CONTO

Pulse emitter water meters

EUROACQUE 01/02/22

DESCRIPTION. TURBINE pulse emitter water meters with dry quadrant to be installed on the network to be connected with proportional metering pumps and/or dosing and control panels. Equipped with 2.5 m cable. Including outlets.

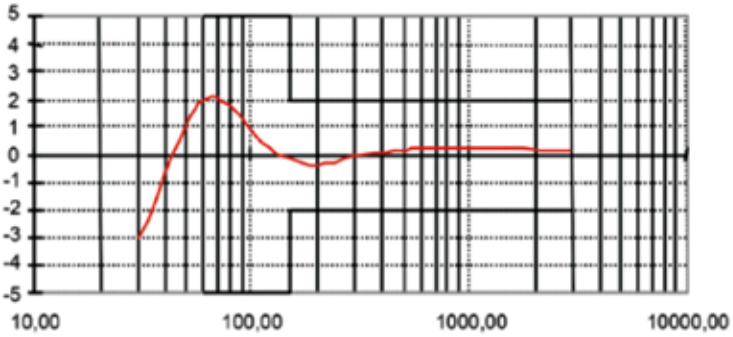
CODE	MODEL	CONNECTIONS	LITRE PULSE
CONTO101	CONTO ½"	½"	1/10
CONTO102	CONTO ¾"	¾"	1/10
CONTO103	CONTO 1"	1"	1/10
CONTO104	CONTO 1¼"	1¼"	1/10
CONTO105	CONTO 1½"	1½"	1/10
CONTO106	CONTO 2"	2"	1/10
CONTO107	CONTO DN65	DN65	1/10
CONTO108	CONTO DN80	DN80	1/10
CONTO109	CONTO DN100	DN100	1/10

CONTO ½"

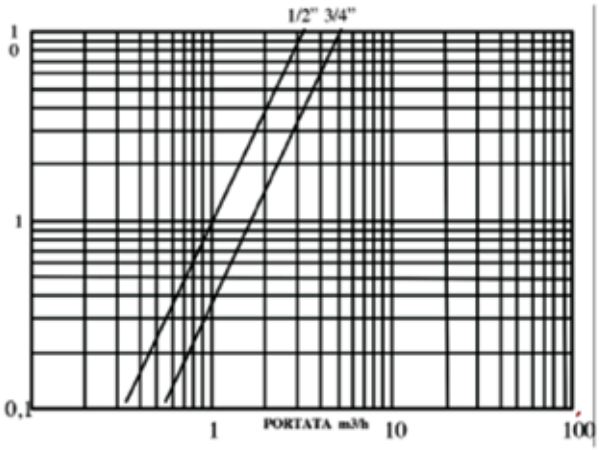
This is the new range of Super Dry 8 dial magnetic drive dry quadrant single jet water meters

- Designed to meet the severe requirements of Directive2004/22/EC (MID) and of the European Standard EN 14154
- Provided with conformity assessment modules: B+D achieving a maximum Q3/Q1 ratio (R) equal to 100 for horizontal installations and 50 for vertical.
- It is provided with certifications for use with drinking water in accordance with Ministerial Decree 6/4/2004 N°174.
- Direct reading with 8 number dials: 5 (black) for cubic meters – 3 (red) for submultiples
- Moulded brass casing (OT58)
- Rated pressure (PN) 16 bar
- Max use temperature: 50°C (AF) 90°C (AC)
- Double pinning with stainless steel AISI 316 pins, to balance the turbine under all flow and installation conditions.
- Protection against external magnetic actions
- Does not need upstream and downstream straight pipe sections: U0-D0
- The serial number is marked on the quadrant both in numerical form and barcode.
- 100% of the production hydraulically checked on 3 points of the curve (Q1, Q2, Q3) on test benches compliant with standards ISO 4064/3 and ISO 4185 (EN 14154/III) and certified by a European metrological body.
- Pulse factor 1 pul.= 10 l

