

IE BiRotor Flowmeters

POSITIVE DISPLACEMENT METERS

Description

IE BiRotor Meter is a positive displacement meter utilized in the most demanding applications requiring accuracy, long life and ruggedness.. ACCURACY is attained by the unique BiRotor design, which features two finely balanced rotors. An adjustor, incorporated on the meter, is calibrated at the factory for maximum accuracy within the meters flow range. LONG LIFE is assured because the meter does not contain any oscillating, reciprocating, sliding parts or cranks to wear or disturb the balanced rotary action. In addition, the materials incorporated within the meter assembly were selected specifically for the wide range of petroleum and industrial products to be exposed to the meter assembly. RUGGEDNESS is provided in the double case housing fabricated from steel castings and drawn steel plates. This protects the meter from adverse forces, such as pipe strain, vibration or external damage which the meter can be exposed to.



IE BIROTOR FLOWMETERS

Principle Of Operation

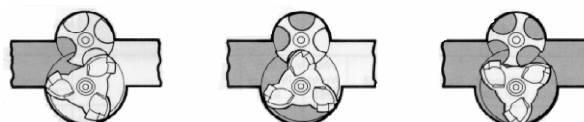
The two aluminium spiral fluted rotors within the measuring chamber are dynamically balanced, but hydraulically unbalanced. (Refer to Figure 1). As the product enters the intake of the measuring unit chamber, the two rotors divide the product into precise segments of volume momentarily and then return these segments to the outlet of the measuring unit chamber. During this "liquid transition", the rotation of the two rotors is directly proportional to the flow rate of liquid thruput. A gear train located outside the measuring unit chamber conveys mechanical rotation of the rotors to a mechanical or electronic register for totalization of the liquid thruput.

Design Features

- Mounting can be either vertically or horizontally
- Applicable to either pump or gravity flow applications
- Calibration can be easily achieved while the meter is under pressure and with no loss of liquid product
- Conforms with international standards of flowmeter accuracy

Accessories

- The wide range of accessories such as preset counters, pulse transmitters, control valves and strainers enable the meter assembly to be adapted to a wide range of liquid measurement or control systems



	MODEL NO	DATA SHEET NO.	APPLICATIONS	MAXIMUM CAPACITY				
				US gpm	Imp gpm	bph	lit/ min	Cu mtrs/hr
GROUP 1	BA-31	(S)DS-T.T (OIL)	Industrial products and pump-operated tank trucks metering petroleum products	60	50	--	227	--
	B-31T			60	50	--	227	--
	BI-42			100	83	--	378	--
	BI-42T			100	83	--	378	--
	BI-52			150	125	--	570	--
GROUP 2	BA-33	(S)DS-T.T (LPG)	1) Industrial Products and pump-operated tank trucks metering LPG	60	50	--	227	--
	BA-33T			60	50	--	227	--
	BI-43		2) Chemical and industrial liquids	100	83	--	378	--
	BI-43T			100	83	--	378	--
GROUP 3	B-40DB	(S)DS-(B-40DB)	Small custody transfer crude and refined petroleum and Industrial products	100	83	143	378	23
	B-50DB			150	125	214	568	34
GROUP 4	B-43	M1043-10	Chemical, industrial liquids and petroleum products	80	67	115	300	18
	B-43H			80	67	115	300	18
				80	67	115	300	18
	B-53			120	100	170	450	27
	B-53H			120	100	170	450	27
				120	100	170	450	27
GROUP 5	B-54	M1043-10	Small pipelines LACT units	120	100	170	450	27
	B-55			120	100	170	450	27
GROUP 6	B-60CB	(S)DS-(B-60CB)	Tank truck fuel oil pump operational gravity operational	300	250	428	1135	68
	B-61CB			250	210	357	950	57
				150	125	214	570	34
	B-61CB-1			250	210	357	950	57
GROUP 7	B-62DB	M1062-10	Loading racks, Chemical and industrial liquids	250	208	357	946	57
	B-72DB			425	354	607	1609	97
	B-82DB			600	500	857	2271	136
	B-92DEB			1000	833	1429	3785	227
	BA-89	(S)DS-(BA-89)	Axial Design	1000	833	1429	3785	227
GROUP 8	B-63DEB	(S)-(B-63DEB)	High pressure metering, Refinery and pipeline.	250	208	357	946	57
	B-64DEB			250	208	357	946	57
	B-65DEB			250	208	357	946	57
	B-73DEB			425	354	607	1609	97
	B-74DEB			425	354	607	1609	97
	B-75DEB			425	354	607	1609	97
	B-83DEB			600	500	857	2271	136
	B-84DEB			600	500	857	2271	136
	B-85DEB			600	500	857	2271	136
	B-93DEB			1000	833	1429	3785	227
	B-94DEB			1000	833	1429	3785	227
	B-95DEB			1000	833	1429	3785	227

