

HYDROPAD EXPANSION VESSELS



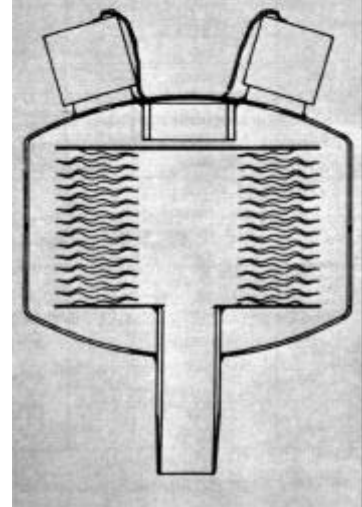
CONSTRUCTION DETAILS

The Hydropad is a pressure vessel containing an inner expandable and collapsible chamber or bellows assembly. A suitable connection is provided to permit liquid displaced from the system to enter the inside of the bellows assembly. Inside the pressure vessel and surrounding the bellows assembly, a suitable gas, usually nitrogen, is sealed at a pressure equal to line pressure so that under normal flowing conditions the internal and external pressures on the bellows unit are equal. The housing is designed to allow for the expansion of the bellows within the shell as it absorbs surges from the main flow line, thus preventing excessive pressure and line shock caused by sudden closure of valves, cessation of pumping, pulsations introduced by reciprocating pumps, or thermal expansion of the system fluid.

Screwed, flanged or welded connections are available.

All metal, all welded construction, using various steel and stainless steel alloys and other metals as needed to meet system requirements avoids the faults of units using rubber and other compounds in the flexible member. Standard Hydropads with the hydraulic stop are suitable for temperature ranges from $-40\text{ }^{\circ}\text{C}$ to $+110\text{ }^{\circ}\text{C}$. Pressures to 200 bar; displacement volumes to more than 800 litres.; for almost any fluid such as: water, hydraulic fluids, all hydrocarbons having viscosities below 10,000 s.s.u., liquified gases, and a large number of corrosive chemical solutions are possible.

All Hydropads are designed and welded to meet ASME unfired pressure vessel codes. ASME code stamping is available. The attention to design and fabrication details, together with the use of inert gas as the precharging medium, assures maximum safety, particularly in systems handling inflammable or explosive fluids.



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