

H4400

Hot water meter

Sizes 2", 3" and 4"



Size			2"	3"	4"
Qmin	Min. flow (gpm)	±5%	2.6	7	10.5
Qt	Low flow (gpm)	±2%	9.9	26	39.6
Qn	Cont. flow (gpm)	±2%	66	176	254
Qmax	Peak flow (gpm)	±2%	110	308	440
Operating pressure by temperature		250 °F	230 psi		
		350 °F	195 psi		

Register reading smallest quantity	2"	3"	4"
US gallons	0.1	0.1	0.1

Capacity of register	2"	3"	4"
US gallons (millions)	100	100	100

Pulse output (choose one)	2"	3"	4"
Reed switch pulse			
Arrows up configuration	1 contact = 10 USG		
Arrows down configuration	1 contact = 100 USG		
Inductive (NAMUR) pulse	1 pulse = 0.2642 USG*		

*3.785 pulses = 1 USG

Pulse options

The H4400 hot water meters can be fitted with one of two pulse assemblies. The reed switch pulser is a plug-in assembly that fits without breaking the seal of the meter. Max. voltage is 48 V DC, switching current 0.2 A, reed switch rated at 4W, 50 ohm resistance in series, two wire cable wired in series with external power.

The inductive (NAMUR) pulser is a plug-in assembly that fits between the meter body and register. The transmitting element is a proximity sensor. Nominal voltage 8VDC, open current 1.0 mA, closed current 3.0 mA. Two wire cable, polarity sensitive; external power source required. The pulser is for interface with Elster's RIDA4-20AK panel mount converter, wire diagrams available, or other appropriate electronics compatible with the above specifications - check with electronics' manufacturer.

Low flow performance at its highest for hot water

This family of Elster AMCO Water meters offers a wide measuring range with improved low flow performance.

Operation

The H4400 is a Woltmann vertical impeller (inferential) meter. The impeller, shaft and magnet are the only moving parts in the measuring element. The magnetic coupling transfers the impeller movement to the register.

Installation

The meter must be installed in a clean pipeline, free from any foreign materials. The meter shall be installed with the direction of flow as indicated by the arrow cast in the meter case. The meter may be installed in a horizontal line with the register facing upward. The meter requires 10 pipe diameters ahead of the meter and 5 pipe diameters after the meter, of straight pipe of the same size as the meter, to insure proper flow through the meter.

Application

The meter is for use with hot water to 350°F (180°C) with working pressure up to 195 psi (13.4 bar) or 250°F (120°C) with working pressure to 230 psi (16 bar). Both the pressure loss and accuracy tests are made before shipment. No adjustments need to be made before installation. The meter should be installed in a protected environment. It's not submersible.

Construction

The meter consists of a main case, a measuring chamber, an impeller, a removable top plate and o-ring with a magnetically driven register or register with reed switch or opto-electronic pulser.

Connection

ASA class 150 raised face flange

Materials

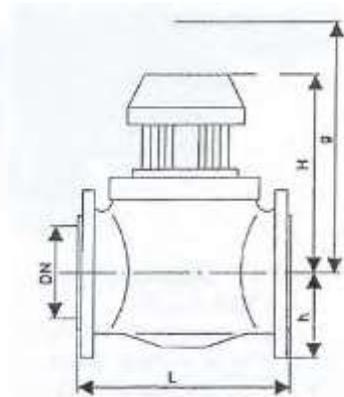
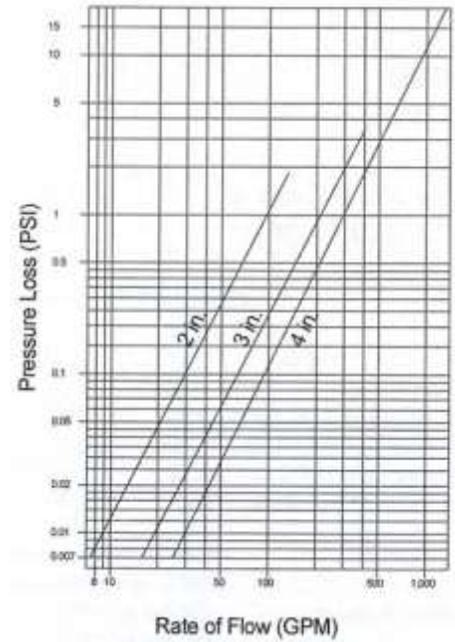
Meter body	Cast iron (Nodular)
Wetted material	Polyetheretherketone (PEEK)
O-ring seal	Tetrafluoroethylene-propylene (Aflas)
Magnet	Ferrite
Register	Polyphenylensulfide (PPS)

Dimensions and net weights

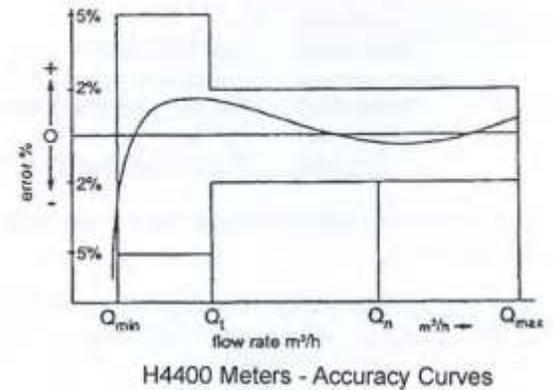
Meter size (inches)	2"	3"	4"
L	10.6	11.8	14.2
g	10.8	12	13.6
H	7.7	8	9.3
h	3.2	3.9	4.3
W	6.7	7.9	10.2
Weight (lbs)	30.9	44	72.8

Note: The width is not shown on the drawing.

Flanges. The meter body with flanges drilled according to ISO 7005-2 is rated up to 16 bar, 232 psi. This means that the flanges and the whole meter are rated and operational at 232 psi, just the drilling is according to ANSI 150/ASA 150.



H4400 Meters - Pressure Loss Curves (Typical)



Temperature/pressure rating

Temperature	-20—150	220	225	250	275	300	325	350
Min PSIG*	----	6	25	45	72	112	154	194

*This is the minimum line pressure required to prevent steam flashing within the meter body. Flashing can damage the meter permanently.

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