

Wafer Type Balance Pressure Proportioners

Introduction

There are a number of implementations of balanced proportioning systems. Systems use a venturi device that is a variant of the line proportioner. The venturi produces only a moderate low-pressure zone and the pressure reduction is proportional to the flow through the proportioner. If the foam concentrate is supplied to the proportioner at the same pressure as the water and the proportioning rate is constant over a wide range of flows. Turn down ratios of 7 to 10 are possible with these systems.

The difference in the implementation of this proportioning method comes in the way the foam concentrate is supplied and how the pressure balance is maintained. Pumped systems use a foam concentrate pump to supply the foam concentrate and a double acting control valve to regulate the foam concentrate supply pressure to the water supply pressure. Pumped systems are commonly used for large installations where one unit can be used for many different foam systems.

Bladder tank systems use the water from the water supply to pressurise a bladder containing foam concentrate. The bladder tank system naturally balances the water and foam concentrate pressures. This method is relatively low cost but refilling the system is quite difficult.

The Orion BVW series balanced pressure proportioners are available in 80, 100, 150 and 200mm sizes. The standard proportioner is compact, economical and suited to most applications. These larger 'wafer' type proportioners compliment our range of smaller threaded proportioners.

the minimum Working pressure for any balanced pressure proportioner is 200 kPa. All balanced pressure proportioners must be installed with five (5) diameters of straight pipe of the same nominal diameter either side of the proportioner.

Materials of Construction

Standard proportioners are manufactured from gunmetal, alloy C83600 per AS 1565. We can also manufacture our proportioners from Aluminium Bronze for harsh environments.

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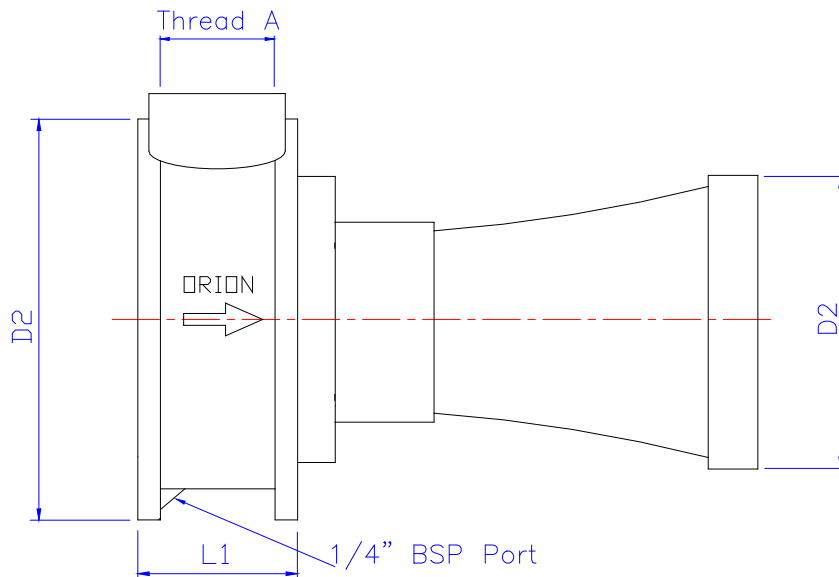
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Specifications



MODEL	D1 mm	D2 mm	L1 mm	Thread A mm	Weight kg
80mm BVW	76	134	65	1 1/4" BSP	5.9
100mm BVW	100	173	75	1 1/2" BSP	9.1
150mm BVW	152	219	85	2" BSP	18
200mm BVW	200	278	105	2 1/2" BSP	29

Proportioners are designed to fit between ANSI #150 flanges.

MODEL	Std Flow Range lpm	ARAFFF Flow Range lpm
80mm BVW	265 – 1,700	645 – 1,700
100mm BVW	570 – 4,540	1,210 – 4,540
150mm BVW	1,140 – 9,465	2,650 – 9,465
200mm BVW	3,230 – 18,925	5,300 – 18,925

