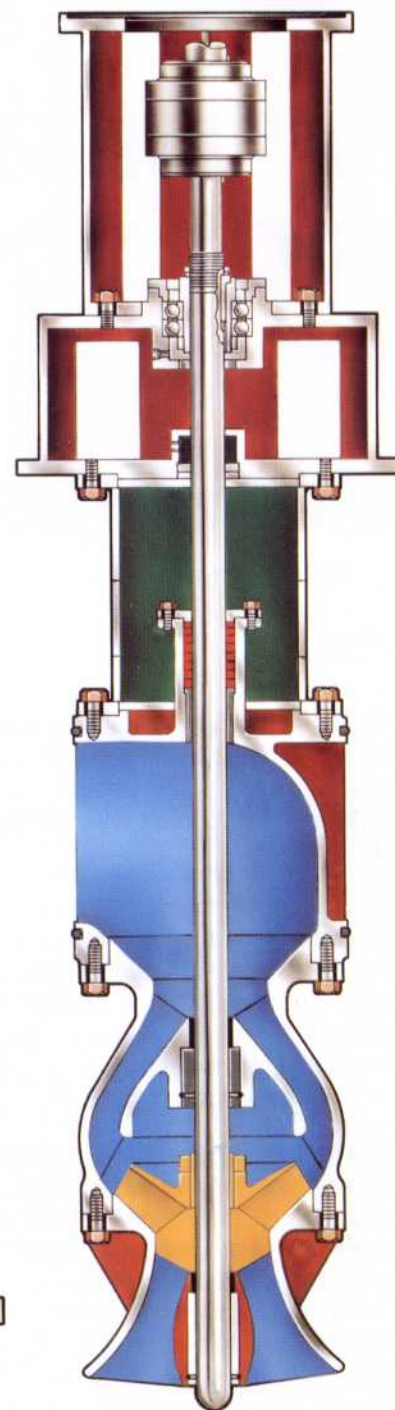




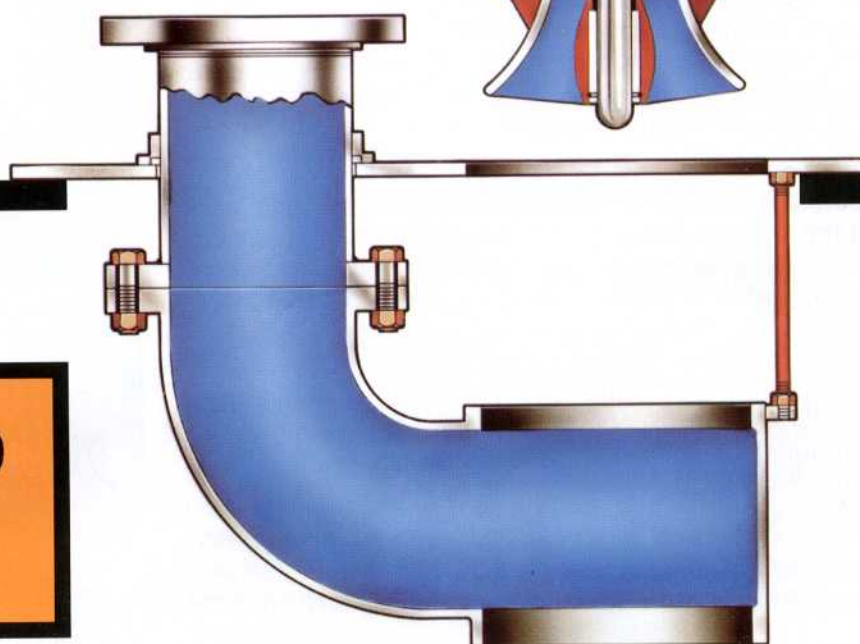
VERTICAL TURBINE PROCESS PUMP

Model No. 3580



NEW FEATURES

- **Top Pull Out Design**
- **No Liquid Seal Above Tank**
- **New Flow Diverter Design**
- **Easy Maintenance**



**PATENTED
DESIGN**

VERTICAL TURBINE PROCESS PUMP

Model No. 3580

HISTORY

Virtually all vertical turbine pumps used by industry today are similar to those originally designed for deep well water service. Until recently, this design has been applied to industrial process and chemical applications with two notable shortcomings:

Sealing the liquid being pumped was accomplished with a packed type stuffing box, a mechanical seal, or by enclosing the pump shaft in a tube. These designs exposed the seal to the material being pumped at the pressure developed above the process tank. Seal exposure to corrosive or particulate liquid shortened its life, resulting in leakage. Refer to the illustration on the right.

