APKD
Vertical Double-Suction, Double-Casing Pump

Thrust Bearing (Not Shown)
Sized to withstand the total hydraulic thrust as well as the rotor weight. Located in the motor (NEMA) or pump (IEC)

***Seal Chamber** is designed to accommodate cartridge type mechanical seal. Plan 13 provides continuous venting*

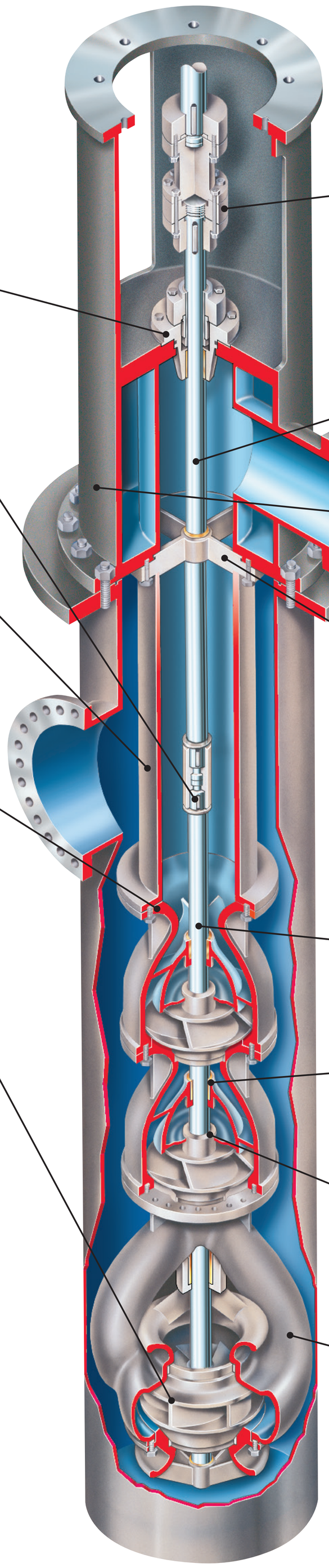
***Keyed Lineshaft Couplings** positively lock sections of lineshaft together*

***Flanged Column Assembly** utilizes precision rabbet fits to ensure proper alignment of each section. Provides transition from bowl assembly to discharge*

***O-Rings** in intermediate stages seal against interstage leakage, prevent premature failure of flange surface due to "wire drawing"*

***Double-Suction First-Stage Impeller** reduces NPSH and meets Hydraulic Institute standards for suction-specific speed, thereby reducing the possibility of cavitation over a wide operating range*

Suction Can Drain (Optional, Not Shown)
Allows the suction can to be drained of pumping fluid prior to removing the pump



Solid Shaft Motor
Shaft extension allows motor to be coupled to pump

***Rigid, Adjustable Flanged Coupling** provides the proper impeller clearance adjustment. A spacer coupling allows access to the mechanical seal without removing the motor*

***Shaft** is precision machined for trueness, to minimize shaft vibration and maximize bearing life*

***Discharge Head** is designed so that the combined natural frequency of the pump and motor are safely removed from the operating speed range of the pump*

***Bearing Retainers** provide shaft support in column assembly. Retainers are spaced between column sections*

***Open Lineshaft Construction** allows the lineshaft bearings to be lubricated by the pumped fluid*

***Large Shafts**, with low shaft stress levels, mean less shaft whip, longer bearing and ring life*

***Bearings** available in carbon or bronze throughout, have inherent self-lubricating properties, last longer and are more durable in two-phase liquid operations*

***Keyed Impellers** with lock collars provide method of fastening impeller to shaft with a positive locking design*

***Twin Volute** design minimizes radial loads, extending radial bearing life*

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