TYPICAL ERROR CURVE

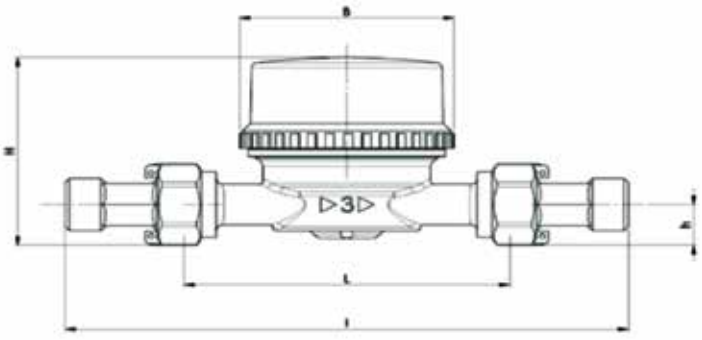


PRESSURE DROP



HYDRAULIC PERFORMANCE		
Diameter	mm	15
	inches	½"
Module B nr.	TCM 142/10-4794	
Module D nr.	0119-SJ-A010-08	
Metrological Class MI	R (Q3/Q1) ‹ 100 H - ‹ 50 V	
PERFORMANCE PURSUANT TO DIRECTIVE 2004/22/EC		
Q_3 Permanent Flow Rate	m^3/h	2.5
Q_1 Overload flow rate	m^3/h	3.13
R100		
Q_1 Minimum flow rate	l/h	25.0
Q_2 Transitional flow rate	l/h	40.0
R80		
Q_1 Minimum flow rate	l/h	31.25
Q_2 Transitional flow rate	l/h	50.0

TECHNICAL FEATURES		
Maximum admissible error between Q_1 and Q_2 (excluded)		+/-5%
Maximum admissible error between Q_2 (included) and Q_4 with water temperature ‹ 30°C		+/-2%
Maximum admissible error between Q_2 (included) and Q_4 with water temperature › 30°C		+/-3%
Temperature class	°C	AF T50 and AC T30/90
Sensitivity class at installation conditions (upstream and downstream straight pipe sections are not required)		U0-D0
Starting flow rate	l/h	10
Pressure drop class (ΔP@Q_3)	bar	ΔP63
Operating pressure	PN	16
Maximum reading	m^3	100,000
Minimum reading	l	0.05
Pulse set-up (optional)	l/pul	10



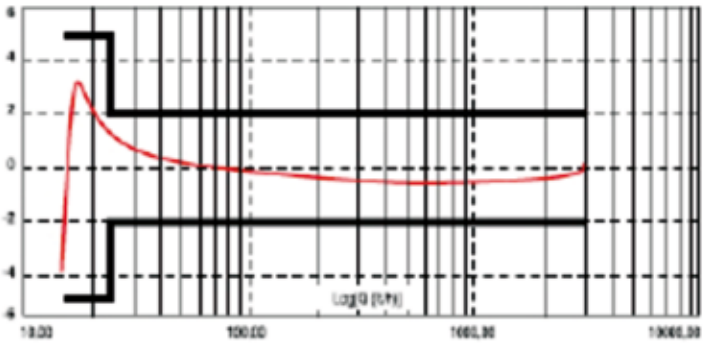
DIMENSIONAL FEATURES		
L	mm	*80/110
I (with fittings)	mm	*160/190
H	mm	73.2
B	mm	72.8
*** on request**	mm	U0-D0

CONTO ¾" – 1"

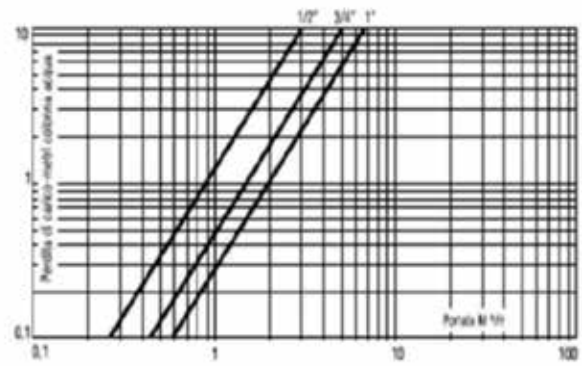
DESCRIPTION. CD ONE TRP MID is a single jet water meter with protected dials with reading area not in contact with water and therefore legible even with suspended parts filled with water.
The CD ONE TRP range is certified according to Directive 2004/22/EC (MID) and provided with assessment modules B+D achieving a maximum ratio Q3/Q1 (R) of 200 for horizontal installation and 100 for vertical.
The water meter can also be produced with a lower R.
The CD ONE TRP range is provided with certifications for use with drinking water in accordance with Ministerial Decree 6/4/2004 N° 174.

