



CORNELL PUMP COMPANY

# STX SERIES

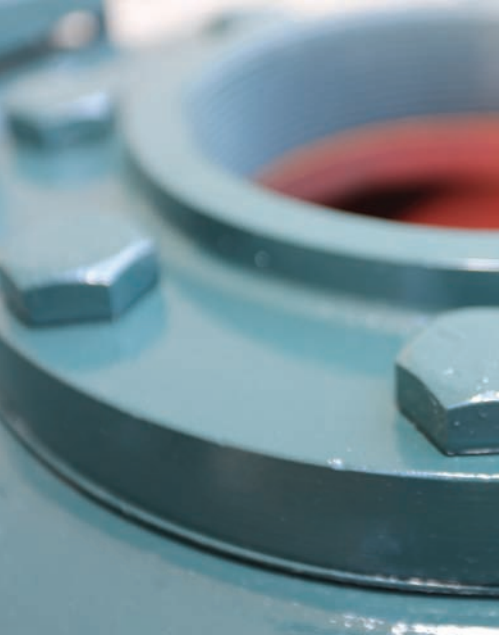
ENHANCED SELF-PRIMING PUMPS



**INDUSTRY LEADING  
EFFICIENCY WITH  
CYCLOSEAL® SYSTEM**

**FIVE YEAR  
WARRANTY**

**EFFICIENT BY DESIGN**



Efficient, durable, innovative and dependable are all words that people use to describe Cornell Pumps. The **Cornell STX Self Priming Line** is newest product from Cornell following a tradition of building world class pumping equipment.

*Efficient by Design* is not only our mantra, but it is also our priority when designing our equipment. The STX line exceeds the efficiency ratings of the competition by multiple efficiency points. The efficiency improvement translates energy cost savings over the life of the pump.

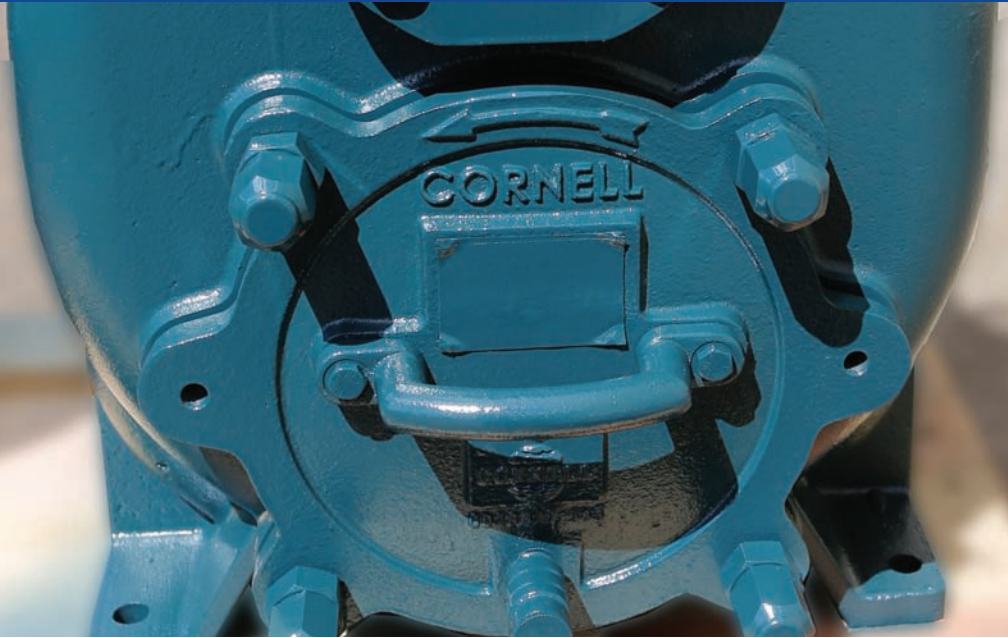
In addition being focused on efficiency, Cornell also is known for adding innovative features. The STX follows this tradition by the addition of the Cycloseal® sealing system which will extend your seal life.

Have an existing self primer installed? Contact Cornell regarding their retrofit program, which allows the Cornell STX rotating assembly to retrofit into your existing pump volute.

