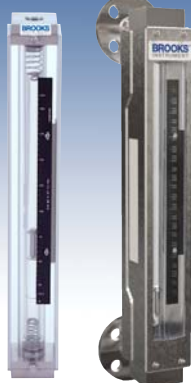


Data Sheet

GT130x Series Flowmeter Model 1307

Variable Area

*Model 1307
NPT,
Standard*



*Model 1307
Flanged,
FV Retrofit*

Glass Tube Variable Area, O-ring Seal Construction, Full-View® Replacement Flowmeters

Description

Model 1307 O-ring seal flowmeters are rugged, economical, accurate indicating flowmeters for liquids and gasses and can be a "drop-in" replacement for many Full-View® models.

Features

- Rugged side-plate construction - protects glass tube from piping stress and/or vibration
- O-ring seal - inlet and outlet same size - positive seal - easy to maintain
- Choice of float types and capacity ranges - broad range of flow rates
- Vertical or horizontal NPT/flanged connections - meter can be easily adapted to customer piping
- Model 1100 Series (Full-View) replacement

Product Specifications

Capacities and Pressure Drops	See Capacities Table
Pressure Ratings	Refer to Pressure/Temperature Ratings Tables
Flow Accuracy	Standard: $\pm 2\%$ Full Scale, Class 2.5 acc VDI/VDE Optional: $\pm 1\%$ Full Scale, Class 1.6 acc VDI/VDE
Repeatability	0.5% Full Scale
Scale Length	250mm
Scale Graduations	Direct reading, engraved detachable metal plate
Ambient Temperature Limits	33 to 125°F (1°C to 52°C)
Operating Fluid Temperature Limits	Refer to Pressure/Temperature Ratings Tables
Connections	Female NPT/150# flange - vertical or horizontal
Dimensions	See Dimension Figures
Materials of Construction	
Metering Tube	Borosilicate glass
Protective Tube Sleeve	UV stabilized polycarbonate
Window	Scratch resistant, UV stabilized polycarbonate (stainless steel frames standard with stainless steel side plates)
Floats & Float Stops	Glass, sapphire, 316 stainless steel or carbonyl / Teflon float stops all sizes
Housing	Aluminum, stainless steel side plates (stainless steel standard Full-View replacement)
End Fittings	Brass or 316 stainless steel
O-rings/Packing	Buna-N, Viton®-A fluoroelastomers, Kalrez® 4079 perfluoroelastomers (Sizes 8-10) Neoprene, Viton® or Teflon® packing (Sizes 2, 6)
Optional Equipment	Mountings: Brackets for front of panel

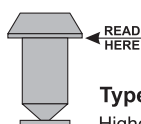
Product Specifications - Pressure and Temperature Ratings

Pressure Rating for Female Threaded 1307 Units					
Meter Size	Max. Operating Pressure		PED	Max. Operating Temperature	
	PSIG	Bar		°F	°C
#2	500	34.5	SEP	250	121
#6	450	31	SEP	250	121
#8	300	20.7	SEP	250	121
#9	175	12.1	SEP	250	121
#10	100	6.9	SEP	250	121

Pressure Rating for Female Threaded & Flanged (150#) 1307 Units With CRN Approval					
Meter Size	Max. Operating Pressure		PED	Max. Operating Temperature	
	PSIG	Bar		°F	°C
#2	217	15	SEP	250	121
#6	217	15	SEP	250	121
#8	94	6.5	SEP	250	121
#9	72	5	SEP	250	121
#10	72	5	SEP	250	121

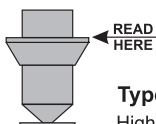
Pressure Rating for Flanged (150#) 1307 Units					
Meter Size	Max. Operating Pressure @ 70°F/21°C		PED	Max. Operating Pressure @ 250°F/121°C	
	PSIG	Bar		PSIG	Bar
#2	276	19	SEP	226	15.6
#6	276	19	SEP	226	15.6
#8	276	19	SEP	226	15.6
#9	175	12.1	SEP	175	12.1
#10	100	6.9	SEP	100	6.9

Float Types



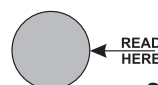
Type RV (rib guided)

Highest immunity to viscous fluids with medium meter capacity. (most stable)



Type RS (rib guided)

High flow capacity with some immunity to viscous fluids.



