



# INLINE BALANCE PRESSURE FOAM PROPORTIONER

## TECHNICAL DATA

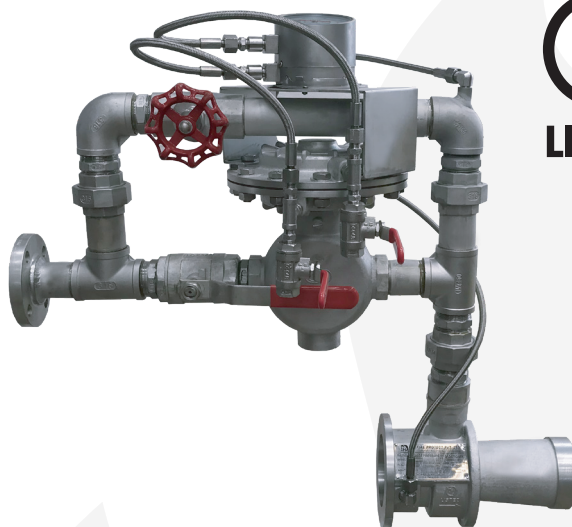
MODEL	FGPS - Stainless Steel* FGPB - Bronze FGPMS - Stainless Steel*# FGPMB - Bronze #
PROPORTIONER SIZE	65, 80, 100, 150 & 200 NB
MAXIMUM SERVICE PRESSURE	14 Bar (200 PSI) 12 Bar (175 PSI) - UL Listed
MINIMUM WORKING PRESSURE	2.8 Bar (40 PSI)
RATIO CONTROLLER MOUNTING TYPE	Wafer type or Flanged end ANSI B 16.5
THREAD OPENING	BSPT/ NPT optional
PRESSURE SENSING HOSE	TEFLON tube with Stainless Steel braided cover
TRIM CONNECTION AND VARIOUS CONTROL VALVES	Stainless Steel
FLOW	Refer Table-V and Graph
FOAM CONCENTRATE	AFFF 3-C6,3% & AR-AFFF 3x3-C6,3%
FACTORY HYDROSTATIC TEST PRESSURE	25 Kg./ Sq.cm. (350 PSI)
FINISH	Red RAL 3001
APPROVAL	UL Listed
ORDERING INFORMATION	Specify: a) Model b) Flow rate c) Percentage Induction d) Type of Foam Concentrate used

\* Stainless Steel CF8 (304) is standard supply; CF8M (316), CF3 (304L) & CF3M (316L) are optional supply.

# Only for 65 NB Size.

## APPLICATION

The Inline Balance Pressure Foam Proportioner is used with positive displacement foam concentrate supply pump. The system controls accurate flow of foam concentrate into the water stream over a wide range of flow rate and pressure.



The Inline Balance Pressure Foam Proportioning System is used for simultaneous operation of the multiple foam injections even with different pressures between the two injection point with a single concentrate supply line. Various sizes of inline balance pressure proportioners can be combined to suit the flow requirement of each hazard area.

## SPECIFICATION

The Inline balance pressure proportioning system utilizes a single, positive displacement foam concentrate supply pump, an atmospheric foam concentrate storage tank, inline balance proportioner, and a foam concentrate regulating valve. The pressure regulating valve is mounted on foam concentrate return line to the foam concentrate storage tank. The valve regulates the foam concentrate supply pressure. The Inline balance pressure proportioner consists of a ratio controller, diaphragm operated pressure balancing valve, duplex pressure gauge and pressure sensing hose of teflon tube with stainless steel braided cover, interconnecting trim fittings with various control and flush valves. The water inlet pressure and foam concentrate pressure at metering orifice is sensed by a diaphragm valve and it automatically balances the concentrate supply to provide accurately proportioned water foam solution over a wide range of flow conditions.

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FS546607



# INLINE BALANCE PROPORTIONER



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## NOTE:

1. Each Inline Balance Pressure Proportioner shall have a minimum of five pipe diameter of straight unobstructed pipe at upstream and downstream of the proportioner.
2. The Inline Balance Pressure Proportioner horizontal mounting is standard supply and vertical mounting is optional supply.
3. It is recommended to have foam concentrate supply pressure gauge adjacent to inlet of foam concentrate (E). It is to be installed by installer.
4. The foam concentrate line connecting to inlet of (E) can be of higher size to reduce friction loss in piping supplying foam concentrate.
5. Inline Balance Proportioner is UL Listed with FIREGUARD Foam Concentrate AFFF 3-C6,3% and AR-AFFF 3x3-C6,3%. For other foam concentrates contact sales.
6. Inline Balance Proportioner is supplied with Duplex gauge as standard supply and two Pressure Gauges as optional supply.

