



THE UNIVERSAL TURBINE PUMP

Custom Manufactured to meet Your Specific Needs



MANUFACTURED BY

Process Systems, inc.
A RUTHMAN COMPANY



THE DEMING[®] VERTICAL TURBINE

The Most Universal Pump Available



No matter what type of liquid you need to move, chances are the Deming Vertical Turbine Pump is your best choice for the job.

The Deming Vertical Turbine Pump is suitable for transferring almost any liquid, from rain water to hard-to-handle fluids (hazardous, abrasive, viscous, etc.), in a wide range of capacities and pressures to match your requirements.

There is a model of the Universal Turbine Pump to solve virtually any fluid-handling problem you may have. By selecting the proper motor, sealing option, strainer, metallurgy, etc. for your application, you can virtually create your own pump. Imagine the possibilities! Our experienced engineers can help with your specific application.

Because there are so many configurations, the Deming Vertical Turbine is the most versatile pump in the world. These pumps are solving problems in a broad range of industries, including steel mills, metal finishing, chemical, paper, municipal, petroleum, agriculture - in virtually any type of facility that transfers fluid.

Additionally, the Deming Vertical Turbine features the same precision engineering and top-quality materials that are built into all our pumps. The result: a pump that runs smoother and lasts longer.

More than a century of research, engineering and manufacturing experience stands by your selection of a Deming Universal Vertical Turbine Pump. It will prove to be a wise choice.



