



R22 Alternate Refrigerant Selection Guidelines

HCFC R22 to HFC R404A/R507, R407C, R410A, R417A, R422A/C and R422B/D

Reference Document No. RD-0002-E-R1

New Equipment Applications of Compressors and Condensing Units

Evaporating Conditions	Refrigerant(s)	Lubricant(s)	Compressor Type	Capacity Range (Btu/h)	New Equipment Guidelines	Equipment/Application ⁺
Low Temperature -10°F (-23.3°C)	R404A, R507	Polyol Ester	Reciprocating	600 to 22,000	RD-0007-E	Commercial and Walk-In Freezers, Process Chillers, Soft Serve Ice Cream and Yogurt Machines
		Polyvinylether	Rotary	2,395 to 3,500	PB128	
		Polyol Ester	Scroll	7,500 to 23,000	PB129	
	R134a	Polyol Ester	Reciprocating	205 to 1,860	PB115	Commercial Refrigerators and Vending Equipment
Medium Temperature +20°F (-6.7°C)	R404A, R507	Polyol Ester	Reciprocating	1,250 to 36,500	RD-0007-E	Commercial Refrigerators and Display Cases, Ice Machines, Beverage Dispensers, Refrigerated Air Driers
		Polyvinylether	Rotary	3,300 to 6,755	PB125	
		Polyol Ester	Scroll	8,800 to 44,000	PB127	Walk-In Refrigerators and Freezers, Air Driers
	R134a	Polyol Ester	Reciprocating	365 to 21,500	RD-0006-E	Transport Refrigeration
		Polyvinylether	Rotary	2,250 to 4,360	PB125	Commercial Refrigerators and Vending Equipment
High Temperature +45°F (7.2°C)	R410A	Polyvinylether	Rotary	5,180 to 12,980	PB126	Residential and Light Commercial Air Conditioners and Heat Pumps
	R407C	Polyol Ester	Reciprocating	6,500 to 72,000	RD-0005-E	
		Polyvinylether	Rotary	4,670 to 12,500*		
		Synthetic Alkylate				
	R134a	Polyol Ester	Reciprocating	1,400 to 12,100	RD-0006-E	Commercial Refrigerators and Vending Equipment
		Polyvinylether	Rotary	3,410 to 11,700	PB125	PTAC/PTHP, Transport Refrigeration, Electronics Cooling

Retrofit Applications of Compressors and Condensing Units

Evaporating Conditions	Refrigerant(s)	Lubricant(s)	Compressor Type	Capacity Range (Btu/h)	Retrofit Guidelines	Potential Equipment/Application
Low Temperature -10°F (-23.3°C)	R422A, R422C	Polyol Ester Mineral Oil Synthetic Alkylate	Reciprocating	1,500 to 11,000	RD-0003-E	Commercial and Walk-In Freezers, Process Chillers, Soft Serve Ice Cream and Yogurt Machines, Commercial Refrigerators and Vending Equipment
Medium Temperature +20°F (-6.7°C)	R417A, R422B, R422D	Polyol Ester Mineral Oil Synthetic Alkylate	Reciprocating	1,250 to 36,500	RD-0003-E	Walk-In Coolers, Refrigerated Air Driers and Dehumidifiers
		Synthetic Alkylate	Rotary	3,170 to 6,995		Dehumidifiers and Beverage Dispensers
High Temperature +45°F (7.2°C)	R407C	Polyol Ester	Reciprocating	5,500 to 72,000	RD-0005-E	Residential and Light Commercial Air Conditioners and Heat Pumps
		Synthetic Alkylate	Rotary	5,500 to 25,000		
	R417A, R422B	Polyol Ester Mineral Oil Synthetic Alkylate	Reciprocating	5,500 to 72,000	RD-0003-E	
		Synthetic Alkylate	Rotary	5,500 to 18,000*		

NOTE: This Selection Guide is for reference only and does not represent an endorsement by Tecumseh Products Company of any particular retrofit refrigerant. Guidelines are provided to assist in better applying Tecumseh compressors.

* 50 Hz models available in a wider capacity range.

+ For a complete list of compressor applications refer to Reference Document RD-0004-E

Tecumseh approved alternate R22 refrigerant, guidelines available

Tecumseh guidelines are available for these additional listed refrigerants