CORNELL PUMP COMPANY

MP SERIES

MINING PUMPS DESIGNED FOR COARSE ABRASIVES

EFFICIENT BY DESIGN

MP SERIES MINING

CORNELL®
EFFICIENT BY DESIGN

Cornell Pump was founded in 1946 by five friends who set out to design a more reliable, durable, and efficient pump. Over the years, Cornell engineers have contributed significantly to industry advances in centrifugal pump design with pump features like Cornell Redi-Prime®, Run-Dry™, and Cycloseal® systems.

THE CORNELL MP SERIES: SOLID ENGINEERING, ADVANCED TECHNOLOGY

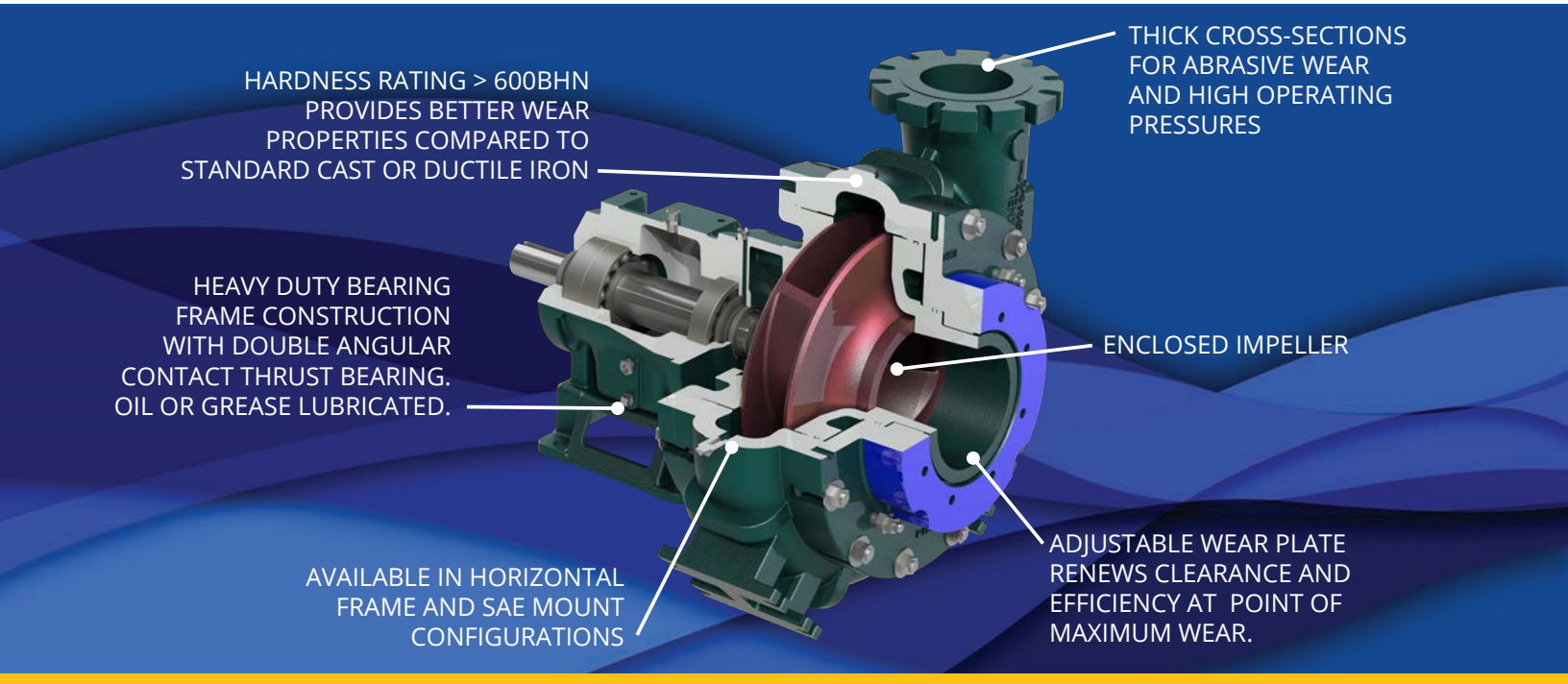
Cornell Pump Company's MP Mining Pump Series combines decades of innovative pump manufacturing and design, with our highly-regarded, patented Cycloseal® technology. Offering high-operating pressures, the MP pumps are specifically designed for coarse abrasive slurry applications such as sand, gravel, coal, manure, and mine dewatering.