Spherical (Ball)

Lowest meter capacity or medium capacity with low viscosity fluids.

Product Specifications - Capacities

			Water ²		Presures Drop	V.I.C. ¹	Air ³		Presures Drop
Size	Tube	Float	cc/min	l/h	kPa / inch W.C.	cSt	slpm	nm3/h	kPa / inch W.C.
2	R-2-25-D	GLASS	5.6	0.33	0.08 / 0.3	1.0	0.36	0.02	0.08 / 0.3
		SAPPHIRE	10	0.61	0.1 / 0.4	1.0	0.5	0.028	0.11 / 0.4
		316SS	20	1.2	0.22 / 0.9	1.0	0.8	0.045	0.24 / 1.0
		CARBOLOY	32	1.9	0.38 / 1.5	1.0	1.2	0.067	0.42 / 1.7
2	R-2-25-B	GLASS	49	2.9	0.16 / 0.6	1.0	2.2	0.12	0.18 / 0.7
		SAPPHIRE	74	4.4	0.21 / 0.8	1.0	2.8	0.16	0.23 / 0.9
		316SS	120	7.4	0.45 / 1.8	1.0	4.3	0.24	0.51 / 2.0
		CARBOLOY	180	11	0.75 / 3.0	1.0	6.2	0.34	0.51 / 2.0
2	R-2-25-C	GLASS	82	4.9	0.28 / 1.1	1.0	3.7	0.21	0.34 / 1.4
		SAPPHIRE	120	7.5	0.41 / 1.7	1.0	4.9	0.27	0.51 / 2.0
		316SS	210	12	0.85 / 3.4	1.0	7.4	0.41	1.1 / 4.4
		CARBOLOY	320	19	1.51 / 6.1	1.0	10	0.58	1.2 / 4.8
6	R-6-25-B	GLASS	550	33	2.34 / 9.4	1.0	22	1.2	2.6 / 10.4
		SAPPHIRE	810	49	3.7 / 14.9	1.0	28	1.6	4.1 / 16.5
		316SS	1300	78	7.5 / 30.1	1.0	42	2.3	8.3 / 33
		CARBOLOY	1800	110	14.4 / 57.8	1.0	58	3.2	16 / 64
Size	Tube	Float	GPM	l/m	kPa / inch W.C.	cSt	scfm	slpm	kPa / inch W.C.
8	R-8M-25-4F	8-RV-3	0.78	2.9	0.1 / 4.0	2.0	3.17	89.8	0.1 / 4.0
		8-RV-8	1.0	4.1	1.7 / 7.0	3.7	4.4	126	2.0 / 8.0
		8-RS-8	1.4	5.3	2.5 / 10	1.80	5.8	166	2.7 / 11.0
		8-RV-14	1.4	5.4	3.0 / 12	5.4	5.8	166	3.5 / 14
		8-RS-14	1.8	6.9	4.2 / 17	1.9	7.5	214	4.7 / 19
		8-RV-31*	2	7.8	5.7 / 23	7	8.3	235	7.0 / 28
		8-RS-31*	2.5	9.8	8.2 / 33	3.1	10	301	9.2 / 37
9	R-9M-25-3F	9-RV-33	2.5	9.5	1.5 / 6.0	11.0	10	295	1.7 / 7.0
		9-RS-33	3.2	12	1.7 / 7.0	2.4	13	380	2.0 / 8.0
		9-RV-87*	3.9	14	3.5 / 14	17.0	16	460	4.0 / 16
		9-RS-87*	5.1	19	4.2 / 17	3.5	21	600	5.0 / 20
10	R-10M-25-3F	10-RV-64	6.2	23	2.7 / 11	15.0	25	7129	3.2 / 13
		10-RS-64	7.8	29	3.7 / 15	3.7	32	910	4.2 / 17
		10-RS-138*	10	41	7.2 / 29	5.5	45	1299	8.2 / 33

