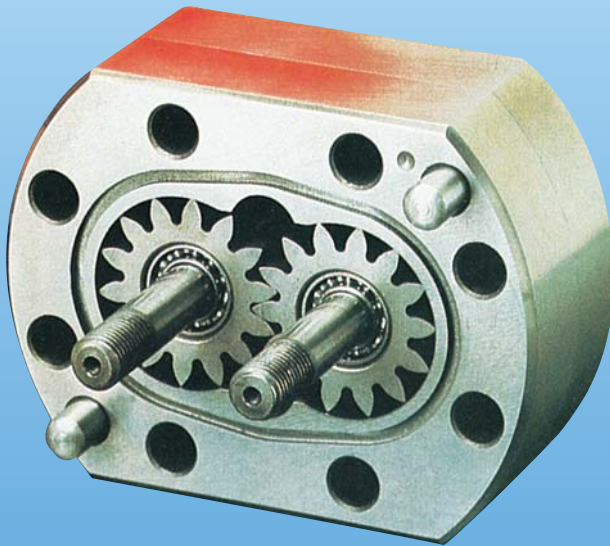


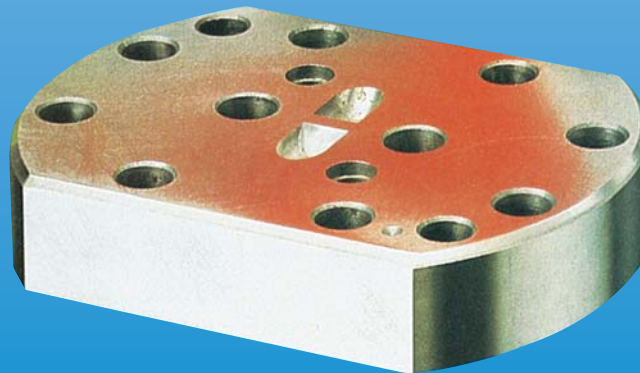
## ZDM POSITIVE DISPLACEMENT FLOW METER



Flow  
Pressure  
Level  
Temperature  
measurement  
monitoring  
control



- Viscosities up to 100,000 cSt
- Accuracy:  $\pm 0.3\%$  of Flow
- To 4600 PSIG Pressure
- Can Detect Flow Direction
- Handles a Variety of Fluids



S4



### USA

KOBOLD Instruments Inc.  
1801 Parkway View Drive  
USA- Pittsburgh, PA 15205  
☎ +1 412-788-2830  
Fax +1 412-788-4890  
E-mail: info@koboldusa.com



### CANADA

KOBOLD Instruments Canada Inc.  
9A Aviation  
Pointe-Claire, QC H9R 4Z2  
☎ +1 514-428-8090  
Fax +1 514-428-8899  
E-mail: kobold@kobold.ca

Visit KOBOLD Online at  
[www.kobold.com](http://www.kobold.com)

Model:  
ZDM



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 economical cast iron (we understand budgets), the ZDM offers state-of-the-art capability at affordable prices.

Capable of operating at pressures to 4600 PSI and temperatures from -20°F to +300°F, the ZDM is sufficiently rugged 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.

