

Lineshaft Pumps

Axial & Mixed-Flow Propeller Pumps



Heads up to 60ft./18.3M

Flows up to 800,000 GPM/50.4 M³/S

The Power to Move Water® Since 1926
mwipumps.com





MWI axial and mixed flow lineshaft pumps are used in critical applications where failure is not an option. Manufactured from corrosion-resistant steel, stainless steel, or cast iron, these pumps are efficient and durable, making them the dependable solution for water management, flood control, drainage, irrigation, and stormwater management.

Where MWI Pumps are Used



MUNICIPAL

- Flood control & storm water drainage
- Emergency pumping
- River & stream bypass



MINES & QUARRIES

- Open pit & underground drainage
- Process water supply & transfer
- Aggregate wash down



INDUSTRIAL

- Large-volume processes
- Temporary raw water
- Water management



MARINE

- Drydock
- Water transfer & waterway diversions
- Moving large volumes of water



AGRICULTURE

- Irrigation
- Aquaculture
- Flood control

Features & Services

Versatile, Robust & Reliable

MWI Lineshaft Pumps are available in 8-inch – 96-inch (0.2 m – 2.44 m) diameters with capacities up to 800,000 GPM (50.4 M³/S). These traditional style pumps use a long shaft to connect the impeller to the drive and are typically driven by diesel or electric motors that can be connected using a belt and pulley, gear, or direct coupling. Available with low-head axial flow and medium head mixed flow impellers their dimensions depend on installation requirements. MWI offers complete engineering assistance and custom job site specifications as this pump can be installed in various configurations.



Features & Benefits

SIMPLE & RELIABLE

One-piece factory-aligned construction with highly efficient hydraulic design

SIZES & CAPACITIES

Available in 8" – 96" (0.2 M – 2.44 M) diameters with capacities up to 800,000 GPM (50.4 M³/S)

FULLY CUSTOMIZABLE

Experienced engineers design units to fit your site needs

MULTIPLE ORIENTATIONS

Installation options include vertical and angled designs with welded or jointed column options. As well as our uniquely designed elbow configuration

HIGHEST HYDRAULIC EFFICIENCY

ISO 9001: 2015 Certified - Designed to maintain the highest possible efficiency⁽¹⁾

BUILT TOUGH FOR LONG LIFE

Durable, heavy-duty internal parts reduce corrosion and increase lifespan of the unit

WIDE ARRAY OF MATERIALS

Many grades of materials available for construction, including super-duplex stainless steel - designed to match the environment and pumped media

QUICK PARTS & SERVICE AVAILABLE

USA made, standardized spare parts and quick response means less downtime when service is needed

LESS MAINTENANCE REQUIRED

Convenient lubrication port and vent plus a unique stepped bearings design allows for quick replacement without full disassembly

DRIVE UNIT CONFIGURATIONS

Electric, diesel or natural gas to provide you with the most reliable and cost-effective situation

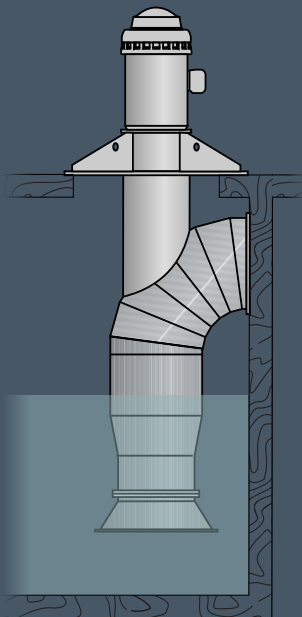
FIELD SUPPORT & IN-HOUSE REPAIR FACILITY IF NEEDED

⁽¹⁾ Highest efficiency via the pump bowl and for higher-head applications via the mixed-flow bowl

