Check Universal	2255332633
Ethernet-Interface PoE for Flow Check/ Flow Check Universal	2255332634
M-Bus board for Flow Check/ Flow Check Universal	2255332635
ISO calibration certificate (5 calibration points) for Flow sensors	2255332642
Gas type: ___ (specify type of gas when ordering)	2255332643
Gas mixture: ___ (specify gas mixture when ordering)	2255332644
Real gas calibration	2255332645
Special cleaning oil and grease-free (e. g. oxygen application)	2255332646
Silicone-free version incl. cleaning free of oil and grease	2255332647
Additional calibration curve stored in the sensor (selectable via display)	2255332648
Certificate of origin	2255332649

Technical data Flow Check	
Parameters	m³/h, l/min (1000 mbar, 20 °C) at compressed air or Nm³/h, Nl/min (1013 mbar, 0 °C) for gases
Units adjustable via keys at display	m³/h, m³/min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min, g/s, lb/min, lb/h
Sensor	Thermal mass flow sensor
Measuring medium	Air, gases
Gas types are adjustable over PMH service software or PMH data logger	Air, nitrogen, argon, helium, CO_2, oxygen, vacuum
Measure range	See table above
Accuracy (m.v.: of meas. value) (f.s.: of full scale)	± 1.5 % of m.v. ± 0.3 % of f.s. on request ± 1.0 % of m.v. ± 0.3 % of f.s.
Operating temperature	-30-80 °C
Operating pressure	-1 to 16 bar optional to PN 40
Digital output	RS 485 interface (Modbus-RTU), optional: Ethernet-Interface PoE), M-Bus
Analog output	4-20 mA for m³/h e. g. l/min
Pulse output	1 Pulse per m³ or per liter galvanically isolated. Pulse value can be set on the display. Alternatively, the pulse output can be used as an alarm relay
Supply	18-36 VDC, 5 W
Burden	< 500 Ω
Housing	Polycarbonate (IP 65)
Measuring section	stainless steel, 1.4301 or 1.4571
Process connection	Flange (to DIN EN 1092-1 e. g. ANSI 150 lbs or ANSI 300 lbs)
Mounting position	Any

Flow Check - Inline flow meter

Easy installation in existing piping through integrated measuring section (1/4˝ to 2“)

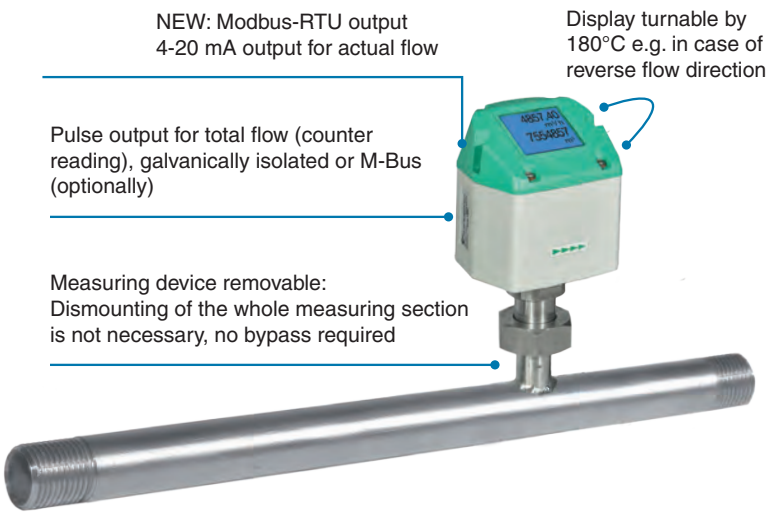
High measuring accuracy due to defined measuring section (inlet and outlet section)

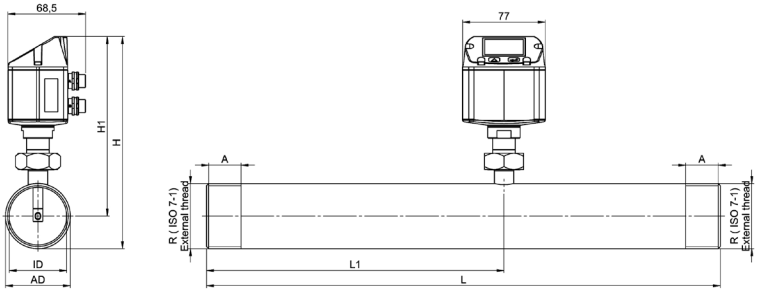
Display shows 2 values at the same time:

- Actual flow in m³/h, l/min,-
- Total consumption (counter reading) in m³, l resp. temperature measurement
- Values indicated in the display turnable by 180°C, e.g. in case of overhead installation

Application-technological features of the flow meters Flow Check:

- Digital interfaces such as Modbus RTU, Ethernet (PoE) and M-Bus enable connection to higher-level systems such as energy management systems, building management systems, SPS,-
- Easy and affordable installation
- Units freely selectable via keys at the display m³/h, m³/min, l/min, l/s, kg/h, kg/min, kg/s, cfm
- Compressed air counter up to 1.999.999.999 m³. Resetable to „zero“ via keypad
- Analogue output 4-20 mA, pulse output (galvanically separated)
- High measuring accuracy also in the lower measuring range (ideal for leakage measurement)
- Negligibly small loss of pressure
- Calorimetric measuring principle, no additional pressure and temperature measurement necessary, no mechanically moved parts
- Comprehensive diagnosis functions can be read out at the display or by remote access via Modbus-RTU like e. g. exceeding Max./Min values °C, calibration cycle, error codes, serial number. All parameters can be read out and changed via Modbus





Options

Zero-point adjustment, leak flow volume suppression

Bi-directional measurement. Blue or green arrows in the display indicate the direction of flow. A meter reading is available for each flow direction.

Measuring ranges flow Flow Check (Max. version 185 m/s) for compressed air (ISO 1217: 1000 mbar, 20 ° C) Measuring ranges for other types of gas see pages 74-77

Measuring section	Outer pipe dia. mm	Inner pipe dia. mm	Measuring ranges m³/h	cfm	L mm	L1 mm	H mm	H1 mm	A mm
R 1/4“	13,7	8,9	105 l/min	3,6	194	137	174,7	165,7	15
R 1/2“	21,3	16,1	90	50	300	210	176,4	165,7	20
R 3/4“	26,9	21,7	170	100	475	275	179,2	165,7	20
R 1“	33,7	27,3	290	170	475	275	182,6	165,7	25
R 1 1/4“	42,4	36,0	530	310	475	275	186,9	165,7	25
R 1 1/2“	48,3	41,9	730	430	475*	275	186,9	165,7	25
R 2“	60,3	53,1	1195	700	475*	275	195,9	165,7	30

*Attention: Shortened inlet section! Please observe the recommended minimum inlet section (length = 15 x inner diameter) on site

Description	Order no. Stainless steel 1.4571	Order no. Stainless steel 1.4301
Flow Check 1 Flow meter with 1/4“ measuring section	2255332744	2255330393
Flow Check 2 Flow meter with 1/2“ measuring section	2255332738	2255330394
Flow Check 3 Flow meter with 3/4“ measuring section	2255332739	2255330395
Flow Check 4 Flow meter with 1“ measuring section	2255332740	2255330396
Flow Check 5 Flow meter with 1 1/4“ measuring section	2255332741	2255330397
Flow Check 6 Flow meter with 1 1/2“ measuring section	2255332742	2255330398
Flow Check 7 Flow meter with 2“ measuring section	2255332443	2255330399
Bi-directional measurement - includes 2 x 4 - 20 mA analog outputs and 2x pulse outputs. These are omitted for Ethernet (PoE) and M-Bus		2255332627
High-pressure version PN 40		2255332658
Measuring ranges		
Low Speed (50 m/s)		2255332661
Standard (92,7 m/s)		2255332662
High Speed (224 m/s)		2255332663
Options		
Special measuring range for Flow Check according to customer requirements		2255332664
1 % Accuracy of m.v. ± 0,3 % of f.s.		2255332632
Ethernet-Interface for Flow Check/ Flow Check Universal		2255332633
Ethernet-Interface PoE for Flow Check/ Flow Check Universal		2255332634
M-Bus board for Flow Check/ Flow Check Universal		2255332635
ISO calibration certificate (5 calibration points) for Flow sensors		**2255332642**
Gas type: ___ (specify type of gas when ordering)		2255332643
Gas mixture: ___ (specify gas mixture when ordering)		2255332644
Real gas calibration		2255332645
Special cleaning oil and grease-free (e. g. oxygen application)		2255332646
Silicone-free version incl. cleaning free of oil and grease		2255332647
Additional calibration curve stored in the sensor (selectable via display)		2255332648
Certificate of origin		2255332649

Technical data flow check	
Parameters	m³/h, l/min (1000 mbar, 20 ° C) at compressed air or Nm³/h, Nl/min (1013 mbar, 0 °C) for gases
Units adjustable via keys at display	m³/h, m³/min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min, g/s, lb/min, lb/h
Sensor	Thermal mass flow sensor
Measuring medium	Air, gases
Gas types are adjustable over PMH service software or PMH data logger	Air, nitrogen, argon, helium, CO_2, oxygen, vacuum
Measure range	See table above
Accuracy (m.v.: of meas. value) (f.s.: of full scale)	± 1.5 % of m.v. ± 0.3 % of f.s. on request ± 1.0 % of m.v. ± 0.3 % of f.s.
Operating temperature	-30-80 °C
Operating pressure	-1 to 16 bar optional to PN 40
Digital output	RS 485 interface (Modbus-RTU), optional: Ethernet-Interface PoE), M-Bus
Analog output	4-20 mA for m³/h e. g. l/min
Pulse output	1 Pulse per m³ or per liter galvanically isolated. Pulse value can be set on the display. Alternatively, the pulse output can be used as an alarm relay
Supply	18-36 VDC, 5 W
Burden	< 500 Ω
Housing	Polycarbonate (IP 65)
Measuring section	Stainless steel, 1.4301 or 1.4571
Process connection	R 1/4“ to R 2“ (BSP British Standard Piping) or 1/2“ to 2“ NPT-thread
Mounting position	Any

Flow Check Universal W - Flow sensor for wet compressed air

For measuring immediately downstream of the compressor in moist air up to +180 °C

Field of Application:

- Measurement immediately downstream of the compressor
- Measurement at high temperatures
- Measurement of fast processes

Benefits at a glance:

- Particularly suitable for extremely high flow rates
- Extremely fast response time: 100 ms
- Flow, total consumption, temperature and pressure
- Measurement at high temperatures, max. temperature 180 °C
- Measurement in various gases by selecting the gas type, on request
- Can be used in pipes from DN 20 to DN 500
- Installation via 1/2″ ball valve under pressure
- RS 485 interface (Modbus-RTU), 4...20 mA, pulse output as standard

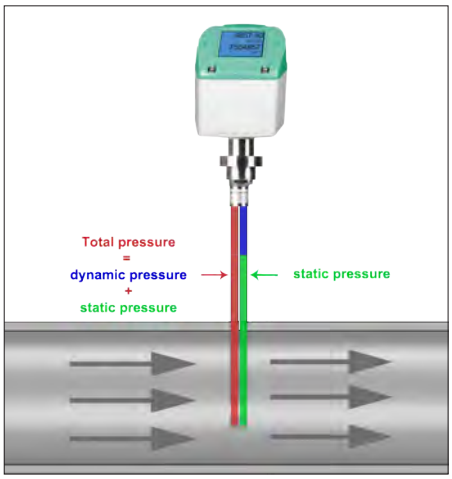
Typical applications:

- Measurement of the capacity of compressors
- Compressed air audits
- Efficiency measurement of compressed air systems

Installation requirements:

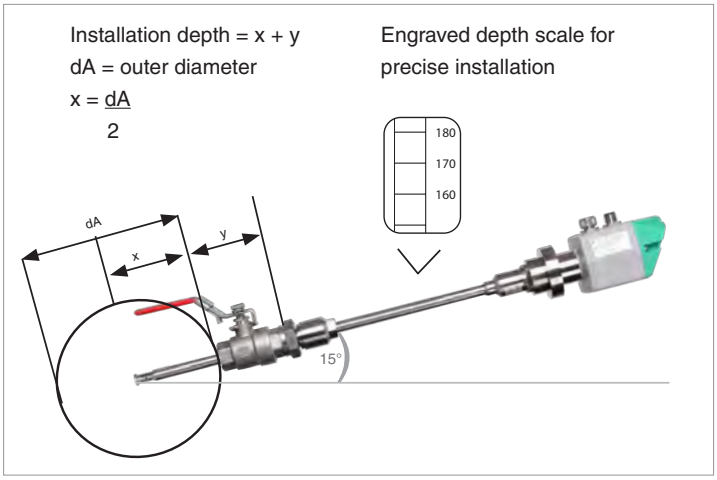
- After functioning water separator
- In horizontal lines (recommended) or in risers

The integrated, precise differential pressure sensor measures the differential pressure/dynamic pressure at the sensor tip. The pressure depends on the respective gas velocity. The flow is therefore easy to determine by means of the pipe diameter. The additional measurement of temperature and absolute pressure and calculation of the relevant density means that measuring can be carried out for various gases, a wide variety of temperatures and pressures.



Technical data Flow Check Universal W	
Measuring range:	up to 224 m/s / 600 m/s
Measured medium:	Air, non-aggressive gases
Accuracy: **(m.v.: of meas. value)** **(f.s.: of full scale)**	 ± 1.5% of m.v. ± 0.3% of f.s.(20...224 m/s) ± 1.5% of m.v. (> 224 m/s)
Measuring principle:	Differential pressure
Measuring span:	1:10
Response time:	t 99: < 1 sec.
Temperature of the medium:	-30 °…+180 °C
Operating pressure:	Max. 20 bar
Ambient temperature:	-30 °…+70 °C
Screw-in thread:	G 1/2″, ISO 228
Power supply:	18…36 VDC, 5 W
Signal outputs:	As standard: RS 485 (Modbus-RTU), 4…20 mA, pulse **Optional**: Ethernet Interface (PoE), M-Bus

Simple installation and removal under pressure



Recommended installation position

Description	Order no.
Flow Check Universal W basic version: Standard (224m/s); probe length 220mm, G1/2», without display, signal output 1x 4…20mA analogue output (electrically not isolated), pulse output, RS 485 (Modbus-RTU), reference standard 20°C, 1000mbar	2255332970
Options	
600m/s	2255332971
1/2» NPT male thread	2255332972
Probe length 400mm	2255332973
With display	2255332974
Signal output Ethernet interface (Modbus/TCP), 1x 4…20mA analogue output (not electrically isolated), RS 485 (Modbus-RTU)	2255332975
Signal output Ethernet interface PoE (Power over Ethernet) (Modbus/TCP), 1x 4…20mA analogue output (not electrically isolated), RS 485 (Modbus-RTU)	2255332976
Signal output M-Bus 1x 4…20mA analogue output (not electrically isolated), RS 485 (Modbus-RTU)	2255332977
Reference standard 0°C, 1013.25mbar	2255332978
Reference standard 15°C, 981mbar	2255332979
Reference standard 15°C, 1013.25mbar	2255332980
Gas type additional gas on request	2255332981

Flow measuring ranges Flow Check Universal W for compressed air (ISO 1217:1000 mbar, 20 °C)

Inside diameter of pipe			Flow Check Universal W 20 … 224 m/s	
			Measuring range initial values and full scale	
Inch	mm	DN	m³/h	(cfm)
3/4″	21.7	DN 20	19 … 215	11 … 127
1″	27.3	DN 25	32 … 357	19 … 210
1 1/4″	36.0	DN 32	57 … 644	34 … 379
1 1/2″	41.9	DN 40	79 … 886	47 … 522
2″	53.1	DN 50	130 … 1450	76 … 853
2 1/2″	68.9	DN 65	222 … 2484	131 … 1462
3″	80.9	DN 80	307 … 3440	181 … 2025
4″	110.0	DN 100	571 … 6391	336 … 3762
5″	133.7	DN 125	844 … 9453	497 … 5564
6″	159.3	DN 150	1200 … 13436	706 … 7908
8″	200.0	DN 200	1896 … 21230	1116 … 12495
10″	250.0	DN 250	2966 … 33211	1746 … 19547
12″	300.0	DN 300	4276 … 47881	2517 … 28182

