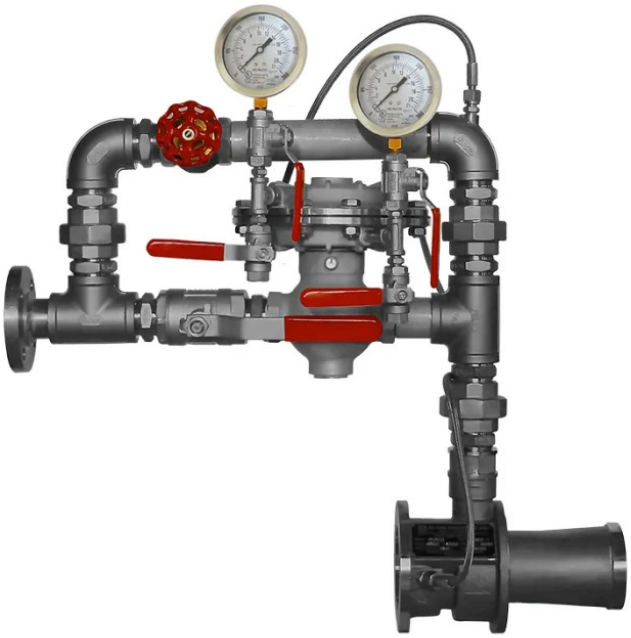
DESCRIPTION

APPLICATION

The Inline Balance Pressure Foam Proportioners are used with positive displacement foam concentrate supply pump. The system controls accurately the 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 injection 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

Inline balance pressure proportioning system utilizes a single, positive displacement foam concentrate supply pump, an atmospheric foam concentrates 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, water and foam gauges, 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. A foam concentrate supply valve is also provided as an optional item. The system requires foam concentrate supply pressure of 1.5-2.0 bar. higher than the water supply pressure. The Inline balance pressure proportioner is also provided with a manual balancing valve.



TECHNICAL DATA

MODELS	IB - Bronze construction IS 318/ASTM B62 IBS - Stainless Steel (304) construction (ASTM A351 - CF8
SIZE	80, 100 & 150 NB
MAXIMUM SERVICE PRESSURE	14 Bar (200 PSI)
MIMIMUM WORKING PRESSURE	3.0 Bar (44 PSI)
MOUNTING BETWEEN THE FLANGES	ANSI B16.5 - 150#
THREAD OPENING	BSPT/NPT optional
PRESSURE SENSING HOSE	TEFLON tube with Stainless Steel braided cover
TRIM CONNECTION AND VARIOUS CONTROL VALVES	Stainless Steel
FACTORY HYDROSTATIC TEST PRESSURE	25 Kg./Sq.cm (350 PSI)
FINISH	Epoxy red painted
ORDERING INFORMATION	Specify • Model Number • Flow rate • Percentage Induction • Type of Foam Concentrate used

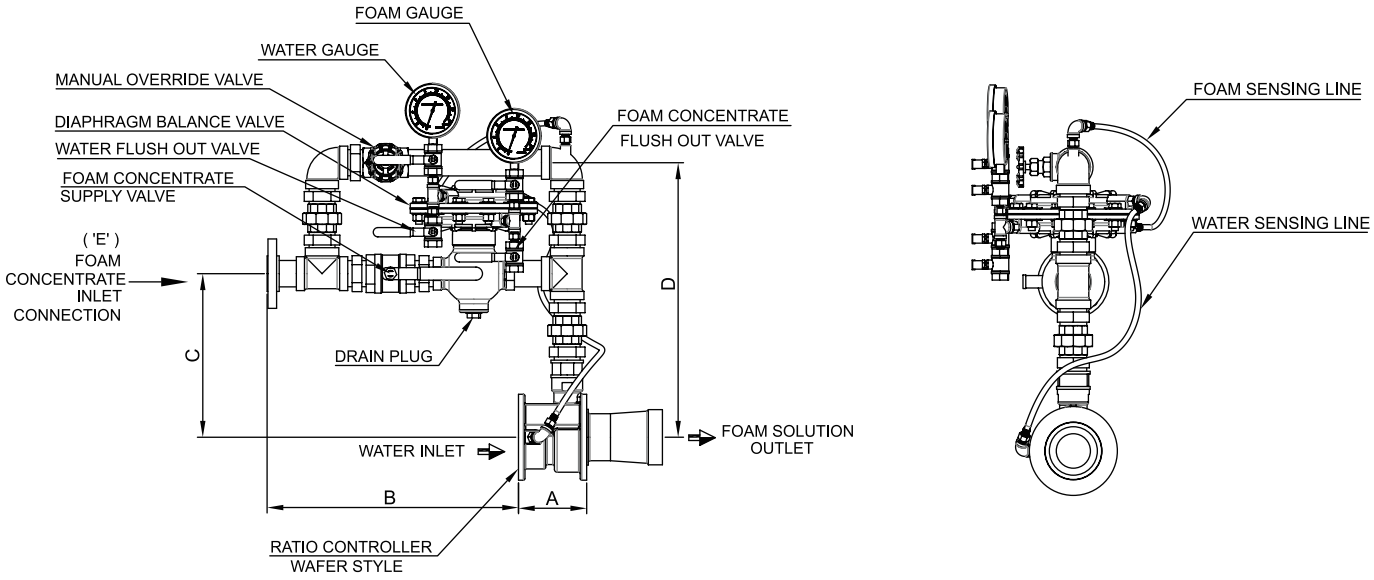
INSPECTION & MAINTENANCE

A qualified and trained person must commission the system. After a 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.