## FEATURES + BENEFITS



- **CORNELL 5 YEAR WARRANTY** –
- **PATENTED CORNELL CYCLOSEAL®** – Cornell's dished backplate design and grit removal system extends your seal life and reduces down time.
- **STRESS PROOF STEEL SHAFTS** – Utilizing stress proof shafts and oversized bearings extends the operation range of the pump while reducing shaft breakage.
- **HIGH EFFICIENCY DESIGN** – The Cornell innovative volute designs reduces hydraulic recirculation and improves pump efficiency.
- **SELF-CLEANING ADJUSTABLE WEAR PLATE** – Shimless coverplate adjustment with radially notched replaceable wear plate.
- **MODULAR DESIGN** – Cornell's modular designed rotating assembly allows for easy conversion to SAE engine drive applications.
- **DOUBLE LIP SEALS** – Dual protection of bearings with external seal leakage monitor (vent to atmosphere).
- **DUCTILE IRON CONSTRUCTION** – Heavy duty castings for increased durability and ruggedness.
- **HIGH RPM CAPACITY** – Cornell heavy duty design allows for higher RPM operation.
- **DROP IN REPLACEMENT** – Dimensional envelope the same as many existing installations.
- **OVERSIZED OIL RESERVOIR** – Provides superior bearing cooling.



### REMOVABLE COVER PLATE

Cornell STX Pumps have a removable coverplate that provides quick access to the pump's interior.



### SOLIDS HANDLING IMPELLER

Ductile iron two blade impeller handles solids up to 3" in diameter. Impeller backvanes reduce the buildup of foreign matter and pressure in the stuffing box.

### EASILY REPLACEABLE SUCTION CHECK VALVE

Steel reinforced nitrile rubber check valve can easily be replaced through the front cover without removing the pipework.

## SPECIFICATIONS

**HOUSING MATERIAL:** Ductile Iron ASTM A536

**IMPELLER MATERIAL:** Ductile Iron ASTM A536

**BACK PLATE:** Ductile Iron ASTM A536

**DISCHARGE SIZES:** 3", 4", 6", and 8"

**FLOW RATES:** 3STX—550GPM; 4STX—900GPM;

6STX—1600GPM; 8STX—2400GPM

**SEAL TYPE:** Type 2

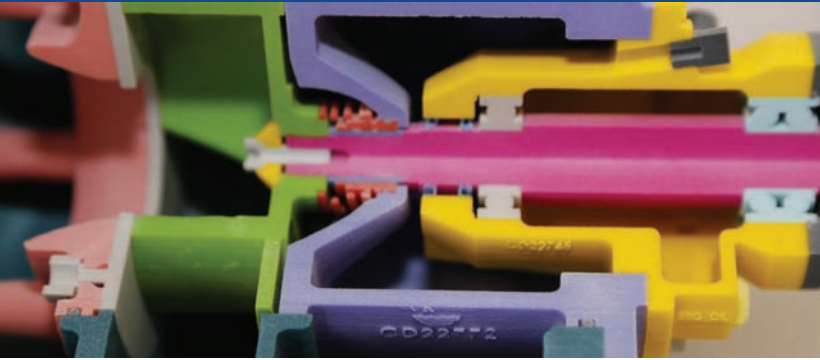
**SOLIDS HANDLING DIAMETER:** Up to 3"

**IMPELLER TYPE:** Semi-open

## OPTIONAL ACCESSORIES

- Discharge check valve
- Viton elastomers
- Volute casing heater
- Complete replacement rotating assembly
- Pump spare parts
- Custom seal options
- Pedestal frame mount
- V-belt drive
- SAE engine mount



