

ZDM
POSITIVE DISPLACEMENT
FLOW METER



Flow
Pressure
Level
Temperature
Measurement
Monitoring
Control



- Viscosities up to 100,000 cSt
- Accuracy: $\pm 0.3\%$ of Flow
- To 6500 PSIG Pressure
- Can Detect Flow Direction
- Handles a Variety of Lubricating Fluids



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Model:
ZDM

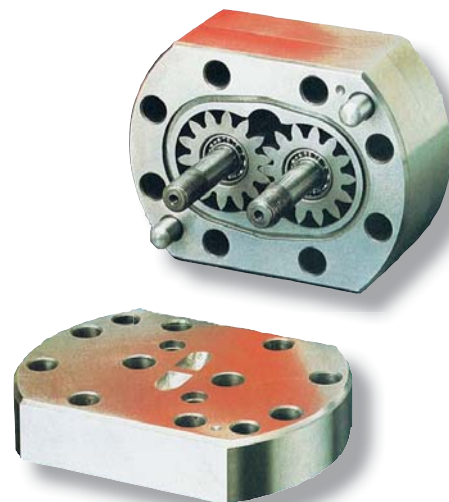


Description

When your metering problem gets particularly difficult or when the absolute in precision is a must, the ZDM positive displacement flowmeter is the choice for you. Available in either stainless steel or cast iron, the ZDM offers a state-of-the-art solution.

Capable of operating at pressures to 6500 PSI and temperatures from -40°F to +410°F, the ZDM is rugged enough to operate with some fairly demanding requirements. Add to this the ability to precisely meter fluids with viscosities ranging from 0.3 cSt to 100,000 cSt, and the range of possible applications for the ZDM becomes truly enormous.

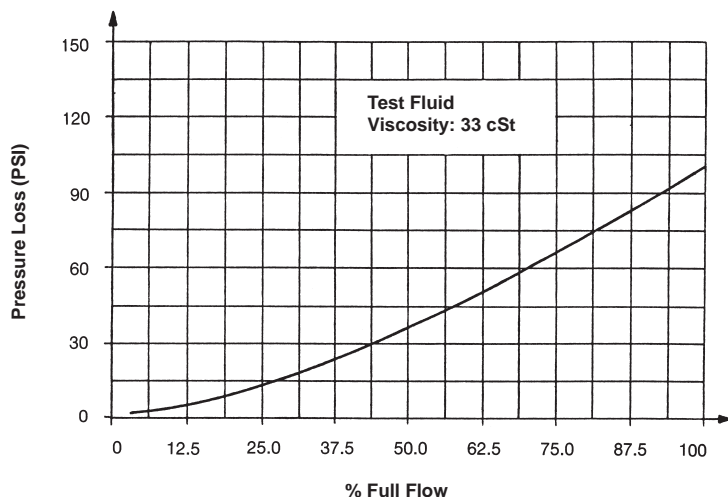
All liquids that can be pumped and have known lubrication properties can be measured with the ZDM, for example: gasoline, paraffin, kerosene, diesel, Skydrol, mineral oils, hydraulic oils, inks, dyes, paints, greases, polyurethane, glues, pastes, creams, resins, waxes, and many others.



Specifications

Accuracy:	±0.3% of reading for viscosity >20 cSt	Max. Pressure	
Repeatability:	±0.05% of reading	Cast Iron:	4500 PSIG
Orientation Sensitivity:	None	Stainless Steel:	6500 PSIG
Inlet/Outlet Location:	Front Face, parallel or Side, 180° Opposed	Max. Temperature	
Construction		Standard:	-40 to 248°F
Housing:	Cast Iron or Stainless Steel (DIN 1.4305)	Ex-design:	-4 to 212°F
Gears:	Stainless Steel (DIN 1.4305)	Option-C:	-40 to 410°F
Seals		Filtering	
Cast Iron Unit:	FKM	ZDM- ..02, ZDM- ..04, ZDM- ..07:	10 µm
Stainless Steel Unit:	FKM	ZDM- ..08, ZDM- ..09:	20 µm
Optionally:	EPDM, PTFE	ZDM- ..10, ZDM- ..20, ZDM- ..40,	
Bearings		ZDM- ..150:	50 µm
Cast Iron Unit:	Stainless Steel	Protection:	NEMA 3S
Stainless Steel Unit:	Stainless Steel	Electrical Input Power:	10-28 V _{DC} (±4 V _{DC}) 40 mA max.