### Specifications

**Accuracy:** ±0.3% of reading for viscosity >20 cSt

**Repeatability:** ±0.05% of reading

**Orientation Sensitivity:** none

**Inlet/Outlet Location:**

- a. Front Face, parallel or
- b. Side 180° Opposed

**Purge Valve:** Available

**Construction**

**Housing:** Cast iron or Stainless Steel (DIN 1.4125)

**Gears:** Stainless Steel (DIN 1,4122)

**Seals:**

**Cast Steel Unit:** Viton

**303 SS Unit:** Viton

**Optionally:** EPDM

**Bearings:**

**Cast Steel Unit:** Nitrided Steel

**304 SS Unit:** Stainless Steel

**Max. Pressure:** 4600 PSIG

**Max. Temperature**

**Standard:** -20 to 212°F

**Option-C:** -20 to 300°F

**Protection:** NEMA 3S

**Electrical**

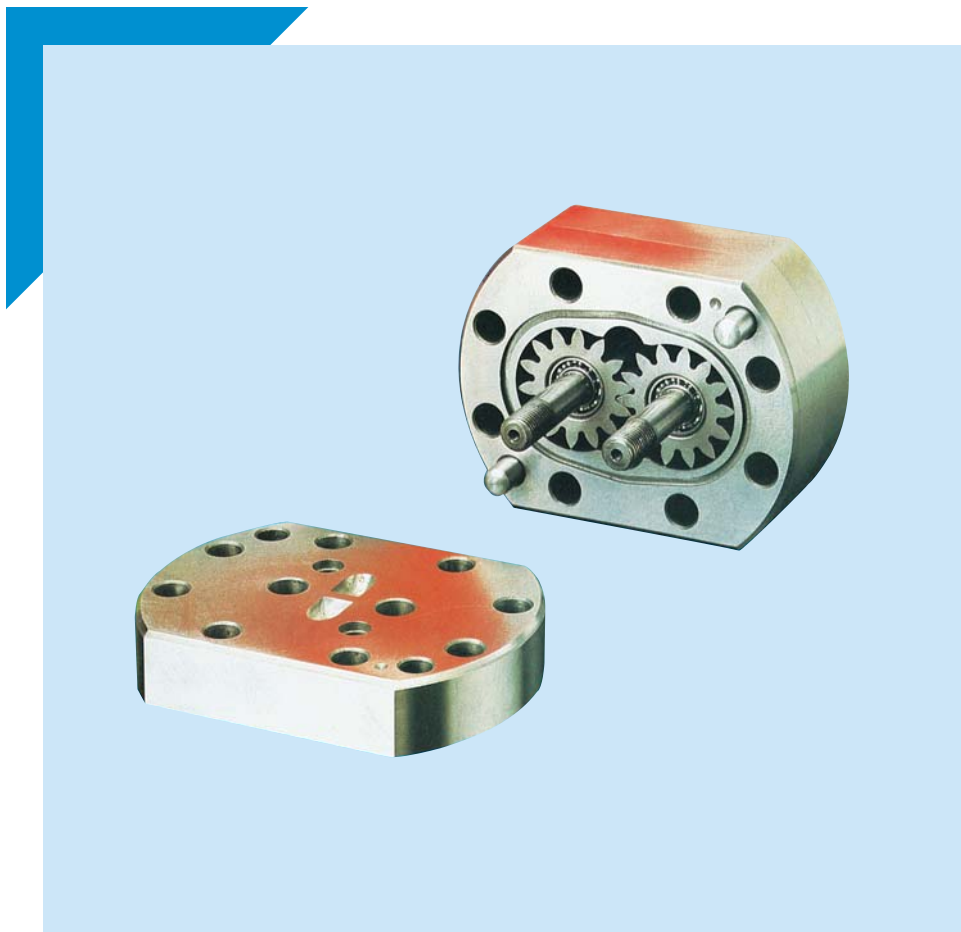
**Input Power**

**Standard:** 24 VDC (±4 VDC)  
40 mA max.

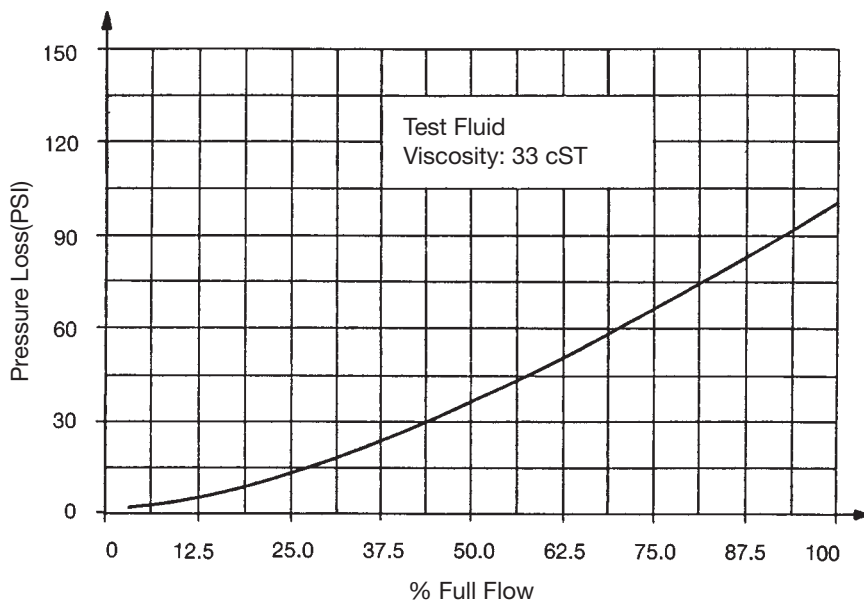
**Optionally:** 12 VDC (+4/-2 VDC)  
30 mA Max. (Option-A)