## INSPECTION AND MAINTENANCE

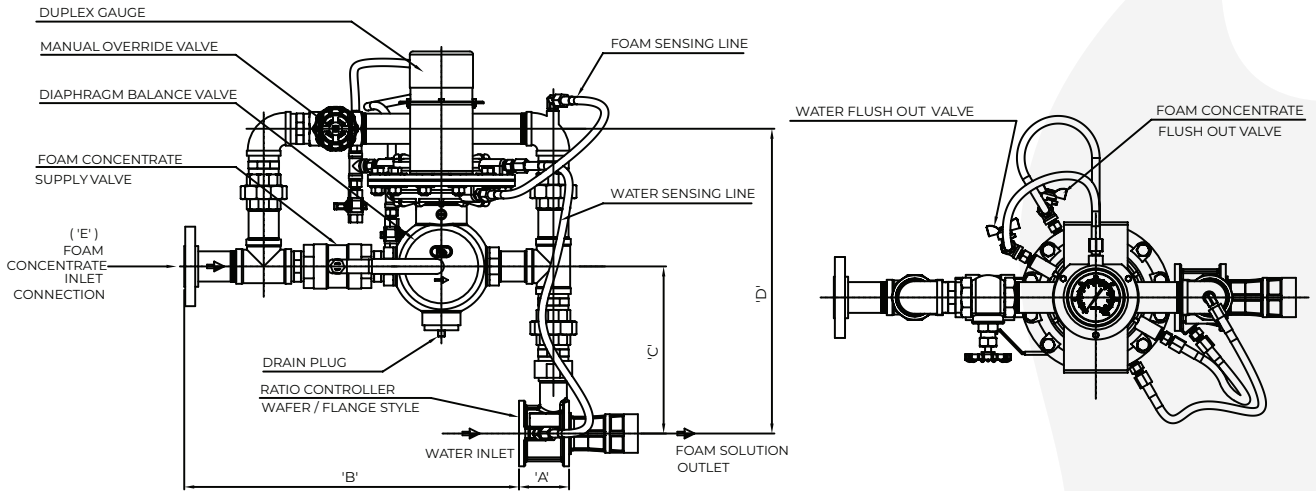
A qualified and trained person must commission the system. After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the system. It is recommended to carry out physical inspection of the system at least once in a week. The inspection should verify that all the valves are in their proper position as per the system requirement and no damage has taken place to any component.

The system where foam concentrate piping is maintained in charged condition, the provision should be made to flow foam through each Inline Balance Proportioner at least once in six weeks. The system should be fully tested at least once in a year or in accordance with applicable NFPA codes, or in accordance to the guidelines of the organization having local jurisdiction.



