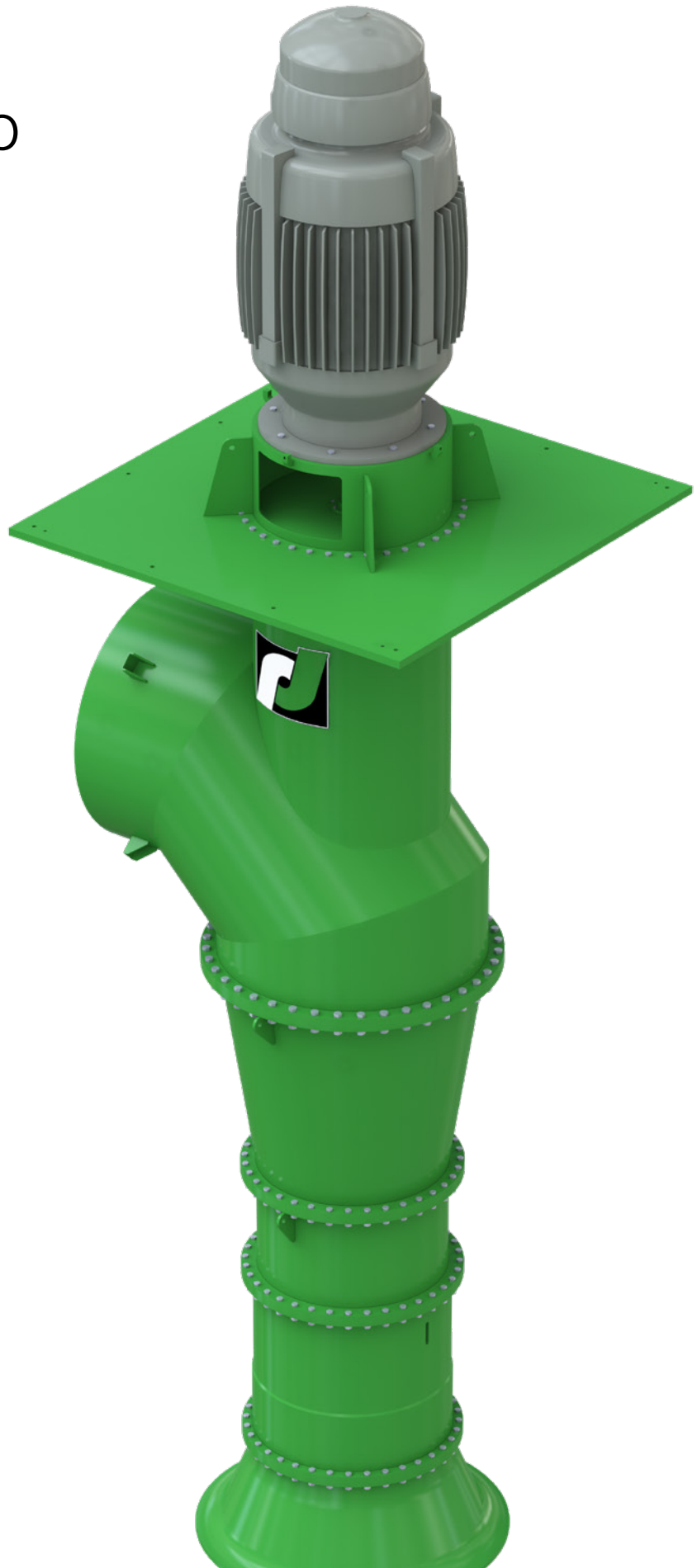


Johnston Pump  
type JP vertical  
propeller pump



A Sulzer Brand

# Main industries and applications

The JP propeller pump is an “engineered to order” vertical axial flow pump is best for high flows low head applications. and has a capacity range up to 240'000 USgpm with a total maximum single stage head up to 12 m (40 ft.) in sizes ranging from 200 to 2'120 mm (8 to 72 in.) in bowl diameter.

The JP can be manufactured from a variety of metallurgies to extend pump life and performance. Above and below base discharge connections are available to suit all existing pipe design variants.

- Drainage
- Flood control
- High pressure pumping
- Pipeline pumping
- Water intake
- Water transport and desalination
- Water supply and irrigation

## Key customer benefits

The Johnston brand has a range of vertical turbine models designed to suit capacity, head conditions and horsepower applications not offered by any other vertical turbine manufacturer. Our vertical turbine pumps are available with complete NSF certification for potable water service.