MINIMUM/MAXIMUM TEMPERATURE	MAXIMUM PRESSURE		CONNECTIONS	APPROX. SHIPPING WEIGHT-LBS
	psi	kPa		
Standard -20°F to +150°F (-29°C to +66°C)	150	1034	1-1/2" NPT threaded inlet & outlet	40
	150	1034	1-1/2" NPT threaded inlet & outlet	40
	150	1034	2" NPT threaded inlet & outlet	60
	150	1034	2" NPT threaded inlet & outlet	60
	150	1034	2" NPT threaded inlet & outlet	60
Standard -20°F to +150°F (-29°C to +66°C)	350	2413	1-1/2" or 2" NPT threaded inlet & outlet	45
	350	2413	1-1/2" or 2" NPT threaded inlet & outlet	45
	350	2413	1-1/2" or 2" NPT threaded inlet & outlet	112
	350	2413	1-1/2" or 2" NPT threaded inlet & outlet	112
Standard -20°F to +150°F (-29°C to +66°C)	125	862	2" 150 lb ANSI flanged or 2" NPT threaded inlet & outlet	70
Optional +325°F (163°C)	125	862	2" 150 lb ANSI flanged or 2" NPT threaded inlet & outlet	75
Standard -20°F to +150°F (-29°C to +66°C)	300	2068	1-1/2" NPT threaded inlet & outlet	95
	275	1896	1-1/2" 150lb ANSI flanged inlet & outlet	95
	300	2068	1-1/2" 300lb ANSI flanged inlet & outlet	95
	300	2068	2" NPT threaded inlet & outlet	140
	245	1896	2" 150 lb ANSI flanged inlet & outlet	140
	350	2068	2" 300 lb ANSI flanged inlet & outlet	140
Standard -20°F to +150°F (-29°C to +66°C)	720	4964	2" 300 lb ANSI flanged inlet & outlet	195
Optional +450°F (232°C)	1440	9928	2" 600 lb ANSI flanged inlet & outlet	213
Standard -20°F to +150°F (-29°C to +66°C)	125	862	3" NPT threaded inlet & outlet	100
	125	862	3" NPT threaded inlet & outlet	138
	50	345	3" NPT threaded inlet & outlet	138
	125	862	3" NPT threaded inlet & outlet	119
Standard -20°F to +150°F (-29°C to +66°C)	150	1034	3" 150lb ANSI flanged inlet & outlet	98
	150	1034	3" 150lb ANSI flanged inlet & outlet	147
	150	1034	4" 150lb ANSI flanged inlet & outlet	323
	150	1034	6" 150lb ANSI flanged inlet & outlet	650
	150	1034	6" 150lb ANSI flanged inlet & outlet	265
	150	1034	6" 150lb ANSI flanged inlet & outlet	265
Standard -20°F to +150°F (-29°C to +66°C)	275/300	1896/2068	3" -150lb/3" -300lb	210
	720	4964	3" -300lb	285
	1440	9928	3" -600lb	452
	275/300	1896/2068	3" -150lb/3" -300lb	215
	720	4964	3" -300lb	325
	1440	9928	3" -600lb	455
	275/300	1896/2068	4" -150lb/4" -300lb	450
	720	4964	4" -300lb	739
	1440	9928	4" -600lb	960
	275/300	1896/2068	6" -150lb/6" -300lb	740/758
	720	4964	6" -300lb	1393
	1440	9928	6" -600lb	1495