



CORNELL PUMP COMPANY

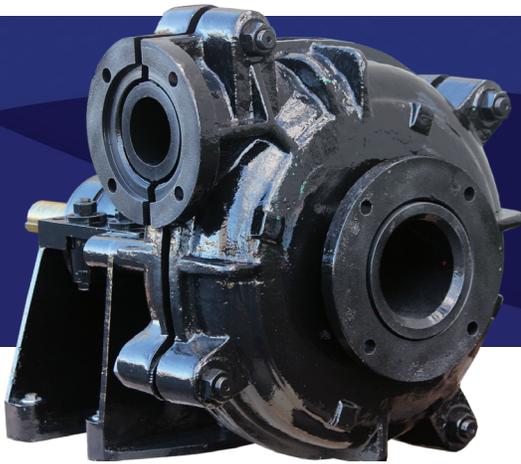
SLURRY PUMPS



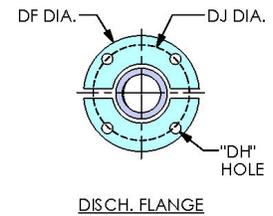
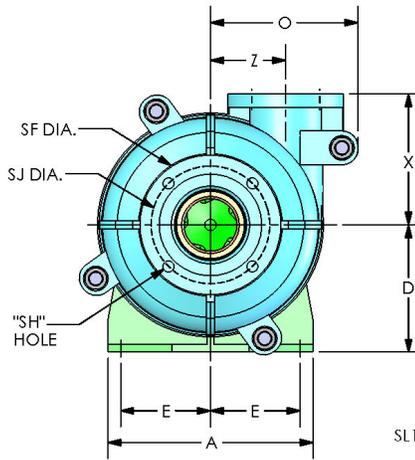
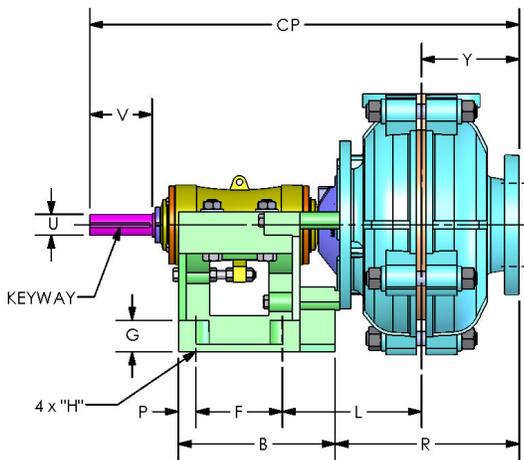
EFFICIENT BY DESIGN



SP SERIES SLURRY PUMPS



CORNELL'S NEW SLURRY PUMPS EXPAND OUR LINE OF DEWATERING PUMPING SOLUTIONS TO ABRASIVE APPLICATIONS IN THE MINING PROCESS INDUSTRY. WITH CORNELL'S PATENTED CYCLOSEAL® TECHNOLOGY, OUR SLURRY PUMPS ARE BUILT TO OPERATE WITHOUT FLUSH WATER.



SL10046

NOTES:

1. Do not use for construction unless certified.
2. Dimension "U" and Keyway are in millimeters. All other dimensions in inches.
3. Flange dimensions are non-standard.

MODEL	FLANGE DIMENSION					
	DISCHARGE			SUCTION		
	DF	DJ	DH	SF	SJ	SH
2SP	7.25	5.75	4x.75	8.5	7	4x.75
3SP	9.02	7.52	4x.88	10.98	9.25	4x.88
4SP	10.98	9.25	4x.88	13.27	11.5	4x.88
6SP	14.49	12.76	8x.81	15.98	14.02	8x.88
8SP	17.01	14.76	8x1.13	19.76	17.52	8x1.13
10SP	20.75	18.5	12x1.0	20.75	18.5	8x1.0
12SP	21.73	19.49	12x1.0	23.03	20.51	12x1.0

MODEL	FRAME	WEIGHT (LB)		
		METAL	RUBB.	
2SP	C	420	340	
3SP	C	580	520	
3SP	D	800	640	
4SP	D	1380	1000	
4SP	E	1600	1400	
6SP	E	3250	2165	
6SP	R	4050	2965	
8SP	ST	8270	6900	
10SP	ST	10185	7400	
12SP	ST	14130	10300	

