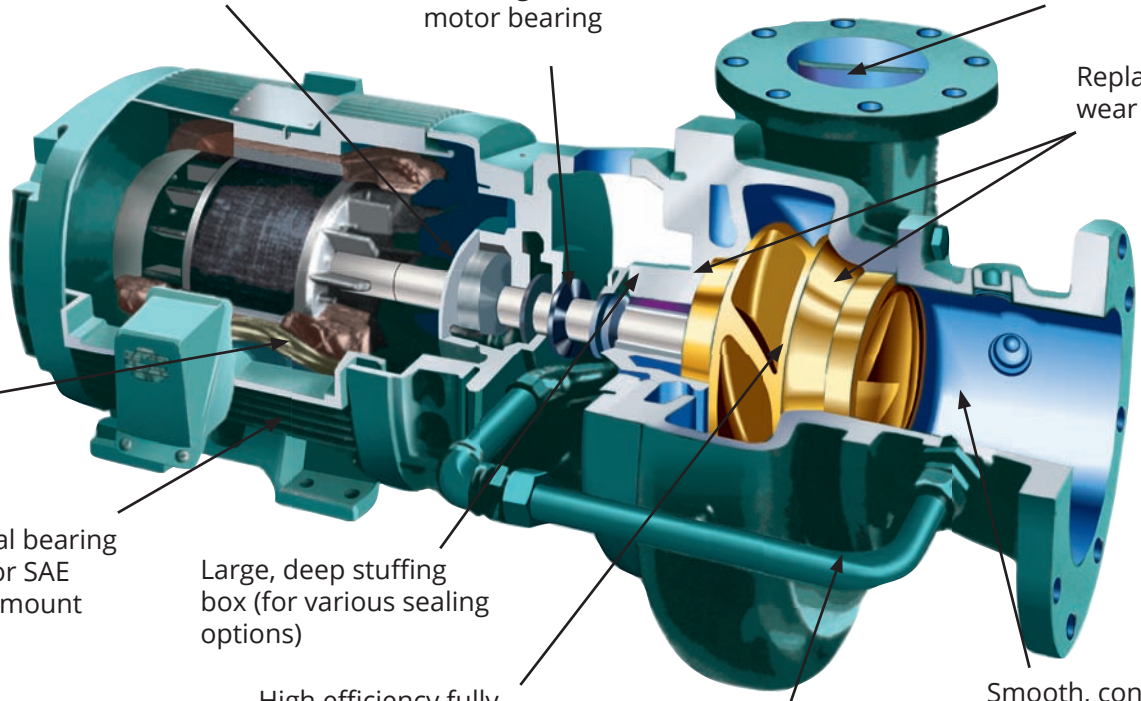
CORNELL PUMP COMPANY

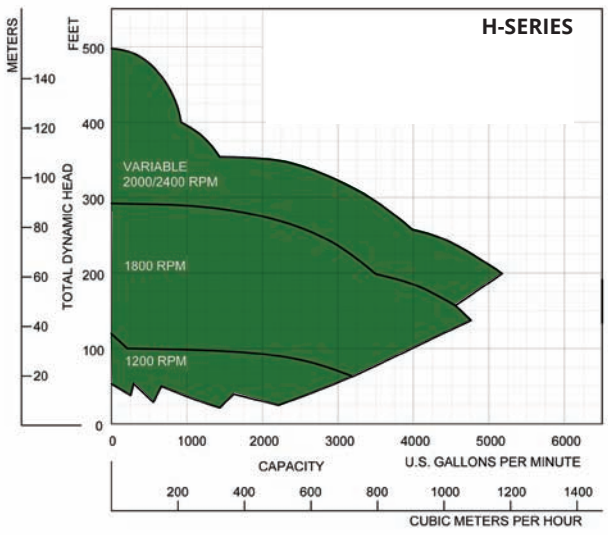
AGRICULTURE

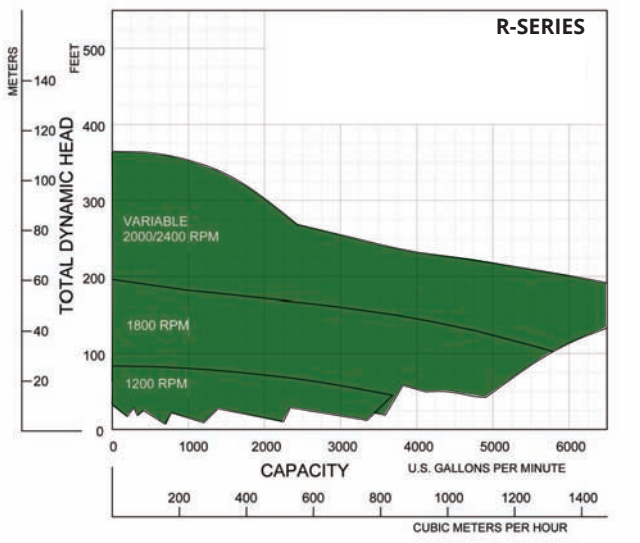
CORNELL
EFFICIENT BY DESIGN

EFFICIENT BY DESIGN

CORNELL IRRIGATION PUMPS







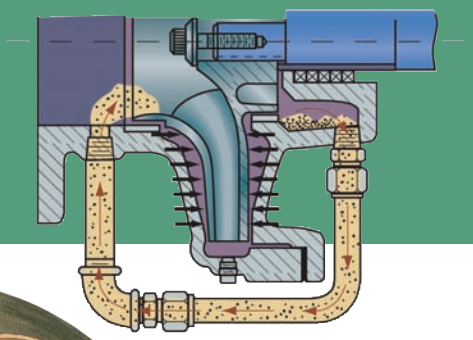
ENERGY EFFICIENCY

Cornell Pumps are designed to deliver best in class efficiency. Depending on operating hours, fuelant, and horsepower required, you can save $3,000 per year (or more) in energy costs. Cornell manufactures more than 35 IRRIGATION pumps that meet or exceed optimum efficiency standards for centrifugal pumps.

