

Data Sheet

GT130x Series Flowmeter Model 1306

Variable Area

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

Description

Model 1306 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	150mm
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, Rc/150# flange - vertical or horizontal
Dimensions	See Dimensions Figure
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 7-10); Neoprene, Viton® or Teflon® packing (Sizes 2-6)
Optional Equipment	Mountings: Brackets for flush or front of panel
	Valves: Available for connection sizes 1/2" through 1" only. Piped in outlet or inlet

Product Specifications - Capacities

Size	Tube	Float	Model Code	Water ²		Pressure Drop		V.I.C. ¹		Air ³		Pressure Drop	
				cc/min	l/h	kPa / inch W.C.	cSt	slpm	nm3/h	kPa / inch W.C.	cSt	slpm	nm3/h
2	R-2-15-AAAA	316SS	BA	2.5	0.15	0.17 / 0.7	1.0	0.15	0.0087	0.19 / 0.8			
		GLASS	BB	0.57	0.034	0.08 / 0.3	1.0	0.05	0.0028	0.08 / 0.3			
		SAPPHIRE	BC	1.1	0.067	0.09 / 0.4	1.0	0.079	0.0044	0.1 / 0.4			
		CARBOLOY	BD	5	0.3	0.27 / 1.1	1.0	0.28	0.015	0.3 / 1.2			
2	R-2-15-D	316SS	BE	20	1.2	0.22 / 0.9	1.0	0.82	0.046	0.24 / 1.0			
		GLASS	BF	5.5	0.33	0.08 / 0.3	1.0	0.36	0.021	0.08 / 0.3			
		SAPPHIRE	BG	10	0.63	0.1 / 0.4	1.0	0.51	0.028	0.11 / 0.4			
		CARBOLOY	BH	33	1.9	0.38 / 1.5	1.0	1.2	0.068	0.42 / 1.7			
2	R-2-15-B	316SS	BJ	130	8	0.45 / 1.8	1.0	4.6	0.26	0.51 / 2.0			
		GLASS	BK	53	3.1	0.16 / 0.6	1.0	2.3	0.13	0.18 / 0.7			
		SAPPHIRE	BL	79	4.7	0.21 / 0.8	1.0	3	0.17	0.23 / 0.9			
		CARBOLOY	BM	200	12	0.75 / 3.0	1.0	6.6	0.37	0.51 / 2.0			
2	R-2-15-C	316SS	BN	210	13	0.85 / 3.4	1.0	7.5	0.42	1.1 / 4.4			
		GLASS	BP	84	5	0.28 / 1.1	1.0	3.8	0.21	0.34 / 1.4			
		SAPPHIRE	BQ	120	7.7	0.41 / 1.7	1.0	5	0.28	0.51 / 2.0			
		CARBOLOY	BR	320	19	1.51 / 6.1	1.0	10	0.59	1.2 / 4.8			
6	R-6-15-A	316SS	CA	490	29	1.53 / 6.1	1.0	16	0.92	1.7 / 6.8			
		GLASS	CB	200	12	0.45 / 1.8	1.0	8.7	0.48	0.5 / 2.0			
		SAPPHIRE	CC	290	17	0.72 / 2.9	1.0	11	0.62	0.8 / 3.2			
		CARBOLOY	CD	720	43	2.61 / 10.5	1.0	23	1.2	2.9 / 11.6			
6	R-6-15-B	316SS	CE	1300	81	7.5 / 30.1	1.0	43	2.4	8.3 / 33			
		GLASS	CF	570	34	2.34 / 9.4	1.0	23	1.3	2.6 / 10.4			
		SAPPHIRE	CG	840	50	3.7 / 14.9	1.0	30	1.6	4.1 / 16.5			
		CARBOLOY	CH	1900	110	14.4 / 57.8	1.0	61	3.4	16 / 64			
Size	Tube	Float	Model Code	l/h	gph	kPa / inch W.C.	cSt	scfm	nm3/h	kPa / inch W.C.	cSt	scfm	nm3/h
7	R-7M-127-1F	Glass	A1	24	6.40	0.25/1.0	1	0.72	1.1	0.25/1.0			
		316 SS	A3	73	19	0.75/3.0	1	1.3	2.1	0.75/3.0			
8	R-8M-127-4F	8-RV-3	DB	160	43	0.5/2.0	3	2.8	4.4	0.75/3.0			
		8-RV-8	DC	220	59	1.25/5.0	4	4	6.4	1.5/6.0			
		8-RS-8	DD	290	79	2/8.0	2	5.2	8.3	2/8.0			
		8-RV-14	DE	300	81	2/8.0	7	5.3	8.4	2.5/10.0			
		8-RS-14	DF	380	100	3/12.0	3	6.7	10	3.25/13.0			
		8-RV-31*	DG	400	100	6/24.0	7	6.8	10	7/28.0			
		8-RS-31*	DH	500	130	8.25/33.0	3	8.4	13	9.25/37.0			
10	R-10M-127-3F	10-RV-15	GA	610	160	0.5/2.0	12	11	17	0.5/2.0			
		10-RV-30	GB	830	220	1/4.0	13	15	23	1/4.0			
		10-RV-64	GC	1300	360	2.25/9.0	20	24	38	2.5/10.0			
		10-RS-64	GD	1700	450	3/12.0	5	30	48	3.25/13.0			
		10-RS-138*	GF	2200	590	7.25/29.0	5	39	61	8.25/33.0			

