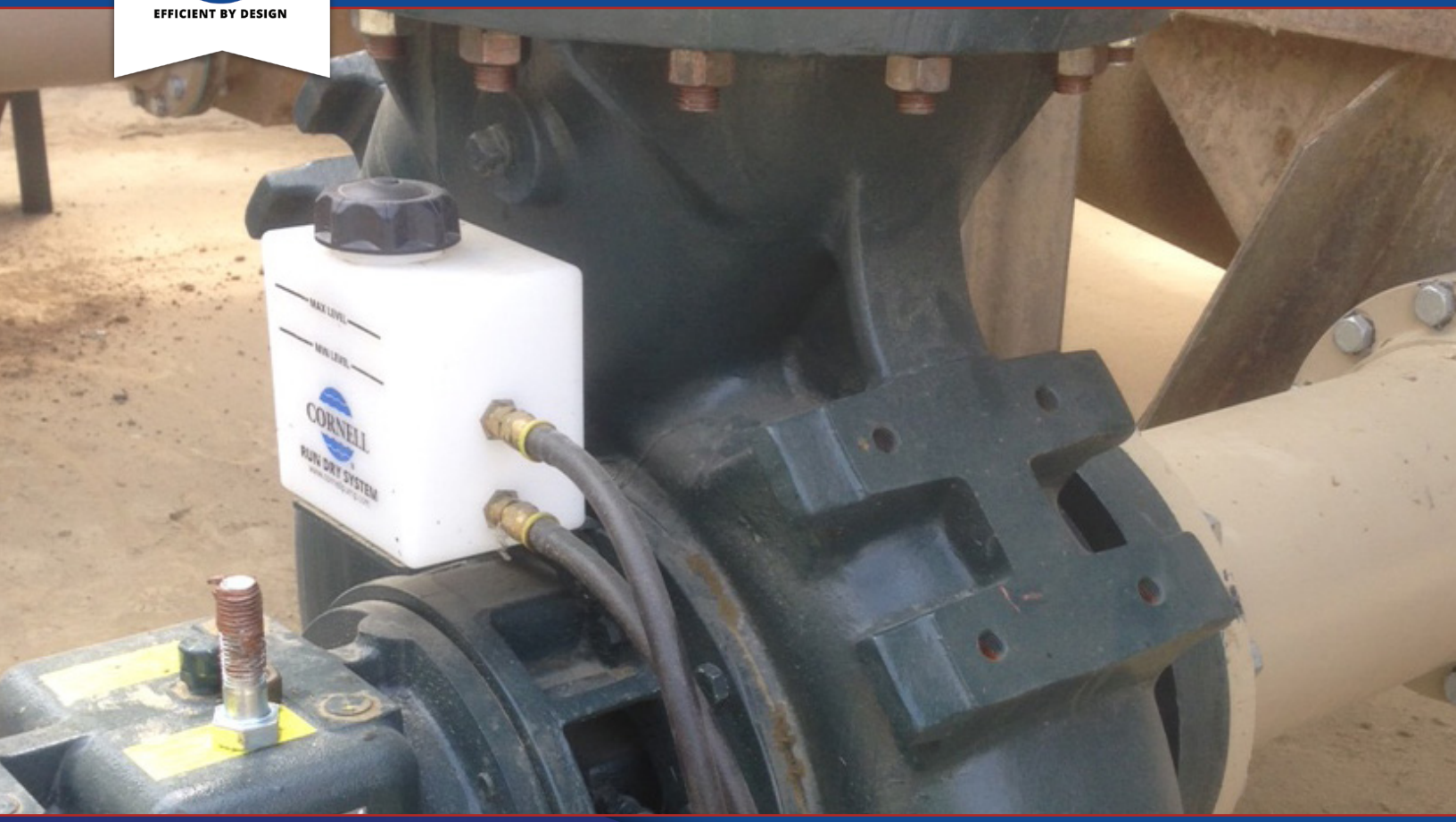
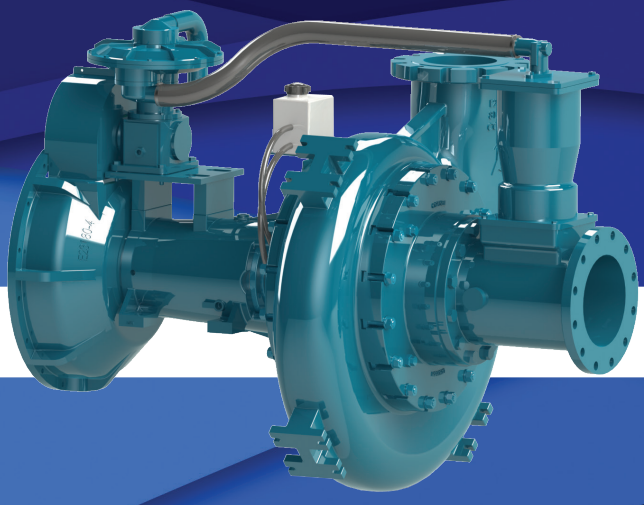
CORNELL PUMP COMPANY

