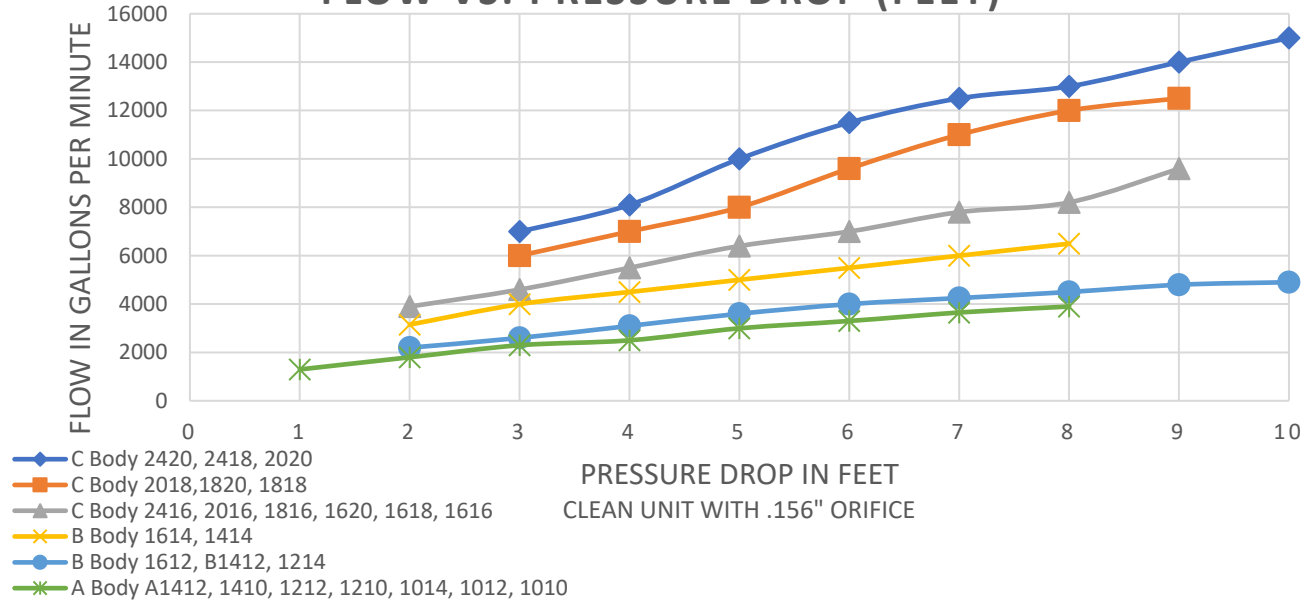


TYPICAL SPECIFICATION AND DESCRIPTION

Double Suction Diffusers manufactured by Flow Conditioning Corporation for symmetrical flow and separation of stream debris shall be installed at the inlet of double suction pumps as indicated on plans. Diffuser shall consist of elbow type ductile iron body with exit vane, integral flanged pump connection, flanged or grooved system connection, 1/4" gauge taps, blowdown connection and pipe support bosses located to assure no movement between pump and support boss. An "O" ring sealed removable cover shall permit

inspection and removal of double inlet bronze and stainless steel orifice cylinder/venturi assembly in a direction perpendicular to the axis of the pump inlet. Diffusers for closed system operation shall be equipped with a readily replaceable start-up strainer which can be removed after initial operation and preserved for future use. Orifice cylinder shall be selected to withstand a pressure differential equal to pump shutoff head. Clean unit pressure drop shall not exceed 5 ft. at flow corresponding to 10 f.p.s. in smaller diffuser nozzle.

FLOW VS. PRESSURE DROP (FEET)



APPLICATION AND INSTALLATION INSTRUCTIONS

GENERAL: The DOUBLE SUCTION DIFFUSER (DSD) is designed for piping connection to larger pumps. It provides, in one pipe fitting, debris separation, symmetrical inlet flow, supports the weight of attached piping, incorporates an elbow, and is available with straight or reducing, flanged or grooved inlet connection. Integral outlet flange assures no relative movement between pump suction and point of pipe support. Orifice cylinder arrangement is perpendicular to the outlet, (pump suction axis) to permit cylinder removal with narrow aisles between pumps. Cylinder is designed to resist large pressure differential such as can occur when clogged.

VERTICAL ELBOW: DSD's are designed for use as an elbow turning in a vertical plane into either a vertical or horizontal double or single suction pump. The dual cover Model is required only if cylinder removal is required from the R.H. end. (See DSD drawing).

HORIZONTAL ELBOW: DSD's are designed for the use as an elbow turning in a horizontal plane into either a vertical or horizontal double or single action pump. The dual cover Model is required only if cylinder removal is required from the R.H. end. (See DSD drawing). 1/4" NPT BOTTOM DRAIN in R.H. cover of "B" units drains cover.

SERVICE: Increased gauge pressure drop from inlet to outlet (at the same flow) normally indicates clogging. Debris is removed from the DSD by periodic blowdown or removal and inspection of the cylinder assembly. Gasketing of the cover normally will permit

several removals without replacement of the O-ring. When O-ring replacement is required, the groove should be cleaned and coated with petroleum jelly or other compatible lubricant.

PIPING: Raised face flanges of DSD's are designed for use only with low strength bolts with yield equivalent to A307Gr B, and resilient gasketing for leak free seating at rated pressures in compliance with ANSI B16.42. A NPT piping connection is provided for valved blowdown and drain. Threaded inlet and outlet gauge connections are provided on DSD nozzles for pressure measurement. Bosses proportioned to the fit standard 1-1/4" steel pipe are provided on DSD body in reinforced locations for support of the DSD and attaching piping. A threaded adjustable pipe size support foot is supplied with each DSD.

START-UP SCREEN: A removable and replaceable copper fine mesh screen is firmly clamped inside orifice cylinder for removal of initial construction debris. Normal operation requires removal of this screen within 30 days after initial operation for closed systems. Open systems such as cooling towers, which may continue to accumulate debris, are normally operated without the screen. Screens may be readily reinstalled for system cleaning in the event of debris accumulation as with additional construction phases. Caution should be exercised in reassembling after screen removal to assure tightness of threads and adjustment of positioning stops for axial and rotation security of the cylinder assembly.



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