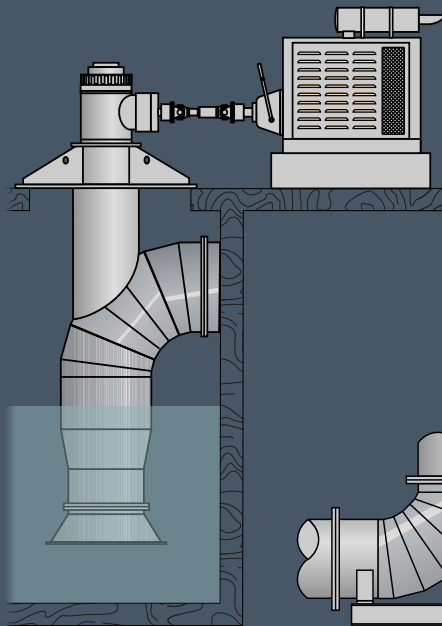
Installations & Configurations

Customized to suit your needs

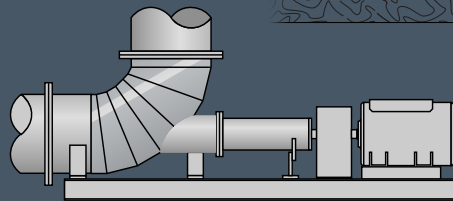
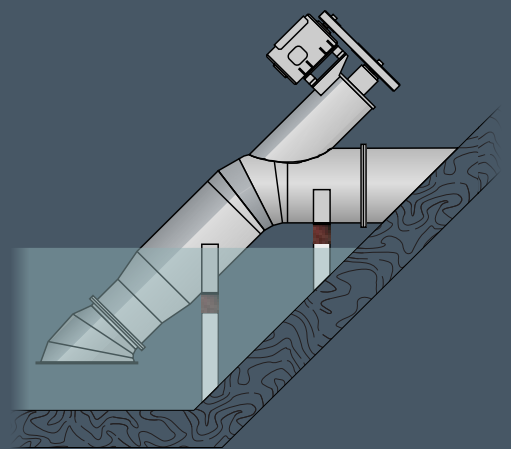
**VERTICAL WITH DIRECT
DRIVE ELECTRIC MOTOR**



**VERTICAL WITH RIGHT ANGLE
GEAR - DIESEL OR ELECTRIC DRIVE**



**ANGLED WITH BELT DRIVE
& ELECTRIC MOTOR**



**ELBOW WITH
DIRECT DRIVE
ELECTRIC MOTOR**

MWI offers various configurations for lineshaft pumps. Vertical and Angle pumps can be driven with direct drive motors (diesel or electric), right angle gears, or belt and pulley. Elbow pumps can be driven with direct drives (diesel or electric). Consult our engineers for the correct solution to your pumping requirements.

Design Advantages

SHAFT & BEARINGS

Shafts are made from high tensile strength polished alloy steel that is stress relieved, turned, and ground. The lower areas of the shaft that are in contact with bearings or seals are inlaid with hardened stainless steel. The shaft can be product lubricated, or enclosed in a sealed oil or grease filled tube. The tube contains bearings, spaced to ensure proper alignment along the entire rotating axis of the shaft.

COLUMN & ELBOW

The discharge column and elbow are manufactured from ASTM A36 steel with A242, 304 and 316 options available. The discharge elbow has multiple segments to allow for a smooth and efficient flow. The elbow terminates with a flange and is available with a plain or grooved end to accommodate compression type couplings.

PUMP BOWL

The pump bowl is designed to maintain the highest possible hydraulic efficiency. Because the bowl absorbs much of the hydraulic and mechanical stress, its heavy-duty design features ASTM A36 steel. Bowls can also be manufactured of COR-TEN A242, 304 and 316 steel.

ONE-PIECE PUMP

Simplicity of design is the hallmark of the MWI one-piece pump. While using the same high-efficiency hydraulic design common to all MWI pumps, this pump features major components permanently welded together to form a rigid, factory aligned unit. Critical alignment of the bearings and shaft is maintained by support spiders welded to the pump column and hood. The unique stepped design of the bearings allows easy replacement with minimal disassembly.