## INLINE BALANCE PRESSURE PROPORTIONER WITH MANUAL OVERRIDE

### DUPLIX GAUGE ARRANGEMENT (Standard Supply)



### TWIN GAUGE ARRANGEMENT (Optional Supply)

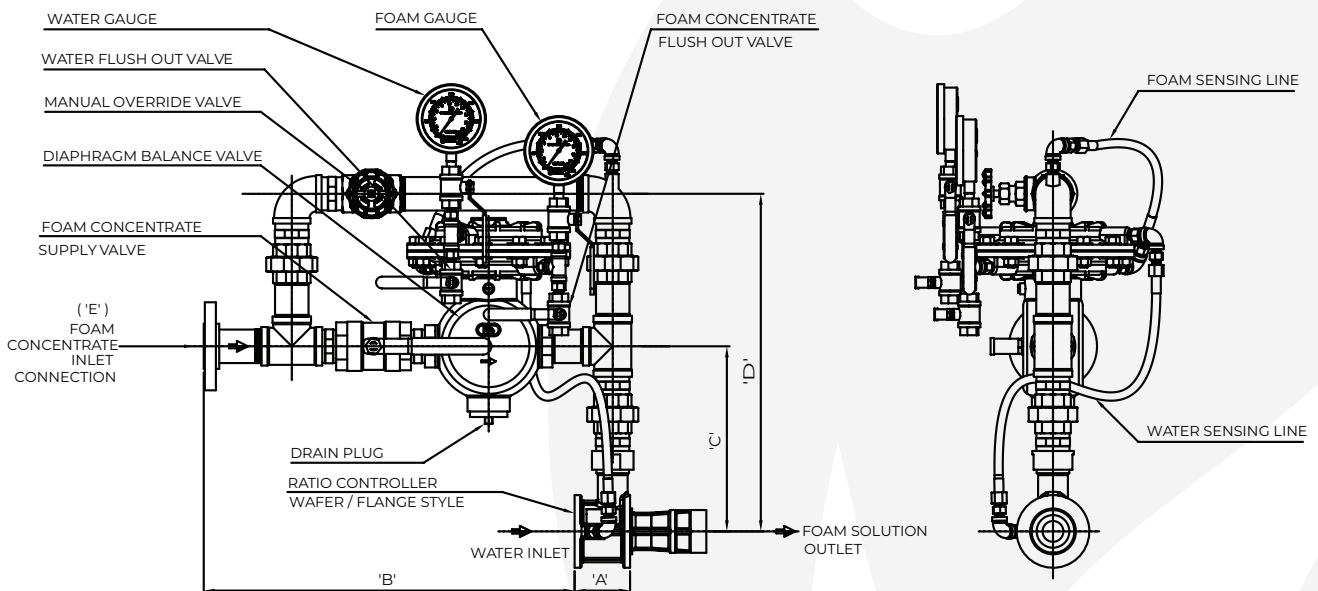
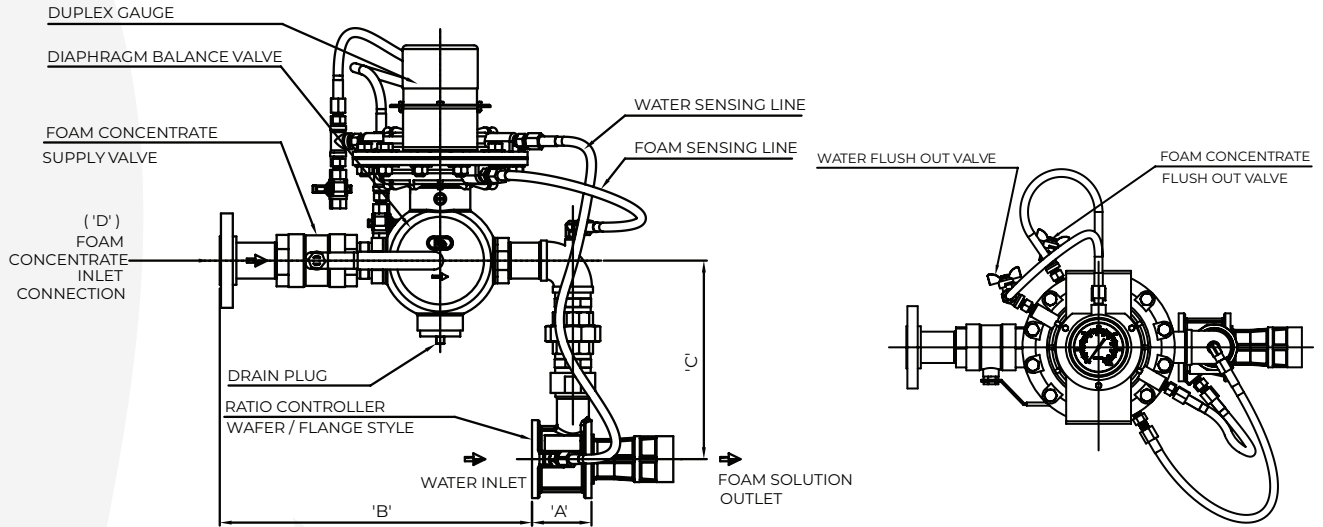


TABLE - I

Model	Approximate Dimensions (in mm)				
	'A'	'B'	'C'	'D'	'E'
65 NB	80	535	267	487	40 NB
80 NB	107.5	508	272	492	40 NB
100 NB	126	500	293	513	40 NB
150 NB	133	525	338	583	50 NB
200 NB	130	538	365	610	50 NB