Select High Efficiency Pump Models:
8H–88% efficient
6RB–89% efficient
5RB–86% efficient
4RB–85% efficient

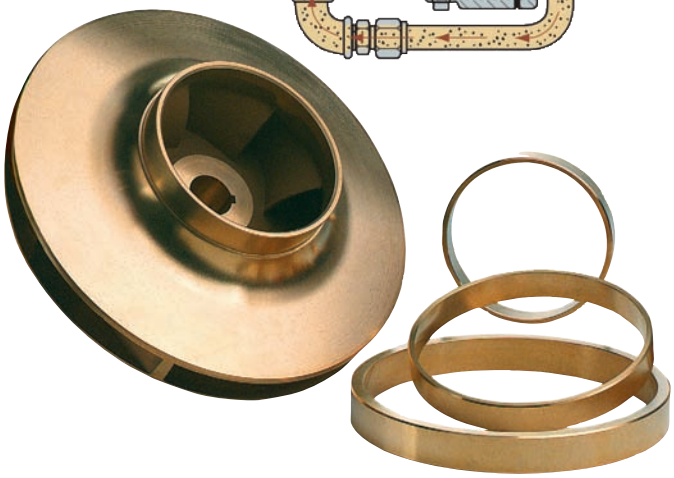
EXTERNAL HYDRAULIC BALANCE LINE

Cornell's external hydraulic balance line equalizes pressure between the impeller hub area and the pump suction to reduce axial loading acting on the impeller, shaft and bearings. The balance line also assists in moving sand and silt from the stuffing box to the low pressure area at the pump suction, reducing wear of the wetted parts.



