



Flowmeter



F10-2E0xx



F70-200xx



F10-2G0xx



F90-210xx

The Flotec medical gas **Flowmeter** features unique 12 position, non-gravity sensitive fixed orifices. The all-metal component construction **Flowmeter** features a 30-micron sintered metal inlet filter, and a second internal 20-micron rotor filter. It effectively functions as a back pressure compensated device, based on the "Perfect Gas Law". Flotec **Flowmeters** are ergonomically designed, and are available with a complete selection of inlet and outlet connections, including international fittings, and they feature Large View Windows with flow numerals that are permanently lased into the black anodized knob. The Flowmeter is lightweight, ergonomic, MRI conditional, all metal assembly, and are extraordinarily durable, like their brother regulators, they can withstand driving nails and cracking pecans. Available flows as low as 1/50th of a liter (20mL) through, and including, 60 LPM in any medical gas or gas blend. Custom flows and flow ranges are available at nominal charge.

- Unique Laser Drilled Orifice Plate with 20-micron Integral Filter
- Unique Large Window with Numbers permanently Lased into the black anodized knob
- Unique Redundant detent system
- Unique Double Filtration System
- Unique Custom Laser Etching is available
- Nonmagnetic, MRI Conditional
- Non-gravity Sensitive
- Three Knob Detents Assemblies with Teflon Bushings
- Optional Resident Nipple Adapter
- Pediatric Flow Ranges Available
- Full Range of Medical Gases Available
- Optional Color Coding for Oxygen or other Medical Gases
- All Metal Construction (Anodized Aluminum or Plated Brass)

Manufactured exclusively in the United States of America



MADE IN USA

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 Order Desk: 800-401-1723



**FA04-2F04xx
 Medical Air**



**FN0-2EExx
 w/ PTO & HBD2**



**F72-2Z0xx
 Pediatric**



**FN0-2E0P6
 w/ HBD2**



**FF0-3G0xx
 w/ 22mm**



**BL500-F10-320M3
 Seven Flowmeter Stand**



**T10-BEED1M3
 Y-Block with DISS-1240 Check Valve**



**HBD2 HBD26 HBD24
 Resident Nipple Adapter**



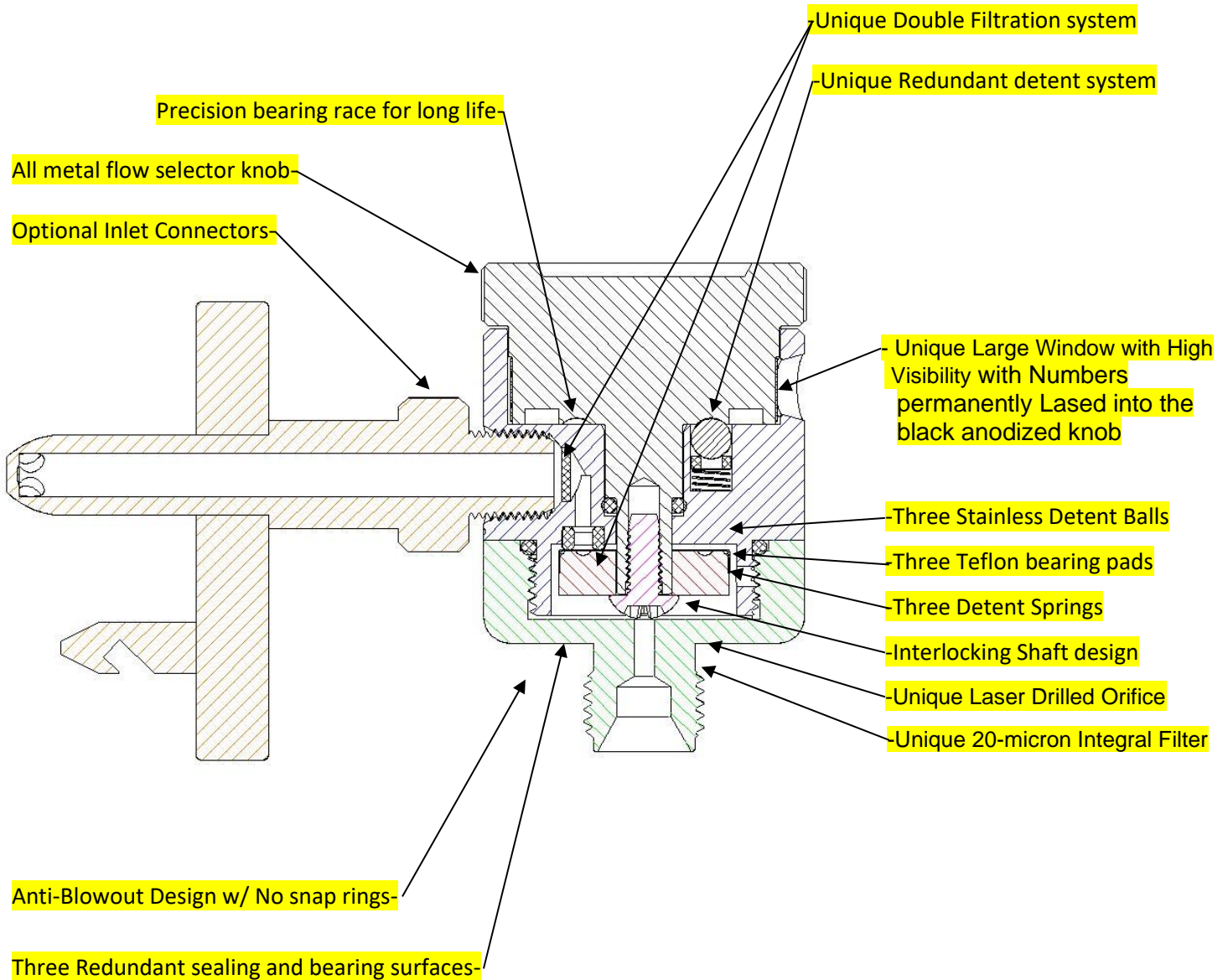
**T10-B2Exxxx Y-Block
 Mounted on Pole Mount**