Transparent disk in tempered mineral glass: thickness 6 mm.
- Molten brass casing (OT 58)
- Moulded brass head (OT 58)
- Dial shaft in stainless steel 18/8
- Internal filter with adequate surface
- Calibration of all the production on three points of the curve (Q1, Q2, Q3) on test benches compliant with Standards ISO 4064/3 and ISO 4185(EN14154/III) and certified by a certified European body.
- Max use temperature: 50 °C (AF) 90 °C (AC)
- Rated pressure PN 16 Bar
- Does not need upstream and downstream straight pipe sections: U0-D0
- The water meter can be equipped with pulse emitter and a radio module, preserving the mechanical, metrological and legibility features.

TYPICAL ERROR CURVE



PRESSURE DROP

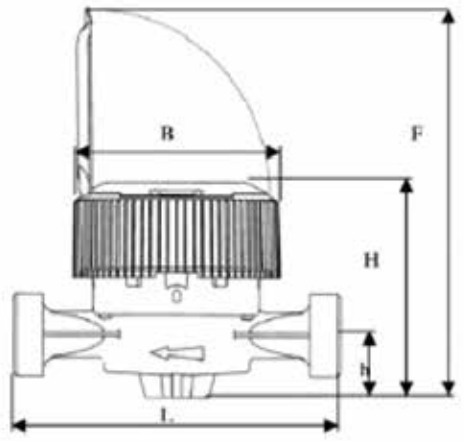


DATA SHEET

HYDRAULIC PERFORMANCE			
Diameter	mm	20	25
	inches	¾"	1"
Module B nr.	TCM 142/08-4627		
Module D nr.	0119-SJ-A010-08		
Metrological Class MI	R (Q3/Q1) ≤ 200 H - ≤ 100 V		
PERFORMANCE PURSUANT TO DIRECTIVE 2004/22/EC			
Q3 Permanent Flow Rate	m^3/h	4.0	6.3
Q4 Overload flow rate	m^3/h	5.0	7.9
R160			
Q1 Minimum flow rate	l/h	25.0	N.D.
Q2 Transitional flow rate	l/h	40.0	N.D.
R100			
Q1 Minimum flow rate	l/h	40.0	63.0
Q2 Transitional flow rate	l/h	64.0	100.8

TECHNICAL FEATURES				
Maximum admissible error between Q_1 and Q_2 (excluded)		+/-5%		
Maximum admissible error with water temperature ‹ 30°C		+/-2%		
Maximum admissible error between Q_2 (included) and Q_4 with water temperature › 30°C		+/-3%		
Temperature class	°C	AF T50 and AC T30/90		
Sensitivity class at installation conditions (upstream and downstream straight pipe sections are not required)		U0-D0		
Starting flow rate	l/h	4-5	7-9	16-18
Pressure drop class ($\Delta P@Q_3$)	bar	ΔP63	ΔP63	ΔP63
Operating pressure	PN	16	16	16
Maximum reading	m^3	100,000	100,000	100,000
Minimum reading	l	0.05	0.05	0.05
Pulse set-up (optional)	l/pul	1-10-100-1000 (reed)		

DIMENSIONAL FEATURES			
L	mm	130	160
L (with fittings)	mm	228	256
H	mm	87	87
h	mm	25.51	25.51
B	mm	82.4	82.4
F	mm	158	158