## INLINE BALANCE PRESSURE PROPORTIONER WITHOUT MANUAL OVERRIDE

### DUPLEX GAUGE ARRANGEMENT (Standard Supply)



### TWIN GAUGE ARRANGEMENT (Optional Supply)

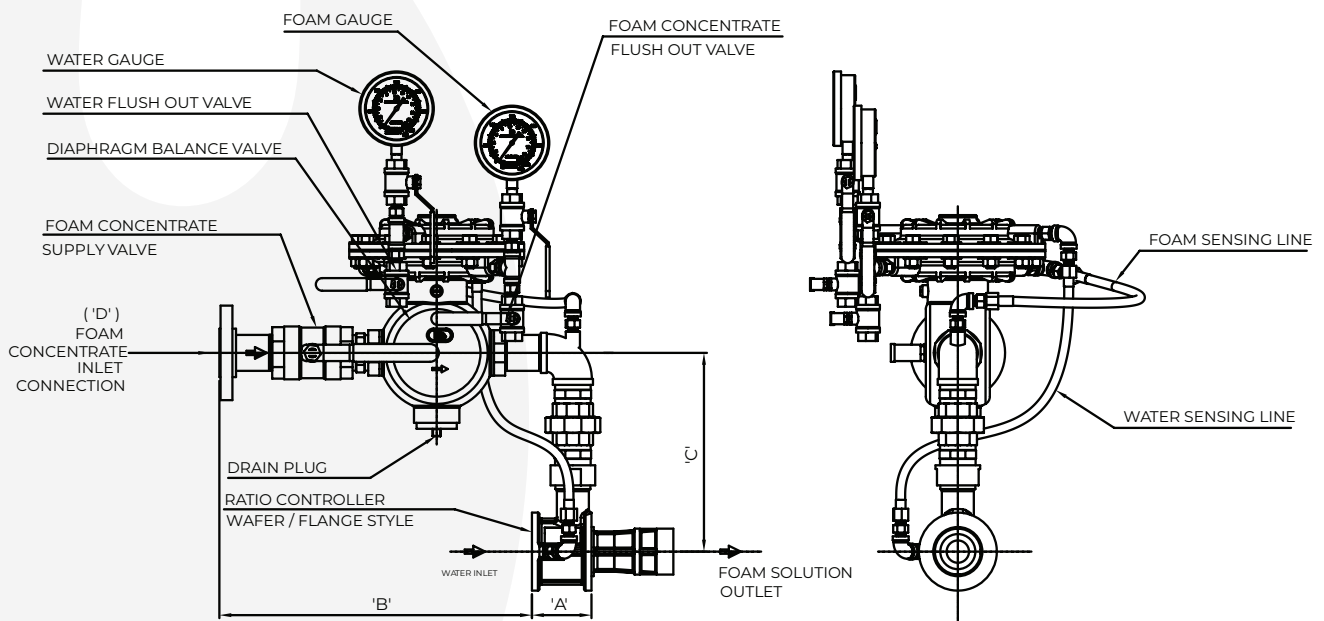
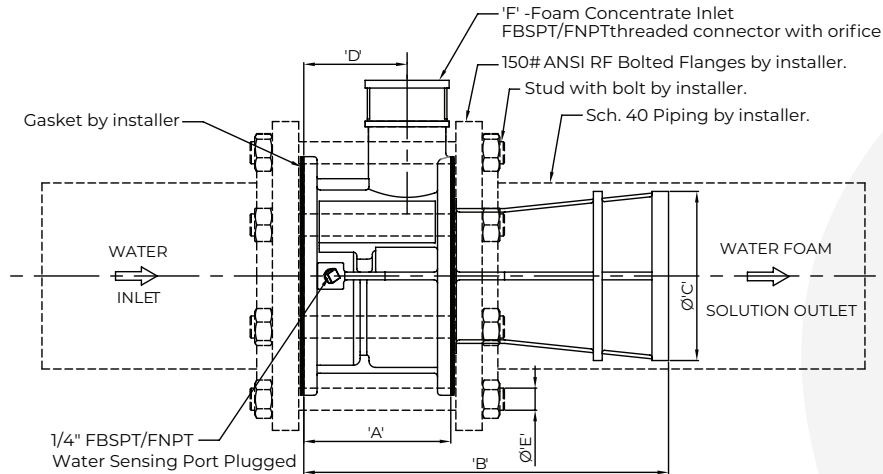


TABLE - II

Model	Approximate Dimensions (in mm)			
	'A'	'B'	'C'	'D'
65 NB	80	420	267	40 NB
80 NB	107.5	390	272	40 NB
100 NB	126	382	293	40 NB
150 NB	133	393	338	50 NB
200 NB	130	408	365	50 NB

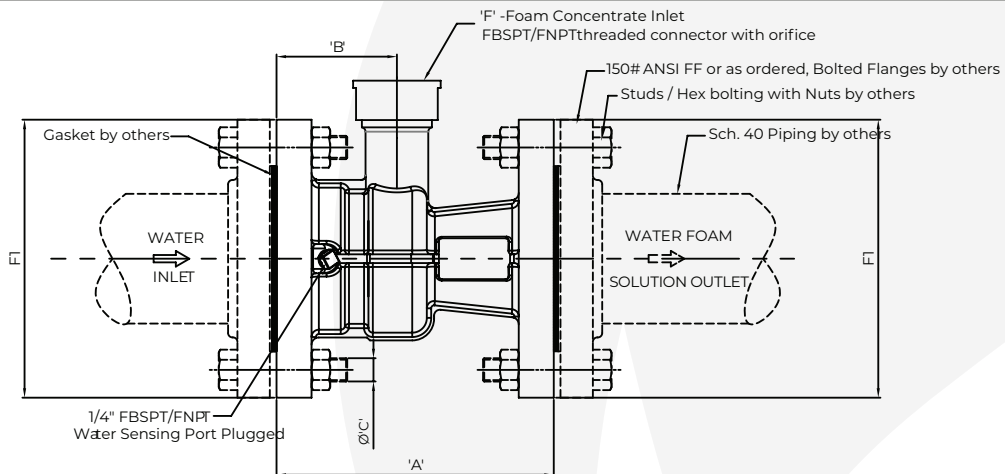
## RATIO CONTROLLER (WAFER STYLE - RCW SERIES)



