# **CORNELL PUMP COMPANY**

Redi-Prime<sup>®</sup> Pumps





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# **SETTING THE STANDARD**

Cornell's Redi-Prime® pumps are designed and engineered for the most rugged and demanding industries; construction, industrial, rental and municipal. With over 50 years of proven experience and reliability Cornell Pump Company has established the highest industry standard for premium quality and rugged performance.

Our pumps are backed by an industry-leading two-year warranty.





Cornell Pump Company is setting the standard for the construction pumping industry. Flow characteristics that were 'good enough' before are no longer acceptable. Cornell's innovative engineering and forward thinking have made our pumps capable of producing up to 400 percent more flow than the construction industry standards.

Cornell's hydraulic efficiencies reach well into the 80 percent range, significantly more than competitive products. In the new millennium there will be a need for more efficient pumps. It will no longer be acceptable to settle for a pump operating at 50% - 60% efficiency. Cornell Pump Company has made these pumps obsolete.

Cornell's priming system was specifically designed with the environment in mind. By using a positive sealing float box and a diaphragm vacuum pump, there is absolutely no water carry-over to contaminate the environment. Cornell pumps are designed for the new millennium.

# **Energy Efficiency**

Cornell Pumps are designed to deliver **best in class efficiency**. Depending on operating hours, fuelant, and horsepower required, you can save \$3,000 per year (or more) in energy costs. Cornell manufactures **more than 60 clear liquid and non-clog pumps** that meet or exceed optimum efficiency standards for centrifugal pumps.

## Select High Efficiency Pump Models:

- 8H 88% efficient
- 6RB 89% efficient
- 5RB 86% efficient
- 4RB 85% efficient

#### **BENEFITS**

- Fully automatic self-priming, dry-prime pump.
- Handles air/liquid mixtures with ease.
- Rapidly primes and re-primes completely unattended.
- Environmentally safe priming system designed to prevent product leakage.
- Patented Cycloseal® and Run-Dry<sup>™</sup> options.
- Handles large sized solids.
- High suction lift capability up to 28 feet.
- Premium hydraulic efficiency for reduced energy consumption.

# **CORNELL REDI-PRIME®**

Automatic Priming and Re-Priming. Heads of up to 470 feet are possible.

> Valve eliminates any liquid carry over.



# **REDI-PRIME® COMPONENTS**

# Suction Lifts of 28 feet are achievable.



# THE REDI-PRIME® SYSTEM







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## **EFFICIENCY**

In addition to a dependable pump system, today's systems must also be efficient and economical. As energy costs rise, conservation and efficiency of operation become critical issues for customers as they strive to minimize expenses associated with energy consumption. Cornell pumps maintain superb hydraulic operating efficiencies.

The bottom line – Cornell pumps cost less to operate.





Ornell offers the widest range of pump sizes and capacities in the industry. No matter what your requirements are, Cornell can provide you with a package that will fill your needs – Clear Liquid pumps up to 10", Solids Handling pumps up to 30" and Slurry pumps up to 4".

#### **Pump Options: Solids Handling Pumps**

	Disch.		Max.	Max.	Max.	
Model	Size	Max. Cap.	Solids	Head	Suction Lift	RPM
4NNTL	4"	1,450 gpm	3"	175'	25'	2,500
4NNT	4"	1,400 gpm	3"	150'	25'	2,000
4NHTA	4"	1,400 gpm	3"	225'	25'	2,100
4414T	4"	1,400 gpm	3"	350'	25'	2,000
4NHTB	- 4"	1,600 gpm	3"	425'	25'	2,000
6NHTA	6"	2,700 gpm	3"	280'	25'	2,000
6NNT	6"	2,550 gpm	3"	150'	25'	2,100
6NHTB	6"	4,250 gpm	3.38"	350'	25'	1,800
8NNT	8"	4,500 gpm	3.38"	255'	25'	1,900
8NHTA	8"	5,000 gpm	3.38"	350'	25'	1,800
8NHTH	8"	6,250 gpm	4"	255'	25'	1,200
10NNT	10"	6,300 gpm	4"	340'	25'	1,800
<b>10NHTB</b>	10"	8,000 gpm	4.75"	195'	25'	1,200
10NHTA	10"	6,400 gpm	4.25"	245'	25'	1,200
12NHTL	12"	5,200 gpm	4.25"	140'	25'	1,500
12NNF	12"	8,500 gpm	3"	195'	25'	1,800
12NHG28	12"	12,000 gpm	3.2"	410'	25'	1,200
14NHG	14"	12,000 gpm	4"	210'	25'	1,500
14NHGH	14"	13,500 gpm	4.25"	145'	25'	1,200
14NHG28	14"	15,000 gpm	4.25"	430'	25'	1,200
16NHGH	16"	13,500 gpm	4.25"	175'	25'	1,200
16NHG22	16"	16,500 gpm	4.5"	265'	25'	1,200
18NHG	18"	22,000 gpm	5"	220'	25'	900
18NHFL	18"	26,000 gpm	5"	190'	25'	890
18NHF34	18"	22,000 gpm	4.5"	320'	25'	900
20NHFL	20"	18,000 gpm	5"	116'	25'	720
24NNG	24"	32,000 gpm	5.25"	135'	25'	750
30NNT	30"	38,000 gpm	10.2"	110'	25'	585