RATIO CONTROLLER FLOW RANGE

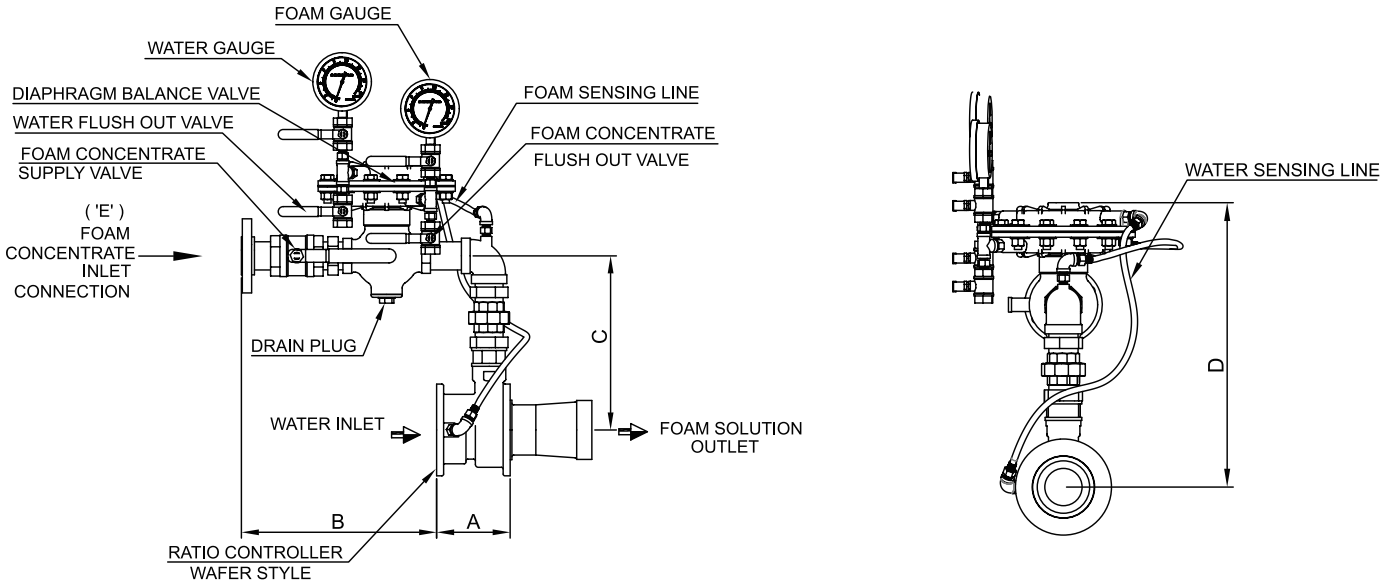
SIZE	FLOW RANGE IN LPM	
	AFFF 3%	ARAFFF 3/3%
80	260 to 3000	680 to 2900
100	650 to 6000	1400 to 5800
150	1200 to 12000	2750 to 11600

Inline Balance Pressure Proportioner With Manual Override



MODEL	Approximate Dimensions (in mm)				
	'A'	'B'	'C'	'D'	'E'
80 NB RCW	107.5	460	285	495	40 NB
100 NB RCW	126	450	300	505	40 NB
150 NB RCW	133	530	335	570	50 NB

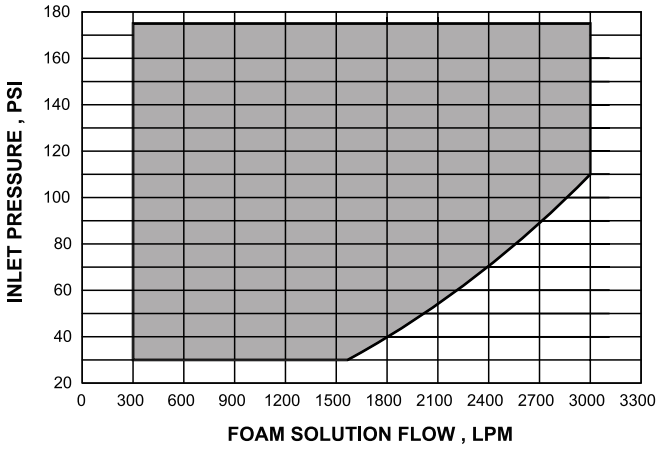
Inline Balance Pressure Proportioner With Manual Override



