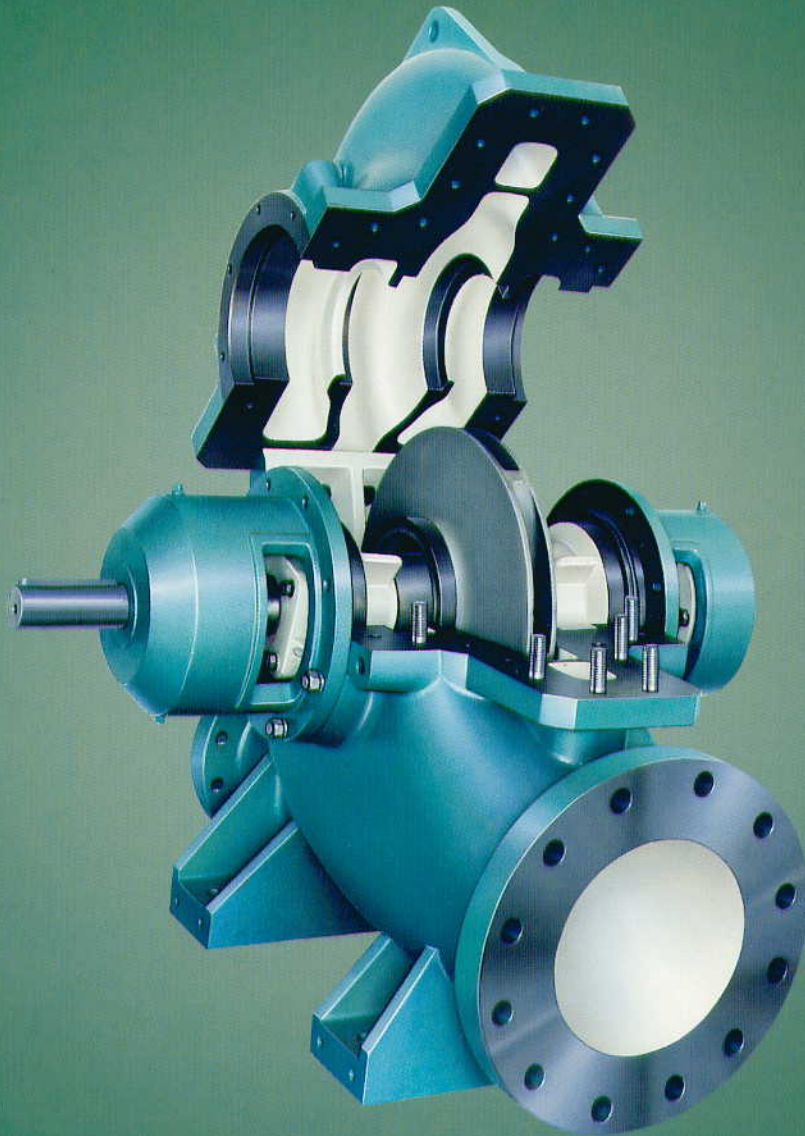


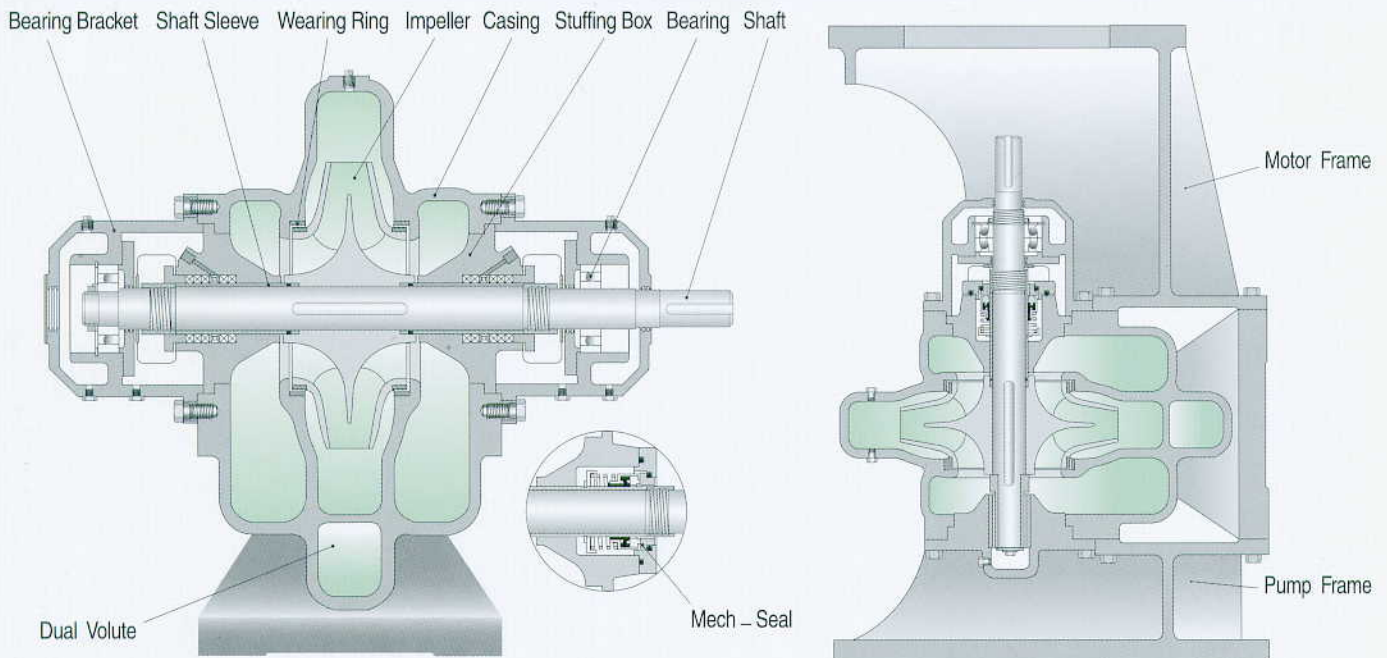
Acme Pumps

HVS Horizontal Split Case
Centrifugal Pumps



16 or 20 Bar Working Pressure Available in Cast Iron, Bronze, Cast Steel or Stainless Steel
ANSI, DIN, JIS, or PN Standard Flanges Suitable for Horizontal or Vertical Mounting

Features



Casing

Suction and discharge flanges available in ANSI, DIN, JIS, or PN Standard. They are integrally cast into lower half casing. This allows for removal of rotating assembly without disturbing the piping system. Dual volute design available in selected sizes, which eliminates radial force acting on shaft. This provides extended seal and bearing life.

Impeller

Dynamically and hydraulically balanced impeller designed using the latest CFD technique ensures high efficiency and quiet operation throughout the entire operation range.

Shaft

Oversize shaft with short shaft span between bearings minimizes shaft deflection and extends the seal and bearing life.

Casing & Impeller Wear Rings

Replaceable wear rings protect pump casing and impeller from wear. They can be replaced at relatively low cost to maintain proper running clearance and high operating efficiency.

Shaft Sleeve

Replaceable shaft sleeves in different materials are available for all ACME HVS pumps to protect the shaft against corrosion and wear.

