



Liquid Ring Vacuum Pumps and Packages



GRAHAM
ENGINEERING ANSWERS

Graham Liquid Ring Pumps provide *engineering answers* for all your vacuum needs.

HIGH PERFORMANCE

LONG LIFE

LOW MAINTENANCE

Liquid Ring Pump Benefits

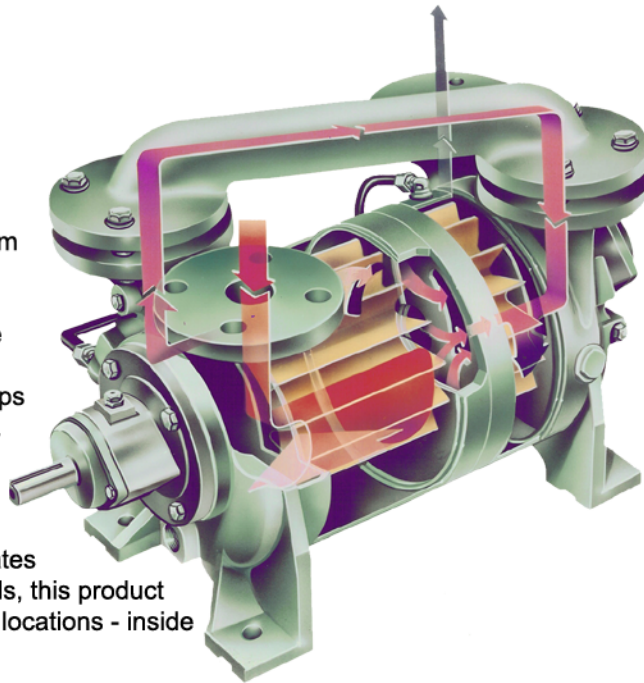
Operating Benefits.

Simple, but rugged, the Graham Liquid Ring Pump provides numerous advantages to its users. Designed with only one rotating assembly and a long service life in mind, these pumps require very little maintenance.

And, because this pump operates at low noise and vibration levels, this product can be easily installed in most locations - inside a building or outside facilities.

Although water is the most common and readily available service liquid, the Graham Liquid Ring Pump can efficiently operate with many different fluids, such as ethylene glycol, ethylbenzene, caustic solution (NaOH), mineral oil or hydrocarbon solvents, just to name a few.

The Graham Liquid Ring Pump provides exceptional performance under all types of adverse operating conditions as it is designed to endure varying process loads and upset conditions without damage. This includes functioning trouble-free with liquid in the suction, high inlet gas temperatures or condensible loads.



Materials.

Cast iron, 316 stainless steel, Ni-Al-Br, and titanium are but a few of the wide variety of materials available for manufacturing Graham Liquid Ring Pumps.

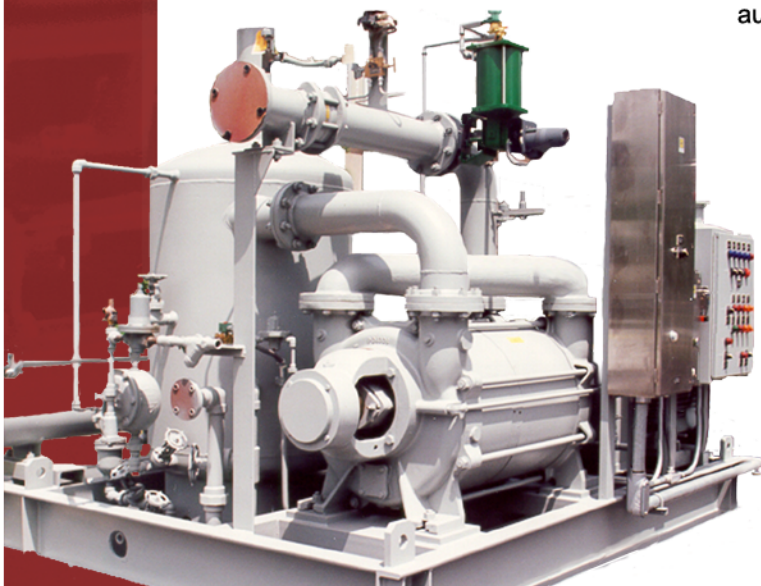
Packaged Pumps.

When the Graham "stand alone" pump doesn't fit your requirements, Graham can supply the pump packaged with our Steam Jet Ejectors, mechanical boosters or atmospheric air ejectors to provide a deeper vacuum or reduce utility costs. Combinations of efficient packages that can be supplied include: Pump-motor packages or complete closed loop, skid mounted and completely automated packages.

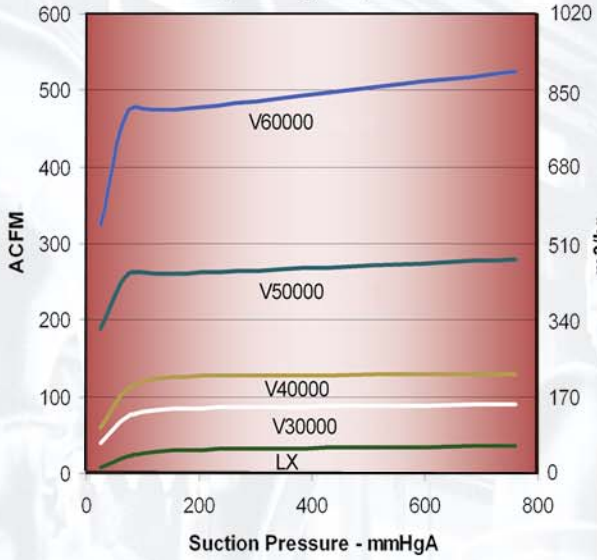
Applications.

