



Vacuum Systems

A complete line of vacuum pumps and accessories for every dairy

CL Vacuum Pump

Exclusive coated lobes increase efficiency

Commercial grade lobe style vacuum pump — designed for the commercial dairy milking 12 to 18 hours a day.

Popular sizes to fit most dairies — 7.5 HP through 30 HP.

Solid shaft and rotor assembly versus a two-piece, pinned design — stronger one-piece assembly outlasts the competition.

Exclusive internal coating — improves performance and reduces exhaust temperatures compared to uncoated pumps.

Non-stick lobes — release milk vapor build-up more readily.

Powder coated paint process used on the steel frame — resists corrosion.

Helical timing gears versus straight spur gears — smoother operation with three gear touch points versus the competitors' single touch point.

Splash oil lubrication on both sides of the pump — no greasing required which means less maintenance.

Viton lipseals — chemically resistant seals keep oil in and all other contaminants out.

1.15 service factor motor — heavy duty, long lasting.

Fully factory assembled with laser guided pulley alignment — less installation time and longer belt life.

Optional Vacuum on Demand control — provides energy saving variable speed control and lower maintenance costs.

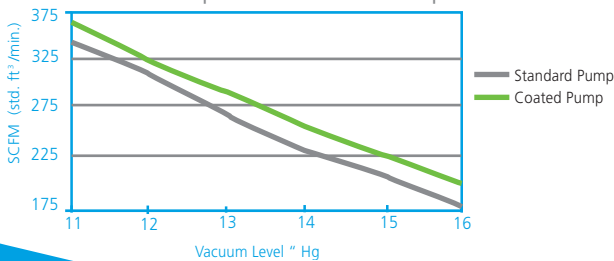


CL performance specifications

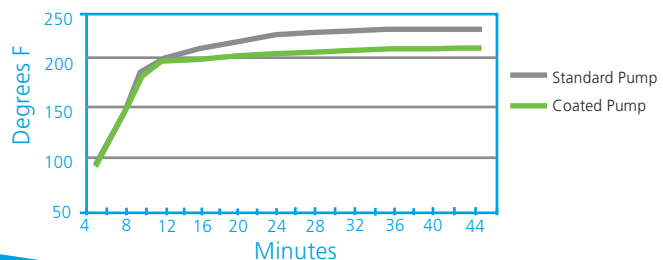
Description	SCFM @ 12"	SCFM @ 13"	SCFM @ 14"	SCFM @ 15"
7.5HP/230V/1PH	91	83	75	67
10HP/230V/1PH	113	104	95	85
10HP/208-230-440V/3PH	113	104	95	85
15HP/208-230-440V/3PH	184	169	155	141
20HP/208-230-440V/3PH	267	248	229	210
25HP/208-230-440V/3PH	341	316	291	266
30HP/208-230-440V/3PH	400	372	343	315

Air flow capacity measured at sea level at 68°F (20°C) ambient temperature.

Air Flow Capacity Comparison
Standard Pump vs. Coated Pump



Sample Temperature Differential Across the Pump at 15" Hg — Coated vs. Uncoated



Exclusive internal coating improves performance and reduces exhaust temperatures compared to uncoated pumps.

RPS Rotary Vane Vacuum Pumps

High performance, low maintenance pumps for any dairy

Automatic pump lubrication — no wasted oil; reduces maintenance time and provides longer service.

High airflow pump outlet — greatest possible airflow per HP.

1.15 service factor motor — heavy duty, long lasting.

Split vane construction — improved operating efficiency.

One-piece, solid rotor — quieter operation; maintenance and repairs minimized.

Cooling ribs on pump housing — longer service life and lower operating costs.

High capacity oil canister — provides longer operation without oil refills; helps lower repair costs.

Optional Vacuum on Demand control — provides energy saving variable speed control and lower maintenance costs.



