

WP-QF High Pressure Turbine Water Meters

for cold water up to 104°F & 40 °C ... for hot water up to 266°F & 130 °C



Cold Water up to 104°F / 40°C

- Sealed register, waterproof (IP 67)
- Register may be rotated up to 360 degrees
- Up to three pulsers can be fitted without breaking the meter seal
- Enamel Powder Coating provides maximum corrosion protection
- Not affected by external magnetic fields
- Replaceable measuring element

Application

Measurement of cold water up to 104°F/40°C (overloadable to 122°F/50°C) in water supply systems with pressures up to 300 psi

Pressure Rated to:

300 PSI (ANSI Flanges)

PN25/40 (DIN Flanges)

Hot Water up to 266°F / 130°C

- Sealed register, waterproof (IP 67)
- Register may be rotated up to 360 degrees
- Up to three pulsers can be fitted without breaking the meter seal
- Enamel Powder Coating provides maximum corrosion protection
- Not affected by external magnetic fields
- Replaceable measuring element

Application

Measurement of hot water up to 266°F/130°C (overloadable to 150°F/302°C) in water supply systems with pressures up to 300 psi

Pressure Rated to:

300 PSI (ANSI Flanges)

PN25/40 (DIN Flanges)



Performance Data

Performance Table - WP/Dynamic Cold Water Meter (< 104°F / 40°C)

Meter Line Size:			2"	3"	4"	6"	8"	10"	12"
			50mm	80mm	100mm	150mm	200mm	250mm	300mm
Q _{max}	maximum peak flow	gpm	352.2	880.6	1100.7	2641.7	3522.3	5283.4	8805.7
		m ³ /hr	80	200	250	600	800	1200	2000
Q _n	max continuous flow (+ 2%)	gpm	176.1	528.3	792.5	1761.1	2927.9	3302.2	4402.9
		m ³ /hr	40	120	180	400	665	750	1000
Q _t	transitional flow (+ 2%)	gpm	4.4	4.4	11.0	17.6	26.4	52.8	66.0
		m ³ /hr	1.0	1.0	2.5	4.0	6.0	12.0	15.0
Q _{min}	minimum flow (+ 5%)	gpm	2.2	2.6	5.3	12.1	17.6	26.4	52.8
		m ³ /hr	0.5	0.6	1.2	2.8	4.0	6.0	12.0
	starting flow	gpm	0.9	1.1	1.3	7.5	7.9	13.2	39.6
		m ³ /hr	0.2	0.3	0.3	1.7	1.8	3.0	9.0

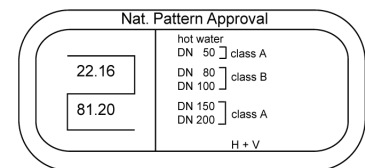
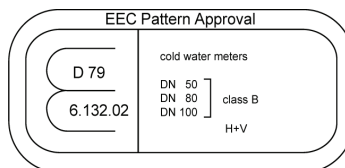
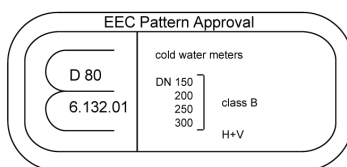
Performance Table - WP/Dynamic Hot Water Meter (< 266°F / 130°C)

Meter Line Size:			2"	3"	4"	6"	8"	10"	12"
			50mm	80mm	100mm	150mm	200mm	250mm	300mm
Q _{max}	maximum peak flow	gpm	132.1	352.2	616.4	1320.9	2201.4	4402.9	5283.4
		m ³ /hr	30	80	140	300	500	1000	1200
Q _n	max continuous flow (+ 2%)	gpm	66.0	198.1	308.2	660.4	1100.7	2201.4	2641.7
		m ³ /hr	15	45	70	150	250	500	600
Q _t	transitional flow (+ 2%)	gpm	7.9	14.1	21.1	52.8	88.1	198.1	220.1
		m ³ /hr	1.8	3.2	4.8	12.0	20.0	45.0	50.0
Q _{min}	minimum flow (+ 5%)	gpm	4.4	6.2	8.8	19.8	35.2	110.1	132.1
		m ³ /hr	1.0	1.4	2.0	4.5	8.0	25.0	30.0
	starting flow	gpm	1.1	1.5	2.6	7.5	8.8	44.0	66.0
		m ³ /hr	0.3	0.4	0.6	1.7	2.0	10.0	15.0

Legend

Q _{max}	Max Peak Flow	Once in a lifetime, 24hours @ Q _{max} or 5 minutes @ 1.2 x Q _{max}
Q _n	Max Continuous Flow	± 2%
Q _t	Transitional Flow	± 2%
Q _{min}	Minimum Flow	± 5%