LONGER WEAR LIFE

Compared to Cornell's standard solids handling pumps, MP series pumps last longer and are better suited for tough environments. And while MP series pumps are designed for slurry, they also handle larger solids.

IDEAL FOR THESE MINING APPLICATIONS:

- MINE DEWATERING
- COAL PRODUCTION
- SAND PUMPING
- GRAVEL TRANSPORT
- MANURE SLURRY
- AGGREGATE
- TAILINGS
- OIL SANDS
- UNDERGROUND RAMP DEVELOPMENT
- TUNNEL DEWATERING & TBM SUPPORT



MP SERIES MINING

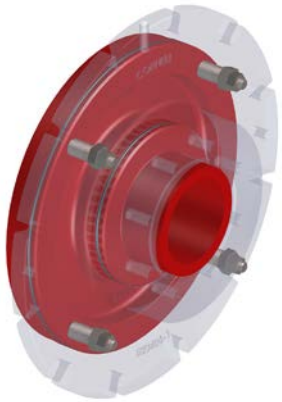
MP SERIES MINING PUMPS: DESIGNED FOR COARSE ABRASIVES

MP SERIES SLURRY PUMPS

MP series pumps are an unlined slurry pump designed for coarse abrasives and solids up to 4”. The MP series offers exceptional wear resistance for reduced maintenance and long life in harsh environments.

Cornell Slurry pumps are designed to withstand exposure to the abrasive materials that can reduce pump life and cause seal failures. With proper maintenance, MP slurry pumps can last years longer than standard cast-iron pumps. MP-series pumps are suitable for for mine dewatering, gravel transport, tailings, and many other applications within the mining industry.

MP SERIES PERFORMANCE	
DISCHARGE SIZE RANGE	2” TO 10” (5 cm TO 20 cm)
MAX SOLIDS HANDLING	4” (10.16 cm)
MAX FLOW	9,000 GPM (2044 m^3/h)
MAX HEAD	660’ (201 m)



MP Series pumps feature a replaceable, adjustable wear plate to regain lost efficiency while in service. Externally adjustable without moving piping or bearing frame.

MATERIALS OF CONSTRUCTION

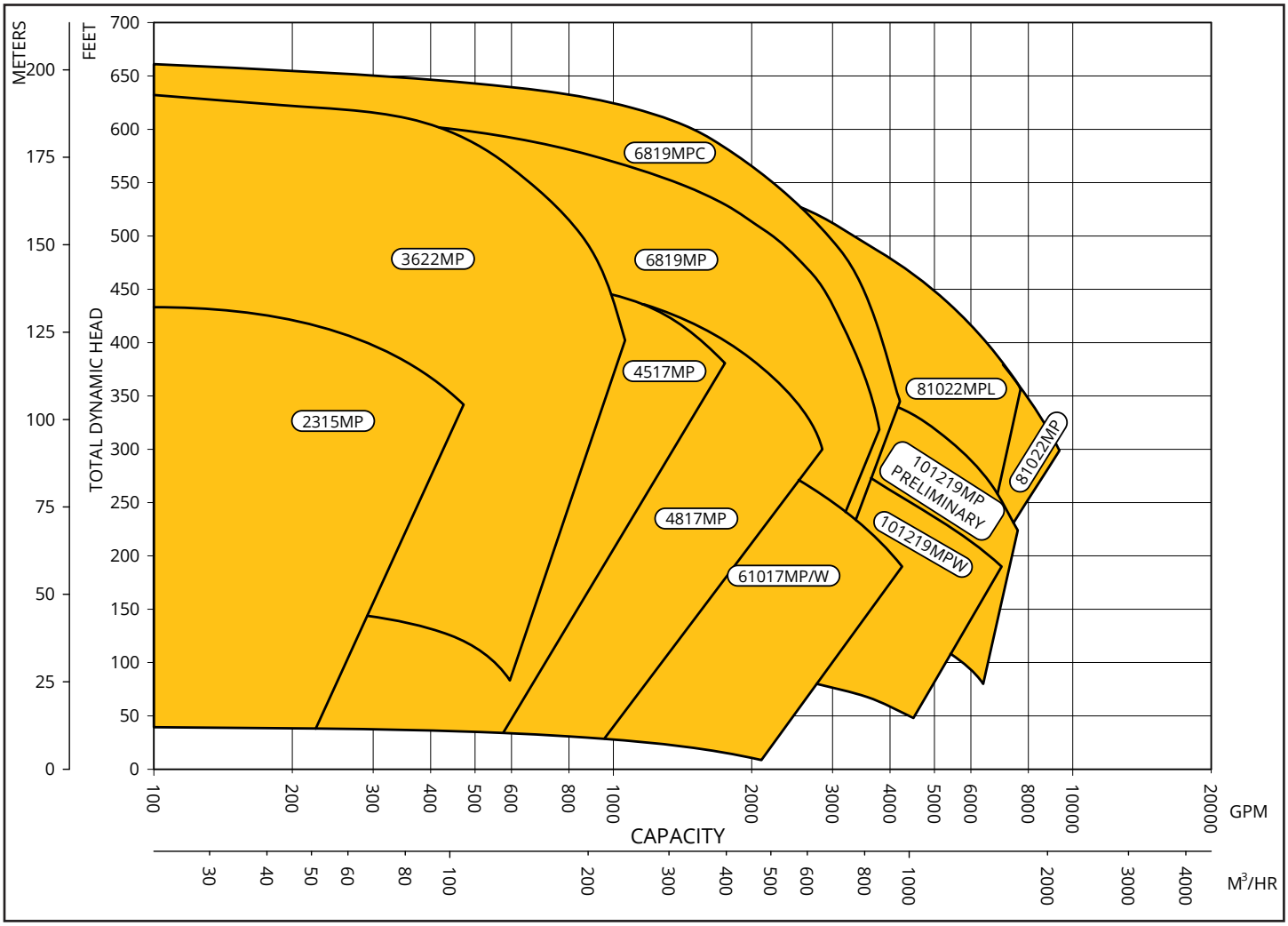
- High-chrome white iron standard construction
- 17-4PH stainless steel shafts
- Hardness rating > 600BHN

