

## AN 130

Flow sensor for water temperatures from 5 °C to 130 °C, PN 16



The flow sensors AN 130 are multi-jet dry dial vane impeller hot water meters, suitable for installing in central heating and cooling systems and remote warning systems. With their built-in pulse sender they are approved as flow sensors for heating meters according to the European measuring instruments directive 2014/32/EU (MID).

Versions for horizontal, rising and falling flow directions with screwings or flanges are available.

### Main characteristics

- Fully dry dial meter with no gear reduction in the wet chamber
- Wear resistant tungsten carbide / sapphire
- Magnetic coupling protected against magnetite
- Pulse sender safe from interference
- Easy to repair construction with external regulation

### Pattern approval

- DE-12-MI004-PTB002

### Technical data

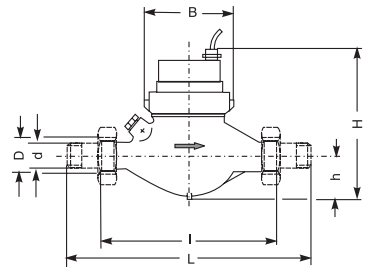
Display	00000.000 m <sup>3</sup>
Working pressure	16 bar
Working temperature	5 ... 130 °C
Accuracy class	Class 2 or 3

### Pulse sender

Pulse sender	Reed switch, permanently installed
Cable length	2 m
Load capacity	max. 0.1 A, max. 28 V
Contact resistance	max 105 Ohm
Pulse value	10 litres / pulse (for other pulse values see special versions)

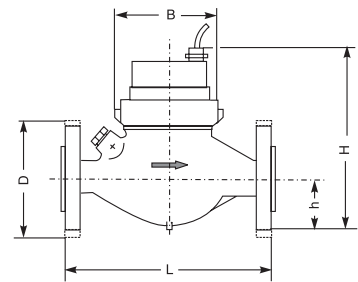
### Horizontal installation for threaded fittings, Type AN 130 q<sub>p</sub> ... AN R ... K 10

Size marking	q <sub>p</sub>	m <sup>3</sup> /h	1.5	1.5	2.5	3.5	6	6	10
Nom. connection size	DN	mm	15	20	20	25	25	32	40
Pipe connection thread <sup>1)</sup>	d	inches	R <sup>3</sup> / <sub>4</sub>	R <sup>3</sup> / <sub>4</sub>	R <sup>3</sup> / <sub>4</sub>	R1	R1	R1 <sup>1</sup> / <sub>4</sub>	R1 <sup>1</sup> / <sub>2</sub>
Meter stub thread <sup>2)</sup>	D	inches	G <sup>3</sup> / <sub>4</sub>	G1	G1	G1 <sup>1</sup> / <sub>4</sub>	G1 <sup>1</sup> / <sub>4</sub>	G1 <sup>1</sup> / <sub>2</sub>	G2
Installed length without fittings	l	mm	165	190	190	260	260	260	300
Installed length with fittings	L	mm	244	288	288	378	378	378	438
Height	H	mm	155	155	155	170	170	170	190
Height	h	mm	34	36.5	36.5	49	49	49	62
Width	B	mm	96	97	97	103	103	103	140
Weight of meter without fittings		~kg	1.6	2.0	2.1	2.9	2.9	2.9	5.2
Weight of meter with fittings		~kg	2.1	2.5	2.6	3.6	3.6	3.6	6.5



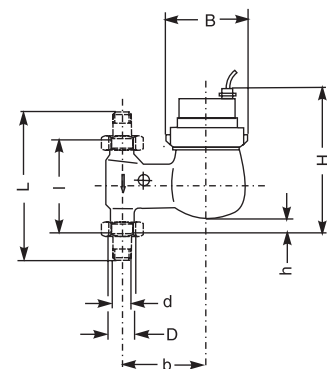
### Horizontal installation with flanges, Type AN 130 q<sub>p</sub> ... AN R ... K 10

Size marking	q <sub>p</sub>	m <sup>3</sup> /h	1.5	2.5	3.5	6	10
Nom. connection size	DN	mm	20	20	25	25	40
Installed length	L	mm	190	190	260	260	300
Height	H	mm	157	157	179	179	197
Height	h	mm	46	46	51	51	68
Flange diameter	D	mm	105	105	115	115	150
Width	B	mm	95	95	101	101	131
Weight		~kg	3.5	3.5	4.8	4.8	8



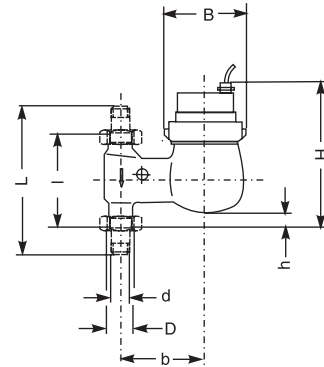
### Installation in falling line for threaded fittings, Type AN 130 q<sub>p</sub> ... FAN R ... K 10

Size marking	q <sub>p</sub>	m <sup>3</sup> /h	1.5	2.5	3.5	6	10
Nom. connection size	DN	mm	20	20	25	25	40
Pipe connection thread <sup>1)</sup>	d	inches	R <sup>3</sup> / <sub>4</sub>	R <sup>3</sup> / <sub>4</sub>	R1	R1	R1 <sup>1</sup> / <sub>2</sub>
Meter stub thread <sup>2)</sup>	D	inches	G1	G1	G1 <sup>1</sup> / <sub>4</sub>	G1 <sup>1</sup> / <sub>4</sub>	G2
Installed length without fittings	l	mm	105	105	150	150	200
Installed length with fittings	L	mm	203	203	268	268	338
Height	H	mm	160	160	175	175	195
Height	h	mm	13	13	22	22	30
Axial offset	b	mm	100	100	105	105	120
Width	B	mm	97	97	103	103	140
Meter weight without fittings		~kg	2	2.1	3.3	3.3	5
Meter weight with fittings		~kg	2.3	2.4	3.8	3.8	6.3