#### Solids Handling, Enclosed Impeller, Redi-Prime<sup>®</sup> Curves



1. 4NNTL 2. 4NNT 3. 4NHTA 4. 4414T 5. 4NHTB 6. 6NHTA 7. 6NNT 8. 6NHTB 9. 8NNT 10. 8NHTA 11. 8NHTH 12. 10NNT 13. 10NHTB

Redi-Prime® Models

12. 10NN1 13. 10NHTB 14. 10NHTA 15. 12NHTL 16. 12NNF 17. 12NHG28 18. 14NHG 19. 14NHGH 20. 14NHGH 20. 14NHGH 22. 16NHGH 22. 16NHG22 23. 18NHG 24. 18NHFL 25. 18NHF34 26. 20NHFL 27. 24NNG

28. 30NNT

CUBIC METERS PER HOUR

# **Pump Options: Clear Liquid Pumps**

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	Disch.		Max.	Max,	Max.		
Model	Size	Max. Cap.	Solids	Head	Suction Lift	RPM	
2.5RB	2.5"	400 gpm	.38"	300'	25'	2,200	
2.5H	2.5"	500 gpm	.41"	360'	25'	2,200	
2.5YH	2.5"	750 gpm	.41"	310'	28'	3,000	
3HC/HA	3"	1,050 gpm	.5"	490'	28'	2,400	
3RB	3"	800 gpm	.5"	280'	28'	2,200	
3YL/YH	3"	1,100 gpm	.5"	245'	28'	2,700	
4HC	4"	1,650 gpm	.62"	470'	28'	2,150	
4RB	4"	1,550 gpm	.84"	270'	25'	2,200	
5HH	5"	2,900 gpm	.75"	375'	25'	2,000	
5RB	5"	2,350 gpm	1"	360'	25'	2,400	
5YBH	5"	2,500 gpm	.75"	200'	25'	2,400	
6HH	6"	4,000 gpm	1.22"	365'	25'	2,000	
6RB	6"	4,250 gpm	1.31"	300'	28'	2,200	
6YB	6"	4,100 gpm	.75"	235'	25'	2,400	
8H	8"	5,400 gpm	1.25"	305'	25'	2,000	
10RB	10"	7,000 gpm	1.25"	300'	25'	2,200	
10YB	10"	6,500 gpm	1.38"	200'	25'	2,300	





## **Clear Liquid Redi-Prime® Curves**





Redi-Prime<sup>®</sup> Model

1. 2.5RB 2. 2.5H 3. 2.5YH 4. 3HC/HA 5. 3RB 6. 3YL/YH 7. 4HC 8. 4RB 9. 5HH 10. 5RB 11. 5YBH 12. 6HH 13. 6RB 14. 6YB 15. 8H 16. 10RB 17. 10YB

10/15/03

# COMMITMENT TO EXCELLENCE

Cornell Pump Company proudly maintains its ISO 9001:2000 certification which validates that Cornell is in compliance with all necessary processes to meet customer requirements.

The elements associated with ISO 9001:2000 certification include such areas as contract review, design and development, production, purchasing, quality control and service.





# Pump Options: Delta<sup>™</sup> Impeller Pumps

	Disch.	Max.	Max.	Max.	Max.	Max.
Model	Size	Сар.	Solids	Head	Suction Lift	RPM
4NLDL	4"	525 gpm	3"	85'	25'	2,000
4NNDH	4"	750 gpm	3"	115'	25'	1,800
4NHDH	4"	1,050 gpm	3"	225'	25'	1,800
4NHM	4"	1,500 gpm	2.5"	380'	25'	2,200
6NHM	6"	2,500 gpm	3"	320'	25'	2,200
6NNDH	6"	2,400 gpm	3"	140'	25'	2,200
8NNDH	8"	1,625 gpm	3.38"	50'	25'	1,200
10NNDH	10"	5,000 gpm	3.5"	190'	25'	1,500

### Solids Handling, Delta Impeller, Redi-Prime<sup>®</sup> Curves



# CYCLOSEAL<sup>®</sup> & RUN-DRY<sup>™</sup>

Cornell's patented Cycloseal<sup>®</sup> design, with its unique deflector vanes, works with the impeller back vanes to create a cyclo-action. This action removes solids and abrasive materials from the seal area while purging air and gas pockets, extending seal life and eliminating any need for venting or waterflushing.

# **CYCLOSEAL<sup>®</sup> BENEFITS**

**Extended Seal Life:** Cornell's Cycloseal<sup>®</sup> design has proven itself in the toughest applications from manure slurry to starch recovery to sewer bypass and mining applications – in some cases more than tripling the normally expected mechanical seal life.

# RUN-DRY<sup>™</sup> CAPABILITY

Cornell's Run-Dry<sup>™</sup> system consists of an auxiliary gland which provides containment for an application-specific lubricant present at the inside diameter of the mechanical seal faces. This lubricant prevents dry running of the seal faces while priming, re-priming, and on standby. The Run-Dry<sup>™</sup> gland is connected to a lubricant reservoir via inlet and outlet lines which are oriented tangentially to the pump shaft so that shaft rotation provides circulation and subsequent cooling of the lubricant.