RUN-DRY™





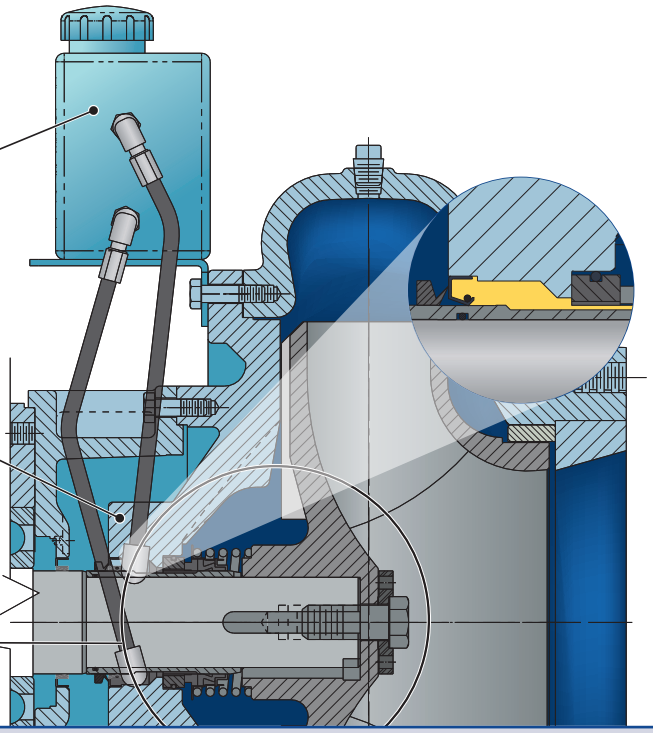
EFFICIENT BY DESIGN

RUN-DRY™ SYSTEM

Fluid Reservoir
The heart of Cornell's Run-Dry™ system is the ability to deliver lubrication/cooling to the seal during periods of no flow operation. Natural circulation of the fluid in the reservoir removes heat from the seal faces to keep them in pristine condition.

Run-Dry™ Gland
With Cornell's Run-Dry system, seal face cooling is effected by providing for heat exchange/lubrication in the area immediately adjacent to the seal faces. This small cavity is created by adding a gland which is connected to the reservoir to complete the lubrication/cooling circuit.

Cycloseal®
Cornell's Run-Dry is an addition to the same Cycloseal system that protects our pumps during normal operating conditions. Truly a system, this combination of backplate deflector vanes, impeller backvanes and a quality type I or II mechanical seal, can also run dry, when equipped with the Run-Dry system.



PROTECTS MECHANICAL SEALS FROM DAMAGE CAUSED BY OPERATING WITHOUT PUMPING FLUID—RUNNING DRY.

The Cornell Run Dry system is an inventive solution to provide continual lubrication of mechanical seals. Run-Dry provides a gland on the backside of the mechanical seal through which a lubricant can circulate providing lubrication and cooling to the hardened seal faces of the mechanical seal. The result is exceptional seal life regardless of operating conditions, from maximum flow to no flow – Run-Dry.