Typical Pressure Loss vs Flow Rate Behavior





Ordering Information				Optional Fitting Size Add Suffix ..B
Fitting Style	Body Material	Range oil [GPM]	Fitting Size [NPT]	
ZDM-1.. = Front Ports, bsp threads	..1.. = Cast Iron ..2.. = Stainless Steel	..02 = 0.0005 - 0.53	3/8"	-
		..04 = 0.0011 - 1.06	1/2"	-
		..07 = 0.0026 - 2.64	1/2"	-
ZDM-2.. = Side Ports, bsp threads		..08 = 0.0053 - 4.76	1/2"	-
ZDM-3.. = Front Ports, NPT		..09 = 0.0079 - 10.57	1/2"	3/4"
ZDM-4.. = Side Ports, NPT		..10 = 0.0132 - 21.13	3/4"	1"
		..20 = 0.0264 - 31.70	3/4"	1"
	..40 = 0.2642 - 66.00	1 1/4"	1 1/2"	
	..50 = 0.39 - 138.00*	1 1/2"	2"	

*Range code 50 only for cast iron versions

Options	
Description	Suffix
Larger fitting size (see table above)	..B
EPDM seals in place of standard FKM seals	..E
PTFE seals in place of standard FKM seals	..T
Intrinsically safe 10-28 V _{DC} pulse sensor (incl. 1 Zener barriers)	..EX
Externally mounted sensor pre-amplifier for temperatures above 248°F (internal mounting is standard)	..C

Order Details (Example: ZDM-3204 B)



ZDM for High Temperature (Option C)

