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.
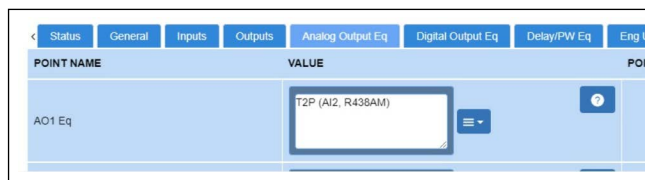
Table 1: Legend

Key	Description
No glide	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).

Flex Combiner Syntax

COPELAND

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		✔	✔	✔	

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

COPELAND