**Output Frequency at Maximum Flow:**

Approx. 1250-1675 Hz  
Depending on model



Typical Pressure Loss vs Flow Rate Behavior



Options		
Part Number Suffix	Description	
-B	Large fitting size	
-E	EPDM seals in place of standard seals	
-A	12 VDC powered pulse sensor in place of standard 24 VDC sensor	
-Ex	Intrinsically safe 24 VDC pulse sensor (incl. 3 Zener barriers)	on request
-ExA	Intrinsically safe 12 VDC pulse sensor (incl. 3 Zener barriers)	on request
-C	Externally mounted sensor pre-amplifier for temperatures above 212°F (internal mounting is standard)	
-K	Pig-tail hook-up wiring in place of NEMA 4, DIN plug	

**How to Order:**

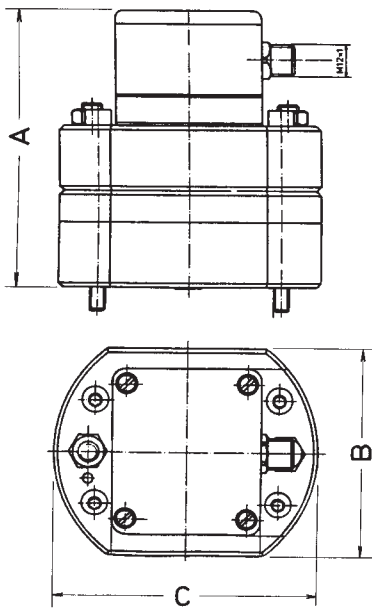
The ZDM part number consists of the basic part number plus the option letters in the format **ZDM-XXXX-Options**. The **X** designates the desired fitting style, **YYY** specifies the range and material choice and **Options** allows customization of the ZDM. The **Options** should remain separated by dashes.

**Example:**

To order a stainless steel ZDM with a range of 0.3-80 GPM, with NPT side ports, EPDM and seals, the appropriate part number would be: ZDM-4240-E.