MODEL	FRAME	CONNECTION		PUMP DIMENSIONS																	
		DISCH.	SUCT.	A	B	CP	D	E	F	G	H	L	O	P	R	U	V	X	Y	Z	KEYWAY
		2SP	C	2	3	15.98	12.24	30.24	10	7	6.89	1.89	0.75	9.17	9.37	1.26	11.06	42mm	4.76	8.27	5.98
3SP	C	3	4	15.98	12.24	33.19	10	7	6.89	1.89	0.75	10.63	11.5	1.26	13.94	42mm	4.76	10.31	7.4	5.87	12mm x 8mm
3SP	D	3	4	19.37	14.33	37.13	13	8.5	8.39	2.52	0.87	10.98	11.5	1.5	13.9	65mm	6.46	10.31	7.4	5.87	18mm x 11mm
4SP	D	4	6	19.37	14.33	40.2	13	8.5	8.39	2.52	0.87	12.52	15.98	1.5	16.57	65mm	6.46	13.31	8.5	9.02	18mm x 11mm
4SP	E	4	6	24.49	17.64	46.38	17.99	10.75	10.12	2.99	1.14	13.82	15.98	2.13	17.05	80mm	8.74	13.31	8.5	9.02	22mm x 14mm
6SP	E	6	8	24.49	17.64	51.26	17.99	10.75	10.12	2.99	1.14	15.83	21.69	2.13	21.93	80mm	8.74	18.11	11.5	12.52	22mm x 14mm
6SP	R	6	8	26.77	23.23	53.54	13.78	11.02	19.29	2.76	-	12.28	21.69	1.98	21.81	85mm	8.5	18.11	11.5	12.52	22mm x 14mm
8SP	ST	8	10	45.28	30.71	68.82	25.59	17.72	24.41	4.92	1.89	17.28	26.5	3.15	27.24	120mm	11.02	25	13.11	16.5	32mm x 18mm
10SP	ST	10	12	45.28	30.71	71.5	25.59	17.72	24.41	4.92	1.89	18.13	29.72	3.15	30	120mm	11.02	26.54	15	18.27	32mm x 18mm
12SP	ST	12	14	45.28	30.71	73.74	25.59	17.72	24.41	4.92	1.89	19.13	37.17	3.15	31.97	120mm	11.02	32.76	15.98	24.76	32mm x 18mm