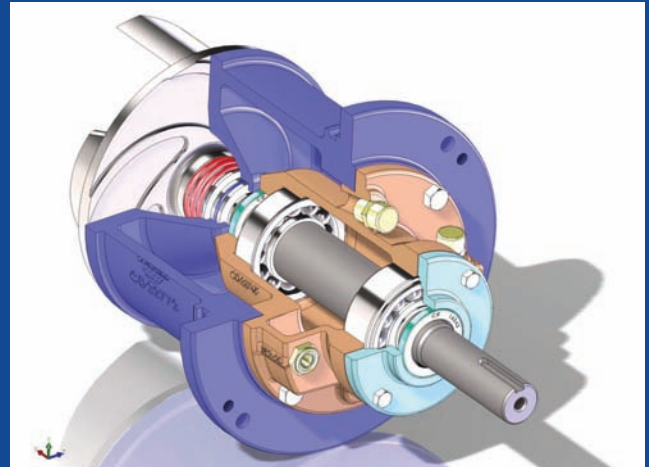
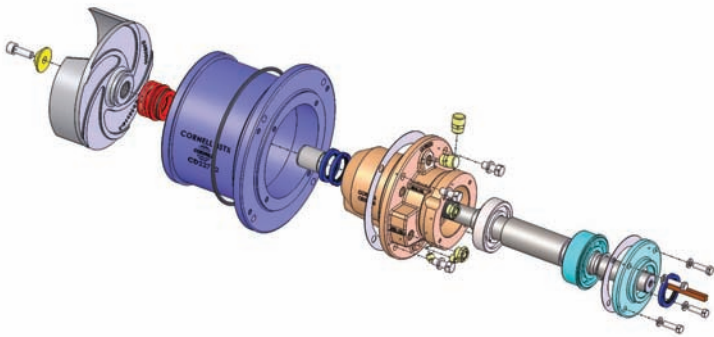


## ROTATING ASSEMBLY

Cornell's rotating assembly allows for retrofits of existing installations, allowing you to upgrade your existing pump with Cornell quality and features. The modular two piece bearing frame and a back plate allow for easy changes of SAE engine mount sizes.

### HEAVY DUTY BEARINGS WITH SEPARATE OIL RESERVE

Heavy duty thrust bearings sized for V belt drive loads. Separate oil fillings plugs for bearings and mechanical seals with sight gauges.



### BACK PULL OUT DESIGN

The rotating assembly can be removed without dismantling the pump or disturbing the piping.

**DUAL PROTECTION OF BEARINGS**—Atmospheric barrier and dual lip seals provide bearing protection in the event of seal failure.

### CORNELL CYCLOSEAL® SEALING SYSTEM

The Cycloseal® system is standard on all STX pumps. Run dry, grit removal and a Type 2 tungsten carbide vs. silicon carbide hard face seal is standard.

### THREADED IMPELLER FIT

Makes installation easy.

