



R-404A

Technical Guidelines

Physical Properties of Refrigerants	R-404A
Environmental Classification	HFC
Molecular Weight	97.6
Boiling Point (1 atm, °F)	-51.8
Critical Pressure (psia)	548.2
Critical Temperature (°F)	162.5
Critical Density, (lb./ft ³)	35.84
Liquid Density (70 °F, lb./ft ³)	66.37
Vapor Density (bp, lb./ft ³)	0.342
Heat of Vaporization (bp, BTU/lb.)	86.1
Specific Heat Liquid (70 °F, BTU/lb. °F)	0.3600
Specific Heat Vapor (1 atm, 70 °F, BTU/lb. °F)	0.2077
Ozone Depletion Potential (CFC 11 = 1.0)	0
Global Warming Potential (CO ₂ = 1.0)	3920
ASHRAE Standard 34 Safety Rating	A1
Temperature Glide (°F) (see section 2)	1.5

Available in the following sizes

R-404A

24 LB. CYLINDER

100 LB. CYLINDER

800 LB. CYLINDER

1300 LB. CYLINDER

R-404A

(R-125/143a/134a)
(44 / 52 / 4 wt%)

Replaces: R-22 & R-502

Applications: Medium and low temperature commercial and industrial direct expansion refrigeration and ice machines

Performance:

- Similar PT and flow properties to R-502
- Higher capacity than R-22, therefore requires TXV change

Lubricant

Recommendation: Compatible with polyolester lubricant

Retrofitting: Replacement for R-502
Replacement for R-22

Pressure-Temp Chart

Temp (°F)	R-404A psig
-40	4.3
-35	6.8
-30	9.5
-25	12.5
-20	15.7
-15	19.3
-10	23.2
-5	27.5
0	32.1
5	37.0
10	42.4
15	48.2
20	54.5
25	61.2
30	68.4
35	76.1
40	84.4
45	93.2
50	103
55	113
60	123
65	135
70	147
75	159
80	173
85	187
90	202
95	218
100	234
105	252
110	270
115	289
120	310
125	331
130	353
135	377
140	401