RPS 1500/2100

RPS 1500/2100 CFM Ratings (KPA)*

Motor HP	5	5	7.5	7.5
Inches of mercury	12" (40.6)	15" (50.8)	12" (40.6)	15" (50.8)
CFM capacity (SCFM)	68	52	98	74
Vacuum pump RPM	925	925	1440	1440

RPS 2800 CFM Ratings (KPA)*

Motor HP	5	5	7.5	7.5	10	10
Inches of mercury	12" (40.6)	15" (50.8)	12" (40.6)	15" (50.8)	12" (40.6)	15" (50.8)
CFM capacity (SCFM)	74	55	95	75	138	105
Vacuum pump PRM	740	740	1030	1030	1240	1240



RPS 2800

* Cubic feet per minute is based on the American Standard for an average pump. Capacity shown is minimum rating. Pumps often produce more vacuum than shown.

RPC Vacuum Pump

A high-efficiency, oil-free pump

Unique rotor profile — allows for a very wide-range – yet efficient – operation at all speeds. This pump can efficiently operate at slower speeds, saving you energy compared to other pump styles.

Efficient design — this pump can operate at high vacuum levels and high altitude locations at slow speed without overheating, increasing the life of the pump. It's great for highline stanchion installations using variable speed drives.



Oil-free operation — the RPC creates vacuum without consuming oil. Oil is only required for lubrication in the gearbox. This reduces operating costs and is better for the environment.

Direct drive configuration — no belts to maintain.

Integral muffler for quiet operation — exhaust does not have to be vented and you can enjoy a quiet, stress-free equipment room.

RPC performance specifications*

Description	SCFM @ 12"	SCFM @ 13"	SCFM @ 14"	SCFM @ 15"
Installation at Sea Level				
RPC900	33	31	29	27
RPC1500	54	50	47	44
RPC2300	87	82	77	72
Installation at 1,650 ft. ASL				
RPC900	30	28	26	24
RPC1500	49	45	42	39
RPC2300	79	74	69	64
Installation at 3,280 ft. ASL				
RPC900	27	25	23	21
RPC1500	44	40	37	34
RPC2300	71	66	60	56

* At 60 Hertz operation

Vacuum on Demand™

Variable speed vacuum pump for precise control



State-of-the-art vacuum control

Pay only for the vacuum needed — senses the system’s vacuum level and varies the speed of the vacuum pump to provide the correct vacuum required.

Constant torque — keeps the drive operating within its amp draw limits to eliminate fault trips common with other drives.

Fast micro-processor controls — provides more stable vacuum and much faster response time compared to conventional drives.

Exhaust temperature monitors — determines the correct pump speed for maximum energy savings and longer pump life.

Reduced electrical noise — NEMA 12 enclosure is UL, CSA and CE approved. Filters reduce emissions.

Useful displays — up to 27 data types for management and maintenance information, including digital vacuum gauge.

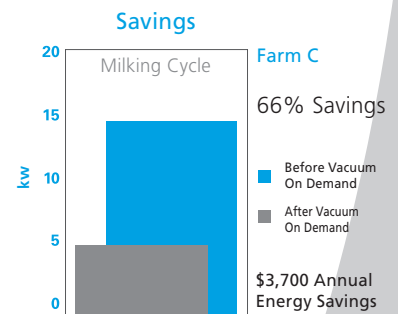
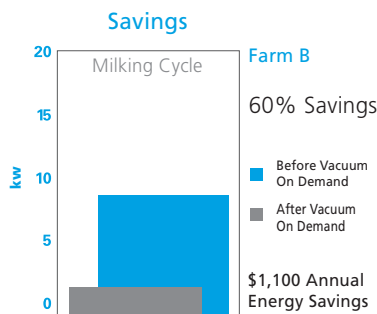
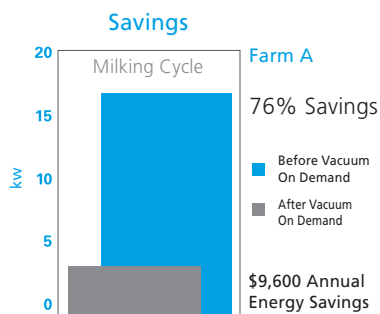
Internal maintenance monitors — tells when to check belts or change oil.

MILK and WASH modes — adjustments provide lower operating costs.

Soft start — prolongs motor, belt and pump life.

A size for every pump — 5 HP up to 40 HP in 1 phase, and 208, 230, and 460-volt models.