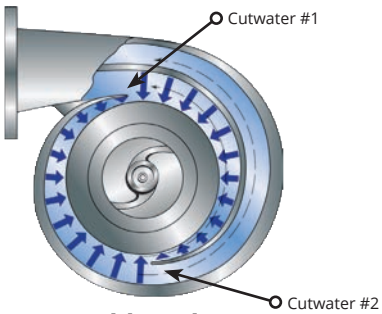
MATERIALS OF CONSTRUCTION

All Cornell irrigation pumps are constructed with top quality materials. Cornell irrigation pumps are cast iron, bronze fitted or all iron construction. Optional materials are available for abrasive or caustic applications. Standard features include balanced impellers, heavy-duty shafts, replaceable shaft sleeves, and replaceable wear rings.

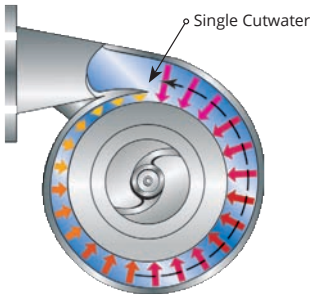


DOUBLE VOLUTE

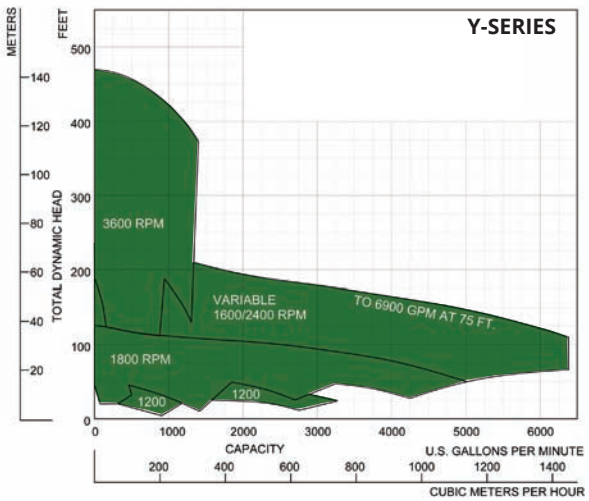
Cornell introduced the double volute as an industry first more than 30 years ago. The double volute system effectively balances forces within the pump to reduce radial load, shaft deflection and fatigue. This eliminates shaft breakage and extends the service life of packing and mechanical seals, wear rings and bearings while maintaining high hydraulic efficiency.