Accessories Flow Check/ Flow Check Universal

Description	Order no.
Connection cable for Flow/ PDP series, 5 m	2255460213
Connection cable for Flow/ PDP series, 10 m	2255460214
Connection cable for Flow/ PDP series, 20 m	2255460215
Cable for alarm / pulse output, with M12 plug, 5 m	2255332609
Cable for alarm / pulse output, with M12 plug, 10 m	2255332610
Connection cable for Flow/ PDP series, 5 m shielded	2255332607
Connection cable for Flow/ PDP series, 10 m shielded	2255332608

Connection cable

Description	Order no.
Ethernet connection cable, length 5 m, M12 connector x-coded (8 pol.) on RJ 45 plug	2255332614
Ethernet connection cable, length 10 m, M12 connector x-coded (8 pol.) on RJ 45 plug	2255332615

Ethernet connection cable

Description	Order no.
M12 T-connector for Flow Check/ Flow Check Universal for connecting several sensors to an M-Bus or Modbus network	2255332666

M12 T-connection for flow check

Description	Order no.
M12 plug for Flow Check/ Flow Check Universal	2255332611
M12 plug angled 90°	2255332612

M12 plug for Flow Check

M12 plug angled 90°

Description	Order no.
Drilling jig incl. drill (Ø 13 mm)	2255332667

Accessories Flow Check/ Flow Check Universal

Description	Order no.
High pressure protection recommended for installations from 10 to 50 bar (Flow Check Universal)	2255332668

- Only suitable for Flow Check Universal with sensor length: 160 mm, 220 mm, 300 mm. For further sensor length on request

Description	Order no.
Thickness meter PMH 0495 incl. case and calibration block	2255332669

Thickness meter

Description	Order no.
Welding Nipple, L = 35 mm, male thread, R 1/2″ stainless steel 1.4301	2255332670
Welding Nipple, L = 35 mm, male thread, R 1/2″ stainless steel 1.4571	2255332671

Description	Order no.
X-connection for connection of pressure and dew point sensor at the same measuring point (incl. 2x quick-release coupling)	2255332673

Description	Order no.
Ball valve I / I G 1/2″ stainless steel	2255332672

Description	Order no.
Thread adapter G 1/2″ female thread to NPT 1/2″ male thread	2255332674

Thread adapter G 1/2

Accessories for all Flow Check

Description	Order no.
Power supply in wall housing for max. 2 sensors of the Flow / PDP Sens series 100-240 V, 23 VA, 50-60 Hz / 24 VDC, 0.35 A	2255332616
Power supply in wall housing for max. 4 sensors of the Flow Check/ Flow Check Universal series 100-240 V, 23 VA, 50-60 Hz / 24 VDC, 0.35 A	2255332690

Power supply in wall housing

Description	Order no.
Plug-in power supply 100-240 V, AC / 24 V for Flow / PDP Sens	2255332617

Plug-in power supply

Description	Order no.
PMH service software incl. PC connection set, USB port and interface adapter to the sensor	2255332597

PMH service software

Description	Order no.
External gateway PROFIBUS for connection to integrated RS 485 interface	2255332467
External gateway PROFINET for connection to integrated RS 485 interface	2255332676

External gateway PROFIBUS

Description	Order no.
Transport case for all sensors (dimensions: 500 x 360 x 120 mm)	2255332518

Transport case for all sensors

External thread	Pipe (outside ø thickness)	Total length	Order no.
R 1/2“	21,3 x 2,6 mm	500 mm	2255332678
R 3/4“	26,9 x 2,6 mm	600 mm	2255332679
R 1“	33,7 x 3,2 mm	750 mm	2255332680
R 1 1/4“	42,4 x 3,2 mm	900 mm	2255332681
R 1 1/2“	48,3 x 3,2 mm	1000 mm	2255332682
R 2“	60,3 x 3,6 mm	1250 mm	2255332683
R 2 1/2“	76,1 x 3,6 mm	1500 mm	2255332684
From DN 80 with flange DIN 2633			
DN 80/88,9	88,9 x 2,0 mm	1850 mm	2255332685
DN 100/114,3	114,3 x 2,0 mm	2104 mm	2255332686
DN 125/139,7	139,7 x 3,0 mm	2860 mm	2255332687
DN 150/168,3	168,3 x 3,0 mm	3110 mm	2255332688

Practical accessories measuring sections

Measuring sections for precise measurements: Measuring section in stainless steel 1.4301 incl. ball valve, up to DN 65 (R 2 1/2″) with R male thread, from DN 80 with welding neck to DIN 2633.

Measuring section 1/2“

Description	DN	Order no.
Spot drilling collar for pipe-Ø 032 - 036 mm, length: 100 mm*		2255332689
Spot drilling collar for pipe-Ø 036 - 040 mm, length: 100 mm*		2255332691
Spot drilling collar for pipe-Ø 040 - 044 mm, length: 150 mm*		2255332692
Spot drilling collar for pipe-Ø 044 - 051 mm, length: 200 mm*		2255332693
Spot drilling collar for pipe-Ø 048 - 055 mm, length: 200 mm*	40	2255332694
Spot drilling collar for pipe-Ø 052 - 059 mm, length: 200 mm*		2255332695
Spot drilling collar for pipe-Ø 057 - 064 mm, length: 200 mm*	50	2255332696
Spot drilling collar for pipe-Ø 063 - 070 mm, length: 200 mm*		2255332697
Spot drilling collar for pipe-Ø 070 - 077 mm, length: 200 mm*	65	2255332698
Spot drilling collar for pipe-Ø 075 - 083 mm, length: 200 mm*		2255332699
Spot drilling collar for pipe-Ø 082 - 090 mm, length: 200 mm*		2255332700
Spot drilling collar for pipe-Ø 087 - 097 mm, length: 200 mm*	80	2255332701
Spot drilling collar for pipe-Ø 095 - 104 mm, length: 200 mm*		2255332702
Spot drilling collar for pipe-Ø 102 - 112 mm, length: 200 mm*		2255332703
Spot drilling collar for pipe-Ø 108 - 118 mm, length: 200 mm*	100	2255332704
Spot drilling collar for pipe-Ø 118 - 128 mm, length: 200 mm*		2255332705
Spot drilling collar for pipe-Ø 125 - 135 mm, length: 200 mm*		2255332706
Spot drilling collar for pipe-Ø 133 - 144 mm, length: 200 mm*	125	2255332707
Spot drilling collar for pipe-Ø 145 - 155 mm, length: 250 mm*		2255332708
Spot drilling collar for pipe-Ø 151 - 161 mm, length: 250 mm*	150	2255332709
Spot drilling collar for pipe-Ø 159 - 170 mm, length: 250 mm*		2255332710
Spot drilling collar for pipe-Ø 168 - 180 mm, length: 250 mm*		2255332711
Spot drilling collar for pipe-Ø 180 - 191 mm, length: 250 mm*	175	2255332712
Spot drilling collar for pipe-Ø 193 - 203 mm, length: 300 mm*		2255332713
Spot drilling collar for pipe-Ø 200 - 210 mm, length: 300 mm*		2255332714
Spot drilling collar for pipe-Ø 209 - 220 mm, length: 300 mm*	200	2255332715

*Incl. 1/2″ ball valve
* not suitable for copper and plastic pipes

Useful accessories-spot drilling collars for compressed air lines

- If there is no measuring site with 1/2“ ball valve present it can be set up by means of spot drilling collars
- The spot drilling collar is imposed onto the pipe and tightened via thread rods. The enveloping rubber gasket is pressure-tight up to 10 bar. By means of the drilling jig it is possible to drill through the 1/2“ ball valve into the existing pipe.
- **Important**: Please indicate the exact outer diameter of the existing pipe when placing the order resp. please select the suitable spot drilling collar from the adjoining list.

PMH Service Software - for Flow Check meters

Including PC connection set, USB adapter and interface adapter to the meter

The flow sensors Flow Check can be connected to the PC and the following adjustments can be carried out by means of the PMH Service Software:

- Selection of the gas type (Compressed air, CO_2, N_2O, N_2, O_2, NG, Ar, CH4)
- Selection of the units for flow, velocity, temperature, consumption
- Selection of units: m³/h, Nm³/h, m³/min, Nm³/min, ltr/h, Nltr/h, ltr/min, Nltr/min, ltr/s, Nltr/s, cfm, SCFM, kg/h, kg/min, kg/s
- Adjustment of the reference temperature, reference pressure
- Zero-point adjustment, low flow cut-off adjustable
- Modbus and M-Bus settings
- Scaling of the 4-20 mA analog output
- Reading out of: Version number, production date, serial number, date of last calibration
- Adjustment of alarm limits
- Reset to factory defaults
- Transfer of updates to the sensor (firmware update, language update)

Description	Order no.
PMH Service Software for Flow/ PDP sensors incl. PC connection set, USB connection and interface adapter to the sensor	2255332597

Measuring ranges Flow Check Universal

Measuring ranges Low-Speed version

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			Low-Speed version (50 m/s)									
			Measuring range Nm³/h * / [cfm]									
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH_4)	Helium (He)	Hydrogen (H2)	Propane (C3H8)	Recommended probe length
1/2“	16,1	DN 15	24 [14]	22 [13]	38 [22]	23 [13]	24 [14]	14 [8]	10 [6]	7 [4]	11 [6]	160 mm - 6,299 inch
3/4“	21,7	DN 20	48 [28]	44 [26]	75 [44]	45 [26]	47 [27]	28 [16]	20 [11]	14 [8]	22 [13]	
1“	27,3	DN 25	79 [46]	73 [43]	124 [73]	75 [44]	78 [46]	47 [27]	33 [19]	23 [13]	36 [21]	
1 1/4“	36,0	DN 32	143 [84]	132 [77]	224 [132]	136 [80]	142 [83]	85 [50]	60 [35]	42 [24]	66 [38]	
1 1/2“	41,9	DN 40	197 [116]	181 [107]	309 [182]	188 [111]	195 [115]	117 [68]	82 [48]	58 [34]	90 [53]	
2“	53,1	DN 50	323 [190]	297 [175]	506 [297]	308 [181]	320 [188]	191 [112]	135 [79]	95 [55]	148 [87]	
2 1/2“	68,9	DN 65	554 [326]	509 [300]	866 [510]	528 [311]	548 [322]	328 [193]	231 [136]	162 [95]	254 [150]	220 mm - 8,661 inch
3“	80,9	DN 80	768 [452]	706 [415]	1201 [706]	732 [431]	760 [447]	454 [267]	321 [188]	225 [132]	353 [207]	
4“	110,0	DN 100	1426 [839]	1311 [772]	2230 [1312]	1360 [800]	1411 [830]	844 [496]	596 [350]	418 [246]	655 [386]	
5“	133,7	DN 125	2110 [1241]	1940 [1141]	3299 [1941]	2011 [1183]	2088 [1228]	1248 [734]	881 [519]	619 [364]	970 [570]	
6“	159,3	DN 150	2999 [1765]	2758 [1623]	4689 [2759]	2859 [1682]	2967 [1746]	1774 [1044]	1253 [737]	880 [518]	1379 [811]	300 mm - 11,811 inch
8“	200,0	DN 200	4738 [2788]	4357 [2564]	7409 [4360]	4517 [2658]	4689 [2759]	2804 [1650]	1980 [1165]	1391 [819]	2178 [1282]	
10“	250,0	DN 250	7413 [4362]	6817 [4011]	11590 [6820]	7067 [4159]	7336 [4317]	4386 [2581]	3098 [1823]	2177 [1281]	3408 [2005]	
12“	300,0	DN 300	10687 [6289]	9828 [5783]	16710 [9833]	10189 [5996]	10576 [6224]	6324 [3721]	4466 [2628]	3138 [1847]	4914 [2891]	

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			Low-Speed version (50 m/s)										
			Measuring range Nm³/h * / [cfm]										
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50%CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40%C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C_2H_2)	Recommended probe length
1/2“	16,1	DN 15	35 [21]	36 [21]	35 [20]	20 [12]	15 [9]	17 [10]	17 [10]	13 [7]	12 [7]	24 [14]	13 [8]	160 mm - 6,299 inch
3/4“	21,7	DN 20	70 [41]	71 [42]	69 [40]	40 [23]	30 [17]	34 [20]	34 [20]	25 [15]	25 [14]	47 [27]	26 [15]	
1“	27,3	DN 25	116 [68]	119 [70]	115 [67]	67 [39]	50 [29]	57 [34]	56 [33]	42 [24]	41 [24]	78 [45]	44 [26]	
1 1/4“	36,0	DN 32	209 [123]	214 [126]	208 [122]	121 [71]	91 [53]	104 [61]	101 [59]	76 [45]	74 [44]	140 [89]	80 [47]	
1 1/2“	41,9	DN 40	288 [170]	296 [174]	286 [168]	167 [98]	125 [73]	143 [84]	140 [82]	105 [62]	103 [60]	194 [114]	110 [65]	
2“	53,1	DN 50	472 [278]	484 [284]	468 [275]	273 [161]	205 [120]	235 [138]	229 [135]	172 [101]	168 [99]	317 [186]	181 [106]	
2 1/2“	68,9	DN 65	809 [476]	829 [488]	803 [472]	469 [276]	351 [207]	403 [237]	393 [231]	295 [173]	288 [169]	543 [320]	311 [183]	220 mm - 8,661 inch
3“	80,9	DN 80	1121 [660]	1149 [676]	1112 [654]	649 [382]	487 [286]	558 [328]	544 [320]	409 [240]	400 [235]	753 [443]	430 [253]	
4“	110,0	DN 100	2082 [1225]	2134 [1255]	2066 [1216]	1206 [710]	905 [532]	1037 [610]	1011 [595]	759 [447]	742 [437]	1399 [823]	800 [470]	
5“	133,7	DN 125	3080 [1813]	3156 [1857]	3056 [1798]	1785 [1050]	1338 [787]	1534 [903]	1496 [880]	1123 [661]	1098 [646]	2069 [1217]	1183 [696]	
6“	159,3	DN 150	4378 [2576]	4486 [2640]	4344 [2556]	2537 [1493]	1903 [1119]	2181 [1283]	2126 [1251]	1597 [939]	1561 [919]	2941 [1731]	1682 [990]	300 mm - 11,811 inch
8“	200,0	DN 200	6918 [4071]	7089 [4171]	6864 [4039]	4009 [2359]	3006 [1769]	3446 [2028]	3359 [1977]	2523 [1485]	2467 [1452]	4647 [2735]	2658 [1564]	
10“	250,0	DN 250	10823 [6369]	11090 [6526]	10738 [6319]	6271 [3690]	4703 [2768]	5392 [3173]	5255 [3093]	3947 [2323]	3860 [2271]	7270 [4278]	4158 [2447]	
12“	300,0	DN 300	15604 [9183]	15988 [9409]	15481 [9110]	9042 [5321]	6781 [3990]	7774 [4575]	7577 [4459]	5691 [3349]	5565 [3275]	10482 [6168]	5995 [3528]	

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measuring ranges Standard version