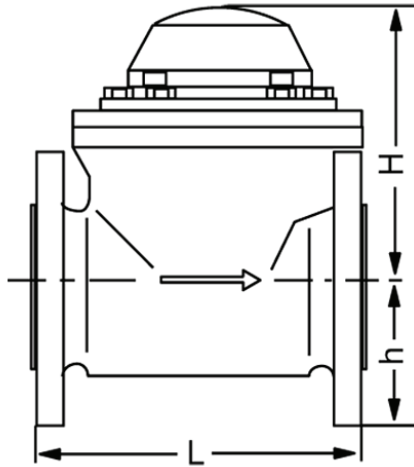
Pattern Approvals



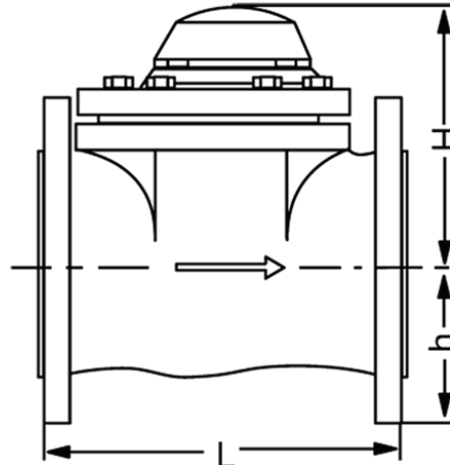
Dimensions and Weights

Size of Meter		inches	2	3	4	6	8	10	12
		mm	50	80	100	150	200	250	300
Dimensions	overall length	L inches	7 7/8	8 7/8	9 13/16	11 13/16	13 3/4	17 3/4	19 11/16
		L mm	200	225	250	300	350	450	500
	height	H inches	4 3/4	5 15/16	5 15/16	7	8 1/8	9 1/16	10 1/16
		H mm	120	150	150	177	206	231	256
		h inches	2 7/8	3 3/4	4 1/8	5 5/16	6 3/8	7 5/8	8 7/8
		H mm	73	95	105	135	162	194	226
Weights	meter	pounds	33.1	39.7	52.9	94.8	125.7	260.1	339.5
		kg	15	18	24	43	57	118	154
	imu	pounds	6.6	6.6	6.6	19.8	19.8	48.5	48.5
		kg	3	3	3	9	9	22	22
	body	pounds	26.5	33.1	46.3	75	105.8	211.6	291
		kg	12	15	21	34	48	96	132
Pressure Rating	PSI	300	300	300	300	300	300	300	300
	Bar	PN40	PN40	PN40	PN40	PN40	PN40	PN25	PN25

Dimension Pictures



**2 inch to 4 inch
DN 50 to DN 100**



**6 inch to 12 inch
DN 150 to DN 300**

Installation Guidelines

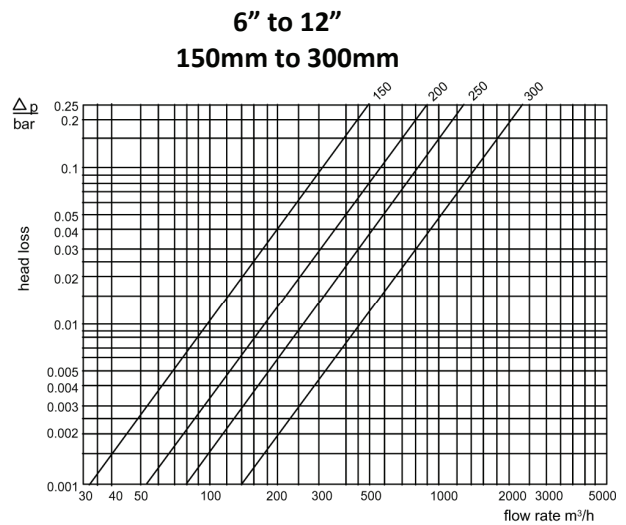
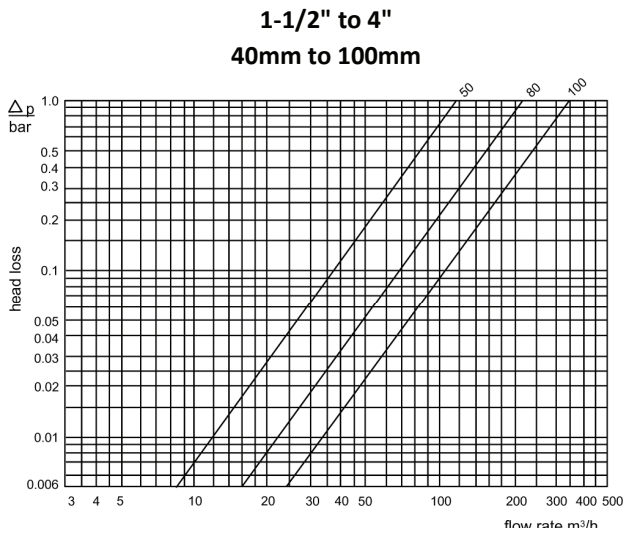
Pipe	horizontal	
	vertical	
	inclined	
Meter Head	upwards	
	sideways	

