

POSITIVE DISPLACEMENT HIGH FLOWMETERS FOR VISCOUS FLUIDS

FPD1004
Starts at
\$939



- ✓ 0 to 1000 cP Viscosity Standard, 1,000,000 cP Viscosity Rotor Also Available
- ✓ Compact, Durable, and Serviceable On-Site
- ✓ Extremely Accurate Even with Viscous Fluids
- ✓ Meter Design Minimizes the Number of Wearable Parts—Extending Product Life
- ✓ Reed Switch or Hall Effect Sensor
- ✓ Handles Particle Sizes to 0.28 mm (0.011")

SPECIFICATIONS

Accuracy: ±0.5% rdg

Repeatability: ±0.03%

Fitting Type: FNPT, flange and tri-clover sanitary fittings optional on some models

Sensor Options: Reed switch (2-wire SPST reed switch N/O, 3 watts rated, 150 Vdc max) or hall effect sensor (25 mA NPN open collector)

Hall Effect Sensor—Power

Requirements: Dedicated 4.5 to 24 Vdc (4.6 to 9 mA)



FPD1000D-TX remote 4 to 20 mA output with programmable display (loop powered), \$448, shown smaller than actual size.

FPD1004, \$939, shown smaller than actual size.

Maximum Viscosity: 1000 cP

Body: Aluminum; not recommended for water applications

Strainer Size: 60 mesh [handles particle sizes to 0.28 mm (0.011")]

Mounting: Shafts must be in a horizontal plane; cap screws should not point up or down

Meter Size	Length mm (in)	Height mm (in)
1/2"	100.0 (3.94)	96.0 (3.78)
3/4"	133.0 (5.24)	126.0 (4.96)
1" PPS	107.9 (4.25)	100.0 (3.94)
1" AL/SS	170.1 (6.70)	112.0 (4.41)
1 1/2"	212.0 (8.35)	144.0 (5.67)
2"	240.0 (9.45)	178.0 (7.01)

Wetted Materials			
Housing	Aluminum (Std)	Stainless Steel	PPS
Bearings for 1" units	Carbon/graphite	Carbon/graphite	PPS
Bearings for 1/2 to 2" units	PPS	PPS	N/A
Shaft	316 SS	316 SS	Hastelloy C
Rotor for 1/2, 3/4, 1 1/2, 2"	PPS	PPS	N/A
Rotor for 1" units	316 SS	316 SS	PPS
O-ring	FKM	FKM	PTFE

Meter Size	Weight kg (lb)	Max Temp °C (°F)	Max Pressure bar (psi)	Typical K Factors (PPG)	Frequency Range (Hz)
1/2" Aluminum	1.50 (3.25)	80 (176)	55 (800)	424.0	1.8 to 55.8
1/2" SS	2.70 (6.0)	120 (248)	55 (800)	424.0	1.8 to 55.8
3/4" Aluminum	1.9 (4.3)	80 (176)	55 (800)	197.0	2.6 to 51.9
1" PPS body	1.30 (1.3)	80 (176)	10 (150)	197.0	2.6 to 69.0
1" Aluminum	2.20 (4.9)	80 (176)	55 (800)	136.3	3.6 to 72.7
1" Al w/150# flange	2.90 (6.6)	80 (176)	Flange Rule	136.3	3.6 to 72.7
1 SS	5.70 (12.7)	120 (248)	55 (800)	136.3	3.6 to 72.7
1 SS w/150# flange	6.60 (14.6)	120 (248)	Flange Rule	136.3	3.6 to 72.7
1 SS w/tri-clover fittings	4.90 (10.8)	120 (248)	55 (800)	136.3	3.6 to 72.7
1 1/2" Aluminum	4.50 (10.0)	80 (176)	55 (800)	54.9	2.4 to 60.4
1 1/2" Al w/150# flange	5.40 (12.0)	80 (176)	Flange Rule	54.9	2.4 to 60.4
2" Aluminum	7.80 (17.1)	80 (176)	55 (800)	25.3	1.7 to 39.0
2" Al w/150# flange	9.10 (20.1)	80 (176)	Flange Rule	25.3	1.7 to 39.0



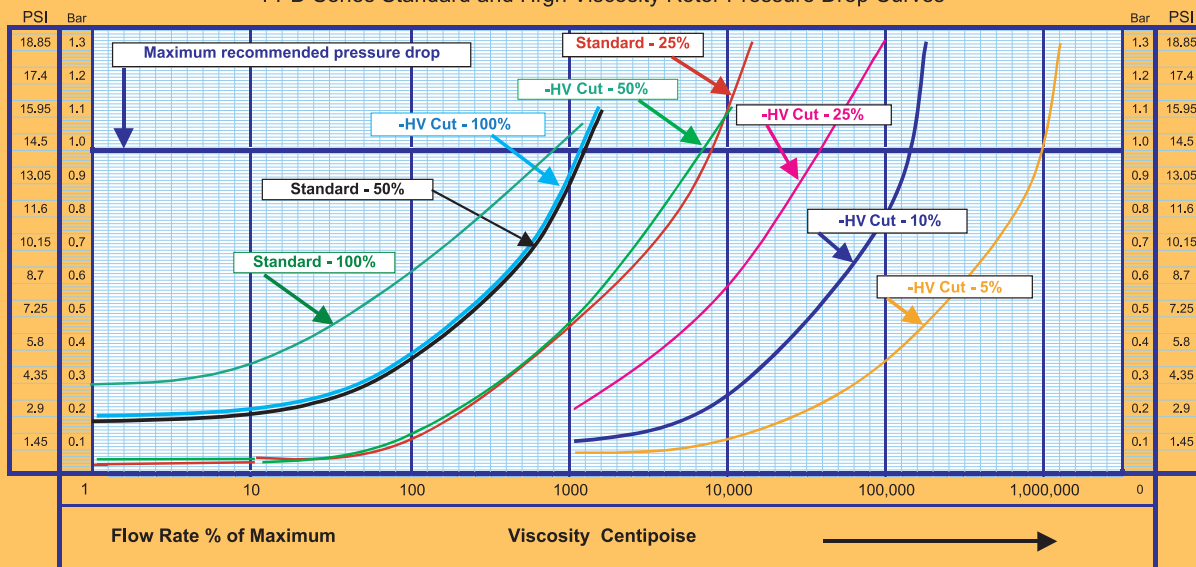
FPD1000D-TX remote 4 to 20 mA output with programmable display (loop powered), \$448, shown smaller than actual size.

