

The Importance of Deep Vacuum

The purpose of a vacuum pump is to remove moisture and air from an A/C-R system.

Modern systems are built tighter and charges are more critical. That means these systems have a greater sensitivity to moisture and other contaminants, making thorough evacuation more important than ever before.

Moisture in a refrigeration system, directly or indirectly, is the cause of most problems and complaints. First, moisture can cause freeze-up in a system. Moisture is picked up by the refrigerant and transported through the refrigerant line in a fine mist, with ice crystals forming at the point of expansion.

“Freeze-up” is not the only problem caused by moisture. It can also result in corrosion, the effects of which are not apparent until the real damage has occurred. Moisture alone is bad enough, but combined with refrigerants containing chlorine, hydrochloric acids can form. These greatly increase the corrosion of metals.

Also, refrigerant oil rapidly absorbs moisture. Water-formed acids combine with the refrigerant, forming a closely bonded mixture of fine globules. The effect is called sludging and it greatly reduces the lubricating ability of the oil.

A vacuum pump removes troublesome moisture by lowering the pressure within the system and vaporizing (or boiling off) the moisture, then exhausting it along with air.

CoolTech™ – The Inside Story

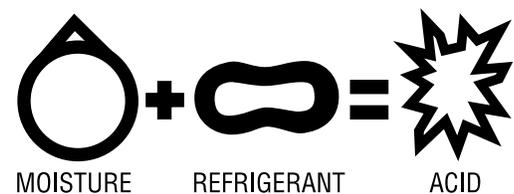
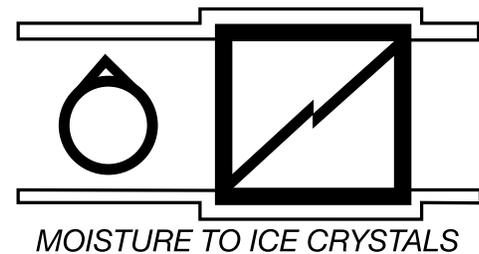
A vacuum pump that’s fast and thorough saves you not only time, but also the expense of callbacks and dissatisfied customers. Robinair pumps perform better than other pumps in the industry, ensuring you complete dehydration before recharging.

Robinair pumps are engineered specifically to meet the needs of the kind of A/C work you’re doing today, and to give you trouble-free operation. We’ve put our years of experience and know-how into developing pumps that help you do the job faster and better.

All Robinair pumps are backed by our exclusive “No Hassle” over-the-counter replacement warranty. You can return a pump to your Robinair distributor for an immediate exchange — with no hassle! (In U.S. and Canada only; in other locations, see your Robinair distributor.)

Robinair CoolTech vacuum pumps are designed for use on A/C-R systems using CFCs, HCFCs, and HFCs in conjunction with mineral oil, ester oil, alkylbenzene oil, and PAG oil as lubricants. Do not use them with ammonia or lithium bromide systems; not for use with flammable refrigerants.

U.S. Patent Numbers: 4,523,897; 4,631,006; 5,209,653.



- 1 Oil Fill Port**
Makes adding oil simple since the port is accessible from the front or either side. The sight glass on the front of the pump shows you when enough oil has been added.
- 2 Two-stage Design**
Cleans the system more thoroughly than a single-stage pump; the second stage starts pumping at a lower pressure so you can pull a deeper ultimate vacuum.
- 3 Die-Cast Aluminum Housing**
Cast aluminum housings make the pumps lightweight but durable.
- 4 Heavy Duty Motor**
High torque design for easy startup and efficient operation.
- 5 Molded Base**
Durable polycarbonate base improves pump balance and minimizes vibration during operation.
- 6 Iso-Valve™**
Isolates the pump from the system with just a quarter-turn.
- 7 Offset Rotary Vanes**
Our proven design builds a powerful compression within the pumping chamber to reduce system pressure and vaporize moisture, so it can be exhausted along with air.
- 8 Oil Drain Valve**
Positioned at the bottom of the oil reservoir and angled for faster, more complete draining.

Selecting the Right Size Pump

The more air a pump moves, the faster it can reach an acceptable vacuum. A smaller pump takes more time to evacuate a system than one that's the correct size for the job.

Use this Chart as a Guide to Selecting the Right Size Pump

System	Recommended Pump Size	
	CoolTech™	VacuMaster™
Up to 10 tons (35kW); Domestic Refrigeration, Passenger Cars	1.2 CFM (28 l/m)	1.5 CFM (35 l/m)
Up to 30 tons (105kW); Residential A/C, Panel Trucks & RV's	4 CFM (93 l/m)	3 CFM (71 l/m)
Up to 50 tons (176kW); Rooftop A/C systems, Tractor/Trailers, Buses	6 CFM (142 l/m)	5 CFM (118 l/m)
Up to 70 tons (246kW)	10 CFM (236 l/m)	-

	Oil Fill Port	Heavy Duty Motor	Two-Stage Design	Molded Base	Die-Cast	Oil Drain Valve	Offset Rotary Vanes	Iso-Valve	Gas Ballast
CoolTech™ Pumps	●	●	●	●	●	●	●	●	●
VacuMaster® Pumps	●	●	●		●	●			

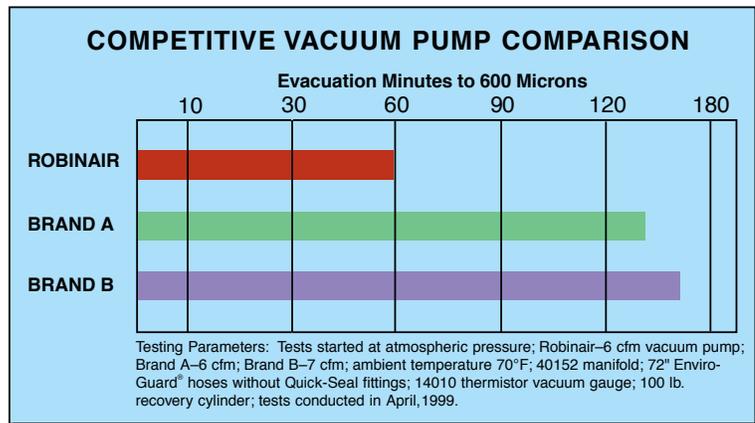
Tests done under the same laboratory conditions confirm that Robinair vacuum pumps consistently out perform other major brands. Our Model 15600 reaches a vacuum of 600 microns in just 60 minutes, while the competition's pumps took more than two hours to reach the same micron level.

Robinair pumps weigh less!

You'll appreciate the difference a few pounds make when you're carrying the pump up a ladder or through an access hatch.

Robinair pumps use less oil!

Smaller oil capacity means that your maintenance costs will be lower over the life of the pump.



Robinair (6 CFM)	27 lbs
Brand A (6 CFM)	34.5 lbs
Brand B (7 CFM)	27.5 lbs

Robinair	15 oz.
Brand A	24 oz.
Brand B	30 oz.