Code No. LIT-12012584
Issued November 2017

Quick Response Expansion Valve Selection Guide

Description

Quick Response Expansion Valve, Precision Superheat Controller, and Wiring Harness

The PENN Quick Response Expansion Valve (QREV) is an electronically controlled expansion valve used in air conditioning, heat pumps, and refrigeration applications.

The QREV and Precision Superheat Controller (PSHC) form an electronically controlled expansion valve solution that maximizes evaporator efficiency. Users achieve energy savings by reaching targeted superheat faster and controlling the valve more precisely, through varying load conditions. The silicon-based microelectromechanical system (MEMS) technology eliminates valve wear. There are no stepper motor failures associated with this type of technology. The PSHC comes loaded with 17 user selectable approved refrigerants for easy commissioning, plus it has an on-board pressure sensor. The wiring harness, which completes the kit, includes a temperature sensor for sensing the suction line temperature.

Base valve selection on the QREV capacity rating at specific system conditions.
Select a valve based on the following critical parameters:

- Refrigerant type
- Evaporator size in tons, British Thermal Units per Hour (BTUH), or kW
- Evaporator temperature
- Liquid temperature at the QREV expansion valve inlet (the sub-cooling temperature)
- Pressure drop expected across the QREV valve

Use the following equation to calculate valve pressure drop:

$$\Delta P_{Valve} = P_{Condenser} - P_{Evaporator} - P_{Loss}$$

Sources of P_{Loss} are:

- Pressure loss in evaporator lines and liquid lines
- Filter dryer pressure drop
- Solenoid valve pressure loss, if present
- Refrigerant distributor pressure drop
- Changes in elevation in liquid lines. This is usually not a factor in reach-in cases or display cases.

Use a factor of 0 if the parameters for the pressure drop in a line and filter are not known.

The following sections describe the QREV model selection process under AHRI/ANSI Standard 750-2007.

Features and Benefits

Quick Response Expansion Valve

- MEMS-based hybrid expansion valve for refrigeration and HVAC applications
- Compact footprint
- Pulse-width modulation (PWM) signal control with quick response time (0.25 second for full stroke)
- Valve is refrigerant neutral (each valve can be used with any of 17 approved refrigerants)
- Direct thermal expansion valve (TXV) or electronic expansion valve (EEV) replacement

Precision Superheat Controller

- Precise superheat control
- Closed loop control
- Internal MEMS suction pressure sensor
- External temperature sensor
- Built in PWM driver
- Multiple refrigerant database: controls any one of 17 approved refrigerants
- Communication: RS485 serial bus with Modbus® remote thermal unit (RTU) protocol

Benefits

- Fast, accurate control of refrigerant flow and superheat for maximum evaporator efficiency
- Silicon-based MEMS technology eliminates valve wear, extends life, and results in no stepper motor failures
- Preconfigured PSHC reduces install and commissioning time
- Closed loop solution: no front-end controllers needed
- ModBus RTU: integrate into popular refrigeration control systems for remote visibility
- High durability and reliability
- Backed by 3-year warranty

AHRI Standard 750-2007

The AHRI standard 750-2007 establishes definitions, requirements, and conditions for determining expansion valve capacities. PENN QREV capacity ratings are calculated and published in compliance with the AHRI Standard 750-2007.

Quick Response Expansion Valve Selection Guide (Continued)

Capacity Ratings

QREV capacity ratings are calculated at the nominal rating and also at various application ratings to serve a variety of industry-based applications.

Nominal Rating

The nominal rating of the expansion valve is the capacity rating under the conditions specified in Table 1. Table 4 and Table 5 show the nominal capacity ratings.

Table 1: Standard Rating Condition for Nominal Capacity

Liquid Temperature (at expansion valve inlet)	98°F (37°C)
Saturated Condensing Temperature (at expansion valve inlet)	100°F (38°C)
Saturated Evaporating Temperature (at expansion valve outlet)	40°F (4.4°C)

Application Rating

The application rating of the expansion valve is the capacity rating under conditions different from those specified in Table 1. Application ratings account for various evaporator temperatures, liquid temperatures, and pressure losses in the system. Tables 6 to 107 show the application ratings.

For both nominal and application ratings, the following conditions are considered:

- 95% PWM duty cycle (valve fully open)
- Static superheat at evaporator outlet of 4°F (2°C)
- Liquid sub-cooling at valve inlet of 2°F (1°C)

QREV Model Number Matrix

The following table explains the naming convention for the QREV model numbers, using the example code QREV01-24SC-C:

Table 2: QREV Product Code Matrix

	Code Letter/Number and Description	**QREV**	**01**	**-**	**24**	**SC**	**-**	**C**
Family Prefix								
Sequence Code*	01-05							
	09-15							
Valve Voltage	12 = 12 VDC**							
	24 = 24 VDC/VAC							
Valve Body Type	SC = Straight Body Connection							
Packaging	C = Individual							

*See Table 4 and Table 5 to determine the required QREV capacity.

**Contact your Johnson Controls sales representative about 12 VDC availability.

Quick Response Expansion Valve Selection Guide (Continued)

PSHC Model Number Matrix

The following table explains the naming convention for the PSHC model numbers, using the example code PSHC01-134A-C:

Table 3: PSHC Model Number Matrix

	Code Letter/Number and Description	PSHC	01	-	134A	-	C
Controller Series							
Firmware Version	01						
Refrigerant Type	134A = R134A						
	0022 = R22						
	404A = R404A						
	407A = R407A						
	407C = R407C						
	407F = R407F						
	410A = R410A						
	417A = R417A						
	422A = R422A						
	422D = R422D						
	427A = R427A						
	438A = R438A						
	448A = R448A						
	449A = R449A						
	405A = R405A						
	507A = R507A						
	513A = R513A						
Packaging	C = Individual						

Selection Procedure

Valve capacity tables are organized by refrigerant type, evaporator temperature, pressure drop across the valve, and a liquid temperature correction factor. Select the valve using tables 6 to 107.

Perform the following steps to select the correct QREV model for your HVAC or refrigeration application:

1. Determine the system refrigerant. PENN expansion valves are compatible with the refrigerants listed in Table 4 and Table 5. For additional refrigerant options, contact a sales representative at Johnson Controls Intl. (www.johnsoncontrols.com).
2. Determine evaporator temperature and pressure drop across the valve. The pressure drop across the valve is the difference in saturated condenser and evaporator pressure minus any other pressure losses, as shown in the following equation:

$$\Delta P_{Valve} = P_{Condenser} - P_{Evaporator} - P_{Loss}$$

Sources of pressure loss include:

- Friction losses in liquid line and evaporator
- Filter drier in liquid line
- Solenoid valve in liquid line
- Refrigerant distributor
- Change in elevation of copper line

If P_{Loss} cannot be determined, increase the total pressure drop $P_{Cond} - P_{Evap}$ by 10%.

3. Determine the evaporator capacity (tons, kW, or BTUH) and liquid temperature at valve inlet.

Note: Liquid temperature at valve inlet is the liquid temperature in the condenser minus the sub-cool temperature. Condenser liquid temperature is the condenser dry bulb temperature for dry condensers and wet bulb temperature for wet condensers.

4. Find the valve inlet temperature in the Application Capacity Factor table for each refrigerant.

Note: If the liquid temperature is between values in the Correction Factor table, use the lower temperature.

5. Multiply the evaporator capacity by 1.2 to prevent under-sizing the expansion valve.
6. Divide the calculated quantity by the liquid temperature at the valve inlet correction factor (obtained from the Correction Factor table) to find the look up value in the capacity table, as shown in the following equation:

$$\text{Look up value} = \frac{\textit{Evaporator Capacity (tons or kW) * 1.2}}{\textit{Correction Factor}}$$

7. The capacity tables are divided into sections based on evaporator temperature. Locate the evaporator temperature section, in degrees °C or °F, in the capacity table of the refrigerant. If it is between temperatures, use the higher temperature section.

Quick Response Expansion Valve Selection Guide (Continued)

8. In the Evaporator Temperature table, locate the column with a value equal to or higher than the pressure drop across the valve in bars or PSI. This value is derived in step 2. Locate the ton or kW value that is just higher than the look up value in step 6.
9. Select the valve model shown in the first column of the capacity table for that row.

QREV Model Selection Example

System Specification

Capacity	Value
Evaporator Capacity	3.0 Tons (10.55kW)
Refrigerant	R134A
Condenser Temperature	90°F (32°C)
Sub-cool Temperature	10°F (5.5°C)
Liquid Temperature = Condenser Temperature - Sub-cool Temperature)	80°F (27°C)
Evaporator Temperature	0°F (-18°C)

Solution

Capacity	Value
Correction Factor (from Table 47)	1.06
Saturated Condenser Pressure	104 psig (7.17 bar)
Saturated Evaporator Pressure	6.5 psig (0.45 bar)
Estimated Pressure Loss	22 psig (1.5 bar)
Pressure Drop Across Valve	104 - 6.5 - 22psig = 75.5psid

$$\text{Look up value} = \frac{\textit{Evaporator Capacity} * 1.2}{\textit{Correction Factor}}$$

3 Tons X 1.2 / 1.06 = 3.4 Tons

The closest QREV valve from Table 9 is the QREV05-24SC-C.

Note: If your tonnage is between two sizes, select a valve size larger than your requirements. For example, if you have 5.5 tons, select the 6 ton model instead of the 5 ton model.

Nominal Capacity Ratings

The nominal capacity rating for each refrigerant type is based upon vapor free, 100°F liquid refrigerant entering the expansion valve with sub-cooling of 2°F, evaporator temperature of 40°F with superheat of 4°F, and no pressure loss in the copper line. If your application does not satisfy these conditions, see tables 6 to 107.

Table 4: QREV Valve Selection Guide and Nominal Capacities: QREV 01-05

Refrigerant	Sequence Codes and Nominal Capacities kW (ton)				
	QREVxx				
	01	02	03	04	05
R134A	1.76 (1/2)	5.28 (1-1/2)	7.03 (2)	8.79 (2-1/2)	10.55 (3)
R22	2.64 (3/4)	6.15 (1-3/4)	8.79 (2-1/2)	10.55 (3)	14.07 (4)
R404A	1.76 (1/2)	3.52 (1)	6.15 (1-3/4)	7.03 (2)	10.55 (3)
R407A	2.64 (3/4)	6.15 (1-3/4)	8.79 (2-1/2)	10.55 (3)	14.95 (4-1/4)
R407C	2.64 (3/4)	7.03 (2)	8.79 (2-1/2)	11.43 (3-1/4)	15.83 (4-1/2)
R407F	2.64 (3/4)	7.03 (2)	9.67 (2-3/4)	12.31 (3-1/2)	16.71 (4-3/4)
R410A	2.64 (3/4)	7.03 (2)	10.55 (3)	13.19 (3-3/4)	17.58 (5)
R417A	1.76 (1/2)	4.4 (1-1/4)	6.15 (1-3/4)	7.91 (2-1/4)	10.55 (3)
R422A	1.76 (1/2)	4.4 (1-1/4)	5.28 (1-1/2)	6.15 (1-3/4)	8.79 (2-1/2)
R422D	1.76 (1/2)	4.4 (1-1/4)	6.15 (1-3/4)	7.03 (2)	10.55 (3)
R427A	2.64 (3/4)	6.15 (1-3/4)	7.91 (2-1/4)	10.55 (3)	14.07 (4)
R438A	1.76 (1/2)	5.28 (1-1/2)	7.03 (2)	8.79 (2-1/2)	12.31 (3-1/2)
R448A	2.64 (3/4)	6.15 (1-3/4)	8.79 (2-1/2)	10.55 (3)	14.95 (4-1/4)
R449A	2.64 (3/4)	6.15 (1-3/4)	8.79 (2-1/2)	10.55 (3)	14.07 (4)
R450A	1.76 (1/2)	4.4 (1-1/4)	6.15 (1-3/4)	7.03 (2)	9.67 (2-3/4)
R507A	1.76 (1/2)	4.4 (1-1/4)	6.15 (1-3/4)	7.03 (2)	9.67 (2-3/4)
R513A	1.76 (1/2)	4.4 (1-1/4)	5.28 (1-1/2)	7.03 (2)	9.67 (2-3/4)

Quick Response Expansion Valve Selection Guide (Continued)

Table 5: QREV Valve Selection Guide and Nominal Capacities kW (ton): QREV 09-15

Refrigerant	Sequence Codes and Nominal Capacities kW (ton)						
	QREVxx						
	09	10	11	12	13	14	15
R134A	24.61 (7)	31.65 (9)	35.16 (10)	39.68 (11)	45.72 (13)	49.24 (14)	52.75 (15)
R22	31.65 (9)	39.68 (11)	45.72 (13)	52.75 (15)	56.27 (16)	63.30 (18)	70.34 (20)
R404A	21.10 (6)	28.13 (8)	31.65 (9)	35.16 (10)	42.20 (12)	45.72 (13)	49.24 (14)
R407A	31.65 (9)	39.68 (11)	45.72 (13)	49.24 (14)	56.27 (16)	63.30 (18)	70.34 (20)
R407C	35.16 (10)	42.20 (12)	49.24 (14)	52.75 (15)	59.79 (17)	66.82 (19)	77.37 (22)
R407F	35.16 (10)	42.20 (12)	49.24 (14)	56.27 (16)	63.30 (18)	73.85 (21)	80.89 (23)
R410A	35.16 (10)	45.72 (13)	52.75 (15)	59.79 (17)	70.34 (20)	77.37 (22)	87.92 (25)
R417A	24.61 (7)	28.13 (8)	31.65 (9)	39.68 (11)	42.20 (12)	45.72 (13)	52.75 (15)
R422A	17.58 (5)	24.61 (7)	28.13 (8)	31.65 (9)	35.16 (10)	39.68 (11)	45.72 (13)
R422D	21.10 (6)	28.13 (8)	31.65 (9)	35.16 (10)	39.68 (11)	45.72 (13)	49.24 (14)
R427A	31.65 (9)	39.68 (11)	42.20 (12)	49.24 (14)	56.27 (16)	63.30 (18)	66.82 (19)
R438A	31.65 (9)	31.65 (9)	39.68 (11)	42.20 (12)	49.24 (14)	52.75 (15)	59.79 (17)
R448A	31.65 (9)	39.68 (11)	45.72 (13)	52.75 (15)	56.27 (16)	63.30 (18)	70.34 (20)
R449A	31.65 (9)	39.68 (11)	45.72 (13)	49.24 (14)	56.27 (16)	63.30 (18)	70.34 (20)
R450A	21.10 (6)	24.61 (7)	31.65 (9)	35.16 (10)	39.68 (11)	42.20 (12)	49.24 (14)
R507A	21.10 (6)	24.61 (7)	31.65 (9)	35.16 (10)	39.68 (11)	42.20 (12)	49.24 (14)
R513A	21.10 (6)	24.61 (7)	28.13 (8)	31.65 (9)	39.68 (11)	42.20 (12)	45.72 (13)

Table 6: R134A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV01-24SC	1.44	2.04	2.49	2.88	3.22	3.53	3.81	4.07	1.39	1.96	2.40	2.77	3.10	3.39	3.66	3.92	1.33	1.88	2.30	2.66	2.97	3.26	3.52	3.76
QREV02-24SC	3.56	5.04	6.17	7.13	7.97	8.73	9.43	10.1	3.43	4.85	5.94	6.86	7.67	8.40	9.07	9.70	3.29	4.65	5.70	6.58	7.36	8.06	8.71	9.31
QREV03-24SC	4.63	6.54	8.02	9.26	10.4	11.3	12.2	13.1	4.45	6.30	7.71	8.91	9.96	10.9	11.8	12.6	4.27	6.04	7.40	8.55	9.55	10.5	11.3	12.1
QREV04-24SC	5.69	8.05	9.86	11.4	12.7	13.9	15.1	16.1	5.48	7.75	9.49	10.9	12.3	13.4	14.5	15.5	5.26	7.43	9.10	10.5	11.8	12.8	13.9	14.9
QREV05-24SC	7.82	11.1	13.5	15.6	17.5	19.2	20.7	22.1	7.53	10.6	13.0	15.1	16.8	18.4	19.9	21.3	7.22	10.2	12.5	14.4	16.1	17.7	19.1	20.4
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV09-24SC	17.5	24.8	30.3	35.0	39.1	42.9	46.3	49.5	16.8	23.8	29.2	33.7	37.7	41.3	44.6	47.6	16.2	22.9	28.0	32.3	36.1	39.6	42.8	45.7
QREV10-24SC	20.7	29.3	35.9	41.5	46.4	50.8	54.9	58.6	20.0	28.2	34.6	39.9	44.6	48.9	52.8	56.4	19.1	27.1	33.2	38.3	42.8	46.9	50.6	54.1
QREV11-24SC	24.1	34.1	41.7	48.2	53.9	59.0	63.8	68.2	23.2	32.8	40.2	46.4	51.9	56.8	61.4	65.6	22.3	31.5	38.5	44.5	49.8	54.5	58.9	62.9
QREV12-24SC	27.3	38.6	47.3	54.7	61.1	66.9	72.3	77.3	26.3	37.2	45.6	52.6	58.8	64.4	69.6	74.4	25.2	35.7	43.7	50.5	56.4	61.8	66.8	71.4
QREV13-24SC	30.7	43.4	53.2	61.4	68.6	75.2	81.2	86.8	29.5	41.8	51.2	59.1	66.1	72.4	78.2	83.5	28.3	40.1	49.1	56.7	63.4	69.4	75.0	80.2
QREV14-24SC	33.9	48.0	58.8	67.9	75.9	83.1	89.8	96.0	32.6	46.2	56.5	65.3	73.0	80.0	86.4	92.3	31.3	44.3	54.3	62.6	70.0	76.7	82.9	88.6
QREV15-24SC	37.3	52.7	64.6	74.6	83.4	91.3	98.7	105.5	35.9	50.8	62.2	71.8	80.2	87.9	94.9	101.5	34.4	48.7	59.6	68.9	77.0	84.3	91.1	97.4

Table 7: R134A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 1 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV01-24SC	1.27	1.80	2.20	2.54	2.84	3.11	3.36	3.60	1.21	1.71	2.10	2.42	2.71	2.97	3.21	3.43	1.15	1.63	2.00	2.31	2.58	2.82	3.05	3.26
QREV02-24SC	3.15	4.45	5.45	6.30	7.04	7.71	8.33	8.90	3.00	4.25	5.20	6.00	6.71	7.35	7.94	8.49	2.85	4.04	4.94	5.71	6.38	6.99	7.55	8.07
QREV03-24SC	4.09	5.78	7.08	8.18	9.14	10.0	10.8	11.6	3.90	5.51	6.75	7.80	8.72	9.55	10.3	11.0	3.71	5.24	6.42	7.41	8.29	9.08	9.81	10.5
QREV04-24SC	5.03	7.11	8.71	10.1	11.2	12.3	13.3	14.2	4.79	6.78	8.30	9.59	10.7	11.7	12.7	13.6	4.56	6.45	7.90	9.12	10.2	11.2	12.1	12.9
QREV05-24SC	6.91	9.77	11.9	13.8	15.5	16.9	18.3	19.5	6.59	9.32	11.4	13.2	14.7	16.1	17.4	18.7	6.26	8.86	10.9	12.5	14.0	15.3	16.6	17.7
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV09-24SC	15.5	21.9	26.8	30.9	34.6	37.9	40.9	43.7	14.7	20.8	25.5	29.5	33.0	36.1	39.0	41.7	14.0	19.8	24.3	28.0	31.3	34.3	37.1	39.6

Quick Response Expansion Valve Selection Guide (Continued)

Table 7: R134A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 2 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV10-24SC	18.3	25.9	31.7	36.6	40.9	44.9	48.4	51.8	17.5	24.7	30.2	34.9	39.1	42.8	46.2	49.4	16.6	23.5	28.8	33.2	37.1	40.7	43.9	47.0
QREV11-24SC	21.3	30.1	36.9	42.6	47.6	52.1	56.3	60.2	20.3	28.7	35.2	40.6	45.4	49.7	53.7	57.4	19.3	27.3	33.4	38.6	43.2	47.3	51.1	54.6
QREV12-24SC	24.1	34.1	41.8	48.3	54.0	59.1	63.9	68.3	23.0	32.6	39.9	46.0	51.5	56.4	60.9	65.1	21.9	31.0	37.9	43.8	48.9	53.6	57.9	61.9
QREV13-24SC	27.1	38.3	47.0	54.2	60.6	66.4	71.7	76.7	25.9	36.6	44.8	51.7	57.8	63.3	68.4	73.1	24.6	34.8	42.6	49.2	55.0	60.2	65.0	69.5
QREV14-24SC	30.0	42.4	51.9	59.9	67.0	73.4	79.3	84.8	28.6	40.4	49.5	57.2	63.9	70.0	75.6	80.8	27.2	38.4	47.1	54.3	60.8	66.6	71.9	76.9
QREV15-24SC	32.9	46.6	57.0	65.9	73.7	80.7	87.1	93.2	31.4	44.4	54.4	62.8	70.2	76.9	83.1	88.8	29.9	42.2	51.7	59.7	66.8	73.2	79.0	84.5

Table 8: R134A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.58	1.52	1.46	1.40	1.34	1.27	1.21	1.15	1.09	1.03	0.96	0.90	0.83	0.77	0.70

Liquid Temperature Correction Factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 9: R134A Application Capacity Rating in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV01-24SC	0.37	0.53	0.65	0.75	0.84	0.92	0.99	1.06	0.36	0.51	0.62	0.72	0.80	0.88	0.95	1.01	0.34	0.48	0.59	0.68	0.76	0.83	0.90	0.96
QREV02-24SC	0.93	1.31	1.60	1.85	2.07	2.27	2.45	2.62	0.89	1.25	1.53	1.77	1.98	2.17	2.34	2.50	0.84	1.19	1.46	1.69	1.89	2.07	2.23	2.39
QREV03-24SC	1.20	1.70	2.08	2.40	2.69	2.94	3.18	3.40	1.15	1.63	1.99	2.30	2.57	2.82	3.04	3.25	1.10	1.55	1.90	2.19	2.45	2.68	2.90	3.10
QREV04-24SC	1.48	2.09	2.56	2.96	3.31	3.62	3.91	4.18	1.41	2.00	2.45	2.83	3.16	3.46	3.74	4.00	1.35	1.91	2.33	2.69	3.01	3.30	3.56	3.81
QREV05-24SC	2.03	2.87	3.52	4.06	4.54	4.98	5.37	5.75	1.94	2.75	3.36	3.89	4.34	4.76	5.14	5.49	1.85	2.62	3.21	3.70	4.14	4.53	4.90	5.24
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV09-24SC	4.5	6.4	7.9	9.1	10.2	11.1	12.0	12.9	4.3	6.1	7.5	8.7	9.7	10.6	11.5	12.3	4.1	5.9	7.2	8.3	9.3	10.1	11.0	11.7
QREV10-24SC	5.4	7.6	9.3	10.8	12.0	13.2	14.2	15.2	5.2	7.3	8.9	10.3	11.5	12.6	13.6	14.6	4.9	6.9	8.5	9.8	11.0	12.0	13.0	13.9
QREV11-24SC	6.3	8.9	10.8	12.5	14.0	15.3	16.6	17.7	6.0	8.5	10.4	12.0	13.4	14.7	15.8	16.9	5.7	8.1	9.9	11.4	12.8	14.0	15.1	16.1
QREV12-24SC	7.1	10.0	12.3	14.2	15.9	17.4	18.8	20.1	6.8	9.6	11.8	13.6	15.2	16.6	18.0	19.2	6.5	9.1	11.2	12.9	14.5	15.8	17.1	18.3
QREV13-24SC	8.0	11.3	13.8	15.9	17.8	19.5	21.1	22.6	7.6	10.8	13.2	15.3	17.1	18.7	20.2	21.6	7.3	10.3	12.6	14.5	16.2	17.8	19.2	20.6
QREV14-24SC	8.8	12.5	15.3	17.6	19.7	21.6	23.3	24.9	8.4	11.9	14.6	16.9	18.8	20.6	22.3	23.8	8.0	11.4	13.9	16.1	18.0	19.7	21.2	22.7
QREV15-24SC	9.7	13.7	16.8	19.4	21.7	23.7	25.6	27.4	9.3	13.1	16.0	18.5	20.7	22.7	24.5	26.2	8.8	12.5	15.3	17.7	19.7	21.6	23.4	25.0

