



# CORNELL PUMP COMPANY

## Double Volute System

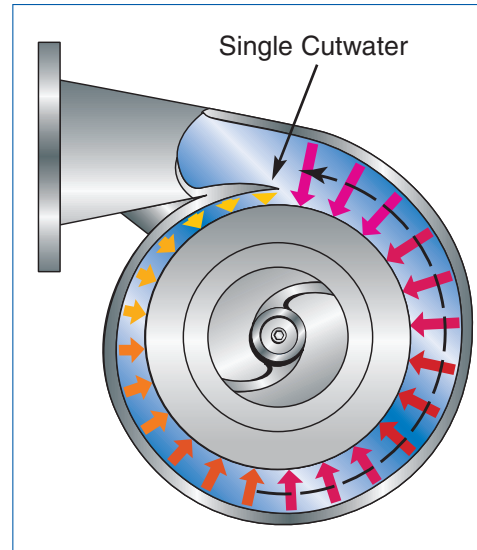
### DOUBLE VOLUTE SYSTEM

To minimize the radial thrust loads common with high capacity, high head centrifugal pumps, Cornell has developed a Double Volute System (DVS) design. With this feature the radial forces around the impeller are balanced, eliminating shaft flexing and fatigue. This greatly extends the life of the packing, wear rings, and bearings.

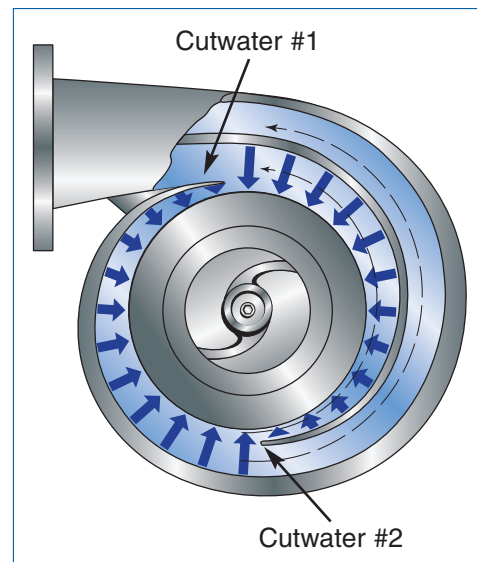
Cornell's double volute system, with our statically and dynamically balanced enclosed impellers and superior hydraulic design, enables our single stage, end-suction centrifugal pumps to effectively and efficiently meet high pressure, high volume, requirements.

On single volute pumps, increasing pressure acts against the impeller area creating unbalanced radial forces. In contrast, the double volute system effectively balances these forces by dividing the flow into two comparable parts with two cutwaters located directly across from each other. The resulting two opposing forces, balance each other and hold the shaft in proper alignment. Thus the combined radial forces remain low throughout the operating range of the pump regardless of load variance, shut-off or run-out conditions.

Cornell's "DVS" design keeps the shaft from breaking; extends the life of the packing, mechanical seals, wear rings, and bearings; and helps maintains high hydraulic efficiency.

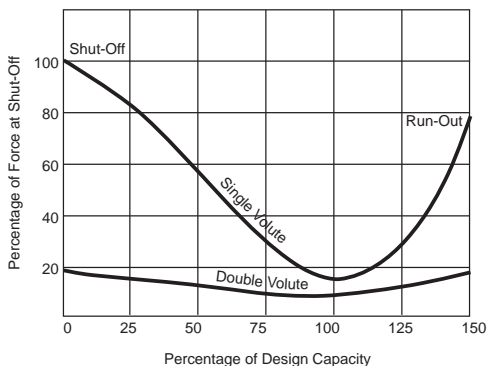


Conventional Single Volute  
(unbalanced radial thrust causes shaft deflection)



Cornell Double Volute  
(radial thrust is offset and balanced by the double volute design)

### RADIAL FORCE



CERTIFIED TO ISO 9001:2000

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