APPLICATIONS

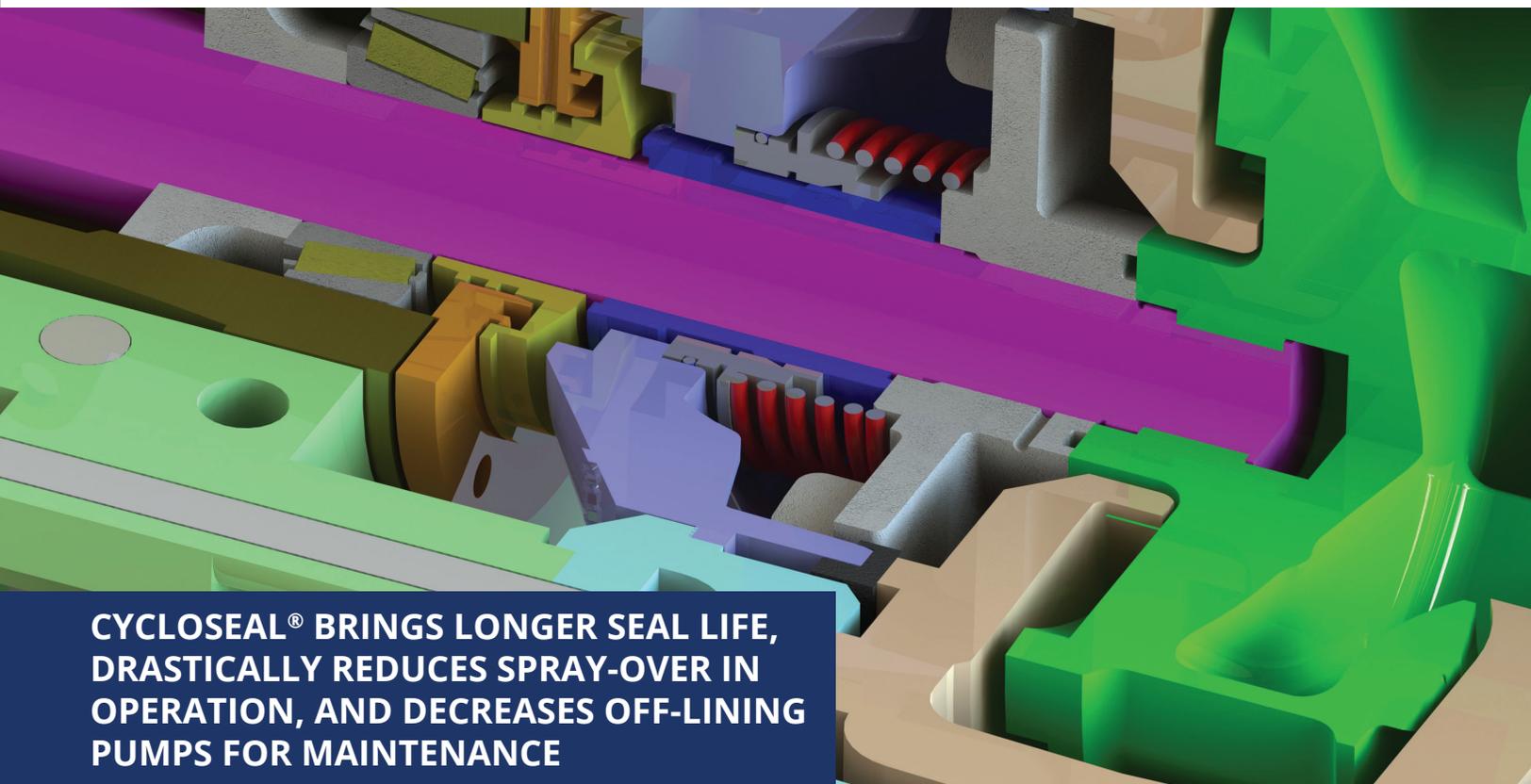
- Dewatering
- Cyclone feed
- Re grind
- Flotation
- Mill discharge
- Tailings and mine refuse
- Mining and mineral processing
- Heavy duty abrasive slurries
- Medium duty abrasive slurries
- In-plant slurry transfer pumps



SP SERIES SLURRY PUMPS

CYCLOSEAL®: THE INNOVATION THAT DISTINGUISHES THE SP SERIES AS CORNELL TOUGH

Cornell's Cycloseal® design, with its unique deflector vanes, works with the expeller to create a cyclo-action. This action removes solids and abrasive material from the seal area while purging air and gas pockets – extending seal life and eliminating any need for venting or water flush.



CYCLOSEAL® BRINGS LONGER SEAL LIFE, DRASTICALLY REDUCES SPRAY-OVER IN OPERATION, AND DECREASES OFF-LINING PUMPS FOR MAINTENANCE

CYCLOSEAL® BENEFITS:

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

Run-Dry™ Option: All pumps equipped with Cornell's Cycloseal® system have an optional run-dry feature available, 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, piping or instrumentation normally associated with packing or double mechanical seals.

Maintenance Savings: Longer seal life which translates into less pump down time and lower maintenance costs.

SP SERIES SLURRY PUMPS



The SP series is designed to transport heavy abrasive slurry with high concentration of solids, at pH levels 1 to 13 (rubber lined) and 3 to 14 (metal). Pumps available in chrome iron and rubber lining configurations. SP series pumps are designed to handle abrasive high density slurries in mining, metallurgical, coal, manure, and other industrial applications.