Installation Requirements

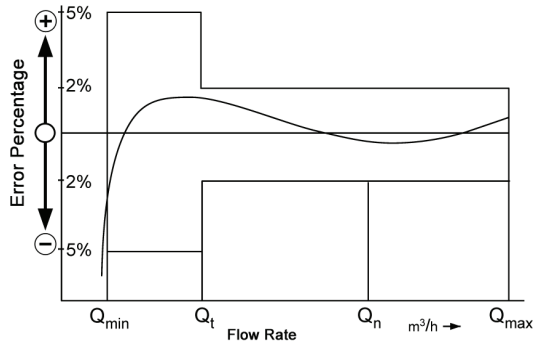
- Provide a minimum of 3 pipe diameters of straight, unobstructed pipe upstream of the meter
- The Pipe Diameter should not be reduced directly in front of or behind the meter.
- No abrupt restrictions directly behind the meter
- All regulation of the flow should be done behind the meter.
- The meter must be installed in the pipe free of stress.
- The location of the meter should be such that it is not possible for air pockets to develop in the meter.



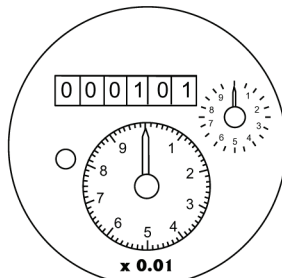
Typical Head Loss Curve



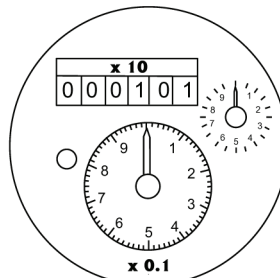
Typical Accuracy Curve



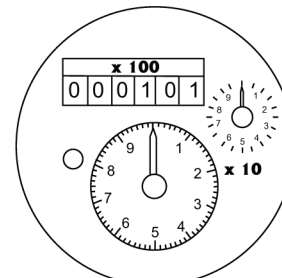
Register Dials



1-1/2 inches to 4 inches
DN 50 ... DN 100



6 inches to 10 inches
DN 150 ... DN 250



12 inches
DN 300

Register Readings

Line/Meter Size		Smallest Reading		Maximum Reading	
Inches	MM	USG	M ³ /Hr	USG	M ³ /Hr
1-1/2" to 4"	40mm to 100mm	1.0	0.0005	99,999,999	1,000,000
6" to 12"	150mm to 300mm	10.0	0.005	999,999,999	10,000,000



Pulse Values

		1-1/2" to 4" 40mm to 100mm		6" to 8" 150mm to 200mm		10" to 12" 250mm to 300mm	
		US Gallons	Cubic Meters	US Gallons	Cubic Meters	US Gallons	Cubic Meters
Cold Service	R 01	10/100	0.1 / 1.0	100/1,000	1/10	1,000/10,000	10/100
	OP01	0.1	0.001	1	0.01	10	0.1
	OP03	1	0.01	10	0.1	100	1
Hot Service	R 02	10.0 / 25.0	0.1 / 0.25	100/ 250	1 / 2.5	1,000 / 2,500	10/25
	OP02	0.1	0.001	1	0.01	10	0.1
	OP04	1	0.01	10	0.1	100	1

Available Designs

Cold Water	Meter Line Size		50mm	2 inch	80mm	3 inch	100mm	4 inch
	Model Number		827444		827450		827456	
Meter Line Size	150mm	6 inch	200mm	8 inch	250mm	10 inch	300mm	12 inch
Model Number	827462		827468		828182		828188	
Hot Water	Meter Line Size		50mm	2 inch	80mm	3 inch	100mm	4 inch
	Model Number		828364		827451		827457	
Meter Line Size	150mm	6 inch	200mm	8 inch	250mm	10 inch	300mm	12 inch
Model Number	827463		827469		828183		828189	

Ordering Information

To Order, please specify the following:

Model Code: See "Available Designs" above
 Flange Drilling: Specify: ANSI 150 or DIN PN-16 (Raised Face Flanges)
 Register Reading: Cold: US Gallons, Cubic Meters
 Hot: US Gallons, Cubic Meters
 Options: Pulsers: REED-01, REED-02, OPTO-01, OPTO-02,
 Frequency To Current Converters: FM-1D/K, FM-2D/K

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