**Female DISS 1240 to 22mm
 Adapter**



Flowmeter Exploded View





Configuration Matrix

 F00-200xx F00-200xx	 F10-200xx	 F20-200xx	 F50-200xx	 F70-200xx	 F90-200xx
 F00-210xx		 F20-210xx	 F50-210xx	 F70-210xx	 F90-210xx
 F00-220xx	 F10-220xx	 F20-220xx F20-220xx	 F50-220xx	 F70-220xx	 F90-220xx
 F00-2C0xx	 F10-2C0xx	 F20-2C0xx	<div style="border: 1px solid black; padding: 10px;"> <p>Flows are designated by last two spaces of the part number, shown here by xx. Flotec Flowmeters can flow in either direction. Forward flow configurations are shown in Yellow and Reverse flow configurations are shown in Gray.</p> <p>Select the code for the desired flows from that table below. Example: Part # F10-2E0P6 or F70-210P4</p> </div>		
 F00-2E0xx	 F10-2E0xx	 F20-2E0xx			
 F00-2E0xx	 F10-2E0xx	 F20-2E0xx			
 F00-2E0xx	 F10-2E0xx	 F20-2E0xx			
 F00-2E0xx	 F10-2E0xx	 F20-2E0xx			



Samples of Available Flows

The numbers below are displayed in the chart as they appear through the window on the flowmeter. For example, the D1 range features ¼ LPM flow, however the same flow is displayed as .25 in the F1 range. The Yellow flows are forward and the Green highlighted flows are reverse direction.