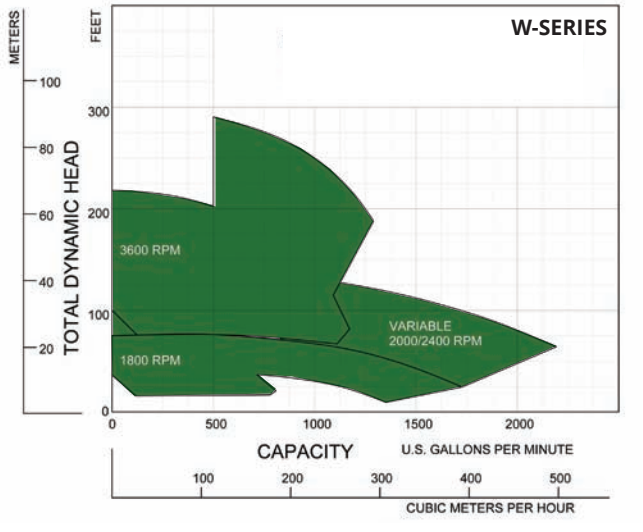


Double Volute



Single Volute





MANURE SLURRY PUMPS

MANURE SLURRY PUMPS

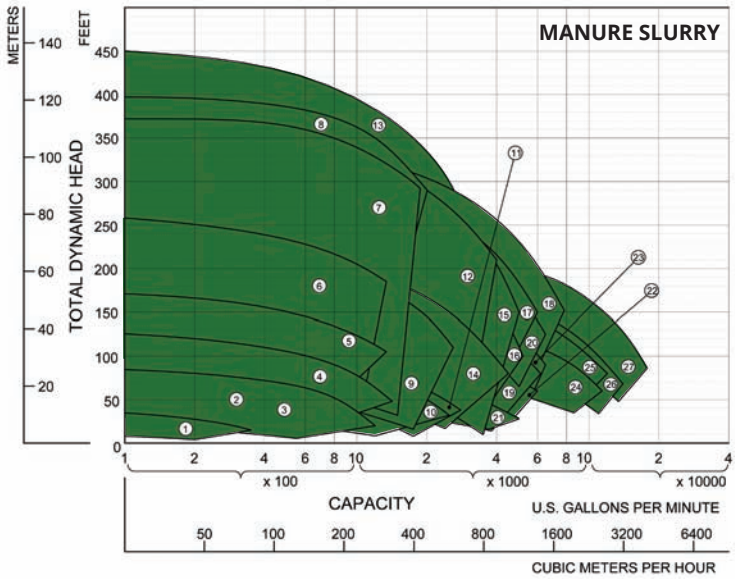
Cornell offers over 60 models of heavy duty Solids Handling Pumps for the toughest slurry applications. With three unique impeller designs (Enclosed, Semi-Open & Delta™) to select from, Cornell has a model that will fit your application.

MATERIALS OF CONSTRUCTION

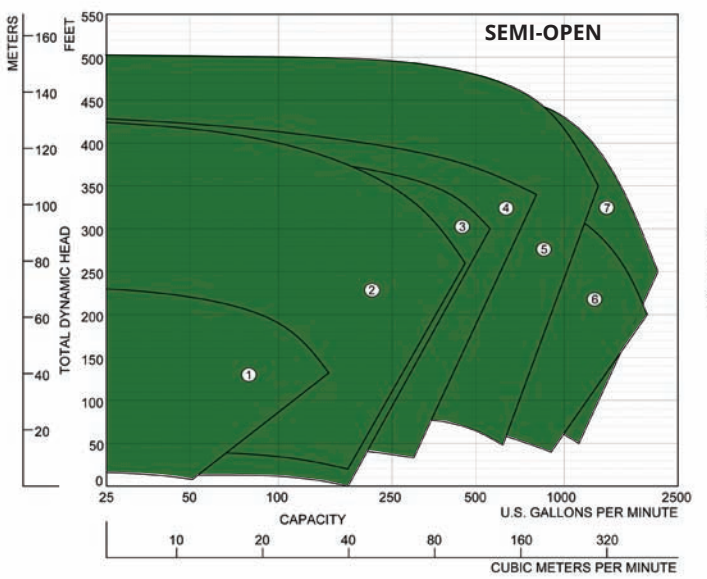
Cornell Manure Slurry pumps are all iron construction with hard face mechanical seals for extended seal life. Optional materials are available for abrasive applications.

IMPELLER OPTIONS

Cornell offers three unique impeller designs for liquid waste slurry applications. The DELTA™ style impeller is excellent for handling straw, twine and heavy sludge where there is a low to medium head requirement. Cornell's two and three port enclosed impellers are designed to handle large solids with high efficiency and high head requirements. The three or four bladed, semi-open impeller has a cutting action which allows it to handle the worst slurries at high heads.



1. 3NLT
2. 3NNTL
3. 4NNTL
4. 4NNT
5. 4NHTA
6. 4414T
7. 4NHTB
8. 4514T
9. 6NHTA
10. 6NNT
11. 6NHT/TH
12. 6NHTB
13. 6NHTB19
14. 8NNT
15. 8NHTA
16. 8NHTH
17. 8NHTR
18. 10NNT
19. 10NHTB
20. 10NHTA
21. 12NHTL
22. 12NHTM
23. 12NNT
24. 14NHG
25. 14NHGA
26. 16NHGH
27. 16NHG22

