

CRP Paks

from Clean Resources are Your Solution

Compressed air condensate can provide environmental headaches for today's manufacturer. That's because dumping contaminated water is not only detrimental to the environment, it is also illegal. With over 50 year's experience in the environmental and compressed air field, Clean Resources is the leader in molecular filtration for compressor condensate. We, as CRP Inc., pioneered molecular filtration for the compressor condensate market in 1997, we developed the first decompression chamber that works with all types of compressed air drains, and we were first to offer a specific ppm guarantee for oil/water separators. To date, Clean Resources is the only company offering a no-charge disposal option to its customers. We stand ready to offer you the kind of innovative solutions that help you attain compliance with today's most stringent environmental and clean water regulations.

Problems caused by contaminants in the waste stream

There are two main problems caused by dumping compressed air condensate that is laden with compressor lubricants:

1. **Pollution**—just one gallon of compressor lubricant can contaminate up to four acres of ground water. A 100 hp compressor operating 24/7 will carry over 15 gallons of lubricant annually.
2. **Environmental liability**—It's illegal to dump oil-laden compressor condensate into the ground or sewer system. The legal limits range between 10 ppm and 100 ppm of allowable lubricant contamination, depending on your location. Typical compressor condensate has 500–3000 ppm of contaminants.

The cost of non-compliance is high. Fines, negative publicity and clean up costs add up to tens of thousands of dollars.

CRP Paks provide cost-effective condensate treatment

CRP Paks from Clean Resources are engineered to minimize maintenance and clean up headaches, operate efficiently in all conditions, and reduce the cost of dealing with wastewater streams. This advanced molecular filtration system removes all types of lubricants, providing a truly scientific solution to a troublesome problem.

CRP Paks are filled with a media bed formulated to attract the targeted contaminant, while at the same time repelling the water molecules. Wastewater passes through the media bed and the contaminants are trapped by the bed. The lubricants are actually bonded to the media bed, virtually eliminating the possibility of ground water contamination from the spent bed.

Unlike some oil/water separators that utilize gravity separation as prefiltration, CRP units need no pumps, sensors, or pre-separation filter pads. The reason CRP Paks stand alone is that the superior media bed is so efficient no prefiltration is needed. In addition, the rugged internal piping and a fail-safe decompression chamber assure proper operation. All CRP Paks contain media beds of the highest quality alumino silicate substrate, the product of a proprietary process that applies the proper quats in a particular sequence under tight quality assurance standards.



The specially treated alumino silicate substrate media bed is a key to CRP Pak's outstanding performance.





Laboratory tested, field-proven results

Extensive independent laboratory tests and thousands of real-world installations prove the effective performance of CRP Paks in handling the following lubricants:

- Diester-based lubricants
- PAO-based lubricants
- Glycol-based lubricants
- Hydraulic lubricants
- Food grade lubricant
- Mineral-based lubricant

A partial list of lubricant brand names CRP Paks work with:

- Androl
- Ultra Chem
- Summit
- Royal Purple
- All Gardner Denver Lubricants
- All Kaeser Lubricants
- All Sullair Lubricants except 24 KT*
- All Quincy Lubricants
- All Atlas Copco Lubricants
- All Palatek Lubricants
- All Compair Lubricants
- All Ingersoll-Rand Lubricants

** XKT Paks are available for silicone-based lubricants*

Traditional condensate processing is costly and often ineffective

There are a number of conventional ways to handle oil-laden compressor condensate, however, these alternatives are often expensive and ineffective.

- **You can have condensate hauled away by a licensed hazardous waste contractor.** This is generally the most costly and time-consuming solution.
- **Oil/water separators** are available in a variety of styles; but they provide limited success in removing many types of oil from the compressor condensate.
- **Flotation separators** are used in the compressor industry for the separation of lubricants from water. These devices are not effective in removing emulsified, glycol-based, or nonsynthetic lubricants. Flotation separators frequently clog and spill due to mold growth, and *e-coli* bacteria can form on the water's surface.
- **Boil off systems** use heat to distill the water, leaving only the contaminant. Although often effective in removing contaminants, these systems are costly to operate and maintain due to high energy usage.



CRP Paks provide cost-effective condensate treatment

CRP Paks are extremely cost effective. Initial cost is low, installation is easy and maintenance time is practically eliminated. Best of all, disposal costs are drastically reduced.