Table 10: R134A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV01-24SC	0.33	0.47	0.58	0.66	0.74	0.81	0.88	0.94	0.32	0.46	0.56	0.65	0.72	0.79	0.86	0.91	0.31	0.43	0.53	0.61	0.68	0.75	0.81	0.87
QREV02-24SC	0.82	1.16	1.42	1.64	1.84	2.01	2.18	2.33	0.80	1.13	1.39	1.60	1.79	1.96	2.12	2.27	0.76	1.07	1.31	1.52	1.69	1.86	2.00	2.14
QREV03-24SC	1.07	1.51	1.85	2.14	2.39	2.62	2.83	3.02	1.04	1.47	1.80	2.08	2.33	2.55	2.75	2.94	0.98	1.39	1.70	1.97	2.20	2.41	2.60	2.78
QREV04-24SC	1.31	1.86	2.28	2.63	2.94	3.22	3.48	3.72	1.28	1.81	2.22	2.56	2.86	3.13	3.38	3.62	1.21	1.71	2.10	2.42	2.71	2.96	3.20	3.42
QREV05-24SC	1.80	2.55	3.13	3.61	4.04	4.42	4.77	5.10	1.76	2.49	3.04	3.52	3.93	4.31	4.65	4.97	1.66	2.35	2.88	3.33	3.72	4.07	4.40	4.70
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV09-24SC	4.0	5.7	7.0	8.1	9.0	9.9	10.7	11.4	3.9	5.6	6.8	7.9	8.8	9.6	10.4	11.1	3.7	5.3	6.4	7.4	8.3	9.1	9.8	10.5
QREV10-24SC	4.8	6.8	8.3	9.6	10.7	11.7	12.7	13.5	4.7	6.6	8.1	9.3	10.4	11.4	12.3	13.2	4.4	6.2	7.6	8.8	9.9	10.8	11.7	12.5
QREV11-24SC	5.6	7.9	9.6	11.1	12.4	13.6	14.7	15.7	5.4	7.7	9.4	10.8	12.1	13.3	14.3	15.3	5.1	7.2	8.9	10.2	11.5	12.6	13.6	14.5
QREV12-24SC	6.3	8.9	10.9	12.6	14.1	15.4	16.7	17.8	6.1	8.7	10.6	12.3	13.7	15.0	16.3	17.4	5.8	8.2	10.1	11.6	13.0	14.2	15.4	16.4
QREV13-24SC	7.1	10.0	12.3	14.2	15.8	17.3	18.7	20.0	6.9	9.8	11.9	13.8	15.4	16.9	18.3	19.5	6.5	9.2	11.3	13.1	14.6	16.0	17.3	18.5
QREV14-24SC	7.8	11.1	13.6	15.7	17.5	19.2	20.7	22.1	7.6	10.8	13.2	15.2	17.0	18.7	20.2	21.6	7.2	10.2	12.5	14.4	16.1	17.7	19.1	20.4
QREV15-24SC	8.6	12.2	14.9	17.2	19.2	21.1	22.8	24.3	8.4	11.9	14.5	16.8	18.7	20.5	22.2	23.7	7.9	11.2	13.7	15.9	17.7	19.4	21.0	22.4

Quick Response Expansion Valve Selection Guide (Continued)

Table 11: R134A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**
Correction Factor														
1.68	1.60	1.53	1.46	1.40	1.33	1.26	1.19	1.12	1.06	0.99	0.92	0.85	0.78	0.70

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 12: R22 Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	2.15	2.64	3.05	3.40	3.73	4.03	4.31	4.57	2.11	2.58	2.98	3.33	3.65	3.94	4.21	4.47	2.05	2.52	2.91	3.25	3.56	3.84	4.11	4.36
QREV02-24SC	5.33	6.53	7.54	8.43	9.23	9.97	10.7	11.3	5.22	6.39	7.38	8.25	9.03	9.76	10.4	11.1	5.09	6.23	7.19	8.04	8.81	9.52	10.2	10.8
QREV03-24SC	6.92	8.48	9.79	10.9	11.9	12.9	13.8	14.7	6.77	8.29	9.58	10.7	11.7	12.7	13.5	14.4	6.61	8.09	9.34	10.5	11.4	12.4	13.2	14.0
QREV04-24SC	8.52	10.4	12.0	13.5	14.8	15.9	17.0	18.1	8.33	10.2	11.8	13.2	14.4	15.6	16.7	17.7	8.13	9.95	11.5	12.9	14.1	15.2	16.3	17.2
QREV05-24SC	11.7	14.3	16.5	18.5	20.3	21.9	23.4	24.8	11.4	14.0	16.2	18.1	19.9	21.4	22.9	24.3	11.2	13.7	15.8	17.7	19.3	20.9	22.3	23.7
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	26.2	32.1	37.0	41.4	45.4	49.0	52.4	55.5	25.6	31.4	36.2	40.5	44.4	47.9	51.2	54.3	25.0	30.6	35.3	39.5	43.3	46.7	50.0	53.0
QREV10-24SC	31.0	38.0	43.9	49.0	53.7	58.0	62.0	65.8	30.3	37.2	42.9	48.0	52.5	56.8	60.7	64.4	29.6	36.2	41.9	46.8	51.3	55.4	59.2	62.8
QREV11-24SC	36.1	44.2	51.0	57.0	62.4	67.4	72.1	76.5	35.3	43.2	49.9	55.8	61.1	66.0	70.5	74.8	34.4	42.1	48.7	54.4	59.6	64.4	68.8	73.0
QREV12-24SC	40.9	50.1	57.8	64.6	70.8	76.5	81.8	86.7	40.0	49.0	56.6	63.2	69.3	74.8	80.0	84.8	39.0	47.8	55.2	61.7	67.6	73.0	78.0	82.8
QREV13-24SC	45.9	56.2	64.9	72.6	79.5	85.9	91.8	97.4	44.9	55.0	63.5	71.0	77.8	84.0	89.8	95.3	43.8	53.7	62.0	69.3	75.9	82.0	87.6	93.0
QREV14-24SC	50.8	62.2	71.8	80.3	87.9	95.0	101.5	107.7	49.6	60.8	70.2	78.5	86.0	92.9	99.3	105.3	48.4	59.3	68.5	76.6	83.9	90.6	96.9	102.7
QREV15-24SC	55.8	68.3	78.9	88.2	96.6	104.4	111.6	118.4	54.6	66.8	77.2	86.3	94.5	102.1	109.1	115.8	53.2	65.2	75.3	84.2	92.2	99.6	106.5	112.9

Table 13: R22 Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	2.00	2.45	2.83	3.16	3.46	3.74	4.00	4.24	1.94	2.38	2.75	3.07	3.36	3.63	3.88	4.12	1.88	2.30	2.66	2.97	3.26	3.52	3.76	3.99
QREV02-24SC	4.95	6.06	7.00	7.83	8.58	9.26	9.90	10.5	4.81	5.89	6.80	7.60	8.33	8.99	9.62	10.2	4.66	5.71	6.59	7.37	8.07	8.71	9.32	9.88
QREV03-24SC	6.43	7.88	9.09	10.2	11.1	12.0	12.9	13.7	6.24	7.65	8.83	9.87	10.8	11.7	12.5	13.2	6.05	7.41	8.55	9.56	10.5	11.3	12.1	12.8
QREV04-24SC	7.91	9.69	11.9	12.5	13.7	14.8	15.8	16.8	7.68	9.40	10.9	12.1	13.3	14.4	15.4	16.3	7.44	9.11	10.5	11.8	12.9	13.9	14.9	15.9
QREV05-24SC	10.9	13.3	15.4	17.9	18.8	20.3	21.7	23.1	10.6	12.9	14.9	16.7	18.8	19.7	21.1	22.9	10.2	12.5	14.5	16.2	17.7	19.1	20.4	21.7
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	24.3	29.8	34.4	38.4	42.1	45.5	48.6	51.6	23.6	28.9	33.4	37.3	40.9	44.2	47.2	50.1	22.9	28.0	32.4	36.2	39.6	42.8	45.8	48.5
QREV10-24SC	28.8	35.3	40.7	45.5	49.9	53.9	57.6	61.1	28.0	34.3	39.6	44.2	48.4	52.3	55.9	59.3	27.1	33.2	38.3	42.8	46.9	50.7	54.2	57.5
QREV11-24SC	33.5	41.0	47.3	52.9	58.0	62.6	67.0	71.0	32.5	39.8	46.0	51.4	56.3	60.8	65.0	69.0	31.5	38.6	44.5	49.8	54.6	58.9	63.0	66.8
QREV12-24SC	38.0	46.5	53.7	60.0	65.8	71.0	75.9	80.5	36.9	45.2	52.1	58.3	63.9	69.0	73.7	78.2	35.7	43.8	50.5	56.5	61.9	66.8	71.4	75.8
QREV13-24SC	42.6	52.2	60.3	67.4	73.9	79.8	85.3	90.5	41.4	50.7	58.6	65.5	71.7	77.5	82.8	87.8	40.1	49.1	56.7	63.4	69.5	75.1	80.2	85.1
QREV14-24SC	47.1	57.7	66.7	74.5	81.6	88.2	94.3	100.0	45.8	56.1	64.7	72.4	79.3	85.6	91.5	97.1	44.3	54.3	62.7	70.1	76.8	83.0	88.7	94.1
QREV15-24SC	51.8	63.5	73.3	81.9	89.7	96.9	103.6	109.9	50.3	61.6	71.1	79.5	87.1	94.1	100.6	106.7	48.7	59.7	68.9	77.1	84.4	91.2	97.5	103.4

Table 14: R22 Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	**-5**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**
Correction Factor														
1.48	1.43	1.38	1.33	1.28	1.23	1.18	1.12	1.07	1.02	0.97	0.92	0.86	0.81	0.75

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Quick Response Expansion Valve Selection Guide (Continued)

Table 15: R22 Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.62	0.76	0.87	0.98	1.07	1.16	1.24	1.31	0.60	0.74	0.85	0.95	1.04	1.13	1.20	1.28	0.58	0.72	0.83	0.92	1.01	1.09	1.17	1.24
QREV02-24SC	1.53	1.87	2.16	2.42	2.65	2.86	3.06	3.24	1.49	1.82	2.11	2.36	2.58	2.79	2.98	3.16	1.15	1.77	2.05	2.29	2.51	2.71	2.89	3.07
QREV03-24SC	1.99	2.43	2.81	3.14	3.44	3.72	3.97	4.21	1.93	2.37	2.74	3.06	3.35	3.62	3.87	4.10	1.88	2.30	2.66	2.97	3.25	3.51	3.76	3.99
QREV04-24SC	2.44	2.99	3.45	3.86	4.23	4.57	4.89	5.18	2.38	2.91	3.37	3.76	4.12	4.45	4.76	5.05	2.31	2.83	3.27	3.65	4.00	4.32	4.62	4.90
QREV05-24SC	3.36	4.11	4.75	5.31	5.81	6.28	6.71	7.12	3.27	4.00	4.62	5.17	5.66	6.12	6.54	6.93	3.17	3.89	4.49	5.02	5.50	5.94	6.35	6.73
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	7.5	9.2	10.6	11.9	13.0	14.1	15.0	15.9	7.3	9.0	10.3	11.6	12.7	13.7	14.6	15.5	7.1	8.7	10.0	11.2	12.3	13.3	14.2	15.1
QREV10-24SC	8.9	10.9	12.6	14.1	15.4	16.6	17.8	18.9	8.7	10.6	12.3	13.7	15.0	16.2	17.3	18.4	8.4	10.3	11.9	13.3	14.6	15.7	16.8	17.9
QREV11-24SC	10.3	12.7	14.6	16.4	17.9	19.3	20.7	21.9	10.1	12.3	14.2	15.9	17.4	18.8	20.1	21.4	9.8	12.0	13.8	15.5	16.9	18.3	19.6	20.8
QREV12-24SC	11.7	14.4	16.6	18.5	20.3	21.9	23.5	24.9	11.4	14.0	16.2	18.1	19.8	21.4	22.8	24.2	11.1	13.6	15.7	17.5	19.2	20.8	22.2	23.5
QREV13-24SC	13.2	16.1	18.6	20.8	22.8	24.6	26.3	27.9	12.8	15.7	18.1	20.3	22.2	24.0	25.7	27.2	12.5	15.3	17.6	19.7	21.6	23.3	24.9	26.4
QREV14-24SC	14.6	17.8	20.6	23.0	25.2	27.2	29.1	30.9	14.2	17.4	20.1	22.4	24.6	26.5	28.4	30.1	13.8	16.9	19.5	21.8	23.9	25.8	27.5	29.2
QREV15-24SC	16.0	19.6	22.6	25.3	27.7	29.9	32.0	34.0	15.6	19.1	22.0	24.6	27.0	29.2	31.2	33.1	15.1	18.5	21.4	23.9	26.2	28.3	30.3	32.1

Table 16: R22 Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.58	0.70	0.81	0.91	1.00	1.08	1.15	1.22	0.57	0.69	0.80	0.89	0.98	1.06	1.13	1.20	0.55	0.67	0.77	0.86	0.95	1.02	1.09	1.16
QREV02-24SC	1.42	1.74	2.01	2.25	2.47	2.66	2.85	3.02	1.40	1.72	1.98	2.21	2.43	2.62	2.80	2.97	1.35	1.66	1.91	2.14	2.34	2.53	2.71	2.87
QREV03-24SC	1.85	2.26	2.62	2.92	3.20	3.46	3.70	3.92	1.82	2.23	2.57	2.88	3.15	3.40	3.64	3.86	1.76	2.15	2.48	2.78	3.04	3.29	3.51	3.73
QREV04-24SC	2.27	2.79	3.22	3.60	3.94	4.26	4.55	4.82	2.24	2.74	3.16	3.54	3.88	4.19	4.47	4.75	2.16	2.65	3.06	3.42	3.74	4.04	4.32	4.58
QREV05-24SC	3.12	3.83	4.42	4.94	5.41	5.85	6.25	6.63	3.07	3.76	4.35	4.86	5.32	5.75	6.15	6.52	2.97	3.64	4.20	4.69	5.14	5.55	5.94	6.30
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	7.0	8.6	9.9	11.1	12.1	13.1	14.0	14.8	6.9	8.4	9.7	10.9	11.9	12.9	13.8	14.6	6.6	8.1	9.4	10.5	11.5	12.4	13.3	14.1
QREV10-24SC	8.3	10.1	11.7	13.1	14.3	15.5	16.6	17.6	8.1	10.0	11.5	12.9	14.1	15.2	16.3	17.3	7.9	9.6	11.1	12.4	13.6	14.7	15.7	16.7
QREV11-24SC	9.6	11.8	13.6	15.2	16.7	18.0	19.3	20.4	9.5	11.6	13.4	15.0	16.4	17.7	18.9	20.1	9.1	11.2	12.9	14.5	15.8	17.1	18.3	19.4
QREV12-24SC	10.9	13.4	15.4	17.3	18.9	20.4	21.8	23.2	10.7	13.2	15.2	17.0	18.6	20.1	21.5	22.8	10.4	12.7	14.7	16.4	18.0	19.4	20.7	22.0
QREV13-24SC	12.3	15.0	17.3	19.4	21.2	22.9	24.5	26.0	12.1	14.8	17.1	19.1	20.9	22.6	24.1	25.6	11.7	14.3	16.5	18.4	20.2	21.8	23.3	24.7
QREV14-24SC	13.6	16.6	19.2	21.4	23.5	25.4	27.1	28.8	13.3	16.3	18.9	21.1	23.1	24.9	26.7	28.3	12.9	15.8	18.2	20.4	22.3	24.1	25.8	27.3
QREV15-24SC	14.9	18.3	21.1	23.6	25.8	27.9	29.8	31.6	14.7	18.0	20.7	23.2	25.4	27.4	29.3	31.1	14.2	17.3	20.0	22.4	24.5	26.5	28.3	30.0

Table 17: R22 Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.54	1.49	1.43	1.38	1.33	1.27	1.21	1.16	1.10	1.05	0.99	0.93	0.87	0.81	0.75

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 18: R404A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 1 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.43	1.75	2.02	2.26	2.47	2.67	2.86	3.03	1.37	1.68	1.94	2.16	2.37	2.56	2.74	2.90	1.30	1.60	1.84	2.06	2.26	2.44	2.61	2.77
QREV02-24SC	3.54	4.33	5.00	5.59	6.12	6.61	7.07	7.50	3.39	4.15	4.79	5.36	5.87	6.34	6.78	7.19	3.23	3.95	4.57	5.11	5.59	6.04	6.46	6.85
QREV03-24SC	4.59	5.62	6.49	7.26	7.95	8.59	9.18	9.74	4.40	5.39	6.22	6.96	7.62	8.23	8.80	9.33	4.19	5.14	5.93	6.63	7.26	7.85	8.39	8.90
QREV04-24SC	5.65	6.92	7.98	8.93	9.78	10.6	11.3	11.	5.41	6.63	7.65	8.56	9.37	10.1	10.8	11.5	5.16	6.32	7.29	8.15	8.93	9.65	10.3	10.9
QREV05-24SC	7.8	9.5	10.9	12.3	13.4	14.5	15.5	16.5	7.44	9.11	10.5	11.8	12.9	13.9	14.9	15.8	7.09	8.68	10.0	11.2	12.3	13.3	14.2	15.0
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	17.4	21.3	24.6	27.4	30.1	32.5	34.7	36.8	16.6	20.4	23.5	26.3	28.8	31.1	33.3	35.3	15.9	19.4	22.4	25.1	27.5	29.7	31.7	33.6

Quick Response Expansion Valve Selection Guide (Continued)

Table 18: R404A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 2 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV10-24SC	20.6	25.2	29.1	32.5	35.6	38.5	41.1	43.6	19.7	24.1	27.9	31.2	34.1	36.9	39.4	41.8	18.8	23.0	26.6	29.7	32.5	35.1	37.6	39.9
QREV11-24SC	23.9	29.3	33.8	37.8	41.4	44.7	47.8	50.7	22.9	28.1	32.4	36.2	39.7	42.9	45.8	48.6	21.8	26.7	30.9	34.5	37.8	40.9	43.7	46.3
QREV12-24SC	27.1	33.2	38.3	42.9	47.0	50.7	54.2	57.5	26.0	31.8	36.7	41.1	45.0	48.6	52.0	55.1	24.8	30.3	35.0	39.2	42.9	46.3	49.5	52.5
QREV13-24SC	30.4	37.3	43.1	48.1	52.7	57.0	60.9	64.6	29.2	35.7	41.3	46.1	50.5	54.6	58.4	61.9	27.8	34.1	39.3	44.0	48.2	52.0	55.6	59.0
QREV14-24SC	33.7	41.2	47.6	53.2	58.3	63.0	67.3	71.4	32.3	39.5	45.6	51.0	55.9	60.3	64.5	68.4	30.7	37.6	43.5	48.6	53.2	57.5	61.5	65.2
QREV15-24SC	37.0	45.3	52.3	58.5	64.1	69.2	74.0	78.5	35.5	43.4	50.1	56.1	61.4	66.3	70.9	75.2	33.8	41.4	47.8	53.4	58.5	63.2	67.6	71.7

Table 19: R404A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.24	1.51	1.75	1.95	2.14	2.31	2.47	2.62	1.17	1.43	1.65	1.84	2.02	2.18	2.33	2.47	1.09	1.34	1.55	1.73	1.89	2.04	2.19	2.32
QREV02-24SC	3.06	3.75	4.33	4.84	5.30	5.73	6.12	6.49	2.89	3.53	4.08	4.56	5.00	5.40	5.77	6.12	2.71	3.31	3.83	4.28	4.69	5.06	5.41	5.74
QREV03-24SC	3.98	4.87	5.62	6.29	6.88	7.44	7.95	8.43	3.75	4.59	5.30	5.93	6.49	7.01	7.50	7.95	3.51	4.30	4.97	5.56	6.09	6.57	7.03	7.46
QREV04-24SC	4.89	5.99	6.91	7.73	8.47	9.15	9.78	10.4	4.61	5.65	6.52	7.29	7.98	8.62	9.22	9.78	4.32	5.29	6.11	6.83	7.49	8.09	8.65	9.17
QREV05-24SC	6.72	8.23	9.50	10.6	11.6	12.6	13.4	14.3	6.33	7.76	8.96	10.0	10.9	11.9	12.7	13.4	5.9	7.3	8.4	9.4	10.3	11.1	11.9	12.6
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	15.0	18.4	21.3	23.8	26.0	28.1	30.1	31.9	14.2	17.4	20.0	22.4	24.6	26.5	28.3	30.1	13.3	16.3	18.8	21.0	23.0	24.9	26.6	28.2
QREV10-24SC	17.8	21.8	25.2	28.2	30.8	33.3	35.6	37.8	16.8	20.6	23.7	26.5	29.1	31.4	33.6	35.6	15.7	19.3	22.3	24.9	27.3	29.5	31.5	33.4
QREV11-24SC	20.7	25.4	29.3	32.7	35.9	38.7	41.4	43.9	19.5	23.9	27.6	30.9	33.8	36.5	39.0	41.4	18.3	22.4	25.9	28.9	31.7	34.2	36.6	38.8
QREV12-24SC	23.5	28.7	33.2	37.1	40.7	43.9	46.9	49.8	22.1	27.1	31.3	35.0	38.3	41.4	44.3	47.0	20.8	25.4	29.4	32.8	35.9	38.8	41.5	44.0
QREV13-24SC	26.4	32.3	37.3	41.7	45.7	49.3	52.7	55.9	24.9	30.4	35.2	39.3	43.1	46.5	49.7	52.7	23.3	28.5	33.0	36.9	40.4	43.6	46.6	49.4
QREV14-24SC	29.1	35.7	41.2	46.1	50.5	54.5	58.3	61.8	27.5	33.7	38.9	43.4	47.6	51.4	55.0	58.3	25.8	31.6	36.4	40.7	44.6	48.2	51.5	54.7
QREV15-24SC	32.0	39.2	45.3	50.6	55.5	59.9	64.1	67.9	30.2	37.0	42.7	47.8	52.3	56.5	60.4	64.1	28.3	34.7	40.0	44.8	49.1	53.0	56.6	60.1

Table 20: R404A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.84	1.76	1.67	1.58	1.49	1.40	1.31	1.22	1.13	1.04	0.94	0.85	0.75	0.65	0.54