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

Product Specifications - Pressure and Temperature Ratings

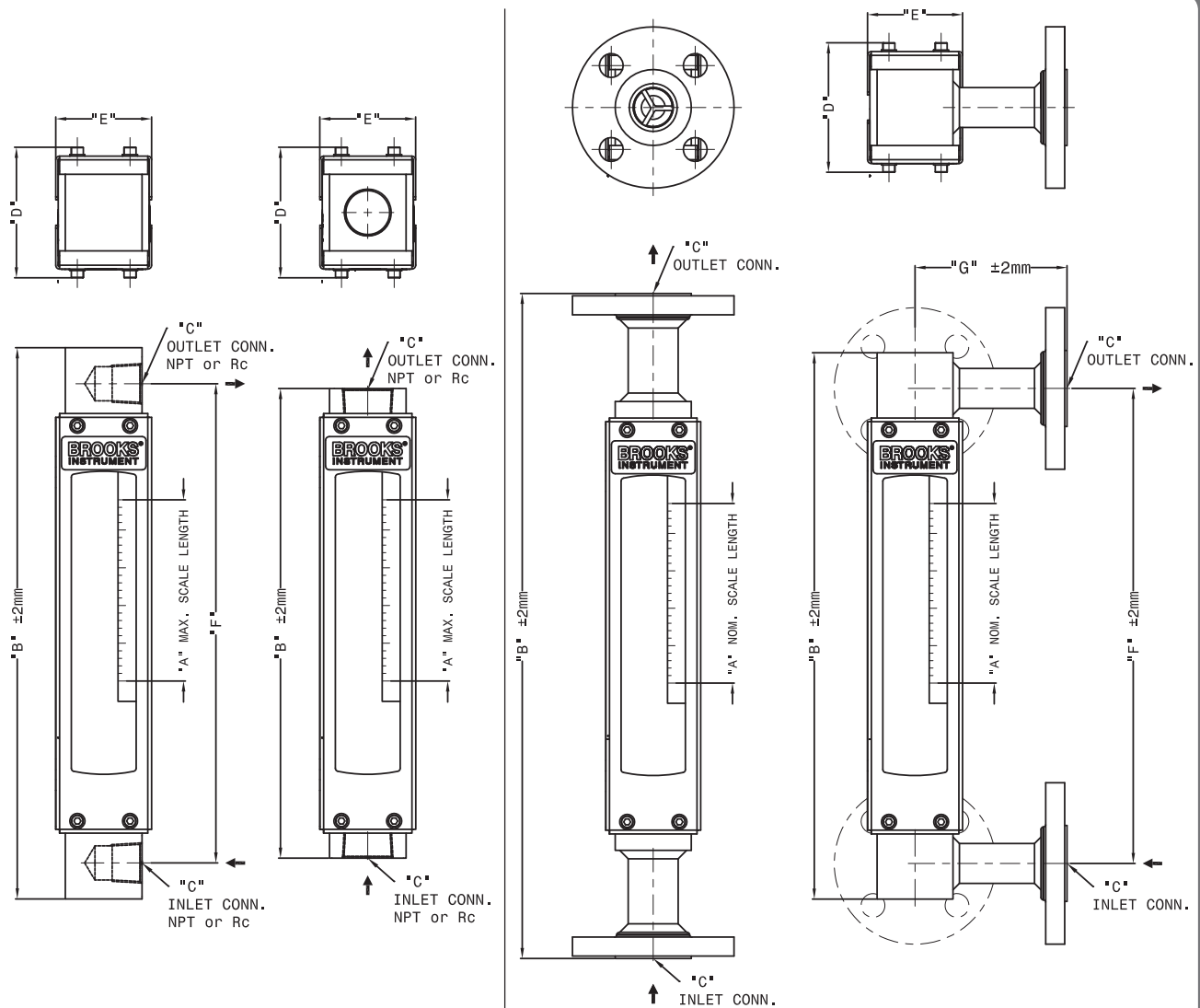
Pressure Rating for Female Threaded 1306 Units					
Meter Size	Max. Operating Pressure		PED	Max. Operating Temperature	
	PSIG	Bar		°F	°C
#2	500	34.5	SEP	250	121
#6	450	31	SEP	250	121
#7	350	24	SEP	250	121
#8	300	20.7	SEP	250	121
#9/10	100	6.9	SEP	250	121

(Values apply to unit with valve - sizes 7-10)

Pressure Rating for Female Threaded & Flanged (150#) 1306 Units With CRN Approval					
Meter Size	Max. Operating Pressure		PED	Max. Operating Temperature	
	PSIG	Bar		°F	°C
#2	217	15	SEP	250	121
#6	145	10	SEP	250	121
#7	152	10.5	SEP	250	121
#8	116	8	SEP	250	121
#9/10	80	5.5	SEP	250	121