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			Standard version (92,7 m/s)									
			Measuring range Nm³/h * / [cfm]									
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H2)	Propane (C3H8)	Recommended probe length
1/2“	16,1	DN 15	45 [26]	41 [24]	71 [41]	43 [25]	45 [26]	26 [15]	19 [11]	13 [7]	20 [12]	
3/4“	21,7	DN 20	89 [52]	81 [48]	139 [81]	84 [49]	88 [51]	52 [31]	37 [21]	26 [15]	40 [24]	
1“	27,3	DN 25	147 [86]	135 [79]	230 [135]	140 [82]	146 [86]	87 [51]	61 [36]	43 [25]	67 [39]	160 mm - 6,299 inch
1 1/4“	36,0	DN 32	266 [156]	244 [144]	416 [245]	253 [149]	263 [155]	157 [92]	111 [65]	78 [46]	122 [72]	
1 1/2“	41,9	DN 40	366 [215]	337 [198]	573 [337]	349 [205]	363 [213]	217 [127]	153 [90]	107 [63]	168 [99]	
2“	53,1	DN 50	600 [353]	551 [324]	938 [552]	572 [336]	593 [349]	355 [208]	250 [147]	176 [103]	275 [162]	
2 1/2“	68,9	DN 65	1028 [604]	945 [556]	1607 [945]	980 [576]	1017 [598]	608 [358]	429 [252]	301 [177]	472 [278]	
3“	80,9	DN 80	1424 [838]	1309 [770]	2227 [1310]	1358 [799]	1409 [829]	842 [496]	595 [350]	418 [246]	654 [385]	220 mm - 8,661 inch
4“	110,0	DN 100	2644 [1556]	2432 [1431]	4135 [2433]	2521 [1484]	2617 [1540]	1565 [921]	1105 [650]	776 [457]	1216 [715]	
5“	133,7	DN 125	3912 [2302]	3597 [2117]	6116 [3599]	3729 [2195]	3871 [2278]	2315 [1362]	1635 [962]	1149 [676]	1798 [1058]	
6“	159,3	DN 150	5560 [3272]	5113 [3009]	8693 [5116]	5301 [3119]	5502 [3238]	3290 [1936]	2324 [1367]	1633 [961]	2556 [1504]	
8“	200,0	DN 200	8785 [5170]	8079 [4754]	13736 [8083]	8376 [4929]	8694 [5116]	5198 [3059]	3672 [2160]	2580 [1518]	4039 [2377]	300 mm - 11,811 inch
10“	250,0	DN 250	13744 [8088]	12638 [7437]	21488 [12646]	13103 [7711]	13601 [8004]	8133 [4786]	5744 [3380]	4036 [2375]	6319 [3718]	
12“	300,0	DN 300	19814 [11661]	18221 [10723]	30980 [18232]	18891 [11117]	19609 [11539]	11725 [6900]	8281 [4873]	5819 [3424]	9110 [5361]	

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			Standard version (92,7 m/s)											
			Measuring range Nm³/h * / [cfm]											
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50% CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)	Recommended probe length
1/2“	16,1	DN 15	66 [39]	68 [40]	66 [38]	38 [22]	28 [17]	33 [19]	32 [19]	24 [14]	23 [13]	44 [26]	25 [15]	
3/4“	21,7	DN 20	130 [76]	133 [78]	129 [75]	75 [44]	56 [33]	64 [38]	63 [37]	47 [27]	46 [27]	87 [51]	49 [29]	
1“	27,3	DN 25	215 [126]	220 [130]	213 [125]	124 [73]	93 [55]	107 [63]	104 [61]	78 [46]	76 [45]	144 [85]	82 [48]	160 mm - 6,299 inch
1 1/4“	36,0	DN 32	388 [228]	398 [234]	385 [227]	225 [132]	168 [99]	193 [114]	188 [111]	141 [83]	138 [81]	261 [153]	149 [87]	
1 1/2“	41,9	DN 40	535 [315]	548 [322]	531 [312]	310 [182]	232 [136]	266 [157]	260 [153]	195 [114]	191 [112]	359 [211]	205 [121]	
2“	53,1	DN 50	876 [515]	897 [528]	869 [511]	507 [298]	380 [224]	436 [256]	425 [250]	319 [188]	312 [183]	588 [346]	336 [198]	
2 1/2“	68,9	DN 65	1500 [883]	1537 [905]	1489 [876]	869 [511]	652 [383]	747 [440]	728 [428]	547 [322]	535 [315]	1008 [593]	576 [339]	
3“	80,9	DN 80	2079 [1223]	2130 [1254]	2063 [1214]	1205 [709]	903 [531]	1036 [609]	1009 [594]	758 [446]	741 [436]	1397 [822]	799 [470]	220 mm - 8,661 inch
4“	110,0	DN 100	3861 [2272]	3956 [2328]	3831 [2254]	2237 [1316]	1678 [987]	1923 [1132]	1875 [1103]	1408 [828]	1377 [810]	2594 [1526]	1483 [873]	
5“	133,7	DN 125	5711 [3361]	5852 [3444]	5666 [3335]	3309 [1947]	2482 [1460]	2845 [1674]	2773 [1632]	2083 [1226]	2037 [1198]	3837 [2258]	2194 [1291]	
6“	159,3	DN 150	8118 [4777]	8318 [4895]	8054 [4740]	4704 [2768]	3528 [2076]	4044 [2380]	3942 [2320]	2961 [1742]	2895 [1704]	5453 [3209]	3119 [1835]	
8“	200,0	DN 200	12827 [7548]	13143 [7734]	12726 [7489]	7432 [4374]	5574 [3280]	6390 [3760]	6229 [3665]	4678 [2753]	4575 [2692]	8616 [5071]	4928 [2900]	300 mm - 11,811 inch
10“	250,0	DN 250	20066 [11809]	20560 [12100]	19908 [11716]	11627 [6842]	8720 [5132]	9997 [5883]	9744 [5734]	7319 [4307]	7157 [4212]	13480 [7932]	7709 [4537]	
12“	300,0	DN 300	28930 [17025]	29643 [17444]	28702 [16891]	16763 [9865]	12572 [7399]	14413 [8482]	14048 [8267]	10552 [6209]	10318 [6072]	19434 [11437]	11115 [6541]	

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measuring ranges Max version

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			Max version (185,0 m/s)									
			Measuring range Nm³/h * / [cfm]									
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H2)	Propane (C3H8)	Recommended probe length
1/2“	16,1	DN 15	90 [53]	83 [49]	142 [83]	86 [51]	90 [52]	53 [31]	38 [22]	26 [15]	41 [24]	160 mm - 6,299 inch
3/4“	21,7	DN 20	177 [104]	163 [96]	278 [163]	169 [99]	175 [103]	105 [61]	74 [43]	52 [30]	81 [48]	
1“	27,3	DN 25	294 [173]	271 [159]	460 [271]	280 [165]	291 [171]	174 [102]	123 [72]	86 [50]	135 [79]	
1 1/4“	36,0	DN 32	531 [312]	488 [287]	830 [489]	506 [298]	525 [309]	314 [185]	222 [130]	156 [91]	244 [143]	
1 1/2“	41,9	DN 40	732 [430]	673 [396]	1144 [673]	697 [410]	724 [426]	433 [254]	305 [180]	215 [126]	336 [198]	
2“	53,1	DN 50	1197 [704]	1101 [648]	1872 [1101]	1141 [671]	1185 [697]	708 [417]	500 [294]	351 [206]	550 [324]	
2 1/2“	68,9	DN 65	2051 [1207]	1886 [1110]	3207 [1887]	1955 [1151]	2030 [1194]	1214 [714]	857 [504]	602 [354]	943 [555]	220 mm - 8,661 inch
3“	80,9	DN 80	2842 [1672]	2614 [1538]	4444 [2615]	2710 [1594]	2813 [1655]	1682 [989]	1188 [699]	834 [491]	1307 [769]	
4“	110,0	DN 100	5278 [3106]	4854 [2856]	8252 [4856]	5032 [2961]	5223 [3074]	3123 [1838]	2206 [1298]	1550 [912]	2427 [1428]	
5“	133,7	DN 125	7807 [4594]	7179 [4225]	12206 [7183]	7443 [4380]	7726 [4546]	4620 [2718]	3263 [1920]	2293 [1349]	3589 [2112]	
6“	159,3	DN 150	11096 [6530]	10204 [6005]	17349 [10210]	10579 [6226]	10981 [6462]	6566 [3864]	4637 [2729]	3259 [1917]	5102 [3002]	300 mm - 11,811 inch
8“	200,0	DN 200	17533 [10318]	16123 [9488]	27413 [16132]	16716 [9837]	17351 [10211]	10375 [6105]	7328 [4312]	5149 [3030]	8061 [4744]	
10“	250,0	DN 250	27428 [16141]	25223 [14843]	42884 [25237]	26150 [15389]	27143 [15974]	16231 [9552]	11463 [6746]	8055 [4740]	12611 [7421]	
12“	300,0	DN 300	39544 [23271]	36364 [21400]	61827 [36385]	37701 [22187]	39133 [23030]	23400 [13771]	16527 [9726]	11614 [6834]	18182 [10700]	

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			Max version (185,0 m/s)											
			Measuring range Nm³/h * / [cfm]											
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L(CH4)	Biogas 50% CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)	Recommended probe length
1/2“	16,1	DN 15	132 [78]	136 [80]	131 [77]	76 [45]	57 [33]	66 [38]	64 [37]	48 [28]	47 [27]	89 [52]	51 [30]	160 mm - 6,299 inch
3/4“	21,7	DN 20	259 [152]	266 [156]	257 [151]	150 [88]	112 [66]	129 [76]	126 [74]	94 [55]	92 [54]	174 [102]	99 [58]	
1“	27,3	DN 25	430 [253]	440 [259]	426 [251]	249 [146]	187 [110]	214 [126]	208 [122]	156 [92]	153 [90]	289 [170]	165 [97]	
1 1/4“	36,0	DN 32	775 [456]	795 [467]	769 [453]	449 [264]	337 [198]	386 [227]	376 [221]	283 [166]	276 [162]	521 [306]	298 [175]	
1 1/2“	41,9	DN 40	1068 [629]	1095 [644]	1060 [624]	619 [364]	464 [273]	532 [313]	519 [305]	389 [229]	381 [224]	718 [422]	410 [241]	
2“	53,1	DN 50	1748 [1029]	1791 [1054]	1734 [1020]	1013 [596]	759 [447]	871 [512]	849 [499]	637 [375]	623 [367]	1174 [691]	671 [395]	
2 1/2“	68,9	DN 65	2995 [1762]	3069 [1806]	2971 [1748]	1735 [1021]	1301 [766]	1492 [878]	1454 [856]	1092 [642]	1068 [628]	2012 [1184]	1150 [677]	220 mm - 8,661 inch
3“	80,9	DN 80	4150 [2442]	4252 [2502]	4117 [2423]	2404 [1415]	1803 [1061]	2067 [1216]	2015 [1186]	1513 [890]	1480 [871]	2788 [1640]	1594 [938]	
4“	110,0	DN 100	7706 [4535]	7896 [4647]	7646 [4499]	4465 [2628]	3349 [1971]	3839 [2259]	3742 [2202]	2811 [1654]	2748 [1617]	5177 [3046]	2961 [1742]	
5“	133,7	DN 125	11399 [6708]	11679 [6873]	11309 [6655]	6605 [3887]	4954 [2915]	5679 [3342]	5535 [3257]	4157 [2446]	4065 [2392]	7657 [4506]	4379 [2577]	
6“	159,3	DN 150	16201 [9534]	16600 [9769]	16074 [9459]	9388 [5524]	7041 [4143]	8071 [4750]	7867 [4630]	5909 [3477]	5778 [3400]	10883 [6405]	6224 [3663]	300 mm - 11,811 inch
8“	200,0	DN 200	25599 [15065]	26229 [15436]	25397 [14946]	14833 [8729]	11125 [6547]	12753 [7505]	12431 [7315]	9337 [5494]	9130 [5373]	17196 [10120]	9835 [5788]	
10“	250,0	DN 250	40046 [23567]	41033 [24148]	39731 [23382]	23205 [13656]	17404 [10242]	19951 [11741]	19447 [11444]	14606 [8596]	14283 [8406]	26901 [15831]	15386 [9054]	
12“	300,0	DN 300	57736 [33977]	59158 [34814]	57281 [33710]	33455 [19688]	25091 [14766]	28764 [16927]	28037 [16499]	21058 [12393]	20593 [12119]	38784 [22824]	22182 [13054]	

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measuring ranges High-Speed version

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			High-Speed version (224,0 m/s)									
			Measuring range Nm³/h * / [cfm]									
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H_2)	Propane (C3H8)	Recommended probe length
1/2“	16,1	DN 15	110 [64]	101 [59]	172 [101]	105 [61]	109 [64]	65 [38]	46 [27]	32 [19]	50 [29]	160 mm - 6,299 inch
3/4“	21,7	DN 20	215 [126]	198 [116]	336 [198]	205 [120]	213 [125]	127 [74]	89 [52]	63 [37]	99 [58]	
1“	27,3	DN 25	356 [210]	328 [193]	557 [328]	340 [200]	353 [207]	211 [124]	149 [87]	104 [61]	164 [96]	
1 1/4“	36,0	DN 32	643 [378]	591 [348]	1006 [592]	613 [361]	636 [374]	380 [224]	268 [158]	188 [111]	295 [174]	
1 1/2“	41,9	DN 40	886 [521]	815 [479]	1385 [815]	845 [497]	877 [516]	524 [308]	370 [218]	260 [153]	407 [239]	
2“	53,1	DN 50	1450 [853]	1333 [784]	2267 [1334]	1382 [813]	1434 [844]	858 [504]	606 [356]	425 [250]	666 [392]	
2 1/2“	68,9	DN 65	2484 [1461]	2284 [1344]	3883 [2285]	2368 [1393]	2458 [1446]	1469 [865]	1038 [611]	729 [429]	1142 [672]	220 mm - 8,661 inch
3“	80,9	DN 80	3441 [2025]	3165 [1862]	5381 [3166]	3281 [1931]	3406 [2004]	2036 [1198]	1438 [846]	1010 [594]	1582 [931]	
4“	110,0	DN 100	6391 [3761]	5877 [3458]	9992 [5880]	6093 [3586]	6324 [3722]	3782 [2225]	2671 [1572]	1877 [1104]	2938 [1729]	
5“	133,7	DN 125	9453 [5563]	8693 [5116]	14780 [8698]	9012 [5304]	9355 [5505]	5594 [3292]	3951 [2325]	2776 [1633]	4346 [2558]	
6“	159,3	DN 150	13436 [7907]	12355 [7271]	21007 [12362]	12810 [7538]	13296 [7825]	7950 [4679]	5615 [3304]	3946 [2322]	6177 [3635]	300 mm - 11,811 inch
8“	200,0	DN 200	21229 [12493]	19522 [11489]	33192 [19533]	20240 [11911]	21009 [12363]	12562 [7393]	8873 [5221]	6235 [3669]	9761 [5744]	
10“	250,0	DN 250	33211 [19544]	30540 [17973]	51925 [30557]	31663 [18633]	32865 [19341]	19652 [11565]	13880 [8168]	9753 [5740]	15270 [8986]	
12“	300,0	DN 300	47880 [28177]	44030 [25912]	74861 [44055]	45649 [26864]	47383 [27885]	28333 [16674]	20012 [11777]	14062 [8275]	22015 [12956]	

Flow measuring ranges Flow Check Universal - insertion meter

Inner pipe diameter			High-Speed version (224,0 m/s)										
			Measuring range Nm³/h * / [cfm]										
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50% CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)	Recommended probe length
1/2“	16,1	DN 15	160 [94]	164 [96]	159 [93]	93 [54]	69 [41]	80 [47]	78 [45]	58 [34]	57 [33]	108 [63]	61 [36]	160 mm - 6,299 inch
3/4“	21,7	DN 20	314 [185]	322 [189]	311 [183]	182 [107]	136 [80]	156 [92]	152 [89]	114 [67]	112 [65]	211 [124]	120 [71]	
1“	27,3	DN 25	521 [306]	533 [314]	516 [304]	301 [177]	226 [133]	259 [152]	253 [148]	190 [111]	185 [109]	349 [205]	200 [117]	
1 1/4“	36,0	DN 32	939 [552]	962 [566]	932 [548]	544 [320]	408 [240]	468 [275]	456 [268]	342 [201]	335 [197]	631 [371]	360 [212]	
1 1/2“	41,9	DN 40	1294 [761]	1326 [780]	1284 [755]	749 [441]	562 [331]	644 [379]	628 [369]	472 [277]	461 [271]	869 [511]	497 [292]	
2“	53,1	DN 50	2117 [1245]	2169 [1276]	2100 [1236]	1226 [721]	920 [541]	1054 [620]	1028 [605]	772 [454]	755 [444]	1422 [836]	813 [478]	
2 1/2“	68,9	DN 65	3626 [2134]	3716 [2186]	3598 [2117]	2101 [1236]	1576 [927]	1806 [1063]	1761 [1036]	1322 [778]	1293 [761]	2436 [1433]	1393 [820]	220 mm - 8,661 inch
3“	80,9	DN 80	5025 [2957]	5149 [3030]	4985 [2934]	2911 [1713]	2183 [1285]	2503 [1473]	2440 [1436]	1832 [1078]	1792 [1054]	3375 [1986]	1930 [1136]	
4“	110,0	DN 100	9331 [5491]	9561 [5626]	9258 [5448]	5407 [3182]	4055 [2386]	4649 [2735]	4531 [2666]	3403 [2003]	3328 [1958]	6268 [3689]	3585 [2109]	
5“	133,7	DN 125	13802 [8122]	14142 [8322]	13693 [8058]	7997 [4706]	5998 [3530]	6876 [4046]	6702 [3944]	5034 [2962]	4923 [2897]	9271 [5456]	5302 [3120]	
6“	159,3	DN 150	19617 [11544]	20100 [11829]	19462 [11453]	11367 [6689]	8525 [5017]	9773 [5751]	9526 [5606]	7155 [4210]	6997 [4117]	13178 [7755]	7537 [4435]	300 mm - 11,811 inch
8“	200,0	DN 200	30996 [18241]	31759 [18690]	30752 [18097]	17960 [10569]	13470 [7927]	15442 [9087]	15051 [8858]	11305 [6653]	11055 [6506]	20821 [12253]	11908 [7008]	
10“	250,0	DN 250	48489 [28535]	49683 [29238]	48107 [28311]	28097 [16535]	21072 [12401]	24157 [14216]	23546 [13857]	17686 [10408]	17295 [10178]	32573 [19169]	18629 [10963]	
12“	300,0	DN 300	69907 [41140]	71629 [42153]	69357 [40816]	40508 [23839]	30381 [17879]	34828 [20496]	33947 [19978]	25498 [15005]	24934 [14674]	46961 [27636]	26858 [15806]	

