



PISTON FLOWMETER

SERIES

RPF



Fluidex RPF series is a Rotary Piston Flow Meter. The meter consists of a piston rotating within a chamber of known volume. For each rotation, an amount of the liquid passes through the piston chamber. The RPF is a simple and reliable metering device that provide high levels of accuracy & repeatability. It is used in a wide range of liquids including high viscous lubricants, chemicals, food, fuels and many others

FEATURES AND BENEFITS:

- Available in DN15 to DN50 (½" to 2") line sizes
- Flow range covered from 0.2~330 LPM (0.05~90 US GPM)
- Not sensitive to mounting orientation.
- Measure low & high viscosity liquids.
- Has only one moving part (oscillating piston).
- Availability of explosion proof and Intrinsically Safe models.
- No need for flow conditioning.



STANDARD OPTIONS:

- ▶ Flanged and hygienic process connections
- ▶ Explosion proof
- ▶ Integral and remote LCD totalizer and batch totalizer
- ▶ Flow rate totalizers
- ▶ Scaled pulse
- ▶ 4~20mA & flow alarm outputs
- ▶ Electronic batch controllers and pulse processing modules



GENERAL SPECIFICATIONS

MODEL PREFIX	RPF015	RPF020	RPF025	RPF040	RPF050
Nominal size	DN15 (½")	DN20 (¾")	DN25 (1")	40 (1½")	DN50 (2")
Flow range (LPM)	0.2~10	2~50	2~50	4~140	12~330
Flow range (US GPM)	0.05~2.7	0.5~13	0.5~13	1.1~37	3.2~90
Accuracy @ 3cp	±1% o.r. (*)	± 0.5% of reading or ± 0.2% of rate with optional NL correction			
Repeatability	Typically, ± 0.03%				
Temperature range	-40°C ~+200°C (-40°F ~+390°F)				

(*) Within nominal spans of RPF015 (0.2~1.7, 1.7~5 & 5~10 LPM)

MAXIMUM PRESSURE

BAR (PSI) (THREADED METERS)

MODEL PREFIX	RPF015	RPF020	RPF025	RPF040	RPF050
Aluminium	30 (440)	-	60 (870)	30 (440)	20 (300)
316L stainless	100 (1500)	-	60 (870)	60 (870)	30 (400)
High pressure stainless	350 (5150)	-	150 (2175)	150 (2175)	-
UPVC (SAP meters)	-	4 (60)	-	-	-
Protection class	IP66/67 (NEMA4X), Optional Exd IIB T4/T6 or I.S.				
Recommended filtering	150 microns (100 mesh) minimum				

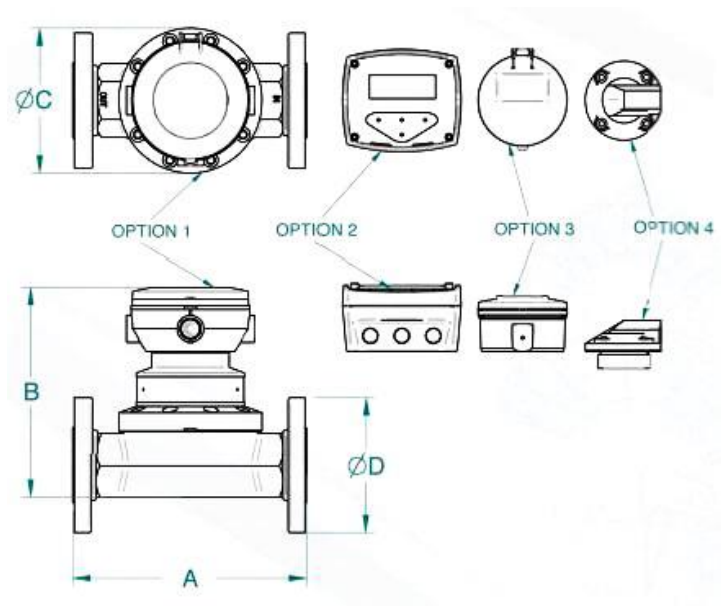
OUTPUT PULSE RESOLUTION

PULSES / LITER (PULSES / US GALLON)

MODEL PREFIX	RPF015	RPF020	RPF025	RPF040	RPF050
Reed switch	200 (760)	20 (76)	20 (76)	7.3 (28)	2.5 (9.5)
Hall effect	400 (1520)	100 (380)	100 (380)	44 (167)	20 (76)
Reed switch output	30Vdc x 200mA max.				
Hall effect output (NPN)	3 wire open collector, 5~24Vdc, 20mA max.				