As the Graham Liquid Ring Pump is an asset to any industry dependent upon vacuum, the market is endless. Some of the more dominant industries for the Graham Liquid Ring Pump include:

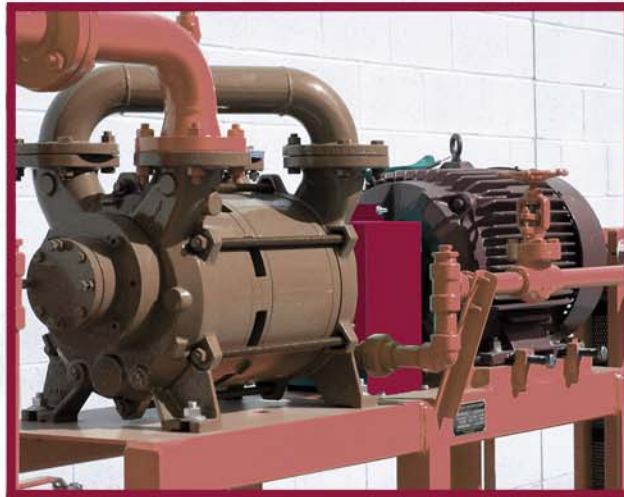
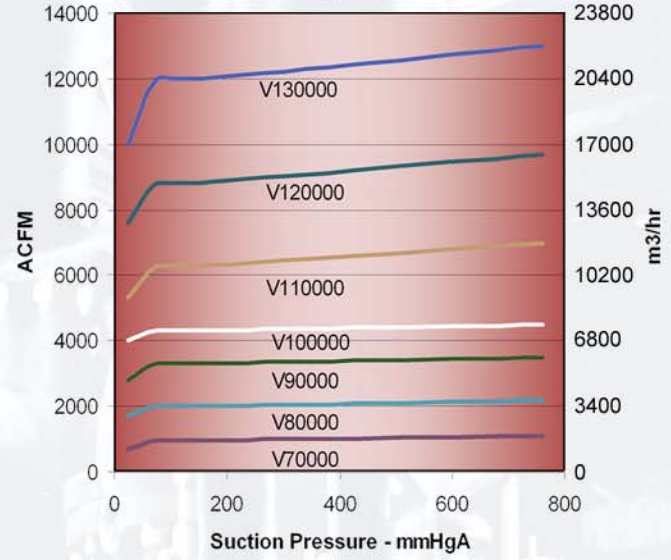
- Power
- Refining
- Chemical
- Food
- Distillation
- Automotive
- Pulp & Paper
- Metal
- Pharmaceutical
- Aerospace
- Edible Oil
- Environmental



Graham Liquid Ring Pump Performance



Graham Liquid Ring Pump Performance



Pump Size	Suction & Discharge Connections	Service Liquid Connections	Nominal Service Liquid Flow		Motor Size		Pump Weight	
			US GPM	m ³ /hr	60 HZ	50 HZ	LBS	KG
LX	1" NPT	1/4" NPT	1.0	0.3	3 HP	1.5 KW	60	30
30000	1 1/2"-150# ASME	1/2" NPT	2.0	0.5	7.5 HP	4.0 KW	165	75
40000	1 1/2"-150# ASME	1/2" NPT	3.0	0.7	10 HP	7.5 KW	200	100
50000	2" - 150# ASME	1" NPT	9.0	2.0	25 HP	15 KW	350	160
60000	3" - 150# ASME	1 1/4" NPT	12.0	3.0	50 HP	30 KW	625	280
70000	4" - 150# ASME	1 1/2" NPT	30.0	7.0	100 HP	40 KW	1550	700
80000	6" - 150# ASME	2 1/2" NPT	60.0	14.0	200 HP	100 KW	4000	1800
90000	10" - 150# ASME	1 1/2" NPT	65.0	15.0	200 HP	150 KW	4500	2000
100000	12" - 150# ASME	1 1/2" NPT	75.0	17.0	250 HP	200 KW	7500	3400
110000	14" - 150# ASME	2 1/2" NPT	100.0	23.0	300 HP	225 KW	10500	4800
120000	16" - 150# ASME	3" CONN	150.0	34.0	400 HP	300 KW	16500	7500
130000	20" - 150# ASME	3" CONN	210.0	48.0	500 HP	400 KW	24000	10900

Other products from Graham

Graham designs and manufactures two distinct lines of products: vacuum systems and heat transfer equipment. Contact us for more information on any of the following:

- **Liquid ring pumps:** Vacuum, compressors, packaged vacuum systems and hybrid systems.
- **Process vacuum condensers.**
- **Ejectors:** Steam jet and organic motivated ejectors, thermocompressors and steam vacuum refrigeration systems.
- **Ecofreeze vacuum systems.**
- **UltraHeat plate and frame heat exchangers.**
- **Steam surface condensers:** Turbine-generator condensers and mechanical drive condensers.
- **Heliflow heat exchangers:** Cryogenic vaporizers and coolers, vent condensers, vaporizers, gas coolers, liquid-to-liquid, sample coolers and seal coolers.
- **MicroMix II and MicroMax water heaters.**
- **Desuperheaters:** Venturi and steam-atomizing.
- **Clean steam generators.**

Graham engineers analyze your specific vacuum and heat transfer requirements to maximize the efficiency and performance of your process. Because it's not just about engineering products, it's about engineering answers.

Graham Corporation
20 Florence Avenue
Batavia, New York 14020 USA
Phone: 585-343-2216 Fax: 585-343-1097
Visit: www.graham-mfg.com

Graham Corporation, 2005. All rights reserved worldwide.

LRVP05-1