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RUTHMAN
COMPANIES

TYPICAL PUMP CONFIGURATIONS



Hollow-shaft motor

Surface discharge head

Threaded column

Standard bowl assembly

Basket strainer



Solid-shaft motor

Motor stand

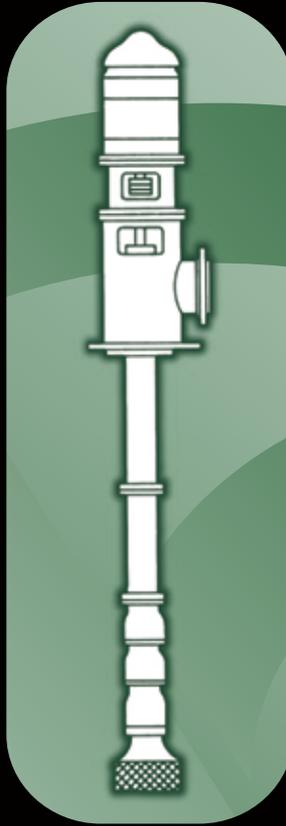
Fabricated discharge head

Flanged column

Flanged Bowls

Bell-mouth suction

Bolt-on strainer



Hollow-shaft motor

G-head Ansi base-mounting flange

Liquid lock-bypass construction

Bowl assembly-open suction



Hollow-shaft motor

Surface discharge head

Grease flush construction

Bell-mouth suction



Hollow-shaft motor

T-head

Flanged column

Bell-mouth suction

Suction barrel



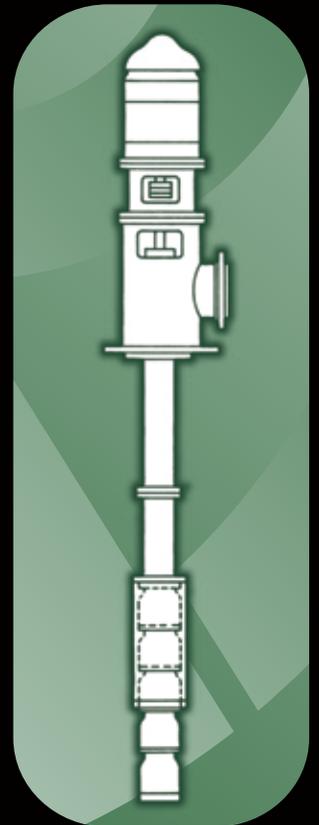
Solid-shaft motor

Motor stand

Fabricated discharge head

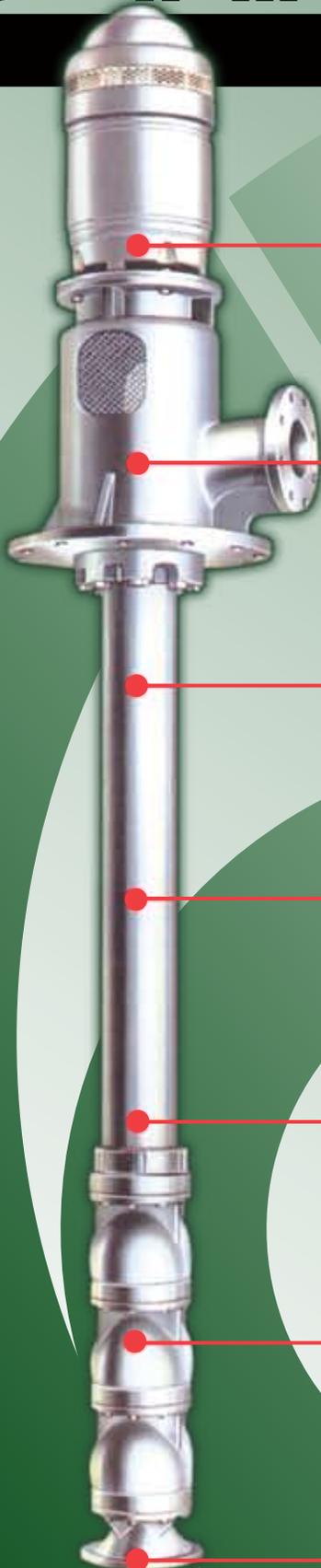
Flanged column

High-pressure cased bowls





A MODULAR APPROACH



DRIVERS

Hollow-shaft motor



DISCHARGE HEADS

Standard surface discharge - cast iron



SEALING METHODS

Standard pressure packing box



COLUMN AND SHAFT

Open line-shaft product-lubricated



BEARING HOUSINGS

Product-lubricated with rubber bearing



BOWL ASSEMBLIES

Product-lubricated



STRAINERS

Standard basket



TO PUMP CONSTRUCTION...

Solid shaft motor with stand



C-face motor with thrust stand



Right angle gear drive



Combination right angle gear drive



Fabricated-steel surface discharge



T-head



G-head ANSI flange base



Motor stand for below-grade discharge



Mechanical seal



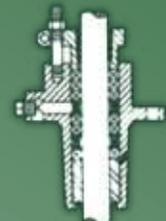
Liquid lock-bypass construction



Oil/grease flush construction



High-pressure packing box



Enclosed lineshaft-oil-lubricated



Flanged column



Oil/grease flush construction



Below-grade discharge



Product-lubricated with metallic bearing



...TO MEET YOUR SPECIFIC NEEDS.