- Minimal floor space required
- The NPSH available can be the lowest level to satisfy the NPSH requirements of the pump
- No priming required, the pump bowl assembly is submerged in the fluid being pumps

- Highly versatile and adaptable in terms of both location and pump length
- Pressure requirements are easily met by staging
- Low operating speeds
- Easily modified for changing hydraulic conditions
- Adaptable to various codes
- No messy, complex hydraulic conditions
- Numerous types of coating for corrosive and abrasive systems
- Trouble free operation, requires minimum maintenance and service



# Features and benefits

## 1 Driver

- Various types include electric motors (hollow or solid shaft), fixed variable speed drives, right angle gear drives or steam turbine driven

## 2 Headshaft

- Precision machined and sized for the application power input
- Supplied with a nut or flanged coupling for impeller adjustments to maximize efficiency
- Material is selected to suit the pumped fluid

## 3 Seal

- Various arrangements are provided for a positive seal and simple maintenance

## 4 Pump shaft

- The shaft is tailor-made to the service needs and sized individually for each installation; sized for maximum torque
- A stepped shaft with sleeves can be supplied

## 5 Propeller

- Propeller type design, cast from various materials of choice for versatility
- Balanced to assure vibration-free operation
- Polished to optimize performance
- The impeller is secured to the shaft by a key and split thrust ring
- A single inlet, available in numerous pitch positions to allow for maximum capacity handling

## 6 Discharge head

- Below ground discharge head is standard featuring a segmented elbow design to optimize pump efficiency
- Elbows are fabricated in various materials to meet many required applications

## 7 Column assembly

- Column pipes are flanged
- Line shafts are connected by split ring, key and sleeve couplings
- Line shaft bearings are replaceable
- Threaded column with threaded couplings
- Column assemblies have integral spiders for column diameter above 14"

## 8 Bowls

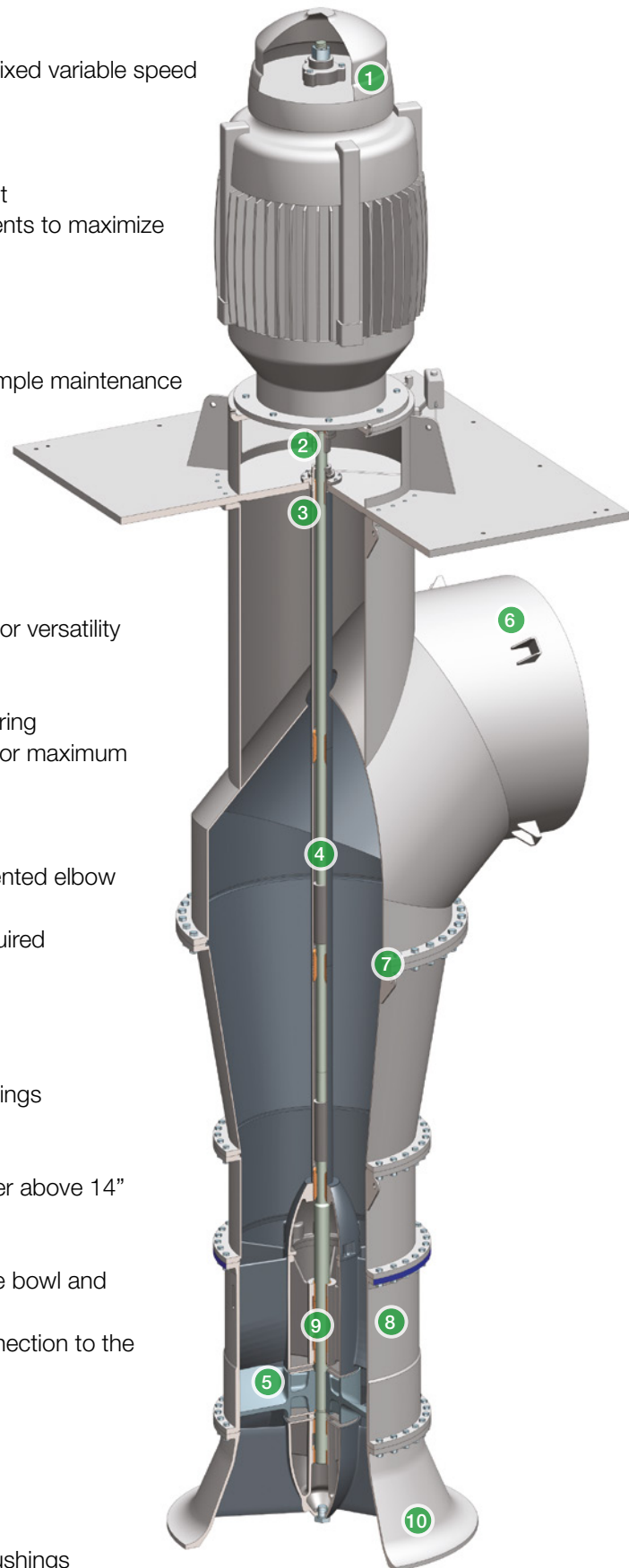
- Combine energy conversion and diffusion of the intermediate bowl and discharge case in one single casing
- Reduce the required components and allow for a direct connection to the column pipe