Maintenance has also been a major problem. The large column pipe assemblies found in most vertical turbine process pumps usually have threaded connections. This design makes the column pipes almost impossible to disassemble during maintenance.

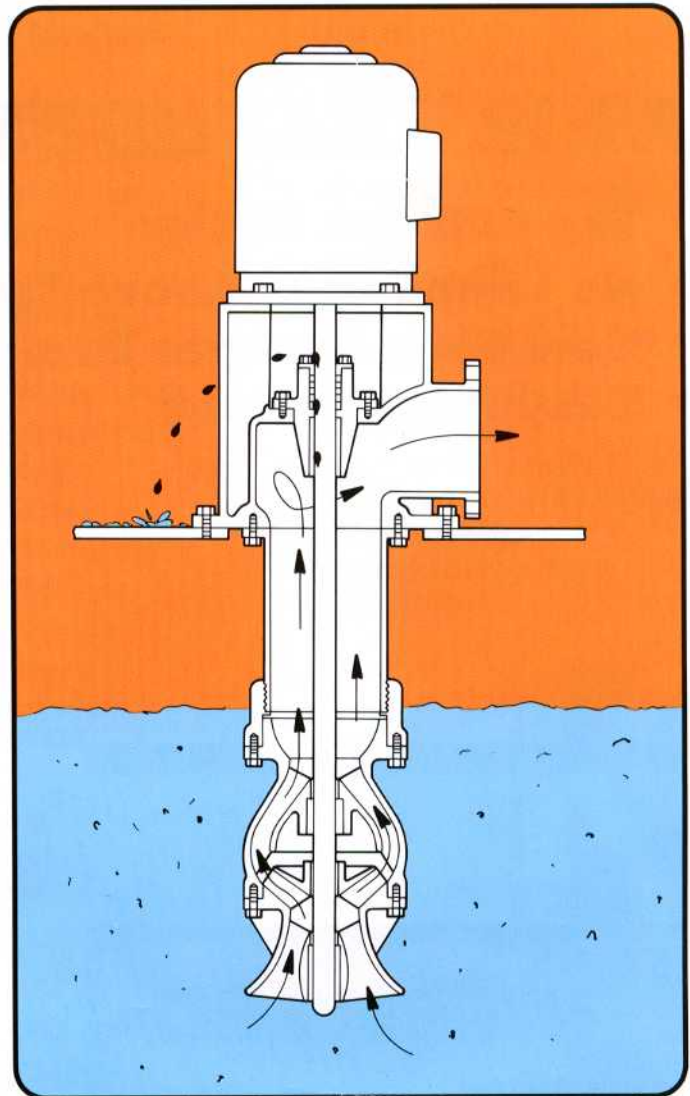
NEW DESIGN

Kerr Pump and Supply has designed and received a patent for a unique vertical turbine process pump with a top pull out feature. The complete vertical turbine assembly is easily removable from above the coverplate. Its construction is illustrated on the front cover. This pump has been engineered to overcome shortcomings of other vertical turbine process pumps. It is easy to service and can pump dirty, hazardous, and corrosive liquids without the potential of damage to the surrounding environment. A non-top pull out design, having similar features, is also available. Refer to the illustration at the bottom of the next page.

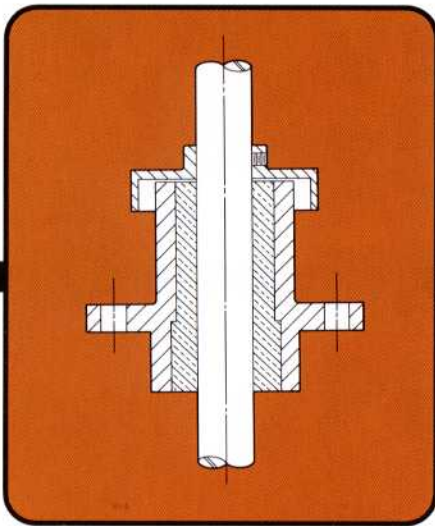
SIGNIFICANT DIFFERENCES

Our design is remarkably different from conventional vertical turbine process pumps. A unique flow diverter has been located **below the coverplate**. It reduces fluid velocity and pressure in and around the area of the pump shaft seal, thereby minimizing both leakage and exposure of the pump shaft seal to contaminants. With this configuration, the pump shaft can penetrate the coverplate without being surrounded by pressurized fluid. Hence, any leakage through the seals remains in the process tank. This design feature is illustrated on the following page. The differences in the fluid flow paths are illustrated in the drawings below.

