CORNELL

EFFICIENT BY DESIGN

CORNELL PUMP COMPANY

MINING

EFFICIENT BY DESIGN

MINE DEWATERING

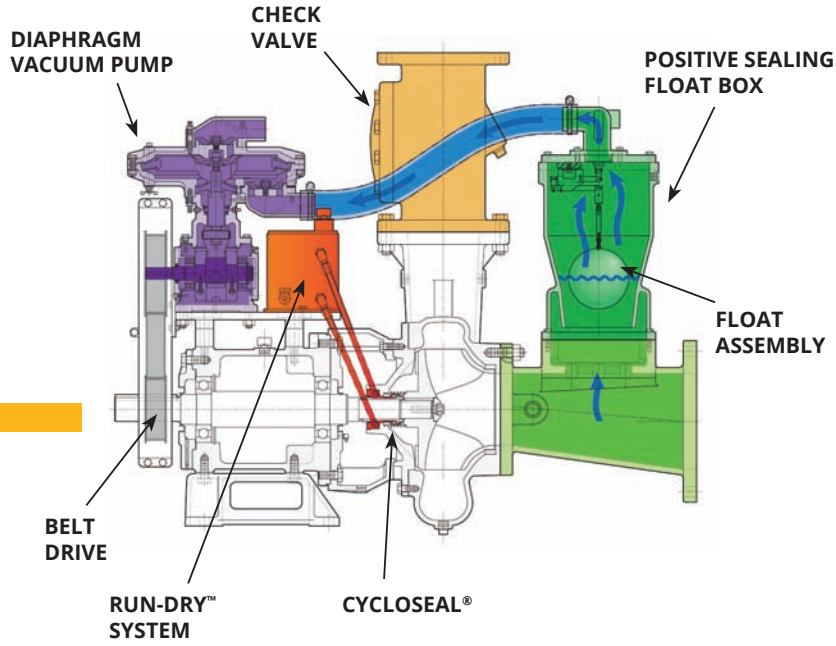
HIGH EFFICIENCY

SETTING THE STANDARD

Cornell's Redi-Prime® pumps are designed and engineered for the most rugged and demanding industries; construction, industrial, rental and municipal. With over 50 years of proven experience and reliability Cornell Pump Company has established the highest industry standards for premium quality and rugged performance.

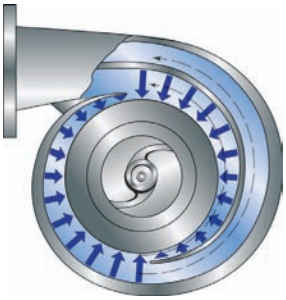
ENERGY EFFICIENT

Energy costs are at a record high and you can actually save money with Energy Efficient Cornell Pumps. Cornell manufactures MORE THAN 60 clear liquid and non-clog pumps that meet or exceed optimum efficiency standards for centrifugal pumps.



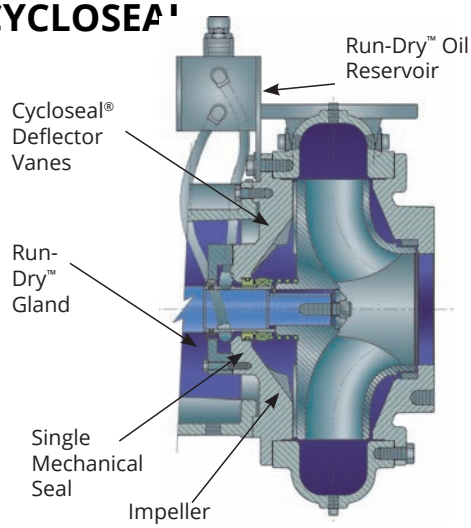
DOUBLE VOLUTE

The Double Volute system enables Cornell single-stage, end-suction centrifugal pumps to easily perform big volume and high pressure jobs. On single volute pumps, the increasing pressure acts against the impeller area and creates unbalanced radial forces. By contrast, the Double Volute system effectively balances these forces around the impeller to reduce shaft flexure and fatigue for longer seal life, bearing life and shaft life.