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 21: R404A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.41	0.50	0.57	0.64	0.70	0.76	0.81	0.86	0.39	0.47	0.55	0.61	0.67	0.72	0.77	0.82	0.36	0.45	0.52	0.58	0.63	0.68	0.73	0.77
QREV02-24SC	1.01	1.23	1.42	1.59	1.74	1.88	2.01	2.14	0.96	1.17	1.35	1.51	1.66	1.79	1.91	2.03	0.90	1.11	1.28	1.43	1.56	1.69	1.81	1.92
QREV03-24SC	1.31	1.60	1.85	2.07	2.26	2.45	2.61	2.77	1.24	1.52	1.76	1.96	2.15	2.32	2.48	2.64	1.17	1.44	1.66	1.85	2.03	2.19	2.35	2.49
QREV04-24SC	1.61	1.97	2.27	2.54	2.78	3.01	3.22	3.41	1.53	1.87	2.16	2.42	2.65	2.86	3.06	3.24	1.44	1.77	2.04	2.28	2.50	2.70	2.89	3.06
QREV05-24SC	2.21	2.71	3.12	3.49	3.83	4.13	4.42	4.69	2.10	2.57	2.97	3.32	3.64	3.93	4.20	4.45	1.98	2.43	2.80	3.13	3.43	3.71	3.96	4.20
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.9	6.1	7.0	7.8	8.6	9.2	9.9	10.5	4.7	5.8	6.6	7.4	8.1	8.8	9.4	10.0	4.4	5.4	6.3	7.0	7.7	8.3	8.9	9.4
QREV10-24SC	5.9	7.2	8.3	9.3	10.1	11.0	11.7	12.4	5.6	6.8	7.9	8.8	9.6	10.4	11.1	11.8	5.3	6.4	7.4	8.3	9.1	9.8	10.5	11.1
QREV11-24SC	6.8	8.3	9.6	10.8	11.8	12.7	13.6	14.4	6.5	7.9	9.1	10.2	11.2	12.1	12.9	13.7	6.1	7.5	8.6	9.7	10.6	11.4	12.2	13.0
QREV12-24SC	7.7	9.5	10.9	12.2	13.4	14.4	15.4	16.4	7.3	9.0	10.4	11.6	12.7	13.7	14.7	15.6	6.9	8.5	9.8	11.0	12.0	13.0	13.9	14.7
QREV13-24SC	8.7	10.6	12.3	13.7	15.0	16.2	17.3	18.4	8.2	10.1	11.7	13.0	14.3	15.4	16.5	17.5	7.8	9.5	11.0	12.3	13.5	14.6	15.6	16.5
QREV14-24SC	9.6	11.7	13.6	15.2	16.6	17.9	19.2	20.3	9.1	11.2	12.9	14.4	15.8	17.0	18.2	19.3	8.6	10.5	12.2	13.6	14.9	16.1	17.2	18.2
QREV15-24SC	10.5	12.9	14.9	16.7	18.2	19.7	21.1	22.3	10.0	12.3	14.2	15.8	17.3	18.7	20.0	21.2	9.5	11.6	13.4	14.9	16.4	17.7	18.9	20.0

Quick Response Expansion Valve Selection Guide (Continued)

Table 22: R404A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to 40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.35	0.43	0.50	0.56	0.61	0.66	0.71	0.75	0.34	0.42	0.48	0.54	0.59	0.64	0.68	0.73	0.32	0.39	0.45	0.50	0.55	0.60	0.64	0.68
QREV02-24SC	0.88	1.07	1.24	1.38	1.52	1.64	1.75	1.86	0.85	1.04	1.20	1.34	1.47	1.58	1.69	1.80	0.79	0.97	1.12	1.25	1.37	1.48	1.58	1.67
QREV03-24SC	1.14	1.39	1.61	1.80	1.97	2.13	2.27	2.41	1.10	1.35	1.56	1.74	1.91	2.06	2.20	2.33	1.02	1.25	1.45	1.62	1.77	1.92	2.05	2.17
QREV04-24SC	1.40	1.71	1.98	2.21	2.42	2.62	2.80	2.97	1.35	1.66	1.91	2.14	2.34	2.53	2.71	2.87	1.26	1.54	1.78	1.99	2.18	2.36	2.52	2.67
QREV05-24SC	1.92	2.35	2.72	3.04	3.33	3.59	3.84	4.07	1.86	2.28	2.63	2.94	3.22	3.48	3.72	3.94	1.73	2.12	2.45	2.74	3.00	3.24	3.46	3.67
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.3	5.3	6.1	6.8	7.4	8.0	8.6	9.1	4.2	5.1	5.9	6.6	7.2	7.8	8.3	8.8	3.9	4.7	5.5	6.1	6.7	7.2	7.7	8.2
QREV10-24SC	5.1	6.2	7.2	8.1	8.8	9.5	10.2	10.8	4.9	6.0	7.0	7.8	8.5	9.2	9.9	10.5	4.6	5.6	6.5	7.3	8.0	8.6	9.2	9.7
QREV11-24SC	5.9	7.2	8.4	9.4	10.3	11.1	11.8	12.6	5.7	7.0	8.1	9.1	9.9	10.7	11.5	12.2	5.3	6.5	7.5	8.4	9.2	10.0	10.7	11.3
QREV12-24SC	6.7	8.2	9.5	10.6	11.6	12.6	13.4	14.2	6.5	8.0	9.2	10.3	11.3	12.2	13.0	13.8	6.1	7.4	8.6	9.6	10.5	11.3	12.1	12.8
QREV13-24SC	7.5	9.2	10.7	11.9	13.1	14.1	15.1	16.0	7.3	8.9	10.3	11.5	12.6	13.6	14.6	15.5	6.8	8.3	9.6	10.7	11.8	12.7	13.6	14.4
QREV14-24SC	8.3	10.2	11.8	13.2	14.4	15.6	16.7	17.7	8.1	9.9	11.4	12.8	14.0	15.1	16.1	17.1	7.5	9.2	10.6	11.9	13.0	14.1	15.0	15.9
QREV15-24SC	9.2	11.2	13.0	14.5	15.9	17.1	18.3	19.4	8.9	10.9	12.5	14.0	15.4	16.6	17.7	18.8	8.3	10.1	11.7	13.1	14.3	15.4	16.5	17.5

Table 23: R404A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.95	1.86	1.76	1.67	1.57	1.48	1.38	1.28	1.18	1.08	0.98	0.88	0.77	0.66	0.54

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 24: R407A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.89	2.31	2.67	2.99	3.27	3.54	3.78	4.01	1.83	2.24	2.59	2.89	3.17	3.42	3.66	3.88	1.77	2.16	2.50	2.79	3.06	3.30	3.53	3.75
QREV02-24SC	4.68	5.73	6.62	7.40	8.10	8.75	9.36	9.93	4.53	5.55	6.41	7.16	7.85	8.48	9.06	9.61	4.37	5.35	6.18	6.91	7.57	8.18	8.74	9.27
QREV03-24SC	6.08	7.44	8.59	9.61	10.5	11.4	12.2	12.9	5.88	7.21	8.32	9.30	10.2	11.0	11.8	12.5	5.68	6.95	8.03	8.98	9.83	10.6	11.4	12.0
QREV04-24SC	7.47	9.15	10.6	11.8	12.9	13.9	14.9	15.9	7.24	8.86	10.2	11.4	12.5	13.5	14.5	15.4	6.98	8.55	9.87	11.0	12.1	13.1	13.9	14.8
QREV05-24SC	10.3	12.6	14.5	16.2	17.8	19.2	20.5	21.8	9.94	12.2	14.1	15.7	17.2	18.6	19.8	21.1	9.59	11.8	13.6	15.2	16.6	17.9	19.2	20.4
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	23.0	28.1	32.5	36.3	39.8	43.0	46.0	48.7	22.3	27.3	31.5	35.2	38.5	41.6	44.5	47.2	21.5	26.3	30.4	33.9	37.2	40.2	42.9	45.5
QREV10-24SC	27.2	33.3	38.5	43.0	47.1	50.9	54.4	57.7	26.4	32.3	37.3	41.7	45.7	49.3	52.7	55.9	25.4	31.1	36.0	40.2	44.0	47.6	50.9	53.9
QREV11-24SC	31.6	38.7	44.7	50.0	54.8	59.2	63.3	67.1	30.6	37.5	43.3	48.4	53.1	57.3	61.3	65.0	29.6	36.2	41.8	46.7	51.2	55.3	59.1	62.7
QREV12-24SC	35.9	43.9	50.7	56.7	62.1	67.1	71.8	76.1	34.7	42.6	49.1	54.9	60.2	65.0	69.5	73.7	33.5	41.1	47.4	53.0	58.1	62.7	67.0	71.1
QREV13-24SC	40.3	49.4	57.0	63.7	69.8	75.4	80.6	85.5	39.0	47.8	55.2	61.7	67.6	73.0	78.1	82.8	37.7	46.1	53.2	59.5	65.2	70.4	75.3	79.9
QREV14-24SC	44.5	54.6	63.0	70.4	77.1	83.3	89.1	94.5	43.1	52.8	61.0	68.2	74.7	80.7	86.3	91.5	41.6	51.0	58.9	65.8	72.1	77.9	83.2	88.3
QREV15-24SC	49.0	60.0	69.2	77.4	84.8	91.6	97.9	103.9	47.4	58.1	67.1	75.0	82.1	88.7	94.8	100.6	45.7	56.0	64.7	72.3	79.2	85.6	91.5	97.0

Table 25: R407A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 1 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.70	2.08	2.40	2.68	2.94	3.17	3.39	3.60	1.63	1.99	2.30	2.57	2.82	3.04	3.25	3.45	1.55	1.90	2.19	2.45	2.69	2.90	3.10	3.29
QREV02-24SC	4.20	5.15	5.94	6.64	7.28	7.86	840	8.91	4.03	4.93	5.69	6.36	6.97	7.53	8.05	8.54	3.84	4.71	5.43	6.08	6.66	7.19	7.68	8.15
QREV03-24SC	5.46	6.68	7.72	8.63	9.45	10.2	10.9	11.6	5.23	6.40	7.39	8.26	9.05	9.78	10.5	11.1	4.99	6.11	7.06	7.89	8.64	9.33	9.98	10.6
QREV04-24SC	6.71	8.22	9.49	10.6	11.6	12.6	13.4	14.2	6.43	7.87	9.09	10.2	11.1	12.0	12.0	13.6	6.14	7.52	8.68	9.70	10.6	11.5	12.3	13.0
QREV05-24SC	9.22	11.3	13.0	14.6	15.9	17.3	18.4	19.6	8.8	10.8	12.5	13.9	15.3	16.5	17.7	18.7	8.43	10.3	11.9	13.3	14.6	15.8	16.9	17.9
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	20.6	25.3	29.2	32.6	35.7	38.6	41.3	43.8	19.8	24.2	28.0	31.3	34.2	37.0	39.5	41.9	18.9	23.1	26.7	29.8	32.7	35.3	37.7	40.0
QREV10-24SC	24.4	29.9	34.6	38.7	42.3	45.7	48.9	51.9	23.4	28.7	33.1	37.0	40.6	43.8	46.8	49.7	22.4	27.4	31.6	35.3	38.7	41.8	44.7	47.4

Quick Response Expansion Valve Selection Guide (Continued)

Table 25: R407A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 2 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV11-24SC	28.4	34.8	40.2	44.9	49.2	53.2	56.8	60.3	27.2	33.3	38.5	43.0	47.1	50.9	54.4	57.7	26.0	31.8	36.7	41.1	45.0	48.6	52.0	55.1
QREV12-24SC	32.2	39.5	45.6	51.0	55.8	60.3	64.4	68.4	30.9	37.8	43.7	48.8	53.5	57.7	61.7	65.5	29.5	36.1	41.7	46.6	51.0	55.1	58.9	62.5
QREV13-24SC	36.2	44.3	51.2	57.2	62.7	67.7	72.4	76.8	34.7	42.5	49.0	54.8	60.0	64.9	69.3	73.5	33.1	40.5	46.8	52.3	57.3	61.9	66.2	70.2
QREV14-24SC	40.0	49.0	56.6	63.2	69.3	74.8	80.0	84.9	38.3	46.9	54.2	60.6	66.4	71.7	76.6	81.3	36.6	44.8	51.7	57.8	63.4	68.4	73.2	77.6
QREV15-24SC	44.0	53.9	62.2	69.5	76.2	82.3	87.9	93.3	42.1	51.6	59.6	66.6	73.0	78.8	84.2	89.4	40.2	49.2	56.9	63.6	69.6	75.2	80.4	85.3

Table 26: R407A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.65	1.58	1.51	1.45	1.38	1.31	1.24	1.17	1.10	1.03	0.96	0.88	0.81	0.73	0.66

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 27: R407A Application Capacity Correction Factor in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.54	0.66	0.76	0.85	0.94	1.01	1.08	1.15	0.52	0.64	0.74	0.82	0.90	0.97	1.04	1.10	0.50	0.61	0.70	0.79	0.86	0.93	1.00	1.06
QREV02-24SC	1.34	1.64	1.89	2.11	2.32	2.50	2.67	2.84	1.29	1.58	1.82	2.03	2.23	2.41	2.57	2.73	1.23	1.51	1.74	1.95	2.14	2.31	2.47	2.62
QREV03-24SC	1.74	2.13	2.46	2.75	3.01	3.25	3.47	3.68	1.67	2.05	2.36	2.64	2.89	3.13	3.34	3.55	1.60	1.96	2.27	2.53	2.77	3.00	3.20	3.40
QREV04-24SC	2.14	2.62	3.02	3.38	3.70	4.00	4.27	4.53	2.06	2.52	2.91	3.25	3.56	3.85	4.11	4.36	1.97	2.41	2.79	3.11	3.41	3.69	3.94	4.18
QREV05-24SC	2.93	3.59	4.15	4.64	5.08	5.49	5.87	6.22	2.82	3.46	3.99	4.47	4.89	5.28	5.65	5.99	2.71	3.31	3.83	4.28	4.69	5.06	5.41	5.74
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.6	8.0	9.3	10.4	11.4	12.3	13.1	13.9	6.3	7.7	8.9	10.0	10.9	11.8	12.6	13.4	6.1	7.4	8.6	9.6	10.5	11.3	12.1	12.8
QREV10-24SC	7.8	9.5	11.0	12.3	13.5	14.6	15.6	16.5	7.5	9.2	10.6	11.8	13.0	14.0	15.0	15.9	7.2	8.8	10.1	11.3	12.4	13.4	14.4	15.2
QREV11-24SC	9.0	11.1	12.8	14.3	15.7	16.9	18.1	19.2	8.7	10.7	12.3	13.8	15.1	16.3	17.4	18.5	8.3	10.2	11.8	13.2	14.4	15.6	16.7	17.7
QREV12-24SC	10.3	12.6	14.5	16.2	17.8	19.2	20.5	21.8	9.9	12.1	14.0	15.6	17.1	18.5	19.7	20.9	9.5	11.6	13.4	15.0	16.4	17.7	18.9	20.1
QREV13-24SC	11.5	14.1	16.3	18.2	19.9	21.5	23.0	24.4	11.1	13.6	15.7	17.5	19.2	20.7	22.2	23.5	10.6	13.0	15.0	16.8	18.4	19.9	21.2	22.5
QREV14-24SC	12.7	15.6	18.0	20.1	22.0	23.8	25.5	27.0	12.3	15.0	17.3	19.4	21.2	22.9	24.5	26.0	11.7	14.4	16.6	18.6	20.3	22.0	23.5	24.9
QREV15-24SC	14.0	17.1	19.8	22.1	24.2	26.2	28.0	29.7	13.5	16.5	19.0	21.3	23.3	25.2	26.9	28.6	12.9	15.8	18.3	20.4	22.4	24.1	25.8	27.4

Table 28: R407A Application Capacity Correction Factor in Tons at Evaporator Temperature -10°F to 40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.49	0.60	0.69	0.77	0.84	0.91	0.97	1.03	0.48	0.58	0.67	0.75	0.82	0.89	0.95	1.01	0.45	0.55	0.64	0.71	0.78	0.84	0.90	0.96
QREV02-24SC	1.21	1.48	1.70	1.91	2.09	2.26	2.41	2.56	1.18	1.44	1.66	1.86	2.04	2.20	2.35	2.50	1.12	1.37	1.58	1.77	1.94	2.09	2.24	2.37
QREV03-24SC	1.57	1.92	2.21	2.48	2.71	2.93	3.13	3.32	1.53	1.87	2.16	2.42	2.65	2.86	3.06	3.24	1.45	1.78	2.05	2.30	2.51	2.72	2.90	3.08
QREV04-24SC	1.93	2.36	2.72	3.04	3.33	3.60	3.85	4.08	1.88	2.30	2.66	2.97	3.26	3.52	3.76	3.99	1.79	2.19	2.53	2.82	3.09	3.34	3.57	3.79
QREV05-24SC	2.65	3.24	3.74	4.18	4.58	4.95	5.29	5.61	2.58	3.16	3.65	4.08	4.47	4.83	5.16	5.48	2.45	3.00	3.47	3.88	4.25	4.59	4.91	5.20
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	5.9	7.3	8.4	9.4	10.3	11.1	11.8	12.6	5.8	7.1	8.2	9.1	10.0	10.8	11.6	12.3	5.5	6.7	7.8	8.7	9.5	10.3	11.0	11.6
QREV10-24SC	7.0	8.6	9.9	11.1	12.1	13.1	14.0	14.9	6.8	8.4	9.7	10.8	11.9	12.8	13.7	14.5	6.5	8.0	9.2	10.3	11.3	12.2	13.0	13.8
QREV11-24SC	8.2	10.0	11.5	12.9	14.1	15.2	16.3	17.3	8.0	9.7	11.3	12.6	13.8	14.9	15.9	16.9	7.6	9.3	10.7	12.0	13.1	14.1	15.1	16.0
QREV12-24SC	9.2	11.3	13.1	14.6	16.0	17.3	18.5	19.6	9.0	11.1	12.8	14.3	15.6	16.9	18.0	19.1	8.6	10.5	12.1	13.6	14.8	16.0	17.1	18.2
QREV13-24SC	10.4	12.7	14.7	16.4	18.0	19.4	20.8	22.0	10.1	12.4	14.3	16.0	17.6	19.0	20.3	21.5	9.6	11.8	13.6	15.2	16.7	18.0	19.3	20.4
QREV14-24SC	11.5	14.1	16.2	18.1	19.9	21.5	22.9	24.3	11.2	13.7	15.8	17.7	19.4	21.0	22.4	23.8	10.6	13.0	15.1	16.8	18.4	19.9	21.3	22.6
QREV15-24SC	12.6	15.4	17.8	19.9	21.8	23.6	25.2	26.8	12.3	15.1	17.4	19.5	21.3	23.0	24.6	26.1	11.7	14.3	16.5	18.5	20.3	21.9	23.4	24.8

Quick Response Expansion Valve Selection Guide (Continued)

Table 29: R407A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**
Correction Factor														
1.74	1.67	1.59	1.52	1.44	1.37	1.29	1.22	1.14	1.06	0.99	0.91	0.83	0.75	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 30: R407C Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	2.05	2.51	2.90	3.24	3.55	3.83	4.10	4.35	1.99	2.43	2.81	3.14	3.44	3.72	3.98	4.22	1.92	2.35	2.72	3.04	3.33	3.60	3.85	4.08
QREV02-24SC	5.07	6.21	7.17	8.02	8.79	9.49	10.2	10.8	4.92	6.03	6.96	7.78	8.53	9.21	9.85	10.4	4.76	5.83	6.73	7.53	8.25	8.91	9.52	10.1
QREV03-24SC	6.59	8.07	9.32	10.4	11.4	12.3	13.2	13.9	6.39	7.83	9.04	10.1	11.1	11.9	12.8	13.6	6.18	7.57	8.74	9.77	10.7	11.6	12.4	13.1
QREV04-24SC	8.10	9.92	11.5	12.8	14.0	15.2	16.2	17.2	7.86	9.63	11.1	12.4	13.6	14.7	15.7	16.7	7.6	9.3	10.8	12.0	13.2	14.2	15.2	16.1
QREV05-24SC	11.1	13.6	15.7	17.6	19.3	20.8	22.3	23.6	10.8	13.2	15.3	17.1	18.7	20.2	21.6	22.9	10.5	12.8	14.8	16.5	18.1	19.5	20.9	22.2
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	24.9	30.5	35.2	39.4	43.1	46.6	49.8	52.8	24.2	29.6	34.2	38.2	41.9	45.2	48.3	51.3	23.4	28.6	33.1	37.0	40.5	43.7	46.8	49.6
QREV10-24SC	29.5	36.1	41.7	46.7	51.1	55.2	59.0	62.6	28.6	35.1	40.5	45.3	49.6	53.6	57.3	60.8	27.7	33.9	39.2	43.8	48.0	51.8	55.4	58.8
QREV11-24SC	34.3	42.0	48.5	54.2	59.4	64.2	68.6	72.8	33.3	40.8	47.1	52.6	57.7	62.3	66.6	70.6	32.2	39.4	45.5	50.9	55.8	60.2	64.4	68.3
QREV12-24SC	38.9	47.6	55.0	61.5	67.4	72.8	77.8	82.5	37.8	46.2	53.4	59.7	65.4	70.6	75.5	80.1	36.5	44.7	51.6	57.7	63.2	68.3	73.0	77.4
QREV13-24SC	43.7	53.5	61.8	69.1	75.7	81.7	87.4	92.7	42.4	51.9	60.0	67.0	73.4	79.3	84.8	89.9	41.0	50.2	58.0	64.8	71.0	76.7	82.0	87.0
QREV14-24SC	48.3	59.1	68.3	76.4	83.6	90.3	96.6	102.4	46.9	57.4	66.3	74.1	81.2	87.7	93.7	99.4	45.3	55.5	64.1	71.7	78.5	84.8	90.6	96.1
QREV15-24SC	53.1	65.0	75.1	83.9	91.9	99.3	106.2	112.6	51.5	63.1	72.8	81.4	89.2	96.4	103.0	109.3	49.8	61.0	70.5	78.8	86.3	93.2	99.6	105.7