BENEFITS

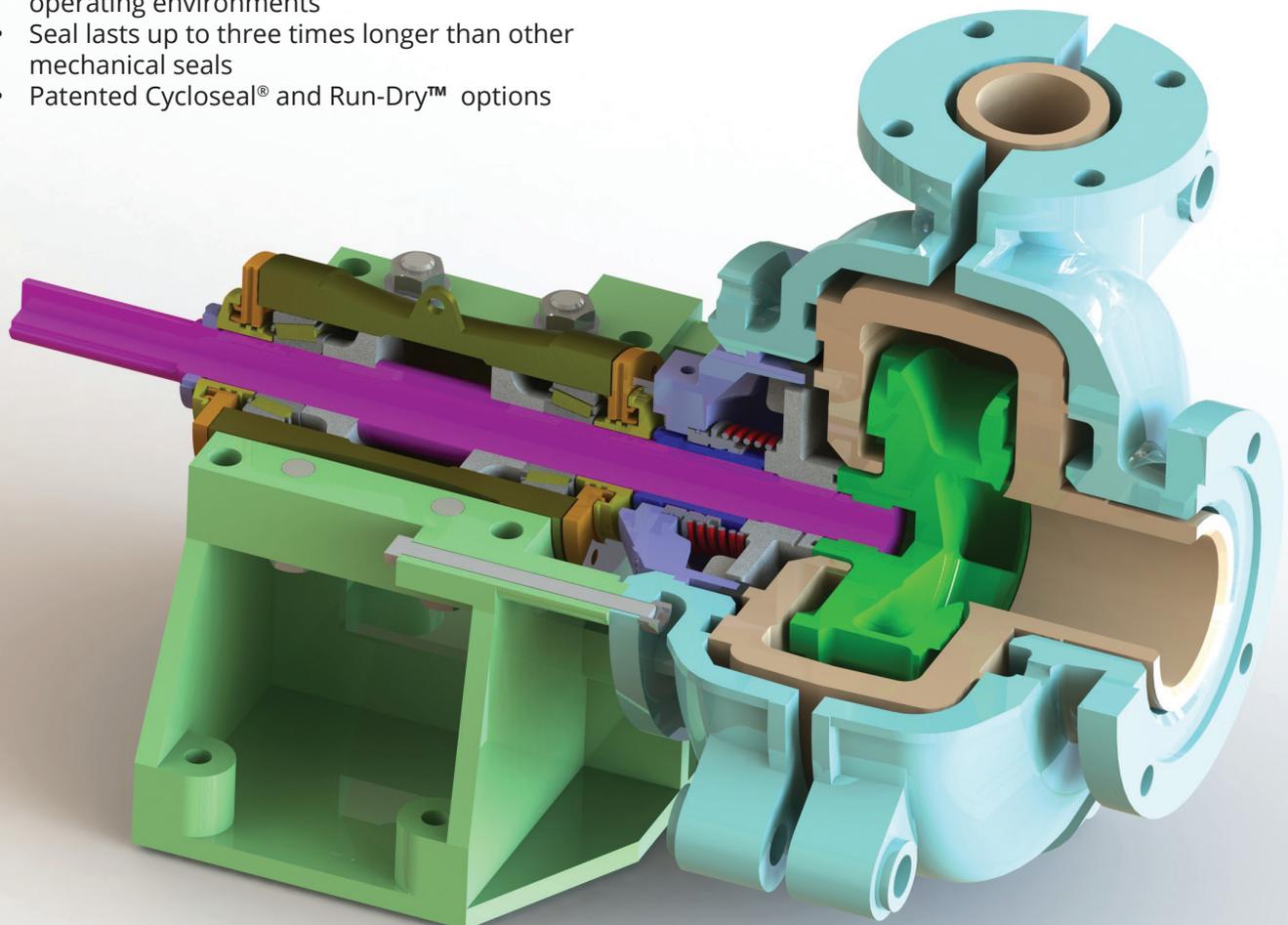
- Solids handling up to 3.5"
- Heads up to 235' at BEP
- No Flush Water Required
- Industry leading two year warranty
- Superior abrasive and corrosive wear life
- Handles pH levels 1 to 13 (rubber lined) and 3 to 14 (metal)
- Available in rubber lined or chrome-iron configuration

FEATURES

- Specific lining allows for various material handling
- Large solids handling
- Robust design allows it to be applied in difficult operating environments
- Seal lasts up to three times longer than other mechanical seals
- Patented Cycloseal® and Run-Dry™ options

