

TURBINE GAS METER - CPT QUANTOMETER

FEATURES

The CPT turbine gas meter or quantometer meters gas volumes. It can be used with many gases (see list below). It is especially used as a secondary meter for natural gas. The measurement accuracy is 1.5%. It is equipped with a totalizer display and a pulse emitter. It can be used in an explosive atmosphere. CPT's main advantages are its robustness, the quality of its manufacturing and its communication possibilities. Horizontal or vertical mounting with a 5D upstream length and a 3D downstream length.

AVAILABLE MODELS

CPT: G 1" to G 2"

CPT: DN 65 to DN 200.

Threaded connection G and between PN16 flanges.

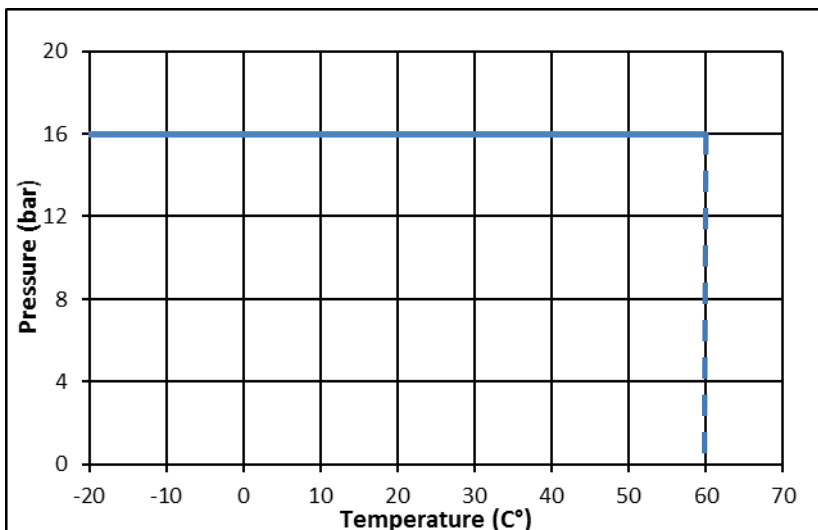
ACCURACY

1,5 % (3 % from Q min to 0.2 Q max).

Provide a 10 µm filter upstream.

LIMITS OF USE

Fluid WP:	16 bar
Fluid WT°:	-20°C / +60°C
Ambient WT°:	-25°C / +70°C



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COMPATIBLE GASES

GAS	Chemical symbol	Density (Kg/m ³)	Density (Air)	ATEX classification
Argon	Ar	1.66	1.38	IIB Standard Model
Butane	C ₄ H ₁₀	2.53	2.1	IIB Standard Model
Carbon dioxide	CO ₂	1.84	1.53	IIB Standard Model
Carbon monoxide	CO	1.16	0.97	IIB Standard Model
Ethane	C ₂ H ₆	1.27	1.06	IIB Standard Model
Ethylene	C ₂ H ₄	1.17	0.98	IIB Standard Model
Helium	He	0.17	0.14	IIB Standard Model
Methane	CH ₄	0.67	0.55	IIB Standard Model
Natural Gas	-	-0.75	-0.63	IIB Standard Model
Nitrogen	N ₂	1.16	0.97	IIB Standard Model
Propane	C ₃ H ₈	1.87	1.56	IIB Standard Model
Acetylene	C ₂ H ₂	1.09	0.91	Special model IIC
Hydrogen	H ₂	0.084	0.07	Special model IIC
Air	-	1.2	1.00	IIB Standard Model

DIRECTIVES AND MANUFACTURING STANDARDS

OBJECT	Standard
Pressure Equipment Directive 2014/68	G 1" to G 2": A4 § 3 category II
	DN 65 to DN 200: A4 § 3 category II
ATEX Directive	Category 2
Threaded connection	ISO 228
Flanges	EN 1092-1

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FLOW-RATE TABLE

Threaded version:

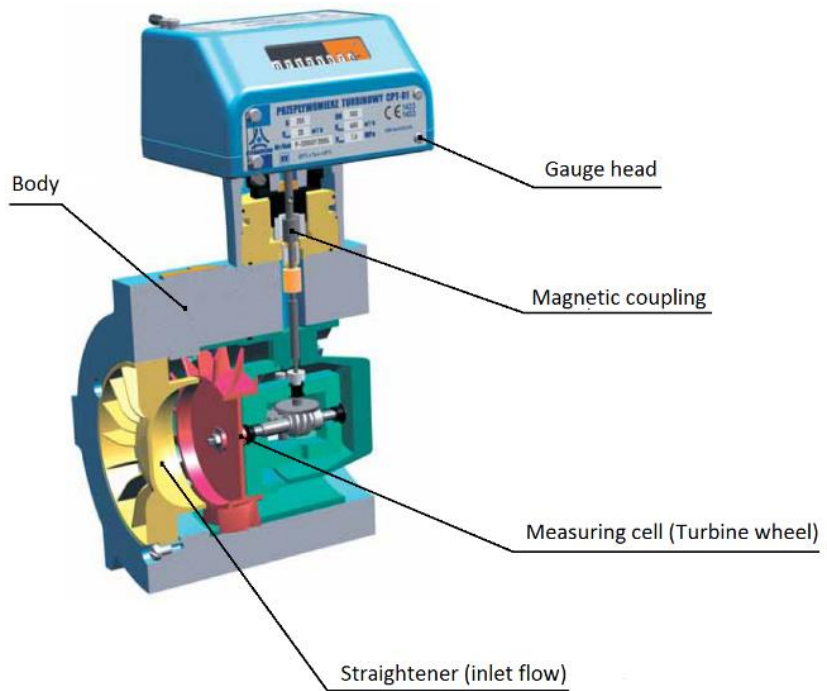
DN	Nominal flow-rate G	Maximum flow-rate Qmax (m ³ /h)	Pressure drop (mbar)		Minimum flow-rate Qmin (m ³ /h)	LF pulse (m ³ /h)	HF1-HF2 pulse (m ³)	HF1-HF2 pulse (m ³)
			Qmin	Qmax	1:10			
1"	16	25	1.5	4	2.5	10	9770	113600
	25	40	1.5	4	4		8710	101300
1" 1/4	16	25	1.5	4	2.5	10	9770	113600
	25	40	1.4	3.2	4		8925	103800
1" 1/2	40	65	1	2.5	6.5	10	2610	94830
	65	100	2	5	10		2610	94830
2"	40	65	1	2.5	6.5	10	2610	94830
	65	100	2	5	10		2610	94830

Flange version:

DN	Nominal flow-rate G	Maximum flow-rate Qmax (m ³ /h)	Pressure drop Qmax (mbar)	Minimum flow-rate Qmin (m ³ /h)			LF pulse (m ³)	HF1-HF2 pulse (m ³)	HF pulse (m ³)
				1:10	1:20	1:30			
50	40	65	2.5	6.5	-	-	10	2610	94830
	65	100	5.0	10	-	-		2610	94830
65	65	100	1.6	10	8	-	10	1081	42560
	100	160	3.8	16	8	-	1	1081	42560
80	100	160	3.7	16	8	-	1	1081	42560
	160	250	5.4	25	13	8		844	30650
	250	400	11.4	40	20	13		470	17060
100	160	250	3.7	-	13	8	1	692	16780
	250	400	4.2	-	20	13		692	16780
	400	650	8.8	-	32	20		401	9720
150	400	650	2.4	-	32	20	1	227	6870
	650	1000	6.4	-	50	32		227	6870
	1000	1600	16.0	-	80	50	0.1	129	3910
200	650	1000	2.0	-	50	32	1	114	3110
	1000	1600	6.0	-	80	50	0.1	116	3170
	1600	2500	15.0	-	130	80		67	2025