## 9 Bowls bearing

- Fitted with dual metal and rubber bearings

## 10 Suction

- Each suction bell includes anti-vortex ribs and tail bearing bushings
- The suction bells are available with replaceable wear rings



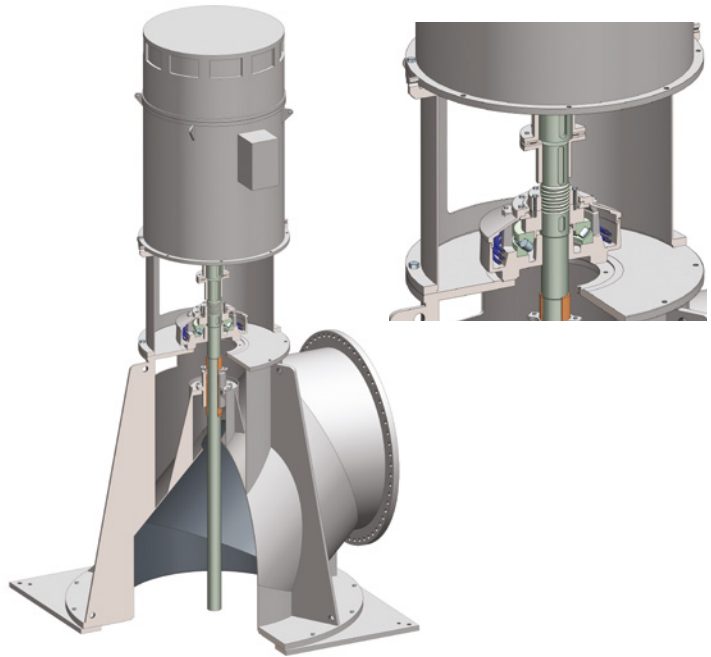
# Options

## Thrust bearing assembly

Thrust bearing assemblies are available when required by application. They are built to handle all of the down thrust produced by the pump and as much momentary up thrust that may occur. A one-piece fabricated motor stand housing is bolted down over the discharge to protect the bearing and support the motor.

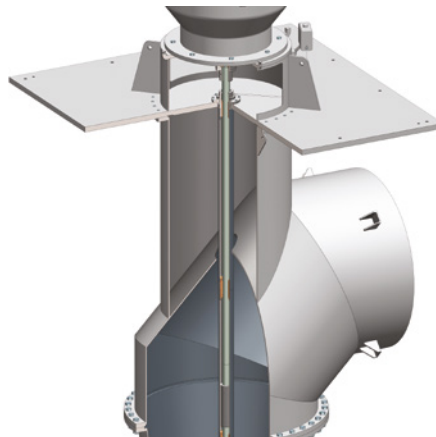
The flexible coupling with spacer allows servicing the thrust bearing and mechanical seal as needed.

Optional features include sandstorm protection, special means for cooling and a constant level oil lubricator.



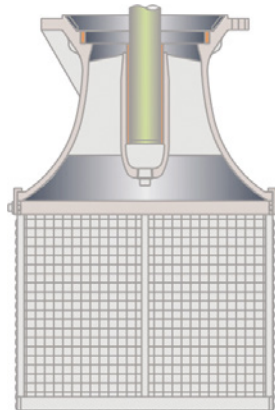
## Discharge head

Below ground discharge head is available. Each comes with a segmented elbow designed to optimize pump efficiency. The elbows are made of various materials to meet virtually any requirements. The discharge nozzle can be either plain-end or flanged. The motor stand is mounted above ground and is designed to support the weight and provide the maximum clearance for multiple stuffing box options.



## Strainers

Basket strainers are available in galvanized steel.