DOUBLE VOLUTE

CYCLOSEAL



FEATURES

- Heads of up to 470 feet are possible
- Valve eliminates any liquid carry over
- Automatic Priming and Re-Priming
- Suction Lifts of 28 feet are achievable
- Backed by an industry-leading two-year warranty

BENEFITS

- Fully automatic self-priming, dry-prime pump
- Handles air/liquid mixtures with ease
- Patented Cycloseal® and Run-Dry™ options
- Handles large sized solids
- High suction lift capability up to 28 feet

HIGH HEAD DEWATERING PUMPS

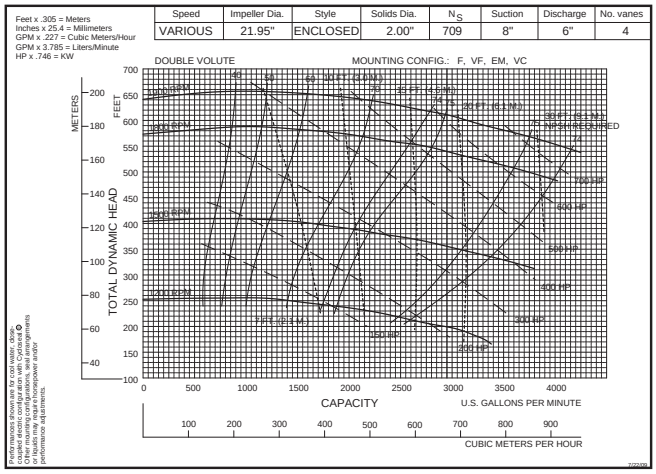
UP TO 25FT LIFT - HEADS TO 800FT - FLOWS TO 4000 GPM

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 engine mounted configurations.

- High Operating Pressures
- High Flow Requirements
- Dependable, High Quality Construction
- Available in Horizontal Frame Mount & SAE Engine Mount Styles
- All Iron construction
- Run-Dry™ seal option
- Ductile Iron case, CA6NM Impeller
- Impeller wear ring optionally hardened to 375-425 BNH
- Volute wear ring optionally hardened to 450-500 BHN
- Double angular contact thrust bearings
- 4142 Alloy Steel shaft
- Oil fitted or grease lubricated frames
- 420HT shaft sleeves available for abrasive applications
- Dynamically balanced Impellers

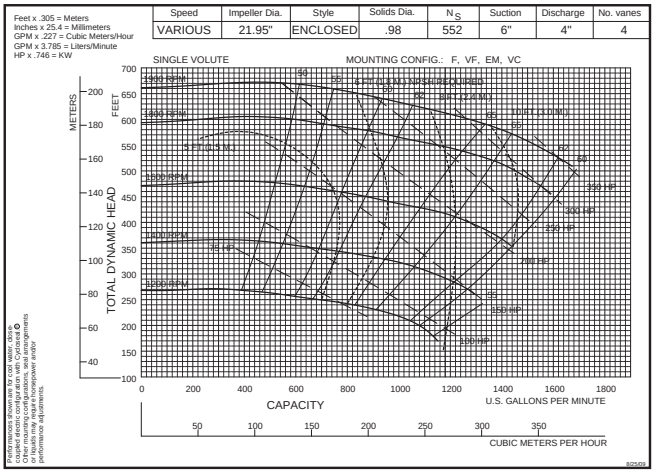
6822MX

Speed	Impeller Dia.	Style	Solids Dia.	N_S	Suction	Discharge	No. vanes
VARIOUS	21.95"	ENCLOSED	2.00"	709	8"	6"	4



