G. GIOANOLA

ESF

DN mm
50-2”
65-2.1/2”
80-3”
100-4”
150-6”
200-8”

MID
2004/22/CE

- Dual beam ultrasonic technology for precise and ultra reliable metering
- Extremely sensitive and accurate in low flows; turndown ratio – better than 1:300
- Working pressure: 16 bar- Liquid working temperature: water 50°C –Environment operational Temperature: -25°C + 55°C
- The water meter can be installed in any position. The meters must be filled with water all the time. No special requirements for installation (U0-D0)
- Bi-directional –including bi-directional outputs; flexible data formats including flow directions, flow rates, volumes and leak direction; alerts and statistics features
- AMR and cellular networks ready- programmable display (units and outputs resolution)
- Dual Digital high resolution output and analog output (4-20mA) – EMI/RFI protection
- Mid approved according to Directive 2004/22/EC

ESF

Technical Data	50	65	80	100	150	200
Max peak flow (for short time) (m^3/h)	75	90	120	200	350	550
Q_4 (m^3/h)	65	80	100	150	320	510
Q_3 (m^3/h)	40	50	63	100	250	400
Q_2 (m^3/h)	0,125	0,150	0,200	0,320	0,600	1,000
Q_1 (m^3/h)	0,060	0,070	0,080	0,100	0,400	0,800
Starting flow (m^3/h)	0,015	0,015	0,015	0,015	0,200	0,200
R10-Q_3/Q_1 (m^3/h)	500	500	500	500	500	500
L – Length (mm)	200	200	225	250	300	350
W – Width (mm)	165	185	200	220	285	340
H – Height (mm)	154	120	120	120	142	167
h – Height (mm)	40	90	90	103	140	165
1Peso (kg)	9	11,5	13	15	32	45

Meter performance accordino to ISO 4064 rev. 2005	50	80	100	150	200
Q_4 (m^3/h)	50	80	125	313	500
Q_3 (m^3/h)	40	63	100	250	400
Q_2 (m^3/h)	0,125	0,200	0,320	0,800	1,280
Q_1 (m^3/h)	0,080	0,125	0,200	0,500	0,800
R10-Q_3/Q_1 (m^3/h)	500	500	500	500	500

Pulse per selected quantity	m^3	USG	Cuft	A.F
	max pulse width [ms]	max pulse width [ms]	Max pulse width [ms]	max pulse width [ms]
0,0001	1			
0,001	10			125
0,01	90		3	125
0,1	125	4	32	125
1	125	40	125	125
10	125	125	125	125
100	125	125	125	125
1000	125	125		

MODELS:

Temperature class T50

ESF/50 2" (threaded and flanged)
ESF/65 2.1/2" (flanged)
ESF/80 3" (flanged)
ESF/100 4" (flanged)
ESF/150 6" (flanged)
ESF/200 8" (flanged)

MEASURING PRINCIPLE

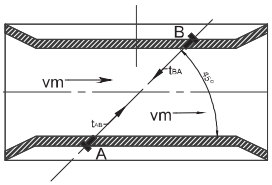


Immagine two identical swimmers crossing over a river on the same diagonal line, one with the flow and the other against the flow. The swimmer moving with the flow needs much less time to reach the opposite bank. Ultrasonic wawes behave exactly the same way. The sound wave that flows in the direction of the stream moves faster than the one that flows against the stream. The transit times TAB (transit time of ultrasonic waves from sensor A to sensor B) and TBA (from sensor B to sensor A) are measured continuously. The time difference (TBA-TAB) is directly proportional to the mean flow velocity (Vm)of the product. The flow rate is a result of the velocity multiplied by the cross section of the size of the meter.

The company 's policy .is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice

DISPLAY

APPLICATIONS

Waterworks and industrial applications

CONSTRUCTION

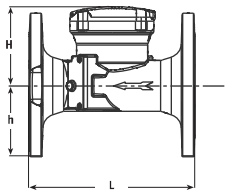
Cast iron – epoxy coated drinking water approval

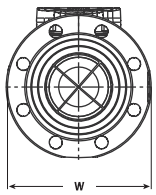
INDICATIONS

- Flow direction
- Alarm/Error
- Output mode
- Coil/3G/GSM active com.
- volume units
- flow rate units
- Leak detection
- Battery level

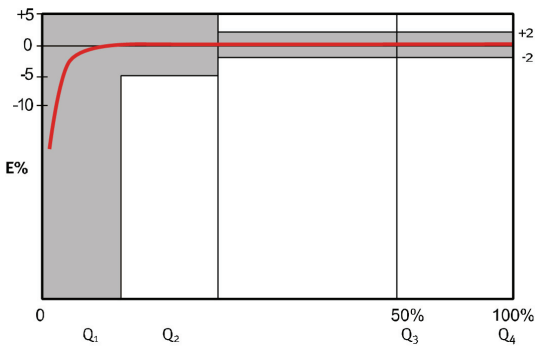
AVAILABLE OPTIONS

- Size DN 50 is also available as threaded version and length 300 mm

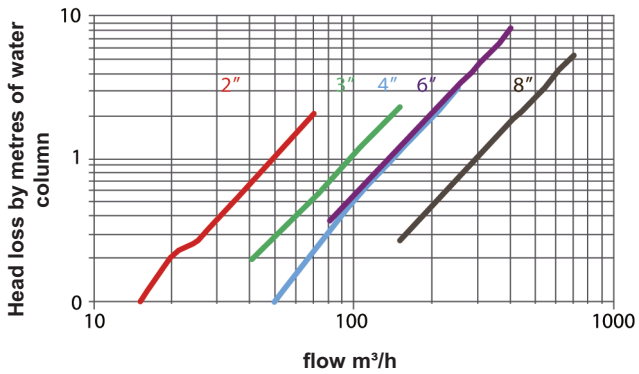




TYPICAL ERROR CURVE



HEADLOSS DIAGRAM



G. GIOANOLA SISMA water meters

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