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
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Measuring ranges Flow Check

Measuring ranges Low-Speed version

Flow measuring ranges Flow Check

Inner pipe diameter			Low-Speed version (50 m/s)								
			Measuring range Nm³/h * / [cfm]								
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H2)	Propane (C3H8)
1/4“	8,9	DN 8	25 Nl/min [0,9]	25 Nl/min [0,9]	45 Nl/min [1,5]	25 Nl/min [0,9]	25 Nl/min [0,9]	15 Nl/min [0,6]	735 Nl/h [0,3]	515 Nl/h [0,3]	810 Nl/h [0,3]
1/2“	16,1	DN 15	20 [14,4]	20 [13,2]	35 [20]	20 [13,5]	20 [14,1]	240 Nl/min [8,4]	170 Nl/min [6]	120 Nl/min [4,2]	185 Nl/min [6,6]
3/4“	21,7	DN 20	45 [25]	40 [25]	75 [40]	45 [25]	45 [25]	25 [15]	20 [11,7]	235 Nl/min [8,1]	20 [12,9]
1“	27,3	DN 25	75 [45]	70 [40]	120 [70]	75 [40]	75 [45]	45 [25]	30 [15]	20 [13,5]	35 [20]
1 1/4“	36,0	DN 32	140 [80]	130 [75]	220 [130]	135 [80]	140 [80]	85 [50]	60 [35]	40 [20]	65 [35]
1 1/2“	41,9	DN 40	195 [115]	180 [105]	305 [180]	185 [110]	195 [115]	115 [65]	80 [45]	55 [30]	90 [50]
2“	53,1	DN 50	320 [190]	295 [175]	505 [295]	305 [180]	320 [185]	190 [110]	135 [75]	95 [55]	145 [85]
2 1/2“	68,9	DN 65	550 [325]	505 [300]	865 [510]	525 [310]	545 [320]	325 [190]	230 [135]	160 [95]	250 [150]
3“	80,9	DN 80	765 [450]	705 [415]	1200 [705]	730 [430]	760 [445]	450 [265]	320 [185]	225 [130]	350 [205]

Flow measuring ranges Flow Check

Inner pipe diameter			Low-Speed version (50 m/s)									
			Measuring range Nm³/h * / [cfm]									
Inch	mm	DN	Corgon ®18	Corgon 10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50%CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)
1/4“	8,9	DN 8	40 Nl/min [1,5]	40 Nl/min [1,5]	40 Nl/min [1,5]	20 Nl/min [0,6]	15 Nl/min [0,6]	20 Nl/min [0,6]	20 Nl/min [0,6]	15 Nl/min [0,3]	15 Nl/min [0,3]	25 Nl/min [0,9]	15 Nl/min [0,3]
1/2“	16,1	DN 15	35 [20]	35 [20]	35 [20]	20 [12]	15 [9]	15 [10,5]	15 [10,2]	215 Nl/min [7,5]	210 Nl/min [7,5]	20 [14,1]	225 Nl/min [8,1]
3/4“	21,7	DN 20	70 [40]	70 [40]	65 [40]	40 [20]	30 [15]	30 [20]	30 [20]	25 [15]	25 [14,7]	45 [25]	25 [15]
1“	27,3	DN 25	115 [65]	115 [70]	115 [65]	65 [35]	50 [25]	55 [30]	55 [30]	40 [20]	40 [20]	75 [45]	40 [25]
1 1/4“	36,0	DN 32	205 [120]	210 [125]	205 [120]	120 [70]	90 [50]	100 [60]	100 [55]	75 [45]	70 [40]	140 [80]	80 [45]
1 1/2“	41,9	DN 40	285 [170]	295 [170]	285 [165]	165 [95]	125 [70]	140 [80]	140 [80]	105 [60]	100 [60]	190 [110]	110 [65]
2“	53,1	DN 50	470 [275]	480 [280]	465 [275]	270 [160]	205 [120]	235 [135]	225 [135]	170 [100]	165 [95]	315 [185]	180 [105]
2 1/2“	68,9	DN 65	805 [475]	825 [485]	800 [470]	465 [275]	350 [205]	400 [235]	390 [230]	295 [170]	285 [165]	540 [320]	310 [180]
3“	80,9	DN 80	1120 [660]	1145 [675]	1110 [650]	645 [380]	485 [285]	555 [325]	540 [320]	405 [240]	400 [235]	750 [440]	430 [250]

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measuring ranges Standard version

Flow measuring ranges Flow Check

Inner pipe diameter			Standard version (92,7 m/s)								
			Measuring range Nm³/h * / [cfm]								
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H2)	Propane (C3H8)
1/4“	8,9	DN 8	50 Nl/min [1,8]	50 Nl/min [1,5]	85 Nl/min [3]	50 Nl/min [1,8]	50 Nl/min [1,8]	30 Nl/min [0,9]	20 Nl/min [0,6]	15 Nl/min [0,3]	25 Nl/min [0,6]
1/2“	16,1	DN 15	45 [25]	40 [20]	70 [40]	40 [25]	45 [25]	25 [15]	15 [11,1]	220 Nl/min [7,8]	20 [12,3]
3/4“	21,7	DN 20	85 [50]	80 [45]	135 [80]	80 [45]	85 [50]	50 [30]	35 [20]	25 [15]	40 [20]
1“	27,3	DN 25	145 [85]	135 [75]	230 [135]	140 [80]	145 [85]	85 [50]	60 [35]	40 [25]	65 [35]
1 1/4“	36,0	DN 32	265 [155]	240 [140]	415 [245]	250 [145]	260 [155]	155 [90]	110 [65]	75 [45]	120 [70]
1 1/2“	41,9	DN 40	365 [215]	335 [195]	570 [335]	345 [205]	360 [210]	215 [125]	150 [90]	105 [60]	165 [95]
2“	53,1	DN 50	600 [350]	550 [320]	935 [550]	570 [335]	590 [345]	355 [205]	250 [145]	175 [100]	275 [160]
2 1/2“	68,9	DN 65	1025 [600]	945 [555]	1605 [945]	980 [575]	1015 [595]	605 [355]	425 [250]	300 [175]	470 [275]
3“	80,9	DN 80	1420 [835]	1305 [770]	2225 [1310]	1355 [795]	1405 [825]	840 [495]	595 [350]	415 [245]	650 [385]

Flow measuring ranges Flow Check

Inner pipe diameter			Standard version (92,7 m/s)										
			Measuring range Nm³/h * / [cfm]										
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50% CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)
1/4“	8,9	DN 8	75 Nl/min [2,7]	80 Nl/min [2,7]	75 Nl/min [2,7]	45 Nl/min [1,5]	30 Nl/min [1,2]	35 Nl/min [1,2]	35 Nl/min [1,2]	25 Nl/min [0,9]	25 Nl/min [0,9]	50 Nl/min [1,8]	30 Nl/min [0,9]
1/2“	16,1	DN 15	65 [35]	65 [40]	65 [35]	35 [20]	25 [15]	30 [15]	30 [15]	20 [14,1]	20 [13,8]	40 [25]	25 [15]
3/4“	21,7	DN 20	130 [75]	130 [75]	125 [75]	75 [40]	55 [30]	60 [35]	60 [35]	45 [25]	45 [25]	85 [50]	45 [25]
1“	27,3	DN 25	215 [125]	220 [130]	210 [125]	120 [70]	90 [55]	105 [60]	100 [60]	75 [45]	75 [45]	140 [85]	80 [45]
1 1/4“	36,0	DN 32	385 [225]	395 [230]	385 [225]	225 [130]	165 [95]	190 [110]	185 [110]	140 [80]	135 [80]	260 [150]	145 [85]
1 1/2“	41,9	DN 40	535 [315]	545 [320]	530 [310]	310 [180]	230 [135]	265 [155]	260 [150]	195 [110]	190 [110]	355 [210]	205 [120]
2“	53,1	DN 50	875 [515]	895 [525]	865 [510]	505 [295]	380 [220]	435 [255]	425 [250]	315 [185]	310 [180]	585 [345]	335 [195]
2 1/2“	68,9	DN 65	1500 [880]	1535 [905]	1485 [875]	865 [510]	650 [380]	745 [440]	725 [425]	545 [320]	535 [315]	1005 [590]	575 [335]
3“	80,9	DN 80	2075 [1220]	2130 [1250]	2060 [1210]	1205 [705]	900 [530]	1035 [605]	1005 [590]	755 [445]	740 [435]	1395 [820]	795 [470]

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measuring ranges Max version

Flow measuring ranges Flow Check

Inner pipe diameter			Max version (185,0 m/s)								
			Measuring range Nm³/h * / [cfm]								
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H2)	Propane (C3H8)
1/4“	8,9	DN 8	105 Nl/min [3,6]	100 Nl/min [3,3]	170 Nl/min [6]	100 Nl/min [3,6]	105 Nl/min [3,6]	60 Nl/min [2,1]	45 Nl/min [1,5]	30 Nl/min [0,9]	50 Nl/min [1,5]
1/2“	16,1	DN 15	90 [50]	80 [45]	140 [80]	85 [50]	90 [50]	50 [30]	35 [20]	25 [15]	40 [20]
3/4“	21,7	DN 20	175 [100]	160 [95]	275 [160]	165 [95]	175 [100]	105 [60]	70 [40]	50 [30]	80 [45]
1“	27,3	DN 25	290 [170]	270 [155]	460 [270]	280 [165]	290 [170]	170 [100]	120 [70]	85 [50]	135 [75]
1 1/4“	36,0	DN 32	530 [310]	485 [285]	830 [485]	505 [295]	525 [305]	310 [185]	220 [130]	155 [90]	240 [140]
1 1/2“	41,9	DN 40	730 [430]	670 [395]	1140 [670]	695 [410]	720 [425]	430 [250]	305 [180]	215 [125]	335 [195]
2“	53,1	DN 50	1195 [700]	1100 [645]	1870 [1100]	1140 [670]	1185 [695]	705 [415]	500 [290]	350 [205]	550 [320]
2 1/2“	68,9	DN 65	2050 [1205]	1885 [1110]	3205 [1885]	1955 [1150]	2030 [1190]	1210 [710]	855 [500]	600 [350]	940 [555]
3“	80,9	DN 80	2840 [1670]	2610 [1535]	4440 [2615]	2710 [1590]	2810 [1655]	1680 [985]	1185 [695]	830 [490]	1305 [765]

Flow measuring ranges Flow Check

Inner pipe diameter			Max version (185,0 m/s)										
			Measuring range Nm³/h * / [cfm]										
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50% CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)
1/4“	8,9	DN 8	155 Nl/min [5,4]	160 Nl/min [5,7]	155 Nl/min [5,4]	90 Nl/min [3]	65 Nl/min [2,4]	75 Nl/min [2,7]	75 Nl/min [2,7]	55 Nl/min [1,8]	55 Nl/min [1,8]	105 Nl/min [3,6]	60 Nl/min [2,1]
1/2“	16,1	DN 15	130 [75]	135 [80]	130 [75]	75 [45]	55 [30]	65 [35]	60 [35]	45 [25]	45 [25]	85 [50]	50 [30]
3/4“	21,7	DN 20	255 [150]	265 [155]	255 [150]	150 [85]	110 [65]	125 [75]	125 [70]	90 [55]	90 [50]	170 [100]	95 [55]
1“	27,3	DN 25	430 [250]	440 [255]	425 [250]	245 [145]	185 [110]	210 [125]	205 [120]	155 [90]	150 [90]	285 [170]	165 [95]
1 1/4“	36,0	DN 32	775 [455]	795 [465]	765 [450]	445 [260]	335 [195]	385 [225]	375 [220]	280 [165]	275 [160]	520 [305]	295 [175]
1 1/2“	41,9	DN 40	1065 [625]	1095 [640]	1060 [620]	615 [360]	460 [270]	530 [310]	515 [305]	385 [225]	380 [220]	715 [420]	410 [240]
2“	53,1	DN 50	1745 [1025]	1790 [1050]	1730 [1020]	1010 [595]	755 [445]	870 [510]	845 [495]	635 [375]	620 [365]	1170 [690]	670 [395]
2 1/2“	68,9	DN 65	2995 [1760]	3065 [1805]	2970 [1745]	1735 [1020]	1300 [765]	1490 [875]	1450 [855]	1090 [640]	1065 [625]	2010 [1180]	1150 [675]
3“	80,9	DN 80	4150 [2440]	4250 [2500]	4115 [2420]	2400 [1415]	1800 [1060]	2065 [1215]	2015 [1185]	1510 [890]	1480 [870]	2785 [1640]	1590 [935]

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measuring ranges High-Speed version

Flow measuring ranges Flow Check

Inner pipe diameter			High-Speed version (224,0 m/s)								
			Measuring range Nm³/h * / [cfm]								
Inch	mm	DN	Air**	Nitrogen (N_2)	Argon (Ar)	Oxygen (O_2)	Carbon dioxide (CO_2)	Methane Natural gas (CH4)	Helium (He)	Hydrogen (H_2)	Propane (C3H8)
1/4“	8,9	DN 8	130 Nl/min [4,5]	120 Nl/min [4,2]	205 Nl/min [7,2]	125 Nl/min [4,2]	130 Nl/min [4,5]	75 Nl/min [2,7]	55 Nl/min [1,8]	35 Nl/min [1,2]	60 Nl/min [2,1]
1/2“	16,1	DN 15	110 [60]	100 [55]	170 [100]	105 [60]	105 [60]	65 [35]	45 [25]	30 [15]	50 [25]
3/4“	21,7	DN 20	215 [125]	195 [115]	335 [195]	205 [120]	210 [125]	125 [70]	85 [50]	60 [35]	95 [55]
1“	27,3	DN 25	355 [210]	325 [190]	555 [325]	340 [200]	350 [205]	210 [120]	145 [85]	100 [60]	160 [95]
1 1/4“	36,0	DN 32	640 [375]	590 [345]	1005 [590]	610 [360]	635 [370]	380 [220]	265 [155]	185 [110]	295 [170]
1 1/2“	41,9	DN 40	885 [520]	815 [475]	1385 [815]	845 [495]	875 [515]	520 [305]	370 [215]	260 [150]	405 [235]
2“	53,1	DN 50	1450 [850]	1330 [780]	2265 [1330]	1380 [810]	1430 [840]	855 [500]	605 [355]	425 [250]	665 [390]
2 1/2“	68,9	DN 65	2480 [1460]	2280 [1340]	3880 [2285]	2365 [1390]	2455 [1445]	1465 [865]	1035 [610]	725 [425]	1140 [670]
3“	80,9	DN 80	3440 [2025]	3165 [1860]	5380 [3165]	3280 [1930]	3405 [2000]	2035 [1195]	1435 [845]	1010 [590]	1580 [930]