A1 A4	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.5
A5 A7	0.02	0.03	0.05	0.08	0.12	0.2	0.3	0.5	0.75	1	3
B1 B2	0.025	0.04	0.06	0.09	0.15	0.25	0.4	0.6	0.9	1.5	2
D1 D2	1/32	1/16	1/8	1/4	1/2	3/4	1	1 1/2	2	3	4
D3	0.03	0.06	0.12	0.25	0.50	0.75	1.0	1.5	2	3	4
D4	0.06	0.12	0.25	0.5	0.75	1	1.5	2	2.5	3	4
E1	0.03	0.06	0.12	0.25	0.5	1	1.5	2	2.5	3	4
F1	0.12	0.25	0.5	0.75	1	1.5	2	3	4	5	6
F3	0.50	0.75	1.0	1.5	2.0	2.5	3.0	3.5	4.0	5.0	6.0
F4	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	6
H1	0.5	1	1.5	2	2.5	3	4	5	6	7	8
H2	1	2	3	4	5	5.5	6	6.5	7	7.5	8
H3	.5	1	1.5	2	2.5	3	3.5	4	4.5	5	6
H4	8	-	-	-	-	-	-	-	-	-	-
J1	0.5	1	1.5	2	2.5	3	4	5	6	8	10
L4	-	6	-	12	-	-	-	-	-	-	-
M1 M3	0.5	1	1.5	2	3	4	5	6	8	10	15
M5 M7	0.5	1	2	3	4	5	6	8	10	12	15
M4 M6	1/32	1/16	1/8	1/4	1/2	3/4	1	1 1/2	2	6	15
M8 MB	1/4	1/2	1	1 1/2	2	3	4	6	8	12	15
M9	0.06	0.12	0.25	0.50	1	2	3	5	8	10	15
MA	4	5	6	7	8	10	11	12	13	14	15
MC	A	B	C	D	E	F	G	H	I	J	K
MD	8	15	-	-	-	-	-	-	-	-	-
MX	FLOW	CPR	-	-	-	-	-	-	-	-	-
P1 P3	0.25	0.5	1	2	3	4	6	8	10	15	25
P2	1/4	1/2	1	2	3	4	6	8	10	15	25
P4 P6	1	2	3	4	6	8	10	12	15	20	25
P5 PB	1	2	3	4	5	6	8	10	12	15	25
P7 P8	1/2	1	1 1/2	2	3	4	6	8	10	15	25
PC PD	1/2	2	4	6	7	6	8	10	15	20	25
PE PF	1/4	1/2	1	2	4	6	8	10	15	20	25
PL	3	4	5	6	7	8	10	12	15	20	25
Q1	0.25	0.5	1	2	4	6	8	10	12	20	30
Q7	4	6	8	10	12	15	20	25	30	35	40
S1	0.5	1	2	3	4	5	6	8	10	25	60
T1	1	2	3	4	5	6	10	15	25	40	60
T2	0.25	0.5	1	2	3	4	6	8	10	25	60
T3	0.25	0.5	0.75	1	2	6	8	10	15	40	60











Oxygen Flowmeters by Inlet Configurations



To add a DISS power takeoff to any O2 flow meter below, substitute the letter "E" where indicated Example: Part # F10-320H3 becomes Part # F10-32EH3



To add a Resident Nipple Adapter (HBD2) any O2 flow meter below, substitute the letter "N" where indicated Example: Part # F10-320H3 becomes Part # FN0-32EH3