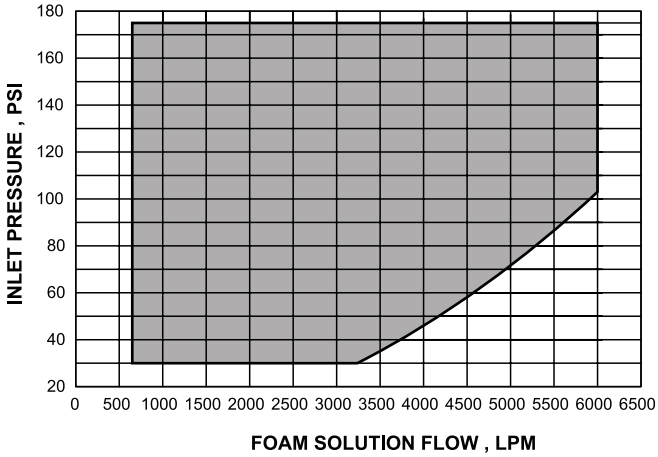
MODEL	Approximate Dimensions (in mm)				
	'A'	'B'	'C'	'D'	'E'
80 NB RCW	107.5	330	285	450	40NB
100 NB RCW	126	320	300	460	40NB
150 NB RCW	133	390	335	520	50NB

Inlet Pressure Vs Foam Solution Flow

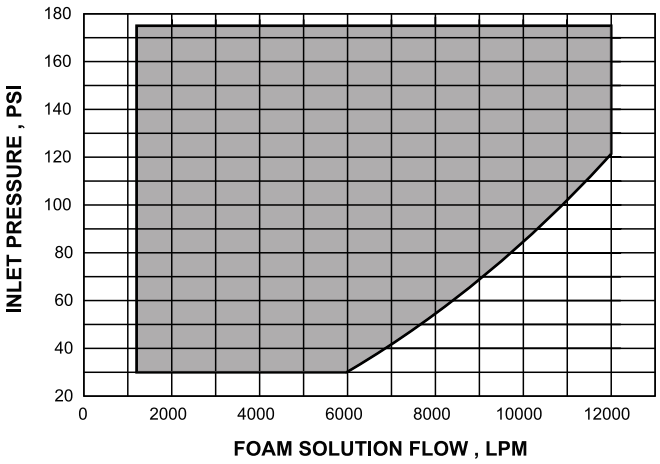
80NB



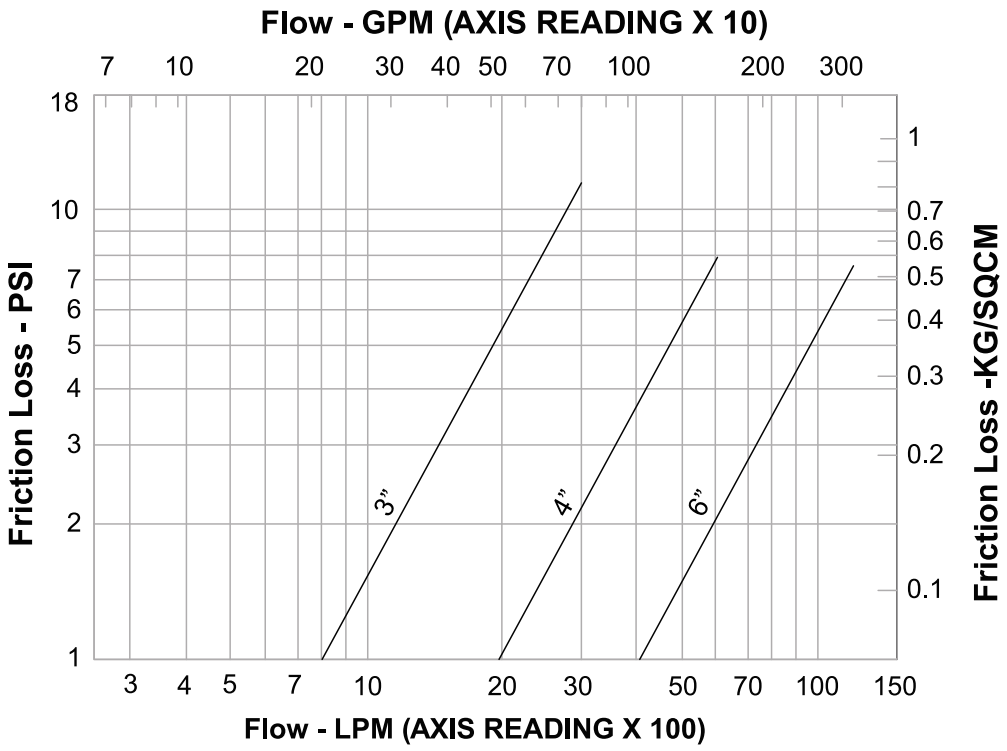
100NB



150NB



Flow Vs Pressure Loss



Typical Inline Balance Pressure Foam Proportioning System