Table 31: R407C Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	1.85	2.27	2.62	2.93	3.21	3.47	3.71	3.93	1.78	2.18	2.52	2.82	3.09	3.33	3.56	3.78	1.71	2.09	2.41	2.70	2.96	3.19	3.41	3.62
QREV02-24SC	4.59	5.62	6.49	7.26	7.95	8.59	9.18	9.74	4.41	5.40	6.24	6.97	7.64	8.25	8.82	9.36	4.23	5.18	5.98	6.68	7.32	7.91	8.45	8.96
QREV03-24SC	5.96	7.30	8.43	9.42	10.3	11.2	11.9	12.6	5.73	7.01	8.10	9.06	9.92	10.7	11.5	12.2	5.49	6.72	7.76	8.68	9.50	10.3	10.9	11.6
QREV04-24SC	7.33	8.98	10.4	11.6	12.7	13.7	14.7	15.6	7.04	8.63	9.96	11.1	12.2	13.2	14.1	14.9	6.75	8.27	9.54	10.7	11.7	12.6	13.5	14.3
QREV05-24SC	10.1	12.3	14.2	15.9	17.4	18.8	20.1	21.4	9.68	11.9	13.7	15.3	16.8	18.1	19.4	20.5	9.27	11.4	13.1	14.7	16.1	17.4	18.5	19.7
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	22.5	27.6	31.9	35.6	39.0	42.2	45.1	47.8	21.7	26.5	30.6	34.2	37.5	40.5	43.3	45.9	20.8	25.4	29.3	32.8	35.9	38.8	41.5	44.0
QREV10-24SC	26.7	32.7	37.8	42.2	46.2	50.0	53.4	56.6	25.7	31.4	36.3	40.6	44.4	48.0	51.3	54.4	24.6	30.1	34.8	38.9	42.6	46.0	49.2	52.1
QREV11-24SC	31.0	38.0	43.9	49.1	53.8	58.1	62.1	65.8	29.8	36.5	42.2	47.2	51.7	55.8	59.6	63.3	28.6	35.0	40.4	45.2	49.5	53.5	57.1	60.6
QREV12-24SC	35.2	43.1	49.8	55.6	61.0	65.8	70.4	74.7	33.8	41.4	47.8	53.5	58.6	63.3	67.6	71.7	32.4	39.7	45.8	51.2	56.1	60.6	64.8	68.7
QREV13-24SC	39.5	48.4	55.9	62.5	68.5	74.0	79.1	83.9	38.0	46.5	53.7	60.1	65.8	71.1	76.0	80.6	36.4	44.6	51.5	57.5	63.0	68.1	72.8	77.2
QREV14-24SC	43.7	53.5	61.8	69.1	75.7	81.7	87.4	92.7	42.0	51.4	59.4	66.4	72.7	78.5	84.0	89.1	40.2	49.3	56.9	63.6	69.7	75.3	80.4	85.3
QREV15-24SC	48.0	58.8	67.9	75.9	83.2	89.8	96.1	101.9	46.2	56.5	65.3	73.0	79.9	86.3	92.3	97.9	44.2	54.2	62.5	69.9	76.6	82.7	88.4	93.8

Table 32: R407C Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	**-5**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**
Correction Factor														
1.60	1.54	1.48	1.41	1.35	1.29	1.22	1.16	1.09	1.03	0.96	0.89	0.82	0.75	0.68

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 33: R407C Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 1 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	**90**	**120**	**150**	**180**	**210**	**240**	**270**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**
QREV01-24SC	0.59	0.72	0.83	0.93	1.01	1.10	1.17	1.24	0.57	0.69	0.80	0.89	0.98	1.06	1.13	1.20	0.54	0.67	0.77	0.86	0.94	1.02	1.09	1.15
QREV02-24SC	1.45	1.78	2.05	2.29	2.51	2.71	2.90	3.08	1.40	1.71	1.98	2.21	2.42	2.62	2.80	2.97	1.35	1.65	1.90	2.13	2.33	2.52	2.69	2.85
QREV03-24SC	1.88	2.31	2.66	2.98	3.26	3.52	3.77	4.00	1.82	2.23	2.57	2.87	3.15	3.40	3.64	3.86	1.75	2.14	2.47	2.76	3.03	3.27	3.49	3.71

Quick Response Expansion Valve Selection Guide (Continued)

Table 33: R407C Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 2 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV04-24SC	2.32	2.84	3.28	3.66	4.01	4.33	4.63	4.91	2.24	2.74	3.16	3.53	3.87	4.18	4.47	4.74	2.15	2.63	3.04	3.40	3.72	4.02	4.30	4.56
QREV05-24SC	3.18	3.90	4.50	5.03	5.51	5.96	6.37	6.75	3.07	3.76	4.34	4.86	5.32	5.75	6.14	6.52	2.95	3.62	4.18	4.67	5.11	5.52	5.90	6.26
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	7.1	8.7	10.1	11.3	12.3	13.3	14.2	15.1	6.9	8.4	9.7	10.9	11.9	12.9	13.7	14.6	6.6	8.1	9.3	10.4	11.4	12.4	13.2	14.0
QREV10-24SC	8.4	10.3	11.9	13.3	14.6	15.8	16.9	17.9	8.1	10.0	11.5	12.9	14.1	15.2	16.3	17.3	7.8	9.6	11.1	12.4	13.6	14.6	15.7	16.6
QREV11-24SC	9.8	12.0	13.9	15.5	17.0	18.4	19.6	20.8	9.5	11.6	13.4	15.0	16.4	17.7	18.9	20.1	9.1	11.1	12.9	14.4	15.8	17.0	18.2	19.3
QREV12-24SC	11.1	13.6	15.7	17.6	19.3	20.8	22.2	23.6	10.7	13.1	15.2	17.0	18.6	20.1	21.5	22.8	10.3	12.6	14.6	16.3	17.9	19.3	20.6	21.9
QREV13-24SC	12.5	15.3	17.7	19.8	21.6	23.4	25.0	26.5	12.1	14.8	17.1	19.1	20.9	22.6	24.1	25.6	11.6	14.2	16.4	18.3	20.1	21.7	23.2	24.6
QREV14-24SC	13.8	16.9	19.5	21.8	23.9	25.8	27.6	29.3	13.3	16.3	18.8	21.1	23.1	24.9	26.7	28.3	12.8	15.7	18.1	20.3	22.2	24.0	25.6	27.2
QREV15-24SC	15.2	18.6	21.5	24.0	26.3	28.4	30.4	32.2	14.6	17.9	20.7	23.2	25.4	27.4	29.3	31.1	14.1	17.2	19.9	22.3	24.4	26.3	28.2	29.9

Table 34: R407C Application Capacity Correction Factor at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.53	0.65	0.75	0.84	0.92	1.00	1.06	1.13	0.52	0.64	0.74	0.82	0.90	0.97	1.04	1.10	0.50	0.61	0.70	0.78	0.86	0.93	0.99	1.05
QREV02-24SC	1.32	1.61	1.86	2.08	2.28	2.46	2.63	2.79	1.29	1.58	1.82	2.04	2.23	2.41	2.58	2.73	1.23	1.50	1.74	1.94	2.13	2.30	2.46	2.61
QREV03-24SC	1.71	2.09	2.42	2.70	2.96	3.20	3.42	3.63	1.67	2.05	2.37	2.64	2.90	3.13	3.35	3.55	1.60	1.95	2.26	2.52	2.76	2.99	3.19	3.38
QREV04-24SC	2.10	2.58	2.98	3.33	3.64	3.94	4.21	4.46	2.06	2.52	2.91	3.25	3.56	3.85	4.11	4.36	1.96	2.40	2.78	3.10	3.40	3.67	3.92	4.16
QREV05-24SC	2.89	3.54	4.09	4.57	5.01	5.41	5.78	6.13	2.83	3.46	4.00	4.47	4.90	5.29	5.65	6.00	2.70	3.30	3.81	4.26	4.67	5.04	5.39	5.72
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.5	7.9	9.1	10.2	11.2	12.1	12.9	13.7	6.3	7.7	8.9	10.0	11.0	11.8	12.7	13.4	6.0	7.4	8.5	9.5	10.5	11.3	12.1	12.8
QREV10-24SC	7.7	9.4	10.8	12.1	13.3	14.3	15.3	16.3	7.5	9.2	10.6	11.8	13.0	14.0	15.0	15.9	7.1	8.8	10.1	11.3	12.4	13.4	14.3	15.2
QREV11-24SC	8.9	10.9	12.6	14.1	15.4	16.7	17.8	18.9	8.7	10.7	12.3	13.8	15.1	16.3	17.4	18.5	8.3	10.2	11.7	13.1	14.4	15.5	16.6	17.6
QREV12-24SC	10.1	12.4	14.3	16.0	17.5	18.9	20.2	21.4	9.9	12.1	14.0	15.6	17.1	18.5	19.8	21.0	9.4	11.5	13.3	14.9	16.3	17.6	18.8	20.0
QREV13-24SC	11.3	13.9	16.0	17.9	19.6	21.2	22.7	24.1	11.1	13.6	15.7	17.5	19.2	20.8	22.2	23.5	10.6	13.0	15.0	16.7	18.3	19.8	21.2	22.4
QREV14-24SC	12.5	15.4	17.7	19.8	21.7	23.5	25.1	26.6	12.3	15.0	17.3	19.4	21.2	22.9	24.5	26.0	11.7	14.3	16.5	18.5	20.3	21.9	23.4	24.8
QREV15-24SC	13.8	16.9	19.5	21.8	23.9	25.8	27.6	29.2	13.5	16.5	19.1	21.3	23.3	25.2	27.0	28.6	12.9	15.7	18.2	20.3	22.3	24.1	25.7	27.3

Table 35: R407C Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.69	1.62	1.55	1.48	1.41	1.34	1.27	1.20	1.13	1.06	0.99	0.91	0.84	0.76	0.68

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 36: R407F Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 1 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	2.07	2.53	2.92	3.27	3.58	3.86	4.13	4.38	2.01	2.46	2.84	3.18	3.48	3.76	4.02	4.26	1.95	2.39	2.76	3.08	3.38	3.65	3.90	4.14
QREV02-24SC	5.11	6.26	7.23	8.09	8.86	9.57	10.2	10.9	4.98	6.10	7.04	7.87	8.62	9.31	9.96	10.6	4.83	5.91	6.83	7.63	8.36	9.03	9.66	10.2
QREV03-24SC	6.64	8.13	9.39	10.5	11.5	12.4	13.3	14.1	6.46	7.92	9.14	10.2	11.2	12.1	12.9	13.7	6.27	7.68	8.87	9.91	10.9	11.7	12.5	13.3
QREV04-24SC	8.17	10.0	11.6	12.9	14.2	15.3	16.3	17.3	7.95	9.74	11.2	12.6	13.8	14.9	15.9	16.9	7.71	9.44	10.9	12.2	19.4	14.4	15.4	16.4
QREV05-24SC	11.2	13.8	15.9	17.8	19.4	21.0	22.5	23.8	10.9	13.4	15.5	17.3	18.9	20.4	21.9	23.2	10.6	12.9	14.9	16.8	18.4	19.8	21.2	22.5
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	24.9	30.5	35.2	39.4	43.1	46.6	49.8	52.8	24.2	29.6	34.2	38.2	41.9	45.2	48.3	51.3	23.4	28.6	33.1	37.0	40.5	43.7	46.8	49.6
QREV10-24SC	29.5	36.1	41.7	46.7	51.1	55.2	59.0	62.6	28.6	35.1	40.5	45.3	49.6	53.6	57.3	60.8	27.7	33.9	39.2	43.8	48.0	51.8	55.4	58.8
QREV11-24SC	34.3	42.0	48.5	54.2	59.4	64.2	68.6	72.8	33.3	40.8	47.1	52.6	57.7	62.3	66.6	70.6	32.2	39.4	45.5	50.9	55.8	60.2	64.4	68.3
QREV12-24SC	38.9	47.6	55.0	61.5	67.4	72.8	77.8	82.5	37.8	46.2	53.4	59.7	65.4	70.6	75.5	80.1	36.5	44.7	51.6	57.7	63.2	68.3	73.0	77.4
QREV13-24SC	43.7	53.5	61.8	69.1	75.7	81.7	87.4	92.7	42.4	51.9	60.0	67.0	73.4	79.3	84.8	89.9	41.0	50.2	58.0	64.8	71.0	76.7	82.0	87.0

Quick Response Expansion Valve Selection Guide (Continued)

Table 36: R407F Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 2 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV14-24SC	48.3	59.1	68.3	76.4	83.6	90.3	96.6	102.4	46.9	57.4	66.3	74.1	81.2	87.7	93.7	99.4	45.3	55.5	64.1	71.7	78.5	84.8	90.6	96.1
QREV15-24SC	53.1	65.0	75.1	83.9	91.9	99.3	106.2	112.6	51.5	63.1	72.8	81.4	89.2	96.4	103.0	109.3	49.8	61.0	70.5	78.8	86.3	93.2	99.6	105.7

Table 37: R407F Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.89	2.31	2.67	2.98	3.27	3.53	3.77	4.00	1.82	2.22	2.57	2.87	3.15	3.40	3.63	3.85	1.74	2.14	2.47	2.76	3.02	3.26	3.49	3.70
QREV02-24SC	4.67	5.72	6.60	7.38	8.08	8.73	9.34	9.90	4.50	5.51	6.36	7.11	7.79	8.41	9.00	9.54	4.32	5.29	6.11	6.83	7.48	8.08	8.64	9.17
QREV03-24SC	6.06	7.42	8.57	9.58	10.5	11.3	12.1	12.9	5.84	7.15	8.26	9.23	10.1	10.9	11.7	12.4	5.61	6.87	7.93	8.87	9.72	10.5	11.2	11.9
QREV04-24SC	7.46	9.13	10.5	11.8	12.9	13.9	14.9	15.8	7.18	8.80	10.2	11.4	12.4	13.4	14.4	15.2	6.9	8.45	9.76	10.9	11.9	12.9	13.8	14.6
QREV05-24SC	10.2	12.5	14.5	16.2	17.7	19.2	20.5	21.7	9.87	12.1	13.9	15.6	17.1	18.5	19.7	20.9	9.5	11.6	13.4	14.9	16.4	17.7	18.9	20.1
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	22.5	27.6	31.9	35.6	39.0	42.2	45.1	47.8	21.7	26.5	30.6	34.2	37.5	40.5	43.3	45.9	20.8	25.4	29.3	32.8	35.9	38.8	41.5	44.0
QREV10-24SC	26.7	32.7	37.8	42.2	46.2	50.0	53.4	56.6	25.7	31.4	36.3	40.6	44.4	48.0	51.3	54.4	24.6	30.1	34.8	38.9	42.6	46.0	49.2	52.1
QREV11-24SC	31.0	38.0	43.9	49.1	53.8	58.1	62.1	65.8	29.8	36.5	42.2	47.2	51.7	55.8	59.6	63.3	28.6	35.0	40.4	45.2	49.5	53.5	57.1	60.6
QREV12-24SC	35.2	43.1	49.8	55.6	61.0	65.8	70.4	74.7	33.8	41.4	47.8	53.5	58.6	63.3	67.6	71.7	32.4	39.7	45.8	51.2	56.1	60.6	64.8	68.7
QREV13-24SC	39.5	48.4	55.9	62.5	68.5	74.0	79.1	83.9	38.0	46.5	53.7	60.1	65.8	71.1	76.0	80.6	36.4	44.6	51.5	57.5	63.0	68.1	72.8	77.2
QREV14-24SC	43.7	53.5	61.8	69.1	75.7	81.7	87.4	92.7	42.0	51.4	59.4	66.4	72.7	78.5	84.0	89.1	40.2	49.3	56.9	63.6	69.7	75.3	80.4	85.3
QREV15-24SC	48.0	58.8	67.9	75.9	83.2	89.8	96.1	101.9	46.2	56.5	65.3	73.0	79.9	86.3	92.3	97.9	44.2	54.2	62.5	69.9	76.6	82.7	88.4	93.8

Table 38: R407F Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.60	1.54	1.48	1.42	1.35	1.29	1.22	1.16	1.09	1.03	0.96	0.89	0.82	0.75	0.68

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 39: R407F Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.59	0.72	0.84	0.94	1.03	1.11	1.18	1.26	0.57	0.70	0.81	0.91	0.99	1.07	1.15	1.22	0.55	0.68	0.78	0.87	0.96	1.03	1.10	1.17
QREV02-24SC	1.47	1.79	2.07	2.32	2.54	2.74	2.93	3.11	1.42	1.74	2.01	2.24	2.46	2.65	2.84	3.01	1.37	1.68	1.93	2.16	2.37	2.56	2.74	2.90
QREV03-24SC	1.90	2.33	2.69	3.01	3.30	3.56	3.81	4.04	1.84	2.26	2.61	2.91	3.19	3.45	3.68	3.91	1.78	2.18	2.51	2.81	3.08	3.32	3.55	3.77
QREV04-24SC	2.34	2.87	3.31	3.70	4.05	4.38	4.68	4.96	2.27	2.78	3.20	3.58	3.92	4.24	4.53	4.81	2.18	2.68	3.09	3.45	3.78	4.09	4.37	4.63
QREV05-24SC	3.22	3.94	4.55	5.08	5.57	6.02	6.43	6.82	3.11	3.81	4.40	4.92	5.39	5.82	6.23	6.60	3.00	3.68	4.24	4.75	5.20	5.61	6.00	6.37
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	7.2	8.8	10.2	11.4	12.5	13.5	14.4	15.3	7.0	8.5	9.9	11.0	12.1	13.0	13.9	14.8	6.7	8.2	9.5	10.6	11.6	12.6	13.4	14.2
QREV10-24SC	8.5	10.4	12.1	13.5	14.8	15.9	17.0	18.1	8.3	10.1	11.7	13.0	14.3	15.4	16.5	17.5	8.0	9.7	11.3	12.6	13.8	14.9	15.9	16.9
QREV11-24SC	9.9	12.1	14.0	15.7	17.2	18.5	19.8	21.0	9.6	11.7	13.6	15.2	16.6	17.9	19.2	20.3	9.2	11.3	13.1	14.6	16.0	17.3	18.5	19.6
QREV12-24SC	11.2	13.8	15.9	17.8	19.5	21.0	22.5	23.8	10.9	13.3	15.4	17.2	18.8	20.4	21.8	23.1	10.5	12.8	14.8	16.6	18.2	19.6	21.0	22.2
QREV13-24SC	12.6	15.5	17.8	20.0	21.9	23.6	25.2	26.8	12.2	15.0	17.3	19.3	21.2	22.9	24.4	25.9	11.8	14.4	16.7	18.6	20.4	22.0	23.6	25.0
QREV14-24SC	13.9	17.1	19.7	22.1	24.2	26.1	27.9	29.6	13.5	16.5	19.1	21.4	23.4	25.3	27.0	28.6	13.0	15.9	18.4	20.6	22.6	24.4	26.0	27.6
QREV15-24SC	15.3	18.8	21.7	24.2	26.6	28.7	30.7	32.5	14.8	18.2	21.0	23.5	25.7	27.8	29.7	31.5	14.3	17.5	20.2	22.6	24.8	26.8	28.6	30.4

Table 40: R407F Application Capacity Ratings in Tons at Evaporator Temperature -10°Fto -40°F (Part 1 of 2)

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.54	0.66	0.77	0.86	0.94	1.01	1.08	1.15	0.53	0.65	0.75	0.84	0.92	0.99	1.06	1.13	0.51	0.62	0.72	0.80	0.88	0.95	1.02	1.08
QREV02-24SC	1.34	1.64	1.90	2.12	2.32	2.51	2.68	2.84	1.31	1.61	1.86	2.08	2.27	2.46	2.63	2.79	1.26	1.54	1.78	1.99	2.18	2.35	2.51	2.67
QREV03-24SC	1.74	2.13	2.46	2.75	3.02	3.26	3.48	3.69	1.71	2.09	2.41	2.70	2.95	3.19	3.41	3.62	1.63	2.00	2.31	2.58	2.83	3.05	3.26	3.46

Quick Response Expansion Valve Selection Guide (Continued)

Table 40: R407F Application Capacity Ratings in Tons at Evaporator Temperature -10°Fto -40°F (Continued) (Part 2 of 2)

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV04-24SC	2.14	2.62	3.03	3.39	3.71	4.01	4.28	4.54	2.10	2.57	2.97	3.32	3.63	3.92	4.20	4.45	2.01	2.46	2.84	3.17	3.48	3.75	4.01	4.26
QREV05-24SC	2.94	3.60	4.16	4.65	5.10	5.51	5.89	6.24	2.88	3.53	4.08	4.56	4.99	5.39	5.76	6.11	2.76	3.38	3.90	4.36	4.78	5.16	5.52	5.85
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.6	8.1	9.3	10.4	11.4	12.3	13.2	14.0	6.5	7.9	9.1	10.2	11.2	12.1	12.9	13.7	6.2	7.6	8.7	9.8	10.7	11.5	12.3	13.1
QREV10-24SC	7.8	9.6	11.0	12.3	13.5	14.6	15.6	16.5	7.6	9.4	10.8	12.1	13.2	14.3	15.3	16.2	7.3	9.0	10.3	11.6	12.7	13.7	14.6	15.5
QREV11-24SC	9.1	11.1	12.8	14.3	15.7	17.0	18.1	19.2	8.9	10.9	12.6	14.0	15.4	16.6	17.8	18.8	8.5	10.4	12.0	13.4	14.7	15.9	17.0	18.0
QREV12-24SC	10.3	12.6	14.5	16.3	17.8	19.2	20.6	21.8	10.1	12.3	14.2	15.9	17.4	18.8	20.1	21.4	9.6	11.8	13.6	15.2	16.7	18.0	19.3	20.4
QREV13-24SC	11.5	14.1	16.3	18.3	20.0	21.6	23.1	24.5	11.3	13.9	16.0	17.9	19.6	21.2	22.6	24.0	10.8	13.3	15.3	17.1	18.7	20.2	21.6	23.0
QREV14-24SC	12.8	15.6	18.1	20.2	22.1	23.9	25.5	27.1	12.5	15.3	17.7	19.8	21.7	23.4	25.0	26.5	12.0	14.7	16.9	18.9	20.7	22.4	23.9	25.4
QREV15-24SC	14.0	17.2	19.8	22.2	24.3	26.3	28.1	29.8	13.7	16.8	19.4	21.7	23.8	25.7	27.5	29.2	13.1	16.1	18.6	20.8	22.8	24.6	26.3	27.9

Table 41: R407F Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)															
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor															
	1.69	1.62	1.55	1.48	1.41	1.34	1.27	1.20	1.13	1.06	0.99	0.91	0.83	0.76	0.68
1.73	1.66	1.58	1.51	1.44	1.37	1.29	1.22	1.14	1.06	0.98	0.90	0.82	0.73	0.63	

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 42: R410A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
QREV01-24SC	1.75	2.48	3.04	3.51	3.92	4.29	4.64	4.96	1.72	2.44	2.98	3.45	3.85	4.22	4.56	4.87	1.69	2.38	2.92	3.37	3.77	4.13	4.46	4.77
QREV02-24SC	4.34	6.14	7.52	8.68	9.70	10.6	11.5	12.3	4.27	6.03	7.39	8.53	9.54	10.5	11.3	12.1	4.17	5.90	7.23	8.35	9.33	10.2	11.0	11.8
QREV03-24SC	5.64	7.97	9.76	11.3	12.6	13.8	14.9	15.9	5.54	7.83	9.59	11.1	12.4	13.6	14.7	15.7	5.42	7.67	9.39	10.8	12.1	13.3	14.3	15.3
QREV04-24SC	6.93	9.80	12.0	13.9	15.5	16.9	18.3	19.6	6.81	9.64	11.8	13.6	15.2	16.7	18.0	19.3	6.67	9.43	11.6	13.3	14.9	16.3	17.6	18.9
QREV05-24SC	9.52	13.5	16.5	19.1	21.3	23.3	25.2	26.9	9.4	13.2	16.2	18.7	20.9	22.9	24.8	26.5	9.16	12.9	15.9	18.3	20.5	22.4	24.2	25.9
	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
QREV09-24SC	21.3	30.1	36.9	42.6	47.7	52.2	56.4	60.3	20.9	29.6	36.3	41.9	46.8	51.3	55.4	59.3	20.5	29.0	35.5	41.0	45.8	50.2	54.2	58.0
QREV10-24SC	25.2	35.7	43.7	50.5	56.5	61.8	66.8	71.4	24.8	35.1	43.0	49.6	55.5	60.8	65.7	70.2	24.3	34.3	42.1	48.6	54.3	59.5	64.2	68.7
QREV11-24SC	29.3	41.5	50.8	58.7	65.6	71.9	77.6	83.0	28.8	40.8	50.0	57.7	64.5	70.7	76.3	81.6	28.8	40.8	50.0	57.7	64.5	70.7	76.3	81.6
QREV12-24SC	33.3	47.1	57.6	66.6	74.4	81.5	88.1	94.1	32.7	46.3	56.7	65.4	73.1	80.1	86.5	92.5	32.7	46.3	56.7	65.4	73.1	80.1	86.5	92.5
QREV13-24SC	37.4	52.9	64.7	74.8	83.6	91.6	98.9	105.7	36.7	52.0	63.6	73.5	82.2	90.0	97.2	103.9	36.7	52.0	63.6	73.5	82.2	90.0	97.2	103.9
QREV14-24SC	41.3	58.4	71.6	82.6	92.4	101.2	109.3	116.9	40.6	57.4	70.3	81.2	90.8	99.5	107.4	114.9	40.6	57.4	70.3	81.2	90.8	99.5	107.4	114.9
QREV15-24SC	45.4	64.2	78.7	90.8	101.6	111.2	120.2	128.5	44.6	63.1	77.3	89.3	99.8	109.3	118.1	126.3	44.6	63.1	77.3	89.3	99.8	109.3	118.1	126.3