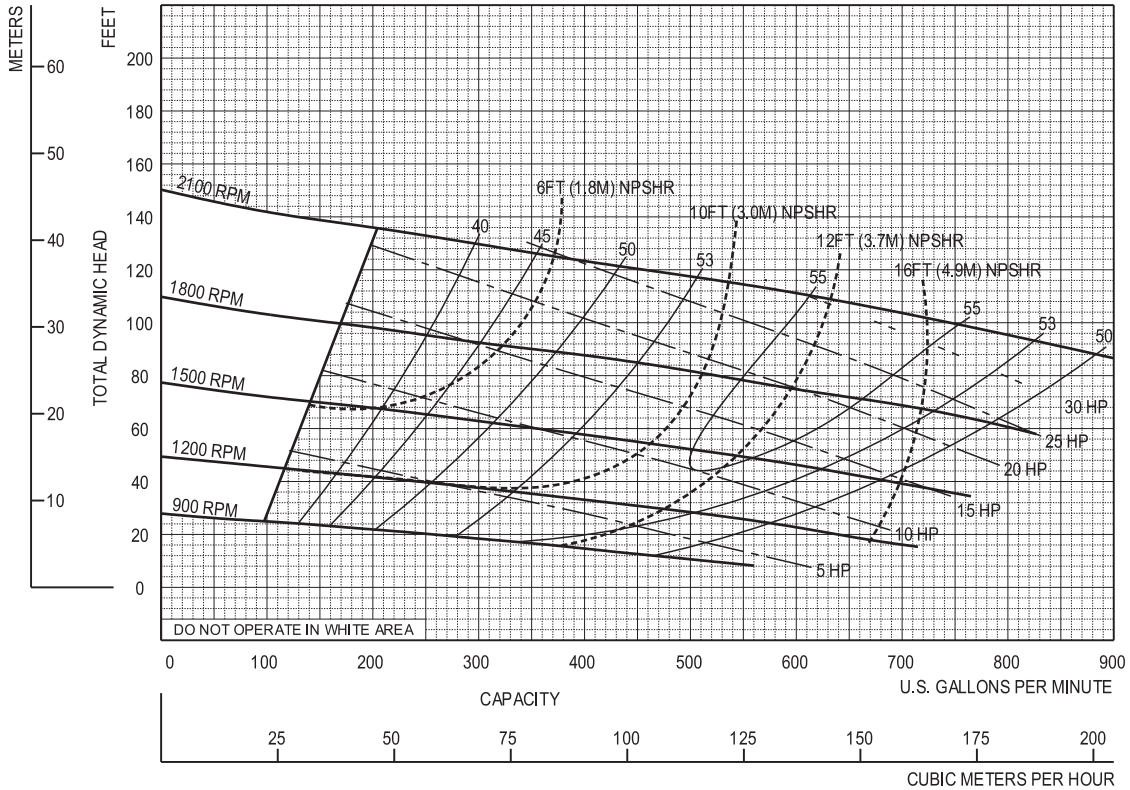
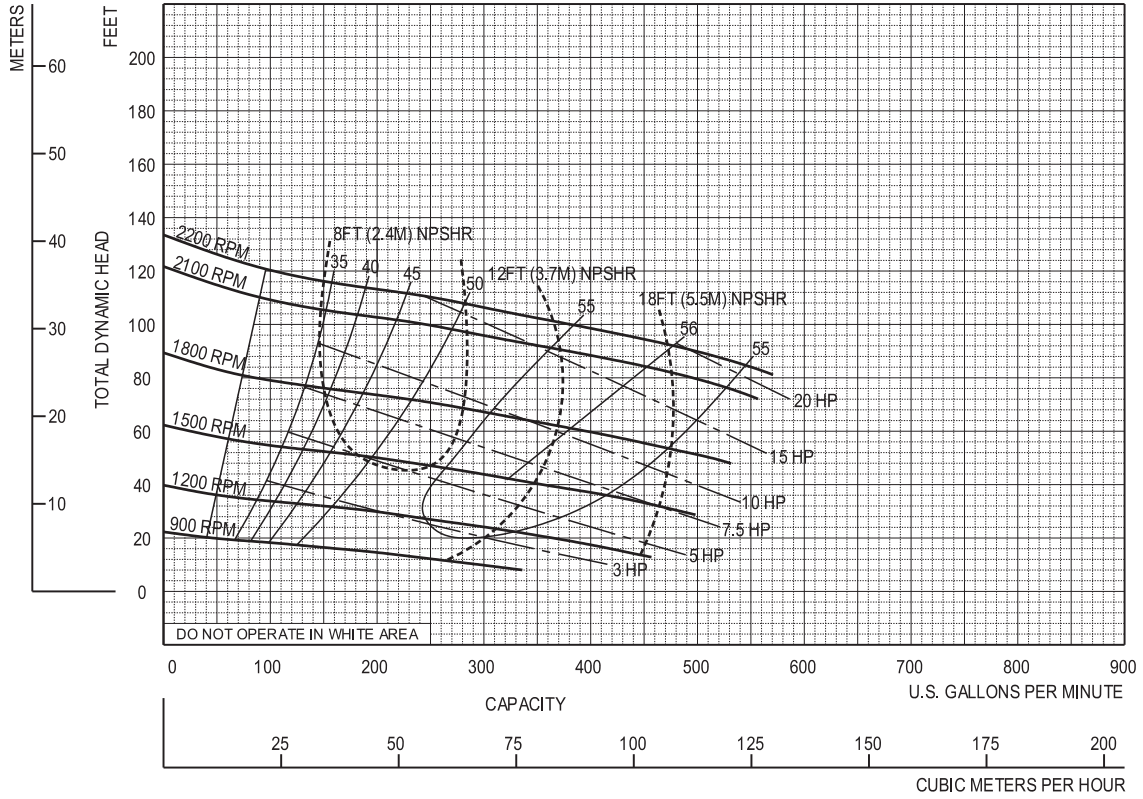
### WEAR PLATE