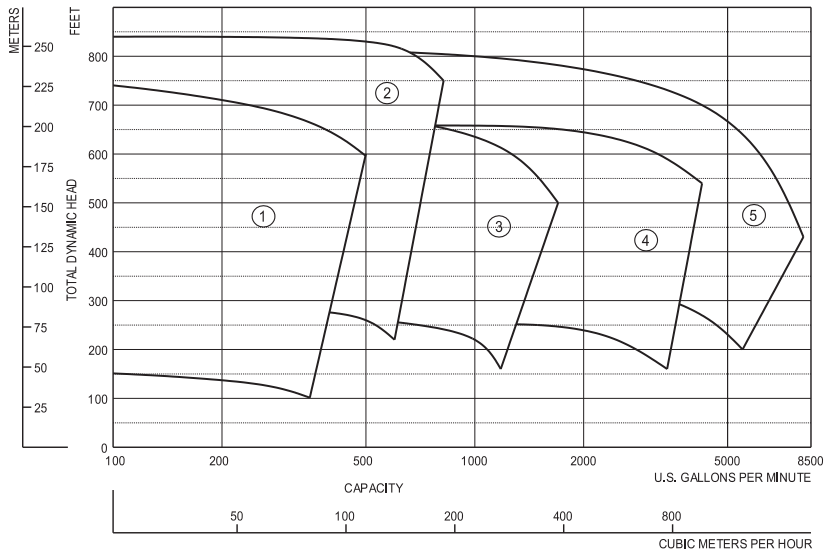


1. 1.25YML
2. 2.5HM
3. 2.5YM
4. 3HM
5. 4HM
6. 4614M

ADDITIONAL PRODUCTS

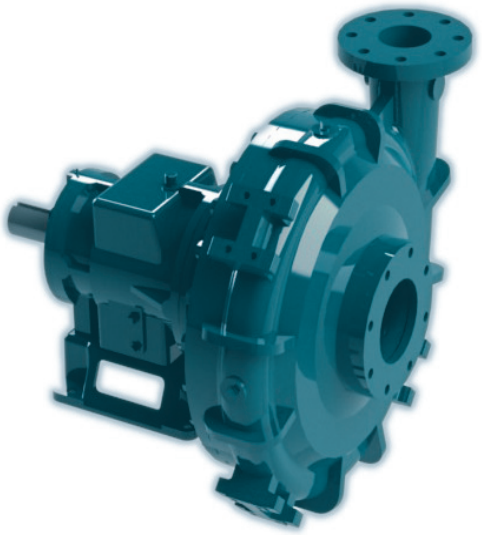
MX SERIES HIGH PRESSURE PUMPS PRESSURES 800ft TDH and flows to 4000gpm

Designed to handle high head applications while providing a long service life. The new high head MX SERIES pumps have multi-vane, enclosed impellers designed for INDUSTRY LEADING EFFICIENCY. The MX SERIES pumps have extra heavy wall thickness, high quality construction, CA6NM impellers and are available in a horizontal frame & SAE mounted configurations.