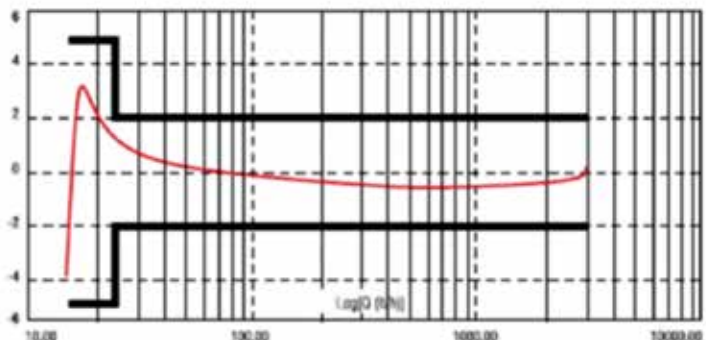


CONTO 1¼" – 1½" – 2"

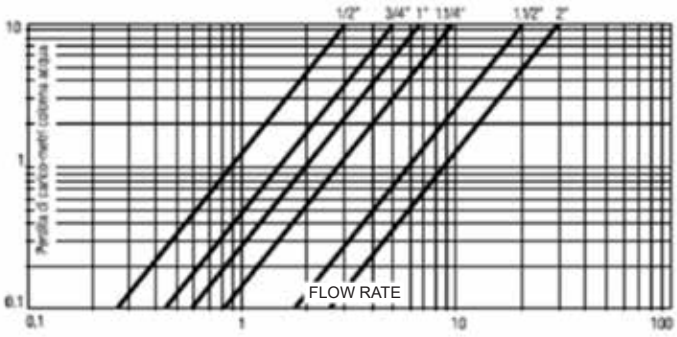
DESCRIPTION. **DS TRP MID** is a multiple jet water meter with protected dials with reading area not in contact with water and therefore legible even with suspended parts filled with water. The DS TRP range is certified according to Directive 2004/22/EC (MID) and provided with assessment modules B+D achieving a maximum ratio Q3/Q1 (R)200 allowing the water meter to even be produced with lower R.
The DS TRP range is provided with certifications for use with drinking water in accordance with Ministerial Decree 6/4/2004 N° 174.

- Transparent disk in tempered mineral glass: thickness 6 mm.
- Molten brass casing (OT58) painted inside and outside with epoxy powder
- Closing ring nut in moulded brass (OT 58)
- Dial shaft in stainless steel 18/8
- Internal filter with adequate surface
- Calibration of all the production on three points of the curve (Q1, Q2, Q3) on test benches compliant with Standards ISO 4064/3 and ISO 4185(EN14154/III) and certified by a certified European body.
- Maximum use temperature:
  50° C (AF)
  90° C (AC)
- Rated pressure PN 16 Bar
- Horizontal Installation
- Does not need upstream and downstream straight pipe sections: U0-D0
- The water meter can be equipped with pulse emitter and a radio module, preserving the mechanical, metrological and legibility features.

TYPICAL ERROR CURVE



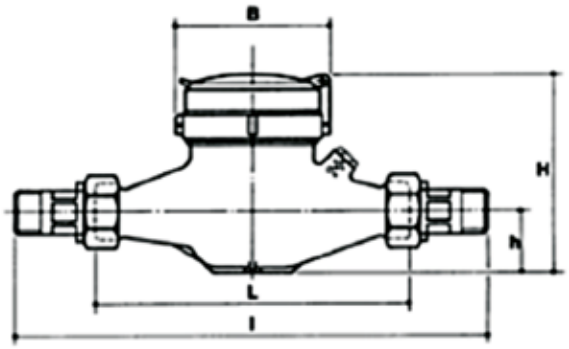
PRESSURE DROP



HYDRAULIC PERFORMANCE				
Diameter	mm	30	40	50
	inches	1.¼"	1.½"	2"
Module B nr.	TCM 142/08-4604			
Module D nr.	0119-SJ-A010-08			
Metrological Class MID	R (Q3/Q1) ‹ 200			
PERFORMANCE PURSUANT TO DIRECTIVE 2004/22/EC				
Q_3 Permanent Flow Rate	m^3/h	10.0	16.0	25.0
Q_4 Overload flow rate	m^3/h	12.5	20	31
R160				
Q_1 Minimum flow rate	l/h	62.5	100	156.2
Q_2 Transitional flow rate	l/h	100	160	250
R100				
Q_1 Minimum flow rate	l/h	100	160	250
Q_2 Transitional flow rate	l/h	160	256	400