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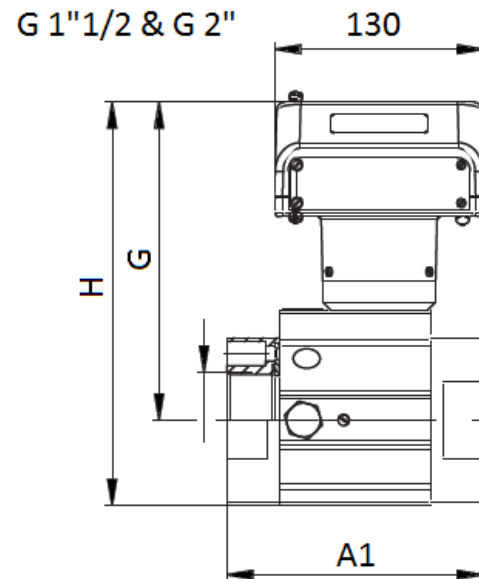
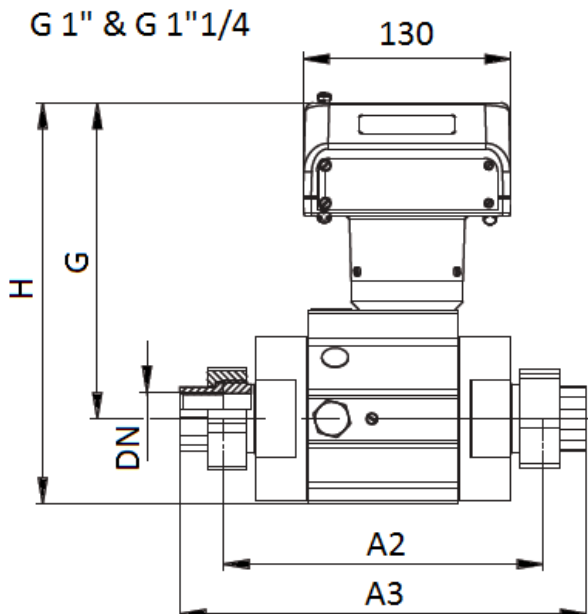
MANUFACTURING



DIMENSIONS (mm) AND WEIGHT (kg)

Threaded version:

DN	A1 (mm)	A2 (mm)	A3 (mm)	G (mm)	H (mm)	Weight (kg)
1"	-	200	250	199	252	4.6
1" 1/4	-	200	250	199	252	4.6
1" 1/2	160	-	-	199	252	4.4
2"	160	-	-	199	252	4.4