CRP Pak vs Other Types of Separation

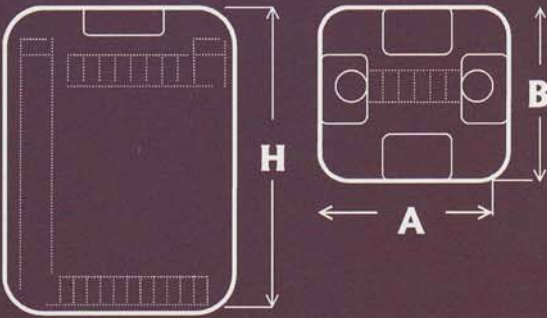
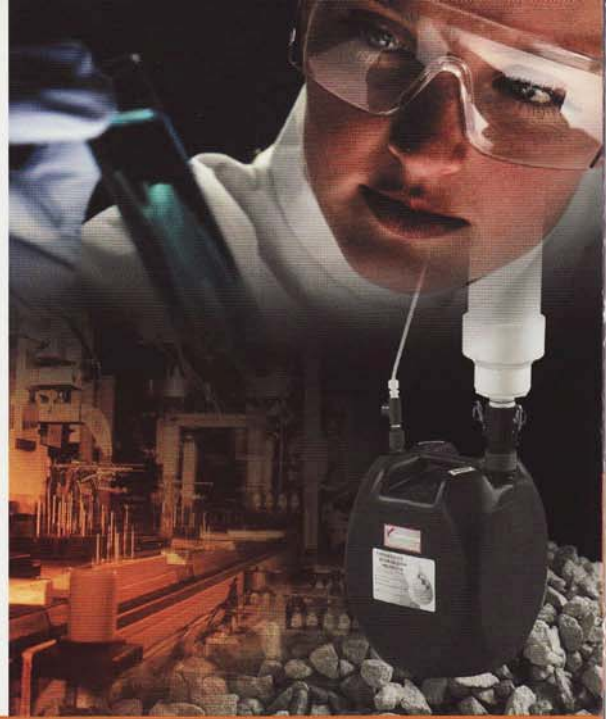
	CRP Pak	Flotation	Flotation w/Sorbant Final Filter	Boil Off
Handles emulsified oil	Yes	No	Yes	Yes
Performs equally well with all lubricants	Yes	No	No	Yes
Electric power required	No	No	Yes	Yes
Maintenance free	Yes	No	No	No
Pump required	No	No	Yes	No
Sensors required	No	No	Yes	Yes
Susceptible to mold growth	No	Yes	Yes	No

Decompression chamber

The DC-202 decompression chamber was developed by CRP to operate with all types of drains, including float, electric, pneumatic and zero-loss styles. This design permits the separation system to properly function even in the event of a drain failure. The DC-202 decompression chamber allows for massive amounts of compressed air to be vented in the case of drain failure. The six-inch diameter port is preceded by a demister pad, thus allowing the air to vent while blocking the water and oil. Designed for easy installation, the DC-202 uses a cam lock system to quickly attach to the CRP Pak. The DC-202 has six ¼" inlets to allow multiple drain hook ups.

Sizing information and life expectancy

CRP Paks are available in three sizes. Select from 15, 30 and 55-gallon capacities to meet your specific application. Life expectancy of the CRP Pak depends on the amount of lubricant carryover from the compressor(s). Contaminant absorption capacity is approximately 50% of media bed volume. Therefore, the 15, 30 and 55 gallon CRP Paks have capacities of about 7, 15 and 27 gallons of contaminant respectively.



Specifications

	CRP 15	CRP 30	CRP 55
Inlet/outlet	2"/.75"	2"/2"	2"/2"
Height (H)	20"	29"	33"
Width (A/B)	15"	19"	23"
Maximum flow (gpm)	5	10	15
Maximum psig	2	2	2
Maximum temperature	125°F	125°F	125°F
Shipping weight	105 lbs.	215 lbs.	375 lbs.

CRP Paks make disposal easy

In most cases, CRP Paks can be disposed of as part of your waste management pick up service, provided the proper paperwork is completed. In the event CRP Paks cannot be disposed of through your normal pick up, Clean Resources will accept spent paks through their return program. Paks must have been used in normal compressor applications.

Guaranteed performance

Thousands of CRP Paks are operating successfully in the field. That's why Clean Resources can offer the following warranty:

CRP Paks, when properly sized and installed, are guaranteed to reduce the contaminants in your compressor condensate to less than 10 ppm, for the life of the unit. In the event a unit fails while operating in approved conditions and having been properly sized and installed, Clean Resources, Inc. will replace the failed CRP Pak or provide a refund through your distributor.

Take the first step to cleaner discharge water—contact your local CRP distributor today

Presented by:

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