### DIMENSIONS

Size	Approximate Dimensions (in mm)					
	'A'	'B'	Ø 'C'	'D'	Ø 'E'	'F'
8"	130	340	Ø200	80	M20 X 240 LONG	2" BSP (F)/NPT (F)
6"	133	330	Ø152	93.5	M20 x 230 LONG	2" BSP (F)/NPT (F)
4"	126	266	Ø101	90	M16 x 220 LONG	1-1/2" BSP (F)/NPT (F)
3"	107.5	190	Ø76	82.5	M16 x 200 LONG	1-1/2" BSP (F)/NPT (F)
2-1/2"	80	190	Ø61.7	55	M16 x 170 LONG	1" BSP (F)/NPT (F)

## RATIO CONTROLLER (FLANGE STYLE - RCF SERIES)



Dimensions of Inlet / Outlet Flanges (F) is as per ANSI B16.5 #150

### DIMENSIONS

Size	Approximate Dimensions (in mm)			
	'A'	'B'	Ø 'C'	'F'
8"	340	80	M20	2" BSP (F)/NPT (F)
6"	330	93.5	M20	2" BSP (F)/NPT (F)
4"	266	90	M16	1-1/2" BSP (F)/NPT (F)
3"	190	82.5	M16	1-1/2" BSP (F)/NPT (F)
2-1/2"	190	55	M16	1" BSP (F)/NPT (F)

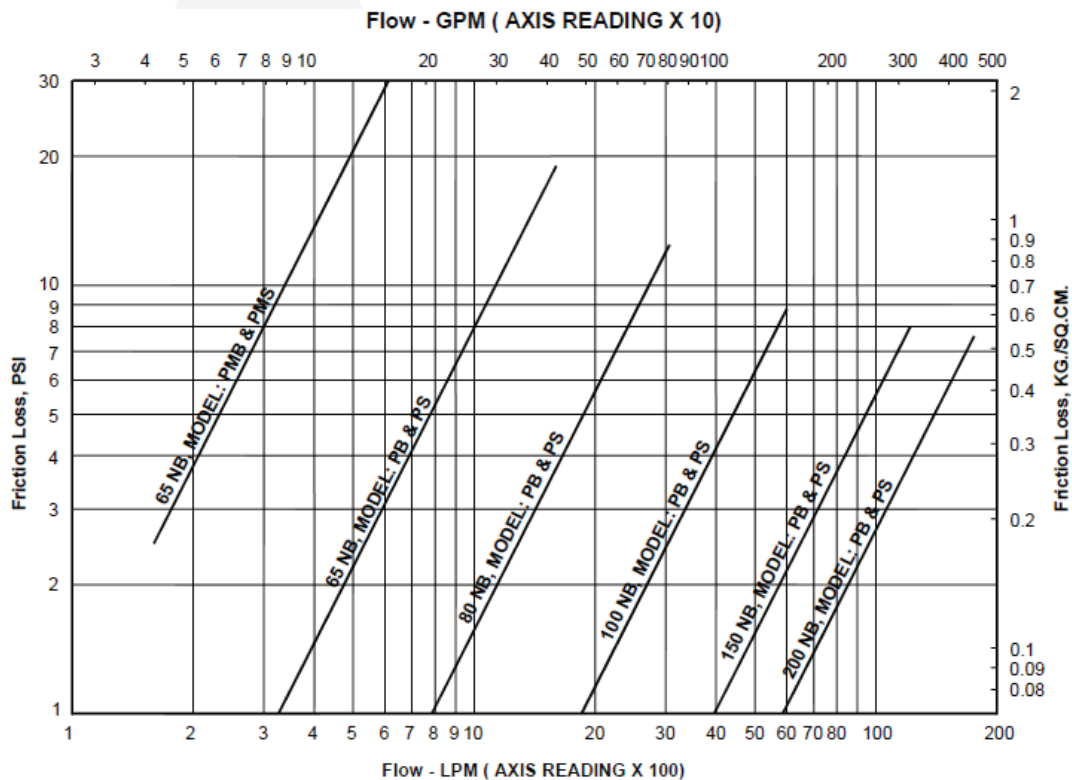
## FLOW RANGE (LPM)