Stuffing Box

ACME unique stuffing box design permits the use of packing or mechanical seal. Seal maintenance can be done without disturbing the pump casing.

Bearings

Grease or oil-lubricated bearings with minimum 100,000 Hrs L-10 rated bearing life. Double row thrust bearings and seal-for-life grease bearings are also available.

Materials of Construction

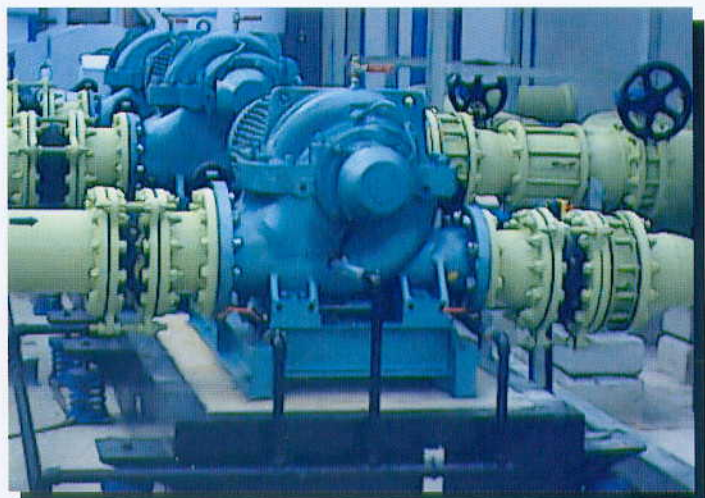
Parts	Standard Fitted	Stainless Steel Fitted	All Bronze Fitted
Casing	Cast Iron	Stainless Steel	Bronze
Casing Wear Ring	Cast Iron	Stainless Steel	Bronze
Casing Gasket	Fiber	Teflon or Fiber	Teflon or Fiber
Impeller	Stainless steel	Stainless Steel	Bronze
Impeller Ring (Optional)	Stainless Steel	Stainless Steel	Bronze
Impeller key	Stainless Steel	Stainless Steel	Stainless Steel
Shaft Sleeve	Stainless Steel	Stainless Steel	Stainless Steel
Shaft Sleeve Lock Nut	Stainless Steel	Stainless Steel	Stainless Steel
Seal Cage	ABS	ABS	ABS
Packing	Graphite Asb	Teflon	Graphite Asb
Packing Gland	Cast Iron	Stainless Steel	Bronze
Mechanical Seal Gland	Cast Iron	Stainless Steel	Bronze
Mechanical Seal	Carbon Vs Ceramic	Carbon Vs Ceramic	Carbon Vs Ceramic
Bearing Lock Nut & Washer	Steel	Steel	Steel
Bearing Bracket	Cast Iron	Cast Iron	Cast Iron
Bearing Cover	Cast Iron	Cast Iron	Cast Iron

