

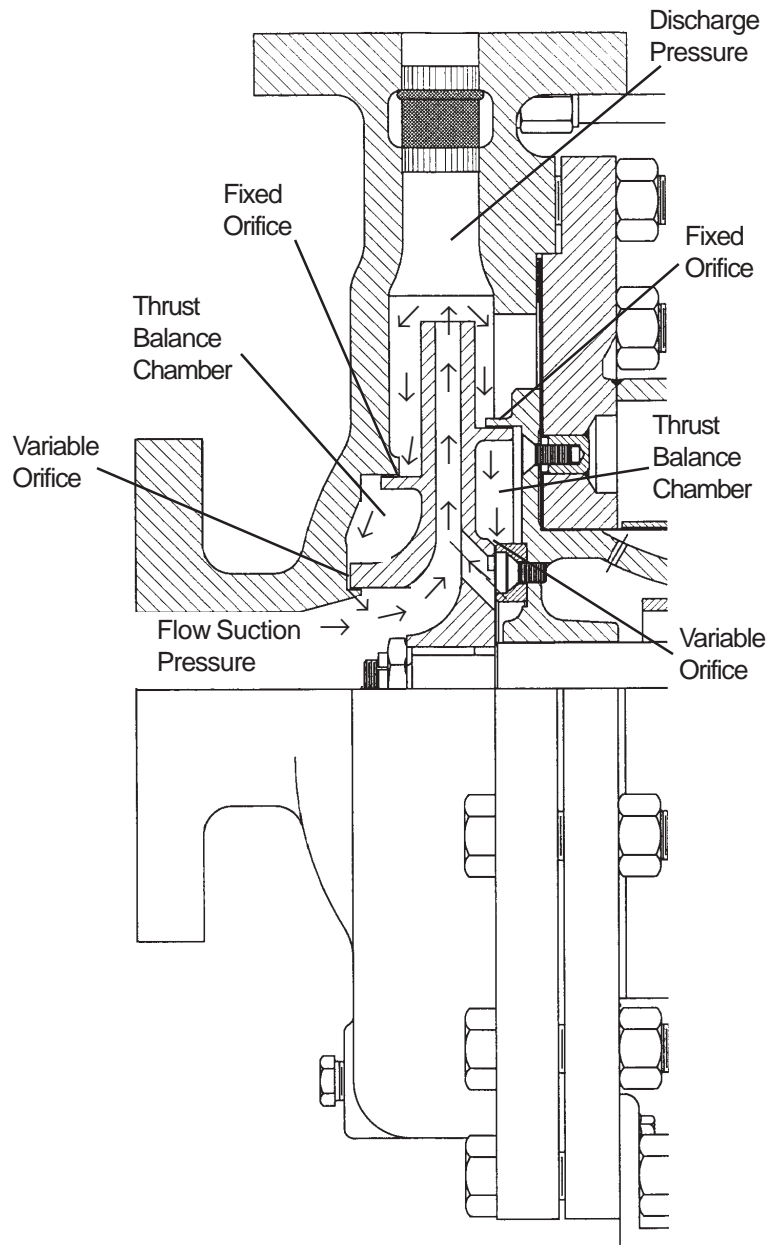
ENGINEERING DATA SHEET

<i>Hydraulic Thrust Balance (Double Ring)</i>		
Date	Supersedes	No.
03/25/99	06/25/93	19E

The diagram illustrates the axial hydraulic thrust balance of Chempumps having a double ring thrust balance system. This design consists of two fixed orifices and two variable orifices which form thrust balance chambers on each side of the impeller. The impeller is free to move axially between the variable orifice faces. This movement controls the amount of recirculation to the pump suction and balances axial thrust by regulating the pressures in the thrust balance chambers on both sides of the impeller.

The schematic drawing illustrates the flow paths between discharge and suction pressure. The areas of the thrust balance chambers are such that even with maximum axial thrust forces applied, the impeller will not make contact with either thrust surfaces.

Thrust surfaces and/or thrust washers are designed to minimize damage in the event of dry running, cavitation, or process upsets which can cause axial contact of the rotary elements. They are not designed to take full thrust forces continually.



Double Ring Thrust Balance