Flow measuring ranges Flow Check

Inner pipe diameter			High-Speed version(224,0 m/s)										
			Measuring range Nm³/h * / [cfm]										
Inch	mm	DN	Corgon ®18	Corgon ®10	Corgon ®20	Forming gas 90% N_2 + 10% H_2	Natural gas L (CH4)	Biogas 50% CH4 + 50% CO_2	Biogas 60% CH4 + 40% CO_2	LPG 60% C3H8 + 40% C4H10	LPG 50% C3H8 + 50% C4H10	Nitrous (N_2O)	Ethyne/ Acetylene (C2H2)
1/4“	8,9	DN 8	190 Nl/min [6,6]	195 Nl/min [6,9]	190 Nl/min [6,6]	110 Nl/min [3,9]	80 Nl/min [2,7]	95 Nl/min [3,3]	90 Nl/min [3,3]	70 Nl/min [2,4]	65 Nl/min [2,4]	125 Nl/min [4,5]	70 Nl/min [2,4]
1/2“	16,1	DN 15	160 [90]	160 [95]	155 [90]	90 [50]	65 [40]	80 [45]	75 [45]	55 [30]	55 [30]	105 [60]	60 [35]
3/4“	21,7	DN 20	310 [185]	320 [185]	310 [180]	180 [105]	135 [80]	155 [90]	150 [85]	110 [65]	110 [65]	210 [120]	120 [70]
1“	27,3	DN 25	520 [305]	530 [310]	515 [300]	300 [175]	225 [130]	255 [150]	250 [145]	190 [110]	185 [105]	345 [205]	200 [115]
1 1/4“	36,0	DN 32	935 [550]	960 [565]	930 [545]	540 [320]	405 [240]	465 [275]	455 [265]	340 [200]	335 [195]	630 [370]	360 [210]
1 1/2“	41,9	DN 40	1290 [760]	1325 [780]	1280 [755]	745 [440]	560 [330]	640 [375]	625 [365]	470 [275]	460 [270]	865 [510]	495 [290]
2“	53,1	DN 50	2115 [1245]	2165 [1275]	2100 [1235]	1225 [720]	920 [540]	1050 [620]	1025 [605]	770 [450]	755 [440]	1420 [835]	810 [475]
2 1/2“	68,9	DN 65	3625 [2130]	3715 [2185]	3595 [2115]	2100 [1235]	1575 [925]	1805 [1060]	1760 [1035]	1320 [775]	1290 [760]	2435 [1430]	1390 [820]
3“	80,9	DN 80	5025 [2955]	5145 [3030]	4985 [2930]	2910 [1710]	2180 [1285]	2500 [1470]	2440 [1435]	1830 [1075]	1790 [1050]	3375 [1985]	1930 [1135]

* Nm³/h according to DIN 1343: 0 °C, 1013,25 hPa for gases
** ISO 1217: 20 °C, 1000 hPa in air

If you want to measure the consumption / flow rate of a specific gas mixture, ask us.
We can offer a real gas adjustment under process conditions on request.

Measure compressed air consumption and save energy

Compressed air is one of the most expensive forms of energy at all. An intelligent use of compressed air holds enormous savings potential.

Therefore a consumption measurement that can measure and record the actual compressed air consumption and even the smallest leaks quickly and reliably is very helpful.

When talking about operating costs in compressed air systems, one actually means the energy costs, because the electricity costs make up about 70-80% of the total cost of a compressed air system.

Depending on the size of the plant this means considerable operating costs. Even in smaller plants this may quickly add up to 10,000 to 20,000 € per year. This is an amount which can be considerably reduced – even in case of well operated and maintained plants.

In case of a three shift operation with 200 kW compressor performance a bad compressed air distribution can create redundant energy costs of more than 50,000 € per year.

This mainly relates to the detection of leaks and the correct design of the compressed air lines to minimize the pressure losses. Energy resources like electricity, water or gas are usually monitored and therefore the costs are transparent.

Contrary to compressed air, a water leak is usually found quickly due to the visibility of the leak and therefore is fixed immediately. Leakages in the compressed air network „blow out“ unnoticed, even on weekends and during production stops.

Also during that time compressors are running continuously in order to establish a constant pressure within the system. In case of compressed air systems which have grown during the years the leakage rate can be between 25 and 35 per cent. They are the most industrious consumers working 365 days a year.

Not considered in these considerations are the costs of producing clean and dry compressed air. Refrigeration and desiccant dryers dry the air with significant operating costs, which then „blow out“ useless through leaks.

At constantly rising energy costs these potential energy savings have to be implemented in order to stay competitive within the market. Only if the consumption of single machines or plants becomes known and transparent for all it is possible to make use of possible savings.

However, often there is no knowledge about the leak ratio. In the following we show you how leakage rate can be determined easily in your company.

Formerly the simple but inaccurate container method was applied very often.

A simplified determination of the leakages is possible by means of the emptying of the tank.

To carry out this measurement you just need a clock and a manometer. Furthermore you should know the storage volume of the tank as well as of the compressed air system.

For measurement first the tank and the compressed air system are set to the upper cut-out pressure value. All compressed air consumers have to be switched off. Then the compressor is switched off and there will be no compressed air feeding into the system.

Now the time T is measured which passes by until there is a pressure drop of 1 to 2 bar due to the leakages.

The pressure drop between which the measurement is taking place can be selected freely.

However, in practice the described method is very time-consuming, not adequate and inaccurate due to the following reasons:

- Storage volume, distribution pipelines cannot be determined exactly
- The accuracy of the differential pressure measurement and time measurement has to be observed
- During pressure drop the compressed air volume cools down and therefore it changes the volume flow reference value
- An online measurement with consumption record is not possible

This method belongs to the so-called indirect measurements, like also the method of the load and unload measurement during which the current intake is measured by means of clamp-on ammeters and calculated back to the volume flow over the technical data of the compressor.

These indirect methods are antiquated and not suitable to detect leakages in the lower measuring range. Determination of compressed air leakages with modern flow meters

A modern compressed air consumption measurement resp. leakage measurement should be able to measure the real compressed air flow and also the smallest leakages quickly and reliably and record them.

New: Flow measurement Flow Check S3/ S4 for compressed air and gases

Worldwide unique with 3.5 inch, graphic display with touch screen and print function. With the new ”ready for plug-in” flow measurement Flow Check S3/ S4 the current flow in m^3/h, l/min etc. as well as the consumption in m^3 or l can be measured.

The new flow station works according to the approved calorimetric measuring principle. The heart is the flow sensor which has been proven and tested for years.

It is characterized by a new thermally more efficient sensor structure which shown a higher chip temperature in case of same electrical connection values.

Compared to other calorimetric measuring instruments the sensor has a considerably lower mass and therefore a faster response time. An additional pressure and temperature compensation is not necessary.

The advantage is that the user can use the flow meters in different pressures and temperatures without any further compensation.

Apart form compressed air also other gases like e. g.

- Nitrogen
- Oxygen
- CO_2
- Argon
- Natural gas
- Helium

can be measured. The flow meter PDP Check S3/ S4 is supplied completely wired. There is no need for a time consuming instruction manual reading.

Exceeding of threshold values can be reported optically and acoustically. 2 relays for pre- and main alarm are freely adjustable.

An alarm delay can be set for each relay. This grants that only really long-term exceeding of the threshold values are indicated. Additionally every alarm can be reset.

The intuitive operation with the 3.5 inch touch screen graphic display with zoom function and print key is worldwide unique in this price class.

The graphic display with zoom function shows the actual flow, the peak values and the leakage at a glance, the values are stored in the data logger.

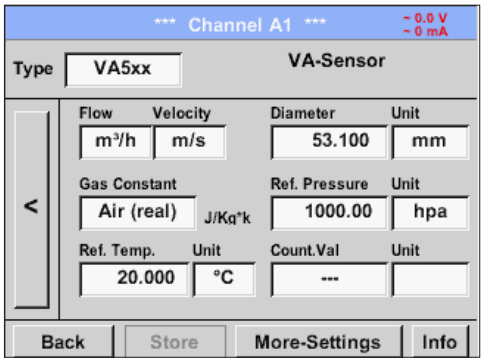
So the user can take a look at the stored measuring curves also without any computer at any time on site. This allows the user to view the stored measured curves without a PC at any time on site.

With the print button, the current screen can be saved as an image file on the internal SD card or on a USB stick and can be printed out without additional software on a PC. Ideal for documentation of the measured values/ curves on site. Colored measured curves can be sent by e-mail as image files or integrated into a service report.

The internal data logger enables the storage of the measured data for several years. The measured data can be evaluated via a USB stick of via Ethernet by means of the comfortable software PMH Soft Basic. Particularly comfortable is the consumption analysis at the touch of a button. The PMH Soft Basic automatically draws up daily, weekly and monthly reports.

Special features

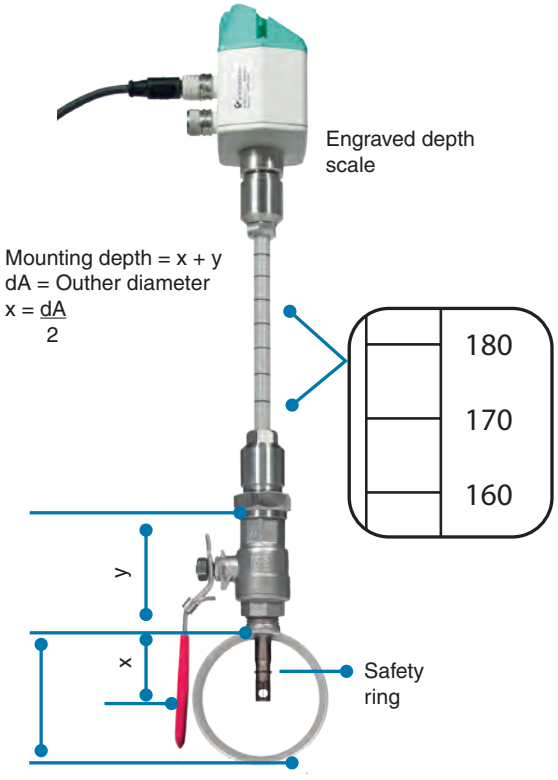
- 3.5“ graphic display, intuitive operation via touch screen
- Zoom function for accurate analysis of measured values
- Consumption analysis with daily/weekly/monthly reports
- Colored measured curves with names
- Mathematical calculation function e. g. addition of several consumers to a total consumption or energy costs per kWh/m³
- Print key: Optional indications can be stored as image files directly on a USB stick and sent by e-mail without any software
- 2 alarm contacts for exceeding of threshold values
- Freely adjustable alarm delay for both alarm contacts
- With reset function
- Up to 4 sensor inputs for: Further flow sensors, dew point, pressure, temperature, consumption, active power meters, optional third-party sensors can be
- Connected: Pt100/1000, 0/4..20 mA, 0-1/10 V,
- Modbus, pulse
- Integrated data logger 8 GB
- USB, Ethernet interface, RS 485
- Webserver



Installation Flow Check Universal under pressure

Flow Check Universal flow meter for compressed air and gases

- The Flow Check Universal flow meter is installed via a standard ball valve under pressure. The circlip prevents the instrument from being ejected during installation and removal by the operating pressure.
- For the installation at different pipe diameters, the Flow Check Universal can be ordered at special lengths: 120, 160, 220, 300, 400 mm. Therefore it is possible to use the Flow Check Universal flow sensor from inner pipe diameters of 1/2“ up to 12” and bigger.
- The exact positioning of the sensor is carried out with the aid of the engraved depth scale at the sensors shaft. The maximum insertion depth is therefore determined by the sensor length. Please see picture to determine the sensor length required.



Measuring site

- If no 1/2“ ball valve is present to carry out the installation of the Flow Check Universal sensor, we have two possible alternatives to offer:

A 1/2“-thread needs to be welded onto the pipe work and the ball valve is then threaded on.

B A spot drilling collar can be ordered and installed.

- Making use of the specialized drilling jig, it is then possible to drill a whole into the pipe work under load. The filings are caught in a special filter system at the drilling jig. Afterwards the Flow Check Universal probe should be installed as described above.
- The Flow Check Universal measuring range allows for measurements in almost all possible applications. Even high flow rates in small pipe diameters can be measured.

Oil-Check S

The monitoring system for permanent highly precise measurement of the vaporous residual oil content in compressed air.

Advantages at a glance:

- Permanent, highly precise residual oil measurement (oil vapour) with PID sensor (photo-ionic-detector)
- Ideal for mobile measurement: The PID sensor is ready for measurement within about 30 minutes
- Measuring results with long-term stability due to automatic zero point calibration. The integrated mini catalyst reliably generates a defined reference gas for zero point calibration
- In contrast to measuring systems which generate the “zero air” or reference gas by means of active carbon filters and which are therefore dependent on the ageing and saturation of the active carbon filters, the mini catalyst generates the “zero air” without ageing or wear. There is no change of active carbon filters necessary
- Easy sampling via PTFE hose or stainless steel pipe

Integrated chart recorder Check Box S

- Data logger for long-term monitoring
- Display shows trend curves (online and history curves available)
- Zoom function directly on the touch screen
- Integrated Ethernet interface (Modbus/TCP) and RS 485 interface (Modbus-RTU) for data transfer to superordinate controls
- 2 alarm relays (changeover contact 230 VAC, 3A) – threshold values freely adjustable
- Easy operation via 3.5" touchscreen

Technical data Oil-Check S	
Measured medium:	Compressed air, free from aggressive, corrosive, acid, toxic, flammable and oxidising components.
Measuring unit:	Residual oil content in mg oil/norm m³ relative to 1.0 bar [abs], +20 °C, 0% relative humidity, in accordance with ISO 8573-1
Identifiable substances:	Hydrocarbons, functional hydrocarbons, aromatic hydrocarbons
Field of application:	After activated carbon filter, after activated carbon adsorber, after oil-free compressor, always with connected upstream filtration and dryer
Ambient temperature:	+5 °C… +45 °C, rel. humidity <= 75% without condensation
Pressure dew point:	max. +10 °Ctd.
Compressed air temp.:	+5 °C… +50 °C
Operational overpressure:	3…16 bar [ü] optional pressure reducer connected upstream for up to 300 bar [ü]
Setting operational pressure:	By means of integrated pressure reducer with display
Humidity of measured gas:	<= 40% rel. humidity, pressure dew point max. +10 °C, non-condensable humidity
Compressed air connection:	G 1/8" female thread according to ISO 228-1
Measured values:	mg/norm m³, pressure and temperature compensated residual oil vapour content
Measuring range:	0.001 … 2.5 mg/m³
Detection limit (residual oil):	0.001 mg/m³
Flow of measuring gas:	approx. 1.20 norm litres/minute, relative to 1.0 bar [abs] and + 20 °C, in a relaxed state
Reference gas generation:	By means of integrated mini catalyst
Power supply:	100…240 VAC / 1 Ph. / PE / 50…60 Hz / ± 10%
Outputs:	Ethernet interface (Modbus/TCP), RS 485 interface (Modbus-RTU), 2 alarm relays (change 230 VAC 3A), 4…20 mA (on request)
Operating hours counter:	integrated
Dimensions (mm):	410 x 440 x 163 (W x H x D)
Weight:	approx. 16.3 kg

ISO 8573-1:2010 Class	Solid particles			Water	Öl
	Maximum number of particles per m³			Vapour pressure dew point	Total share of oil (liquid aerosol and fog)
	0.1 - 0.5 µm	0.5 - 1 µm	1 - 5 µm		mg/ m³
0	In accordance with specification by the device user, stricter requirements than class 1				
1	<= 20,000	<= 400	<= 10	<= -70 °C	0.01
2	<= 400,000	<= 6,000	<= 100	<= -40 °C	0.1
3	--	<= 90,000	<= 1,000	<= -20 °C	1
4	--	--	<= 10,000	<= +3 °C	5
5	--	--	<= 100,000	<= +7 °C	--
6	--	--	--	<= +10 °C	--
7	--	--	--	--	--
8	--	--	--	--	--
9	--	--	--	--	--
x	--	--	--	--	--

Oil-Check S - stationary solution (to order with option Check Box S)

