alltemp®
SOLUTIONS

HIGH-PERFORMANCE GREEN REFRIGERANT

HPGR

alltemp® M is the industry leading next generation R-22 replacement that delivers superior performance over native R-22

The imminent phase out of R-22 has forced plant and equipment owners as well as professionals in the Service Industry to make some difficult decisions:

- Replace existing Plant and Equipment before its useful life
- Retrofit existing Plant and Equipment with an alternative refrigerant that often results in a significant degradation of performance, expensive and time-consuming retrofit procedures; and last but not least, typically a larger negative environmental impact in terms of Global Warming Potential ("GWP")
- Do nothing with existing Plant and Equipment and hope that recycled R-22 remains available at an affordable cost before it is phased out

alltemp® M provides the perfect "proven" SOLUTION that should be implemented for economic and environmental reasons, even if R-22 was readily available and not subject to phase out.

alltemp® M is:

- Direct R-22 Replacement, without compressor oil changes, valves or seals resulting in a SIMPLE retrofit procedure
- HFC non ozone depleting and the lowest Global Warming Potential of any R-22 alternative
- Indisputable Energy Savings (exceeding 25% of kBTUh/kW baseline for R-22) that pays for the retrofit process typically in less than 12 months
- Not a "blend" that results in glide and recharging issues upon leakage
- EPA Approved

Put Green Back In Your Pocket And The Environment

Additional Specifications for alltemp® M:

System Charging

- Initially charge 95% of R-22 OEM recommended charge
- Remove liquid only from **alltemp® M** cylinder
- Charge **alltemp® M** refrigerant in the receiver or high side of the system with the compressor off
- Run system and add refrigerant if needed to design subcooling. Adjust TEV if needed
- Charging system by clearing sight glass is not recommended
- **alltemp® M** is compatible with MO, AB, POE and PVE oils and no compressor lubricant retrofit is required

System Requirements

- System must be designed for use with R-22 or R-407C
- System must be designed for a direct expansion metering device, i.e. TEV, cap tube, or fixed orifice
- System should be operating within its design capacity
- System should be leak free
- Compressor must be charged with lubricant as required by the OEM
- Suction, discharge and liquid piping must be sized, trapped and insulated for systems temp and BTU design

Benefits

- Proven Energy Savings typically exceeding 25% of kBTUh/kW baseline for R-22
- Zero loss of capacity (Delta T) and often increased capacity with higher ambient OAT
- The lowest Global Warming Potential (GWP) of any R-22 alternative and Zero ODP
- Lowest retrofit costs with no POE oil changes, line set changes, valves or seals
- Reduced system leakage and can be topped off after leak has been repaired
- Enables continued use of existing Plant and Equipment at reduced operating cost

Technical Information

Environmental Classification	HFC
ASHRAE Standard 34 Saftey Classification	A1
EPA/SNAP Accepted (S=Stationary M=Mobile)	S/M
Ozone Depletion Potential (ODP)	0
Global Warming Potential (GWP-100 year)	1,151
Oil Compatibility	All
ASHRAE Designation	1,1,1,2=Tetrafluoroethane (CAS) 811-97-2)
Temperature Glide (NBP)	None
Refrigerant Type	Single Component
Maximum Moisture (ppm)	≤10
Non-condensables (% by volume)	0.67
High Boiling Residue (% by volume)	≤0.01
Acidity (ppm by weight as HCL)	≤0.1