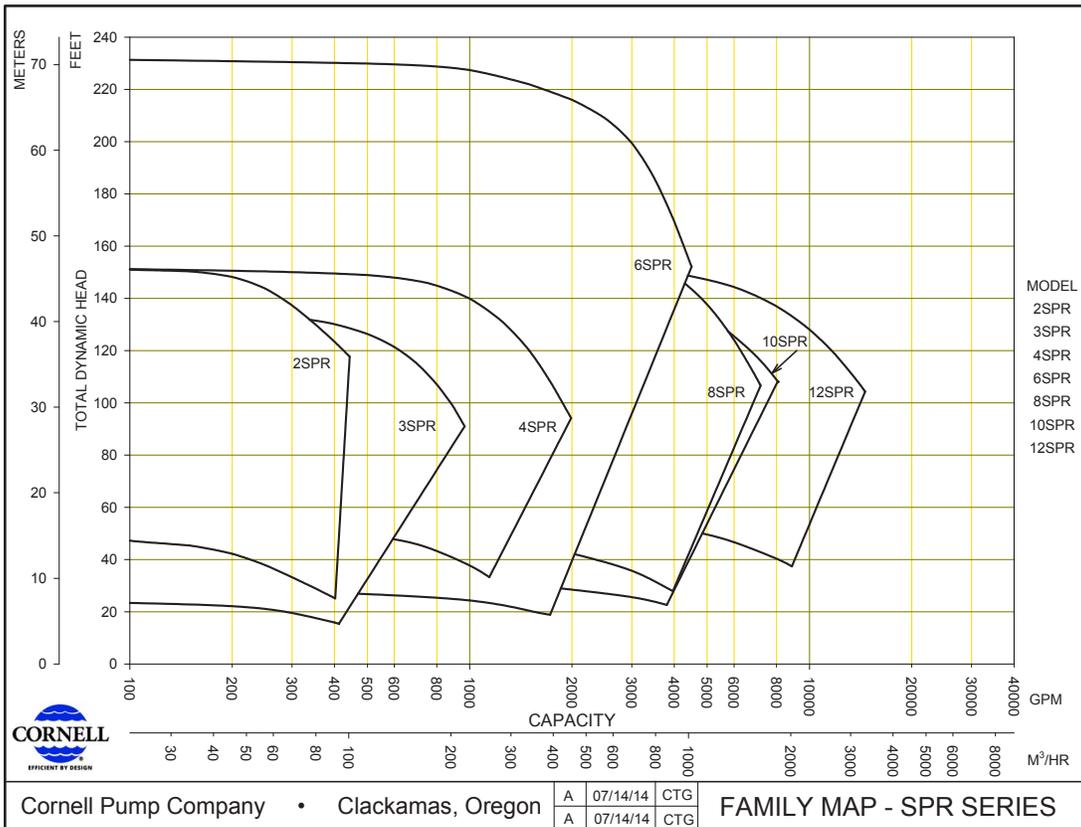
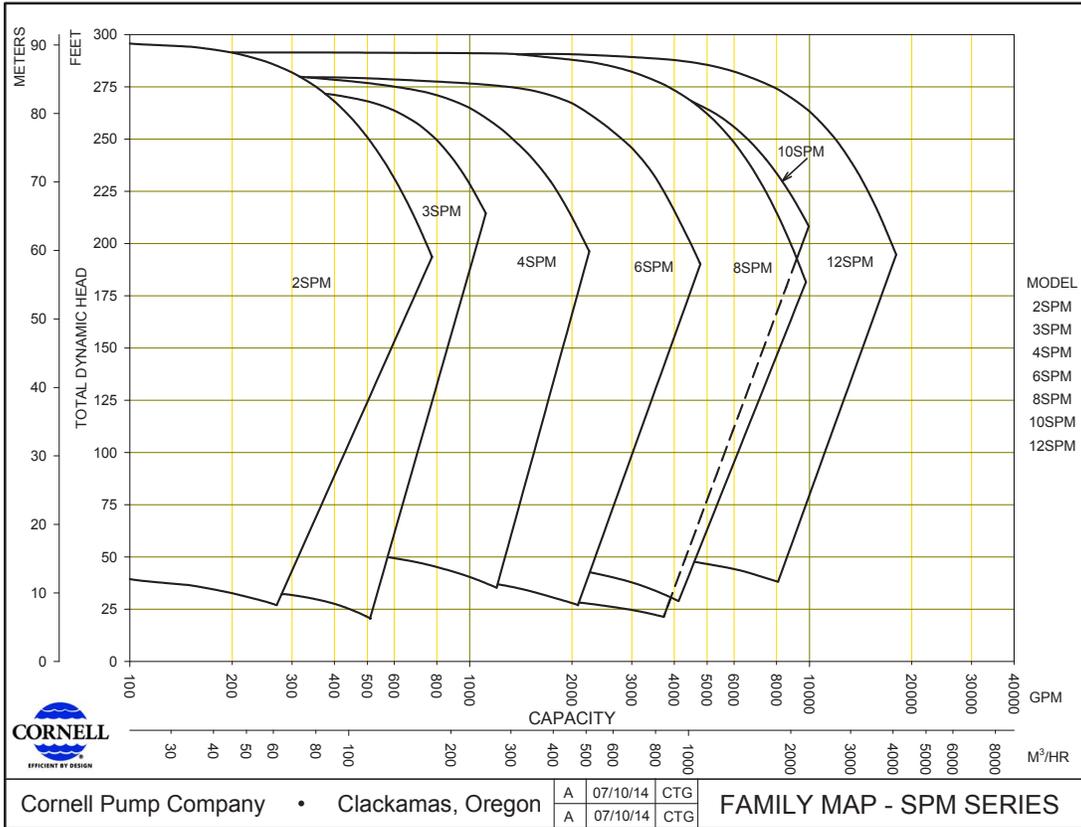
SPECIFICATIONS