Pressure Rating for Flanged (150#) 1306 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
#7	276	19	SEP	226	15.6
#8	276	19	SEP	226	15.6
#9/10	100	6.9	SEP	100	6.9

Product Dimensions



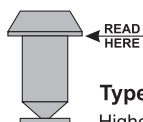
MODEL GT 1306 WITH NPT or Rc CONNECTION

METER SIZE	REPLACE- MENT OF	A	B	C	D	E	F
SIZE 2/6 (NPT ONLY)	-	150	245	1/4"	69	54	-
	1110	150	245	1/4"	80	58	218
	1114	150	245	1/4"	80	58	-
SIZE 7	-	150	299	1/2"	87	64	-
	-	150	299	1/2"	87	64	-
SIZE 8	1110	150	333	1/2"	87	64	292
	1114	150	305	1/2"	87	64	-
	-	150	300	1"	87	64	-
SIZE 9	1110	150	365	3/4"	87	64	318
	1114	150	311	3/4"	87	64	-
	-	150	300	1"	87	64	-
SIZE 10	1110	150	365	3/4"	87	64	318
	1114	150	311	1"	87	64	-

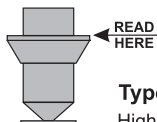
MODEL GT 1306 WITH FLANGED CONNECTION

METER SIZE	REPLACE- MENT OF	A	B	C	D	E	F	G
SIZE 2/6	1140	150	245	1/2"-150LBS	80	58	218	89
	1144	150	378	1/2"-150LBS	80	58	-	-
SIZE 8	1140	150	333	1/2"-150LBS	87	64	292	89
	1144	150	454	1/2"-150LBS	87	64	-	-
SIZE 9	1140	150	365	1"-150LBS	87	64	318	102
	1144	150	451	1"-150LBS	87	64	-	-
SIZE 10	1140	150	365	1"-150LBS	87	64	318	102
	1144	150	445	1"-150LBS	87	64	-	-

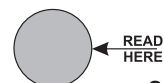
Float Types



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.

Model Code

Code Description		Code Option	Option Description			
I-V	Base Model Number	1306B	O-ring seal flowmeter, scale length 150mm			
VI-VII	Tube & Float Designator	**	To be selected from the flow range/capacities table			
VIII	Fitting Material	1	Brass			
		2	316 Stainless Steel			
		3	316 Stainless Steel FV retrofit (Size 2, 6, 8, 10 retrofit)			
		4	316 Stainless Steel FV retrofit (Size 9 retrofit)			
		5	Brass w/CRN			
		6	316 Stainless Steel w/CRN			
		7	316 SS w/CRN FV retrofit (Size 2, 6, 8, 10 retrofit)			
		8	316 SS w/CRN FV retrofit (Size 9 retrofit)			
IX	O-ring Material	1	Viton			
		2	Buna			
		3	Kalrez			
		4	Neoprene			
		5	Teflon			
X	Connection Type		Meter Type	Conn.	In	Out
		1	Std	NPT	Vertical	Vertical
		2	Std	Rc	Vertical	Vertical
		A	FV Retrofit Only	NPT	Horizontal	Horizontal
		B	FV Retrofit Only	NPT	Vertical	Vertical
		C	FV Retrofit Only	NPT	Horizontal	Vertical
		D	FV Retrofit Only	NPT	Vertical	Horizontal
		E	FV Retrofit Only	Flanged	Horizontal	Horizontal
		F	FV Retrofit Only	Flanged	Vertical	Vertical
XI	Scale Type	C	DR Scale mm, Class 2.5/2% FS			
		D	DR Scale mm, Class 1.6/1% FS			
		G	DR Scale + factor, Class 2.5/2% FS			
		H	DR Scale + factor, Class 1.6/1% FS			
		L	DR Scale, Class 2.5/2% FS			
		M	DR Scale, Class 1.6/1% FS			
		N	DR Scale, Class 2.5/2% FS Dual Scales			
		P	DR Scale, Class 1.6/1% FS Dual Scales			
XII	Panel Mounting	0	None			
		1	Front panel mounting			
		2	Flush panel mounting			
XIII	Valve	0	None			
		B	1/2" 316 Stainless Steel needle valve on inlet			
		D	1" 316 Stainless Steel needle valve on inlet			
		F	1/2" 316 Stainless Steel needle valve on outlet			
		H	1" 316 Stainless Steel needle valve on outlet			

Sample Standard Model Code

I-V	VI-VII	VIII	IX	X	XI	XII	XIII
1306B	A1	1	1	1	A	1	B



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TRADEMARKS

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Model 1306 - Meter Weight: (Lbs./kg)

Meter Size	Connection Type		
	NPT/RC	NPT With Valve	Flanged (150#)
#2/6	5.51 Lbs / 2.5 kg	N/A	7.72 Lbs / 3.5 kg
#7/8	7.72 Lbs / 3.5 kg	8.82 Lbs / 4.0 kg	9.92 Lbs / 4.5 kg
#9/10	9.26 Lbs / 4.2 kg	11.46 Lbs / 5.2 kg	13.45 Lbs / 6.1 kg



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