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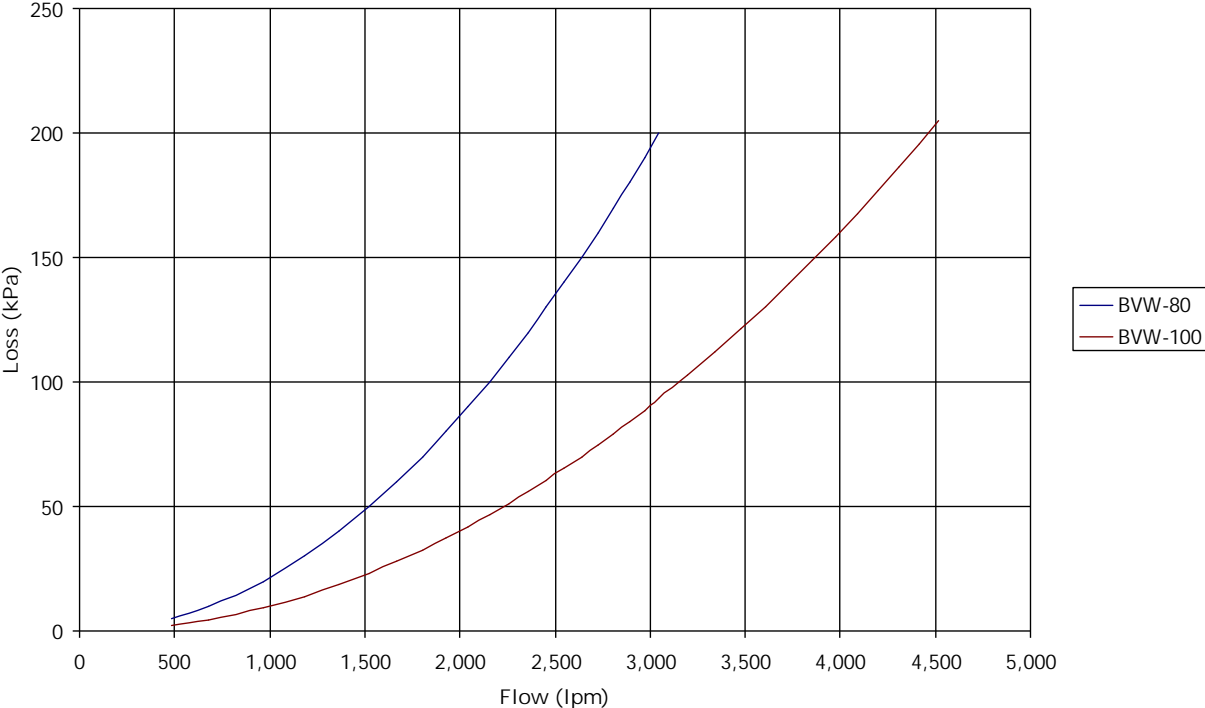
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Friction Loss Curves

BVW Friction Loss - 3% proportioning
BVW-80 & BVW-100



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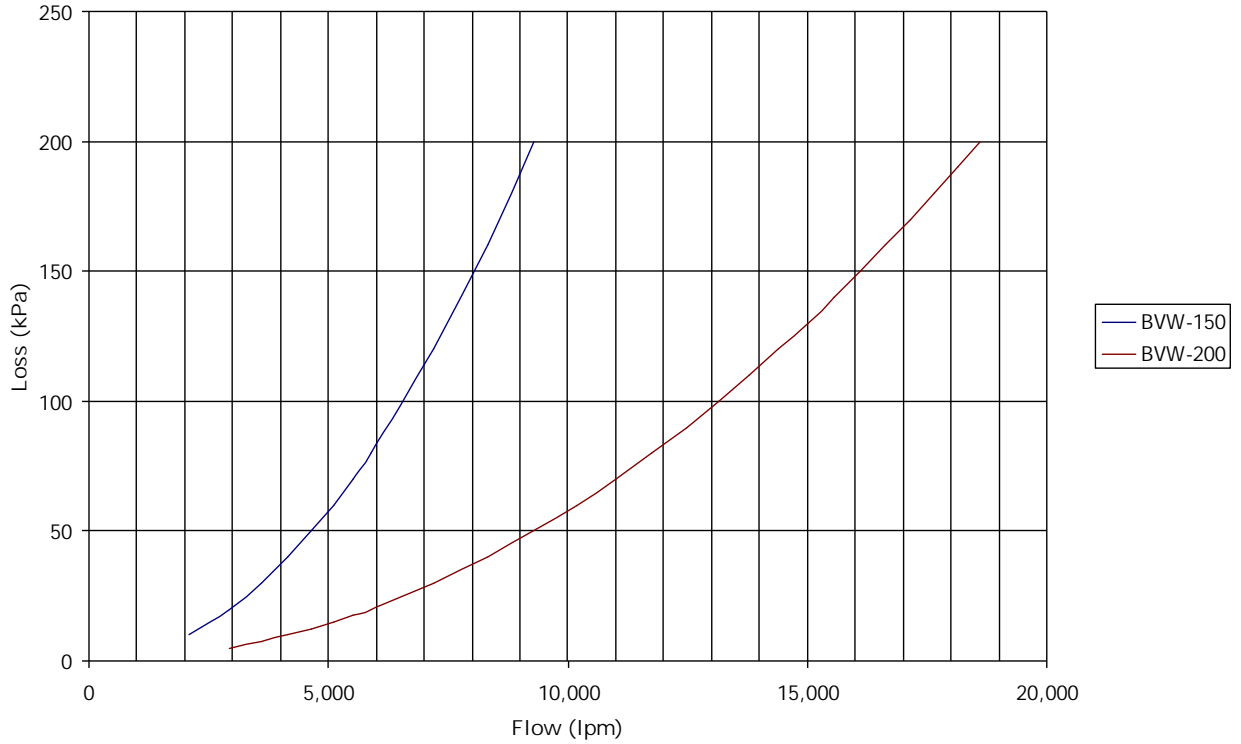
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BVW Friction Loss - 3% proportioning
BVW-150 & BVW-200



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