* These floats require a back pressure of 30 psig / 2 bar

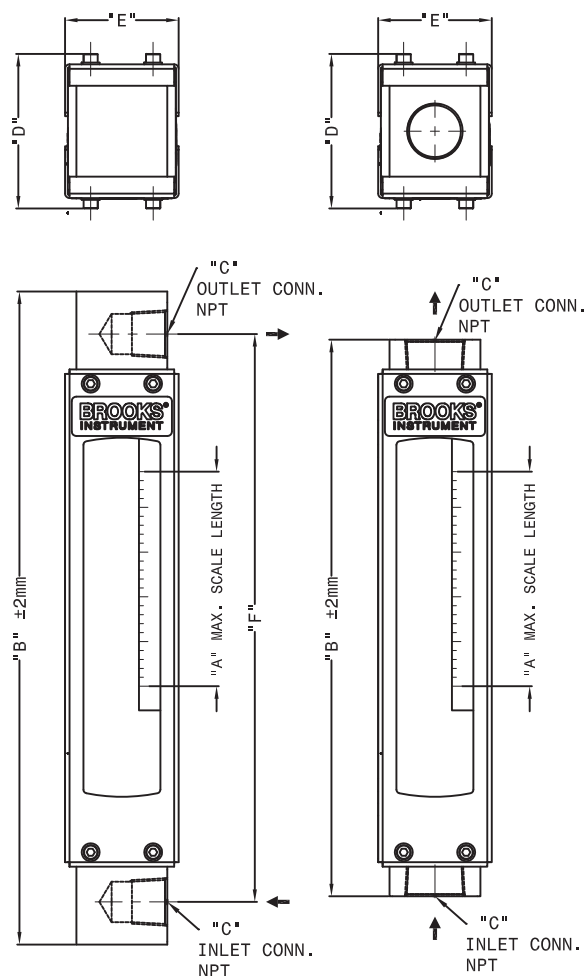
¹ Viscosity Immunity Ceiling

² Water flows @ 20°C

³ Air flows in scfm or slpm are @ 70°F & 14.7 psia

³ Air flows in mn 3/h (0°C&1.013bar(a)) measured @ 20°C & 1.013bar(a)