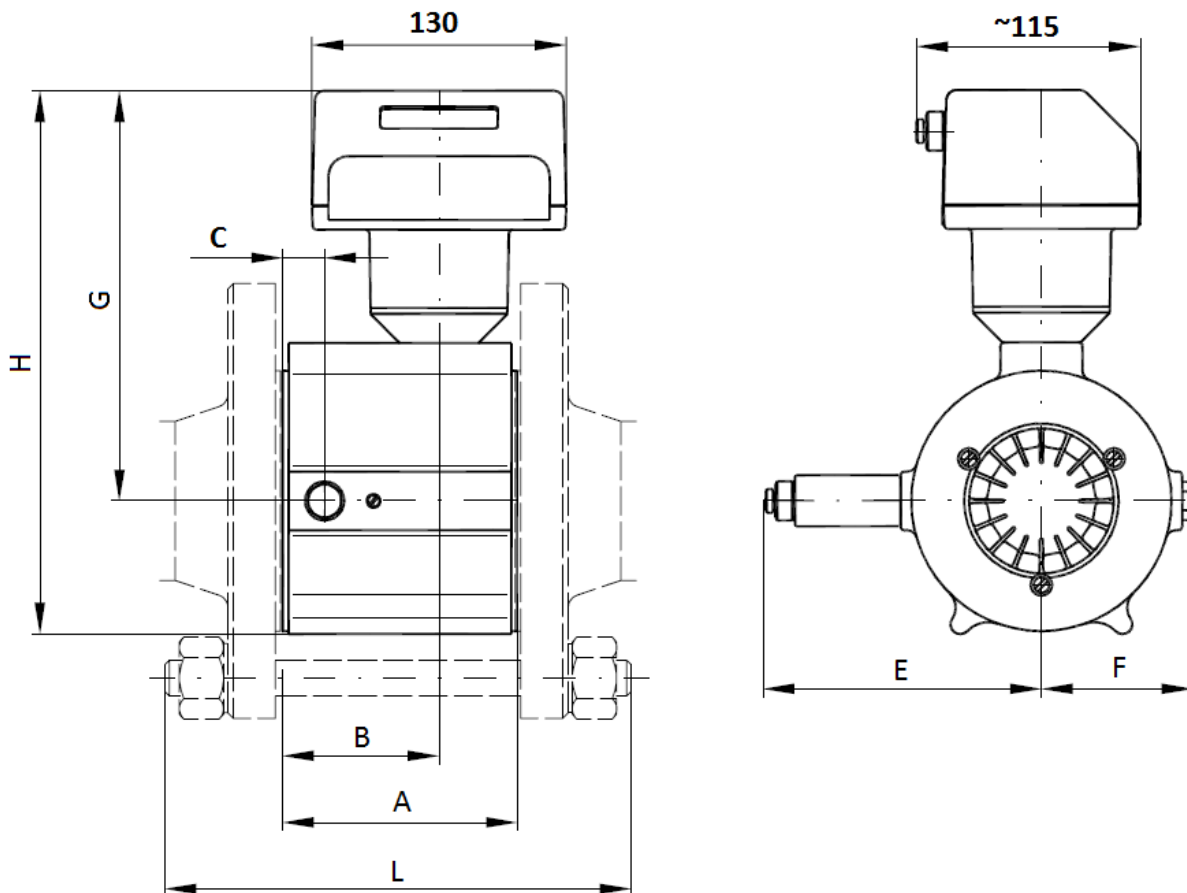


TURBINE GAS METER - CPT QUANTOMETER

Flange version:

DN	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	J (mm)	K	L (mm)	Weight (kg)
50	100	65	18	32	158	74	199	252	78	4 x M16	200	3.6
65	120	80	21	38	170	86	211	278	90	8 x M16	220	5.1
80	120	80	21	38	170	86	211	278	90	8 x M16	220	5.3
100	150	100	29	53	185	100	225	305	105	8 x M16	250	7.4
150	180	127	50	76	210	125	243	351	130	8 x M20	300	11.6
200	200	146	56	83	225	140	272	407	145	12 x M20	320	48.5

K*: Required quantity of threaded stem for mounting the quantometer.

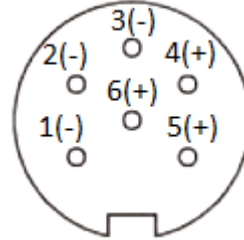


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ELECTRICAL FEATURES

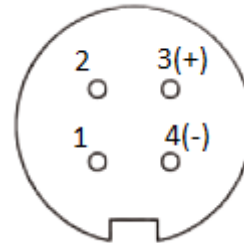
Digitizing of the pulse sensor in the connection pins 1 and 2 installed in the gauge head.
The connection pins correspond to the TUCHEL plug no. C091 31H006 100 2.

Fitting connection	Pin 1 pulse sensor	Pin 2 pulse sensor
1 - 4	LFK 1 (Standard)	LFK 2
2 - 5	LFI 1	LFI 2
3 - 6	HF1 or AFK	HF2



Digitizing of the pulse sensor in the connection pin of the pulse emitter HF3, installed in the body.
The connection pins correspond to the TUCHEL plug no. C091 31H006 100 2.