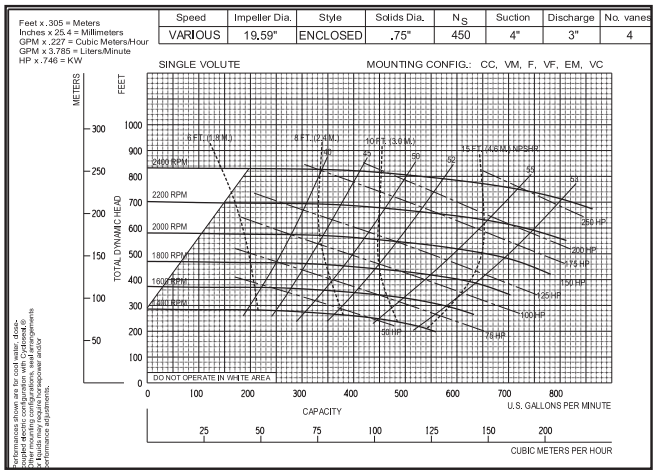
4622MX

Speed	Impeller Dia.	Style	Solids Dia.	N_S	Suction	Discharge	No. vanes
VARIOUS	21.95"	ENCLOSED	.98	552	6"	4"	4



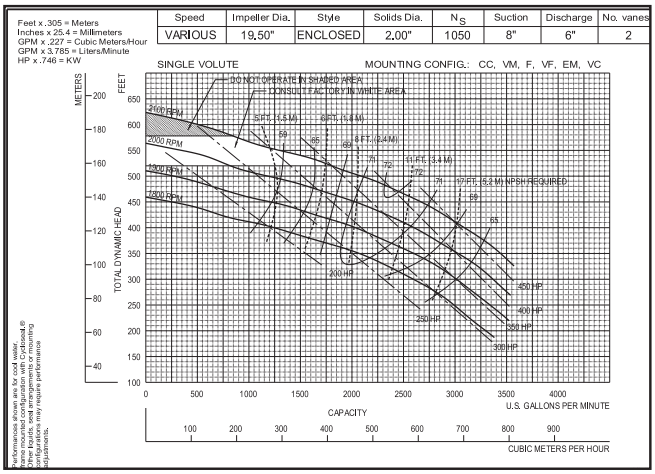
3419MX

Speed	Impeller Dia.	Style	Solids Dia.	N_S	Suction	Discharge	No. vanes
VARIOUS	19.59"	ENCLOSED	.75"	450	4"	3"	4



6NHTB19

Speed	Impeller Dia.	Style	Solids Dia.	N_S	Suction	Discharge	No. vanes
VARIOUS	19.50"	ENCLOSED	2.00"	1050	8"	6"	2



REDI-PRIME® PUMPS

SUCTION LIFTS TO 28FT

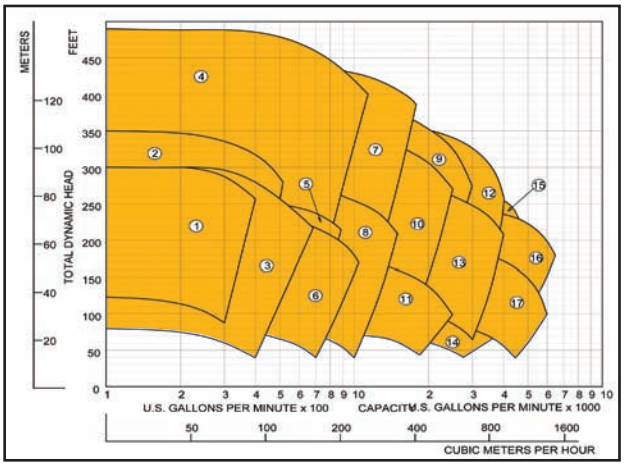
PUMP OPTIONS: CLEAR LIQUID REDI-PRIME® PUMPS

MODEL	DISCh. SIZE	MAX CAPACITY	MAX SOLIDS	MAX HEAD	MAX SUCTION	RPM
2.5RB	2.5"	400 GPM	.38"	300'	25'	2200
2.5H	2.5"	500 GPM	.41"	360'	25'	2200
2.5YH	2.5"	750 GPM	.41"	310'	28'	3000
3HC/HA	3"	1050 GPM	.5"	490'	28'	2400
3RB	3"	800 GPM	.5"	280'	28'	2200
3YL/YH	3"	1100 GPM	.5"	245'	28'	2700
4HC	4"	1650 GPM	.62"	470'	28'	2150
4RB	4"	1550 GPM	.84"	270'	25'	2200
5HH	5"	2900 GPM	.75"	375'	25'	2000
5RB	5"	2350 GPM	1"	360'	25'	2400
5YBH	5"	2500 GPM	.75"	200'	25'	2400
6HH	6"	4000 GPM	1.22"	365'	25'	2000
6RB	6"	4250 GPM	1.31"	300'	28'	2200
6YB	6"	4100 GPM	.75"	235'	25'	2400
8H	8"	5400 GPM	1.25"	305'	25'	2000
10RB	10"	7000 GPM	1.25"	300'	25'	2200
10YB	10"	6500 GPM	1.38"	200'	25'	2300