JOINTED PUMP

The jointed pump allows for complete disassembly of most pump components. The pump bowl is flanged to the column. Column sections can be manufactured in various flanged lengths for large pump installation in low clearance areas.

For medium head applications the mixed flow bowl provides the highest pumping efficiency. Mixed flow bowls come standard with a throttle bearing and pressure relief vent to reduce the hydraulic pressure on the lower seals, thus increasing the life of the seals. A replaceable impeller bowl section is available as an option.

THRUST BEARINGS

Where the pump is required to carry the hydraulic thrust load, the shaft is supported by heavy duty, duplex mounted angular contact ball bearings designed for a combination of thrust and radial loads and a minimum life of 20,000 hours (higher life hours are available).

THRUST BEARING HOUSING

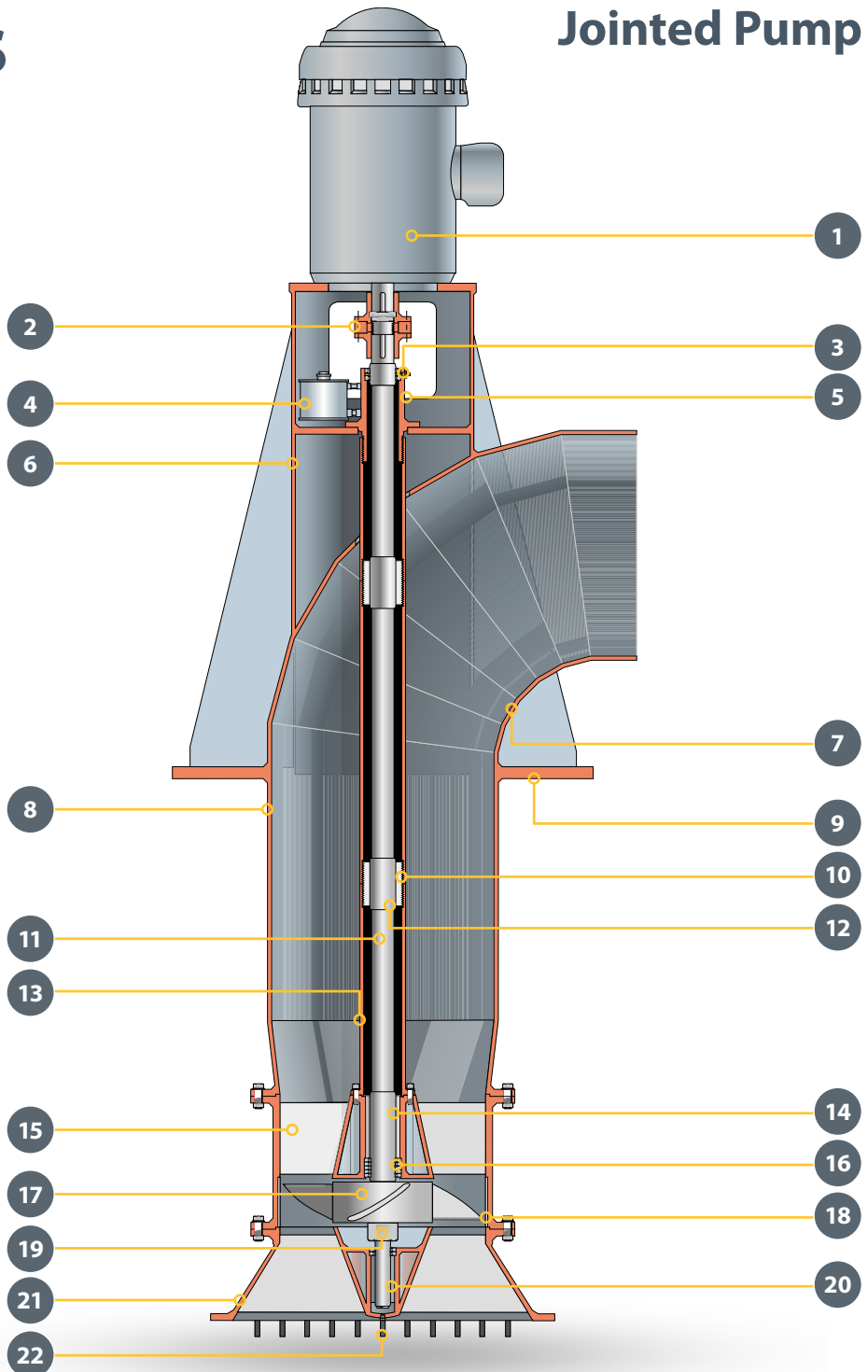
For belt drive applications, a thrust bearing housing at the top of the pump, carries the radial load at the closest possible point to the load. A convenient lubrication port and vent are provided to add new grease and purge old grease from the bearings.