Flanged bowls-tapered suction



Flanged bowls-bell-mouth suction



Grease flush



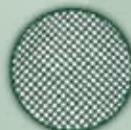
High-pressure cased assembly



Standard conical



Flat mesh for bell



Bolt-on basket for bell

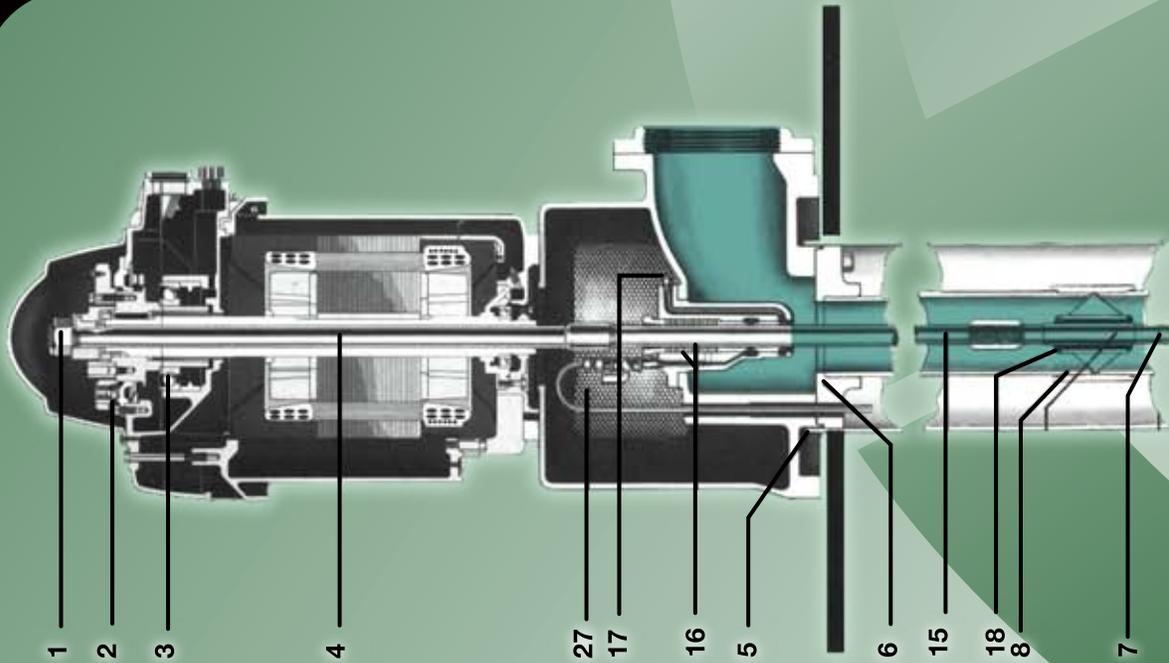


Open construction (no strainer)