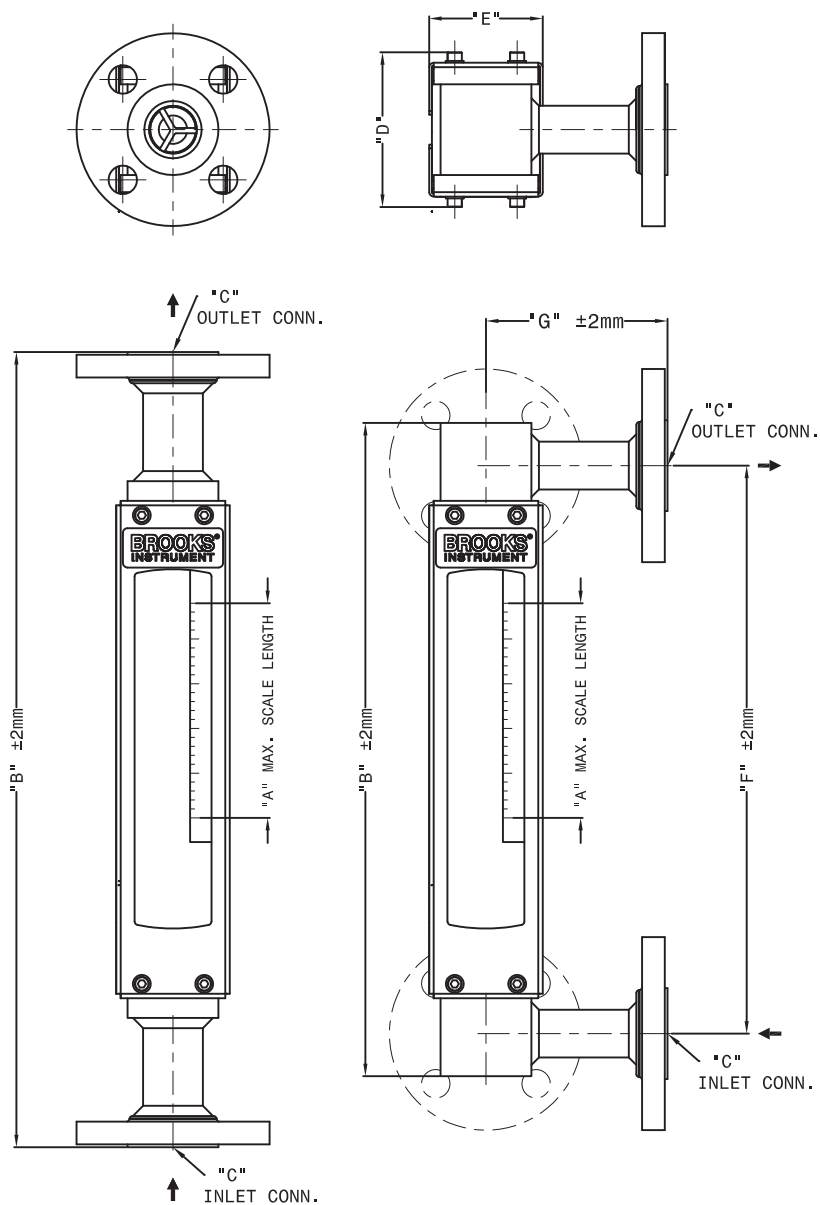
Product Dimensions - NPT Connections



MODEL GT 1307 WITH NPT CONNECTION

METER SIZE	REPLACEMENT OF	A	B	C	D	E	F
SIZE 2/6	-	250	371	1/4"	69	54	-
	1110	250	371	1/4"	80	58	345
	1114	250	371	1/4"	80	58	-
SIZE 8	-	250	430	1/2"	87	64	-
	1110	250	456	1/2"	87	64	419
	1114	250	432	1/2"	87	64	-
SIZE 9	-	250	430	3/4"	87	64	-
	1110	250	497	3/4"	87	64	445
	1114	250	438	3/4"	87	64	-
SIZE 10	-	250	430	1"	87	64	-
	1110	250	497	1"	87	64	445
	1114	250	438	1"	87	64	-

Product Dimensions - Flanged Connections



MODEL GT 1307 WITH FLANGED CONNECTION

METER SIZE	REPLACE- MENT OF	A	B	C	D	E	F	G
SIZE 2/6	1140	250	371	1/2" - 150LBS	80	58	345	89
	1144	250	505	1/2" - 150LBS	80	58	-	-
SIZE 8	1140	250	456	1/2" - 150LBS	87	64	419	89
	1144	250	581	1/2" - 150LBS	87	64	-	-
SIZE 9	1140	250	497	1" - 150LBS	87	64	445	102
	1144	250	578	1" - 150LBS	87	64	-	-
SIZE 10	1140	250	497	1" - 150LBS	87	64	445	102
	1144	250	572	1" - 150LBS	87	64	-	-

Model Code

Code Description Code Option Option Description

I-V Base Model Numbers	1307F	O-ring Seal Flowmeter, scale length 250mm				
VI-VII Tube Designator		Meter size	Tube Number			
	C1	2	R-2-25-D			
	C2	2	R-2-25-B			
	C3	2	R-2-25-C			
	G1	6	R-6-25-B			
	J2	8	R-8M-25-4F			
	K1	9	R-9M-25-3F			
	L2	10	R-10M-25-3F			
	C4	2 w/CRN	R-2-25-D			
	C5	2 w/CRN	R-2-25-B			
	C6	2 w/CRN	R-2-25-C			
	G4	6 w/CRN	R-6-25-B			
	J4	8 w/CRN	R-8M-25-4F			
	K4	9 w/CRN	R-9M-25-3F			
	L4	10 w/CRN	R-10M-25-3F			
VIII Float Designator		Size 2	Size 6	Size 8	Size 9	Size 10
	1	316SS	316SS	8-RV-3	9-RV-33	10-RV-64
	2	Glass	Glass	8-RV-8	9-RS33	10-RS-64
	3	Sapphire	Sapphire	8-RS-8	9-RV-87	-
	4	Carboloy	Carboloy	8-RV-14	9-RS-87	10-RS-138
	5	-	-	8-RS-14	-	-
	6	-	-	8-RV-31	-	-
	7	-	-	8-RS-31	-	-
IX Float Material	C	316 stainless steel				
	D	Glass				
	E	Sapphire				
	F	Carboloy				
X-XI Scale	D2	% of Max. Flow (LIQUID) detachable				
	E2	% of Max. Flow (GAS) detachable				
	J1	GPM WATER SP. GR. 1.0, VISC 1.0 CP detachable				
	K1	LPM WATER SP. GR. 1.0, VISC 1.0 CP detachable				
	L1	SCFM AIR @ STP detachable				
	M1	Special inscription (special calibration not required) detachable				
	Q1	Special calibration with scale 2% F.S. (GAS) detachable				
	Q3	Special calibration with scale 2% F.S. (LIQUID) detachable				
	R1	Special calibration with scale 1% F.S. (GAS) detachable				
	R2	Special calibration with scale 1% F.S. (LIQUID) detachable				