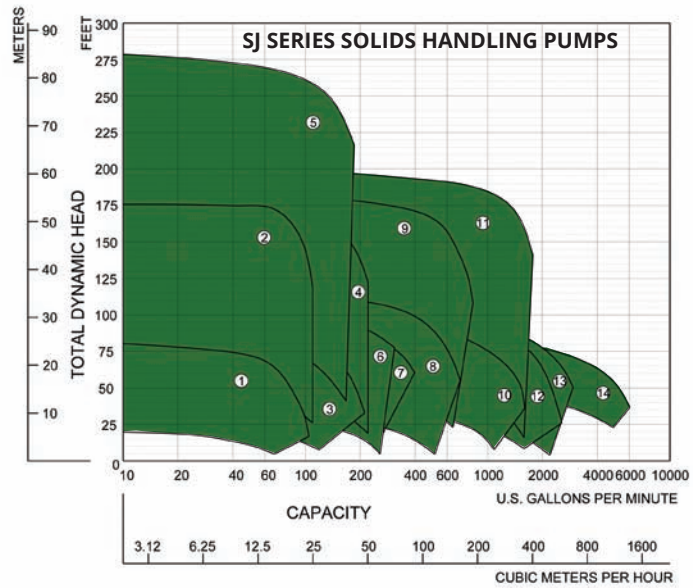
MODEL

1. 2415MX
2. 3419MX
3. 4622MX
4. 6822MX
5. 81026MX

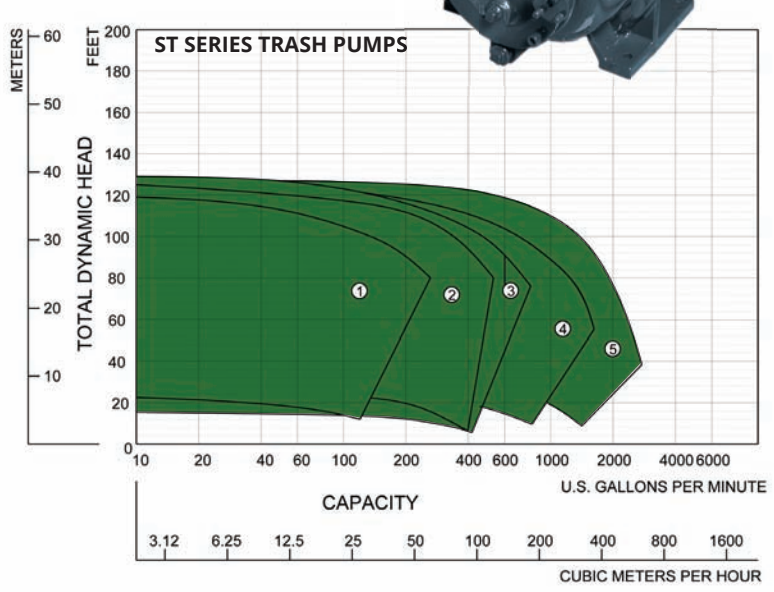


SELF-PRIMING TRASH PUMPS

Cornell's line of horizontal self-priming centrifugal pumps are equipped with open impellers for handling liquids containing solids in suspension. These pumps can operate satisfactorily with liquids containing air or dissolved gases. Various Materials of Construction are available for the Self-Priming Pumps: All Iron, All Stainless Steel, All Bronze, Stainless Steel Fitted and Bronze Fitted.



1. 1.5SJ4
2. 1.5SJ7
3. 2SJ5
4. 2SJ7
5. 2SJ9
6. 3SJ6
7. 3SJ8
8. 4SJ10
9. 4SJ12
10. 6SJ10
11. 6SJ16
12. 8SJ12
13. 10SJ12
14. 12SJ6



1. 2ST
2. 3ST
3. 4ST
4. 6ST
5. 8ST

ADDITIONAL PRODUCTS

HYDRO-TRANSPORT FOOD PUMPS

Cornell's innovative single port impeller configuration with its unique offset volute provides the end user with a food handling pump capable of transporting even the most delicate food products such as cranberries, cherries, lettuce, potatoes, carrots or even live fish; reducing product damage and ensuring product integrity. The single port impeller features a large and rounded leading vane edge designed specifically for handling whole or processed foods.

HYDRAULIC SUBMERSIBLE PUMPS

Cornell's DuraSub™ uses a heavy duty pump end and bearing frame for direct coupling to a ***hydraulic motor.*** The DuraSub™ has a modular design which allows standard Cornell pump ends to be used as a Hydraulic submersible pump.