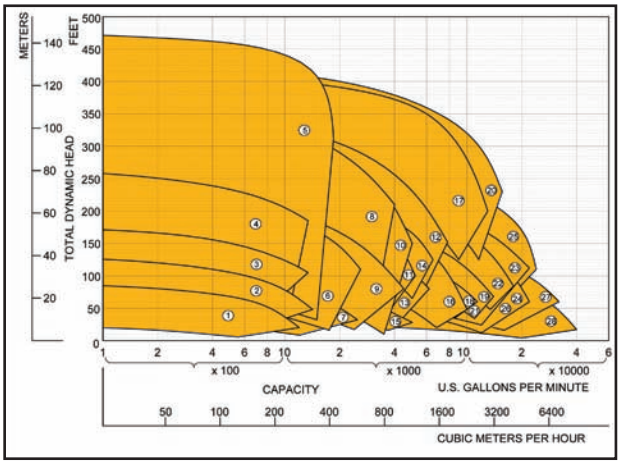
PUMP OPTIONS: SOLIDS HANDLING REDI-PRIME® PUMPS

MODEL	DISCh. SIZE	MAX CAPACITY	MAX SOLIDS	MAX HEAD	MAX SUCTION	RPM
4NNTL	4"	1,450 GPM	3"	175'	25'	2,500
4NNT	4"	1,400 GPM	3"	150'	25'	2,000
4NHTA	4"	1,400 GPM	3"	225'	25'	2,100
4414T	4"	1,400 GPM	3"	350'	25'	2,000
4NHTB	4"	1,600 GPM	3"	425'	25'	2,000
6NHTA	6"	2,700 GPM	3"	280'	25'	2,000
6NNT	6"	2,550 GPM	3	150'	25'	2,100
6NHTB	6"	4,250 GPM	3.38"	350'	25'	1,800
8NNT	8"	4,500 GPM	3.38"	255'	25'	1,900
8NHTA	8"	5,000 GPM	3.38"	350'	25'	1,800
8NHTH	8"	6,250 GPM	4"	255'	25'	1,200
10NNT	10"	6,300 GPM	4"	340'	25'	1,800
10NHTB	10"	8,000 GPM	4.75"	195'	25'	1,200
10NHTA	10"	6,400 GPM	4.25"	245'	25'	1,200
12NHTL	12"	5,200 GPM	4.25"	140'	25'	1,500
12NNF	12"	8,500 GPM	3"	195'	25'	1,800
12NHG28	12"	12,000 GPM	3.2"	410'	25'	1,200
14NHG	14"	12,000 GPM	4"	210'	25'	1,500
14NHGH	14"	13,500 GPM	4.25"	145'	25'	1,200
14NHG28	14"	15,000 GPM	4.25"	430'	25'	1,200
16NHGH	16"	13,500 GPM	4.25"	175'	25'	1,200
16NHG22	16"	16,500 GPM	4.5"	265'	25'	1,200
18NHG	18"	22,000 GPM	5"	220'	25'	900
18NHFL	18"	26,000 GPM	5"	190'	25'	890
18NHF34	18"	22,000 GPM	4.5"	320'	25'	900
20NHFL	20"	18,000 GPM	5"	116'	25'	720
24NNG	24"	32,000 GPM	5.25"	135'	25'	750
30NNT	30"	38,000 GPM	10.2"	110'	25'	585