Stainless Steel Available in 304, 316 and Duplex

Other Materials include Aluminium Bronze, Steel, Monel, Hastelloy



Typical industries served.
process, public works, building services,
petroleum, fire protection, phamaceuticals,
food, steel, agriculture, sugar, pipe line



Typical Specifications

1. Casing

The casing shall be of the volute type and designed to produce a smooth flow with gradual changes in velocity. The casing shall be split on the horizontal center line with the suction and discharge nozzles and casing feet cast integral with the lower casing half. The interior of the pump shall be easily inspected by removing the upper half of the casing. This shall be done without disturbing the pipe connections or pump alignment. The flanges between the halves will be sealed by a pre-cut gasket. The upper and lower halves of the casing shall be accurately located by using straight dowel pins to eliminate mismatch between the upper and lower halves which would otherwise impair both hydraulic and mechanical performance. The casing shall be hydro-tested to one and one half times the working pressure.

2. Impeller

The impeller shall be of a double-suction enclosed type made of bronze or stainless steel using a unique precision casting technique. The surface finish of the waterway should be Ra 25 or better to ensure smooth flow and high efficiency. It shall be hydraulically balanced in its inherent design. The impeller shall be firmly secured to the shaft by a key positioned by shaft sleeves and both locked in place by shaft sleeve lock nuts. The complete pump rotor shall be dynamically balanced.

3. Renewable Casing & Impeller Rings

Renewable casing rings shall be locked in place and protected against rotation by Stainless Steel pins. Impeller Rings – Securely held impeller rings can be supplied as an option.

4. Stuffing Box

The stuffing box shall be separated from the pump casing and accurately machined and fitted to the casing by the bearing bracket.

5. Shaft Sleeve

Renewable shaft sleeves made of stainless steel which extend through the stuffing box shall be provided. They shall be securely keyed and held in place with shaft nuts incorporating set screws for locking purposes. Shaft sleeves shall be provided and sealed with "O" rings at impeller end.

6. Shaft

The shaft shall be stainless steel, ground to accurate dimensions and polished to a smooth surface. The shaft shall have the same nominal diameter from one shaft sleeve lock nut to another to minimize fatigue failure due to stress concentration. The shaft sleeves shall protect the shaft at the stuffing boxes. The sleeves shall be secured in lateral position with external shaft nuts. The impeller keys shall extend into the hub of the shaft sleeves to prevent slippage between the shaft and the sleeves. Sealing to protect against leakage under the shaft sleeve shall be achieved by the use of "O" Ring type seals, located at the keyed end between the sleeve and the shaft. Shaft shall be adequately sized and designed to minimize deflection. The maximum run-out of shaft at stuffing box face shall not exceed 0.05mm at shut-off.

7. Bearings

The bearings shall be single-rowed, deep-grooved type ball bearings. They shall be designed and sized for at least 300,000 hours calculated minimum L10 rated bearing life at shut-off. Each bearing shall be capable of carrying both line and thrust type loads. The thrust bearings shall be securely held to the shaft by a bearing lock nut and washer.

8. Bearing Brackets

The bearing brackets shall be separated from the pump casing and accurately machined and doweled to the casing. Oil or grease lubrication shall be provided. Grease gun fittings shall be standard on grease-lubricated pumps and a constant-level oiler shall be standard on oil lubricated pumps. Conversion from grease to oil shall be easily accomplished by simply removing the grease fittings and installing a constant-level oiler and vent. Pump design shall allow bearing to be removed without disturbing upper casing for inspection and replacement of bearings, mechanical seals and shaft sleeves.

9. Mechanical Seals

Stuffing boxes shall be designed to accommodate mechanical seals.

10. Casing Feet

The casing feet shall be integrally cast with the lower casing and be immediately adjacent to suction and discharge flanges in order to transmit any pipe strain loads to the base and foundation.

Coverage Charts