FEATURES

- Cycloseal® grit removal system
- High-efficiency design
- Run-Dry™ and Redi-Prime® Options
- Heavy-duty construction for aggressive applications
- Adjustable & replaceable wear plates
- Two-year warranty

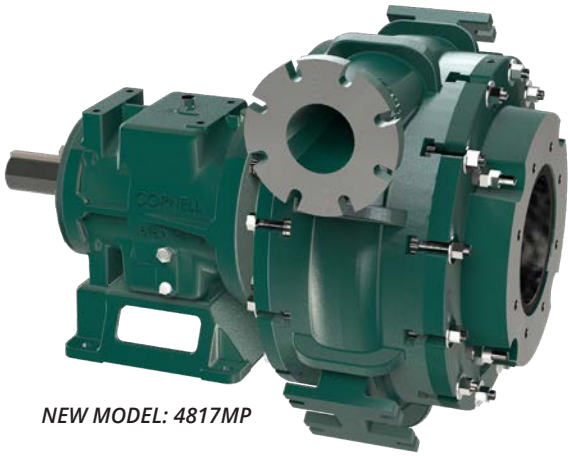
MP SERIES MINING

MP SERIES FAMILY CURVE



PUMP MODEL	MIN. FLOW	MAX. FLOW	MAX PRESSURE	%BEP
2315MP	60 GPM	470 GPM	250 PSI	52%
3622MP*	120 GPM	900 GPM	250 PSI	55%
4517MP	250 GPM	1750 GPM	250 PSI	70%
4817MP	375 GPM	2750 GPM	250 PSI	68%
6819MP	750 GPM	3800 GPM	375 PSI	74%
6819MPC	800 GPM	4300 GPM	375 PSI	77%
61017MP	500 GPM	4250 GPM	250 PSI	79%
81022MP	1400 GPM	9000 GPM	300 PSI	83%
81022MPL	1400 GPM	7600 GPM	300 PSI	83%
101219MP*	1500 GPM	2750 GPM	300 PSI	76%
101219MPW	1500 GPM	6800 GPM	300 PSI	74%

