Supervisory Control Supported Refrigerants

Refrigerant Tables

This bulletin includes all supported refrigerants in Supervisory Controllers. The firmware supports many refrigerant types. The tables include dew (vapor), mid-point, and end-point curves.

Table 1: Legend

Кеу	Description			
Noglide	Single refrigerant or azeotropic blend			
Mid-point (M)	Uses mid-point between bubble and dew			
End-point Shift (E)	Uses end-point shift at 50° F. Uses bubble above 50 and dewpoint at or below 50			
Bubble (B)	Bubble (Liquid)			
Dew (D)	Dew (Vapor)			



Using Refrigerants in Flex Combiner Equations

When referencing a refrigerant, the Flex Combiner application will use an abbreviation, which will be the refrigerant designation such as "R402A" without any hyphen and a single character suffix added based on the curve used:

- M=Mid-Point
- E=End-point table follows dew, then bubble with crossover at 10°C (50°F)
- D=Dew (Vapor) point
- B=Bubble (Liquid) point

To enter a refrigerant in the Flex Combiner algorithm, please follow the below syntax when entering equation: T2P (AI2, R438AM).

Status General Input:	Outputs Analog Output Eq Digital Output Eq	Delay/PW Eq Eng l
POINT NAME	VALUE	POI
AO1 Eq	T2P (AI2, R438AM)	0

Flex Combiner Syntax



DISCLAIMER

Use only refrigerants and lubricants approved by and in the manner prescribed by Copeland. In some circumstances, non-approved refrigerants and lubricants may be dangerous and could cause fires, explosions or electrical shorting. For more information, contact Copeland and your original equipment manufacturer (OEM).

Table 2: Supported Refrigerants

Refrigerant	No Glide	Mid-Point	Dew	Bubble	End-Point Shift
R502	✓				
R22	✓				
R401A		✓			
R401B		✓			
R402A		✓			
R402B		✓			
R408A		✓			
R134A	✓				
R404A		✓			
R507	✓				
R717	✓				
R410A		✓			
R422A					✓
R422D					✓
R407A		✓	✓	✓	
R407C					✓
R407F			✓	×	✓
R744 CO2	✓				
R448A		✓	×	×	
R450A		✓			
R449A		✓	×	✓	
R513A				✓	
R407H		✓	×	✓	
R438A		✓	×	✓	
R454C		✓	×	✓	
R455A		✓	✓	1	

Visit our website at copeland.com/en-us/products/controls-monitoring-systems for the latest technical documentation and updates. For Technical Support call 833-409-7505 or email ColdChain.TechnicalServices@Copeland.com



026-4066 R3

The contents of this publication are presented for informational purposes only and they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. Copeland reserves the right to modify the designs or specifications of such products at any time without notice. Responsibility for proper selection, use and maintenance of any product remains solely with the purchaser and end-user. ©2024 Copeland is a trademark of Copeland LP.