**TABLE - V**

Sl. No.	Inline Balance Proportioner Model	Size	Flow in LPM	
			AFFF 3%	AR-AFFF 3X3%
1	<b>FGPB &amp; FGPS</b>	65 NB	409 TO 1467	510 TO 1608
2	<b>FGPMB &amp; FGMS</b>	65 NB	-----	178 TO 683
3	<b>FGPB &amp; FGPS</b>	80 NB	371 TO 3186	745 TO 3125
4	<b>FGPB &amp; FGPS</b>	100 NB	668 TO 6254	806 TO 6216
5	<b>FGPB &amp; FGPS</b>	150 NB	1683 TO 13299	1441 TO 12798
6	<b>FGPB &amp; FGPS</b>	200 NB	3062 TO 17392	3675 TO 17440

Note: Refer Catalogue for Ratio Controller

## FLOW VS PRESSURE LOSS

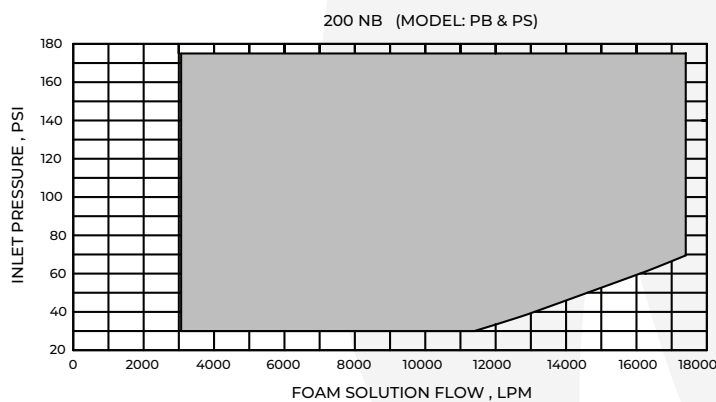
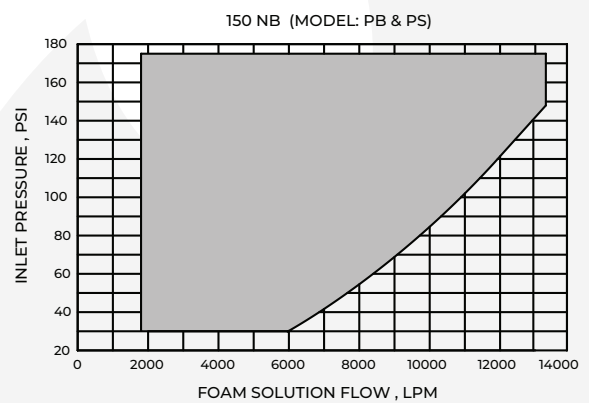
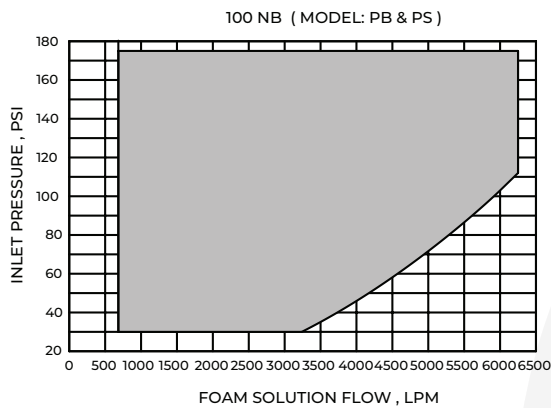
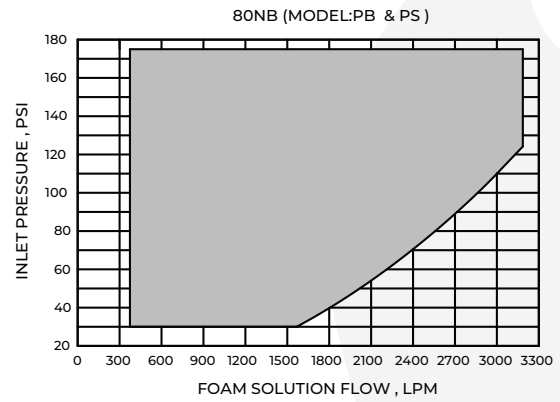
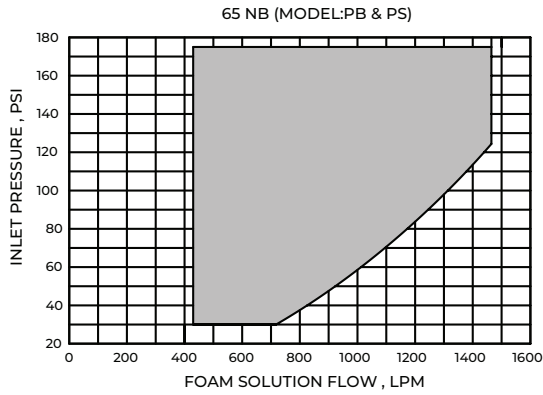