- Available for most Cornell pump models
- Hydraulic motor driven
- Various adapter plates available for hydraulic motor fit
- Heavy duty shaft / bearing frame assembly and wet end construction
- Premium wet end efficiencies reduce horsepower requirements
- Heavy duty pumps ends for long service life and reliability

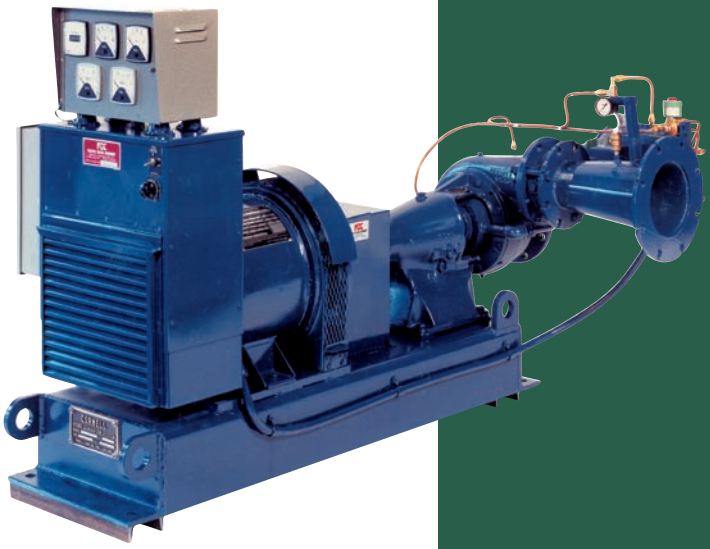
QUALITY CONSTRUCTION

We believe in our products and services. We work hard to develop a one-on-one relationship that will carry you through your purchase experience and continue to support your after market needs.

Cornell Pump Company warrants equipment of its manufacture to be free from defects in material and workmanship for an industry-leading period of ***two years*** from the date of shipment.

HYDRO-TURBINES

You don't need a raging river to take advantage of the energy savings a Cornell Hydro Turbine can provide. Heads as low as 50 feet, and flows as low as 90 gallons per minute can produce usable energy. Cornell's high turbine efficiency is often found to be comparable with specially built imported turbines. They are less complex, easier to install and require less maintenance. Cornell turbines are available in a wide range of configurations and mounting styles.

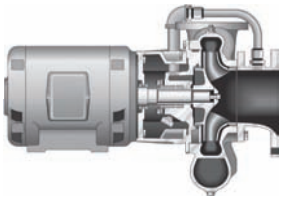


AVAILABLE OPTIONS

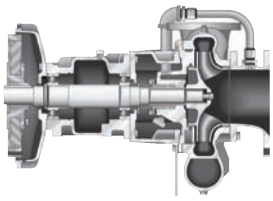
MOUNTING CONFIGURATIONS

Cornell irrigation pumps are available in a variety of mounting configurations, including horizontal and vertical close-coupled pumps, vertical and horizontal frame-mounted pumps, and pumps with an SAE bell housing mounting directly to an engine.