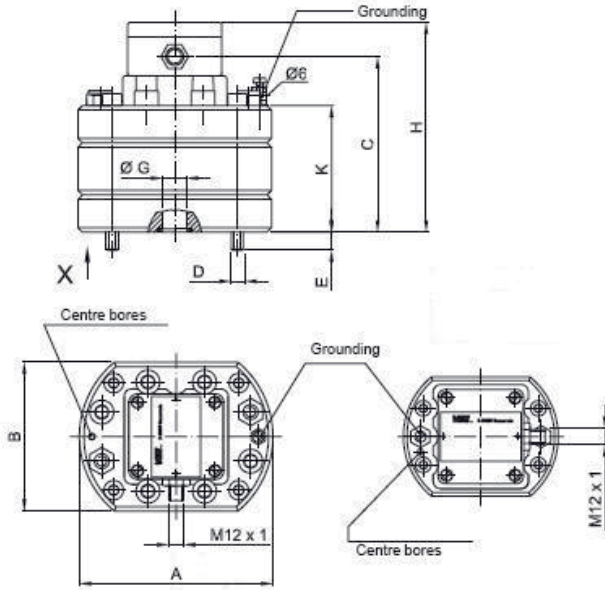


ZDM with Mounting Plate

ZDM- ..02 to ZDM- ..40

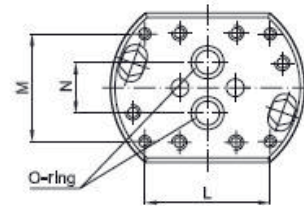
Dimensions

Cast Iron Version

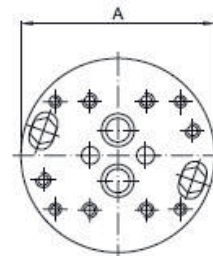


Connection Drawings

Cast Iron Version



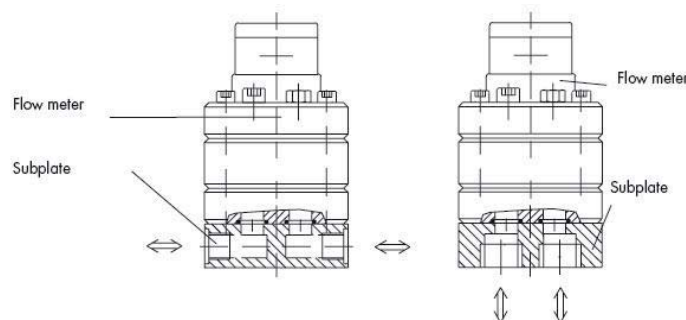
Stainless Steel Version



Model Number	Size [inch]												Weight [lbs]
	A	B	C	D	E	G	H	K	L	M	N	O-ring	
ZDM- ..02	3.94	3.15	3.58	M 6	0.49	0.35	4.49	2.28	2.76	1.57	0.79	0.43 x 0.08	6.17
ZDM- ..04	3.94	3.15	3.60	M 6	0.45	0.35	4.51	2.30	2.76	1.57	0.79	0.43 x 0.08	6.17
ZDM- ..07	3.94	3.15	3.70	M 6	0.35	0.35	4.61	2.40	2.76	1.57	0.79	0.43 x 0.08	6.17
ZDM- ..08	3.94	3.15	3.68	M 6	0.37	0.35	4.59	2.38	2.76	1.57	0.79	0.43 x 0.08	6.61
ZDM- ..09	4.53	3.54	3.80	M 8	0.45	0.63	4.70	2.50	3.15	1.50	1.34	0.71 x 0.10	8.82
ZDM- ..10	5.12	3.94	3.98	M 8	0.47	0.63	4.88	2.67	3.31	2.83	1.34	0.71 x 0.10	11.7
ZDM- ..20	5.12	3.94	4.65	M 8	0.59	0.63	5.55	3.35	3.31	2.83	1.34	0.71 x 0.10	14.8
ZDM- ..40	7.09	5.51	5.63	M 12	0.79	1.18	6.54	4.33	1.81	3.74	1.77	1.42 x 0.10	32.4