FEATURES:

- Seal protection
- Seal cooling
- Easily-checked lubricant reservoir
- Peace of mind if pump runs dry

Dry running can damage, even destroy, seals in mere seconds—counteract the wear and leaks with Cornell Run-Dry™

APPLICATIONS

- Agriculture
- Food Processing (food grade lubricant available)
- Industrial
- Mining
- Oil& Gas
- Municipal
- Rental
- Any application where there is probability, either planned or unplanned, that the pump could operate in dry condition

Dry operation could result from:

- Priming activities
- Blockage in suction piping
- Deliberate operation of the pump in dry conditions
- Accidental loss of prime while pumping

RUN-DRY™ SYSTEM

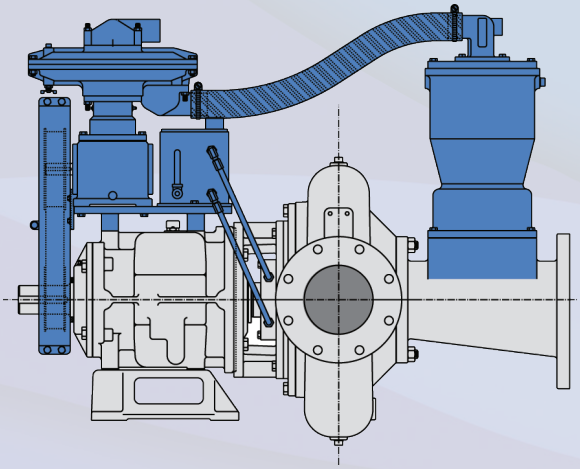
OPERATION

Lubricant leaves the lower portion of the reservoir through a flexible hose and enters the bottom of the Run-Dry gland. The gland is housed within the pump backplate sealed on the drive end by a lip seal operating on a chromed portion of the stainless steel shaft sleeve. The pump end of the gland is sealed by a mechanical seal.

Through this relationship with the mechanical seal, lubrication is provided to the seal and seal protection is achieved. The Cornell Run-Dry gland has two ports entering it. The rotating shaft provides pumping action for continuous flow of the lubricant from the reservoir to the gland and back through the upper and lower ports.

Through lubricant circulation, heat is transferred from the mechanical seal back to the reservoir. The reservoir allows the lubricant the opportunity to dissipate the heat, and insures that sufficient amount of lubricant is always available for the Run-Dry gland.

RUN-DRY COMPLEMENTS TWO OTHER CORNELL PATENTED INNOVATIONS:



REDI-PRIME®

Cornell Redi-Prime pumps are designed with oversized suctions to provide more flow, reduced friction losses, and higher suction lift. The patented dry 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 800 feet and flow rates exceeding 34,000 GPM, most Cornell pumps can be readily fitted with the Redi-Prime system.

CYCLOSEAL® SYSTEM

Cycloseal is a patented system with a self-contained single mechanical seal. The Cycloseal pattern cast into the pump backplate in conjunction with contoured impeller back vanes and a dished backplate, creates a pressure gradient that move solids and entrained vapor away from the seal faces. The Cylcoseal system is available on most Cornell Pumps.

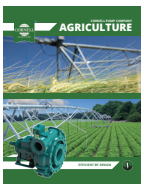
- Grit and vapor removed from pump seal compartment
- Extended pump seal life — three times standard mechanical seals
- No drips/mess at application site
- Reduced maintenance costs
- Increased uptime and reliability

As a sealing and maintenance system, Run-Dry, Cycloseal, and Redi-Prime offer unparalleled reliability, performance, and durability.

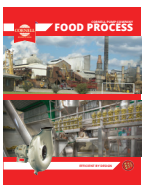
CORNELL®

EFFICIENT BY DESIGN

MARKET AND PRODUCT LINE



AGRICULTURAL



FOOD PROCESS

INDUSTRIAL

MINE DEWATERING

MUNICIPAL

REFRIGERATION

OIL & GAS

CYCLOSEAL®

CHOPPER

CUTTER

EDGE™

HYDRAULIC SUBS

HYDRO TURBINE

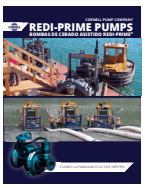
IMMERSIBLE

MANURE

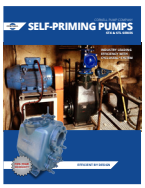
MP SERIES

MX SERIES

MX MINING



REDI-PRIME®

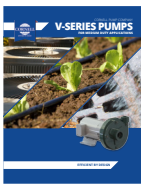


SELF PRIMING

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

ISO 9001:2008 CERTIFIED

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