Model Code continued on next page.

Sample Standard Model Code

I-V	VI-VII	VIII	IX	X-XI	XII	XIII
1307F	J2	2	C	A1		

Model 1307 - Meter Weight: (Lbs./kg)

Meter Size	Connection Type	
	NPT/RC	Flanged (150#)
#2/6	6.82 Lbs / 3.1 kg	9.04 Lbs / 4.1 kg
#8/10	9.48 Lbs / 4.3 kg	11.68 Lbs / 5.3 kg

Model Code (continued)

Code Description	Code Option	Option Description							
XII Materials of Construction		Meter Type	Fitting	O-ring (Sz 8-10)	Packing (Sz 2-6)	Side Plates	Conn	In	Out
	A	Std	Brass	Buna	Neoprene	Aluminum	NPT	Vertical	Vertical
	B	Std	316SS	Viton	Viton	Aluminum	NPT	Vertical	Vertical
	C	Std	316SS	Viton	Viton	Stainless Steel	NPT	Vertical	Vertical
	D	Std	316SS	Buna	Neoprene	Aluminum	NPT	Vertical	Vertical
	E	Std	Brass	Viton	Viton	Aluminum	NPT	Vertical	Vertical
	F	Std	316SS	Kalrez	Teflon	Aluminum	NPT	Vertical	Vertical
	G	Std	316SS	Kalrez	Teflon	Stainless Steel	NPT	Vertical	Vertical
	H	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	NPT	Horizontal	Horizontal
	J	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	NPT	Vertical	Vertical
	K	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	NPT	Horizontal	Vertical
	L	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	NPT	Vertical	Horizontal
	M	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	Flanged	Horizontal	Horizontal
	N	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	Flanged	Vertical	Vertical
	P	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	Flanged	Horizontal	Vertical
	Q	FV retrofit	316SS	Buna	Neoprene	Stainless Steel Rugged	Flanged	Vertical	Horizontal
	R	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	NPT	Horizontal	Horizontal
	S	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	NPT	Vertical	Vertical
	T	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	NPT	Horizontal	Vertical
	U	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	NPT	Vertical	Horizontal
	V	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	Flanged	Horizontal	Horizontal
	W	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	Flanged	Vertical	Vertical
	X	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	Flanged	Horizontal	Vertical
	Y	FV retrofit	316SS	Viton	Viton	Stainless Steel Rugged	Flanged	Vertical	Horizontal
	Z	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	NPT	Horizontal	Horizontal
	1	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	NPT	Vertical	Vertical
	2	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	NPT	Horizontal	Vertical
	3	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	NPT	Vertical	Horizontal
	4	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	Flanged	Horizontal	Horizontal
	5	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	Flanged	Vertical	Vertical
	6	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	Flanged	Horizontal	Vertical
	7	FV retrofit	316SS	Kalrez	Teflon	Stainless Steel Rugged	Flanged	Vertical	Horizontal
XIII Accessories	A	None							
	B	Inlet/Outlet left or right							
	C	Dual Scales							
	D	Inlet/Outlet left or right & Dual Scales							
	E	Dual Scales and front of panel mounting screws							
	F	Front of panel mounting screws							
	G	Inlet/Outlet left or right & Dual Scales & front of panel mounting screws							

Sample Standard Model Code

I-V	VI-VII	VIII	IX	X-XI	XII	XIII
1307F	J2	2	C	A1	A	A

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