

CONTROLS WAREHOUSE

FUEL OIL METERS

Industrial Fuel Oil Meters · Sizes 1½" and 2"

Building managers have more tools to control their facility's systems. They need accurate reliable meters to provide input data.

Controls Warehouse (CW) oil meters provide fuel consumption measurements to users in flexible formats. Whether directly displaying totalization, showing consumption in an accessible location, or providing high resolution information to user's systems, the oil meters fulfill user's needs for accurate, reliable information.

OPERATION

The CW line of high precision oscillating piston oil flow meters covers a range of flows from 6.0 to 800 GPH. These meters are capable of handling a wide viscosity range including light and medium heating oil, diesel, and even heavy heating oil (meters ¾" and 1"). Accuracy is ±1% throughout the operating flow range for each meter. Each meter is tested with #2 fuel oil at 70°F to verify the accuracy.

Typical applications of the CW oil meters include: measuring heating oil consumption in burners for heating units and industrial furnaces; measuring fuel consumption in land-based and sea-based diesel engines including emergency power generators and industrial batching applications.

The user has the option of mounting these meters horizontally, vertically, or on any plane in between. To assist reading at whatever angle the meter is mounted, the register dial maybe rotated through a full 360° (except on reed pulser units). CW oil meters include a bottom plate that is easily removed to allow for cleaning or inspection of the measuring chamber without removing the meter from the line. Also, the register face features a 1:1 piston ratio low-flow indicator to detect plumbing leaks.

Pulse units are available in both high and low speed pulse outputs, allowing interfacing for batch operations, rate of flow indication or remote read and control. Typically, reed pulsers are used for remote totalization. The high speed pulser makes it ideal for rate of flow indication or batching. Compatible electronic equipment is available from Controls Warehouse.

MATERIALS

Meter Body: Cast Bronze

Working Chamber: Brass

Thimble (Bushing): Brass

Shutter: Brass

O-Rings: Viton

Piston: Anodized aluminum

Safety Filter: 316 stainless steel



CW40 (1½") and CW50 (2") industrial oil meters are capable of handling a wide viscosity range including light and medium heating oil, diesel, and even heavy heating oil.

OUTPUT OPTIONS

REED PULSER

- 2-wire system
- Max voltage: 48 VAC/VDC
- Max current: 50 mA
- Max switch power: 3W
- Max resistor (47 Ω) power: 0.5 W
- On time: 50 ± 10%
- No cable supplied

Note: This pulser is not polarity (+/-) sensitive. The pulser adds approximately 0.2 lbs. of weight to the meter.

INDUCTIVE PULSER

- 2-wire system
- Voltage: 5-15 VDC
- Switching element slot-initiator
- DIN 19234 (NAMUR)
- Ideal switching current: 1mA (open), 4mA (closed) @ 8VDC
- On time: 50 ± 10%
- Use a voltage comparator with open collector output, i.e Pepperl+Fuchs p/n SJ3.5-E2
- NEMA 4x
- No cable supplied

Note: This pulser is polarity (+/-) sensitive. This pulser adds approx. 1.3 lbs. of weight to the meter.

ELECTRONIC REGISTER

LCD display of totalization and flow rate

- Power Supply / Analog output
- Voltage: 6 - 30 VDC
- Analog output: 4-20mA passive
- Update interval: <1s
- Max load: 0 to 1116 Ω

Digital output

- Max voltage: 48 VDC
- Max current: 50mA
- Max output frequency: 200 Hz

DIMENSIONS AND NET WEIGHT

Meter Size	A	B	C	D	E			Weight
					Direct read	Reed pulse	Inductive pulse	
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lbs.(kg)
1½" (40)	11.875(300)	5.875(150)	4.5(116)	8.25(210)	9.055(231)	10.040(254)	10.5(270)	45(20.5)
2" (50)	13.750(350)	6.5(165)	6.5(165)	11(286)	11.26(286)	12.205(310)	12.795(325)	88(40)

Note: All dimensions are ±1/16".

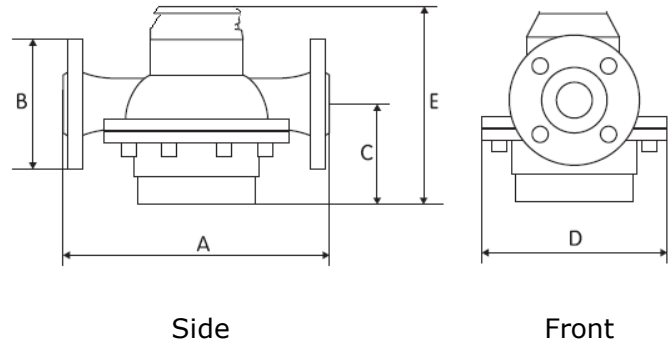
	CW40	CW50
PERFORMANCE	1½"	2"
Minimum flow GPH (l/h)	60 (225)	200(750)
Max. rec. flow GPH (l/h) ¹	1600 (6000)	5300 (20000)
Peak low GPH (l/h)	2400 (9000)	8000 (30000)
Accuracy	±1%	±1%
Max op pressure PSI (bar)	150 (10)	150 (10)
Max op temp ° F (° C)	266 (130)	266 (130)

REGISTER READING	1½"	2"
Smallest quantity USG (l)	0.01 (0.1)	0.01 (0.1)
Capacity in millions USG (l)	10 (1)	10 (11)

PHYSICAL DESCRIPTION	1½"	2"
Weight in lbs (kg)	45.2 (20.5)	88.2 (20)
Flange Connection Type	ANSI 150#	ANSI 150#
Safety Filter Mesh (included)	20	20
Recommended Strainer Mesh	30-40	30-40

OPTIONAL PULSE OUTPUT	1½"	2"
Reed pulses per USG (l)	0.1 (1)	0.1 (1)
Inductive pulses per USG (l)	10 (100)	10 (10)

1. Meter selection should be based on the maximum recommended continuous flow rating.



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