UNIVERSAL TURBINE PUMP



Product Lubricated

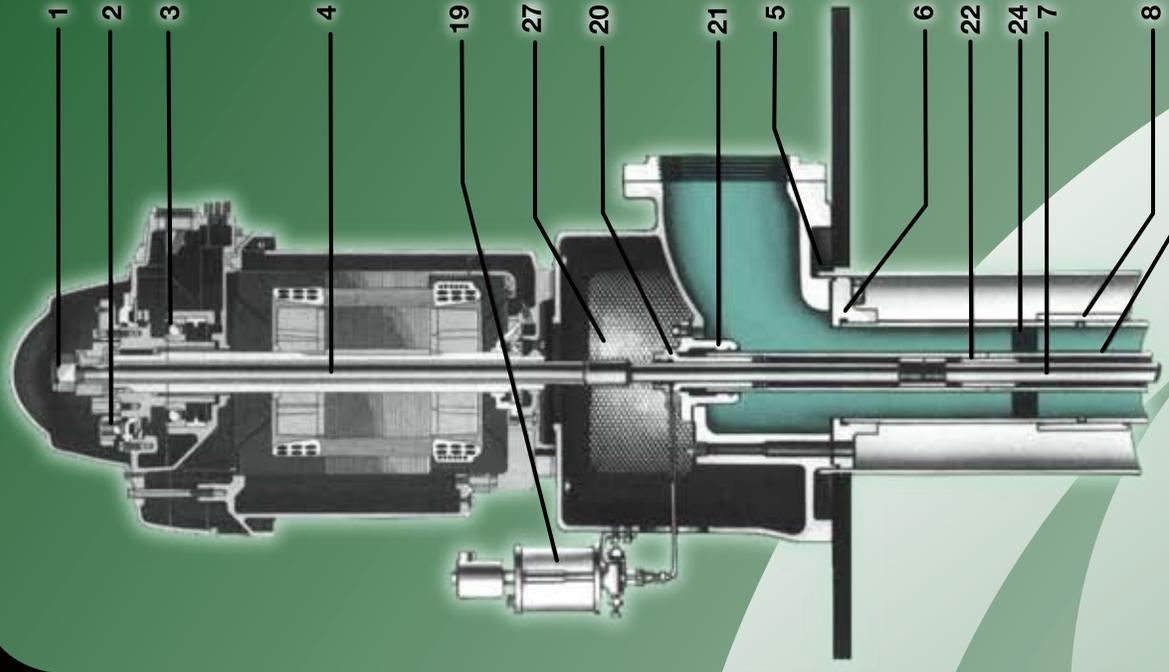


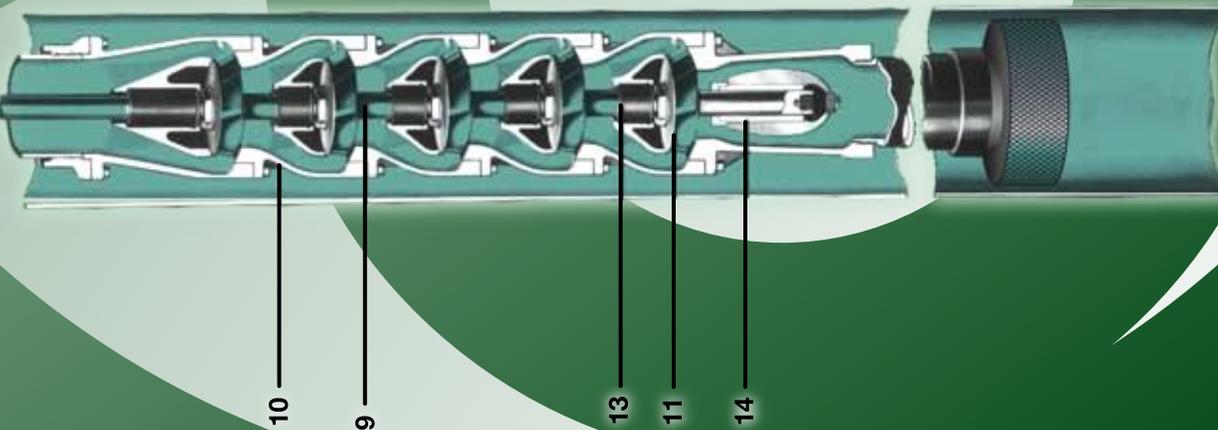
Common Construction

Product and Oil Lubricated

1. **Impellers easily adjustable** - with adjusting nut located at top of motor.
2. **Ratchet prevents backspin** - and avoids damage to pump in case of phase reversal.
3. **Heavy-Duty thrust bearing** - cooled by air entering motor.
4. **Separate headshaft** - with coupling in pump head, facilitates installation. Permits changing drives without raising pump.
5. **Base of head recessed** - permits casing or sleeve to extend above foundation as required by many health departments.
6. **Flanged head construction** - facilitates assembly of column and discharge head. Maintains accurate alignment between motor and column shaft assembly. (Some discharge heads feature threaded column connections. Refer to factory.)
7. **High strength line shaft** - of heat treated steel, ground and polished - one-third stronger than ordinary shaft.
8. **Column couplings** - machined for tight fitting butt joints. (Flanged column available.)
9. **Stainless Steel impeller shaft** - specially heat treated, ground and polished for longer life.
10. **Streamlined bowl passageways** - designed to reduce friction and give greater pump efficiency.
11. **Enclosed or Semi-Enclosed Impellers** - have completely finished surfaces for maximum efficiency.
12. **Bronze bowl bearings** - on all enclosed impeller pumps.
13. **Rubber bowl bearings** - on all semi-enclosed impeller pumps.

Oil Lubricated





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- 14. **Enclosed Bronze bearings** - in suction bowl, protected with sand cap and packed with non-soluble grease. Semi-enclosed impellers 4" to 10" bowl sizes feature open rubber-bearing construction.
- 27. **Coupling guard** - supplied as standard option.