DIMENSIONS



Option Fitted	RPF015	RPF025	RPF040	RPF050
1 RT/EB	143	179	201	234
2 RT Alloy	134	170	192	225
3 BT	147	183	205	238
4 Cover	111	147	169	204

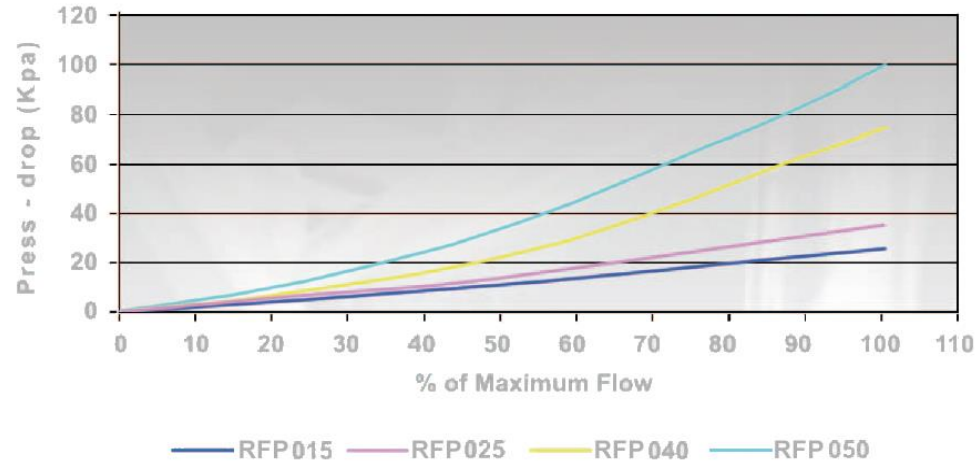
ØC	75	98	140	168
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Connections	A				ØC			
	RPF015	RPF025	RPF040	RPF050	RPF015	RPF025	RPF040	RPF050
ANSI 150 Flange	132	152	224	253	89	108	127	152
ANSI 300 Flange	145	170	239	268	95	124	156	165
DIN 16 Flange	140	165	235	258	95	115	150	165
DIN 40 Flange	144	173	253	270	95	115	150	165
BSP Screwed	100	117	175	202	-	-	-	-
NPT Screwed	100	117	175	202	-	-	-	-

All dimensions in millimetres ±2mm

PRESSURE DROP

RFP SERIES PRESSURE DROP CURVES @ 1cp VISCOSITY



METER SELECTION MATRIX AND ORDER CODE

RPF015	½"	DN15	Aluminium and Stainless Steel
RPF020P	¾"	DN20	UPVC only
RPF025	1"	DN25	Aluminium and Stainless Steel
RPF040	1 ½"	DN40	Aluminium and Stainless Steel
RPF050	2"	DN50	Aluminium and Stainless Steel
		Body material	
	A	Aluminium	
	S	316 Stainless Steel	
	H	High Pressure 316 stainless	
	P	UPVC (5 bar max, 40°C max)	
		Piston material	
		2	PEEK - optional in all meters - 150°C (300°F) max.
		3	PTFE - standard in all meters - 120°C max. (250°F)
		9	Special materials - eg. for 200°C (400°F)
		Partition material	
		1	Ceramic (or abrasive liquids)
		2	316 Stainless Steel (standard)
		O-ring materials	
		1	Viton (standard) -15~+200°C (-5~+400°F)
		2	Ethylene Propylene Rubber -150°C (300°F) max.
		3	Teflon encapsulated Viton -150°C (300°F) max.
		4	Buna-N (Nitrile) -65~+100°C (-53~+212°F)
		Temperature limits	
		- 1	60°C (140°F)
		- 2	120°C (250°F) - See note ¹
		- 3	150°C (300°F) - PEEK piston, NPN output
		- 4	40°C (100°F) - UPVC meters
		- 5	120°C (250°F) - See note ²
		- 6	200°C (400°F) - Coil output
		Process connections	
		1	BSP (RP) female threaded
		2	NPT female threaded
		3	Tri-clamp hygienic ferrules
		4	ANSI-150 RF flanges
		5	ANSI-300 RF flanges
		6	PN16 DIN flanges
		Cable entry	
		0	3~6mm cable gland (With B2 & B3 options)
		1	M20 x 1.5mm
		2	½" NPT



Order Code Example

RPF025	A	2	2	1	-	1	1	1	REG	Integral Options	
Glass Reinforced Nylon (GRN)										GR	GRN terminal cover
IEC. Ex & ATEX approved										SS	Stainless terminal cover
2 NPN open collector phase outputs										E1	Explosion proof ~ Exd
IEC. Ex & ATEX approved										QP	Quadrature pulse output
Accum. & reset totals, pulse output										Q1	Exd with Quadrature pulse
IEC. Ex & ATEX approved										B2	BT11 dual totaliser
flow rate, totals & all outputs										B3	Intrinsically Safe BT11 (I.S.)
IEC. Ex & ATEX approved										R2	RT12 Flow Rate Totaliser
Large backlit LCD digits										R3	Intrinsically safe RT12 (I.S.)
Adapts to pulse output board										R4	RT20 Flow Rate Totaliser
DC powered 2 stages batch controller										FI	Loop powered 4~20mA output
Consult factory										E0	EB10 batch controller
										SB	Specific build requirement



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