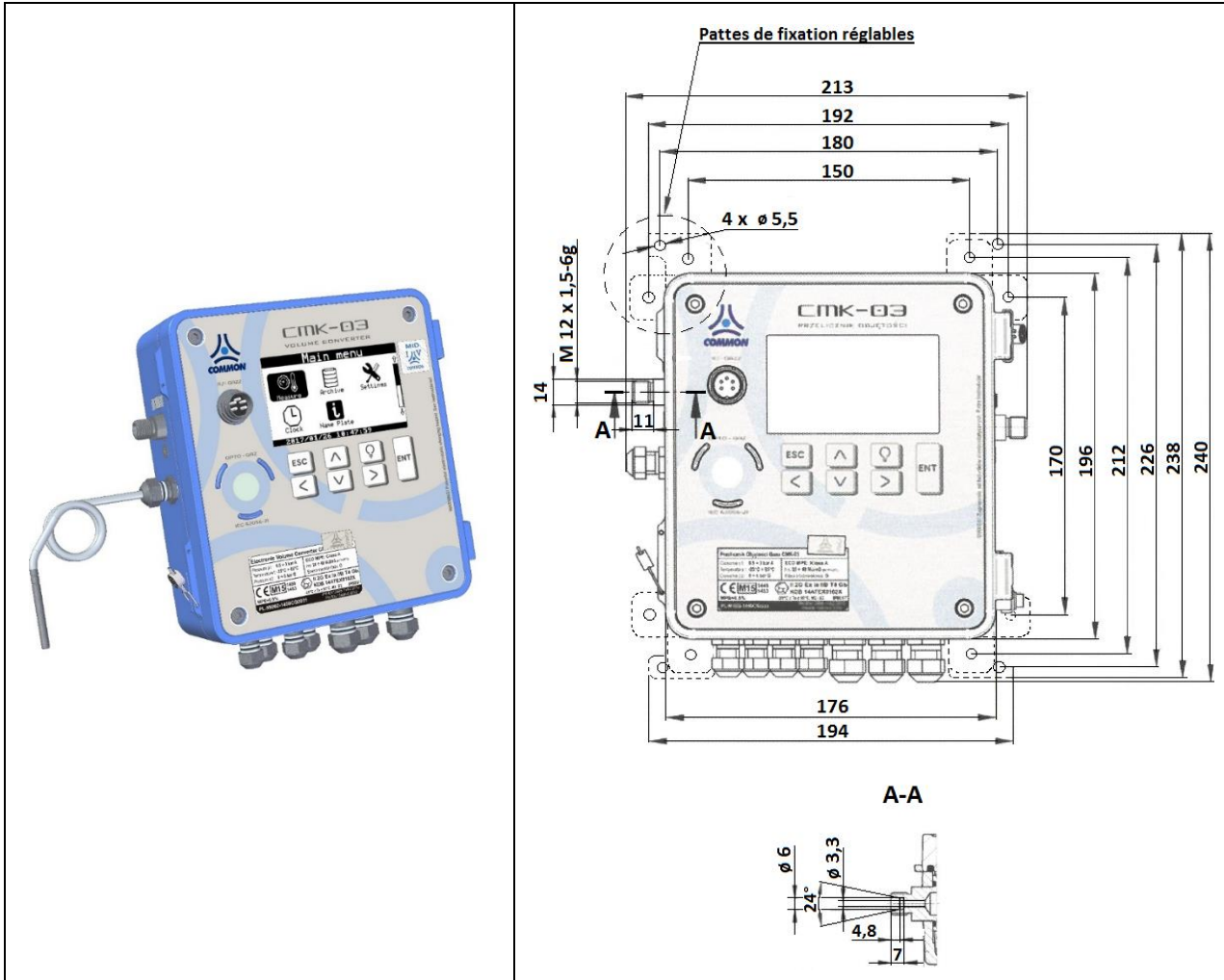
Fitting connection	HF on turbine wheel
1 - 2	Not used
3 - 4	HF3



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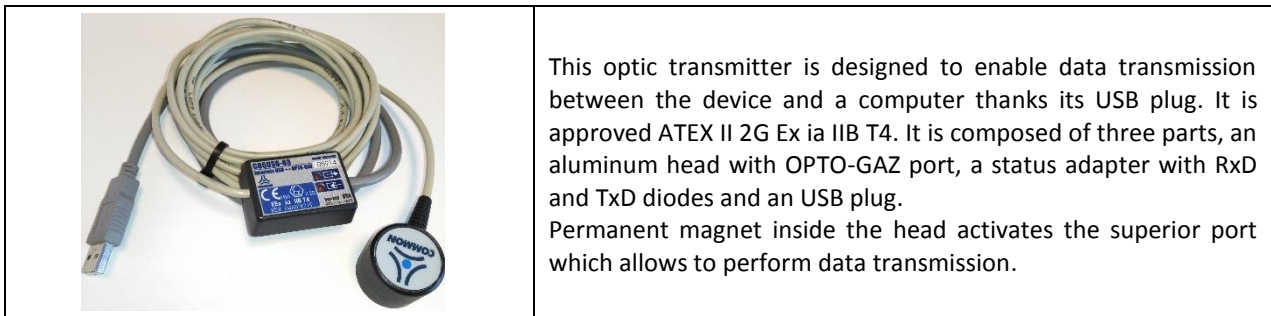
OPTIONS

CMK-03



The electronic volume converter CMK-03 type allows the user to convert the real flow measured by the CPT into a normalised flow with normal temperature and pressure conditions. It is approved ATEX II 2G Ex ia IIB T4 G6. Its work temperature WT is from -25°C to +55°C. It is IP 66 and IP 67. Finally, it is supplied with two 3,6 W internal lithium batteries and a six years internal memory.

COGUSB-03



This optic transmitter is designed to enable data transmission between the device and a computer thanks to its USB plug. It is approved ATEX II 2G Ex ia IIB T4. It is composed of three parts, an aluminum head with OPTO-GAZ port, a status adapter with Rx and Tx diodes and a USB plug. Permanent magnet inside the head activates the superior port which allows to perform data transmission.