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## Axial Flow Propeller Pumps 8200 Series

Capacities: 500 to 1,000,000 GPM

Heads: 2 to 80 feet

**Applications** ... Fairbanks Morse vertical axial flow propeller pumps are of rugged, heavy-duty construction designed to successfully operate in a multitude of applications requiring the movement of a high volume of water at a low discharge pressure. They are used extensively for pumping water from sources including lakes, cooling ponds, tanks, rivers and oceans. These applications include raw water intake, dewatering, storm water removal, and flood control. Fairbanks Morse vertical axial flow propeller pump applications are found in a variety of markets including: urban and rural municipal water, government, industrial and irrigation, and more.

The successful application of vertical axial flow propeller pumps requires the consideration of many elements. In addition to knowing the capacity and discharge head requirements, other factors which need to be evaluated include:

- Total pump thrust
- Net Positive Suction Head Available (NPSHA) and submergence
- Capacity operating range
- Horsepower required throughout the pump's operating range
- Sump requirements

Other considerations include:

- Parameters of the liquid being pumped
- Allowable solid size
- Type of lineshaft lubrication
- Type of lineshaft sealing
- Elevation
- Driver requirements
- Material of construction

**Features** ... Parameters of vertical pumping applications require the units be available in a variety of pumping configurations to meet user needs. Fairbanks Morse meets these demands by providing pump bowls from 8" to 152" in diameter. Propeller bowls can be single-stage or double-staged in series to produce the necessary discharge pressures.

Material of construction include cast iron, bronze, and stainless steel, or other machinable materials. Bowl wear liners are available to provide a renewable surface.

Open lineshafts allow the product to lubricate the shaft bearings. Enclosed lineshafts can provide



external water flush, oil, or grease-bearing lubrication. Column connections are Ranged for ease of maintenance.

Drive shafts extending through the discharge head can be sealed using either packing or mechanical seals. A wide range of mechanical seal designs are available along with an assortment of packing box designs. Fairbanks Morse also offers an array of discharge head designs, including cast iron or fabricated steel construction, above- or below-ground discharge, and flanged or plain-end discharge connections.

Vertical axial flow propeller pumps can be driven by vertical hollow-shaft motors, vertical solid-shaft motors, or through right-angle gears by an internal combustion engine, steam turbine, or horizontal motors. When vertical hollow-shaft drivers are used, impeller-to-bowl clearances can be maintained with an adjusting nut located at the top of the driver. When vertical solid-shaft drivers are utilized, impeller clearance is regulated with an adjustable coupling.

**Our special services** ... at Fairbanks Morse we will design, research, test and manufacture vertical axial flow propeller pumps for special requirements. In many cases our standard pumps can be easily modified to meet these special requirements.

**Our quality** ... begins with total source control coupled with our investment in and commitment to highly specialized, computerized machinery. Fairbanks Morse manufactures vertical axial flow propeller pumps that must meet the exacting standard of our design engineers.

**Our commitment** ... at Fairbanks Morse is based on our longevity, distinctive products, market leadership, and customer service and is the direct result of the quality and dedication of our personnel. Our vertical axial flow propeller pumps are machined, built, and tested by our skilled shop personnel who average over 23 years of experience. Working as a team, our people continually explore new ways to better serve our customers. Product quality, dependability, and innovation are all part of the Fairbanks Morse commitment to excellence.