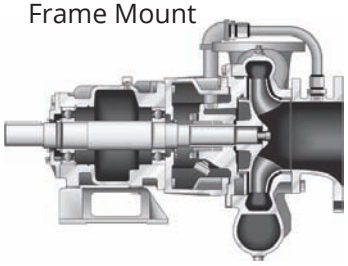
CC
Close-Coupled



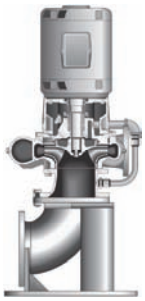
EM
Engine Mount



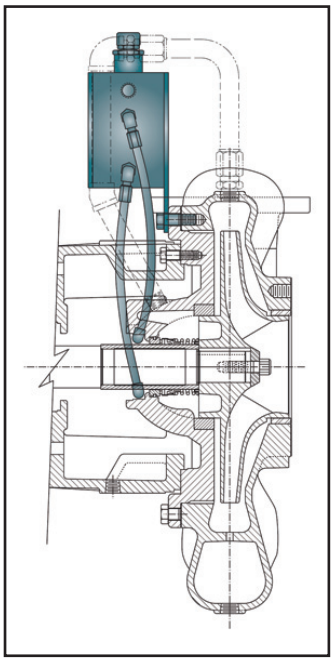
F
Frame Mount



VM/VC/VF
Close Coupled
Coupled
Frame Mount



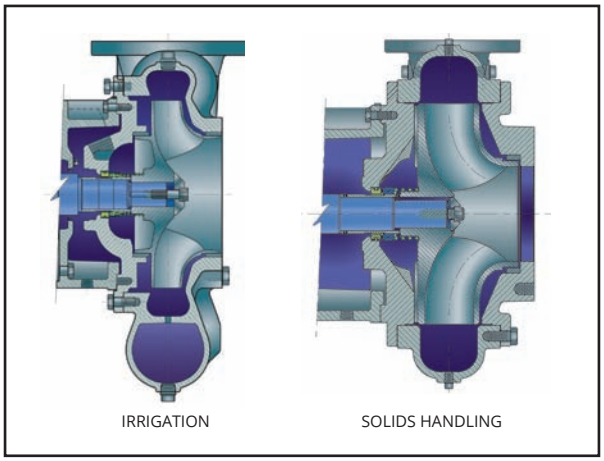
RUN-DRY™ SYSTEM



For applications where there is the possibility of the pump operating in a dry condition, Cornell's Run-Dry™ system is the answer. Cornell's Run-Dry™ system consists of an auxiliary gland and oil reservoir that keeps the seal faces lubricated and prevents dry running of the seal faces during priming, re-priming, or standby operation. The Run-Dry™ gland is connected to a lubricant reservoir via inlet and outlet lines such that shaft rotation provides continuous circulation and cooling of the lubricant and seal faces. With the Run-Dry™ system your pump can run dry for hours without damaging the mechanical seal.

CYCLOSEAL®

Ideally suited for water and waste water applications, Cornell's patented Cycloseal® (U.S. Patent # 5,489,187) is a self-contained single mechanical seal with a dished backplate. This configuration requires no external flushing and eliminates the need for a water flush line. The Cycloseal® uses stationary deflector vanes cast into the pump backplate in conjunction with contoured impeller back vanes and a dished backplate to create pressure gradients that moves solids and entrained vapor away from the seal faces. The service life of a Cycloseal® mechanical seal can be as much as 10 times longer than a typical mechanical seal.



REDI-PRIME®

Cornell Redi-Prime® pumps are designed with oversized suctions to provide more flow, reduced friction losses, and higher suction lift. The priming system was designed with the environment in mind. By using a positive sealing float box and a diaphragm vacuum pump, there is no water carry-over to contaminate the environment. With suction lifts of up to 28 feet, heads to 470 feet and flow rates exceeding 20,000 GPM, most Cornell pumps can be readily fitted with the Redi-Prime® system.

CORNELL®

EFFICIENT BY DESIGN

MARKET AND PRODUCT LINE

AGRICULTURAL

FOOD PROCESS

INDUSTRIAL

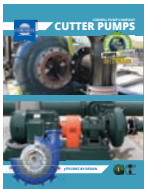
MINE DEWATERING

MUNICIPAL

REFRIGERATION

WATER TRANSFER

CHOPPER



CUTTER

EDGE™

HYDRAULIC SUBS

HYDRO TURBINE

IMMERSIBLE

MANURE

MP SERIES

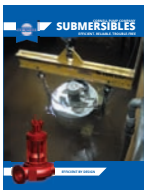
MX SERIES

OIL & GAS

REDI-PRIME

STX

SLURRY



SUBMERSIBLE

ISO 9001:2008 CERTIFIED

Cornell Pump Company
16261 SE 130th Ave
Clackamas, OR 97015
P: (503) 653-0330
F: (503) 653-0338

CORNELLPUMP.COM