CLEAR LIQUID REDI-PRIME® CURVES



SOLIDS HANDLING, ENCLOSED IMPELLER REDI-PRIME® CURVES



1. 3NLT
2. 4NNTL
3. 4NNT
4. 4NHTA
5. 4414T
6. 4NHTB
7. 6NHTA
8. 6NNT
9. 6NHT/TH
10. 6NHTB
11. 8NNT
12. 8NHTA
13. 8NHTH
14. 8NHTR
15. 8NHGA
16. 10NHTB
17. 10NHTBH
18. 10NHTA
19. 12NHTL
20. 12NHTM
21. 12NNF
22. 12NHG28
23. 14NHG
24. 14NHGA
25. 14NHGH
26. 14NHG28
27. 16NHGH
28. 16NHG22
29. 16NHG32
30. 18NHG
31. 18NHFL
32. 18NHF34
33. 18NHG34
34. 20NHFL
35. 20NHF
36. 24NNG
37. 30NNT

SELF-PRIMING
TRASH PUMPS

SUCTION CHECK VALVE
Canvas reinforced nitrile rubber or Viton suction check valve which can easily be replaced through the front cover without removing the pipework.

DUAL WEAR PLATES
Easily replaceable front and rear wearplates with abrasion and oil resistant rubber facing.* The rubber facing protects the impeller blades against wear due to small abrasive particles, reducing the need for adjustment to take up wear, thus ensuring new performance and priming well into the service life of the wear parts. Cast iron and stainless steel wear plates available on request.

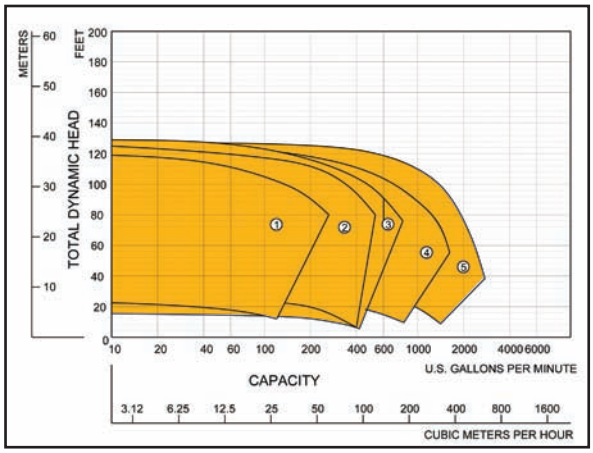
SOLIDS HANDLING IMPELLER
Balanced Ductile Iron or Stainless Steel two blade impeller handling solids up to 3" in diameter. Pump out vanes on rear to reduce the build up of foreign matter and reduce the pressure on the mechanical seal.

HEAVY DUTY BEARINGS
Heavy duty thrust bearings sized for V Belt drive loads. Separate oil filling plugs for bearings and mechanical seal with sight gauges.

SILICON-CARBIDE SEAL
Externally lubricated mechanical seal is standard. Can run dry on high vacuum even when pumping highly abrasive liquids.

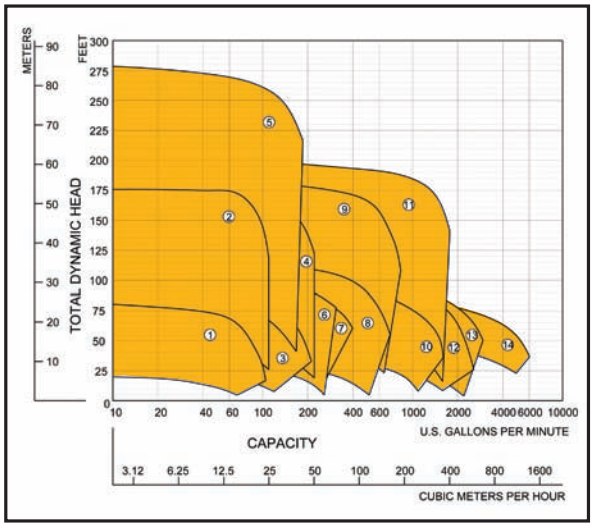
SHIMLESS IMPELLER
The external coverplate allows for the easy adjustment between the clearance of the impeller and the external wearplate. Instead of realigning belts, couplings and other drive components, the external coverplate eliminates those needs. This also makes sure that the seal assembly and the impeller back clearance are not disturbed. This design feature increases the life of the wearplate and the impeller.