Description	1/32 – 4 LPM	1 -25 LPM	10 – 40 LPM	1/4 – 60 LPM
 DISS Hex Nut w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-270D1 F10-27ED1 FN0-270D1 FN0-27ED1	F10-270P6 F10-27EP6 FN0-270P6 FN0-27EP6	F10-270Q5 F10-27EQ5 FN0-270Q5 FN0-27EQ5	F10-270T2 F10-27ET2 FN0-270T2 FN0-27ET2
 DISS Hand Tight w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-2C0D1 F10-2CED1 FN0-2C0D1 FN0-2CED1	F10-2C0P6 F10-2CEP6 FN0-2C0P6 FN0-2CEP6	F10-2C0Q5 F10-2CEQ5 FN0-2C0Q5 FN0-2CEQ5	F10-2C0T2 F10-2CET2 FN0-2C0T2 FN0-2CET2
 Ohmeda w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-2E0D1 F10-2EED1 FN0-2E0D1 FN0-2EED1	F10-2E0P6 F10-2EEP6 FN0-2E0P6 FN0-2EEP6	F10-2E0Q5 F10-2EEQ5 FN0-2E0Q5 FN0-2EEQ5	F10-2E0T2 F10-2EET2 FN0-2E0T2 FN0-2EET2
 Chemetron w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-2G0D1 F10-2GED1 FN0-2G0D1 FN0-2GED1	F10-2G0P6 F10-2GEP6 FN0-2G0P6 FN0-2GEP6	F10-2G0Q5 F10-2GEQ5 FN0-2G0Q5 FN0-2GEQ5	F10-2G0T2 F10-2GET2 FN0-2G0T2 FN0-2GET2
 Puritan w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-2P0D1 F10-2PED1 FN0-2P0D1 FN0-2PED1	F10-2P0P6 F10-2PEP6 FN0-2P0P6 FN0-2PEP6	F10-2P0Q5 F10-2PEQ5 FN0-2P0Q5 FN0-2PEQ5	F10-2P0T2 F10-2PET2 FN0-2P0T2 FN0-2PET2
 Schrader w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-B10D1 F10-B1ED1 FN0-B10D1 FN0-B1ED1	F10-B10P6 F10-B1EP6 FN0-B10P6 FN0-B1EP6	F10-B10Q5 F10-B1EQ5 FN0-B10Q5 FN0-B1EQ5	F10-B10T2 F10-B1ET2 FN0-B10T2 FN0-B1ET2
 Oxyquip w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-2Q0D1 F10-2QED1 FN0-2Q0D1 FN0-2QED1	F10-2Q0P6 F10-2QEP6 FN0-2Q0P6 FN0-2QEP6	F10-2Q0Q5 F10-2QEQ5 FN0-2Q0Q5 FN0-2QEQ5	F10-2Q0T2 F10-2QET2 FN0-2Q0T2 FN0-2QET2
 Medstar w/ Power Take off w/ HBD2 w/ Power Take off & HBD2	F10-B20D1 F10-B2ED1 FN0-B20D1 FN0-B2ED1	F10-B20P6 F10-B2EP6 FN0-B20P6 FN0-B2EP6	F10-B20Q5 F10-B2EQ5 FN0-B20Q5 FN0-B2EQ5	F10-B20T2 F10-B2ET2 FN0-B20T2 FN0-B2ET2



Medical Air Flowmeters by Inlet Configurations

DISS-1 | 60 Outlet



To add a DISS Power Takeoff to any Air flow meter below, substitute letter "G" Where Indicated
 Example: Part # FA04-3M04H3 becomes Part # FA04-3MG4H3

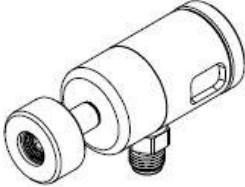
Description	1/32 – 4 LPM	1 -25 LPM	10 – 40 LPM	1/4 – 60 LPM
No inlet adapter 1/8" FNPT w/ Power Take off	FA04-2M04D1 FA04-2MG4D1	FA04-2M04P6 FA04-2MG4P6	FA04-3M04Q5 FA04-3MG4Q5	FA04-3M04T2 FA04-3MG4T2
DISS Hex Nut w/ Power Take off 	FA04-B804D1 FA04-B8G4D1	FA04-B804P6 FA04-B8G4P6	FA04-B804Q5 FA04-B8G4Q5	FA04-B804T2 FA04-B8G4T2
Female DISS w/ Power Take off 	FA04-2L04D1 FA04-2LG4D1	FA04-2L04P6 FA04-2LG4P6	FA04-2L04Q5 FA04-2LG4Q5	FA04-2L04T2 FA04-2LG4T2
Ohmeda w/ Power Take off 	FA04-2D04D1 FA04-2DG4D1	FA04-2D04P6 FA04-2DG4P6	FA04-2D04Q5 FA04-2DG4Q5	FA04-2D04T2 FA04-2DG4T2
Chemetron w/ Power Take off 	FA04-2F04D1 FA04-2FG4D1	FA04-2F04P6 FA04-2FG4P6	FA04-2F04Q5 FA04-2FG4Q5	FA04-2F04T2 FA04-2FG4T2
Puritan w/ Power Take off 	FA04-B304D1 FA04-B3G4D1	FA04-B304P6 FA04-B3G4P6	FA04-B304Q5 FA04-B3G4Q5	FA04-B304T2 FA04-B3G4T2
Schrader w/ Power Take off 	FA04-B404D1 FA04-B4G4D1	FA04-B404P6 FA04-B4G4P6	FA04-B404Q5 FA04-B4G4Q5	FA04-B404T2 FA04-B4G4T2
Oxyquip w/ Power Take off 	FA04-B504D1 FA04-B5G4D1	FA04-B504P6 FA04-B5G4P6	FA04-B504Q5 FA04-B5G4Q5	FA04-B504T2 FA04-B5G4T2
Medstar w/ Power Take off 	FA04-B604D1 FA04-B6G4D1	FA04-B604P6 FA04-B6G4P6	FA04-B604Q5 FA04-B6G4Q5	FA04-B604T2 FA04-B6G4T2