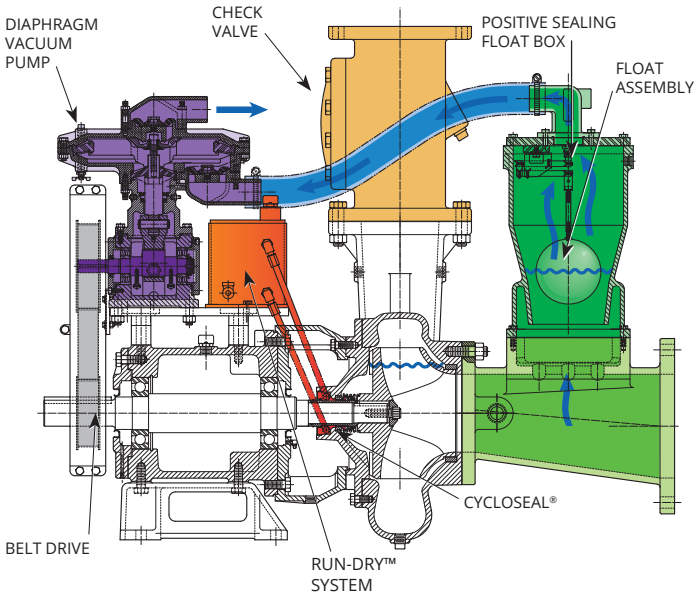
*Preliminary models; specifications subject to change.



NEW MODEL: 4817MP

MP SERIES OPTIONS

REDI-PRIME®

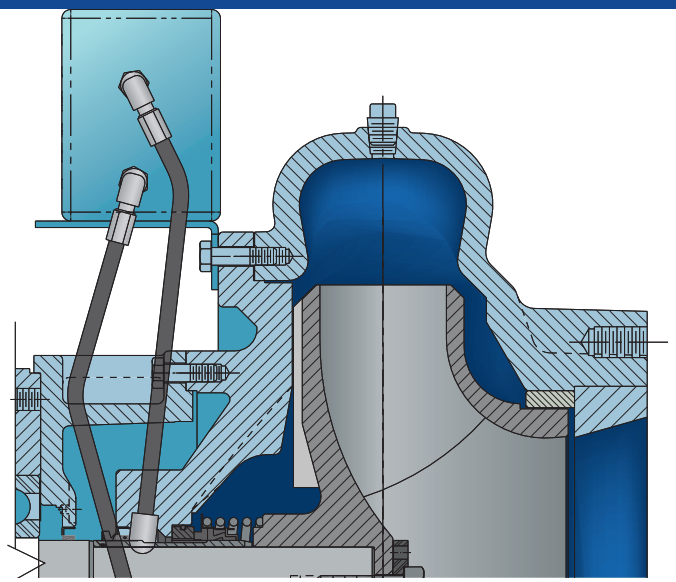


A PATENTED SYSTEM that allows the pump to rapidly prime or re-prime unattended; fully automated. Cornell Redi-Prime pumps are designed with oversized suctions to provide more flow, reduced friction losses, and higher suction lift. Redi-prime handles large size solids and air/liquid mixtures with ease, all while maintaining premium hydraulic efficiency to reduce energy consumption.

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. Most Cornell pumps can be readily fitted with the Redi-Prime system. Redi-Prime fitted pumps are capable of suction lifts of up to 28', heads to 800' and flow rates exceeding 38,000 GPM.

- Fully automatic priming and repriming
- Handles air/liquid mixtures with ease
- Rapidly primes and re-primes completely unattended
- Environmentally safe priming system designed to prevent product leakage
- Premium hydraulic efficiency for reduced energy consumption