# INLINE BALANCE PROPORTIONER



## INLET PRESSURE VS FOAM SOLUTION FLOW (FOAM CONCENTRATE: HD AFFF 3-C6, 3%)



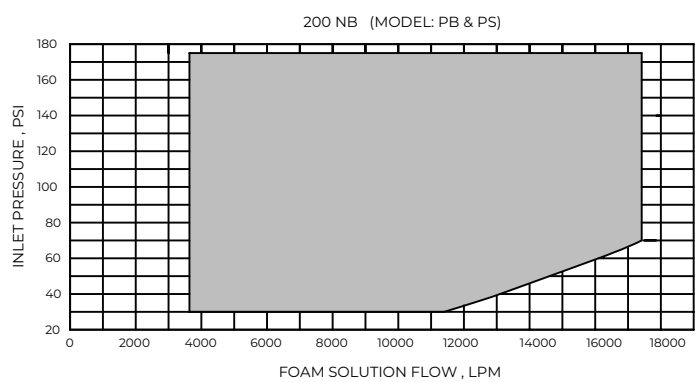
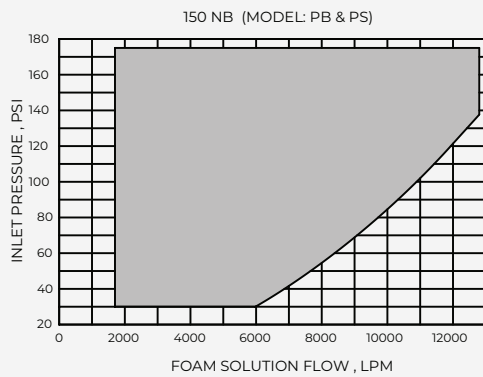
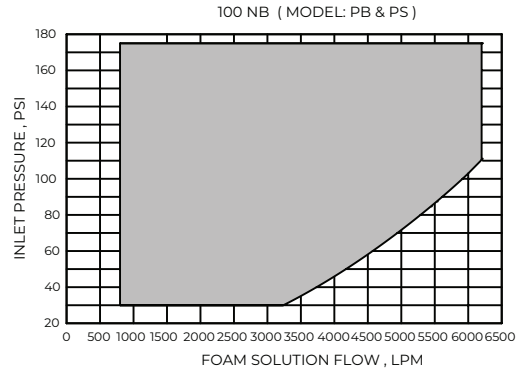
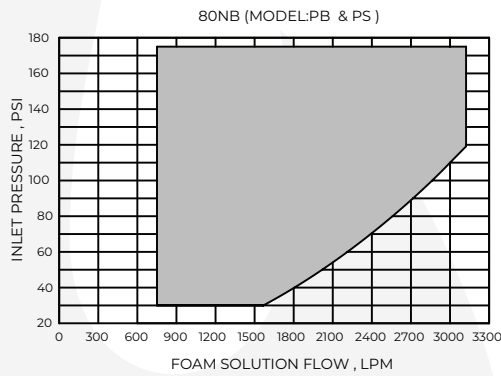
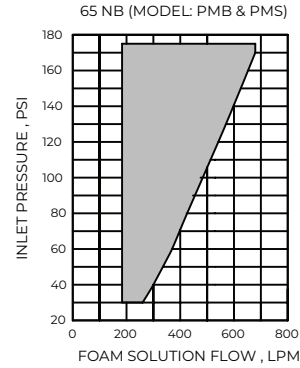
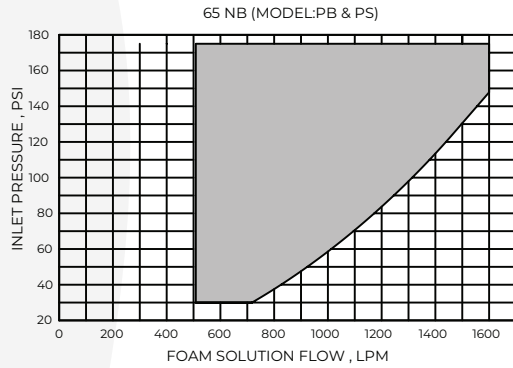