Table 43: R410A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 1 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
QREV01-24SC	1.64	2.32	2.85	3.29	3.67	4.02	4.35	4.65	1.60	2.26	2.76	3.19	3.57	3.91	4.22	4.51	1.55	2.19	2.68	3.09	3.45	3.78	4.09	4.37
QREV02-24SC	4.07	5.75	7.05	8.14	9.10	9.97	10.8	11.5	3.95	5.59	6.85	7.90	8.84	9.68	10.5	11.2	3.83	5.41	6.63	7.65	8.55	9.37	10.1	10.8
QREV03-24SC	5.28	7.47	9.15	10.6	11.8	12.9	13.9	14.9	5.13	7.26	8.89	10.3	11.5	12.6	13.6	14.5	4.97	7.03	8.61	9.94	11.1	12.2	13.1	14.1
QREV04-24SC	6.50	9.19	11.3	13.0	14.5	15.9	17.2	18.4	6.31	8.93	10.9	12.6	14.1	15.5	16.7	17.9	6.11	8.64	10.6	12.2	13.7	14.9	16.2	17.3
QREV05-24SC	8.93	12.6	15.5	17.9	19.9	21.9	23.6	25.3	8.67	12.3	15.0	17.3	19.4	21.2	22.9	24.5	8.40	11.9	14.5	16.8	18.8	20.6	22.2	23.8
	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
QREV09-24SC	20.0	28.3	34.6	40.0	44.7	48.9	52.9	56.5	19.4	27.4	33.6	38.8	43.4	47.5	51.3	54.9	18.8	26.6	32.5	37.6	42.0	46.0	49.7	53.1
QREV10-24SC	23.7	33.5	41.0	47.3	52.9	58.0	62.6	66.9	23.0	32.5	39.8	46.0	51.4	56.3	60.8	65.0	22.3	31.5	38.5	44.5	49.8	54.5	58.9	63.0
QREV11-24SC	27.5	38.9	47.7	55.0	61.5	67.4	72.8	77.8	26.7	37.8	46.3	53.4	59.8	65.5	70.7	75.6	25.9	36.6	44.8	51.7	57.8	63.4	68.4	73.2
QREV12-24SC	31.2	44.1	54.0	62.4	69.8	76.4	82.6	88.2	30.3	42.9	52.5	60.6	67.8	74.2	80.2	85.7	29.3	41.5	50.8	58.7	65.6	71.9	77.6	83.0

Quick Response Expansion Valve Selection Guide (Continued)

Table 43: R410A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 2 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24	3	6	9	12	15	18	21	24
QREV13-24SC	35.0	49.6	60.7	70.1	78.4	85.8	92.7	99.1	34.0	48.1	59.0	68.1	76.1	83.4	90.1	96.3	33.0	46.6	57.1	65.9	73.7	80.7	87.2	93.2
QREV14-24SC	38.7	54.8	67.1	77.5	86.6	94.9	102.5	109.6	37.6	53.2	65.2	75.2	84.1	92.2	99.5	106.4	36.4	51.5	63.1	72.8	81.4	89.2	96.4	103.0
QREV15-24SC	42.6	60.2	73.7	85.1	95.2	104.3	112.6	120.4	41.4	58.5	71.6	82.7	92.5	101.3	109.4	117.0	40.0	56.6	69.3	80.1	89.5	98.1	105.9	113.2

Table 44: R410A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.64	1.58	1.51	1.44	1.38	1.31	1.24	1.17	1.10	1.03	0.96	0.88	0.80	0.72	0.63

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 45: R410A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360
QREV01-24SC	0.67	0.83	0.95	1.07	1.17	1.26	1.35	1.43	0.66	0.81	0.93	1.04	1.14	1.23	1.32	1.40	0.64	0.79	0.91	1.01	1.11	1.20	1.28	1.36
QREV02-24SC	1.67	2.04	2.36	2.64	2.89	3.12	3.34	3.54	1.63	2.00	2.31	2.58	2.83	3.05	3.26	3.46	1.59	1.95	2.25	2.51	2.75	2.97	3.18	3.37
QREV03-24SC	2.17	2.66	3.07	3.43	3.76	4.06	4.34	4.60	2.12	2.60	3.00	3.35	3.67	3.97	4.24	4.50	2.06	2.53	2.92	3.26	3.57	3.86	4.13	4.38
QREV04-24SC	2.67	3.27	3.77	4.22	4.62	4.99	5.33	5.66	2.61	3.19	3.69	4.12	4.52	4.88	5.21	5.53	2.54	3.11	3.59	4.01	4.39	4.75	5.07	5.38
QREV05-24SC	3.66	4.49	5.18	5.79	6.35	6.85	7.33	7.77	3.58	4.39	5.07	5.66	6.20	6.70	7.16	7.60	3.49	4.27	4.93	5.51	6.04	6.52	6.97	7.40
	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360
QREV09-24SC	8.2	10.0	11.6	13.0	14.2	15.3	16.4	17.4	8.0	9.8	11.3	12.7	13.9	15.0	16.0	17.0	7.8	9.6	11.0	12.3	13.5	14.6	15.6	16.5
QREV10-24SC	9.7	11.9	13.7	15.4	16.8	18.2	19.4	20.6	9.5	11.6	13.4	15.0	16.4	17.8	19.0	20.1	9.2	11.3	13.1	14.6	16.0	17.3	18.5	19.6
QREV11-24SC	11.3	13.8	16.0	17.8	19.6	21.1	22.6	23.9	11.0	13.5	15.6	17.5	19.1	20.7	22.1	23.4	10.7	13.2	15.2	17.0	18.6	20.1	21.5	22.8
QREV12-24SC	12.8	15.7	18.1	20.2	22.2	24.0	25.6	27.2	12.5	15.3	17.7	19.8	21.7	23.4	25.0	26.6	12.2	14.9	17.2	19.3	21.1	22.8	24.4	25.8
QREV13-24SC	14.4	17.6	20.3	22.7	24.9	26.9	28.8	30.5	14.1	17.2	19.9	22.2	24.4	26.3	28.1	29.8	13.7	16.8	19.4	21.6	23.7	25.6	27.4	29.0
QREV14-24SC	15.9	19.5	22.5	25.1	27.5	29.7	31.8	33.7	15.5	19.0	22.0	24.6	26.9	29.1	31.1	33.0	15.1	18.5	21.4	23.9	26.2	28.3	30.2	32.1
QREV15-24SC	17.5	21.4	24.7	27.6	30.3	32.7	34.9	37.1	17.1	20.9	24.2	27.0	29.6	32.0	34.2	36.2	16.6	20.4	23.5	26.3	28.8	31.1	33.2	35.3

Table 46: R410A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360
QREV01-24SC	0.63	0.77	0.89	1.00	1.09	1.18	1.26	1.34	0.62	0.76	0.88	0.98	1.08	1.16	1.24	1.32	0.60	0.73	0.85	0.95	1.04	1.12	1.20	1.27
QREV02-24SC	1.56	1.92	2.21	2.47	2.71	2.93	3.13	3.32	1.54	1.88	2.18	2.43	2.67	2.88	3.08	3.26	1.48	1.82	2.10	2.35	2.57	2.78	2.97	3.15
QREV03-24SC	2.03	2.49	2.87	3.21	3.52	3.80	4.06	4.31	2.00	2.45	2.83	3.16	3.46	3.74	4.00	4.24	1.93	2.36	2.73	3.05	3.34	3.61	3.86	4.09
QREV04-24SC	2.50	3.06	3.53	3.95	4.33	4.67	5.00	5.30	2.46	3.01	3.48	3.89	4.26	4.60	4.92	5.21	2.37	2.90	3.35	3.75	4.11	4.44	4.74	5.03
QREV05-24SC	3.43	4.20	4.86	5.43	5.95	6.42	6.87	7.28	3.38	4.14	4.78	5.34	5.85	6.32	6.75	7.16	3.26	3.99	4.61	5.15	5.64	6.10	6.52	6.91
	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360	80	120	160	200	240	280	320	360
QREV09-24SC	7.7	9.4	10.9	12.1	13.3	14.4	15.4	16.3	7.6	9.3	10.7	12.0	13.1	14.1	15.1	16.0	7.3	8.9	10.3	11.5	12.6	13.6	14.6	15.5
QREV10-24SC	9.1	11.1	12.9	14.4	15.8	17.0	18.2	19.3	9.0	11.0	12.7	14.2	15.5	16.8	17.9	19.0	8.6	10.6	12.2	13.7	15.0	16.2	17.3	18.3
QREV11-24SC	10.6	13.0	15.0	16.7	18.3	19.8	21.2	22.4	10.4	12.7	14.7	16.5	18.0	19.5	20.8	22.1	10.0	12.3	14.2	15.9	17.4	18.8	20.1	21.3
QREV12-24SC	12.0	14.7	17.0	19.0	20.8	22.4	24.0	25.4	11.8	14.5	16.7	18.7	20.4	22.1	23.6	25.0	11.4	13.9	16.1	18.0	19.7	21.3	22.8	24.2
QREV13-24SC	13.5	16.5	19.1	21.3	23.3	25.2	26.9	28.6	13.3	16.2	18.7	21.0	23.0	24.8	26.5	28.1	12.8	15.7	18.1	20.2	22.2	23.9	25.6	27.1
QREV14-24SC	14.9	18.2	21.1	23.5	25.8	27.9	29.8	31.6	14.7	17.9	20.7	23.2	25.4	27.4	29.3	31.1	14.1	17.3	20.0	22.4	24.5	26.4	28.3	30.0
QREV15-24SC	16.4	20.0	23.2	25.9	28.4	30.6	32.7	34.7	16.1	19.7	22.8	25.5	27.9	30.1	32.2	34.2	15.5	19.0	22.0	24.6	26.9	29.1	31.1	33.0

Quick Response Expansion Valve Selection Guide (Continued)

Table 47: R410A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**
Correction Factor														
1.73	1.66	1.58	1.51	1.44	1.37	1.29	1.22	1.14	1.06	0.98	0.90	0.82	0.73	0.63

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 48: R417A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	1.62	1.98	2.29	2.56	2.80	3.03	3.23	3.43	1.55	1.89	2.19	2.44	2.68	2.89	3.09	3.28	1.47	1.80	2.08	2.32	2.55	2.75	2.94	3.12
QREV02-24SC	4.00	4.90	5.66	6.33	6.94	7.49	8.01	8.49	3.83	4.69	5.41	6.05	6.63	7.16	7.65	8.12	3.64	4.46	5.15	5.76	6.31	6.81	7.28	7.72
QREV03-24SC	5.20	6.37	7.35	8.22	9.01	9.73	10.4	11.0	4.97	6.09	7.03	7.86	8.61	9.30	9.94	10.5	4.73	5.79	6.69	7.48	8.19	8.84	9.46	10.0
QREV04-24SC	6.40	7.83	9.04	10.1	11.1	11.9	12.8	13.6	6.11	7.49	8.64	9.66	10.6	11.4	12.2	12.9	5.81	7.12	8.22	9.19	10.1	10.9	11.6	12.3
QREV05-24SC	8.79	10.8	12.4	13.9	15.2	16.4	17.6	18.6	8.40	10.3	11.9	13.3	14.6	15.7	16.8	17.8	7.99	9.78	11.3	12.6	13.8	14.9	15.9	16.9
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	19.7	24.1	27.8	31.1	34.1	36.8	39.3	41.7	18.8	23.0	26.8	29.7	32.6	35.2	37.6	39.9	17.9	21.9	25.3	28.3	31.0	33.4	35.8	37.9
QREV10-24SC	23.3	28.5	32.9	36.8	40.3	43.6	46.6	49.4	22.3	27.3	31.5	35.2	38.6	41.7	44.5	47.2	21.2	25.9	30.0	33.5	36.7	39.6	42.4	44.9
QREV11-24SC	27.1	33.2	38.3	42.8	46.9	50.7	54.2	57.4	25.9	31.7	36.6	40.9	44.8	48.4	51.8	54.9	24.6	30.2	34.8	38.9	42.6	46.1	49.2	52.2
QREV12-24SC	30.7	37.6	43.4	48.6	53.2	57.4	61.4	65.1	29.3	35.9	41.5	46.4	50.8	54.9	58.7	62.3	27.9	34.2	39.5	44.1	48.4	52.2	55.8	59.2
QREV13-24SC	34.5	42.2	48.8	54.5	59.7	64.5	69.0	73.2	33.0	40.4	46.6	52.1	57.1	61.7	65.9	69.9	31.4	38.4	44.3	49.6	54.3	58.7	62.7	66.5
QREV14-24SC	38.1	46.7	53.9	60.3	66.0	71.3	76.2	80.9	36.4	44.6	51.5	57.6	63.1	68.2	72.9	77.3	34.7	42.4	49.0	54.8	60.0	64.8	69.3	73.5
QREV15-24SC	41.9	51.3	59.3	66.2	72.6	78.4	83.8	88.9	40.0	49.0	56.6	63.3	69.4	74.9	80.1	84.9	38.1	46.7	53.9	60.2	66.0	71.3	76.2	80.8

Table 49: R417A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	1.39	1.71	1.97	2.20	2.41	2.61	2.79	2.95	1.31	1.61	1.86	2.08	2.27	2.46	2.63	2.79	1.23	1.51	1.74	1.95	2.13	2.30	2.46	2.61
QREV02-24SC	3.45	4.22	4.88	5.45	5.97	6.45	6.90	7.32	3.25	3.98	4.60	5.14	5.63	6.08	6.50	6.90	3.05	3.74	4.31	4.82	5.28	5.71	6.10	6.47
QREV03-24SC	4.48	5.48	6.33	7.08	7.76	8.38	8.96	9.50	4.22	5.17	5.97	6.68	7.31	7.90	8.44	8.96	3.96	4.85	5.60	6.26	6.86	7.41	7.92	8.40
QREV04-24SC	5.51	6.75	7.79	8.71	9.54	10.3	11.0	11.7	5.19	6.36	7.34	8.21	8.99	9.71	10.4	11.0	4.87	5.97	6.86	7.70	8.44	9.12	9.75	10.3
QREV05-24SC	7.57	9.27	10.7	11.9	13.1	14.2	15.1	16.1	7.13	8.74	10.1	11.3	12.4	13.4	14.3	15.1	6.69	8.20	9.47	10.6	11.6	12.5	13.4	14.2
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	16.9	20.7	23.9	26.8	29.3	31.7	33.9	35.9	16.0	19.6	22.6	25.2	27.7	29.9	31.9	33.9	15.0	18.3	21.2	23.7	25.9	28.0	30.0	31.8
QREV10-24SC	20.1	24.6	28.4	31.7	34.7	37.5	40.1	42.6	18.9	23.2	26.7	29.9	32.8	35.4	37.8	40.1	17.7	21.7	25.1	28.1	30.7	33.2	35.5	37.6
QREV11-24SC	23.3	28.6	33.0	36.9	40.4	43.6	46.6	49.5	22.0	26.9	31.1	34.8	38.1	41.1	44.0	46.6	20.6	25.3	29.2	32.6	35.7	38.6	41.3	43.8
QREV12-24SC	26.4	32.4	37.4	41.8	45.8	49.5	52.9	56.1	24.9	30.5	35.3	39.4	43.2	46.6	49.9	52.9	23.4	28.7	33.1	37.0	40.5	43.8	46.8	49.6
QREV13-24SC	29.7	36.4	42.0	47.0	51.4	55.6	59.4	63.0	28.0	34.3	39.6	44.3	48.5	52.4	56.0	59.4	26.3	32.2	37.2	41.5	45.5	49.2	52.6	55.7
QREV14-24SC	32.8	40.2	46.4	51.9	56.9	61.4	65.7	69.6	30.9	37.9	43.8	48.9	53.6	57.9	61.9	65.7	29.0	35.6	41.1	45.9	50.3	54.3	58.1	61.6
QREV15-24SC	36.1	44.2	51.0	57.1	62.5	67.5	72.2	76.5	34.0	41.7	48.1	53.8	58.9	63.6	68.0	72.2	31.9	39.1	45.1	50.5	55.3	59.7	63.8	67.7

Table 50: R417A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	**-5**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**
Correction Factor														
1.74	1.66	1.58	1.50	1.43	1.35	1.27	1.19	1.11	1.03	0.95	0.87	0.79	0.70	0.62

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 51: R417A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 1 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	**90**	**120**	**150**	**180**	**210**	**240**	**270**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**
QREV01-24SC	0.46	0.56	0.65	0.73	0.80	0.86	0.92	0.97	0.44	0.53	0.62	0.69	0.75	0.81	0.87	0.92	0.41	0.50	0.58	0.65	0.71	0.77	0.82	0.87
QREV02-24SC	1.14	1.39	1.61	1.80	1.97	2.13	2.27	2.41	1.08	1.32	1.52	1.70	1.87	2.02	2.16	2.29	1.02	1.24	1.44	1.61	1.76	1.90	2.03	2.16

Quick Response Expansion Valve Selection Guide (Continued)

Table 51: R417A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 2 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV03-24SC	1.48	1.81	2.09	2.33	2.56	2.76	2.95	3.13	1.40	1.71	1.98	2.21	2.42	2.62	2.80	2.97	1.32	1.62	1.87	2.09	2.29	2.47	2.64	2.80
QREV04-24SC	1.82	2.22	2.57	2.87	3.14	3.40	3.63	3.85	1.72	2.11	2.43	2.72	2.98	3.22	3.44	3.65	1.62	1.99	2.30	2.57	2.81	3.04	3.25	3.44
QREV05-24SC	2.49	3.05	3.53	3.94	4.32	4.67	4.99	5.29	2.37	2.90	3.34	3.74	4.10	4.42	4.73	5.02	2.23	2.73	3.15	3.53	3.86	4.17	4.46	4.73
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	5.6	6.8	7.9	8.8	9.7	10.4	11.2	11.8	5.3	6.5	7.5	8.4	9.2	9.9	10.6	11.2	5.0	6.1	7.1	7.9	8.6	9.3	10.0	10.6
QREV10-24SC	6.6	8.1	9.4	10.5	11.5	12.4	13.2	14.0	6.3	7.7	8.9	9.9	10.9	11.7	12.5	13.3	5.9	7.2	8.4	9.3	10.2	11.1	11.8	12.5
QREV11-24SC	7.7	9.4	10.9	12.2	13.3	14.4	15.4	16.3	7.3	8.9	10.3	11.5	12.6	13.6	14.6	15.5	6.9	8.4	9.7	10.9	11.9	12.9	13.7	14.6
QREV12-24SC	8.7	10.7	12.3	13.8	15.1	16.3	17.4	18.5	8.3	10.1	11.7	13.1	14.3	15.5	16.5	17.5	7.8	9.5	11.0	12.3	13.5	14.6	15.6	16.5
QREV13-24SC	9.8	12.0	13.8	15.5	17.0	18.3	19.6	20.8	9.3	11.4	13.1	14.7	16.1	17.4	18.6	19.7	8.8	10.7	12.4	13.8	15.2	16.4	17.5	18.6
QREV14-24SC	10.8	13.3	15.3	17.1	18.7	20.2	21.6	23.0	10.3	12.6	14.5	16.2	17.8	19.2	20.5	21.8	9.7	11.9	13.7	15.3	16.8	18.1	19.4	20.5
QREV15-24SC	11.9	14.6	16.8	18.8	20.6	22.3	23.8	25.2	11.3	13.8	15.9	17.8	19.5	21.1	22.6	23.9	10.6	13.0	15.0	16.8	18.4	19.9	21.3	22.6

Table 52: R417A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.40	0.49	0.56	0.63	0.69	0.74	0.80	0.84	0.38	0.47	0.54	0.61	0.67	0.72	0.77	0.82	0.36	0.44	0.51	0.57	0.62	0.67	0.72	0.76
QREV02-24SC	0.98	1.21	1.39	1.56	1.71	1.84	1.97	2.09	0.95	1.17	1.35	1.51	1.65	1.78	1.91	2.02	0.89	1.09	1.26	1.41	1.54	1.66	1.78	1.89
QREV03-24SC	1.28	1.57	1.81	2.02	2.22	2.39	2.56	2.71	1.24	1.52	1.75	1.96	2.14	2.32	2.48	2.63	1.15	1.41	1.63	1.82	2.00	2.16	2.31	2.45
QREV04-24SC	1.57	1.93	2.22	2.49	2.72	2.94	3.15	3.34	1.52	1.86	2.15	2.41	2.64	2.85	3.04	3.23	1.42	1.74	2.01	2.24	2.46	2.66	2.84	3.01
QREV05-24SC	2.16	2.65	3.06	3.42	3.74	4.04	4.32	4.59	2.09	2.56	2.96	3.31	3.62	3.91	4.18	4.44	1.95	2.39	2.76	3.08	3.38	3.65	3.90	4.14
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.8	5.9	6.8	7.6	8.4	9.0	9.7	10.3	4.7	5.7	6.6	7.4	8.1	8.8	9.4	9.9	4.4	5.3	6.2	6.9	7.6	8.2	8.7	9.3
QREV10-24SC	5.7	7.0	8.1	9.1	9.9	10.7	11.5	12.2	5.5	6.8	7.8	8.8	9.6	10.4	11.1	11.8	5.2	6.3	7.3	8.2	9.0	9.7	10.3	11.0
QREV11-24SC	6.7	8.2	9.4	10.5	11.5	12.5	13.3	14.1	6.4	7.9	9.1	10.2	11.2	12.1	12.9	13.7	6.0	7.4	8.5	9.5	10.4	11.2	12.0	12.7
QREV12-24SC	7.6	9.3	10.7	11.9	13.1	14.1	15.1	16.0	7.3	9.0	10.3	11.6	12.7	13.7	14.6	15.5	6.8	8.3	9.6	10.8	11.8	12.7	13.6	14.5
QREV13-24SC	8.5	10.4	12.0	13.4	14.7	15.9	17.0	18.0	8.2	10.1	11.6	13.0	14.2	15.4	16.4	17.4	7.7	9.4	10.8	12.1	13.3	14.3	15.3	16.2
QREV14-24SC	9.4	11.5	13.3	14.8	16.2	17.5	18.8	19.9	9.1	11.1	12.8	14.3	15.7	17.0	18.1	19.2	8.5	10.4	12.0	13.4	14.7	15.8	16.9	17.9
QREV15-24SC	10.3	12.8	14.6	16.3	17.9	19.3	20.6	21.9	10.0	12.2	14.1	15.8	17.3	18.7	19.9	21.2	9.3	11.4	13.2	14.7	16.1	17.4	18.6	19.7