RUN-DRY™

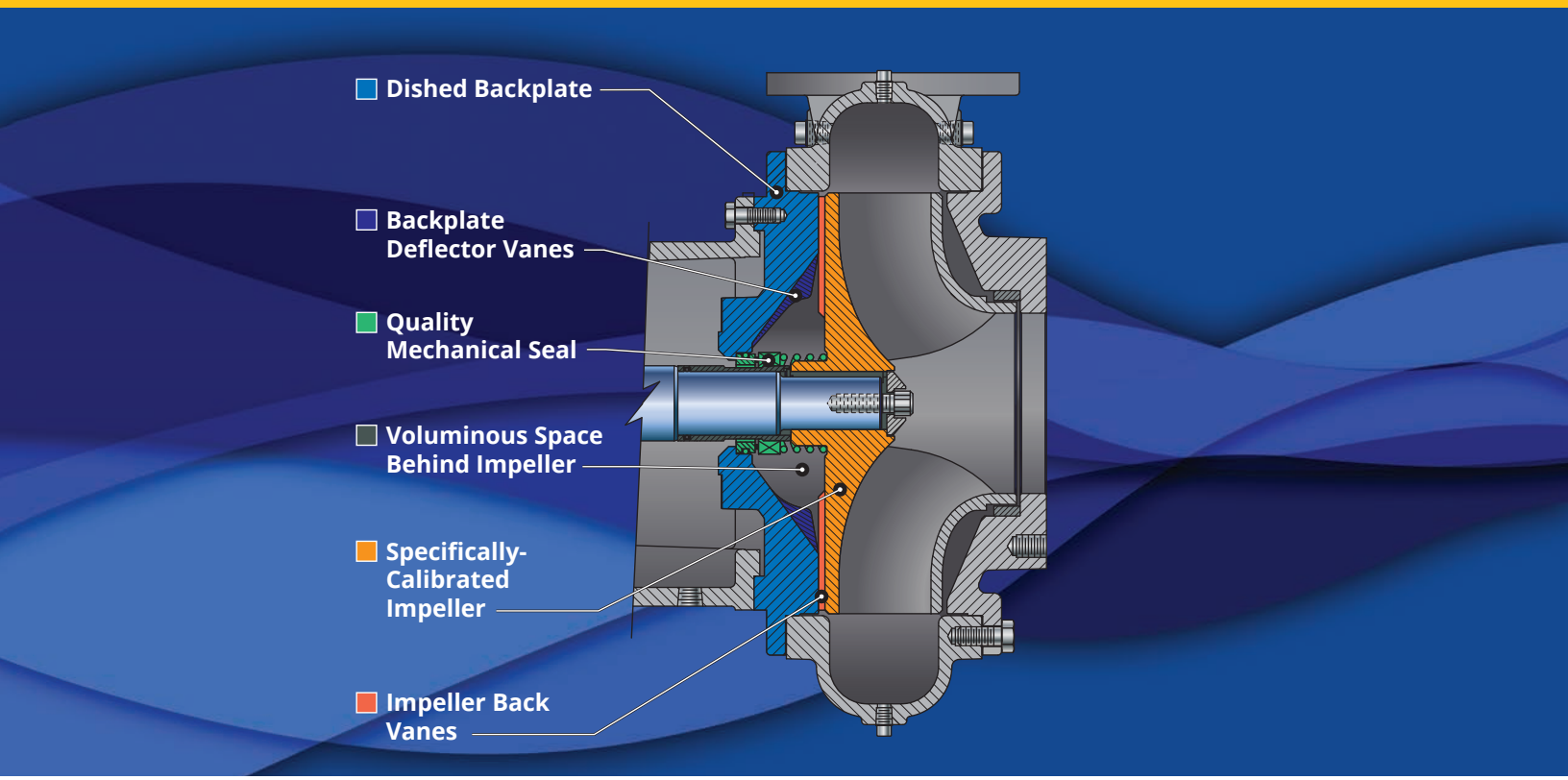


CORNELL'S RUN-DRY SYSTEM is the answer for applications where there is the possibility of the pump operating in a dry condition. Cornell's Run-Dry system consists of an auxiliary gland and oil reservoir that keeps the seal faces lubricated and prevents dry running of the seal faces during priming, re-priming, 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.

- Run dry for hours without damaging the seal
- Cools and lubricates seal faces
- Ideal for applications that could operate in a dry condition
- Useable in conjunction with Cycloseal® and Redi-Prime®

61017MP with Run-Dry™

MP SERIES OPTIONS



CYCLOSEAL® —THE SEALING SYSTEM INTEGRAL TO CORNELL PUMPS

The Cutter Blade or Waste Warrior cutter pumps from Cornell feature our patent Cycloseal sealing system, which removes solids and abrasive material from the seal area, while purging air and gas pockets. This innovative cyclonic action extends seal life and eliminates the need for venting or flush water.

No Flush Water or Packing: Through the backplate and sweeping vanes, Cycloseal requires no flush water or packing, saving expense, service time, and messy drips.

Extended Seal Life: Cornell's Cycloseal design has proven itself in the toughest applications, from manure slurry, starch recovery, and clear water, to food processing and self-priming applications – in some cases more than tripling the normally-expected seal life.

