

CONTROLS WAREHOUSE

FUEL OIL METERS

Industrial Fuel Oil Meters · Sizes 1/2", 3/4" and 1"

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 3/4" and 1"). Accuracy is $\pm 1\%$ 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 meters should be sized according to anticipated flow rates for the system. Users may install piping reducers to fit a properly sized meter into existing piping. 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 may be 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.

MATERIALS

Meter Body: Cast Bronze

Working Chamber: Brass

Thimble (Bushing): Brass (CW20), Ryton (CW15 and CW25)

Shutter: (CW20) Ryton, (CW15 and CW25)

O-Rings: Viton

Piston: Anodized aluminum

Safety Filter: 316 stainless steel



CW15, CW20 and CW25 industrial oil meters are capable of handling a wide viscosity range including light and medium heating oil as well as diesel.

OUTPUT OPTIONS

REED PULSER

- 2-wire system
- Max voltage: 48 VAC/VDC @ 50 mA
- Max switch power: 3W
- On time: 50 ± 10%
- 9ft. (3m) of 2-wire cable is provided

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 current: 1mA (open), 4mA (closed) @ 8 VDC
- On time: 50 ± 10%
- 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
 - On /off resistance: <50 Ω - > 10 MΩ

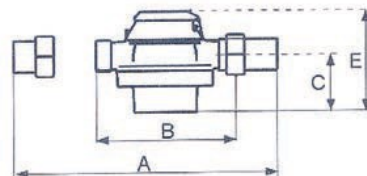
	CW15	CW20	CW25
PERFORMANCE	1/2"	3/4"	1"
Minimum flow GPH (l/h)	2.6 (10)	7.9 (30)	15.9 (60)
Max. rec. flow GPH (l/h) ¹	105 (400)	265 (1000)	530 (2000)
Peak low GPH (l/h)	160 (600)	400 (1500)	800 (3000)
Accuracy	±1%	±1%	±1%
Max op pressure PSI (bar)	225 (15)	225 (15)	225 (15)
Max op temp ° F (° C)	266 (130)	266 (130)	266 (130)

REGISTER READING	1/2"	3/4"	1"
Smallest quantity USG (l)	0.01 (0.1)	0.01 (0.1)	0.01 (0.1)
Capacity in millions USG (l)	1 (1)	1 (10)	1 (10)

PHYSICAL DESCRIPTION	1/2"	3/4"	1"
Union connector thread type Meter spud end threads are BSP	1/2" MNPT	3/4" MNPT	1" MNPT
Safety filter mesh (included)	40	40	40
Recommended strainer mesh	60	60	60

OPTIONAL PULSE OUTPUT	1/2"	3/4"	1"
Reed pulses per USG (l)	10 (10 or 1)	10 (1)	1 (1)
Inductive pulses per USG (l)	278 (100)	100 (100)	100 (100)

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



Side



Front

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)
1/2"	9.875(250)	6.5(165)	1.75(45)	4.125(105)	4.095(104)	5.039(128)	7.165(182)	4.6(2.1)
3/4"	10.5(270)	6.5(165)	2.125(54)	4.125(105)	4.449(113)	5.394(137)	7.52(191)	5.5(2.5)
1"	11.875(300)	7.5(190)	3.032(77)	5.125(140)	5.512(140)	5.475(164)	8.583(164)	9.3(4.2)

Note: All dimensions are ±1/16".

CONTROLS WAREHOUSE

356 Cypress Road, Ocala, Florida 34472; [\(352\)687-2025](tel:3526872025); sales@controlswarehouse.net; controlswarehouse.net; ©11/8/2021 Controls Warehouse, Inc.; all rights reserved