Table 53: R417A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.84	1.75	1.67	1.58	1.50	1.41	1.33	1.24	1.16	1.07	0.98	0.89	0.80	0.71	0.62

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 54: R422A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 1 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.26	1.55	1.79	2.00	2.19	2.36	2.53	2.68	1.20	1.47	1.70	1.90	2.08	2.25	2.40	2.55	1.13	1.39	1.60	1.79	1.96	2.12	2.26	2.40
QREV02-24SC	3.13	3.83	4.43	4.95	5.42	5.85	6.26	6.64	2.97	3.64	4.20	4.70	5.15	5.56	5.94	6.31	2.80	3.43	3.97	4.43	4.86	5.25	5.61	5.95
QREV03-24SC	4.06	4.98	5.75	6.43	7.04	7.60	8.13	8.62	3.86	4.73	5.46	6.10	6.69	7.22	7.72	8.19	3.64	4.46	5.15	5.76	6.31	6.81	7.28	7.72
QREV04-24SC	5.00	6.12	7.07	7.90	8.66	9.35	10.0	10.6	4.75	5.81	6.71	7.51	8.22	8.88	9.49	10.1	4.48	5.48	6.33	7.08	7.76	8.38	8.96	9.50
QREV05-24SC	6.87	8.41	9.71	10.9	11.9	12.9	13.7	14.6	6.52	7.99	9.22	10.3	11.3	12.2	13.0	13.8	6.15	7.54	8.70	9.73	10.7	11.5	12.3	13.1
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	15.4	18.8	21.7	24.3	26.6	28.8	30.7	32.6	14.6	17.9	20.6	23.1	25.3	27.3	29.2	31.0	13.8	16.9	19.5	21.8	23.8	25.8	27.5	29.2
QREV10-24SC	18.2	22.3	25.7	28.8	31.5	34.1	36.4	38.6	17.3	21.2	24.5	27.3	29.9	32.3	34.6	36.7	16.3	20.0	23.1	25.8	28.3	30.5	32.6	34.6
QREV11-24SC	21.2	25.9	29.9	33.5	36.7	39.6	42.3	44.9	20.1	24.6	28.4	31.8	34.8	37.6	40.2	42.6	19.0	23.2	26.8	30.0	32.8	35.5	37.9	40.2
QREV12-24SC	24.0	29.4	33.9	37.9	41.6	44.9	48.0	50.9	22.8	27.9	32.2	36.0	39.5	42.6	45.6	48.4	21.5	26.3	30.4	34.0	37.2	40.2	43.0	45.6

Quick Response Expansion Valve Selection Guide (Continued)

Table 54: R422A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 2 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV13-24SC	27.0	33.0	38.1	42.6	46.7	50.4	53.9	57.2	25.6	31.4	36.2	40.5	44.3	47.9	51.2	54.3	24.1	29.6	34.2	38.2	41.8	45.2	48.3	51.2
QREV14-24SC	29.8	36.5	42.1	47.1	51.6	55.7	59.6	63.2	28.3	34.7	40.0	44.7	49.0	52.9	56.6	60.0	26.7	32.7	37.7	42.2	46.2	49.9	53.4	56.6
QREV15-24SC	32.7	40.1	46.3	51.8	56.7	61.3	65.5	69.5	31.1	38.1	44.0	49.2	53.9	58.2	62.2	66.0	29.3	35.9	41.5	46.4	50.8	54.9	58.7	62.2

Table 55: R422A Application Capacity Ratings in kW (at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.06	1.30	1.50	1.68	1.84	1.99	2.12	2.25	0.99	1.21	1.40	1.56	1.71	1.85	1.97	2.09	0.91	1.12	1.29	1.44	1.58	1.71	1.82	1.93
QREV02-24SC	2.63	3.22	3.72	4.15	4.55	4.92	5.25	5.57	2.44	2.99	3.46	3.87	4.23	4.57	4.89	5.19	2.26	2.77	3.19	3.57	3.91	4.22	4.52	4.79
QREV03-24SC	3.41	4.18	4.83	5.39	5.91	6.38	6.82	7.24	3.17	3.89	4.49	5.02	5.50	5.94	6.35	6.73	2.93	3.59	4.15	4.64	5.08	5.49	5.86	6.22
QREV04-24SC	4.20	5.14	5.93	6.64	7.27	7.85	8.39	8.90	3.90	4.78	5.52	6.17	6.76	7.31	7.81	8.28	3.61	4.42	5.10	5.70	6.25	6.75	7.21	7.65
QREV05-24SC	5.77	7.06	8.15	9.12	9.99	10.8	11.5	12.2	5.37	6.57	7.59	8.48	9.29	10.0	10.7	11.4	4.95	6.07	7.01	7.83	8.58	9.27	9.91	10.5
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	12.9	15.8	18.2	20.4	22.3	24.1	25.8	27.4	12.0	14.7	17.0	19.0	20.8	22.5	24.0	25.5	11.1	13.6	15.7	17.5	19.2	20.7	22.2	23.5
QREV10-24SC	15.3	18.7	21.6	24.2	26.5	28.6	30.6	32.4	14.2	17.4	20.1	22.5	24.6	26.6	28.4	30.2	13.1	16.1	18.6	20.8	22.8	24.6	26.3	27.9
QREV11-24SC	17.8	21.8	25.1	28.1	30.8	33.2	35.5	37.7	16.5	20.2	23.4	26.1	28.6	30.9	33.1	35.1	15.3	18.7	21.6	24.1	26.4	28.6	30.5	32.4
QREV12-24SC	20.1	24.7	28.5	31.9	34.9	37.7	40.3	42.7	18.7	23.0	26.5	29.6	32.5	35.1	37.5	39.8	17.3	21.2	24.5	27.4	30.0	32.4	34.6	36.7
QREV13-24SC	22.6	27.7	32.0	35.8	39.2	42.3	45.3	48.0	21.1	25.8	29.8	33.3	36.5	39.4	42.1	44.7	19.4	23.8	27.5	30.8	33.7	36.4	38.9	41.3
QREV14-24SC	25.0	30.6	35.4	39.5	43.3	46.8	50.0	53.1	23.3	28.5	32.9	36.8	40.3	43.5	46.5	49.4	21.5	26.3	30.4	34.0	37.2	402	43.0	45.6
QREV15-24SC	27.5	33.7	38.9	43.5	47.6	51.4	55.0	58.3	25.6	31.3	36.2	40.5	44.3	47.9	51.2	54.3	23.6	28.9	33.4	37.4	40.9	44.2	47.3	50.1

Table 56: R422A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.95	1.85	1.75	1.65	1.55	1.45	1.35	1.25	1.15	1.04	0.94	0.83	0.72	0.60	0.49

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 57: R422A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.36	0.44	0.51	0.57	0.62	0.67	0.72	0.76	0.34	0.41	0.48	0.53	0.58	0.63	0.67	0.71	0.31	0.38	0.44	0.50	0.54	0.59	0.63	0.6
QREV02-24SC	0.89	1.09	1.25	1.40	1.54	1.66	1.77	1.88	0.83	1.02	1.18	1.32	1.44	1.56	1.67	1.77	0.78	0.95	1.10	1.23	1.35	1.46	1.56	1.65
QREV03-24SC	1.15	1.41	1.63	1.82	2.00	2.16	2.30	2.44	1.08	1.33	1.53	1.71	1.88	2.03	2.17	2.30	1.01	1.24	1.43	1.60	1.75	1.89	2.02	2.14
QREV04-24SC	1.42	1.74	2.00	2.24	2.45	2.65	2.83	3.01	1.33	1.63	1.88	2.11	2.31	2.49	2.66	2.83	1.24	1.52	1.76	1.96	2.15	2.32	2.49	2.64
QREV05-24SC	1.95	2.38	2.75	3.08	3.37	3.64	3.89	4.13	1.83	2.24	2.59	2.89	3.17	3.42	3.66	3.88	1.71	2.09	2.41	2.70	2.96	3.19	3.41	3.62
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.4	5.3	6.2	6.9	7.5	8.2	8.7	9.2	4.1	5.0	5.8	6.5	7.1	7.7	8.2	8.7	3.8	4.7	5.4	6.0	6.6	7.1	7.6	8.1
QREV10-24SC	5.2	6.3	7.3	8.2	8.9	9.7	10.3	10.9	4.9	5.9	6.9	7.7	8.4	9.1	9.7	10.3	4.5	5.5	6.4	7.2	7.8	8.5	9.1	9.6
QREV11-24SC	6.0	7.3	8.5	9.5	10.4	11.2	12.0	12.7	5.6	6.9	8.0	8.9	9.8	10.6	11.3	12.0	5.3	6.4	7.4	8.3	9.1	9.8	10.5	11.2
QREV12-24SC	6.8	8.3	9.6	10.8	11.8	12.7	13.6	14.4	6.4	7.8	9.0	10.1	11.1	12.0	12.8	13.6	6.0	7.3	8.4	9.4	10.3	11.2	11.9	12.7
QREV13-24SC	7.6	9.4	10.8	12.1	13.2	14.3	15.3	16.2	7.2	8.8	10.2	11.4	12.4	13.4	14.4	15.2	6.7	8.2	9.5	10.6	11.6	12.5	13.4	14.2
QREV14-24SC	8.4	10.3	11.9	13.4	14.6	15.8	16.9	17.9	7.9	9.7	11.2	12.6	13.8	14.9	15.9	16.8	7.4	9.1	10.5	11.7	12.8	13.9	14.8	15.7
QREV15-24SC	9.3	11.4	13.1	14.7	16.1	17.4	18.6	19.7	8.7	10.7	12.3	13.8	15.1	16.3	17.5	18.5	8.1	10.0	11.5	12.9	14.1	15.2	16.3	17.3

Table 58: R422A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F (Part 1 of 2)

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.30	0.37	0.43	0.48	0.52	0.57	0.60	0.64	0.29	0.36	0.41	0.46	0.50	0.54	0.58	0.62	0.27	0.33	0.38	0.42	0.46	0.50	0.53	0.57
QREV02-24SC	0.75	0.92	1.06	1.18	1.30	1.40	1.50	1.59	0.72	0.88	1.02	1.14	1.25	1.35	1.44	1.53	0.66	0.81	0.93	1.04	1.14	1.23	1.32	1.40

Quick Response Expansion Valve Selection Guide (Continued)

Table 58: R422A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F (Part 2 of 2)

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV03-24SC	0.97	1.19	1.38	1.54	1.68	1.82	1.95	2.06	0.93	1.14	1.32	1.48	1.62	1.75	1.87	1.98	0.86	1.05	1.21	1.35	1.48	1.60	1.71	1.82
QREV04-24SC	1.20	1.47	1.69	1.89	2.07	2.24	2.39	2.54	1.15	1.41	1.63	1.82	1.99	2.15	2.30	2.44	1.05	1.29	1.49	1.67	1.82	1.97	2.11	2.23
QREV05-24SC	1.64	2.01	2.32	2.60	2.85	3.07	3.29	3.49	1.58	1.93	2.23	2.50	2.74	2.95	3.16	3.35	1.45	1.77	2.05	2.29	2.51	2.71	2.89	3.07
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	3.7	4.5	5.2	5.8	6.4	6.9	7.4	7.8	3.5	4.3	5.0	5.6	6.1	6.6	7.1	7.5	3.2	4.0	4.6	5.1	5.6	6.1	6.5	6.9
QREV10-24SC	4.4	5.3	6.2	6.9	7.5	8.2	8.7	9.2	4.2	5.1	5.9	6.6	7.3	7.8	8.4	8.9	3.8	4.7	5.4	6.1	6.6	7.2	7.7	8.1
QREV11-24SC	5.1	6.2	7.2	8.0	8.8	9.5	10.1	10.7	4.9	6.0	6.9	7.7	8.4	9.1	9.7	10.3	4.5	5.5	6.3	7.1	7.7	8.3	8.9	9.5
QREV12-24SC	5.7	7.0	8.1	9.1	9.9	10.7	11.5	12.2	5.5	6.8	7.8	8.7	9.6	10.3	11.0	11.7	5.1	6.2	7.2	8.0	8.8	9.5	10.1	10.7
QREV13-24SC	6.5	7.9	9.1	10.2	11.2	12.1	12.9	13.7	6.2	7.6	8.8	9.8	10.7	11.6	12.4	13.1	5.7	7.0	8.0	9.0	9.8	10.6	11.4	12.1
QREV14-24SC	7.1	8.7	10.1	11.3	12.3	13.3	14.3	15.1	6.9	8.4	9.7	10.8	11.9	12.8	13.7	14.5	6.3	7.7	8.9	9.9	10.9	11.7	12.6	13.3
QREV15-24SC	7.8	9.6	11.1	12.4	13.6	14.7	15.7	16.6	7.5	9.2	10.6	11.9	13.0	14.1	15.1	16.0	6.9	8.5	9.8	10.9	12.0	12.9	13.8	14.6

Table 59: R422A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)													
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
2.07	1.96	1.86	1.75	1.64	1.53	1.42	1.31	1.20	1.09	0.98	0.86	0.74	0.62	0.49

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 60: R422D Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.44	1.77	2.04	2.28	2.50	2.70	2.89	3.06	1.37	1.68	1.94	2.17	2.38	2.57	2.75	2.92	1.30	1.60	1.84	2.06	2.26	2.44	2.61	2.76
QREV02-24SC	3.57	4.38	5.05	5.65	6.19	6.68	7.14	7.58	3.40	4.17	4.81	5.38	5.90	6.37	6.81	7.22	3.23	3.95	4.56	5.10	5.59	6.04	6.45	6.84
QREV03-24SC	4.64	5.68	6.56	7.34	8.04	8.68	9.28	9.84	4.42	5.41	6.25	6.99	7.66	8.27	8.84	9.38	4.19	5.13	5.93	6.63	7.26	7.84	8.38	8.89
QREV04-24SC	5.71	6.99	8.07	9.02	9.88	10.7	11.4	12.1	5.44	6.66	7.69	8.60	9.42	10.2	10.9	11.5	5.15	6.31	7.29	8.15	8.93	9.64	10.3	10.9
QREV05-24SC	7.84	9.60	11.1	12.4	13.6	14.7	15.7	16.6	7.5	9.2	10.6	11.8	12.9	13.9	14.9	15.9	7.08	8.67	10.0	11.2	12.3	13.3	14.2	15.0
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	17.5	21.5	24.8	27.7	30.4	32.8	35.1	37.2	16.7	20.5	23.6	26.4	29.0	31.3	33.4	35.5	15.8	19.4	22.4	25.1	27.4	29.6	31.7	33.6
QREV10-24SC	20.8	25.5	29.4	32.9	36.0	38.9	41.6	44.1	19.8	24.3	28.0	31.3	34.3	37.1	39.6	42.0	18.8	23.0	26.5	29.7	32.5	35.1	37.5	39.8
QREV11-24SC	24.2	29.6	34.2	38.2	41.8	45.2	48.3	51.2	23.0	28.2	32.6	36.4	39.9	43.1	46.0	48.8	21.8	26.7	30.9	34.5	37.8	40.8	43.6	46.3
QREV12-24SC	27.4	33.6	38.7	43.3	47.5	51.3	54.8	58.1	26.1	32.0	36.9	41.3	45.2	48.8	52.2	55.4	24.7	30.3	35.0	39.1	42.9	46.3	49.5	52.5
QREV13-24SC	30.8	37.7	43.5	48.7	53.3	57.6	61.5	65.3	29.3	35.9	41.5	46.4	50.8	54.9	58.6	62.2	27.8	34.0	39.3	43.9	48.1	52.0	55.6	59.0
QREV14-24SC	34.0	41.7	48.1	53.8	58.9	63.6	68.0	72.1	32.4	39.7	45.8	51.2	56.1	60.6	64.8	68.7	30.7	37.6	43.4	48.6	53.2	57.5	61.4	65.2
QREV15-24SC	37.4	45.8	52.9	59.1	64.7	69.9	74.8	79.3	35.6	43.6	50.4	56.3	61.7	66.6	71.2	75.6	33.8	41.4	47.7	53.4	58.5	63.2	67.5	71.6

Table 61: R422D Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 1 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.23	1.50	1.74	1.94	2.13	2.30	2.46	2.61	1.15	1.41	1.63	1.82	1.99	2.15	2.30	2.44	1.07	1.31	1.52	1.70	1.86	2.01	2.15	2.28
QREV02-24SC	3.04	3.73	4.30	4.81	5.27	5.69	6.08	6.45	2.85	3.49	4.03	4.51	4.94	5.34	5.70	6.05	2.66	3.26	3.76	4.20	4.60	4.97	5.32	5.64
QREV03-24SC	3.95	4.84	5.59	6.25	6.84	7.39	7.90	8.38	3.70	4.54	5.24	5.86	6.41	6.93	7.41	7.86	3.45	4.23	4.88	5.46	5.98	6.46	6.90	7.32
QREV04-24SC	4.86	5.95	6.87	7.68	8.42	9.09	9.72	10.3	4.55	5.58	6.44	7.20	7.89	8.52	9.11	9.66	4.25	5.20	6.00	6.71	7.35	7.94	8.49	9.01
QREV05-24SC	6.68	8.18	9.44	10.6	11.6	12.5	13.4	14.2	6.26	7.66	8.85	9.89	10.8	11.7	12.5	13.3	5.83	7.14	8.25	9.22	10.1	10.9	11.7	12.4
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	14.9	18.3	21.1	23.6	25.9	27.9	29.9	31.7	14.0	17.2	19.8	22.1	24.3	26.2	28.0	29.7	13.1	16.0	18.5	20.6	22.6	24.4	26.1	27.7
QREV10-24SC	17.7	21.7	25.0	28.0	30.7	33.1	35.4	37.5	16.6	20.3	23.5	26.2	28.7	31.0	33.2	35.2	15.5	18.9	21.9	24.4	26.8	28.9	30.9	32.8
QREV11-24SC	20.6	25.2	29.1	32.5	35.6	38.5	41.1	43.6	19.3	23.6	27.3	30.5	33.4	36.1	38.6	40.9	18.0	22.0	25.4	28.4	31.1	33.6	35.9	38.1
QREV12-24SC	23.3	28.6	33.0	36.9	40.4	43.6	46.7	49.5	21.9	26.8	30.9	34.6	37.9	40.9	43.7	46.4	20.4	25.0	28.8	32.2	35.3	38.1	40.8	43.2

Quick Response Expansion Valve Selection Guide (Continued)

Table 61: R422D Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 2 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV13-24SC	26.2	32.1	37.1	41.4	45.4	49.0	52.4	55.6	24.6	30.1	34.7	38.8	42.5	46.0	49.1	52.1	22.9	28.0	32.4	36.2	39.7	42.8	45.8	48.6
QREV14-24SC	29.0	35.5	41.0	45.8	50.2	54.2	57.9	61.4	27.1	33.3	38.4	42.9	47.0	50.8	54.3	57.6	25.3	31.0	35.8	40.0	43.8	47.3	50.6	53.7
QREV15-24SC	31.8	39.0	45.0	50.3	55.1	59.6	63.7	67.5	29.8	36.5	42.2	47.2	51.7	55.8	59.7	63.3	27.8	34.1	39.3	44.0	48.2	52.0	55.6	59.0

Table 62: R422D Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.83	1.74	1.65	1.57	1.48	1.39	1.30	1.22	1.13	1.04	0.95	0.85	0.76	0.66	0.56

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 63: R422D Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.41	0.50	0.58	0.65	0.71	0.77	0.82	0.87	0.39	0.47	0.55	0.61	0.67	0.72	0.77	0.82	0.36	0.44	0.51	0.57	0.63	0.68	0.73	0.77
QREV02-24SC	1.01	1.24	1.43	1.60	1.76	1.90	2.03	2.15	0.96	1.17	1.35	1.51	1.66	1.79	1.91	2.03	0.90	1.10	1.27	1.42	1.56	1.68	1.80	1.91
QREV03-24SC	1.32	1.61	1.86	2.08	2.28	2.46	2.63	2.79	1.24	1.52	1.76	1.97	2.15	2.33	2.49	2.64	1.17	1.43	1.65	1.84	2.02	2.18	2.33	2.47
QREV04-24SC	1.62	1.98	2.29	2.56	2.80	3.03	3.24	3.43	1.53	1.87	2.16	2.42	2.65	2.86	3.06	3.24	1.43	1.76	2.03	2.27	2.49	2.68	2.87	3.04
QREV05-24SC	2.22	2.72	3.14	3.52	3.85	4.16	4.45	4.72	2.10	2.57	2.97	3.32	3.64	3.93	4.20	4.46	1.97	2.41	2.79	3.12	3.41	3.69	3.94	4.18
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	5.0	6.1	7.0	7.9	8.6	9.3	10.0	10.6	4.7	5.8	6.6	7.4	8.1	8.8	9.4	10.0	4.4	5.4	6.2	7.0	7.6	8.3	8.8	9.4
QREV10-24SC	5.9	7.2	8.3	9.3	10.2	11.0	11.8	12.5	5.6	6.8	7.9	8.8	9.6	10.4	11.1	11.8	5.2	6.4	7.4	8.3	9.1	9.8	10.5	11.1
QREV11-24SC	6.9	8.4	9.7	10.8	11.9	12.8	13.7	14.5	6.5	7.9	9.2	10.2	11.2	12.1	12.9	13.7	6.1	7.4	8.6	9.6	10.5	11.4	12.1	12.9
QREV12-24SC	7.8	9.5	11.0	12.3	13.5	14.5	15.5	16.5	7.3	9.0	10.4	11.6	12.7	13.7	14.7	15.6	6.9	8.4	9.7	10.9	11.9	12.9	13.8	14.6
QREV13-24SC	8.7	10.7	12.3	13.8	15.1	16.3	17.5	18.5	8.2	10.1	11.7	13.0	14.3	15.4	16.5	17.5	7.7	9.5	10.9	12.2	13.4	14.5	15.5	16.4
QREV14-24SC	9.6	11.8	13.6	15.3	16.7	18.0	19.3	20.5	9.1	11.2	12.9	14.4	15.8	17.0	18.2	19.3	8.6	10.5	12.1	13.5	14.8	16.0	17.1	18.1
QREV15-24SC	10.6	13.0	15.0	16.8	18.4	19.8	21.2	22.5	10.0	12.3	14.2	15.8	17.4	18.7	20.0	21.2	9.4	11.5	13.3	14.9	16.3	17.6	18.8	19.9