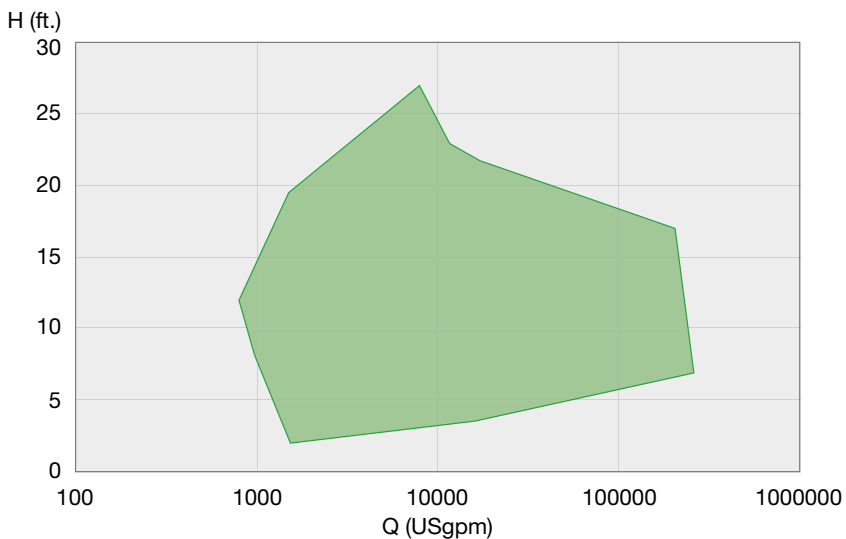
# Materials

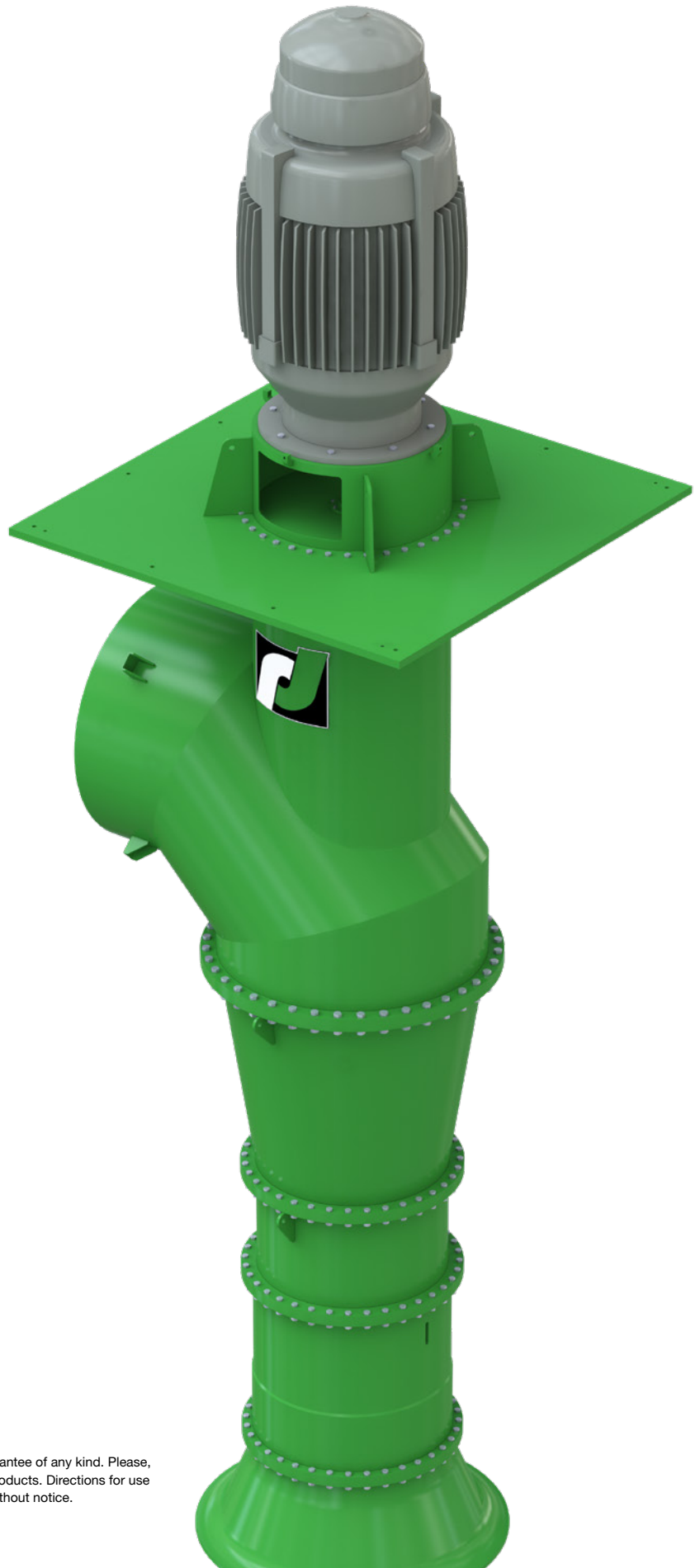
| Pump part    | Material  |
|--------------|---|
| Cast parts   | Cast iron, carbon steel, 316 stainless steel, duplex, super duplex and bronze |
| Shafts       | 12% chrome, 316 stainless steel duplex, super duplex and monel                |
| Fabrications | Carbon steel, 316l, duplex and super duplex                                   |
| Bearings     | Bronze, duplex or super duplex backed rubber                                  |

# Operating data

|              | 60 Hz               |
|--------------|---------------------|
| Bowl sizes   | 8 to 72 in.         |
| Capacities   | up to 240'000 USgpm |
| Heads        | up to 40 ft.        |
| Pressures    | up to 30 psi        |
| Temperatures | up to 120°F         |

# Performance range





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