TECHNICAL FEATURES				
Maximum admissible error between Q_1 and Q_2 (excluded)		+/-5%		
Maximum admissible error between Q_2 (included) and Q_4 with water temperature ‹ 30°C		+/-2%		
Maximum admissible error between Q_2 (included) and Q_4 with water temperature › 30°C		+/-3%		
Temperature class	°C	AF T50 and AC T30/90		
Sensitivity class at installation conditions (upstream and downstream straight pipe sections are not required)		U0-D0		
Starting flow rate	l/h	22-24	28-30	4.0
Pressure drop class (ΔP@Q_3)	bar	ΔP63	ΔP63	ΔP63
Operating pressure	PN	16	16	16
Maximum reading	m3	100,000	100,000	100,000
Minimum reading	l	0.05	0.05	0.05
Pulse set-up (optional)	l/pul	1-10-100-1000 (reed)		

DIMENSIONAL FEATURES				
L	mm	260	300	300
I (with fittings)	mm	378	438	461 FI300
H	mm	123	163	175
h	mm	43	64.5	77
B	mm	97.5	130	154

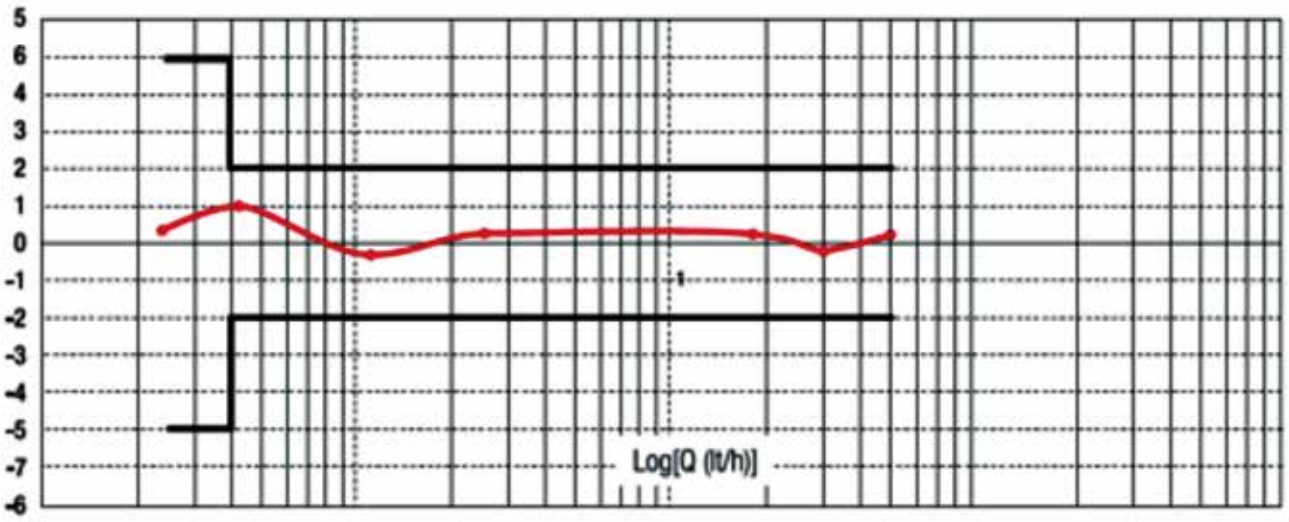


CONTO DN65 – DN80 – DN100

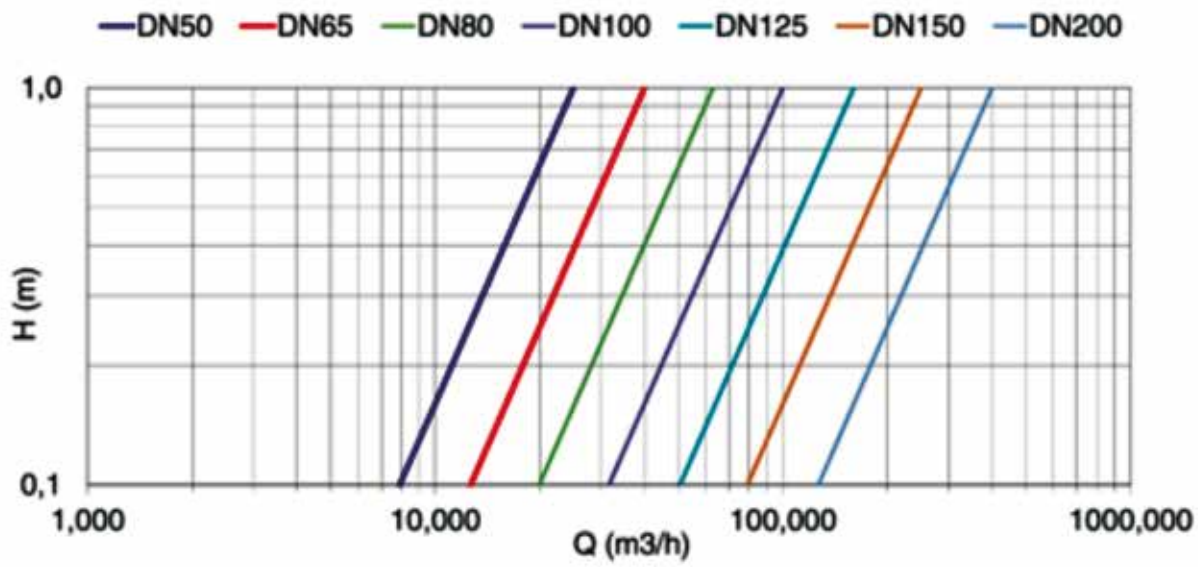
DESCRIPTION. WMAP EVO Woltmann axial flange water meter is the evolution of the CMS range of Woltmann dry quadrant water meters, with removable axial inversion flange.
It is designed to meet the severe requirements of Directive2014/32/EU (MID) and of the International Standard ISO 4064. WMAP EVO can be equipped with a static pulse emitter or a radio module that supports different types of transmission technologies, while preserving the mechanical, metrological and legibility features. The continual hydraulic performance improvement process has allowed us to certify the water meter with a ratio R (Q3/Q1) of 250. WMAP EVO is a Woltmann removable axial flange water meter (the flange axis coincides with that of the pipe). The dial is the dry type with magnetic transmission: the only part in contact with the water flowing in the pipe is the flange. The dial is housed in a copper and glass capsule in which the viewer disk is a single body, thus guaranteeing tightness even when submerged (IP68). The standard version is designed with three pulse outputs, one inductive and two reed switches. This makes it possible to equip the meter with a pulse emitter or radio modules even after installation, without changing its functionality or structure. The available radio modules support different transmission technologies (wireless M-Bus, LoRaTM, Sigfox).