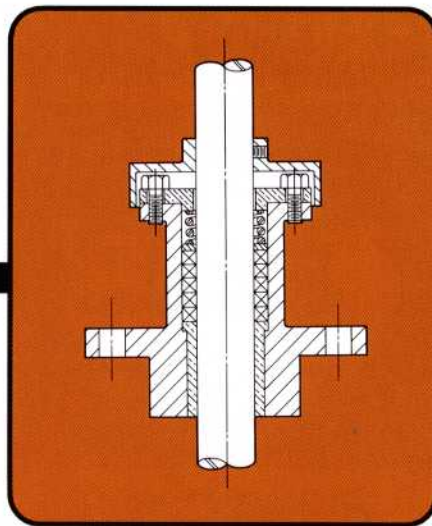
An **Exact Seal** has been incorporated in the flow diverter. It is a standard feature, and allows any leakage to return to the process tank. This design protects the shaft bearings and vapor seals from direct contaminant exposure. Where deemed necessary, an optional spring loaded packed stuffing box or a mechanical seal are also available. Each of these seals is illustrated on the top of the next page.



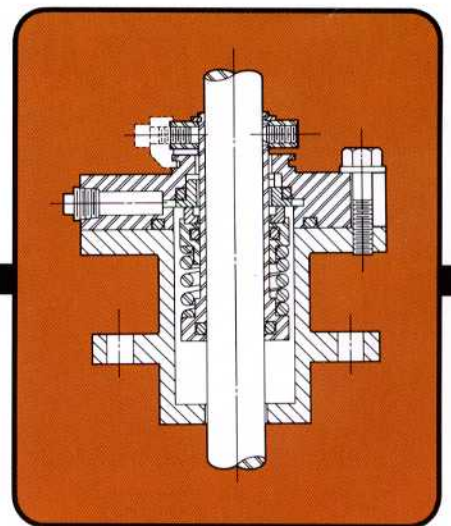
Conventional Vertical Turbine Process
Pump Liquid Path