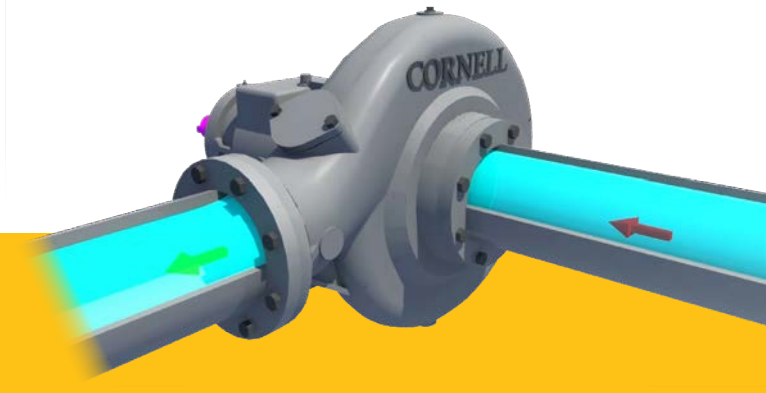
Run-Dry™ Option: All pumps with Cornell's Cycloseal system can be equipped with an optional Run-Dry feature, which serves to lubricate the seal faces even when there is no liquid in the pump casing. In situations where the pump must run dry for several hours, or where the pump may suddenly lose prime without being shut off, the Run-Dry feature is a must.

System Savings: The Cycloseal system requires no external water flush, filters, grease cups, or piping normally associated with packing or mechanical seals in other pumps.

Better for Abrasive Applications: More resilient than packing and standard mechanical seals bathed in grit and other materials, Cycloseal keeps solids away from the seal area for reduced seal wear.

Greater Reliability: Through positive seating, end users can tell when the seal is perfectly fitted. With greater ability to withstand to grit, the Cycloseal system results in longer intervals between service.

Maintenance Savings: The end result of a longer-lasting seal is less down-time and lower maintenance costs over the life of the pump.



Watch the Cycloseal video online to see it in action:
http://www.cornellpump.com/cycloseal-system/

ADDITIONAL MINING PUMPS

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.

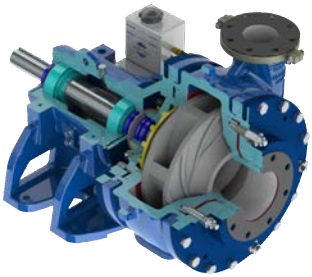
- Available for most Cornell pump models
- Hydraulic motor driven
- Various adapter plates available for hydraulic motor fit
- Heavy duty shaft / bearing frame assembly and wet end construction
- Premium wet end efficiencies reduce horsepower requirements
- Heavy duty pumps ends for long service life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

MX SERIES HIGH PRESSURE PUMPS

Pressures to 800 feet TDH and flows to 8000 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 mounted configurations.

SP SERIES SLURRY PUMP

Cornell's SP Series Slurry pump brings patented **Cycloseal®** technology to the mining process industry. Adding to the diverse range of mine dewatering pumps, The SP Series Slurry pump offers a Cornell solution to abrasive applications throughout the mill process.



SM SERIES SLURRY PUMP

The SM series pumps are hard metal slurry pumps with unlined high-chrome white iron wet ends for a wide range of slurry applications. All pumps have a maximum working pressure of 600 PSI and are specifically designed for series pumping. A unique adjustable suction wear plate incorporates the patented Cycloguard™ feature to reduce recirculation for longer wear life.

STX SERIES

Cornell has redesigned our popular self-priming line to have the best efficiencies in the industry. Combined with our patented **Cycloseal®** back plate technology, the pump is durable, powerful, and energy efficient.

- 5 year warranty
- Cycloseal technology
- Premium efficiency
- 8 percent better performance than leading competitor

CORNELL®

EFFICIENT BY DESIGN

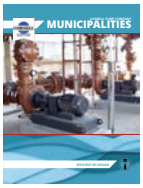
MARKET AND PRODUCT LINE

AGRICULTURE

FOOD PROCESS

INDUSTRIAL

MINING



MUNICIPAL

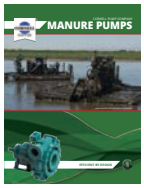
WATER TRANSFER

REFRIGERATION

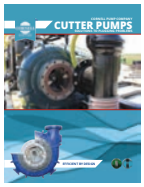
CONSTRUCTION

SLURRY

SLURRY SM



MANURE



CUTTERS

SELF PRIMING

HIGH FLOW

MX SERIES

N SERIES

CYCLONE™

EDGE™

HYDRAULIC SUBS

IMMERSIBLE

CD4MCU

RUN-DRY™

PRIMING SYSTEMS

CYCLOSEAL®

Cycloseal® and Redi-Prime® are Registered Trademarks of Cornell Pump Company.

Cornell pumps and products are the subject of one or more of the following U.S. and foreign patents: 6,074,554; 6,036,434; 6,079,958; 6,309,169.

CORNELLPUMP.COM

ISO 9001:2015 CERTIFIED

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