Pediatric Configurations

Flotec Flowmeters provide specific, articulated Low-Flow and Micro-Flow ranges for all medical gases for both NICU and Pediatrics. Flotec offers a wide range of flows as low as 1/50th of a liter (20mL) in decimal, fractional, and mL and LPM increments. Large ranges available from 20mL to 60 LPM in a single unit. No more guesswork! Flow specific settings remove any doubt whether the bouncing ball is set accurately. They aren't susceptible to drift, nor are they gravity sensitive, meaning they flow accurately in any position regardless of angle or axis. With a 30-micron sintered metal inlet filter, and a second internal 20-micron rotor filter, continued flow accuracy are assured.

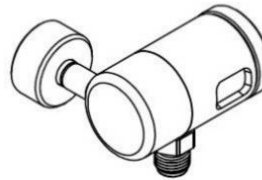
F50-950xx



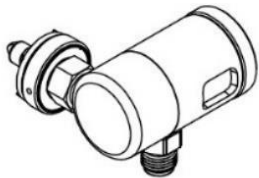
F50-BN0xx



F53-950xx



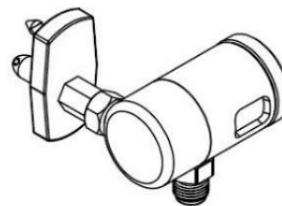
F53-BN0xx



F73-950xx



F73-BN0xx



F93-950xx



F93-BN0xx

A2	25 mL	50 mL	75 mL	100 mL	125 mL	150 mL	175 mL	200 mL	250 mL	500 mL	1 L
A6	25 CC	50 CC	100 CC	150 CC	200 CC	250 CC	500 CC	1 L	1.5 L	2 L	3 L
C4	20 mL	50 mL	100 mL	150 mL	200 mL	250 mL	500 mL	1 L	1.5 L	2 L	3 L
D8	30 mL	60 mL	125 mL	250 mL	500 mL	750 mL	1 L	1.5 L	2 L	3 L	4 L



Y & T Block Configurations

Y-Blocks



**All-Metal-Construction
 No Plastic!**



Dual - Flowmeter from a single wall outlet.

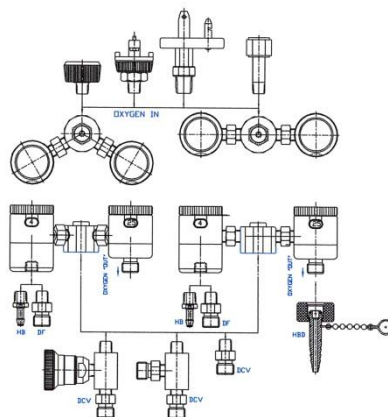
Optional Pediatric and High Flowmeter

Optional removable Resident Nipple Adapter for CPAP or Humidifier applications

Optional DISS-1240 Check Valve, Female Ohio, or Chemetron

Optional T or Y styles.

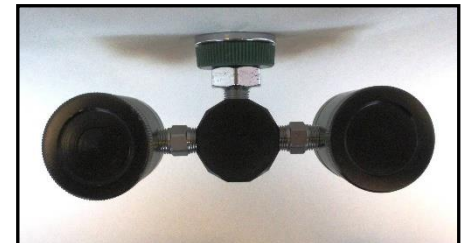
Available flows from 1/32nd of a liter through 60 LPM!



T-Blocks



Slimmest Possible Profile!



5-Year Warranty!