Recommended Reference Book:
Viscous Flows,
CM-0498, \$100
See Section Y
For Additional Books



F

FPD Series Standard and High-Viscosity Rotor Pressure Drop Curves



This graph is intended as an aid to determine the pressure drop of the measuring device as part of a system, allowing engineers to calculate the most economical components for their systems, i.e. pump selection would be determined on the total system pressure drop; the lower the pressure drop, the lower the cost of the pumping components.

The graph above represents the pressure drop for standard and high-viscosity (special cut) rotors at various viscosities. Viscosities are in centipoise and the pressure drop is in psi and bar. As will be noted, the maximum pressure drop is shown at 14.5 psi (1 bar); although this is achievable, it is not recommended. The % of maximum flow rate represents the flow rate of any given meter model and can be applied to the above graph, i.e. 10% of the FPD-1005 model would be 3.2 gallons (12 liters).

ML-1653-1

F-X

MOST POPULAR MODELS HIGHLIGHTED!

To Order (Specify Model Number)							
Aluminum Body with FKM O-Ring Model No.	Price	NPT Size	Sensor Type	Display	4 to 20 mA Analog Output	Flow Rate, GPM	
						Standard Viscosity (5 to 1000 cP)	Low Viscosity (< 5 cP)
FPD1004	\$939	½	Hall effect	—	—	0.26 to 7.9	0.80 to 6.6
FPD1004-R	876		Reed switch	—	—		
FPD1004D-R	1306		Reed switch	Y	—		
FPD1004D-R-A	1350		Reed switch	Y	Y		
FPD1004-R-A	1152		Reed switch	—	Y		
FPD1034	1155	¾	Hall effect	—	—	0.8 to 15.8	2.1 to 14
FPD1034-R	1092		Reed switch	—	—		
FPD1034D-R	1522		Reed switch	Y	—		
FPD1034D-R-A	1566		Reed switch	Y	Y		
FPD1034-R-A	1368		Reed switch	—	Y		
FPD1005	1389	1	Hall effect	—	—	1.6 to 32.0	2.6 to 26
FPD1005-R	1326		Reed switch	—	—		
FPD1005D-R	1756		Reed switch	Y	—		
FPD1005D-R-A	1800		Reed switch	Y	Y		
FPD1005-R-A	1602		Reed switch	—	Y		
FPD1006	2023	1½	Hall effect	—	—	2.6 to 66.0	4.0 to 62
FPD1006-R	1960		Reed switch	—	—		
FPD1006D-R	2390		Reed switch	Y	—		
FPD1006D-R-A	2434		Reed switch	Y	Y		
FPD1006-R-A	2236		Reed switch	—	Y		
FPD1007	2958	2	Hall effect	—	—	4 to 92	9 to 79
FPD1007-R	2895		Reed switch	—	—		
FPD1007D-R	3325		Reed switch	Y	—		
FPD1007D-R-A	3369		Reed switch	Y	Y		
FPD1007-R-A	3171		Reed switch	—	Y		
PPS Body with PTFE O-rings							
FPD1105	\$1295	1	Hall effect	—	—	0.8 to 21.0	2.1 to 18.5
FPD1105-R	1232		Reed switch	—	—		
FPD1105D-R	1662		Reed switch	Y	—		
FPD1105D-R-A	1706		Reed switch	Y	Y		
FPD1105-R-A	1508		Reed switch	—	Y		

Stainless Steel Body Option		Flow Rate, GPM			
Model No.	Add'l Price	NPT Size	Standard Viscosity (5 to 1000 cP)	Low Viscosity (<5 cP)	
Change from FPD1004 to FPD1204	\$909	1/2	0.26 to 7.9	0.80 to 6.6	
Change from FPD1005 to FPD1205	1986	1	1.6 to 32.0	2.6 to 26	

Options

Description	Order Suffix	Add'l Price	Availability
PTFE O-rings	-T	\$100	FPD1004, 1034, 1204
		145	FPD1005, 1205
		155	FPD1006
		179	FPD1007
1,000,000 cP high viscosity rotor	-HV	291	FPD1004, 1005, 1006, 1007
		851	FPD1204
		955	FPD1205
150# flange fittings	-F	282	FPD1005, 1006, 1007, 1205

Accessories

Model No.	Price	Description
FPD1000-TX	\$276	Remote 4 to 20 mA output—loop powered
FPD1000D-TX	474	Remote 4 to 20 mA output with programmable display—loop powered
FPD1000D-BAT	430	Remote battery powered programmable display
FPW-15	75	15V power supply
DPF701	260	Frequency input meter, see page M-5 for complete details

Comes complete with operator's manual.

Ordering Examples: FPD1005, 1" AL meter, \$1389.

FPD1204-T, 1/2" 316 SS meter with PTFE O-rings, (\$939 + 909) + 100 = \$1948.

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