ST SERIES TRASH PUMPS
FOR LARGER DIAMETER SOLIDS AND
DIMENSIONAL INTERCHANGEABILITY



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

SJ SERIES
SOLIDS HANDLING PROCESS PUMPS



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. 12SJ16

ADDITIONAL PRODUCTS

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 reliablity

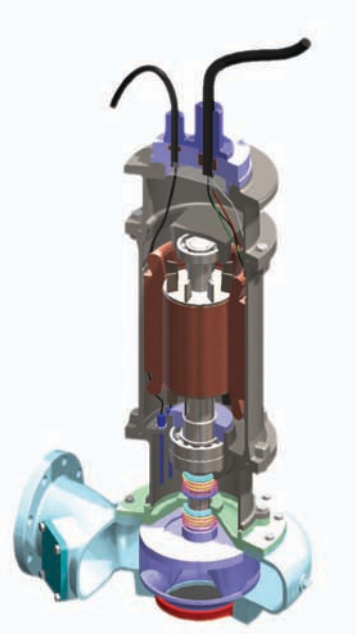
CHOPPER PUMPS

The Cornell Chopper pump is ideally suited for chopping solids. It is constructed of ASTM A536, grade 65-45-12 ductile iron and uses our patented Cycloseal® design (patent #5489187). The cutter bar is of T1 tool steel, heat treated to a minimum 60 Rockwell C hardness. The impeller is of AISI 8630 cast steel, heat treated to a minimum 60 Rockwell C hardness. The shaft is AISI 4142 and the shaft sleeve is 416 stainless steel. Back-to-back angular contact ball thrust bearings and single ball radial bearings make for smooth operation. The Chopper pump is fitted with a John Crane type 2 tungsten carbide mechanical seal. TDH ranges from 30-200 with flows ranging from 0-1500 GPM. An optional oil lubrication system with reservoir is available.

SUBMERSIBLES HIGH EFFICIENCY

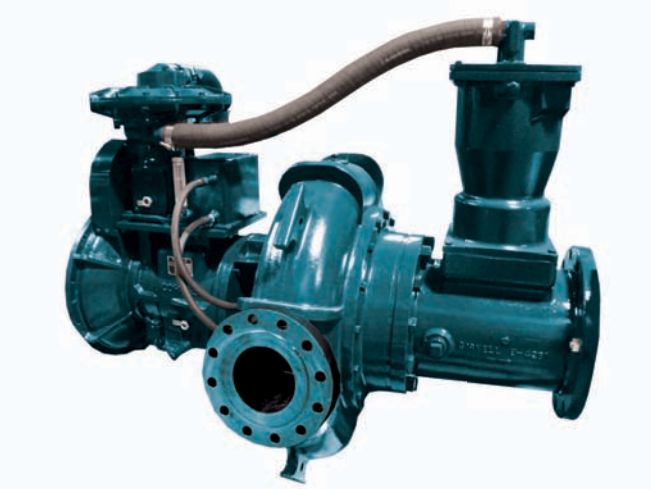
Cornell uses the same high efficiency pump-ends for our submersibles that have been proven time and time again in standard municipal applications. Coupled with the highest quality motors, Cornell's submersible product line provides the best possible value. The bottom line – Cornell Submersible Pumps cost less to operate.

At Cornell we understand the need for reliability, durability and efficiency. This is why we have coupled our pumps with the most reliable and durable submersible motors on the market. Cornell motors are FM approved and suitable for Class I, Division I, Group C & D, explosion proof service and are inverter duty. Non-wicking, Permanently numbered leads are potted into a separate cable cap assembly, preventing leakage to the stator. Cornell motors are protected by thermostats and utilize class F insulation. Dual moisture probes are installed for the early detection of seal failure.



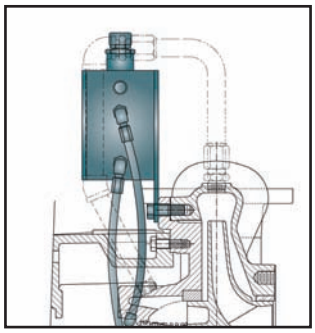
Capacities from 80 GPM to 15,000 GPM and heads from 10 feet to 400 feet give Cornell a clear performance advantage.