Description	Order No.
OIL-Check S – residual oil measurement of the vaporous residual oil content from 0.001…2.5 mg/m³, 3…16 bar. Highly precise PID sensor, integrated mini catalyst for zero point calibration, without integrated display, with analogue output 0…10 volts for connection to external chart recorders	2255332960
Option: Check Box S chart recorder integrated into OIL-Check S	2255332961
Sampling system OIL-Check S: Sampling system consisting of ½" ball valve (oil- and grease-free), 1 m stainless steel tube 6x1 mm (oil- and grease-free), clamp screwing (oil- and grease-free)	2255332963
Portable sampling system consisting of 2 m PTFE hose, quick coupling (oil- and grease-free)	2255332964
For systems > 16 bar: Pressure reducer (oil- and grease-free), input pressure max. 300 bar, output pressure up to 10 bar	2255332965
Options for the Check Box S:	
Integrated data logger for 100 million measured values	2255460217
Integrated Ethernet and RS 485 interface	2255460216
Integrated webserver	2255460218
2 additional sensor inputs for analogue sensors (pressure sensors, temperature sensors etc.)	2255332962
CS Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	2255332468

Oil-Check S - Portable solution with handle (to order with option Check Box S)

Handle and stand

Description	Order No.
OIL-Check S – residual oil measurement of the vaporous residual oil content from 0.001…2.5 mg/m³, 3…16 bar. Highly precise PID sensor, integrated mini catalyst for zero point calibration, without integrated display, with analogue output 0…10 volts for connection to external chart recorders	2255332960
Option:	
Check Box S chart recorder integrated into OIL-Check S	2255332961
Handle and stand for mobile use of the OIL-Check S	2255333008
Flight case for OIL-Check S	2255333009
Portable sampling system consisting of 2 m PTFE hose, quick coupling (oil- and grease-free)	2255332964
Options for the Check Box S:	
Integrated data logger for 100 million measured values	2255460217
Integrated Ethernet and RS 485 interface	2255460216
Integrated webserver	2255460218
2 additional sensor inputs for analogueue sensors (pressure sensors, temperature sensors etc.)	2255332962
PMH Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	2255332468

Description	Order No.
Replacement unit OIL-Check for the period of re-calibration	2255332952
Replacement unit OIL-Check incl. Check Box S for the period of re-calibration	2255333012
Re-calibration OIL-Check S incl. certificate	2255332948
Re-calibration and maintenance OIL-Check S incl. certificate, rate 1 for up to 8760 operating hours	2255332949
Re-calibration and maintenance OIL-Check S incl. certificate, rate 2 from 8760 operating hours	2255332950

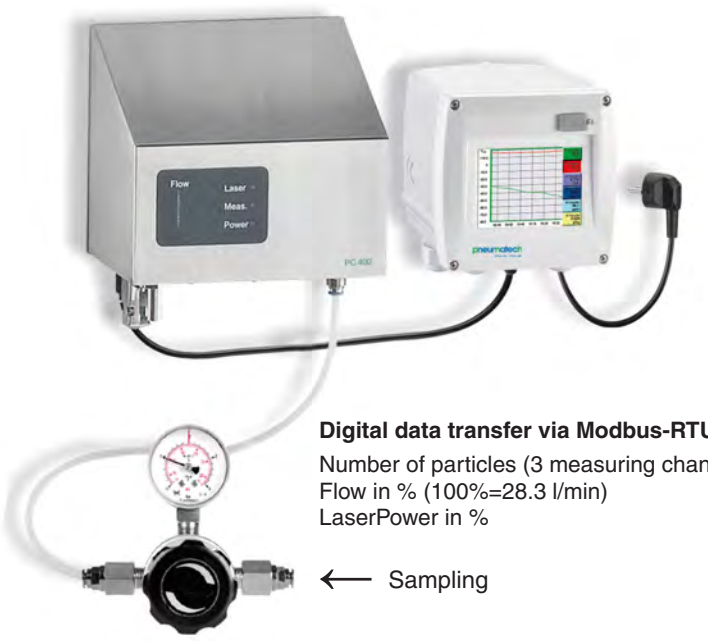
Particle counter – Particle Check S1/ S2/ M1/ M2 (to order with option Check Box S4)

Advantages at a glance:

- Highly precise, optical laser particle counter for use in compressed air and technical gases
- Highly precise optics for detecting the smallest particles up to 0.1 µm and therefore suitable for monitoring the compressed air class 1 according to ISO 8573-1
- The flow rate of 28.3 l/min (1 cfm) is 10 times higher than that of the particle counters generally available on the market (usually 2.83 l/min). Advantage: Counts the smallest particles with high counting accuracy at the same time
- Due to the digital data transfer (Modbus-RTU) to the chart recorders Check Box S4 or Check Box S6, 3 measuring channels can be transferred at the same time (without any faults due to check sum)
- The class 1 filter which is included in the scope of delivery can be used for on-site calibration at any time. Contaminations on the optics can therefore be quickly detected or eliminated.

Advantages of the Check Box S4

- Data logger for long-term monitoring
- Display shows trend curves (online and history curves available)
- Zoom function directly on the touch screen
- Integrated Ethernet interface (Modbus/TCP) and RS 485 interface (Modbus-RTU) for data transfer to superordinate controls
- 2 alarm relays (changeover contact 230 VAC, 3A) – threshold values freely adjustable
- Easy operation via 3.5" touchscreen



Digital data transfer via Modbus-RTU:

Number of particles (3 measuring channels)
Flow in % (100%=28.3 l/min)
LaserPower in %

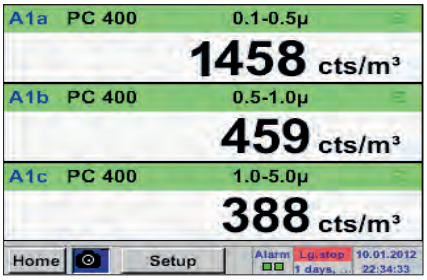
← Sampling

The Check Box S4 shows all 3 measuring channels according to ISO 8573-1

Particle size 0.1…0.5 µm:
Number or particles per m³

Particle size 0.5…1.0 µm:
Number or particles per m³

Particle size 1.0…5.0 µm:
Number or particles per m³



Technical data Particle Check S1/ S2	
Measured medium:	Compressed air (free from aggressive, corrosive, acid, toxic, flammable and oxidising components) as well as gas types like N_2, O_2, CO_2. Further gas types on request
Field of application:	In case of compressed air after filtration In case of gases / pure gases also without filtration
Parameter:	Number of particles per m³ (relative to expanded air: 20 °C, 1000 hPa) Size channels for the Particle Check S1 0.1 µm: Particle size 0.1…0.5 µm: Number or particles per m³ Particle size 0.5…1.0 µm: Number or particles per m³ Particle size 1.0…5.0 µm: Number or particles per m³ Size channels for the Particle Check S2 0.3 µm: Particle size 0.3…0.5 µm: Number or particles per m³ Particle size 0.5…1.0 µm: Number or particles per m³ Particle size 1.0…5.0 µm: Number or particles per m³
Operating pressure:	Max. input pressure on the pressure reducer: 40 bar
Humidity of measured gas:	<= 90% rel. humidity, pressure dew point max. 10 °C, non-condensable humidity
Ambient temparature:	5...40 C
Temperature of the measured medium:	0...70 C
Compressed air connection:	6 mm PTFE-hose incl. quick coupling
Flow rate:	28.3 l/min (1 cfm)
Interface:	RS 485 (Modbus-RTU)
Light source:	Laser diode
Power supply:	24 VDC, 300 mA
Dimensions:	150 x 200 x 300 mm
Weight:	8 kg
Housing:	Stainless steel

Stationary solution with particle counter Particle Check S1/ S2 (to order with option Check Box S1)

Description	Order No.
Particle Check S1 particle counter up to 0.1 µm for compressed air and gases, incl. pressure reducer and calibration certificate	2255332966
Connection cable for probes 5 m, with open ends	2255332498
Check Box S1 chart recorder with graphic display and touch screen operation	2255330407
Option:	
Integrated data logger for 100 million measured values	2255460217
Integrated Ethernet and RS 485 interface	2255460216
PMH Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	2255332468
As an alternative to Particle Check S1 up to 0.1 µm: Particle Check S2 particle counter up to 0.3 µm for compressed air and gases, incl. pressure reducer and calibration certificate	2255332967

Mobile solution with particle counter Particle Check M1/ M2 in a service case (to order with option Check Box M6)

Description	Order No.
Particle Check M1 particle counter up to 0.1 µm for compressed air and gases incl. pressure reducer and calibration certificate in a service case	2255332968
Connection cable for third party sensors to portable devices, ODU/open ends, 5 m	2255332514
Chart recorder Check Box M6, 4 sensor inputs	2255332457
PMH Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	2255332468
As an alternative to Particle Check M1 up to 0.1 µm:	2255332969
Particle Check M2 particle counter up to 0.3 µm for compressed air and gases incl. pressure reducer and calibration certificate in a service case	

Re-calibration and accessories particle counter PC 400

Description	Order No.
Re-calibration particle counter Particle Check S/M incl. certificate	2255332951

Leakage

Leakages are a major problem for your compressed air system. Did you know that the biggest waste of energy in compressed air systems is caused by leakages? Almost as much as 30% of the cost of compressed air can be saved by eliminating leakages. Based on this, it is necessary to frequently check your compressed air systems to detect and eliminate leakages. With our Leak Check series you get all the function needed to detect leakages and measure the energy and more importantly the money wasted.

While Leak Check is reliable in detecting leaks the Leak Check Pro 1X/ Pro 2X is also able to calculate the costs those leaks will cause over time. The user gets a review about the actual state of the tested system and about the estimated potential cost savings.

Our leak detectors are suitable for the following gas types:

- Air / compressed air
- Argon (Ar)
- Oxygen (O_2)
- Nitrogen (N_2)

Leak Check Pro 1X/ Pro 2X

Leak detector with camera indicates leakage rate in l/min and costs in €

Find out your leak rate (l/min) and potential saving (€/year)

NEW:
Unique laser distance measurement for automatic cost determination

Find the smallest leaks in far distance

NEW:
Automatic sensor detection

Auto level: adapts the sensitivity automatically to the environment and eliminates the ambient noise reliably

Photograph leaking parts

Describe the leak and necessary actions

Transmit the leak details via USB to your desktop software

Create an ISO 50001 report

Seek the leak the whole day (9 hours)

The Leak Check meets the requirements of Class I „Standard Test Method for Leaks with ultrasound“ (ASTM Int. - E1002-5)

Costs per year						
Pressure	Leak size - Diameter (mm)					
	0,5 mm	**1,0 mm**	**1,5 mm**	**2,0 mm**	**2,5 mm**	**3,0 mm**
3 bar	90 €	361 €	812 €	1.444 €	2.256 €	3.248 €
4 bar	113 €	451 €	1.015 €	1.805 €	2.820 €	4.061 €
5 bar	135 €	541 €	1.218 €	2.166 €	3.384 €	4.873 €
6 bar	158 €	632 €	1.421 €	2.527 €	3.948 €	5.685 €
7 bar	180 €	722 €	1.624 €	2.888 €	4.512 €	6.497 €
8 bar	203 €	812 €	1.827 €	3.248 €	5.076 €	7.309 €

Table: Leakage costs within one year in case of operation 24 h/365 days, calculated with compressed air costs of 1.9 ct/Nm³.

Leak Check Pro 1X/ Pro 2X is a consistent advancement

The new leak meters Leak Check Pro 1X/ Pro 2X with integrated camera and leakage calculation are ideal measuring instruments which help to find and document even smallest leakages (0.1 l/min corresponds to approx. 1 € per year) easily even in far distances.

The unique Laser distance measurement provides a more precise calculation of Leakrate (l/min) and potential savings (€/year)

Leak Check Pro 2X is the worldwide first leak meter with an additional freely assignable sensor input for all PMH sensors. In addition to the leakage measurement and detection also all necessary measurements with regards to dew point, flow, pressure, and temperature - can be carried out.

Accessories

- **Acoustic trumpet -** bundles the acoustic waves of smallest leakages, disturbing ambient noise will be eliminated
- **Focus tube with focus tip** - for precise locating of smallest leakages in narrow areas
- **Optionally available -** Gooseneck enables a positioning of the leakage on the spot – even in case of hardly accessile locations. Noise is hidden.
- **Optionally parabolic mirror -** for leak detection at long distances. Laser pointer and camera integrated.

Leak detection at:

- Compressed air, gas, steam and vacuum sytems
- Steam Traps
- Seals

The noise-proof headset enables the leak detection also in EXTREMELY loud ambient. The ambient noise will be faded out, the leakage (inaudible ultrasonic sound) will be transformed to an audible signal. The laser grants an exact locating.

Options


Acoustic trumpet


Focus tube with focus tip

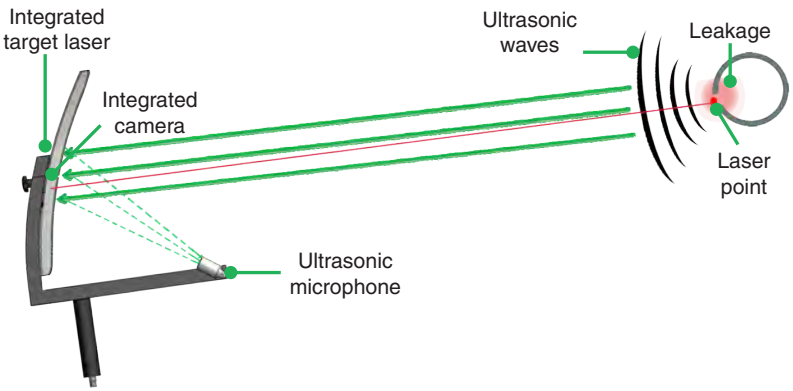

Optionally available


Parabolic mirror


Noise-proof headset

Professional accessory parabolic mirror

By bundling the ultrasonic waves in the parabolic mirror, even the smallest leaks of 0.8 l / min (ca. 8 € p.a.) at a distance of up to 10 - 15 m can be localized with pinpoint accuracy (± 15 cm). The shape of the parabolic mirror ensures that only ultrasonic waves of the targeted leak are evaluated. Disterbing noise is reduced to a minimum.

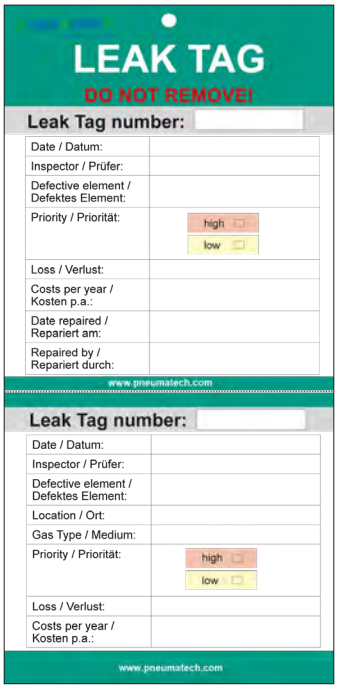


Checking high voltage overhead lines for corona discharge

Accurate leak detection during operation with laser pointer and integrated camera

Leakage files stored in Leak Check Pro 1X/ Pro 2X are exported to a USB stick for issuing a report by software

If the leakage is detected and stored, the following data are also stored in the Leak Check Pro 1X/ Pro 2X and will be available after the export to the PMH Leak Reporter software to issue a report:



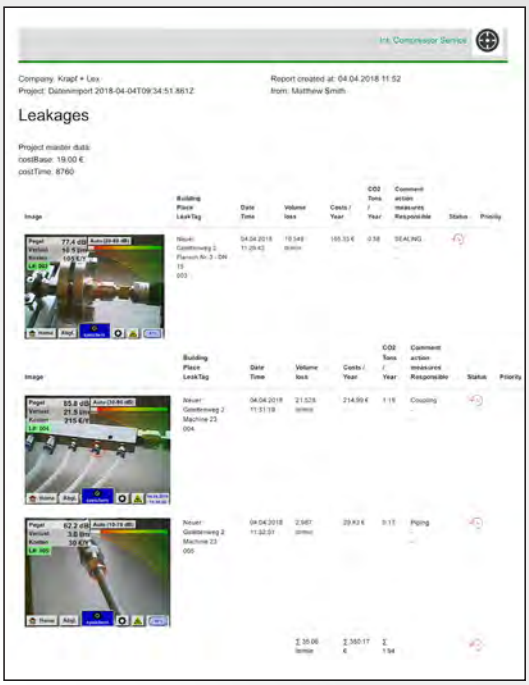
Leak Tags in hardcopies for documentation on-site

- Photo of the leakage
- Date/time
- Company name/department / machine
- Size of the leakage in liters/min (unit selectable)
- Costs of the leakage per year in € (currency selectable)

Detailed reports can be issued via PC software, which can be placed at the disposal of the operators of compressed air systems resp. the head of the respective department.