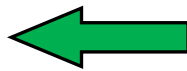




Y & T Block Configurations Configurations








**Y-Block
 Style**



**T-Block
 Style**



Green is for Oxygen and **Yellow** is for Medical Air, All other Medical Gases available on request

Part Number		Inlet Type	Part Number	
T10-B70P6P6 T10-B7EP6P6 (w/ DCV)		DISS Nut & Nipple 	T10-270P6P6 T10-27EP6P6 (w/ DCV)	
TA04- B804P6P6 TA04- B8G4P6P6 (w/ DCV)			TA04- 2804P6P6 TA04- 28G4P6P6 (w/ DCV)	
T10-BC0P6P6 T10-BCEP6P6 (w/ DCV)		DISS Female Hand-Tight 	T10-2C0P6P6 T10-2CEP6P6 (w/ DCV)	
TA04- BL04P6P6 TA04- BLG4P6P6 (w/ DCV)			TA04- 2L04P6P6 TA04- 2LG4P6P6 (w/ DCV)	
T10-BG0P6P6 T10-BGEP6P6 (w/ DCV)		Chemetron 	T10-2G0P6P6 T10-2GEP6P6 (w/ DCV)	
TA04- BF04P6P6 TA04- BFG4P6P6 (w/ DCV)			TA04- 2F04P6P6 TA04- 2FG4P6P6 (w/ DCV)	
T10-BE0P6P6 T10-BEEP6P6 (w/ DCV)		Ohio / Ohmeda 	T10-2E0P6P6 T10-2EEP6P6 (w/ DCV)	
TA04- BD04P6P6 TA04- BDG4P6P6 (w/ DCV)			TA04- 2D04P6P6 TA04-2DG4P6P6 (w/ DCV)	
T10-B10P6P6 T10-B1EP6P6 (w/ DCV)		Shrader 	T10-210P6P6 T10-21EP6P6 (w/ DCV)	
TA04- B404P6P6 TA04- B4G4P6P6 (w/ DCV)			TA04- 2404P6P6 TA04-24G4P6P6 (w/ DCV)	



Flowmeters with 1/8" FNPT Inlet & DISS 1240 Outlet Configurations

	1/32 – 4 LPM		1 -25 LPM		10 – 40 LPM		1/4 – 60 LPM	
1/8" FNPT Oxygen (Green)	F10-220D1		F10-220P6		F10-220Q5		F10-220T2	
1/8" FNPT Carbon Dioxide (Silver)	F102-2202D1		F102-2202P6		F102-2202Q5		F102-2202T2	
1/8" FNPT Helium (Brown)	F107-2207D1		F107-2207P6		F107-220Q5		F107-220T2	
1/8" FNPT Heliox (Brown/Green)	F107-220D1		F107-220P6		F107-220Q5		F107-220T2	
1/8" FNPT Nitrogen (Black)	F109-2209D1		F109-2209P6		F109-2209Q5		F109-2209T2	
1/8" FNPT Nitrous Oxide (Blue)	F105-2205D1		F105-2205P6		F105-2205Q5		F105-2205T2	

Connection No. 1240 for Oxygen

“Instead of having increasing and decreasing diameter, standard Connection No. CGA 1240 retains the long-established 9/16-in, 18-thread standard oxygen confection. This connection is interchangeable with Connection No. CGA 022 described in CGA E-1, Standard Connections for Regulators Outlets, Torches, and Fitted Hose for Welding and Cutting Equipment [4].”

“It is common practice to use the standard Connection No. CGA 1240 on equipment for the administering oxygen or oxygen-enriched air mixtures, for example, nebulizers, humidifiers, ventilators, mixers (blenders), portable air compressors, and demand valves. This allows accessory equipment already fitted with Connection No. CGA 1240 to be used with these gases.”



Flowmeter Comparison

The Flotec Flowmeter is more durable than the typical Thorpe Tube style Flowmeter. The all-metal body is small and compact, and can be oriented in any position and still operate correctly. The precision laser drilled orifices, that are protected by dual sintered metal filters, assure the ultimate in accuracy and durability. The numbers are easy to read, and easy to set at the correct flow setting. No singing along with the bouncing ball.



