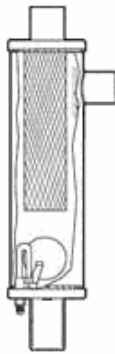


Polycold Unit Special Repair Packages

We offer both an "Acidity System Restoration", and an "Oil Control" retrofit package for the revival of older units that might have previously been condemned. Using our proprietary techniques, We can breath new life into your aging Polycold refrigeration units. Giving you many years of extended service from your Polycold unit, and saving you thousands of dollars as compared to unit replacement.

Oil Control: "High Reliability" Oil Control Retrofit



An Oil Separator's function is to ensure the correct return of oil to the compressor's crankcase. In the early series of Polycold units, they relied completely on the refrigerant to do this, via integral phase separators. This worked fairly well when CFC refrigerants were in use, but later when the CFC's were eliminated due to EPA restrictions, the oil return began to suffer. Smaller units (e.g.; 330, 550, 660) had better tolerance for this, but the larger 1000-1100 series units did not. So in most cases only PFC-1000's, PFC-1100's or PFC-1101's will have a likely hood of experiencing oil related problems (e.g.; poor cooling and stuck solenoid valves).

To circumvent this problem, full-flow oil separators have been implemented in the compressor discharge path in the newest Polycold series (PFC-1102). This is not to be confused with the once standard smaller Temprite 902, or the later Polycold replacement for this same part. Since this was specifically targeted at creating an oil-free gas source for the Defrost circuit only.

In the newer 1102 design, oil laden gases exiting the compressor pass through two larger full-flow oil separators, before continuing on through the water cooled condenser, and into the autocascade heat exchanger stack. Unlike the older system where the oil separators were only used for hot gas defrost, the newer system also removes oil before it has a chance to freeze-up in the colder stages of the Polycold unit.

The Solution:

We will retrofit larger dual Temprite 905 full-flow oil separator's into your pre 1102 unit. This will provide a much improved oil return path to the compressor, and capture what ever residual oil had not been properly returned by the original system as built.

As part of this retrofit, we will also do a complete upper stage flush utilizing our proprietary "Power Flush" process. This will remove any pre-existing higher stage oil contamination that may exist, thereby giving the unit a clean start.

Oil Control Package

Complete System Flush
New Liquid Line Dryer
New Compressor (if needed)
New Retrofitted Dual Temprite
905 Oil Separators
New High Miscibility Synthetic
Compressor Oil
New Solenoid Valves
New "High Reliability Blend"
Refrigerant Charge
Full Performance Test

All Repairs
Are Guaranteed





Improved Full-Flow Oil Separation (PFC-1100 shown)

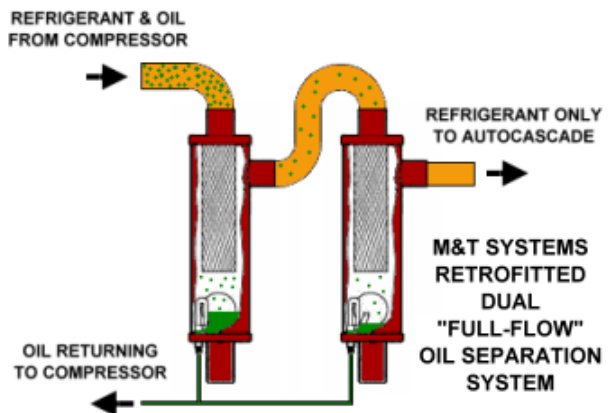
Effective flushing is an important step in bringing the unit back to a "Like New" condition, and also for preventing contamination of the new parts that will be installed.

The compressor's physical condition will also be inspected for signs of internal wear, such as scored cylinder walls, or imminent valve failure.

On very old systems, or ones that have had tenacious oil problems, it is highly recommended that the compressor be replaced as part of the oil control retrofit package.

The compressor oil will be changed to a new highly miscible synthetic, and the refrigerant charge will be updated to our custom high reliability blend.

The original Zerol compressor oil was only miscible with 3 of the 6 refrigerants used in the original charge. So in other words; only 50% of the refrigerants in the original charge blend were effective at combining with, and returning oil back to the compressor. The "High Miscibility Replacement Oil" will combine with 80% of the refrigerants, and thereby exhibit a much higher rate of return.



Finally; we will also replace the liquid line dryer, and solenoid valves (rebuild kits will be used on Buffer and Hot Gas valves).

So if your Polycold unit has been diagnosed with chronic oil problems (e.g. stuck cool valves, warming up over time, lots of oil found in refrigerant lines). Please don't hesitate to [contact](#) us today, to see if our oil control package is right for you.

Acidic Systems: "Condemned Unit" Restoration

The development of acids in the refrigerant of Polycold refrigeration units can severely shorten the life of the compressor. These acids can be formed by chemical reactions with lubricating oils, and/or impurities in the refrigerant charge. The instability of the refrigerant, and thus the formation of acids, is accelerated by elevated compressor temperatures which could be the result of improper operation, such as a failed condenser fan, clogged air flow path, insufficient cooling water flow, or elevated cooling water temperature.

Acid Restore Package

- Complete System Flush
- New Liquid Line Dryer
- Retrofitted Suction Line Dryer
- New Compressor (if needed)
- New Compressor Oil
- M&T Acid Treatment™
- New Solenoid Valves

Checking the system for acid is a common maintenance recommendation, since acidic conditions can often times be cleaned up before a compressor motor burn-out has a chance to occur.

New Refrigerant Charge
Full Performance Test

If a compressor does burn out, the oil becomes extremely acidic. If all this acid is not removed when the compressor is replaced, the elevated acid levels will attack the new compressor and potentially cause another compressor motor burn-out. This is why other service companies have often times been unsuccessful in their attempts to restore such units to a reliable working state. Resulting in unsatisfied customers, additional down-time, and the customer having to buy a new replacement unit with the associated higher price tag.



Retrofitted Suction Line Dryer (PFC-1100 shown)

you it was beyond repair. Please don't hesitate to [contact](#) us today, to see if we have a solution that works for you.

The Solution:

We have developed a universal method of restoring acidic systems to like new condition. With a combination of heat exchanger flushing (using ozone friendly solvents), filter dryer replacement(s), oil and refrigerant replacement, and our unique acid treatment solution, all acids will be eliminated from the refrigerant circuit.

If the acidic nature of the system has been caught in time, and it is determined that the compressor is still usable, compressor replacement will not be necessary. However in all but the most mildest cases of acid discovery, it is highly recommended that a new, or rebuilt compressor be installed.

Utilizing our field proven acid removal techniques, even the worst case motor burn-out scenarios can now be remedied. And because we are so certain of our results, our full unit repair warranty still applies.

If you have a unit that you were told was acidic. Or worse yet, someone used the "C" word (Condemned) in describing your unit, and told

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