



FLO FAB

HORIZONTAL SPLIT CASE PUMP

*SINGLE STAGE, DOUBLE SUCTION
TYPE "AE" "4000 SERIES"*

SPECIFICATIONS

1. General: The pumps shall be of the single stage, double suction, horizontal split case design, split on the horizontal axis and shall be bronze filled construction. Suction and discharge connections shall be located on opposite sides of the lower half casing. Allowing removal of the rotating element without disturbing the system piping connections. The pump (s) shall be a FLO FAB Pump AE design. Each pump shall be designed to deliver a flow of _____ gpm at a total head of _____ feet at an efficiency of _____ % at design condition.

2. Casings: The pump casing material shall be a minimum of class 35 cast iron. Water passage-ways shall be smooth to permit maximum working pressure under which the pump could operate at design speed. The suction flange shall be drilled (125 Lb) (250Lb) ANSI. The discharge flange shall be drilled (125 Lb) (250 Lb) ANSI.

The bearing brackets shall be cast as an integral part of the lower casing and have removable bracket caps. The bearing housing shall be doweled for location and anti-rotation. The pump feet shall also be cast as an integral part of the lower casing.

Bronze renewable casing rings shall be furnished, doweled and shouldered in the casing. Ring dowels shall be located in slots on the split surface of the lower casing.

3. Impeller: The impeller shall be of one piece cast bronze, double suction type. The impeller shall be balanced, keyed to the shaft and fixed in an axial position by threaded split sleeves. The impeller skirt shall be grooved and fit with close tolerances to the casing ring to permit a minimum of recirculation between the impeller and

the casing ring for maximum efficiency. (Optional: Renewable bronze impeller rings shall be struck on the impeller and locked in place with stainless steel set screws. The impeller rings shall be grooved and fit with close tolerances to the casing ring for maximum efficiency.)

4. Stuffing Boxes:
Packing: The stuffing boxes shall hold a minimum of five rings of non-asbestos packing. The bronze gland shall be split in two halves, to facilitate removal for repacking. Gland bolts shall be of the swing type made of steel with 18-8 stainless steel nuts.

Mechanical Seal: Sealing of the pump liquid cavity shall be with a face type mechanical seal with Ni-Resist stationary seal, carbon sealing washer, Buna rubber flexible members, stainless steel, metal parts and spring. Seal to be rated for 225 Deg F, (107 DegC) @ 150 psig (10.34 bar) maximum. Seal shall be mounted over a bronze shaft sleeve.

5. Shaft and Shaft Sleeve: The shaft shall be carbon steel, adequately sized for the loads transmitted. Shaft deflection shall not exceed .002 inches at the face of the stuffing box when operating between 95% and 105% of capacity at best efficiency of the pump. S maximum 60 Hz, speed and with full diameter impeller. The shaft shall be protected through the stuffing box by means of bronze shaft sleeves and they shall be threaded against shaft rotation. The sleeves shall be sealed with "O" rings at the inside diameter to eliminate leakage between the shaft and sleeve. (Optional: Shaft shall be positively sealed against pumped fluid

by means of specially machined shaft sleeve and impeller with sockets for use with "O" ring seals against impeller hubs.) Shaft sleeves shall extend beyond the packing glands for mechanical seal flanges.)

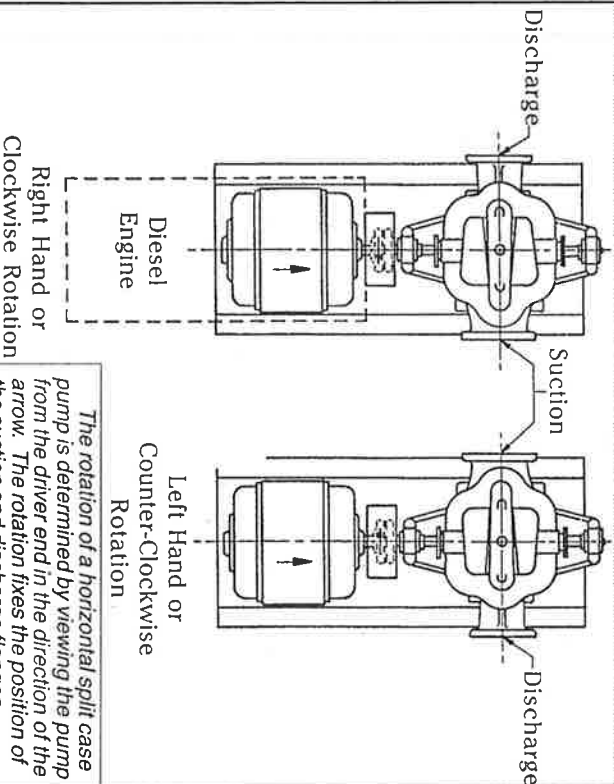
6. Bearings: Bearing shall be single row, deep groove ball type, the inboard bearing shall be arranged for radial load only. The outboard bearing shall be arranged for both radial and axial loads. Both bearings shall be grease lubricated with grease flush through the bearing housing (Optional: oil lubed). Bearings shall be designed for an average life of 100,000 hours. Bearings shall be protected from liquid entry

by means of rubber flingers mounted on the shaft and lip seals in the bearing housings. Outboard bearing cover shall have a plugged opening for tachometer connection. Bearing housing lubrication design must be capable of being changed from grease to oil lubrication type without replacement of bearing housing or the lower pump casing. The outboard bearing shall have retaining ring retention.

7. Base: The pump and driver shall be mounted on a common steel base (with optional drip trim). Pump and driver unit shall be aligned and bolted in place prior to factory shipment. Final alignment must be performed at the jobsite in accordance with the standards of the Hydraulic Institute and the pump installation, operation and maintenance instructions. Base is to be grouted to eliminate vibration.

8. Couplings: A flexible coupling shall be provided between the pump and driver. A coupling guard shall be furnished over the coupling for protection.

DIRECTION OF ROTATION



The rotation of a horizontal split case pump is determined by viewing the pump from the driver end in the direction of the arrow. The rotation fixes the position of the suction and discharge flanges. For pumps having dual drive such as engine and electric motor, the rotation is specified from the engine end of the unit.

Subject to change without notice.

TYPICAL CYCLONE SEPARATOR ARRANGEMENT