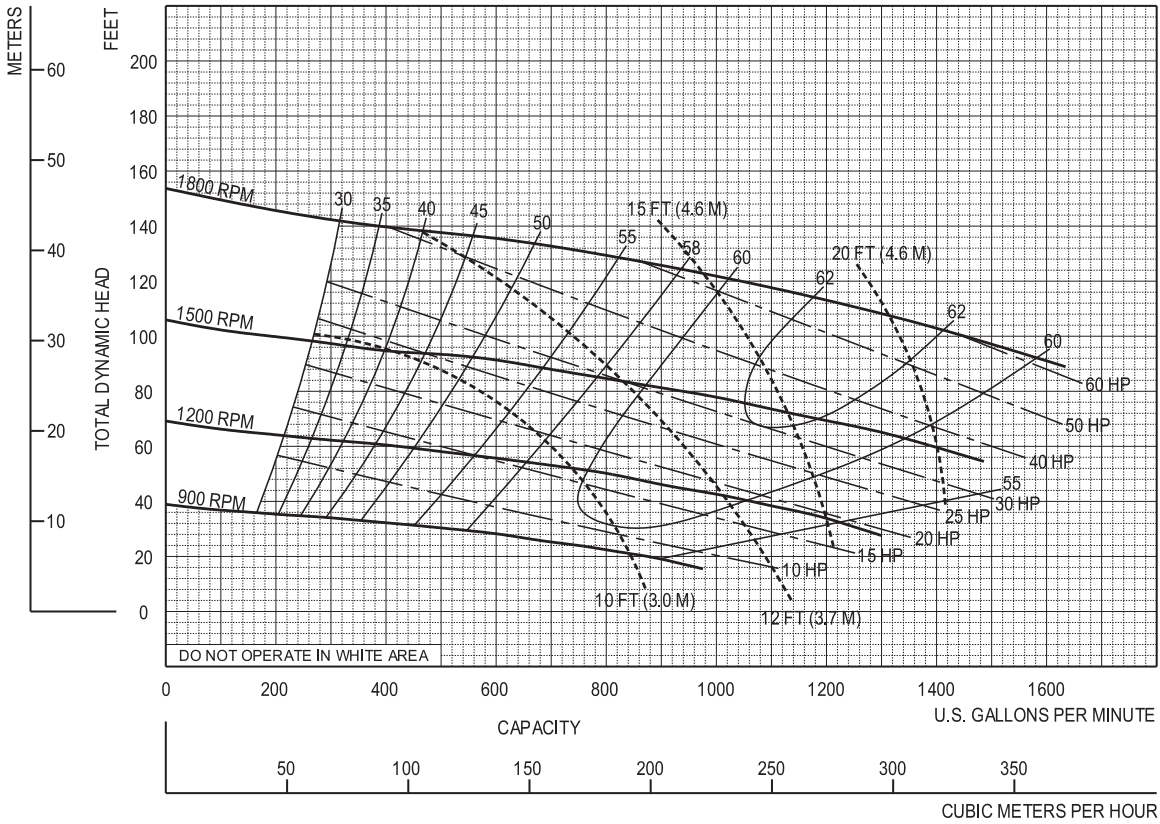
The STX product line comes standard with an abrasion resistant wear plate.

### HIGH EFFICIENCY DESIGN

With Cornell's high efficient design, the STX pumps more liquid for less energy. Saving substantial energy costs during the life of the pump.