The report can be issued for the whole company or for each department and it documents the detected leakages easily and clearly. Due to the summation at the end of the report it is easy to get an overview on the whole leakage amount in liters/min as well as the total leakage costs per year.

Leakage - report for ISO 50001 Audits



Transportation case Leak Check Pro 1/ Pro 2

Transportation case with Parabolic mirror

Description	Order no.
Set Leak Check Pro 1X consisting of:	2255332941
Leak Check Pro 1X leak detector with acoustic trumpet, integrated camera, IR laser for automatic distance measurement and 100 leak tags for marking the leakages on site	2255332957
Transportation case	2255332719
Sound-proof headset	2255332720
Focus tube with focus tip	2255332721
AC adapter plug	2255332722
Helix cable for connecting the ultrasonic sound sensor, length 2 m, (extended)	2255332723
Set Leak Check Pro 2X consisting of	2255332942
Leak Check Pro 2X leak detector incl. acoustic trumpet, with integrated camera and additional input for external sensors, IR laser for automatic distance measurement and 100 leak tags for marking the leakages on site	2255332958
Transportation case	2255332719
Sound-proof headset	2255332720
Focus tube with focus tip	2255332721
AC adapter plug	2255332722
Helix cable for connecting the ultrasonic sound sensor, length 2 m, (extended)	2255332723
Equipment	
PMH Leak Reporter – for detailed ISO 50001 reports. Gives an illustrated survey of the found leakages and their possible savings. Measures for elimination including status display can be defined for every leakage - License for 2 computers	2255332459
Gooseneck for leakage detection at sites which are difficult to access (length 600 mm)	2255332460
Gooseneck for leakage detection at sites which are difficult to access (length 1500 mm)	2255332729
Parabolic mirror for leak detection at long distances, incl. Transportation case	2255332461
Ultrasonic tone generator for leak testing	2255332725
500 leak tags for marking the leakages on site	2255332726
Calibration	
Recalibration Leak Check Pro 1X/ Pro 2X	2255332727
Further sensors / accessories for connection to Leak Check Pro 2	
PDP Sens 1/2 dew point sensor for mobile devices, -80…+20°Ctd, incl. mobile measuring chamber, 5 m connection cable and perforated protection cap	2255332526
Flow sensor Flow Check Universal , Max version (185 m/s) sensor length 220 mm, incl. 5 m connection cable	2255332524
Standard pressure sensor PMH 16, 0…16 bar, ± 1 % accuracy of f. s	2255330414
Differential pressure sensor 1.6 bar diff.	2255332486
Connection cable for pressure, temperature or external sensors on mobile instruments, ODU / open ends, 5 m	2255332514
PMH Basic - data evaluation in graphic and table form - reading out of the measured data via USB Stick Ethernet. License for 2 computers	2255332468

Technical data Leak Check Pro 1X/ Pro 2X	
Working frequency	40 kHz ± 2 kHz
Connections	3.5 mm stereo jack for headset Power supply socket for connecting an external recharger
Laser	Wave length: 645-660 nm Output power: < 1 mW (laser class 2)
Display	3,5“ Touch screen
Interface	USB interface
Data logger	8 GB SD memory card (100 million values)
Power supply	Internal rechargeable Li-Ion batteries approx. 9 h continuous operation, 4 h charging time
Ambient temperature	0-+50°C
EMC	DIN EN 61326
Auto level	Adapts the sensitivity automatically to the environment and eliminates the ambient noise reliably
Sensitivity	min: 0.1 l/min at 6 bar, 5 m distance, approx. 1€/year compressed air costs

Technical data external sensor input (only Leak Check Pro 2X)	
Measuring range	Please see external PMH sensors
Accuracy	Please see external PMH sensors
Voltage supply	Output voltage: 24 VDC ± 10% Output current: 120 mA in continuous operation

Leak detector Leak Check A

Features & Benefits

- Robustness and low weight ensure fatigue-free use in industrial environments
- Improved detection of leaks with optional acoustic trumpet
- Modern lithium-ion battery with high capacity, external recharger
- Minimum operating time 10 h
- Easy operation via keypad
- Leak detection in compressed air lines, gas, vapor and vacuum plants
- Leak detection in door seals
- Leak Check with focus tube and focus tip for precise locating.
- The set includes a robust impact-proof transportation case which contains all necessary components and accessories.
- Sound-proof headset enables leak detection in extremely noisy environments

Leak Check A is available either as standalone device or in a complete set

If gases escape through leaks in piping systems (e.g. untight screwed connections, corrosions and so on) ultrasonic noises are generated. By means of Leak Check A even the smallest leakages which cannot be heard by the human ear and which are not visible due to their size can be detected even from distances of several meters. Leak Check A transforms the inaudible signals into a frequency which can be identified. By means of the comfortable sound-proof headset these noises can be realized even in extremely noisy environments.

The Leak Check A leak detector convinces by its obviously refined sensor technology and its improved support in the tracing of leaks. By means of the integrated laser pointer which serves for target heading the leak can be localized more accurately.

Through the use of a specially designed trumpet, a better bundling of the sound waves is achieved. This trumpet acts like a directional microphone, suppressing unwanted noise and facilitating the pinpoint location of leaks even in hard-to-reach areas. Due to the special design of the bell, the use of the laser pointer is not hindered.

A handy ultrasonic transmitter is available for detecting leaks in pressureless systems. The transmitter is positioned so that the sound can enter the piping system. The ultrasonic signal penetrates the smallest openings, which can then be detected with the Leak Check A.

Even very small leaks at hatches, doors and windows can be detected.

Description	Order no.
Set Leak Check A consisting of:	2255333011
Leak Check Leak detector	2255332959
Transport case	2255332719
Sound-proof headset	2255332720
Focus tube with focus tip	2255332721
Battery charger	2255332722
Acoustic trumpet	2255332728
Accessory, not included in the set: Ultrasonic tone generator	2255332725

Technical data Leak Check A	
Working frequency	40 kHz ± 2 kHz
Connections	3.5 mm stereo jack for headset. Power supply socket for connecting a external recharger
Laser	wave length: 645-660 nm output power: < 1 nW (laser class 2)
Operating duration	10 hours
Charging time	approx. 1.5 hours
Operating temp.	0 to 40 °C
Storage temp.:	-10 °C to 50 °C

Costs per year						
Pressure	**Leak size - Diameter (mm)**					
	0,5 mm	**1,0 mm**	**1,5 mm**	**2,0 mm**	**2,5 mm**	**3,0 mm**
3 bar	90 €	361 €	812 €	1.444 €	2.256 €	3.248 €
4 bar	113 €	451 €	1.015 €	1.805 €	2.820 €	4.061 €
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8 bar	203 €	812 €	1.827 €	3.248 €	5.076 €	7.309 €

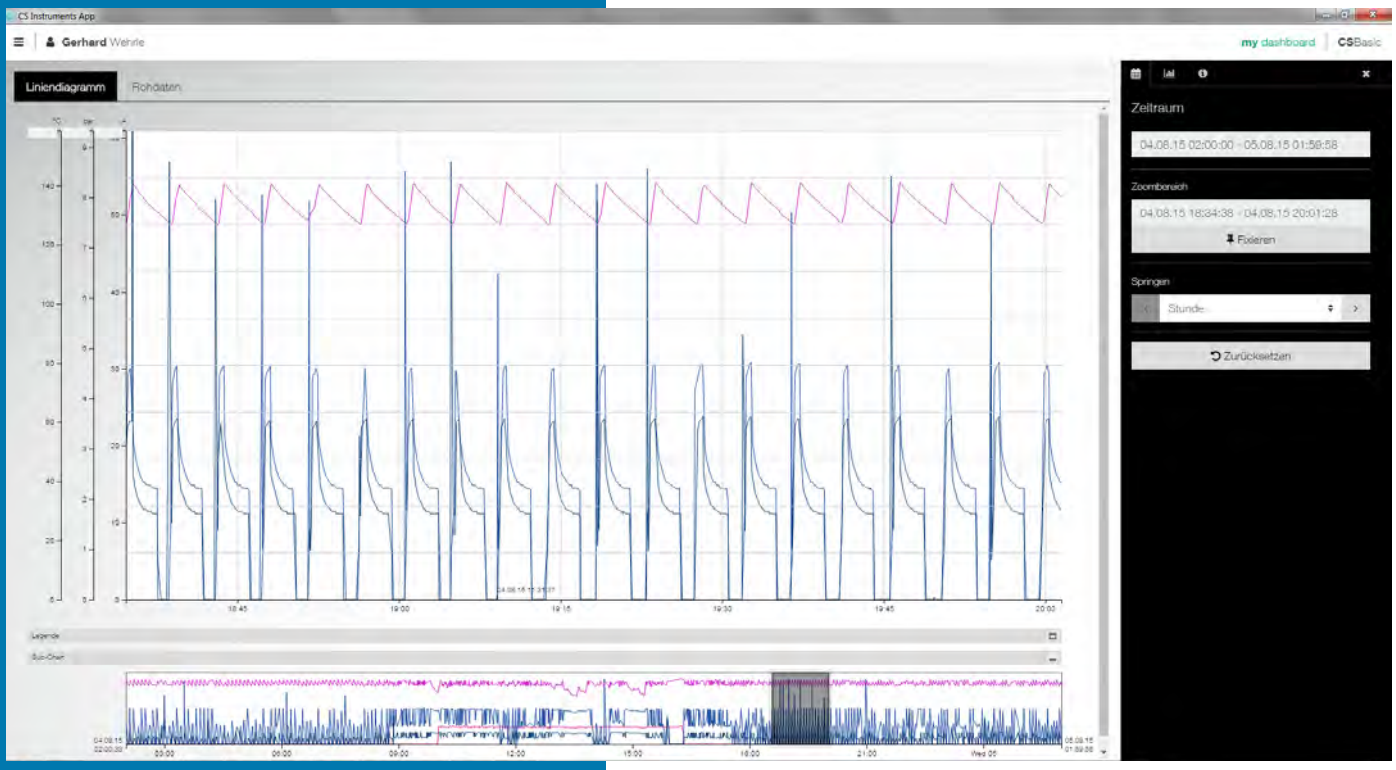
Table: Leakage costs within one year in case of operation 24 h/365 days, calculated with compressed air costs of 1.9 ct/Nm³.

Software

PMH Basic Data evaluation in graphic and table form - reading out of the measured data via USB stick or Ethernet. Due to the intuitive operation all important functions can be retrieved via the dashboard. For better visualization the measurement curves are indicated in terms of color. The user can quickly see which minimum respectively maximum measured values occurred at which time and how long.

PMH Basic

With the PMH Basic the paperless recorder Check Box S6/ Check Box S1-S5 and all mobile devices with data logger can be read out. Depending on the device, data transfer is done either via USB stick or Ethernet connection.



Functions:

Graphic evaluation

All measuring curves are indicated in color. All necessary functions are integrated, like e. g. free zoom, selection/deselection of single measuring curves, free selection of periods, scaling of the axis, select colors and so on. This view can be stored as a PDF file and sent by e-mail. Different data can be combined in one common file.

Table view

All measuring points are listed with exact time interval. The desired measuring channels with the name of the measuring place can be selected via the diagram explorer.

Statistics

All required statistic data are visible at a glance. So the user can see very quickly which minimal or maximal measured values occurred when and for how long.

Consumption report

The software issues a consumption report for all connected flow sensors, it can be selected if it should be daily, weekly or monthly.

Data export to MS-Excel ® or csv

The measured data can be exported to Excel or csv.

Tariffes

The price per consumption unit can be can be stored for each energy form. Depending on the time and the day different tariffs can be stored. The validity of the tariffs can be defined via calendar function in order to grant that price increased resp. decreases can be updated.

Multi lingual

German, english and further languages are included in the scope of delivery.

Alarm history / Alarm logfile

The exceeding of the limit values is documented with the PMH Network.

Administration of the measuring sites

Each PMH sensor resp. each PMH chart recorder can be allocated to a department/hall (resp. cost centers).

Optional add-on modules:

Module „formular-editor“

By means of the formula editor e. g. the measured values of 2 sensors can be totaled or subtracted from each other.

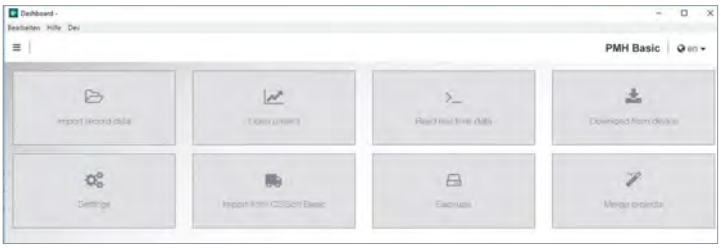
PMH Basic	
Installation	Local PC installation
Data storage	Database (local)
Updates to new releases free of charge	Yes
Automatic information about upgrades	Yes (only in case of internet access)
Number of working place licenses	2
Number of measured values	All measured values transmitted by a device. (Max. 1 device at the same time)
Data transfer	USB Stick (manually) or Ethernet
User administration	No
E-Mail in case of threshold value exceeding	No
Storage of the measured data	Logger data have to be read-out manually via PMH Basic

PMH Basic

Intuitive operation

All important functions can be retrieved via the dashboard.

- Global Settings: Adjust units and change decimal places, store company name and logo
- Import real-time data: Establish Ethernet connection to PMH logger or sensor. Trace real-time measured data in graphic and in table form
- Import from PMH Soft Basic: Data migration from the previous version of PMH Soft Basic
- Data backup: Backup of the projects and the database



Intuitive operation

Grapic evaluation

- All measurement curves are indicated in terms of color. All necessary funktions like free zoom, selection/ deselection of single measured curves, free selection of periods, scaling of the axes, selection of colors and so on are integrated: This view can be stored as pdf file and sent by e-mail. Different data can be merged to one common file.

Graphic evaluation

Table view

- All measuring points are listed with the exact time interval. The desired measuring channels with the measuring site name can be selected via the diagram explorer.

		A2.1	B3.1	B3.2	B3.3
		Pressure	Dewpoint		
		A2a	DewPoint	Rel.Humid.	Temperatur
Date	Device	bar	°Ctd	%	°C
27.01.17 13:52:18	0	9,6749	-50,6462	0,1534	20,2556
27.01.17 13:52:28	0	9,676	-51,4187	0,1394	20,2517
27.01.17 13:52:38	0	9,6769	-52,0952	0,128	20,2499
27.01.17 13:52:48	0	9,678	-52,791	0,1173	20,2479

Table view

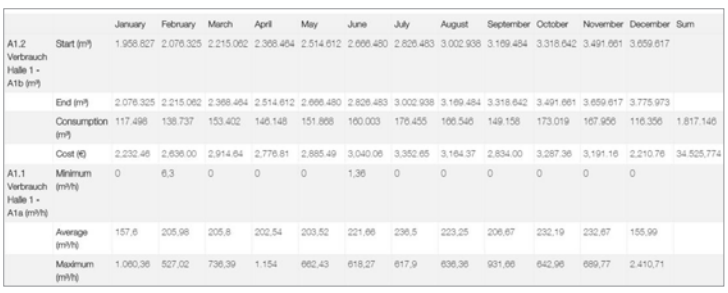
Statistics

- All necessary statistiPMH data are apparent at a glance. So the user can quickly see which minimum or maximum measured values occurred at which time and for how long.