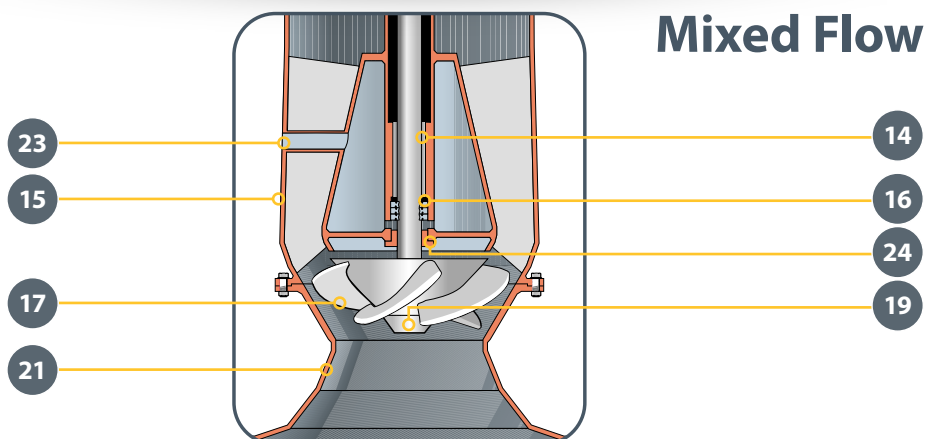
Components & Options

1. Solid Shaft Driver
2. Flanged Shaft Coupling
3. Enclosing Tube Seals
4. Oil Reservoir
5. Tube Tension Nut
6. Hood
7. Discharge Elbow
8. Column
9. Mounting Plate
10. Bearing/Tube Coupling
11. Pump Shaft
12. Shaft Wear Sleeves
13. Shaft Enclosing Tube
14. Bowl Bearing
15. Bowl
16. Bowl Seals
17. Propeller
18. Bowl Liner
19. Propeller Nut
20. Suction Bell Bearing
21. Suction Bell
22. Strainer Bars
23. Pressure Relief Vent
24. Throttle Bearing