# FIVE YEAR WARRANTY

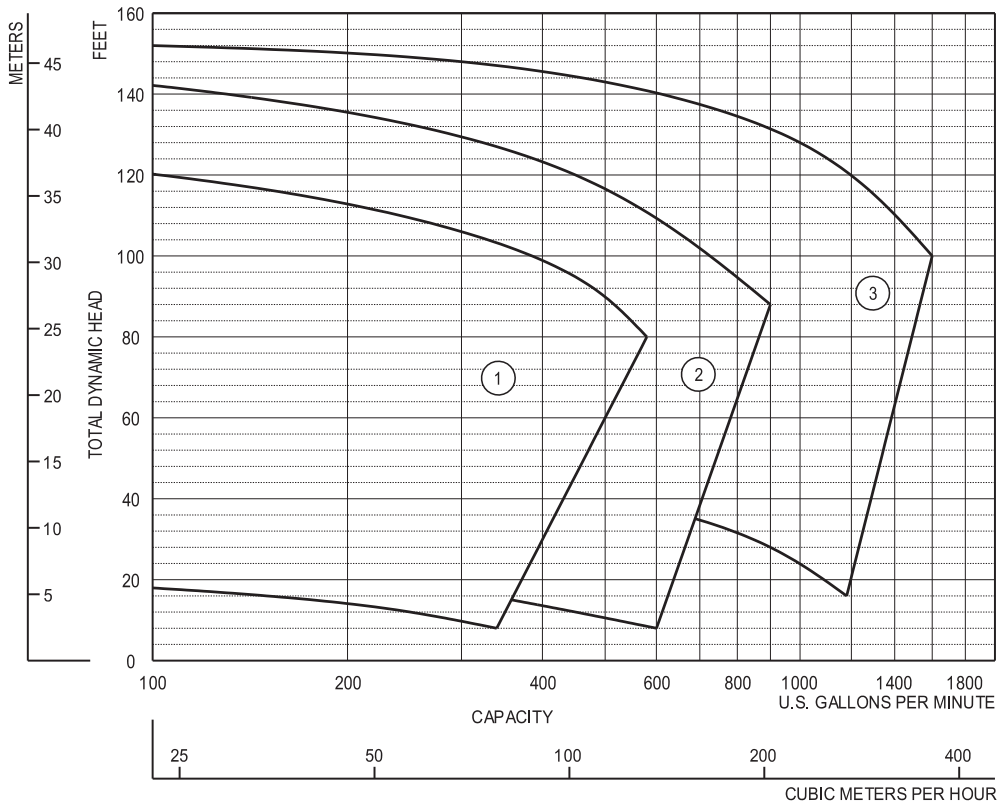




## 6STX

BEP 62%  
20ft. NPSHR @ BEP

## FAMILY



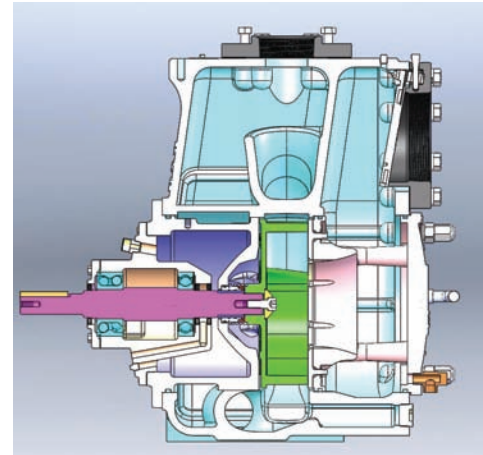
### MODEL

1. 3STX
2. 4STX
3. 6STX

## CYCLOSEAL® DESIGN

The patented, premium mechanical seal system that distinguishes Cornell pumps from all others.

One of the main reasons STX pumps have a distinctive edge on competitors is our patented Cycloseal® design that 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. These benefits come about from the Cycloseal's® unique deflector vanes.



## 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.

**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.

## TYPE 2 SEALS

Cycloseal® utilizes on Type 2 seals as part of the Cycloseal® system.

**Self-aligning:** Automatic adjustment compensates for abnormal shaft movement, primary sealing wear, and machinery tolerances.

**Non-clogging Single Coil Spring:** Has greater dependability than multiple spring designs.

**Non-pusher Design:** No dynamic O-rings to hang up. All seal movement occurs in the bellows.

**No Set Screws:** Nothing to mar the shaft or sleeve.

**Temperature Limits:** -40°F to +160°F (Buna); -40°F to +400°F (Viton®.)

**Dynamic Pressure:** 350 PSIG (dependent on seal size.)

**Seal Faces:** Tungsten carbide vs. silicon carbide or carbon vs. ceramic (other material options available.)

**Elastomeric Bellows:** Buna-N, Viton® and other materials available.

**Hardware:** Stainless or plated steel.

## LEARN MORE ABOUT THE INNOVATIVE STX FROM AN AUTHORISED CORNELL PUMP DISTRIBUTOR





# MARKET AND PRODUCT LINE



AGRICULTURAL



FOOD PROCESS



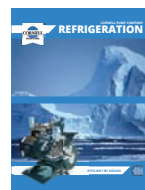
INDUSTRIAL



MINE DEWATERING



MUNICIPAL



REFRIGERATION



WATER TRANSFER



CHOPPER



CUTTER



EDGE™



HYDRAULIC SUBS



HYDRO TURBINE



IMMERSIBLE



MANURE



MP SERIES



MX SERIES



OIL & GAS



REDI-PRIME®



STX SERIES



SLURRY



SUBMERSIBLE

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.



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

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