Not Sensitive to Orientation/Gravity (hang it from the ceiling)	YES	NO
Wide selection Flow Ranges (minimum 20 mL, maximum 60 LPM)	YES	NO
Not Sensitive to Vibration	YES	NO
Large Numbers Easy to Read and Set	YES	NO
Optional Reusable (Cleanable) Resident Nipple Adapter	YES	NO
Nonmagnetic, MRI Conditional	YES	NO
Unique Custom Laser Engraving available	YES	NO
Unique Double Filter System	YES	NO
ISO13485:2016, MDSAP, CE Mark, RoHS 3	YES	NO
UDI and Individual Serial # for Traceability	YES	NO
Pediatric Flow Ranges Available	YES	YES
Available Color Code Options	YES	unknown
Optional Power Take-Off outlet	YES	YES
Flow Selector with Optional number of range options	YES	2
Large Range of Medical Gases Available	YES	2
Triple Knob Detents to Assure Positive position at Preset Flow	YES	NO
Unique Laser Drilled Orifice Plate with Integral Filter	YES	NO
Flow Accuracy exceeds CGA specifications	YES	unknown
Variety of Inlet pressure ranges available	20, 50, 58	unknown
Four Optional Knob Styles with built in Safety Step	YES	NO
Optional Custom Color Coding for Special Requirements	64	NO
All Metal Construction (except Seals and Detent Bushings)	YES	NO
Safety Vent Hole in Flowmeter Assembly Thread	YES	NO



Mass Casualty Flowmeters

Mass Casualty Oxygen Manifold Systems were possible because of the non-gravity feature of the Flotec Flowmeter. Over 6,000 flowmeters were placed in service all over the world, in response to the Covid-19 Pandemic. Flotec custom designed and manufactured these systems according to unique distance restrictions between patient beds and head rail heights.





Humidifier Configuration

As Pandemic treatments evolved, Flotec created solutions. The first problem was solved by configuring the suspended flowmeter to connect to a Humidifier bottle. The next innovation incorporated a PTO (DISS-1240 Power Take-off) to provide oxygen source to Ventilators.

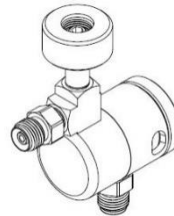
<p align="center">F5K-BN0xx</p> <p>Window at 9 o'clock, DISS-1240 Swivel inlet @ 12 o'clock & DISS-1240 outlet @ 6 o'clock w/ HBD2 Resident Nipple Adapter. Auxiliary 50 PSI DISS-1240 Check Valve located on end cap</p>	<p align="center">F5E-210xx with HBD2 attached</p> <p>Window at 12 o'clock, DISS-1240 Swivel inlet @ 12 o'clock & DISS-1240 outlet @ 6 o'clock w/ HBD2 Resident Nipple Adapter. Auxiliary 50 PSI DISS-1240 Check Valve located on Street Tee above cap</p>