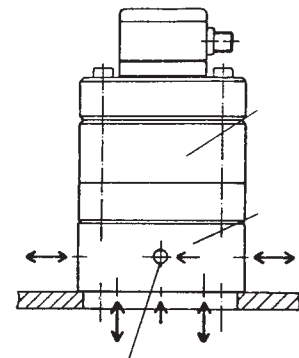
S4

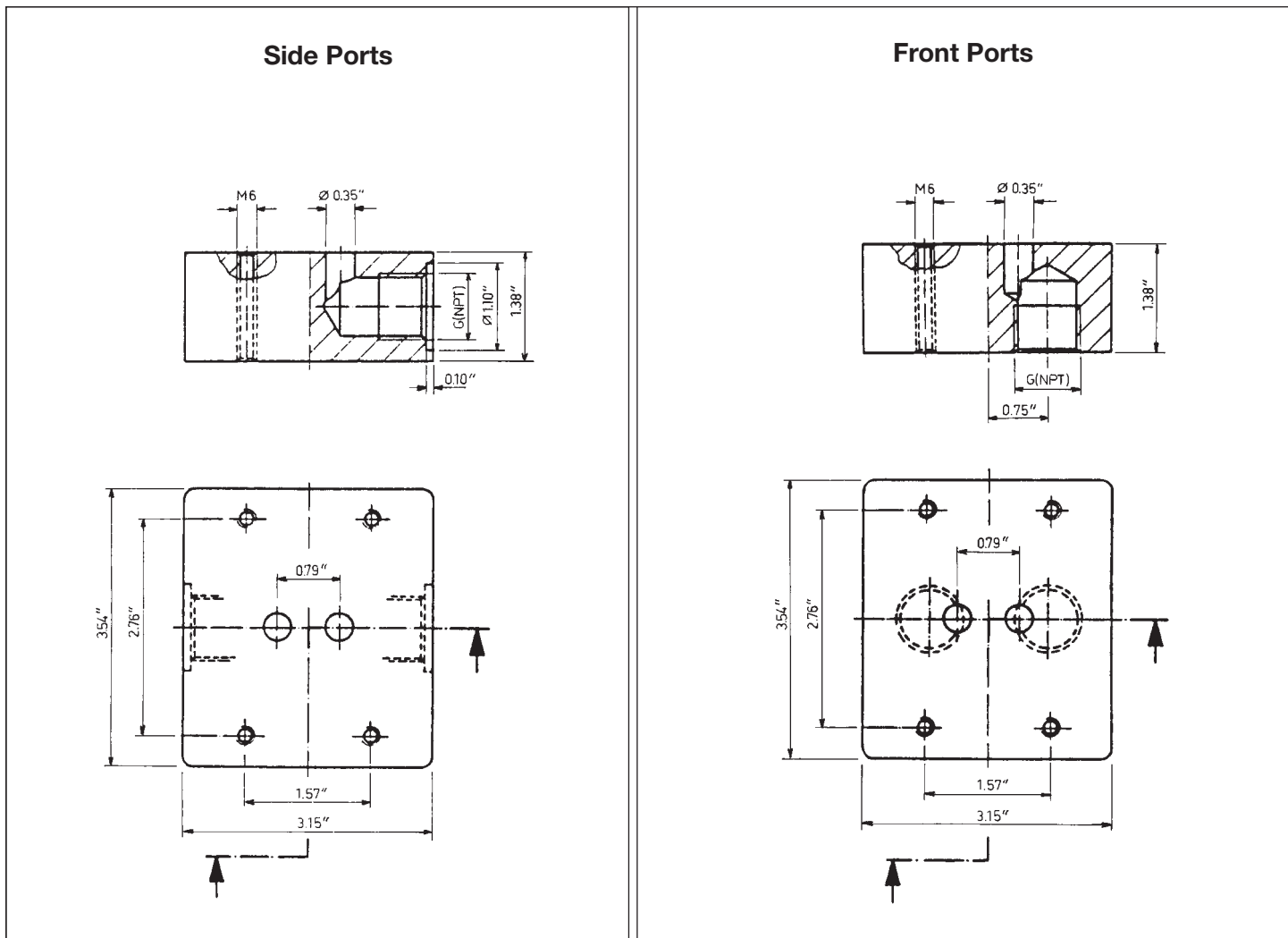
**Dimensions**



Model ZDM	Size			
	A	B	C	D
X105	3.98	3.15	3.94	
X107	4.17	3.15	3.94	
X108	4.17	3.15	3.94	
X110	4.49	3.94	5.12	
X120	5.15	3.94	5.12	
X140	6.42	5.51	7.09	

**ZDM with Mounting Plate**





**Ordering Data**

ZDM-	X			YYY		-Options
Fitting Style X =	Fitting Size NPT	Range GPM	Cast Iron Viton Seals	Stainless Steel Viton Seals	Optional Fitting Size NPT	Add Suffix -B
			Part Number YYY =	Part Number YYY =		
1 = Front Ports, bsp threads	3/8"	0.0005-0.50	102	202		
2 = Side Ports, bsp threads	1/2"	0.001-1.0	104	204		
3 = Front Ports, NPT	1/2"	0.0026-2.6	107	207	3/4"	
4 = Side Ports, NPT threads	1/2"	0.008-4.7	108	208	3/4"	
	3/4"	0.0132-20	110	210	1"	
	3/4"	0.03-40	120	220	1"	
	1 1/4"	0.3-80	140	240	1 1/2"	