WMAP EVO can be a installed both horizontally and vertically and the metrological performance is not affected by the type of installation or the quality of the water. The WMAP EVO range complies with Directive 2014/32/EU (Annex MI-001), transposed in Italy with Legislative Decree no. 84 of May 19, 2016, and is certified according to conformity assessment modules B+D. The maximum certified ratio R (Q3/Q1) is 250, but meters can also be made with lower R (200, 160, 100, 80 etc.). WMAP EVO is certified for use with drinking water in accordance with Ministerial Decree 6/4/2004 no. 174 and with foreign directives.

- Dial with glass disc and copper capsule (IP68).
- The entire dial is located in the dry part of the water meter, not in contact with water, and is always legible.
- The serial number is marked on the quadrant both in numerical form and barcode.
- The characteristic data (MID) are engraved on a metal plate applied on one flange of the meter.
- Direct reading on number dials with 7 digits for cubic meters (8 for DN 150 and DN 200) and 2 pointers for submultiples.
- Plastic cap and cover with internal metal shielding
- Flanged casing, in spherical cast-iron, painted on the inside and outside with epoxy powder.
- Steel pin and synthetic sapphire bearing.
- Internal mechanism in plastic, anhygroscopic, scale inhibitor and wear resistant.
- The version with reed switch pulse emitter preserves the metric seal and is protected by the cap.
- Installation: upstream and downstream straight sections are not required (U0-D0).
- Maximum use temperature: 50 °C.
- Rated pressure (PN) 10 or 16 bar.
- 100% of the production hydraulically checked on 3 points of the curve (Q1, Q2, Q3) on test benches compliant with standards ISO 4064/3 and ISO 4185 (EN 14154/III) and certified by a European notified body.