Side Ports

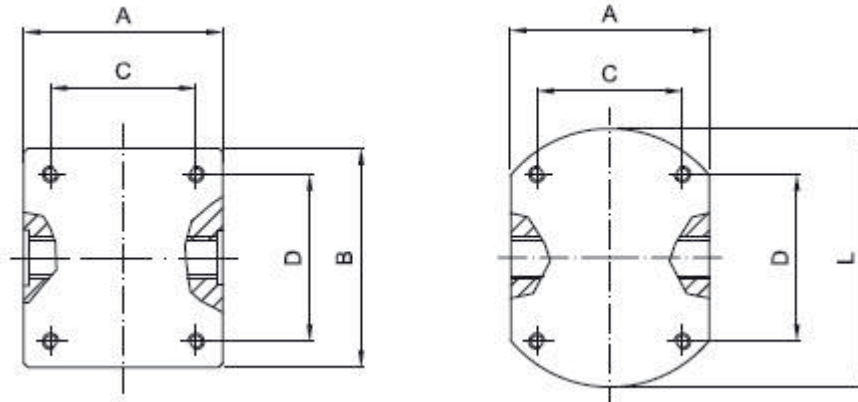
Bottom Ports



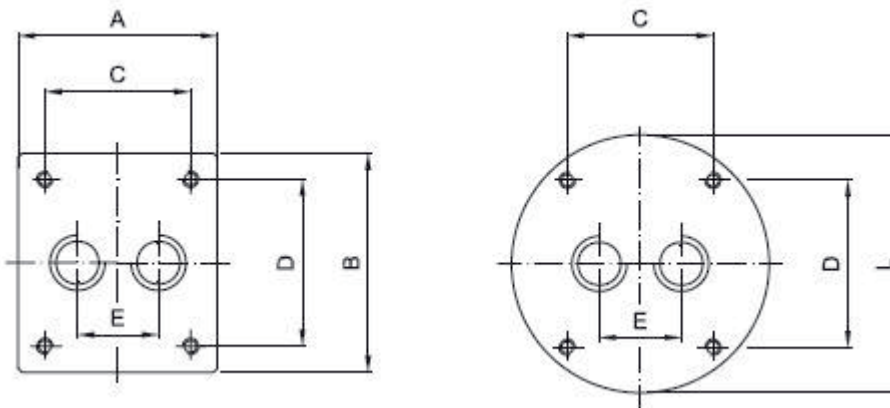
ZDM- ..02 to ZDM- ..40

Subplate Dimensions

Side Ports



Bottom Ports

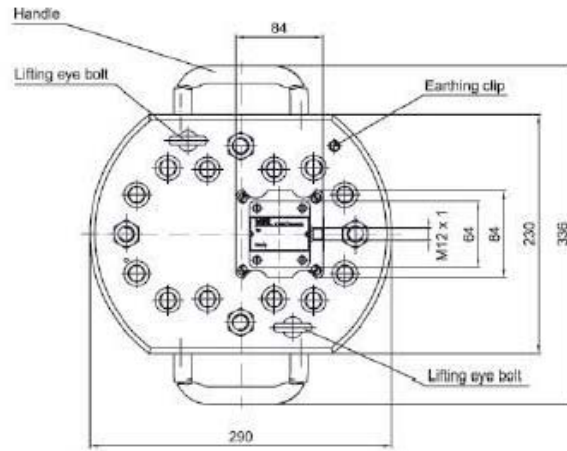
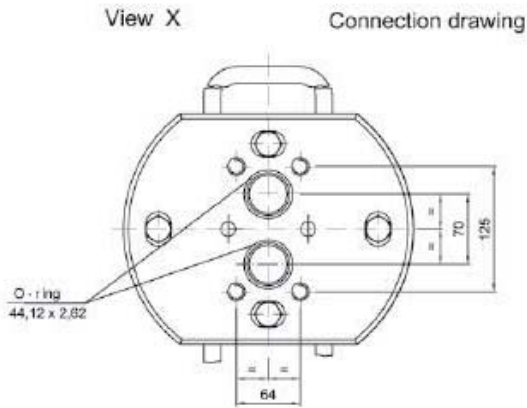
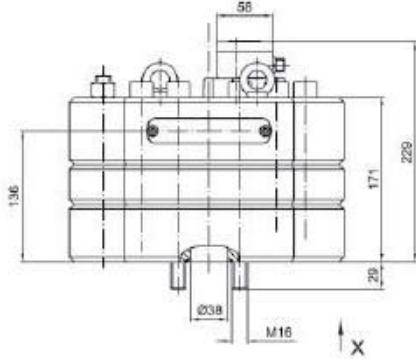


Model Number	Size [inch]					Weight [lbs]
	A	B	C	D	L	
ZDM- ..02, ZDM- ..04, ZDM- ..07, ZDM- ..08	3.15	3.54	1.57	2.76	3.94	3.97
ZDM- ..09	3.54	3.94	1.49	3.15	4.53	5.95
ZDM- ..10, ZDM- ..20	3.94	4.33	2.83	3.31	5.12	7.94
ZDM- ..40 Cast Iron 1 1/4"	4.72	5.12	3.94	4.33	-	16.31
ZDM- ..40 Cast Iron 1 1/2"	5.51	4.72	4.72	3.94	-	16.31
ZDM- ..40 Stainless Steel	5.51	-	3.94	4.33	7.09	26.46



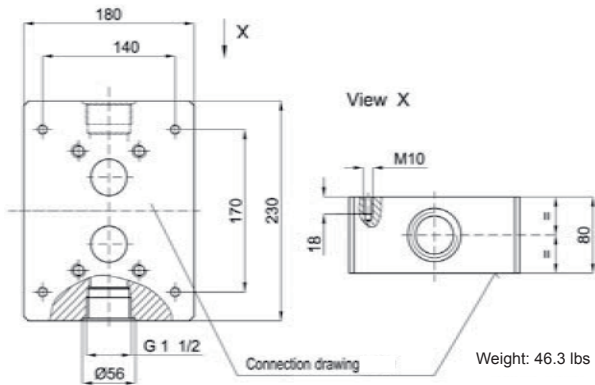
ZDM- .150

Dimensions

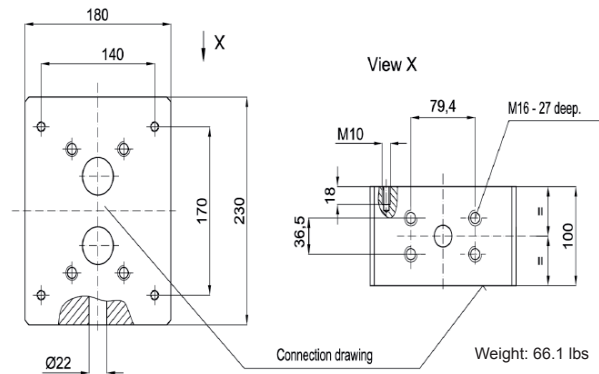


Subplate Dimensions

ZDM- .150 with connection thread NPT 1 1/2"



ZDM- .150 with connection thread SAE 1 1/2"



Dimensions in mm