## Installation in rising line for threaded fittings, Type AN 130 q<sub>p</sub> ... SAN R ... K 10

Size marking	q <sub>p</sub>	m <sup>3</sup> /h	1.5	2.5	3.5	6	10
Nom. connection size	DN	mm	20	20	25	25	40
Pipe connection thread <sup>1)</sup>	d	inches	R¾	R¾	R1	R1	R1½
Meter stub thread <sup>2)</sup>	D	inches	G1	G1	G1¼	G1¼	G2
Installed length without fittings	l	mm	105	105	150	150	200
Installed length with fittings	L	mm	203	203	268	268	338
Height	H	mm	155	155	170	170	190
Height	h	mm	19	19	33	33	30
Axial offset	b	mm	82	82	94	94	120
Width	B	mm	97	97	103	103	140
Meter weight without fittings		~kg	2	2.1	3.3	3.3	5
Meter weight with fittings		~kg	2.3	2.4	3.8	3.8	6.3



Connection thread dimensions:

1) d Withworth tapered pipe thread

R ½" to R 2" to ISO 7/1 = DIN 2999 Part 1

2) D Pipe thread

G 1 to G 2 B to DIN ISO 228/1

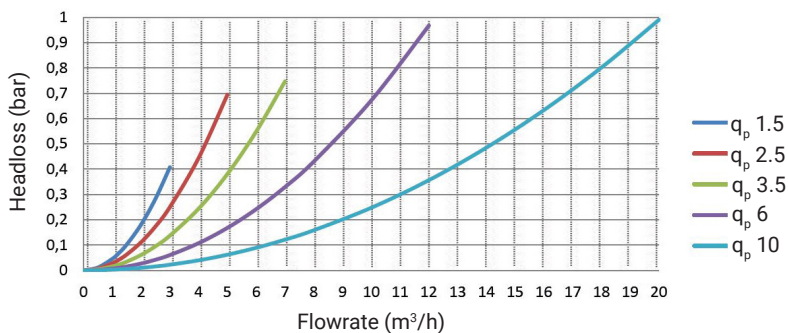
### Performance data

Nominal size	q <sub>p</sub>		1.5	2.5	3.5	6	10
Continuous load	q <sub>p</sub>	m <sup>3</sup> /h	1.5	2.5	3.5	6	10
Max. flow rate (short-term)	q <sub>s</sub>	m <sup>3</sup> /h	3	5	7	12	20
Ratio	q <sub>i</sub> : q <sub>p</sub>		1:50	1:50	1:50	1:50	1:50
Minimum flow rate	q <sub>i</sub>	l/h	30	50	70	120	200
Pressure loss at q <sub>p</sub>		bar	0.11	0.18	0.19	0.24	0.25
Flow rate at 1 bar pressure loss		m <sup>3</sup> /h	4.7	6.0	8.1	12.2	20.1

### Materials

Casing	Brass
Flanges	Iron, painted
Impeller	Plastic
Impeller cup	Plastic
Bearing pin	Tungsten carbide
Impeller bearing	Sapphire
Magnetic coupling	Ceramic permanent magnets

### Typical head loss curve



## Order information

Type	Order text	Order no.
Horizontal version for threaded fittings Pulse sender, 10 litres/pulse, according MID directive	AN130 q <sub>p</sub> 1.5 AN R ¼" K 10	88189301
	AN130 q <sub>p</sub> 1.5 AN R ¾" K 10	88189300
	AN130 q <sub>p</sub> 2.5 AN R ¾" K 10	88189500
	AN130 q <sub>p</sub> 3.5 AN R 1" K 10	88189700
	AN130 q <sub>p</sub> 6 AN R 1" K 10	88189800
	AN130 q <sub>p</sub> 6 AN R 1¼" K 10	88189801
	AN130 q <sub>p</sub> 10 AN R 1½" K 10	88189900
Horizontal version with flanges, PN 16 Pulse sender, 10 litres / pulse, according MID directive	AN130 q <sub>p</sub> 1.5 ANF DN 20 K 10	88189304
	AN130 q <sub>p</sub> 2.5 ANF DN 20 K 10	88189504
	AN130 q <sub>p</sub> 3.5 ANF DN 25 K 10	88189704
	AN130 q <sub>p</sub> 6 ANF DN 25 K 10	88189804
	AN130 q <sub>p</sub> 10 ANF DN 40 K 10	88189904
Falling line version for threaded fittings Pulse sender, 10 litres / pulse, according MID directive	AN130 q <sub>p</sub> 1.5 FAN R ¾" K 10	88189303
	AN130 q <sub>p</sub> 2.5 FAN R ¾" K 10	88189503
	AN130 q <sub>p</sub> 3.5 FAN R 1" K 10	88189703
	AN130 q <sub>p</sub> 6 FAN R 1" K 10	88189803
	AN130 q <sub>p</sub> 10 FAN R1½" K 10	88189903
Rising line version for threaded fittings Pulse sender, 10 litres / pulse, according MID directive	AN130 q <sub>p</sub> 1.5 SAN R ¾" K 10	88189302
	AN130 q <sub>p</sub> 2.5 SAN R ¾" K 10	88189502
	AN130 q <sub>p</sub> 3.5 SAN R1" K 10	88189702
	AN130 q <sub>p</sub> 6 SAN R1" K 10	88189802
	AN130 q <sub>p</sub> 10 SAN R1½" K 10	88189902