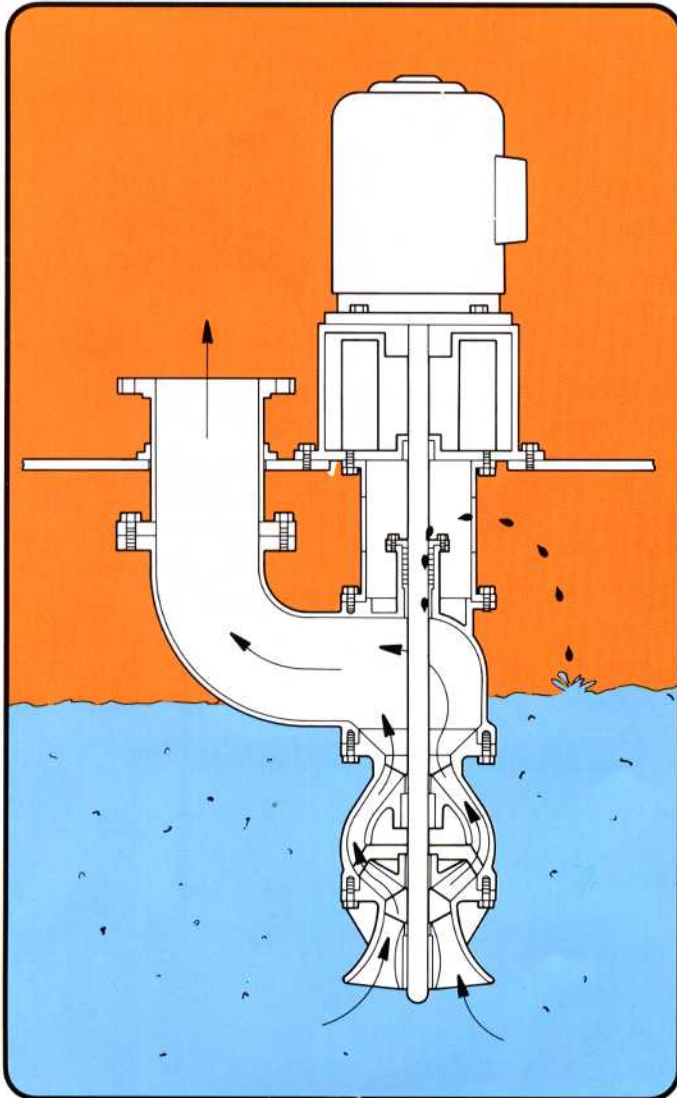
**Seal Less Construction
(Standard)**



**Spring Loaded Packing
(Optional)**



**Mechanical Seal
(Optional)**



**Kerr Vertical Turbine Process Pump
Flow Diverter Liquid Path**

CHOICE OF IMPELLERS

Kerr Pump and Supply offers a **choice of impeller designs**. Both semi-open and enclosed impellers are available on our vertical turbine process pumps. The enclosed impeller has been designed to efficiently handle clean liquids, while our semi-open impeller has been designed for better solids handling capability. Each impeller style is illustrated on the back cover.

EASY TO MAINTAIN

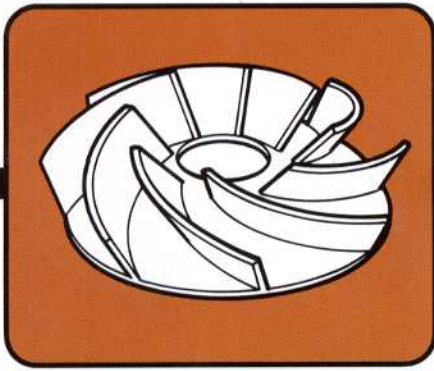
Current vertical turbine pump designs require that the entire unit, including the discharge head, be removed when servicing the pump. The Kerr Vertical Turbine Process Pump does not require disconnection of the discharge piping during servicing. Furthermore, the discharge fluid is channeled through our flow diverter instead of the massive discharge heads used by competitive pumps. The Kerr design is inherently more compact, lighter, and easier to handle. Our flanged construction simplifies disassembly when compared to the threaded column piping used by competitive pumps.

SIGNIFICANT COST SAVINGS

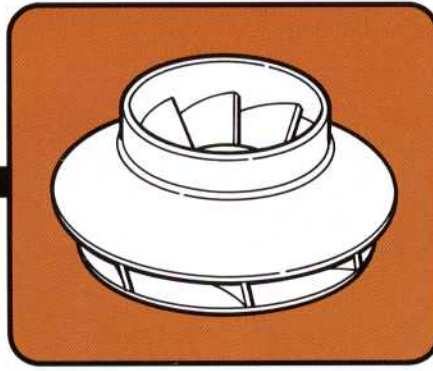
The Kerr Vertical Turbine Process Pump is cost effective and easily adaptable to a great variety of process applications. Alloy Vertical Turbine Process Pumps that are manufactured by Kerr Pump and Supply can offer considerable cost savings over conventional designs. In conventional vertical turbine process pumps, the entire pump casting, including the discharge head, must be of all alloy construction. Kerr Vertical Turbine Process Pumps **do not require expensive alloy discharge heads because of our below the coverplate discharge piping design.**

CHOICE OF IMPELLER DESIGNS

Bulletin No. 2581



Semi-Open Impeller
for improved solids handling



Enclosed Impeller
for clean liquid applications

ADVANTAGES

Cost Effective

- No expensive discharge head
- No expensive discharge case

Smart Design

- No liquid seal above tank
- Flanged column extensions
- Heavy duty construction

Ease of Maintenance

- Simplified repair
- No shaft enclosing tube
- No by-pass ports that plug up
- Quick disassembly, reassembly and alignment
- Unique design for easy job site maintenance
- Lower maintenance time and costs
- Longer service life

APPLICATIONS

- Air Washers
- Centralized Coolant Systems
- Circulation Systems
- Electrocoat Systems
- Filtration Systems
- Metal Washing Machines
- Pollution Control Systems
- Quenching Machines
- Paint Spray Booths
- Paint Systems
- Parts Washers
- Phosphate Systems
- Pickling Machines
- Plating Machines
- Cooling Towers
- Chemical Service

CONSTRUCTION

Choice of Materials

- All Iron
- Bronze Fitted
- 316 Stainless Steel

Choice of Drives

- Standard Vertical "C" or "P" Flange
- Vertical Hollow Shaft Motors

Choice of Seals

- Seal Less Design (Standard)
- Spring Loaded Packed Stuffing Box (Optional)
- Mechanical Seal (Optional)

Phone: 810/543-3880 or 800/482-8259 (within MI) Fax: 810/543-3236

P.O. Box 37160 • 12880 Cloverdale Oak Park, MI 48237



**KERR
PUMP**

**AND
SUPPLY**