See how these three farms saved on their annual energy costs



Calculation to save energy – payback

$$\frac{\text{Horsepower} \times .7457 \text{ KW/HP}}{.9 \text{ Motor Efficiency}} \times \text{Hours Milked/Day} \times 365 \text{ Days/Year} = \text{Yearly KWH Usage of Vacuum Pump}$$

$$\text{Yearly KWH Usage} \times \$ \text{Cost per KWH} = \$ \text{Yearly Cost of Operating Vacuum Pump}$$

$$\$ \text{Yearly Cost of Operating Pump} \times \% \text{ Savings (50\% to 80\%)} + \$ \text{Yearly Savings}$$

$$\$ \text{Cost of Installation} \div \$ \text{Yearly Savings} = \$ \text{Yearly Simple Payback}$$

KW = Kilowatt Demand KWH = Kilowatt Hour

Commander® Vacuum Regulators

For premium performance that saves you money every day




Zero leakage saves money — other models can waste from 5 to 20 cubic feet per minute (CFM) for “air lubrication.” But the precise “zero leakage” operation of a Commander vacuum regulator can shut completely off, significantly reducing the horsepower requirements of the vacuum pump. In fact, for 24-hour operation, a Commander vacuum regulator can save up to \$1,000 per year in energy costs.*

High sensitivity — reacts to small vacuum changes quickly to ensure proper vacuum levels at all times.

Efficient, trouble-free operation — easy to adjust without special tools. Remote mounted vacuum sensing tube allows installation on any milking system.

Reduced maintenance — stainless steel components, quick connect design, and few moving parts ensure easy maintenance and longer operating life.

Available in three models — you can match the unit to your dairy for the most efficient vacuum control.

	Commander 10K	Commander 5K	Commander 1.5K
			
Maximum capacity 15" Hg (50.8 kPa)	385 CFM/ASME** (10,000 L/min)	208 CFM/ASME (5890 L/min)	53 CFM/ASME (1500 L/min)
Maximum capacity 12.5" Hg (42.3 kPa)	370 CFM/ASME (10,477 L/min)	178 CFM/ASME (5040 L/min)	45 CFM/ASME (1274 L/min)
Height	12" (304.8 mm)	11" (279.4 mm)	11" (279.4 mm)
Width	8" (203.2 mm)	4.5" (114.3 mm)	4.5" (114.3 mm)
Weight	2.5 lb. (1.13 kg)	1.6 lb. (.73 kg)	1.5 lb. (.68 kg)
Mounts into	3" PVC female slip	2" PVC female slip	1" NPT female pipe thread

* 10 CFM=1 HP. Waste of 20 CFM = 2 HP x 0.75 kW/HP/HR x 24 HR x 365 = \$1,051.20 savings per year.

** Cubic feet per minute (CFM) capacity is based on American Standard as established by the American Society of Mechanical Engineers

Digital Vacuum Gauge

Precise vacuum level monitoring



Simply and easily monitor vacuum level

Vacuum gauge — is a valuable aid in checking the day-to-day stability of a vacuum system.

Allows monitoring of the vacuum level — simply and easily.

Digital gauge is a precision instrument — designed for accurate, dependable operation and long life.

Improved resolution and accuracy — resolution of +/- 0.1 units on both inches of Hg and kPa. Increased accuracy will be 1/2%.

Stainless steel sensor — for improved durability and longer life.

1/2 LCD for distinct visibility — easy to read without having to interpret gauge (KPA read-out capable).

Multiple input voltage — can operate on 9 volt battery or 12 to 32 volt.

AC/DC pulsation system — great versatility for testing purposes and most farm applications.

Field calibrated/filtered — gauge can be calibrated on system checks without having to replace the unit. Filter helps protect against internal damage.

Long lasting — 2,500 hour battery life.

Vacuum System Installation Accessories

Build a complete system to meet NMC standards

Distribution and header tanks — size and dimensions to fit all milking system requirements. Provides proper termination/connection point for vacuum lines.

Vacuum pump pre-filters — keeps water and milk from entering the vacuum pump and ensures longer pump life.

Hour meters — monitors run-time for scheduled maintenance purposes.

Gate valves — isolates pump for testing. Sizes available to fit most systems — 2" through 6".

PVC check valves — for anti-reversing so pump doesn't run backward on shut down.

Vacuum relief mechanism — protects pump from high vacuum levels upon regulator failure; prevents clogging.



We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.

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