Jointed Pump



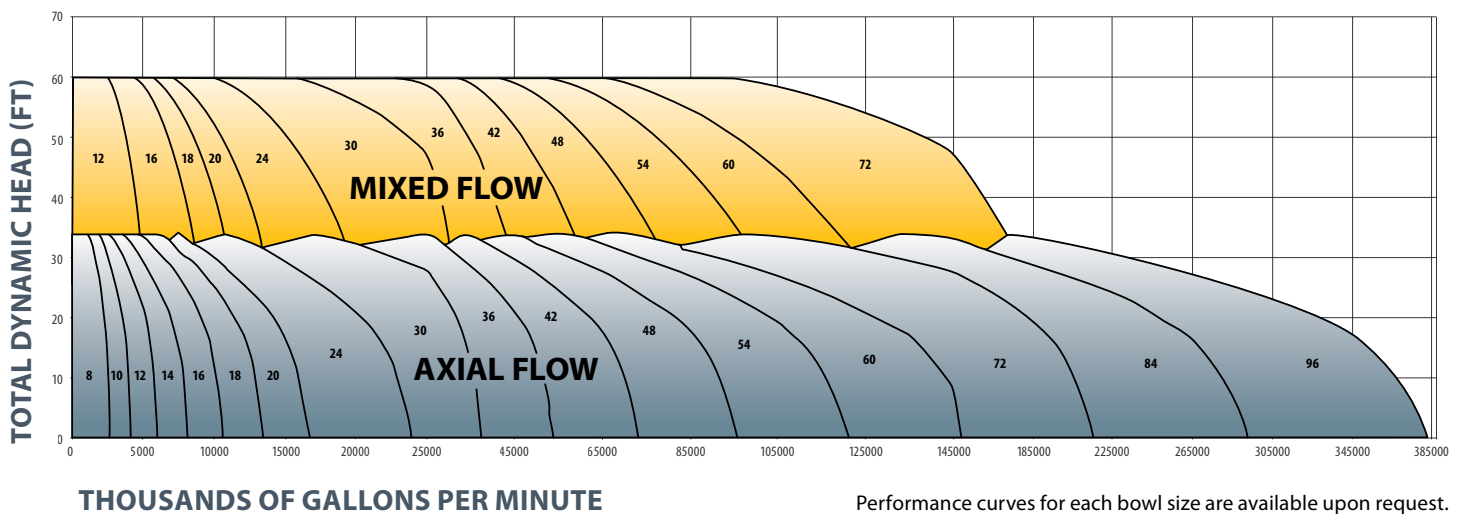
Mixed Flow



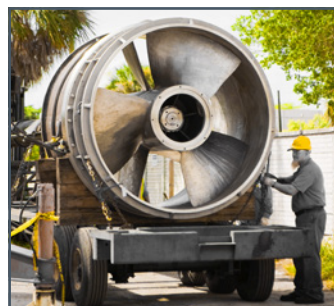
Illustrations are subject to variation due to size, options, etc. Request certified drawings for construction.



Lineshaft Performance



Performance curves for each bowl size are available upon request.



About MWI Pumps

MWI Pumps is an American-made ISO 9001:2015 and 14001:2015 certified pump manufacturer based in Deerfield Beach, Florida. Each pump is constructed using innovative, patented design concepts and heavy-duty materials to ensure durability and reliability. Further quality measures include indoor testing per H.I. 14.6 for flows up to 150,000 GPM. Our pumps are offered at competitive prices, and we always put our customers at the first. With our in-house engineering, years of experience, product variety, extensive rental fleet, and ability to customize each pump, we meet or exceed the needs of any job no matter the size.

Founded in 1926, MWI Pumps specializes in the design, manufacturing and construction of high-efficiency, large-volume axial- and mixed-flow propeller water pumps, centrifugal and mobile pumps, and village water supply units. Known around the world to be proven and safe, our industrial rugged pumps are ideal for a variety of applications, including:

- Construction dewatering
- Sewage bypass pumping
- Flood control
- Emergency pumping
- Final effluent
- Storm water pump stations
- Open pit dewatering
- Water management
- Dam bypass
- Agricultural pumping and more

MWI has provided professional pump rental and repair services since 1968, with locations throughout Florida, and representatives throughout the USA and worldwide. Contact us to learn more about our water pumps, pump repair, pump sales, cost-effective rentals, and other industrial water pump manufacturing services.

LINESHAFT HISTORY & ACQUISITIONS

In 1983, MWI purchased the Grant, Florida division of the Allis-Chambers Corporation, formerly known as the Couch Pump Company. In 2019, MWI acquired Farmers Pump, Inc. (FPI). Recognizing FPI and Couch's rich history and loyal customer base, MWI re-established these trusted brands and continues to build and service them. To thousands of customers, these names are synonymous with quality and thousands of Couch and FPI pumps are still successfully operating today.

Lineshaft Brands



MWI Pumps

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mwipumps.com

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