Table 64: R422D Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.35	0.43	0.50	0.55	0.61	0.66	0.70	0.74	0.34	0.41	0.48	0.53	0.59	0.63	0.68	0.72	0.31	0.38	0.44	0.49	0.54	0.59	0.63	0.66
QREV02-24SC	0.87	1.06	1.23	1.37	1.50	1.62	1.74	1.84	0.84	1.03	1.18	1.32	1.45	1.57	1.67	1.78	0.78	0.95	1.10	1.23	1.34	1.45	1.55	1.64
QREV03-24SC	1.13	1.38	1.59	1.78	1.95	2.11	2.25	2.39	1.09	1.33	1.54	1.72	1.88	2.03	2.18	2.31	1.01	1.23	1.42	1.59	1.74	1.88	2.01	2.14
QREV04-24SC	1.39	1.70	1.96	2.19	2.40	2.59	2.77	2.94	1.34	1.64	1.89	2.11	2.32	2.50	2.68	2.84	1.24	1.52	1.75	1.96	2.14	2.32	2.48	2.63
QREV05-24SC	1.91	2.33	2.69	3.01	3.30	3.56	3.81	4.04	1.84	2.25	2.60	2.91	3.18	3.44	3.68	3.90	1.70	2.08	2.41	2.69	2.95	3.18	3.40	3.61
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.3	5.2	6.0	6.7	7.4	8.0	8.5	9.0	4.1	5.0	5.8	6.5	7.1	7.7	8.2	8.7	3.8	4.7	5.4	6.0	6.6	7.1	7.6	8.1
QREV10-24SC	5.1	6.2	7.1	8.0	8.7	9.4	10.1	10.7	4.9	6.0	6.9	7.7	8.4	9.1	9.7	10.3	4.5	5.5	6.4	7.1	7.8	8.4	9.0	9.6
QREV11-24SC	5.9	7.2	8.3	9.3	10.2	11.0	11.7	12.5	5.7	6.9	8.0	9.0	9.8	10.6	11.3	12.0	5.2	6.4	7.4	8.3	9.1	9.8	10.5	11.1
QREV12-24SC	6.7	8.2	9.4	10.5	11.5	12.5	13.3	14.1	6.4	7.9	9.1	10.2	11.1	12.0	12.8	13.6	5.9	7.3	8.4	9.4	10.3	11.1	11.9	12.6
QREV13-24SC	7.5	9.2	10.6	11.8	13.0	14.0	15.0	15.9	7.2	8.8	10.2	11.4	12.5	13.5	14.4	15.3	6.7	8.2	9.4	10.6	11.6	12.5	13.4	14.2
QREV14-24SC	8.3	10.1	11.7	13.1	14.3	15.5	16.5	17.5	8.0	9.8	11.3	12.6	13.8	14.9	15.9	16.9	7.4	9.0	10.4	11.7	12.8	13.8	14.8	15.7
QREV15-24SC	9.1	11.1	12.8	14.4	15.7	17.0	18.2	19.3	8.8	10.7	12.4	13.9	15.2	16.4	17.5	18.6	8.1	9.9	11.5	12.8	14.0	15.2	16.2	17.2

Quick Response Expansion Valve Selection Guide (Continued)

Table 65: R422D Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**
Correction Factor														
1.94	1.84	1.75	1.65	1.56	1.47	1.37	1.27	1.18	1.08	0.98	0.88	0.78	0.67	0.57

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 66: R427A Application Capacity Ratings in kW at Evaporator Temperature 10°C at -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	1.92	2.35	2.71	3.03	3.32	3.59	3.83	4.07	1.85	2.27	2.62	2.93	3.21	3.47	3.71	3.93	1.79	2.19	2.53	2.82	3.09	3.34	3.57	3.79
QREV02-24SC	4.75	5.81	6.71	7.51	8.22	8.88	9.49	10.1	4.59	5.62	6.49	7.26	7.95	8.59	9.18	9.74	4.42	5.42	6.26	6.99	7.66	8.28	8.85	9.38
QREV03-24SC	6.17	7.55	8.72	9.75	10.7	11.5	12.3	13.1	5.96	7.30	8.43	9.43	10.3	11.2	11.9	12.7	5.74	7.03	8.12	9.08	9.95	10.8	11.5	12.2
QREV04-24SC	7.58	9.29	10.7	11.9	13.1	14.2	15.2	16.1	7.33	8.98	10.4	11.6	12.7	13.7	14.7	15.6	7.06	8.65	9.99	11.2	12.2	13.2	14.1	14.9
QREV05-24SC	10.4	12.8	14.7	16.5	18.0	19.5	20.8	22.1	10.1	12.3	14.3	15.9	17.5	18.9	20.2	21.4	9.71	11.0	13.7	15.4	16.8	18.2	19.4	20.6
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	23.3	28.6	33.0	36.9	40.4	43.6	46.6	49.5	22.5	27.6	31.9	35.6	39.0	42.2	45.1	47.8	21.7	26.6	30.7	34.3	37.6	40.6	43.4	46.1
QREV10-24SC	27.6	33.8	39.1	43.7	47.8	51.7	55.2	58.6	26.7	32.7	37.8	42.2	46.3	50.0	53.4	56.7	25.7	31.5	36.4	40.7	44.6	48.1	51.5	54.6
QREV11-24SC	32.1	39.3	45.4	50.8	55.6	60.1	64.2	68.1	31.0	38.0	43.9	49.1	53.8	58.1	62.1	65.9	29.9	36.6	42.3	47.3	51.8	56.0	59.8	63.4
QREV12-24SC	36.4	44.6	51.5	57.6	63.1	68.1	72.8	77.2	35.2	43.1	49.8	55.7	61.0	65.9	70.4	74.7	33.9	41.5	48.0	53.6	58.8	63.5	67.8	72.0
QREV13-24SC	40.9	50.1	57.8	64.7	70.8	76.5	81.8	86.7	39.5	48.4	55.9	62.5	68.5	74.0	79.1	83.9	38.1	46.7	53.9	60.2	66.0	71.3	76.2	80.8
QREV14-24SC	45.2	55.4	63.9	71.5	78.3	84.6	90.4	95.9	43.7	53.5	61.8	69.1	75.7	81.8	87.4	92.7	42.1	51.6	59.5	66.6	72.9	78.8	84.2	89.3
QREV15-24SC	49.7	60.8	70.3	78.5	86.0	92.9	99.4	105.4	48.0	58.8	67.9	76.0	83.2	89.9	96.1	101.9	46.3	56.7	65.5	73.2	80.2	86.6	92.6	98.2

Table 67: R427A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV01-24SC	1.72	2.10	2.43	2.71	2.97	3.21	3.43	3.64	1.64	2.01	2.32	2.60	2.84	3.07	3.28	3.48	1.57	1.92	2.21	2.47	2.71	2.93	3.13	3.32
QREV02-24SC	4.25	5.20	6.01	6.72	7.36	7.95	8.49	9.01	4.06	4.98	5.75	6.43	7.04	7.60	8.13	8.62	3.88	4.75	5.48	6.13	6.71	7.25	7.75	8.22
QREV03-24SC	5.52	6.75	7.80	8.72	9.55	10.3	11.0	11.7	5.28	6.46	7.46	8.34	9.14	9.87	10.6	11.2	5.03	6.16	7.12	7.96	8.72	9.42	10.1	10.7
QREV04-24SC	6.78	8.31	9.6	10.8	11.8	12.7	13.6	14.4	6.49	7.95	9.18	10.3	11.2	12.1	12.9	13.8	6.19	7.58	8.75	9.79	10.7	11.6	12.4	13.1
QREV05-24SC	9.32	11.4	13.2	14.7	16.1	17.4	18.6	19.8	8.92	10.9	12.6	14.1	15.5	16.7	17.8	18.9	8.50	10.4	12.0	13.5	14.7	15.9	17.0	18.0
	4	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**
QREV09-24SC	20.9	25.5	29.5	33.0	36.1	39.0	41.7	44.2	20.0	24.4	28.2	31.6	34.6	37.3	39.9	42.3	19.0	23.3	26.9	30.1	33.0	35.6	38.1	40.4
QREV10-24SC	24.7	30.3	34.9	39.1	42.8	46.2	49.4	52.4	23.6	29.0	33.4	37.4	41.0	44.2	47.3	50.2	22.5	27.6	31.9	35.6	39.1	42.2	45.1	47.8
QREV11-24SC	28.7	35.2	40.6	45.4	49.7	53.7	57.4	60.9	27.5	33.7	38.9	43.5	47.6	51.4	55.0	58.3	26.2	32.1	37.1	41.4	45.4	49.0	52.4	55.6
QREV12-24SC	32.6	39.9	46.1	51.5	56.4	60.9	65.1	69.1	31.2	38.2	44.1	49.3	54.0	58.3	62.3	66.1	29.7	36.4	42.0	47.0	51.5	55.6	59.4	63.0
QREV13-24SC	36.6	44.8	51.7	57.8	63.4	68.4	73.2	77.6	35.0	42.9	49.5	55.3	60.6	65.5	70.0	74.3	33.4	40.9	47.2	52.8	57.8	62.5	66.8	70.8
QREV14-24SC	40.4	49.5	57.2	63.9	70.0	75.6	80.9	85.8	38.7	47.4	54.7	61.2	67.0	72.4	77.4	82.1	36.9	45.2	52.2	58.3	63.9	69.0	73.8	78.3
QREV15-24SC	44.4	54.4	62.9	70.3	77.0	83.1	88.9	94.3	42.5	52.1	60.1	67.2	73.7	79.6	85.1	90.2	40.6	49.7	57.4	64.1	70.2	75.9	81.1	86.0

Table 68: R427A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	**-5**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**
Correction Factor														
1.64	1.57	1.50	1.44	1.37	1.30	1.23	1.17	1.10	1.03	0.96	0.89	0.81	0.74	0.67

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 69: R427A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 1 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	**90**	**120**	**150**	**180**	**210**	**240**	**270**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**	**60**	**90**	**120**	**150**	**180**	**210**	**240**	**270**
QREV01-24SC	0.55	0.67	0.77	0.87	0.95	1.02	1.09	1.16	0.53	0.64	0.74	0.83	0.91	0.98	1.05	1.12	0.50	0.62	0.71	0.80	0.87	0.94	1.01	1.07
QREV02-24SC	1.36	1.66	1.92	2.14	2.35	2.54	2.71	2.88	1.30	1.60	1.84	2.06	2.26	2.44	2.61	2.76	1.25	1.53	1.76	1.97	2.16	2.33	2.49	2.64

Quick Response Expansion Valve Selection Guide (Continued)

Table 69: R427A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 2 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV03-24SC	1.76	2.16	2.49	2.78	3.05	3.29	3.52	3.73	1.69	2.07	2.39	2.67	2.93	3.16	3.38	3.59	1.62	1.98	2.29	2.56	2.80	3.03	3.24	3.43
QREV04-24SC	2.16	2.65	3.06	3.42	3.75	4.05	4.33	4.59	2.08	2.55	2.94	3.29	3.60	3.89	4.16	4.41	1.99	2.44	2.82	3.15	3.45	3.73	3.98	4.22
QREV05-24SC	2.97	3.64	4.21	4.70	5.15	5.56	5.95	6.31	2.86	3.50	4.04	4.52	4.95	5.35	5.72	6.06	2.74	3.35	3.87	4.33	4.74	5.12	5.47	5.80
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.7	8.2	9.4	10.5	11.5	12.5	13.3	14.1	6.4	7.8	9.0	10.1	11.1	12.0	12.8	13.6	6.1	7.5	8.7	9.7	10.6	11.5	12.2	13.0
QREV10-24SC	7.9	9.7	11.2	12.5	13.7	14.8	15.8	16.7	7.6	9.3	10.7	12.0	13.1	14.2	15.2	16.1	7.3	8.9	10.3	11.5	12.6	13.6	14.5	15.4
QREV11-24SC	9.2	11.2	13.0	14.5	15.9	17.1	18.3	19.4	8.8	10.8	12.5	13.9	15.3	16.5	17.6	18.7	8.4	10.3	11.9	13.3	14.6	15.8	16.9	17.9
QREV12-24SC	10.4	12.7	14.7	16.4	18.0	19.4	20.8	22.1	10.0	12.2	14.1	15.8	17.3	18.7	20.0	21.2	9.6	11.7	13.5	15.1	16.6	17.9	19.1	20.3
QREV13-24SC	11.7	14.3	16.5	18.5	20.2	21.8	23.3	24.8	11.2	13.7	15.9	17.7	19.4	21.0	22.4	23.8	10.7	13.2	15.2	17.0	18.6	20.1	21.5	22.8
QREV14-24SC	12.9	15.8	18.2	20.4	22.3	24.1	25.8	27.4	12.4	15.2	17.5	19.6	21.5	23.2	24.8	26.3	11.9	14.5	16.8	18.8	20.6	22.2	23.7	25.2
QREV15-24SC	14.2	17.4	20.1	22.4	24.6	26.5	28.4	30.1	13.6	16.7	19.3	21.6	23.6	25.5	27.3	28.9	13.0	16.0	18.4	20.6	22.6	24.4	26.1	27.7

Table 70: R427A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to 40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.49	0.60	0.70	0.78	0.85	0.92	0.98	1.04	0.48	0.59	0.68	0.76	0.83	0.90	0.96	1.02	0.46	0.56	0.64	0.72	0.79	0.85	0.91	0.97
QREV02-24SC	1.22	1.49	1.72	1.93	2.11	2.28	2.44	2.58	1.19	1.46	1.68	1.88	2.06	2.22	2.38	2.52	1.13	1.38	1.59	1.78	1.95	2.11	2.26	2.39
QREV03-24SC	1.58	1.94	2.24	2.50	2.74	2.96	3.16	3.35	1.54	1.89	2.18	2.44	2.67	2.89	3.09	3.27	1.46	1.79	2.07	2.32	2.54	2.74	2.93	3.11
QREV04-24SC	1.94	2.38	2.75	3.07	3.37	3.64	3.89	4.13	1.90	2.32	2.68	3.00	3.29	3.55	3.80	4.03	1.80	2.21	2.55	2.85	3.12	3.37	3.60	3.82
QREV05-24SC	2.67	3.27	3.78	4.22	4.63	5.00	5.34	5.67	2.61	3.19	3.69	4.12	4.52	4.88	5.21	5.53	2.47	3.03	3.50	3.91	4.29	4.63	4.95	5.25
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.0	7.3	8.5	9.5	10.4	11.2	12.0	12.7	5.8	7.1	8.3	9.2	10.1	10.9	11.7	12.4	5.5	6.8	7.8	8.8	9.6	10.4	11.1	11.7
QREV10-24SC	7.1	8.7	10.0	11.2	12.3	13.3	14.2	15.0	6.9	8.5	9.8	10.9	12.0	12.9	13.8	14.7	6.6	8.0	9.3	10.4	11.4	12.3	13.1	13.9
QREV11-24SC	8.2	10.1	11.6	13.0	14.3	15.4	16.5	17.5	8.0	9.8	11.4	12.7	13.9	15.0	16.1	17.0	7.6	9.3	10.8	12.1	13.2	14.3	15.2	16.2
QREV12-24SC	9.3	11.4	13.2	14.8	16.2	17.5	18.7	19.8	9.1	11.2	12.9	14.4	15.8	17.0	18.2	19.3	8.6	10.6	12.2	13.7	15.0	16.2	17.3	18.3
QREV13-24SC	10.5	12.8	14.8	16.6	18.2	19.6	21.0	22.2	10.2	12.5	14.5	16.2	17.7	19.1	20.5	21.7	9.7	11.9	13.7	15.4	16.8	18.2	19.4	20.6
QREV14-24SC	11.6	14.2	16.4	18.3	20.1	21.7	23.2	24.6	11.3	13.9	16.0	17.9	19.6	21.2	22.6	24.0	10.7	13.1	15.2	17.0	18.6	20.1	21.5	22.8
QREV15-24SC	12.7	15.6	18.0	20.1	22.1	23.8	25.5	27.0	12.4	15.2	17.6	19.7	21.5	23.3	24.9	26.4	11.8	14.5	16.7	18.7	20.4	22.1	23.6	25.0

Table 71: R427A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.72	1.65	1.58	1.51	1.43	1.36	1.29	1.21	1.14	1.06	0.98	0.91	0.83	0.75	0.67

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 72: R438A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 1 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.72	2.11	2.44	2.73	2.99	3.23	3.45	3.66	1.66	2.03	2.34	2.62	2.87	3.10	3.32	3.52	1.59	1.94	2.24	2.51	2.75	2.97	3.17	3.37
QREV02-24SC	4.27	5.23	6.04	6.75	7.40	7.99	8.54	9.06	4.10	5.03	5.81	6.49	7.11	7.68	8.21	8.71	3.93	4.81	5.56	6.21	6.81	7.35	7.86	8.33
QREV03-24SC	5.55	6.79	7.84	8.77	9.61	1.03	11.1	11.8	5.33	6.53	7.54	8.43	9.23	9.97	10.7	11.3	5.10	6.25	7.22	8.07	8.94	9.55	10.2	10.8
QREV04-24SC	6.82	8.35	9.65	10.8	11.8	12.8	13.6	14.5	6.56	8.03	9.27	10.4	11.4	12.3	13.1	13.9	6.28	7.69	8.87	9.92	10.9	11.7	12.6	13.3
QREV05-24SC	9.37	11.5	13.3	14.8	16.2	17.5	18.7	19.9	9.01	11.0	12.7	14.2	15.6	16.9	18.0	19.1	8.62	10.6	12.2	13.6	14.9	16.1	17.2	18.3
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	21.0	25.7	29.7	33.2	36.3	39.2	41.9	44.5	20.2	24.7	28.5	31.9	34.9	37.7	40.3	42.8	19.3	23.6	27.3	30.5	33.4	36.1	38.6	40.9
QREV10-24SC	24.8	30.4	35.1	39.3	43.0	46.5	49.7	52.7	23.9	29.2	33.8	37.8	41.4	44.7	47.8	50.7	22.9	28.0	32.3	36.1	39.6	42.8	45.7	48.5
QREV11-24SC	28.9	35.4	40.8	45.7	50.0	54.0	57.8	61.3	27.8	34.0	39.3	43.9	48.1	51.9	55.5	58.9	26.6	32.5	37.6	42.0	46.0	49.7	53.1	56.4
QREV12-24SC	32.8	40.1	46.3	51.8	56.7	61.3	65.5	69.5	31.5	38.6	44.5	49.8	54.5	58.9	63.0	66.8	30.1	36.9	42.6	47.6	52.2	56.4	60.3	63.9

Quick Response Expansion Valve Selection Guide (Continued)

Table 72: R438A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 2 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV13-24SC	36.8	45.1	52.0	58.2	63.7	68.8	73.6	78.0	35.4	43.3	50.0	55.9	61.2	66.1	70.7	75.0	33.8	41.4	47.9	53.5	58.6	63.3	67.7	71.8
QREV14-24SC	40.7	49.8	57.5	64.3	70.4	76.1	81.3	86.2	39.1	47.9	55.3	61.8	67.7	73.1	78.2	82.9	37.4	45.8	52.9	59.1	64.8	70.0	74.8	79.3
QREV15-24SC	44.7	54.7	63.2	70.7	77.4	83.6	89.4	94.8	43.0	52.6	60.7	67.9	74.4	80.4	85.9	91.1	41.1	50.4	58.1	65.0	71.2	76.9	82.2	87.2

Table 73: R438A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.51	1.85	2.14	2.39	2.62	2.83	3.03	3.21	1.44	1.76	2.03	2.27	2.49	2.69	2.87	3.05	1.36	1.66	1.92	2.15	2.35	2.54	2.72	2.88
QREV02-24SC	3.75	4.59	5.30	5.92	6.49	7.01	7.49	7.95	3.56	4.36	5.03	5.62	6.16	6.65	7.11	7.54	3.36	4.12	4.76	5.32	5.82	6.29	6.72	7.13
QREV03-24SC	4.86	5.96	6.88	7.69	8.42	9.10	9.73	10.3	4.62	5.66	6.53	7.30	8.00	8.64	9.24	9.80	4.37	5.35	6.18	6.90	7.56	8.17	8.73	9.26
QREV04-24SC	5.98	7.33	8.46	9.46	10.4	11.2	11.9	12.7	5.68	6.96	8.03	8.98	9.84	10.6	11.4	12.1	5.37	6.58	7.60	8.49	9.30	10.1	10.7	11.4
QREV05-24SC	8.22	10.1	11.6	13.0	14.2	15.4	16.4	17.4	7.80	9.56	11.0	12.3	13.5	14.6	15.6	16.6	7.38	9.04	10.4	11.7	12.8	13.8	14.8	15.7
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV09-24SC	18.4	22.5	26.0	29.1	31.9	34.4	36.8	39.0	17.5	21.4	24.7	27.6	30.3	32.7	34.9	37.0	16.5	20.2	23.4	26.1	28.6	30.9	33.0	35.0
QREV10-24SC	21.8	26.7	30.8	34.5	37.7	40.8	43.6	46.2	20.7	25.3	29.3	32.7	35.8	38.7	41.4	43.9	19.6	24.0	27.7	30.9	33.9	36.6	39.1	41.5
QREV11-24SC	25.3	31.0	35.8	40.0	43.9	47.4	50.7	53.7	24.0	29.5	34.0	38.0	41.7	45.0	48.1	51.0	22.7	27.8	32.2	36.0	39.4	42.5	45.5	48.2
QREV12-24SC	28.7	35.2	40.6	45.4	49.8	53.7	57.4	60.9	27.3	33.4	38.6	43.1	47.2	51.0	54.5	57.9	25.8	31.6	36.5	40.8	44.7	48.2	51.6	54.7
QREV13-24SC	32.3	39.5	45.6	51.0	55.9	60.4	64.5	68.4	30.6	37.5	43.3	48.4	53.1	57.3	61.3	65.0	29.0	35.5	41.0	45.8	50.2	54.2	57.9	61.4
QREV14-24SC	35.7	43.7	50.4	56.4	61.8	66.7	71.3	75.6	33.9	41.5	47.9	53.5	58.6	63.3	67.7	71.8	32.0	39.2	45.3	50.6	55.4	59.9	64.0	67.9
QREV15-24SC	39.2	48.0	55.4	62.0	67.9	73.3	78.4	83.1	37.2	45.6	52.6	58.8	64.5	69.6	74.4	78.9	35.2	43.1	49.8	55.6	60.9	65.8	70.4	74.6

Table 74: R438A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.70	1.63	1.55	1.48	1.41	1.33	1.26	1.18	1.11	1.03	0.95	0.88	0.80	0.72	0.63

