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R407a vs R404a and R22

R407A is a REFRIGERANT FLUID replace R404a and R22:

GWP nearly 50% lower than R404a.

- Similar cooling capacity R404a.
- Improved **energy efficiency** for low and medium evaporation temperatures particularly for high ambient temperatures.
- Lower discharge temperature compared to competitive products, allowing a wider range of applications without liquid injection.

R407a can also be used as a retrofit solution for R22.

PERFORMANCE R407a Vs R404a and R22

Refrigerant		R404a	R22	R407a
Molecular Weight		97,6	86,5	90.1
Boiling Temperature (°C)		-46,2	-40,8	-45,5
Critical Temperature (°C)		72,05	96,2	82,26
Critical Pressure (Bar)		37,29	49,9	45,15
Latent Heat at 25°C (kJ/kg)		140	182,7	186,5
Density at 25°C (kg/m ³)	Saturated Liquid	1044.1	1191	1145.1
	Saturated Vapor	66.4	44.23	55.6
Cp at 25°C (kJ/kg·K)	Saturated Liquid	1.54	1.26	1.52
	Saturated Vapor	1.22	0.872	1.194
Thermal Conductivity (W/m·K)	Sat. Liquid at 25°C	0.064	0.086	0.079
	Sat. Vapor at 25°C	0.016	0.011	0.015
Viscosity (mPas)	Sat. Liquid at 25°C	0.128	0.160	0.151
	Sat. Vapor at 25°C	0.012	0.013	0.013
GWP		3784	1810	1990

Lubrication :

R407a requires polyolester (POE) lubricant to ensure reliable oil return and circulation throughout the system. In many cases the original system oil can be reused.