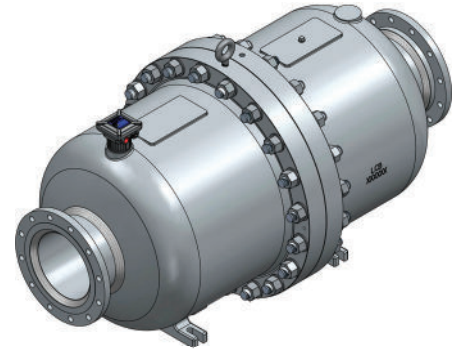


Technical Data

BiRotor Plus Positive Displacement Meter



E2 Series [10", 12"] Custody Transfer Pipeline Meter

General

The Brodie E2 Series BiRotor Plus positive displacement flow meter, with dual helical rotors, offers unsurpassed performance in custody transfer applications.

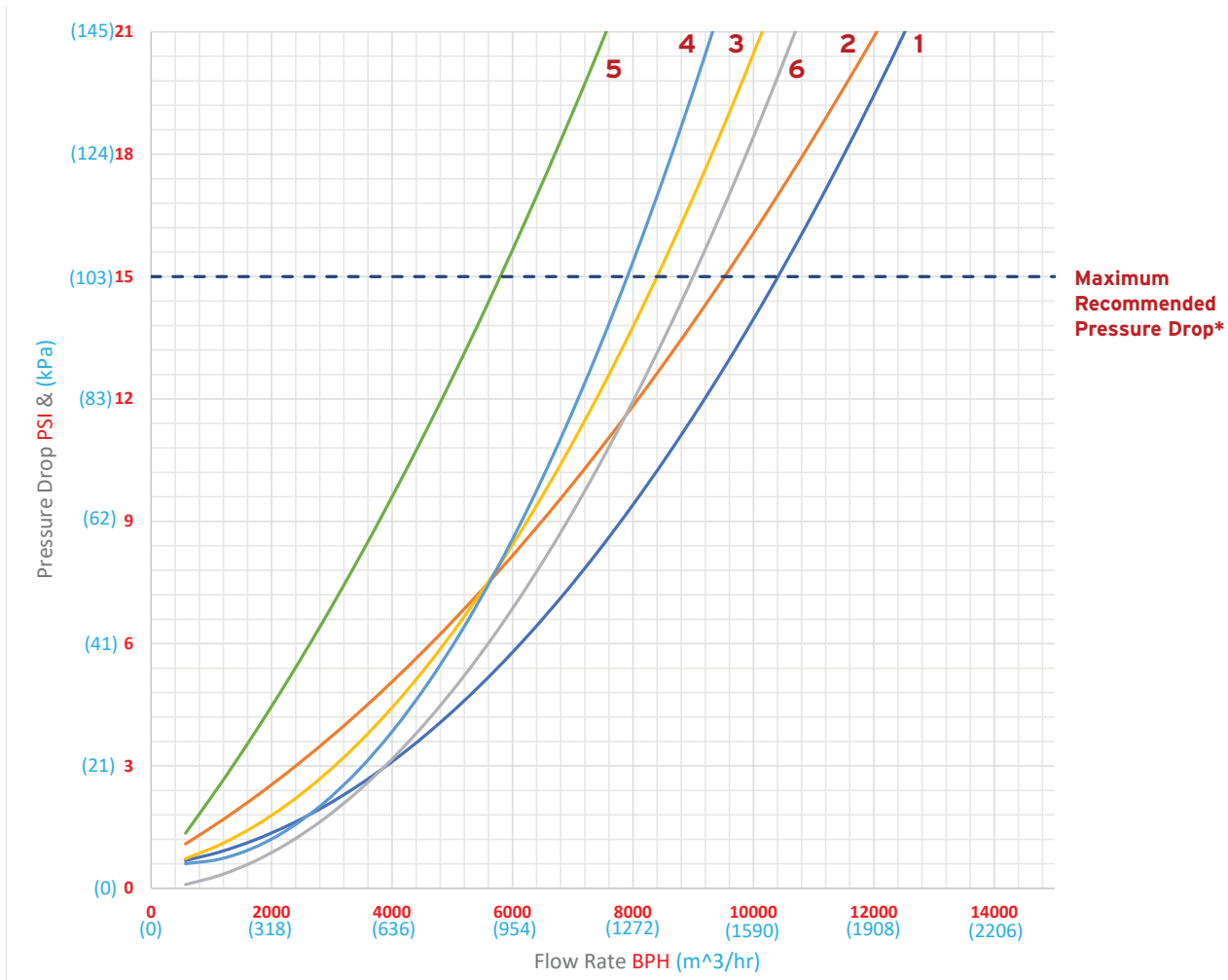
BiRotor Plus meters are the pre-eminent choice in liquid hydrocarbon service, from low viscosity liquids to heavy crude oil applications in pipeline, marine, blending, batching and leak detection with flow rates up to 7,865 BPH (1,250 M3/hr).