F5K-250xx



F5K-BN0xx



F5E-250xx



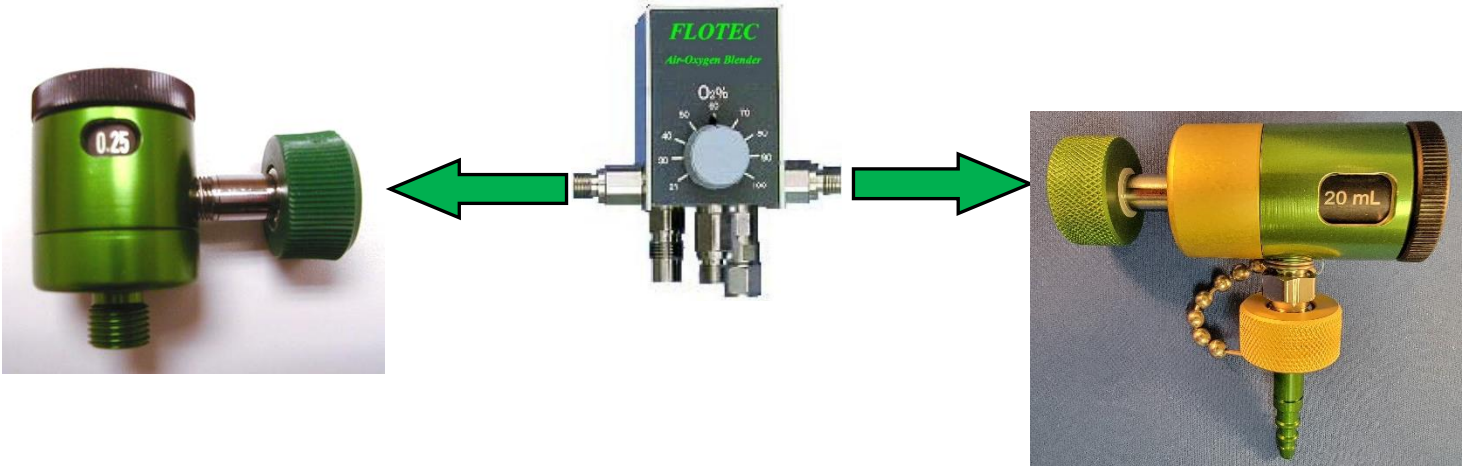
F5E-BN0xx



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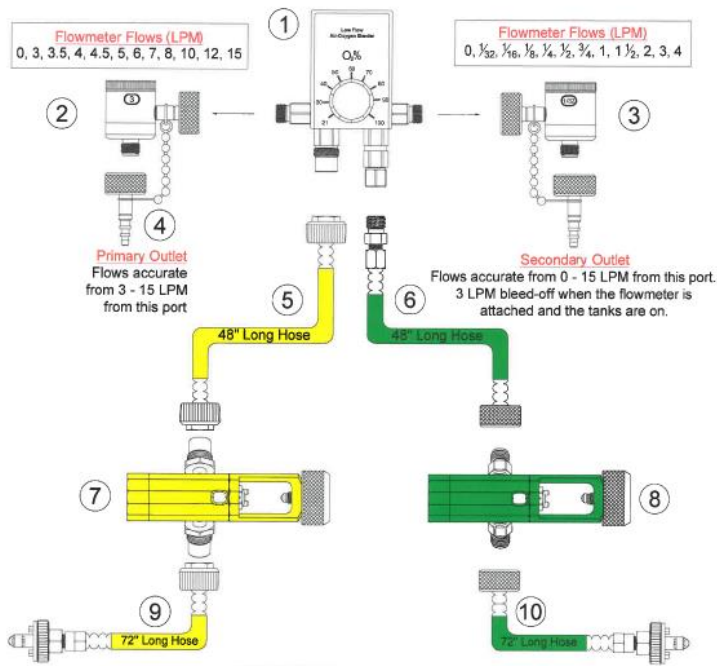
Blender Configurations



F10-250P6
 1 through 25 lpm Flowmeter

BMD-2004M MRI Conditional

F104-BN0Q7
 20mL through 3 lpm Flowmeter



This Assembly Part number 038-1000-118

This system allows the use of Medical Gas from the wall outlet. When transport is needed the cylinders containing Medical Air and Oxygen are turned on and the Ohio Style QD are disconnected from the wall. The patient can now be transported using Medical Gas from the cylinders.

All Flotec hose meets ISO10993-1:2009, ISO1307:2006, ISO13485:2016, ISO1402:2009, ISO15001:2010, ISO18562-3:2017, ISO5359:2014, ISO8033:2016, ISO9170-1:2008, RoHS Directive, CGA G-4.1-2018, SOR/98-282, and CAN/CSA-Z5359:16

Item #	Qty.	Part Number	Description
10	1	HAG3-3SO1-72	Oxygen Hose Assembly Ohio, 72" Long
9	1	HAY3-3TA1-72	Medical Air Hose Assembly Ohio, 72" Long
8	1	DR8C33-6003	DL Regulator Assembly, Oxygen
7	1	DR9F34-6004	DL Regulator Assembly, Medical Air
6	1	HAG3-3S8S-48	Oxygen Hose Assembly, 48" Long
5	1	HAY3-3T3T-48	Medical Air Hose Assembly, 48" Long
4	2	HBD2	Resident Nipple Adapter
3	1	F10-2S0D1	Flotec FM Assy, 1/32, 1/16, 1/8, 1/4, 1/2, 3/4, 1, 1 1/2, 2, 3, 4 LPM
2	1	F10-2Y0MF	Flotec FM Assembly, 3, 3.5, 4, 4.5, 5, 6, 7, 8, 10, 12, 15 LPM
1	1	BMD-2003	Air-Oxygen Blender 3-30 LPM