- Housing Material: Ductile iron
- Liner Material: Chrome iron or rubber
- Impeller Material: Chrome iron or rubber
- Backplate: Chrome iron
- Bearing Housing & Pedestal: Cast iron
- Discharge Size: 2" to 12"
- Flow rate: Up to 14,000 GPM
- Seal Type: Cycloseal or gland packing
- Solids Diameter: Up to 3.5"
- Impeller Type: Enclosed
- Head: Up to 235' at BEP





SP SERIES SLURRY PUMPS



OPTIONS & OTHER PRODUCTS

MX SERIES HIGH PRESSURE PUMPS

Pressures to 800' TDH and flows to 8,000 GPM. Designed to handle high head applications while providing a long service life. The 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.

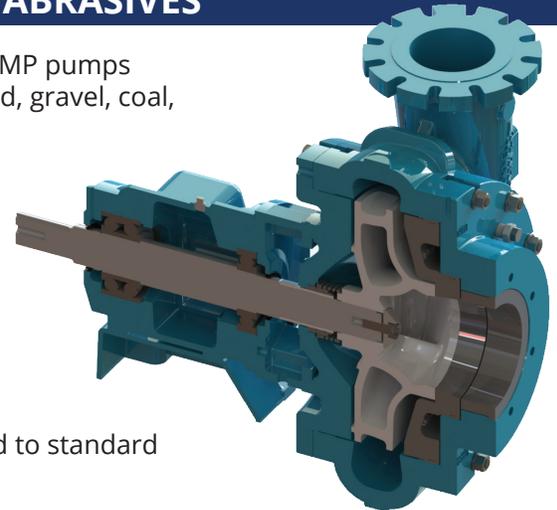
- Discharge sizes: 2", 3", 4", 6" and 8" available
- 600' - 800' TDH flows to 8000 GPM
- CA6NM impellers
- Ductile Iron case
- Cornell Pump quality
- Industry leading efficiency
- Two-year warranty



MP SERIES MINING PUMPS DESIGNED FOR COARSE ABRASIVES

An adjunct to SP series, The MP series offers high operating pressures, the MP pumps are specifically designed for coarse abrasive slurry applications such as sand, gravel, coal, manure, and mine dewatering.

- Discharge Sizes: 4", 6", and 8"
- Flow Rates: Up to 9,000 GPM
- Heads: Up to 550'
- Solids Diameter: Up to 3"
- Seal Type: Cycloseal®
- Impeller type: Enclosed
- Available in horizontal frame and SAE mount configurations
- Heavy duty construction for aggressive applications.
- Hardness rating > 650BHN provides better wear properties compared to standard cast or ductile iron.



MINE DEWATERING

Specializing in high head dewatering pumps, Cornell has delivered dependable, reliable, and efficient pumps for decades. Our new innovative CD4 Duplex metal volutes, shafts, and impellers increase our solids handling capability. Our self-priming pumps coupled with our impressive suction of 28' and head of up to 800' make our pumps ideally suited to dewater the toughest mining applications. Our products are used successfully in long wall, traditional pier and beam, pit, and strip mining applications.