The double-case design combines the rugged durability and long service life of traditional BiRotor meters with the enhanced accuracy and consistent pulse output demanded by today's industry requirements.

The best-in-class BiRotor Plus meter is proven in demanding applications such as paraffin-rich crude oil extraction and refined product pipelines where DRA (Drag Reducing Agents) are present, providing excellent performance while solving end-user challenges where other measurement technologies have failed to produce long-term success.

Linearity	+/- 0.15%	Approvals
Repeatability	0.02%	OIML R117-1 / MID [Class 0.3] CE Mark ATEX & IECEx CSA [United States and Canada] NEMA 4X / IP65
Viscosity Range	0.2 - 1000 cP	Maximum Flow
Operating Temperature	STD: -20°F to 167°F [-29°C to 75°C] Low: -40°F to 167°F [-40°C to 75°C] High: 14°F to 230°F [-10°C to 110°C]	E2 B35x (10" connections) 5820 BPH [925 M3/HR] E2 B36x (12" connections) 7865 BPH [1250 M3/HR]
Ambient Temperature	-40°F to 140°F [-40°C to 60°C]	Maximum Working Pressures @ 100°F / 38°C
		ANSI 150#: 285 PSIG [1965 kPa] ANSI 300#: 740 PSIG [5102 kPa] ANSI 600#: 1480 PSIG [10204 kPa]
		Nominal K-Factor
		+/- 10% 579 PUL/BBL [3,642 PUL/M3]

E Series Pressure Drop



*NOTE: Based upon process conditions

Liquid	Product	Density kg/m ³	Specific Gravity	Viscosity cSt
1	Gasoline	742.85	0.74	0.62
2	Kerosene	804.47	0.80	1.56
3	Heating Oil	850.84	0.85	4.33
4	Light Crude	910.70	.91	23.40
5	Heavy Oil	961.69	0.96	373.00
6	Mineral Spirits	781.18	0.78	2.15

Materials Housing

Meter Housing: ASTM A352 LCB
 Connection Flanges: ASTM A 105 Carbon Steel or ASTM A 350 LF2
 Sensor Housing: ASTM A 479
 304 Stainless Steel

Materials Measuring Unit

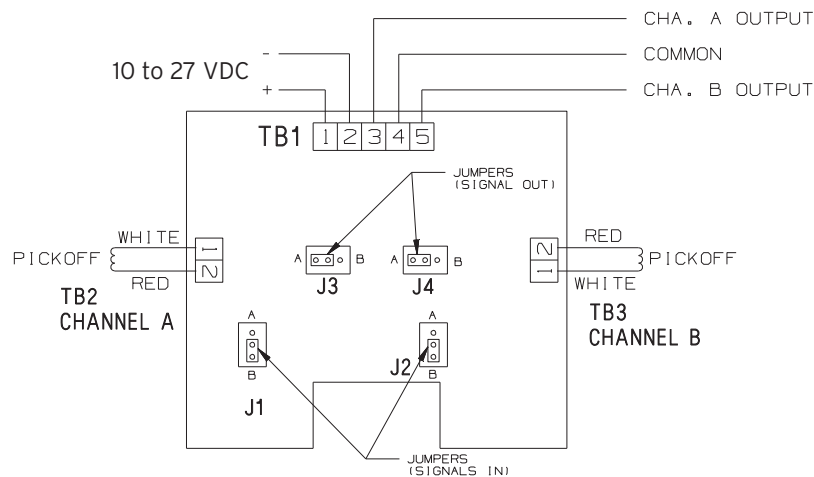
End Plates and Body: A 356 T6 Cast Aluminium
 Rotors: ALCO 319 Cast Aluminium Hard Coat anodized
 Rotor Shafts: 17-4 PH Stainless Steel
 Timing Gears: 17-4 PH Stainless Steel (Heat Treated)
 Bearings: Stainless Steel
 Elastomers: Low Swell Nitrile, Viton®, or Fluorosilicon are standard
 UMB Housing: A356 T6 Cast Aluminium [non wetted component]