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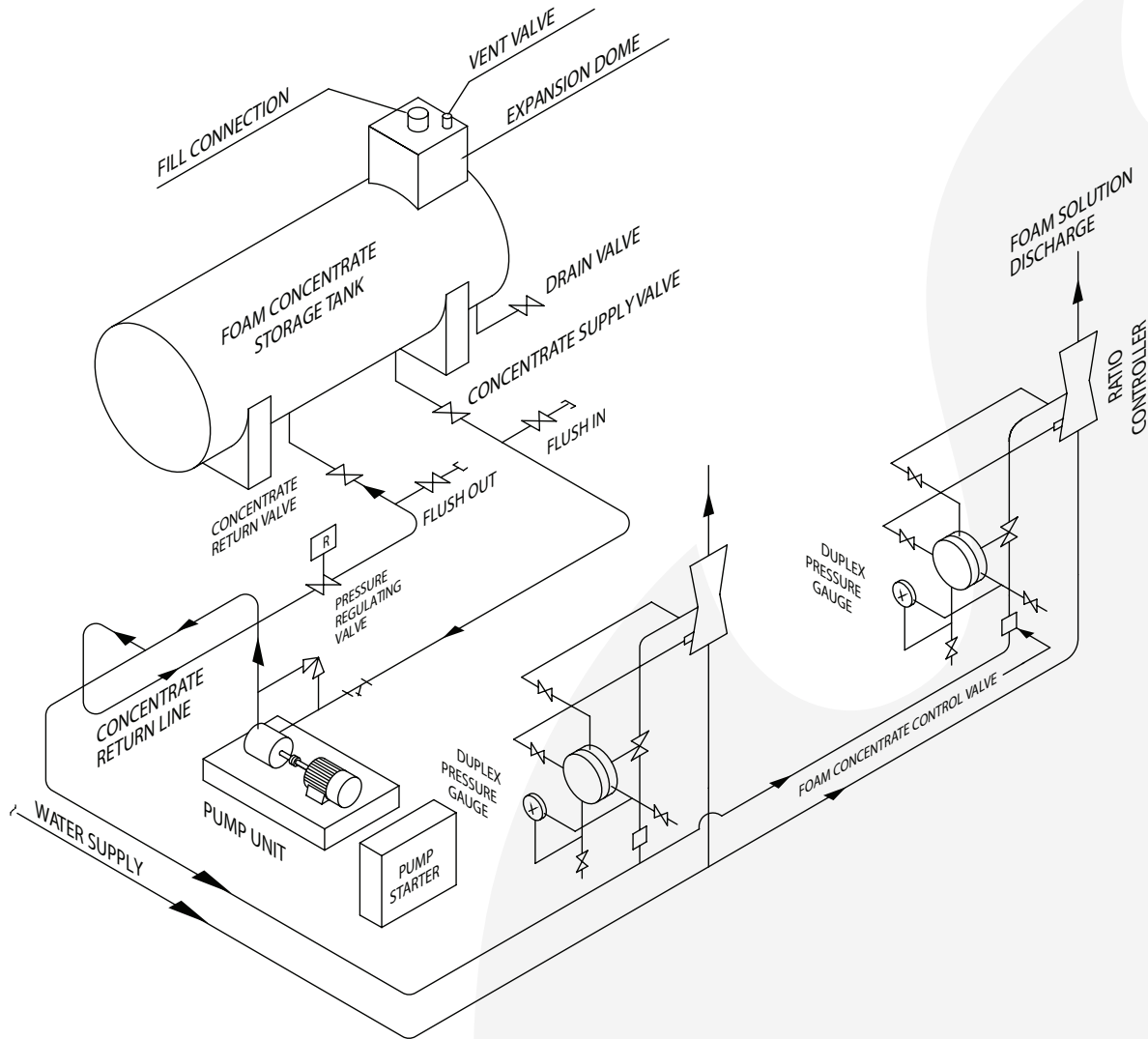
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## INLET PRESSURE VS FOAM SOLUTION FLOW (FOAM CONCENTRATE: HD AR-AFFF 3X3-C6, 3%)





## TYPICAL INLINE BALANCE PRESSURE FOAM PROPORTIONING SYSTEM



## INLINE BALANCE PRESSURE FOAM PROPORTIONER ORDERING INFORMATION

XXX	X	X	X	X	X	X
<b>Model:</b> FGPS FGPB FGPMS* FGPMB*	<b>RC TYPE:</b> W- Wafer F- Flanged	<b>RC Size:</b> 2 - 65 NB 3 - 80 NB 4 - 100 NB 6 - 150 NB 8 - 200 NB	<b>Material:</b> 1 - Bronze 2 - Ni. Al. Bronze 3 - SS CF8 (SS304) 4 - SS CF8M (SS316) 5 - SS CF3 (SS304L) 6 - SS CF3M( SS316L)	<b>Pressure Gauge:</b> D- Duplex Gauge T- Twin Gauge	<b>M- Manual</b> Override N - No Override	<b>Foam Concentrate:</b> 1 - AFFF 3-C6,3% 2 - AR-AFFF 3x3-C6,3%
*Only for 65 NB size						