



# Daikin Creard R-407H Refrigerant Gas. A Lower GWP, Cost-Effective Solution for Refrigeration.

**Product Description:** Daikin Creard R-407H is an economical and highly efficient lower GWP refrigerant for new refrigeration installations and as a replacement for R404A, R507A, R407A/F and R22 in existing systems.

- Zeotropic refrigerant containing R32, R125, R134a (32.5%, 15%, 52.5% by weight)
- Comparable thermo-physical properties to R407A/F, R404A, R507A and R22
- ASHRAE Class A1 Non Flammable Low Toxic
- Lower GWP compared to R404A, R507A and R407A/F
- Compatible with POE Oil

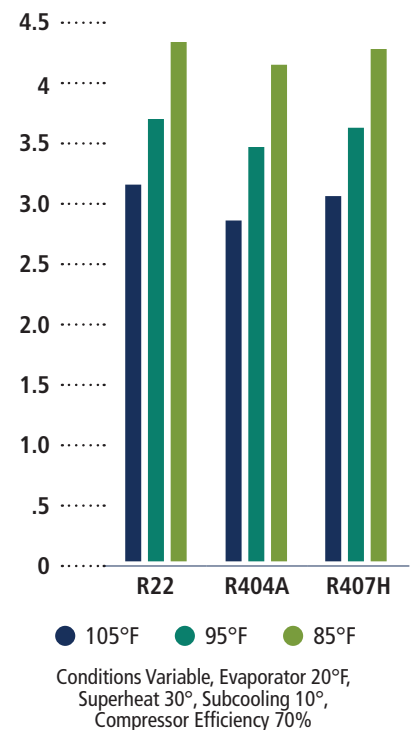
**Applications:** For New Systems and as replacement for R404A, R407A/F, R507A and R22 in:

- Walk-in coolers and freezers
- Supermarket systems and display cases
- Transport refrigeration
- Remote condensing units, chillers

**Status:**

- R407H is listed in EPA SNAP Decision 33 for New and Retrofit Remote Condenser applications.
- EPA SNAP Listing For the remaining applications expected in 2018.
- Available now for sale and samples.
- R407H gas is manufactured domestically.

**COP vs. Condensing Temperature**



**Daikin Creard R-407H Properties Comparison:**

Properties	R22	R404A	R507A	R407A	R407F	R448A	R449A	R407H
GWP (AR5)	1760	3922	3985	1923	1674	1273	1282	<b>1378</b>
ODP	0.055	0	0	0	0	0	0	<b>0</b>
Boiling Point (°F) <sup>1</sup>	-41.5	-46.2	-52.1	-49.9	-49.9	-50.7	-46.0	<b>-48.3</b>
Critical Pressure (psia)	723.7	540.9	538.1	654.7	688.9	675.6	645.4	<b>703.4</b>
Liquid Density at 77°F (lb/ft <sup>3</sup> ) <sup>2</sup>	74.30	65.20	65.40	71.49	69.73	68.66	69.00	<b>69.40</b>
Vapor Density at 77°F (lb/ft <sup>3</sup> ) <sup>2</sup>	2.76	4.10	4.30	3.11	2.97	2.88	2.81	<b>2.60</b>
ASHRAE Classification	A1	A1	A1	A1	A1	A1	A1	<b>A1</b>
Components	R22	R125 R134a R143a	R125 R143a	R32 R125 R134a	R32 R125 R134a	R32 R125 R134a R1234yf R1234ze(E)	R32 R125 R134a R1234yf	<b>R32 R125 R134a</b>

**Daikin Creard R-407H Cycle Performance Comparison<sup>2</sup>:**
**Medium Temperature Refrigeration:**

Evaporator 20°F; Condenser 105°F; Subcooling 10°; Suction Temperature 50°F; Compressor Efficiency 70%

	R22	R404A	R507A	R407A	R407F	R448A	R449A	R407H
COP (vs. R404A)	110.1%	100.0%	99.7%	105.6%	105.6%	107.0%	107.3%	<b>107.3%</b>
Mass Flow Rate (lb/h)	71	100	103	76	68	73	73	<b>64</b>
Volume Flow Rate (ft <sup>3</sup> /s)	102	100	98	104	100	107	109	<b>104</b>
Discharge Temperature (°F)	208.5	161.3	159.5	185.0	195.2	185.4	184.2	<b>196.7</b>
Volumetric Capacity (BTU/ft <sup>2</sup> )	71.0	73.4	75.0	67.1	73.2	68.7	67.3	<b>69.9</b>
Discharge Pressure (psig)	225.4	266.4	274.6	242.1	253.0	233.9	227.3	<b>235.7</b>
Suction Pressure (psig)	57.9	70.1	73.0	57.0	59.8	56.0	54.3	<b>54.8</b>

**Low Temperature Refrigeration:**

Evaporator -25°F; Condenser 105°F; Subcooling 5°; Suction Temperature 30°F; Compressor Efficiency 70%

	R22	R404A	R507A	R407A	R407F	R448A	R449A	R407H
COP (vs. R404A)	114.3%	100.0%	99.3%	107.5%	108.2%	109.5%	110.2%	<b>110.2%</b>
Mass Flow Rate (lb/h)	68	100	104	74	66	70	71	<b>61</b>
Volume Flow Rate (ft <sup>3</sup> /h)	96	100	97	108	101	108	111	<b>107</b>
Discharge Temperature (°F)	298.0	209.5	206.2	249.2	266.9	249.3	247.4	<b>275.6</b>
Volumetric Capacity (BTU/ft <sup>2</sup> )	26.7	27.1	27.9	24.4	26.2	24.5	23.9	<b>24.2</b>
Discharge Pressure (psig)	225.4	266.7	274.6	242.1	253.0	233.9	227.3	<b>235.7</b>
Suction Pressure (psig)	22.2	27.4	28.9	20.5	21.5	20.5	19.8	<b>19.4</b>

<sup>1</sup> at 1atm    <sup>2</sup> Calculated with Refprop 9.1