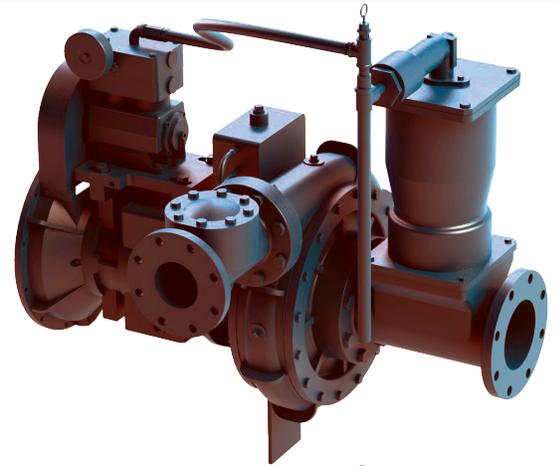


OPTIONS & OTHER PRODUCTS

WATER TRANSFER HYDRAULIC FRACTURING

Setting the standard for hydraulic fracturing, Cornell's pumps are designed and engineered for the most rugged and demanding installations. From the Antrim to Woodford Shales, Cornell pumps have exceeded operating expectations, and provided hydraulic fracturing companies unprecedented uptime, reliability, and efficiency.

- Heads up to 800'
- Valve eliminates any liquid carry-over
- Hardened Iron extends life of pump
- Fully automated priming and self-priming, dry-run pumps
- Handles Air/liquid mixtures with ease
- High suction lift capabilities up to 28'
- Up to 7,000 GPM flow



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 pump ends for long service life and reliability



CLEAR LIQUID PUMPS

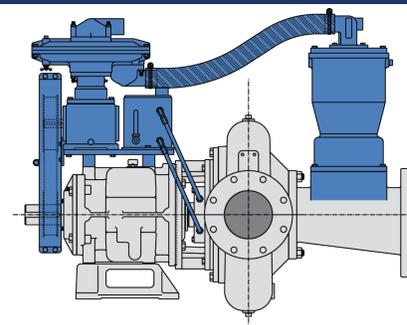
Cornell Clear Liquid pumps are used for commercial and residential irrigation, golf course and lawn maintenance, aqua culture, fountains, breweries, laundries, cooling towers, fire fighting, reverse osmosis feed, and water boosters.

The W, Y, R and H series pumps are available in a wide range of materials with discharge sizes ranging from 1" to 10", heads to 450' TDH, and flow rates up to 7,000 GPM.



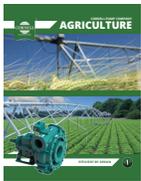
REDI-PRIME®

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', heads to 800' and flow rates exceeding 38,000 GPM, most Cornell pumps can be readily fitted with the Redi-Prime® system.

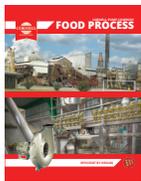




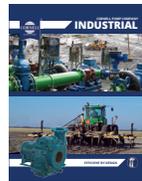
MARKET AND PRODUCT LINE



AGRICULTURAL



FOOD PROCESS



INDUSTRIAL



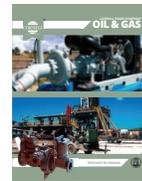
MINE DEWATERING



MUNICIPAL



REFRIGERATION



OIL & GAS



CYCLOSEAL®



CHOPPER



CUTTER



EDGE™



HYDRAULIC SUBS



HYDRO TURBINE



IMMERSIBLE



MANURE



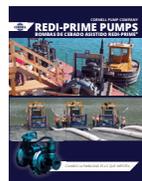
MP SERIES



MX SERIES



MX MINING



REDI-PRIME®



SELF PRIMING



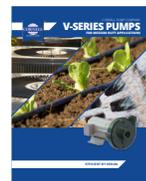
SLURRY



SUBMERSIBLE



WATER TRANSFER



V SERIES

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: 3,207,485; 3,282,226; 3,295,456; 3,301,191; 3,630,637; 3,663,117; 3,743,437; 4,335,886; 4,523,900; 5,489,187; 5,591,001; 6,074,554; 6,036,434; 6,079,958; 6,309,169; 2,320,742; 96/8140; 319,837; 918,534; 1,224,969; 2,232,735; 701,979 and are the subject of pending U.S. and foreign patent applications.

CORNELLPUMP.COM
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Cornell Pump Company
Clackamas, Oregon, USA
P: +1 (503) 653-0330
F: +1 (503) 653-0338

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