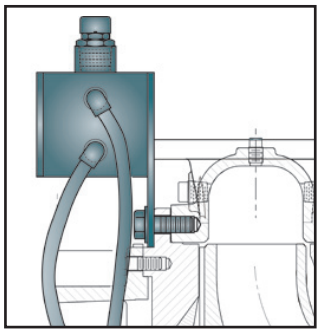
AVAILABLE OPTIONS



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.





RUN-DRY™ OPTION

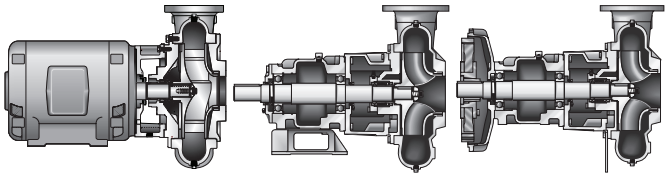
Run your pump dry without the use of expensive water systems and without mechanical seal damage. Cornell's Run-Dry™ system consists of an auxiliary gland which provides containment for an application-specific lubricant present at the inside diameter of the mechanical seal faces. This lubricant prevents dry running of the seal faces while priming, re-priming, and on standby. The Run-Dry™ gland is connected to a lubricant reservoir via inlet and outlet lines which are oriented tangentially to the pump shaft so that shaft rotation provides circulation and subsequent cooling of the lubricant.

SOLIDS HANDLING IMPELLER OPTIONS

Cornell's two- and three-port enclosed impellers are designed to handle large solids and maintain exceptional hydraulic efficiencies. Cornell's Delta™ style impeller is specifically designed for handling stringy materials and heavy sludge for low- to medium-head applications. The three- or four-vane, semi-open impeller generates a cutting action designed to handle concentrated slurries for high head applications.

MOUNTING CONFIGURATIONS

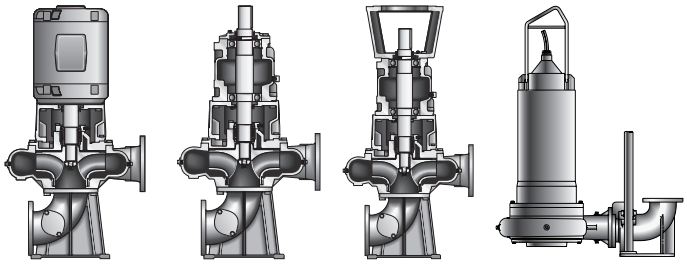
Cornell's Modular Frame design allows for easy adaptability. Choose a pump, then pick the mounting configuration best suited to your application. Right hand and left hand rotation along with tangential or centerline discharges are available for most pumps.



CC
HORIZONTAL CLOSE COUPLED

F
HORIZONTAL FRAME MOUNTED

EM
ENGINE MOUNTED (SAE SIZE)



VM
VERTICAL CLOSE COUPLED

VF
VERTICAL FRAME MOUNTED

VC
VERTICAL COUPLED

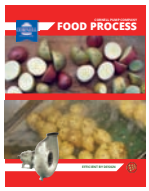
SUB
SUBMERSIBLE

CORNELL®

EFFICIENT BY DESIGN

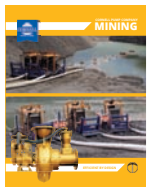
MARKET AND PRODUCT LINE

AGRICULTURAL



FOOD PROCESS

INDUSTRIAL



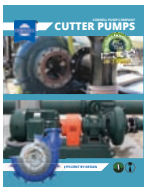
MINE DEWATERING

MUNICIPAL

REFRIGERATION

WATER TRANSFER

CHOPPER



CUTTER

EDGE™

HYDRAULIC SUBS

HYDRO TURBINE

IMMERSIBLE

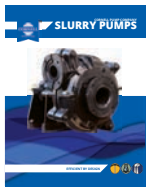
MANURE

MP SERIES

MX SERIES

REDI-PRIME

STX



SLURRY

SUBMERSIBLE

ISO 9001:2008 CERTIFIED

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