Preamplifier

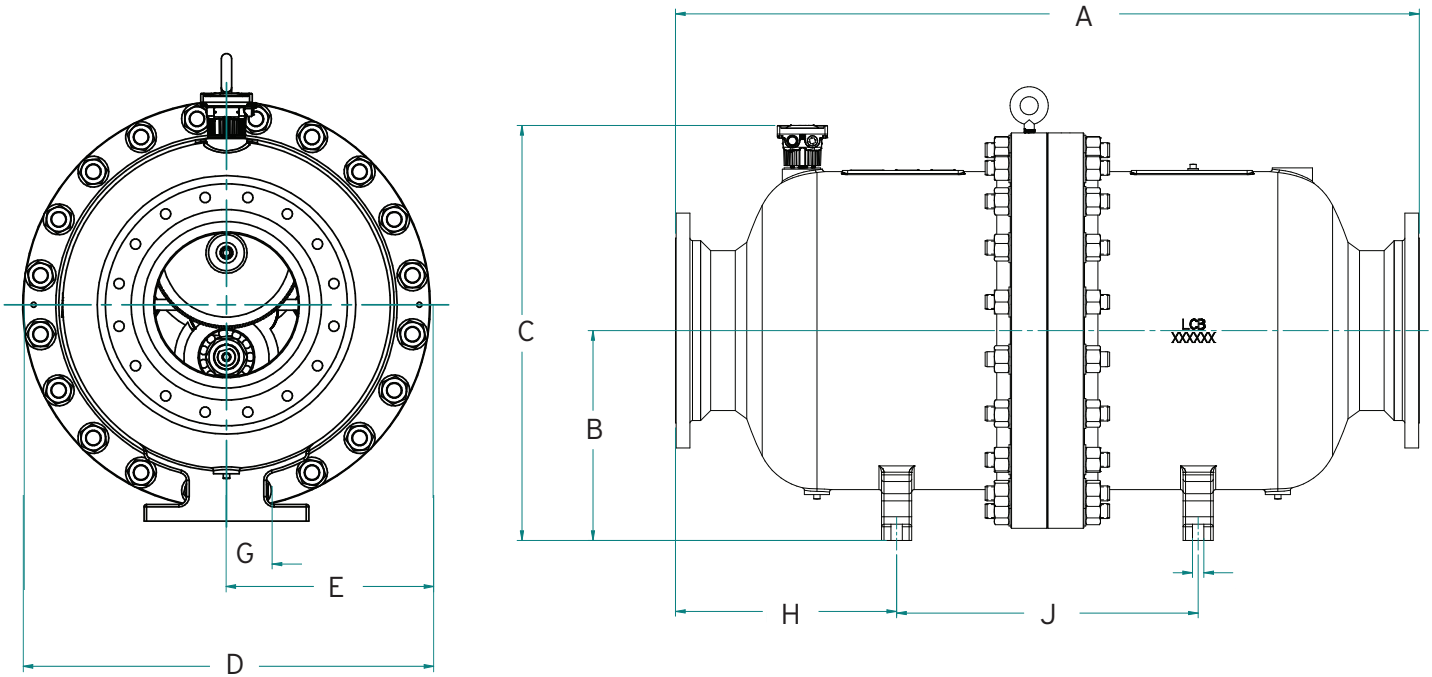
Supply voltage:	10 to 27 VDC	Variable voltage pulses:	0 to supply voltage less 5%
Outputs (jumper selectable):	square wave 0 to 5 KHz		70 mA max
5 V powered pulse:	0 - 5 VDC, 20 mA max		

Wiring Connections

DUAL CHANNEL PREAMP JUMPER LOCATIONS
 (FACTORY SETTINGS SHOWN)



Dimensions



ANSI	Flange Size	Unit	A	B	C	D	E	G	H	J	Meter Weight
150	10"	inch	60	17 1/2	34 13/16	33	16 1/2	3	16 3/4	26 1/2	2766 lbs
		mm	1524	444	884	838	419	76	425	64	1255 kgs
300	10"	inch	60	17 1/2	34 13/16	33	16 1/2	3	16 3/4	26 1/2	5700 lbs
		mm	1524	444	884	838	419	76	425	64	1289 kgs
600	10"	inch	70	20 1/2	38 1/2	37 7/8	18 15/16	4	17 15/16	34 1/8	9276 lbs
		mm	1778	521	978	962	481	102	456	867	4203 kgs
150	12"	inch	61	17 1/2	34 13/16	33	16 1/2	3	17 1/4	26 1/2	2793 lbs
		mm	1549	444	884	838	419	76	438	64	1266 kgs
300	12"	inch	61	17 1/2	34 13/16	33	16 1/2	3	17 1/4	26 1/2	2855 lbs
		mm	1549	444	884	838	419	76	438	64	1295 kgs
600	12"	inch	70	20 1/2	38 1/2	37 7/8	18 15/16	4	17 15/16	34 1/8	9333 lbs
		mm	1778	521	978	962	481	102	456	867	4423 kgs

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