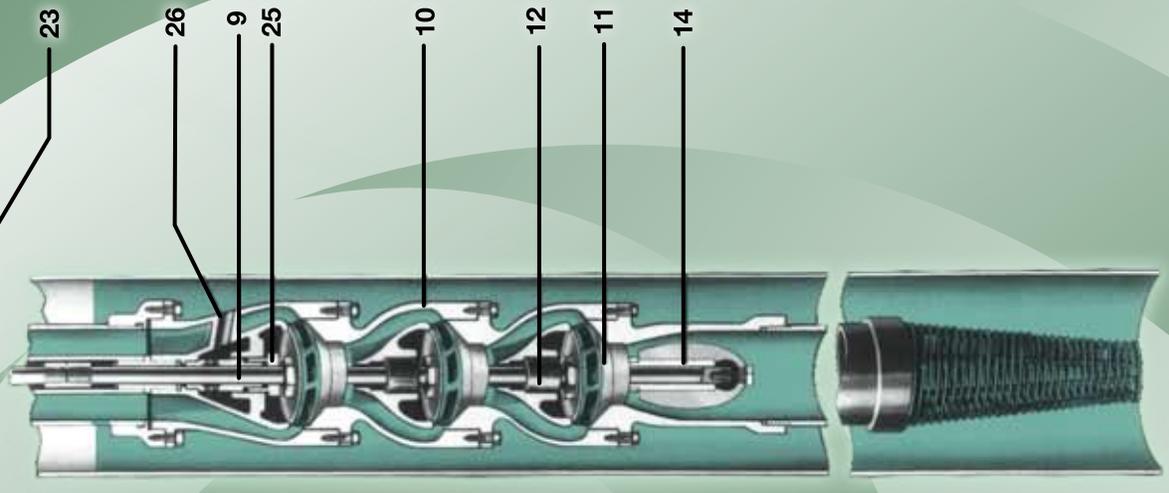
Product Lubricated only

- 15. **Stainless Steel stuffing box shaft** - may be inverted to renew wearing surface.
- 16. **Accessible extra-deep stuffing box** - with controlled lubrication for long packing life.
- 17. **Pre-lubrication connection** - through stuffing box distributes water around shaft for proper lubrication before start-up.
- 18. **Water-lubricated shaft bearings** - fluted, resilient rubber shaft bearings are lubricated by water flowing through the pump. Bearings are held in place by a machined bronze bearing retainer secured between two pipe ends.

Oil Lubricated only

- 19. **Automatic lineshaft lubricator** - on motor-driven units - opens when pump starts, closes when it stops.
- 20. **Bronze tube tension nut** - is easily accessible for placing tube under proper tension - also provides close fitting bearing in pump head.
- 21. **Tubing head adapter with "O" ring** - assures water - tight seal around shaft - enclosing tube.
- 22. **Bronze lineshaft bearings** - provide accurate alignment for lineshaft and a coupling for enclosure tube. A spiraling internal oil groove permits uniform bearing lubrication and by-pass of oil to bearings below.
- 23. **Heavy-duty tubular steel shaft-enclosure tube** - protects lineshaft. Specially machined for accurate bearing alignment.
- 24. **Enclosure tube stabilizers** - reinforced rubber "spiders" are regularly spaced to maintain enclosure-tube alignment.
- 25. **Bearing protecting slinger** - prolongs bearing life by preventing entrance of sand into top bowl bearing.
- 26. **Relief ports in top bowl** - prevent water from rising in tube above water level in well.

Exposed coupling and shafting between pump and driver must be protected with coupling and/or shaft guard prior to pump start-up and operation.



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Deming Vertical Turbine features:

- Two-Piece Head Shaft is standard construction
- Reversible Stainless-Steel stuffing box shaft
- Discharge Head Design meets Municipal Sanitary requirements
- Packing or Mechanical seal options
- Industry Standard column bearings
- Semi-Enclosed and Enclosed impellers
- Backed by over 100 years of Manufacturing Experience



THE DEMING® VERTICAL TURBINE

Availability...Service



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