STX SERIES
SELF-PRIMING PUMPS

EFFICIENT BY DESIGN

INDUSTRY LEADING EFFICIENCY WITH CYCLOSEAL® SYSTEM

FIVE YEAR WARRANTY
Efficient, durable, innovative and dependable are all words that people use to describe Cornell Pumps. The Cornell STX Self Priming Line is the 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. This improvement translates into energy cost savings over the life of the pump.

In addition to being focused on efficiency, Cornell is also known for its 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** – Cornell offers a full five year warranty standard on all STX pumps.

- **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.
**STX SERIES**

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

**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

**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**

**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
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.

Easy installation.

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

With Cornell's high efficient design, the STX pumps more liquid using less energy, saving substantial energy costs during the life of the pump.
FEATURES A FIVE YEAR WARRANTY

3STX
BEP 56%
18ft. NPSHR @ BEP

4STX
BEP 55%
15ft. NPSHR @ BEP
6STX

BEP 62%
20ft. NPSHR @ BEP

FAMILY

MODEL
1. 3STX
2. 4STX
3. 6STX
CYCLOSEAL® DESIGN

The patented, premium mechanical seal system that distinguishes our 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 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 translates into less pump down time and lower maintenance costs.

TYPE 2 SEALS

Cycloseal® utilizes 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: 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 AUTHORIZED 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.

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