TYPICAL ERROR CURVE



PRESSURE DROP



HYDRAULIC PERFORMANCE								
Diameter	mm	50	65	80	100	125	150	200
	inches	2"	2.½"	3"	4"	5"	6"	8"
Module B nr.	TCM 142/17-5473							
Module D nr.	0119-SJ-A010-08							
Metrological Class MID	H ≤ 250 H→; V↑; V↓ inclined ≤ 160						H↑; V↑; inclined ≤ 250 H→; V↓ ≤ 125	
PERFORMANCE PURSUANT TO DIRECTIVE 2014/32/EU								
Q_3	m^3/h	40	63	100	160	160	250	400
Q_4	m^3/h	50	78.8	125	200	200	312.5	500
R250								
Q_1	l/h	160	250	400	640	640	1000	1600
Q_2	l/h	260	400	640	1020	1020	1600	2560
R100 (standard)								
Q_1	l/h	400	630	1000	1600	1600	2500	4000
Q_2	l/h	500	788	1250	2000	2000	3125	5000

TECHNICAL FEATURES								
Maximum admissible error between Q_1 and Q_2 (excluded)		+/-5%						
Maximum admissible error between Q_2 (included) and Q_4		+/-2% with water temperature ≤ 30°C						
		+/-3% with water temperature ≤ 30°C						
Temperature class	°C	T50						
Sensitivity class at installation conditions		U0-D0						
Starting flow rate	l/h	125	190	320	450	700	1200	1800
Pressure drop class (DP@Q_3)		ΔP25	ΔP40	ΔP25	ΔP40	ΔP16	ΔP16	ΔP40
Operating pressure	bar	10/16	10/16	10/16	10/16	10/16	10/16	10/16
Maximum reading	m3	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000	100,000,000
Minimum reading	m3	0.002	0.002	0.002	0.002	0.002	0.02	0.02
No. of turbine revs/litre		1.08	1.02	0.39	0.32	0.40	0.25	0.15
Weight	kg							
Set up of reed switch pulse emitter V max ≤ 24V; I ma 0.1A	l/pul.	10-1,000	10-1,000	10-1,000	10-1,000	10-1,000	100-1,000	100-1,000
Set up of inductive pulse emitter V max ≤ 24V; I ma 0.1A	l/pul.	10	10	10	10	10	10	10

DIMENSIONAL FEATURES								
L	mm	200	200	225	250	250	300	350
H	mm	209	218	249	258	271	316	345
h	mm	132	132	154	154	154	183	183
D	mm	165	185	200	220	250	280	340

AVAILABLE ACCESSORIES

	**SINGLE REED SWITCH PULSE EMITTER** Suitable for the transmission of volume data or for industrial dosages
	**PULSE EMITTER** FlowPulse: inductive pulse emitter, bidirectional with alarm warning. FlowPulse M-Bus: inductive pulse emitter, bidirectional with alarm warning and direct M-Bus output
	**ARROW 868 MHz** Compact radio module with built-in inductive sensor. Wireless M-Bus radio at 868 MHz
	**RADIO ARROW MODULE** Separate radio module, 868 MHz, wireless M-Bus, with pulse input (for reed switch or static emitter)
	**ARROW WAN 169 MHz** Separate radio module, 169 MHz, wireless M-Bus, with pulse input (for reed switch or static emitter)
	**ARROW WAN 868 MHz** Separate radio module, 868 MHz, wireless M-Bus, with pulse input (for reed switch or static emitter). Compatible with wireless M-Bus systems, LoRaWANTM (Sigfox on request)
	**COUNTERFLANGE KIT** Includes two flanges, two rubber gaskets and screws
	**FLOW STRAIGHTENING VANE** Inserted upstream of the meter, it makes it possible to install it even without straight sections