Statistics

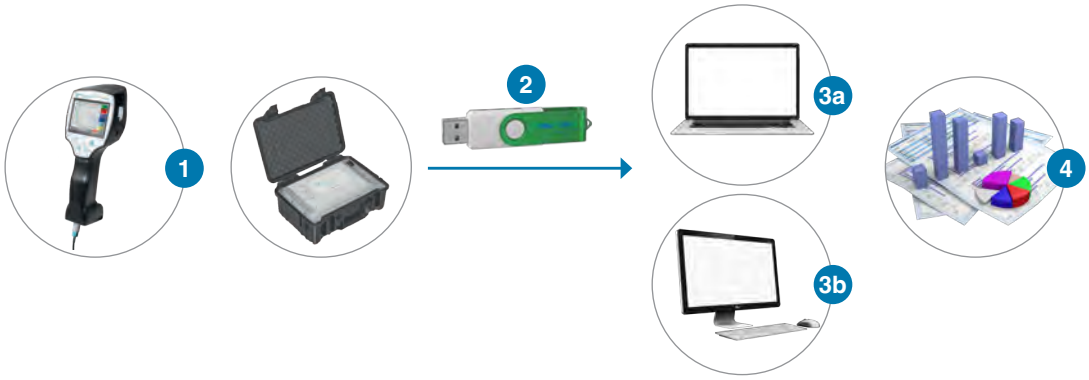
Flow evaluation

- The software carries out flow analysis for all connected flow sensors optionally as daily, weekly or monthly report.



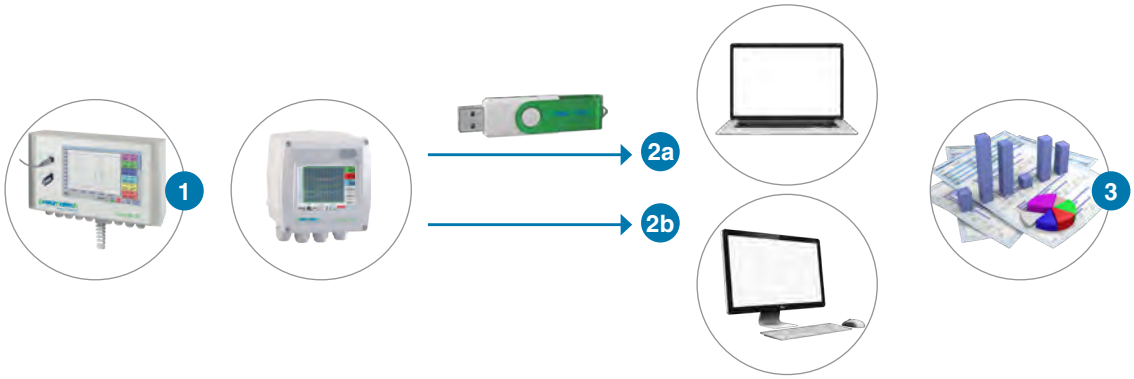
Flow evaluation

Data evaluation for mobile measurement:



1. Mobile measurement at the customer. Measured data are saved in the data logger in the selected measuring cycle
2. Export of the data to the USB stick
3a. Import of the measured data to the laptop directly on-site
3b. Import of the measured data to the computer in the office
4. Evaluation and print out of the measured data

Data evaluation for fix installed chart recorder in the company:



1. Chart recorder is fix installed in the company. Measured data will be saved in the data logger in the selected measurement cycle
2a. Transfer the data via USB stick to the computer
2b. Readout of the logger data via the computer network (LAN) by means of PMH Basic
3. Evaluation and print out of the measured data

Description	Order no.
PMH Basic - data evaluation in graphic and table form - readout of the measured data via USB or Ethernet. License for 2 working places	2255332468
Additional license for 1 further working place	2255332735
Module „Formula Editor“ – by means of the formula editor the measured data and constants can be calculated (addition, subtraction, division, multiplication, root function, exponentiation)	2255332736

Gas Analysis Solutions

Gas Analysis Solutions

Your oxygen or nitrogen generation system is an essential part of your production. That is why it is important to monitor its performance. This allows you to optimize your output and address any issues before they become costly problems. Pneumatech offers a range of gas analysis solutions that allow you to check your oxygen or nitrogen system's quality, purity and safety.

Inline O_2 analyser

The inline oxygen analyser is a device that measures and monitors the oxygen in nitrogen produced by an on-site generator. Two versions are available to meet the requirements of different nitrogen purity levels. For N_2 with a purity of 99.9% to 99.999%, the analyser uses PPM (parts per million) technology to measure up to 1000 PPM O_2. The analyser relies on PCT (parts per hundred) technology for N_2 with a purity between 75% and 99.9% (up to 25% O_2).
The inline O_2 analyser helps enable the remote monitoring of product quality, reliability and safety. Its zirconia sensor has an extra-long service life of 5 years.

Room oxygen monitor

The room oxygen monitor screens the oxygen level in a room where an on-site oxygen or nitrogen generation system is located. It alerts operators if the O_2 level is too high or too low for those working in close proximity. The monitor is wall-mounted and has a zirconia sensor with a long service life of 5 years. Its bright beacon shows green if conditions are good and red if the O_2 level is unsafe. In the latter case, it will also set off a (loud) alarm. A 4-20 mA connection can be added to allow for remote monitoring.

Portable O_2/N_2 analyser

The portable O_2/N_2 analyser checks the purity of the output of on-site oxygen and nitrogen generators. It comes in a rugged, plug-and-play box, so you can take it wherever you need it for quick and easy measurement. The analyser does not require any other sensors or connections.
The portable O_2/N_2 analyser gives operators an independent measurement of the purity of their N_2 or O_2 generators as well as a double-check of the reliability of their other sensors.

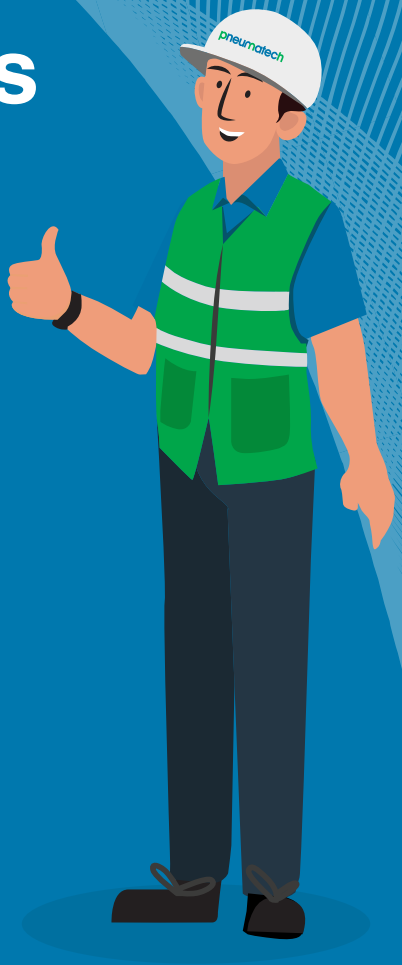
Medical gas analyser

The medical gas analyser is a wall-mounted device that is designed to check the purity of medical oxygen produced by oxygen generation systems. It features a range of advanced sensors and features, including an RS 485 modbus protocol, a 24VDC power supply, a large backlit LCD display, and optional built-in alarms. It can measure up to four parameters simultaneously and has two isolated 4-20mA analogue outputs per channel for easy data transfer and analysis. This makes the medical gas analyser the reliable and effective tool to ensure the purity of medical oxygen.

Model	Description	Reference Number	Additional Information			
			Power Supply	For which type of Gas generator	Sensor type	Measurement range
Inline O_2 analyser (PCT)	Inline wall mounted plug and play O_2/ N_2 analyser	2255333073	80-230 VAC	Nitrogen generators	Zirconia	Oxygen 0-25%
Inline O_2 analyser (PPM)	Inline wall mounted plug and play O_2/ N_2 analyser	2255333074	80-230 VAC	Nitrogen generators	Zirconia	Oxygen 0-1000PPM
Room oxygen monitor	Wall mounted ambient oxygen analyser for safety with alarm	1630134200	80-230 VAC	All	Zirconia	Oxygen 0-25%
Portable gas analyser	Portable Oxygen and Nitrogen analyser in rugged case	1630086150	240 VAC	Nitrogen and oxygen generators	Zirconia	Oxygen 0-96% Oxygen 0-25% Oxygen 0-1000PPM
Medical gas analyser	Plug and play oxygen analyser for medical applications to measure, O_2, CO and CO_2	2255333075	100-240 VAC	Oxygen generators	Zirconia, Infrared, Electrochemical	Oxygen 0-96% CO_2 0-500PPM CO 0-50PPM

PNEUMACHECK Advanced Services

A PNEUMACHECK audit will help you determine how you can maximize your air or gas equipment to improve its performance, energy savings, and sustainability.



PNEUMACHECK

Are you using your compressed air or industrial gas system optimally? If your answer is “I don’t know” or “definitely not”, you are losing a lot of money. Because the costs of an inefficient or unreliable installation quickly add up. A PNEUMACHECK audit will help you determine how you can maximize your air or gas equipment to improve its performance, energy savings, and sustainability.

Optimize your air, nitrogen and oxygen system

- Find out your compressed air or N_2 flow profiles.
- Test your compressed air system’s moisture, oil vapor and particle content to determine whether your air quality meets your requirements.
- Test the purity of the N_2 and O_2 you generate.
- Measure the pressure (drops) in your air and N_2 network to identify potential energy waste.
- Find leaks in your air or N_2 system.
- Measure the energy consumption of your compressed air equipment, including your compressor and dryer.

The all-in-one PNEUMACHECK box

- Flow Check Universal (max. version, probe length 220 mm, with display)
- Check Box M3 with 2 digital and 2 analog inputs
- 1/2" ball valve stainless steel
- 3x welding nipples
- Connection cable 5m (ODU/M12)
- Drilling device
- PMH basic software
- Protection frame (up to 50 bar)

A complete auditing solution

With PNEUMACHECK, you get a comprehensive auditing solution, from accurate measurement to expert advice.

1. Measurement:

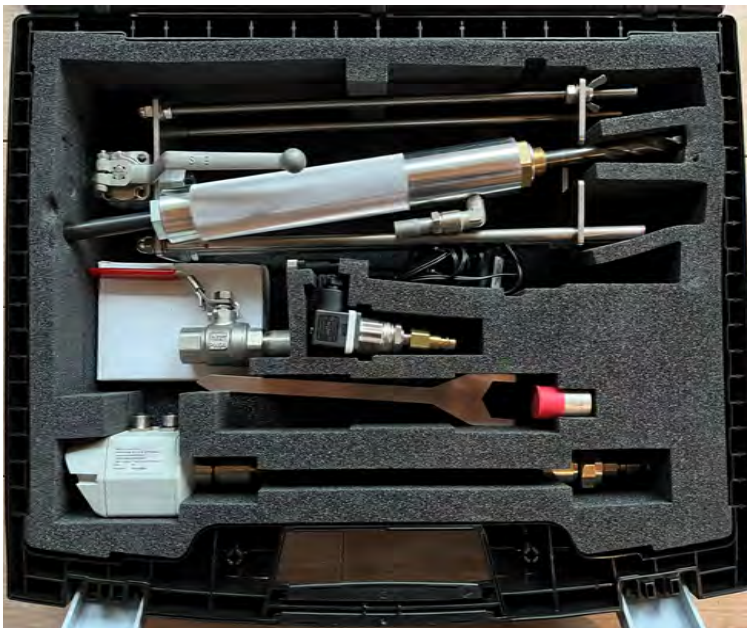
Our specialist comes to you to install the PNEUMACHECK Box, a plug-and-play measurement, monitoring and logging device. It comes with all the tools needed to connect to your installation. The equipment does not interfere with your production during the data gathering process.

2. Analysis and expertise:

Our experts analyze and summarize your data in one report filled with actionable insights.

3. Result:

Optimizing your air and gas system allows you to cut your energy costs, reduce your environmental footprint, and meet your quality and safety standards.



PNEUMACHECK

A wide range of PNEUMACHECK solutions

Pneumatech is the industry leader in air treatment and gas generation. Our range of PNEUMACHECK solutions helps you save money and improve your operational sustainability.

PNEUMA-CHECK audit	What we measure & optimize	How you benefit
Nitrogen and compressed air flow	• Determination of your optimal gas generator size based on your current N_2 flow. • Pre-check for compressed air leakages.	• Make the switch to producing your own N_2 based on a data-driven assessment of the benefits you will enjoy. • Experience the energy efficiency and cost savings of generating N_2 with a system optimized to your needs and requirements. • Get an overview of all leakages in your network.
Air and gas PDP	• Measurement of moisture content in compressed air and gases. • Analysis of dryer performance and efficiency. • Prevention of condensate in pipework and at the application.	• Prevent damage to your air system, your pneumatic equipment and your products caused by condensate. • Ensure the required PDP for your sensitive applications.
Air and gas pressure	• Measurement of the pressure in your compressed air and gas installation. • Measurement of the pressure drop in your air and gas piping, filters and dryers.	• Enjoy the cost and emissions savings of an optimized air and gas pressure and the elimination of pressure drops.
Air, gas and vacuum leakages	• Detection and analysis of leaks in your air, gas and vacuum network. • Sealing of leaks in your air, gas and vacuum system.	• Significantly reduce costs and improve your environmental footprint by eliminating energy waste because of leaks.
Air system power consumption	• Measurement of your air system's actual performance, including your compressor and dryer's power consumption. • Recommendations on how to adjust and optimize your air instlallation's performance and energy use.	• Enjoy the energy cost savings of optimizing your air system's power consumption. This will also reduce your environmental footprint.
Air oil vapor content	• Testing for the presence of oil vapors. • Checking if your compressed air meets your quality class requirements for the presence/ absence of oil vapors. • Checking if your installation meets breathing air standards.	• Prevention of compressed air quality issues, especially for sensitive applications.
Air particle content	• Checking if your compressed air meets your quality class requirements for particle content.	• Prevention of compressed air quality issues that can affect your system, tools and final products.
Gas purity	• Measurement of the purity of the N_2 or O_2 you generate.	• Ensure the quality of your N_2 or O_2 supply to prevent compromising your final product. • Comply with Pharmacopeia and EU food grade standards. • Meet breathing air safety requirements.

PNEUMACHECK basic set	Order no.
PNEUMACHECK box for flow measurement of nitrogen, compressed air, natural gas, methane, CO_2, N_2O, vacuum (optional for hydrogen, helium and propane) consisting of:	2255333105
Check Box M3, Flow Check Universal (max. version, display, probe length 220mm), connection cable 5m; 1/2» ball valve stainless steel, 3 welding nipples, high pressure protection, drilling device, high pressure protection, PMH Basic software	

PNEUMACHECK options based on service	Order no.
Air and gas PDP PDP Check S1/PDP Check S2 - Dew Point Monitoring	See page 44-45
Air and gas pressure Pressure probes	See page 35
Air, gas and vacuum leakages Leak Check Pro 1/ Leak Check Pro 2X	See page 93-99
Air system power consumption PMH PM 600	See page 36-38
Air oil vapor content Oil Check S	See page 88-89
Air particle content Particle Check M1/ M2 (see catalogue page 90-91)	See page 90-91
Gas purity N_2, O_2 measurement box (see catalogue page)	1630086150

Calibrating Measurement Equipment

Calibration helps to ensure that measurement equipment is operating within specified tolerances and is traceable to recognized standards.

Calibrating Measurement Equipment

Calibrating measurement equipment is important because it ensures that the equipment is providing accurate and reliable measurements. When equipment is not properly calibrated, it can produce measurements that are too high or too low, which can lead to incorrect decisions being made based on those measurements.

Calibration helps to ensure that measurement equipment is operating within specified tolerances and is traceable to recognized standards. This helps to eliminate measurement uncertainty and reduce the risk of errors. In addition, regularly calibrating equipment can help to extend its lifespan by identifying and correcting any issues before they become significant.

In summary, calibrating measurement equipment is essential for ensuring the accuracy and reliability of measurements, which is critical for a wide range of applications and industries.

Pneumatech offers calibration services for following measurement equipment products.

- PDP sensors
- Flow sensors
- Oil vapor measurement
- Particle counter

For more information, please contact your local Pneumatech sales representative.

pneumatech

Pure air . Pure gas

Pneumatech reserves the right to change or revise specifications and product design in connection with any features of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

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OHSAS 18001

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