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 75: R438A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.49	0.60	0.69	0.78	0.85	0.92	0.98	1.04	0.47	0.57	0.66	0.74	0.81	0.88	0.94	0.99	0.44	0.55	0.63	0.70	0.77	0.83	0.89	0.94
QREV02-24SC	1.22	1.49	1.72	1.92	2.11	2.27	2.43	2.58	1.16	1.42	1.64	1.83	2.01	2.17	2.32	2.46	1.10	1.35	1.56	1.74	1.91	2.06	2.20	2.34
QREV03-24SC	1.58	1.93	2.23	2.50	2.73	2.95	3.16	3.35	1.51	1.85	2.13	2.38	2.61	2.82	3.01	3.20	1.43	1.75	2.02	2.26	2.48	2.68	2.86	3.04
QREV04-24SC	1.94	2.38	2.75	3.07	3.36	3.63	3.88	4.12	1.85	2.27	2.62	2.93	3.21	3.47	3.71	3.93	1.76	2.16	2.49	2.78	3.05	3.29	3.52	3.73
QREV05-24SC	2.67	3.27	3.77	4.22	4.62	4.99	5.34	5.66	2.55	3.12	3.60	4.03	4.41	4.76	5.09	5.40	2.42	2.96	3.42	3.82	4.19	4.52	4.84	5.13
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.0	7.3	8.4	9.4	10.3	11.2	11.9	12.7	5.7	7.0	8.1	9.0	9.9	10.7	11.4	12.1	5.4	6.6	7.7	8.6	9.4	10.1	10.8	11.5
QREV10-24SC	7.1	8.7	10.0	11.2	12.3	13.2	14.1	15.0	6.8	8.3	9.5	10.7	11.7	12.6	13.5	14.3	6.4	7.9	9.1	10.1	11.1	12.0	12.8	13.6
QREV11-24SC	8.2	10.1	11.6	13.0	14.2	15.4	16.4	17.4	7.8	9.6	11.1	12.4	13.6	14.7	15.7	16.6	7.5	9.1	10.5	11.8	12.9	13.9	14.9	15.8
QREV12-24SC	9.3	11.4	13.2	14.7	16.1	17.4	18.6	19.8	8.9	10.9	12.6	14.1	15.4	16.6	17.8	18.9	8.4	10.3	11.9	13.4	14.6	15.8	16.9	17.9
QREV13-24SC	10.5	12.8	14.8	16.6	18.1	19.6	20.9	22.2	10.0	12.2	14.1	15.8	17.3	18.7	20.0	21.2	9.5	11.6	13.4	15.0	16.4	17.8	19.0	20.1
QREV14-24SC	11.6	14.2	16.4	18.3	20.0	21.7	23.1	24.6	11.0	13.5	15.6	17.5	19.1	20.7	22.1	23.4	10.5	12.8	14.8	16.6	18.2	19.6	21.0	22.3
QREV15-24SC	12.7	15.6	18.0	20.1	22.0	23.8	25.4	27.0	12.1	14.9	17.2	19.2	21.0	22.7	24.3	25.8	11.5	14.1	16.3	18.2	20.0	21.6	23.1	24.5

Table 76: R438A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F (Part 1 of 2)

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.43	0.53	0.31	0.68	0.75	0.81	0.87	0.92	0.42	0.52	0.59	0.66	0.73	0.79	0.84	0.89	0.40	0.48	0.56	0.63	0.68	0.74	0.79	0.84
QREV02-24SC	1.07	1.31	1.52	1.69	1.86	2.01	2.14	2.27	1.04	1.28	1.47	1.65	1.80	1.95	2.08	2.21	0.98	1.20	1.38	1.55	1.70	1.83	1.96	2.08

Quick Response Expansion Valve Selection Guide (Continued)

Table 76: R438A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F (Part 2 of 2)

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV03-24SC	1.39	1.70	1.97	2.20	2.41	2.60	2.78	2.95	1.35	1.66	1.91	2.14	2.34	2.53	2.70	2.87	1.27	1.56	1.80	2.01	2.20	2.38	2.54	2.70
QREV04-24SC	1.71	2.10	2.42	2.71	2.97	3.20	3.42	3.63	1.66	2.04	2.35	2.63	2.88	3.11	3.33	3.53	1.56	1.91	2.21	2.47	2.71	2.93	3.13	3.32
QREV05-24SC	2.35	2.88	3.33	3.72	4.07	4.40	4.70	4.99	2.28	2.80	3.23	3.61	3.96	4.27	4.57	4.85	2.15	2.63	3.04	3.40	3.72	4.02	4.30	4.56
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	5.3	6.4	7.4	8.3	9.1	9.8	10.5	11.2	5.1	6.3	7.2	8.1	8.9	9.6	10.2	10.8	4.8	5.9	6.8	7.6	8.3	9.0	9.6	10.2
QREV10-24SC	6.2	7.6	8.8	9.9	10.8	11.7	12.5	13.2	6.1	7.4	8.6	9.6	10.5	11.3	12.1	12.9	5.7	7.0	8.1	9.0	9.9	10.7	11.4	12.1
QREV11-24SC	7.2	8.9	10.2	11.5	12.6	13.6	14.5	15.4	7.0	8.6	10.0	11.1	12.2	13.2	14.1	14.9	6.6	8.1	9.4	10.5	11.5	12.4	13.2	14.0
QREV12-24SC	8.2	10.1	11.6	13.0	14.2	15.4	16.4	17.4	8.0	9.8	11.3	12.6	13.8	14.9	16.0	16.9	7.5	9.2	10.6	11.9	13.0	14.0	15.0	15.9
QREV13-24SC	9.2	11.3	13.1	14.6	16.0	17.3	18.5	19.6	9.0	11.0	12.7	14.2	15.5	16.8	17.9	19.0	8.4	10.3	11.9	13.3	14.6	15.8	16.9	17.9
QREV14-24SC	10.2	12.5	14.4	16.1	17.7	19.1	20.4	21.6	9.9	12.1	14.0	15.7	17.2	18.5	19.8	21.0	9.3	11.4	13.2	14.7	16.1	17.4	18.6	19.8
QREV15-24SC	11.2	13.7	15.9	17.7	19.4	21.0	22.4	23.8	10.9	13.3	15.4	17.2	18.9	20.4	21.8	23.1	10.2	12.5	14.5	16.2	17.7	19.2	20.5	21.7

Table 77: R438A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.80	1.72	1.64	1.56	1.48	1.40	1.31	1.23	1.15	1.07	0.98	0.90	0.81	0.72	0.63

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 78: R448A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.89	2.32	2.68	2.99	3.28	3.54	3.79	4.02	1.83	2.25	2.59	2.90	3.18	3.43	3.67	3.89	1.77	2.17	2.50	2.80	3.06	3.31	3.54	3.75
QREV02-24SC	4.69	5.74	6.63	7.41	8.12	8.77	9.37	9.94	4.54	5.56	6.42	7.18	7.86	8.49	9.08	9.63	4.38	5.37	6.20	6.93	7.59	8.20	8.76	9.29
QREV03-24SC	6.09	7.45	8.61	9.62	10.5	11.4	12.2	12.9	5.90	7.22	8.34	9.32	10.2	11.0	11.8	12.5	5.69	6.97	8.05	9.00	9.85	10.6	11.4	12.1
QREV04-24SC	7.49	9.17	10.6	11.8	12.9	14.0	14.9	15.9	7.25	8.88	10.3	11.5	12.6	13.6	14.5	15.4	7.00	8.57	9.90	11.1	12.1	13.1	13.9	14.8
QREV05-24SC	10.3	12.6	14.6	16.3	17.8	19.2	20.6	21.8	9.96	12.2	14.1	15.8	17.3	18.6	19.9	21.1	9.61	11.8	13.6	15.2	16.7	17.9	19.2	20.4
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	23.0	28.2	32.6	36.4	39.9	43.1	46.0	48.8	22.3	27.3	31.5	35.3	38.6	41.7	44.6	47.3	21.5	26.4	30.4	34.0	37.3	40.3	43.0	45.6
QREV10-24SC	27.3	33.4	38.6	43.1	47.2	51.0	54.5	57.8	26.4	32.3	37.4	41.8	45.7	49.4	52.8	56.0	25.5	31.2	36.0	40.3	44.1	47.7	51.0	54.1
QREV11-24SC	31.7	38.8	44.8	50.1	54.9	59.3	63.4	67.2	30.7	37.6	43.4	48.5	53.2	57.4	61.4	65.1	29.6	36.3	41.9	46.8	51.3	55.4	59.2	62.8
QREV12-24SC	35.9	44.0	50.8	56.8	62.3	67.2	71.9	76.2	34.8	42.6	49.2	55.0	60.3	65.1	69.6	73.9	33.6	41.1	47.5	53.1	58.2	62.9	67.2	71.3
QREV13-24SC	40.4	49.4	57.1	63.8	69.9	75.5	80.7	85.6	39.1	47.9	55.3	61.8	67.7	73.2	78.2	82.9	37.7	46.2	53.4	59.7	65.4	70.6	75.5	80.0
QREV14-24SC	44.6	54.6	63.1	70.5	77.3	83.5	89.2	94.6	43.2	52.9	61.1	68.3	74.9	80.9	86.4	91.7	41.7	51.1	59.0	65.9	72.2	78.0	83.4	88.5
QREV15-24SC	49.0	60.1	69.4	77.5	84.9	91.8	98.1	104.0	47.5	58.2	67.2	75.1	82.3	88.9	95.0	100.8	45.8	56.1	64.8	72.5	79.4	85.8	91.7	97.2

Table 79: R448A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 1 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.70	2.08	2.41	2.69	2.95	3.18	3.40	3.61	1.63	2.00	2.31	2.58	2.82	3.05	3.26	3.46	1.56	1.91	2.20	2.46	2.70	2.91	3.11	3.30
QREV02-24SC	4.21	5.16	5.96	6.66	7.30	7.88	8.43	8.94	4.04	4.94	5.71	6.38	6.99	7.55	8.07	8.56	3.85	4.72	5.45	6.09	6.68	7.21	7.71	8.18
QREV03-24SC	5.47	6.70	7.74	8.65	9.48	10.2	10.9	11.6	5.24	6.42	7.41	8.29	9.08	9.81	10.5	11.1	5.01	6.13	7.08	7.91	8.67	9.36	10.0	10.6
QREV04-24SC	6.7	8.2	9.5	10.6	11.7	12.6	13.5	14.3	6.45	7.90	9.12	10.2	11.2	12.1	12.9	13.7	6.16	7.54	8.71	9.73	10.7	11.5	12.3	13.1
QREV05-24SC	9.24	11.3	13.1	14.6	16.0	17.3	18.5	19.6	8.86	10.9	12.5	14.0	15.3	16.6	17.7	18.8	8.46	10.4	11.9	13.4	14.7	15.8	16.9	17.9
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	20.7	25.3	29.3	32.7	35.8	38.7	41.4	43.9	19.8	24.3	28.0	31.3	34.3	37.1	39.6	42.0	18.9	23.2	26.8	29.9	32.8	35.4	37.9	40.2
QREV10-24SC	24.5	30.0	34.7	38.7	42.4	45.8	49.0	52.0	23.5	28.8	33.2	37.1	40.7	43.9	47.0	49.8	22.4	27.5	31.7	35.5	38.8	41.9	44.8	47.6
QREV11-24SC	28.5	34.9	40.3	45.0	49.3	53.3	57.0	60.4	27.3	33.4	38.6	43.2	47.3	51.1	54.6	57.9	26.1	31.9	36.9	41.2	45.1	48.8	52.1	55.3
QREV12-24SC	32.3	39.6	45.7	51.1	56.0	60.4	64.6	68.5	31.0	37.9	43.8	48.9	53.6	57.9	61.9	65.7	29.6	36.2	41.8	46.7	51.2	55.3	59.1	62.7

Quick Response Expansion Valve Selection Guide (Continued)

Table 79: R448A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C (Part 2 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV13-24SC	36.3	44.4	51.3	57.4	62.8	67.9	72.6	77.0	34.8	42.6	49.2	55.0	60.2	65.0	69.5	73.7	33.2	40.7	46.9	52.5	57.5	62.1	66.4	70.4
QREV14-24SC	40.1	49.1	56.7	63.4	69.5	75.0	80.2	85.1	38.4	47.1	54.3	60.8	66.6	71.9	76.8	81.5	36.7	44.9	51.9	58.0	63.6	68.6	73.4	77.8
QREV15-24SC	44.1	54.0	62.3	69.7	76.3	82.5	88.2	93.5	42.2	51.7	59.7	66.8	73.2	79.0	84.5	89.6	40.3	49.4	57.0	63.8	69.9	75.5	80.7	85.6

Table 80: R448A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.65	1.58	1.51	1.45	1.38	1.31	1.24	1.17	1.10	1.03	0.96	0.88	0.81	0.73	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 81: R448A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.54	0.66	0.77	0.86	0.94	1.01	1.08	1.15	0.52	0.64	0.74	0.82	0.90	0.97	1.04	1.11	0.50	0.61	0.71	0.79	0.86	0.93	1.00	1.06
QREV02-24SC	1.34	1.64	1.89	2.12	2.32	2.51	2.68	2.84	1.29	1.58	1.82	2.04	2.23	2.41	2.58	2.74	1.24	1.51	1.75	1.95	2.14	2.31	2.47	2.62
QREV03-24SC	1.74	2.13	2.46	2.75	3.01	3.25	3.48	3.69	1.68	2.05	2.37	2.65	2.90	3.13	3.35	3.55	1.61	1.97	2.27	2.54	2.78	3.00	3.21	3.41
QREV04-24SC	2.14	2.62	3.03	3.38	3.71	4.00	4.28	4.54	2.06	2.52	2.91	3.26	3.57	3.85	4.12	4.37	1.97	2.42	2.79	3.12	3.42	3.69	3.95	4.19
QREV05-24SC	2.94	3.60	4.16	4.65	5.09	5.50	5.88	6.24	2.83	3.47	4.00	4.48	4.90	5.30	5.66	6.00	2.71	3.32	3.84	4.29	4.70	5.08	5.43	5.76
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.6	8.1	9.3	10.4	11.4	12.3	13.2	14.0	6.3	7.8	9.0	10.0	11.0	11.9	12.7	13.4	6.1	7.4	8.6	9.6	10.5	11.4	12.1	12.9
QREV10-24SC	7.8	9.5	11.0	12.3	13.5	14.6	15.6	16.5	7.5	9.2	10.6	11.9	13.0	14.0	15.0	15.9	7.2	8.8	10.2	11.4	12.5	13.5	14.4	15.3
QREV11-24SC	9.1	11.1	12.8	14.3	15.7	16.9	18.1	19.2	8.7	10.7	12.3	13.8	15.1	16.3	17.4	18.5	8.4	10.2	11.8	13.2	14.5	15.6	16.7	17.7
QREV12-24SC	10.3	12.6	14.5	16.2	17.8	19.2	20.5	21.8	9.9	12.1	14.0	15.6	17.1	18.5	19.8	21.0	9.5	11.6	13.4	15.0	16.4	17.7	19.0	20.1
QREV13-24SC	11.5	14.1	16.3	18.2	20.0	21.6	23.1	24.5	11.1	13.6	15.7	17.6	19.2	20.8	22.2	23.6	10.6	13.0	15.1	16.8	18.4	19.9	21.3	22.6
QREV14-24SC	12.8	15.6	18.0	20.2	22.1	23.9	25.5	27.1	12.3	15.0	17.4	19.4	21.3	23.0	24.6	26.0	11.8	14.4	16.6	18.6	20.4	22.0	23.5	25.0
QREV15-24SC	14.0	17.2	19.8	22.2	24.3	26.2	28.0	29.7	13.5	16.5	19.1	21.3	23.4	25.3	27.0	28.6	12.9	15.8	18.3	20.5	22.4	24.2	25.9	27.4

Table 82: R448A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.49	0.60	0.69	0.77	0.85	0.91	0.98	1.04	0.48	0.58	0.67	0.75	0.83	0.89	0.95	1.01	0.45	0.55	0.64	0.72	0.78	0.85	0.91	0.96
QREV02-24SC	1.21	1.48	1.71	1.91	2.09	2.26	2.42	2.56	1.18	1.45	1.67	1.87	2.04	2.21	2.36	2.50	1.12	1.37	1.59	1.77	1.94	2.10	2.24	2.38
QREV03-24SC	1.57	1.92	2.22	2.48	2.72	2.94	3.14	3.33	1.53	1.88	2.17	2.42	2.65	2.87	3.06	3.25	1.46	1.78	2.06	2.30	2.52	2.72	2.91	3.09
QREV04-24SC	1.93	2.36	2.73	3.05	3.34	3.61	3.86	4.09	1.88	2.31	2.67	2.98	3.26	3.53	3.77	4.00	1.79	2.19	2.53	2.83	3.10	3.35	3.58	3.80
QREV05-24SC	2.65	3.25	3.75	4.19	4.59	4.96	5.30	5.63	2.59	3.17	3.66	4.09	4.49	4.84	5.18	5.49	2.46	3.01	3.48	3.89	4.26	4.60	4.92	5.22
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	5.9	7.3	8.4	9.4	10.3	11.1	11.9	12.6	5.8	7.1	8.2	9.2	10.0	10.8	11.6	12.3	5.5	6.7	7.8	8.7	9.5	10.3	11.0	11.7
QREV10-24SC	7.0	8.6	9.9	11.1	12.2	13.2	14.1	14.9	6.9	8.4	9.7	10.9	11.9	12.8	13.7	14.6	6.5	8.0	9.2	10.3	11.3	12.2	13.0	13.8
QREV11-24SC	8.2	10.0	11.6	12.9	14.2	15.3	16.3	17.3	8.0	9.8	11.3	12.6	13.8	14.9	16.0	16.9	7.6	9.3	10.7	12.0	13.1	14.2	15.2	16.1
QREV12-24SC	9.3	11.4	13.1	14.7	16.1	17.3	18.5	19.7	9.0	11.1	12.8	14.3	15.7	16.9	18.1	19.2	8.6	10.5	12.2	13.6	14.9	16.1	17.2	18.2
QREV13-24SC	10.4	12.7	14.7	16.5	18.0	19.5	20.8	22.1	10.2	12.4	14.4	16.1	17.6	19.0	20.3	21.6	9.7	11.8	13.7	15.3	16.7	18.1	19.3	20.5
QREV14-24SC	11.5	14.1	16.3	18.2	19.9	21.5	23.0	24.4	11.2	13.8	15.9	17.8	19.5	21.0	22.5	23.8	10.7	13.1	15.1	16.9	18.5	20.0	21.4	22.6
QREV15-24SC	12.6	15.5	17.9	20.0	21.9	23.7	25.3	26.8	12.3	15.1	17.5	19.5	21.4	23.1	24.7	26.2	11.7	14.4	16.6	18.6	20.3	22.0	23.5	24.9

Quick Response Expansion Valve Selection Guide (Continued)

Table 83: R448A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.74	1.66	1.59	1.52	1.44	1.37	1.29	1.22	1.14	1.06	0.98	0.90	0.82	0.74	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 84: R449A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.89	2.32	2.68	2.99	3.28	3.54	3.79	4.02	1.83	2.25	2.59	2.90	3.18	3.43	3.67	3.89	1.77	2.17	2.50	2.80	3.06	3.31	3.54	3.75
QREV02-24SC	4.69	5.74	6.63	7.41	8.12	8.77	9.37	9.94	4.54	5.56	6.42	7.18	7.86	8.49	9.08	9.63	4.38	5.37	6.20	6.93	7.59	8.20	8.76	9.29
QREV03-24SC	6.09	7.45	8.61	9.62	10.5	11.4	12.2	12.9	5.90	7.22	8.34	9.32	10.2	11.0	11.8	12.5	5.69	6.97	8.05	9.00	9.85	10.6	11.4	12.1
QREV04-24SC	7.49	9.17	10.6	11.8	12.9	14.0	14.9	15.9	7.25	8.88	10.3	11.5	12.6	13.6	14.5	15.4	7.00	8.57	9.90	11.1	12.1	13.1	13.9	14.8
QREV05-24SC	10.3	12.6	14.6	16.3	17.8	19.2	20.6	21.8	9.96	12.2	14.1	15.8	17.3	18.6	19.9	21.1	9.61	11.8	13.6	15.2	16.7	17.9	19.2	20.4
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	23.0	28.2	32.6	36.4	39.9	43.1	46.0	48.8	22.3	27.3	31.5	35.3	38.6	41.7	44.6	47.3	21.5	26.4	30.4	34.0	37.3	40.3	43.0	45.6
QREV10-24SC	27.3	33.4	38.6	43.1	47.2	51.0	54.5	57.8	26.4	32.3	37.4	41.8	45.7	49.4	52.8	56.0	25.5	31.2	36.0	40.3	44.1	47.7	51.0	54.1
QREV11-24SC	31.7	38.8	44.8	50.1	54.9	59.3	63.4	67.2	30.7	37.6	43.4	48.5	53.2	57.4	61.4	65.1	29.6	36.3	41.9	46.8	51.3	55.4	59.2	62.8
QREV12-24SC	35.9	44.0	50.8	56.8	62.3	67.2	71.9	76.2	34.8	42.6	49.2	55.0	60.3	65.1	69.6	73.9	33.6	41.1	47.5	53.1	58.2	62.9	67.2	71.3
QREV13-24SC	40.4	49.4	57.1	63.8	69.9	75.5	80.7	85.6	39.1	47.9	55.3	61.8	67.7	73.2	78.2	82.9	37.7	46.2	53.4	59.7	65.4	70.6	75.5	80.0
QREV14-24SC	44.6	54.6	63.1	70.5	77.3	83.5	89.2	94.6	43.2	52.9	61.1	68.3	74.9	80.9	86.4	91.7	41.7	51.1	59.0	65.9	72.2	78.0	83.4	88.5
QREV15-24SC	49.0	60.1	69.4	77.5	84.9	91.8	98.1	104.0	47.5	58.2	67.2	75.1	82.3	88.9	95.0	100.8	45.8	56.1	64.8	72.5	79.4	85.8	91.7	97.2

Table 85: R449A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC-C	1.70	2.08	2.41	2.69	2.95	3.18	3.40	3.61	1.63	2.00	2.31	2.58	2.82	3.05	3.26	3.46	1.56	1.91	2.20	2.46	2.70	2.91	3.11	3.30
QREV02-24SC-C	4.21	5.16	5.96	6.66	7.30	7.88	8.43	8.94	4.04	4.94	5.71	6.38	6.99	7.55	8.07	8.56	3.85	4.72	5.45	6.09	6.68	7.21	7.71	8.18
QREV03-24SC-C	5.47	6.70	7.74	8.65	9.48	10.2	10.9	11.6	5.24	6.42	7.41	8.29	9.08	9.81	10.5	11.1	5.01	6.13	7.08	7.91	8.67	9.36	10.0	10.6
QREV04-24SC-C	6.73	8.24	9.52	10.6	11.7	12.6	13.5	14.3	6.45	7.90	9.12	10.2	11.2	12.1	12.9	13.7	6.16	7.54	8.71	9.73	10.7	11.5	12.3	13.1
QREV05-24SC-C	9.24	11.3	13.1	14.6	16.0	17.3	18.5	19.6	8.86	10.9	12.5	14.0	15.3	16.6	17.7	18.8	8.46	10.4	11.9	13.4	14.7	15.8	16.9	17.9
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC-C	20.7	25.3	29.3	32.7	35.8	38.7	41.4	43.9	19.8	24.3	28.0	31.3	34.3	37.1	39.6	42.0	18.9	23.2	26.8	29.9	32.8	35.4	37.9	40.2
QREV10-24SC-C	24.5	30.0	34.7	38.7	42.4	45.8	49.0	52.0	23.5	28.8	33.2	37.1	40.7	43.9	47.0	49.8	22.4	27.5	31.7	35.5	38.8	41.9	44.8	47.6
QREV11-24SC-C	28.5	34.9	40.3	45.0	49.3	53.3	57.0	60.4	27.3	33.4	38.6	43.2	47.3	51.1	54.6	57.9	26.1	31.9	36.9	41.2	45.1	48.8	52.1	55.3
QREV12-24SC-C	32.3	39.6	45.7	51.1	56.0	60.4	64.6	68.5	31.0	37.9	43.8	48.9	53.6	57.9	61.9	65.7	29.6	36.2	41.8	46.7	51.2	55.3	59.1	62.7
QREV13-24SC-C	36.3	44.4	51.3	57.4	62.8	67.9	72.6	77.0	34.8	42.6	49.2	55.0	60.2	65.0	69.5	73.7	33.2	40.7	46.9	52.5	57.5	62.1	66.4	70.4
QREV14-24SC-C	40.1	49.1	56.7	63.4	69.5	75.0	80.2	85.1	38.4	47.1	54.3	60.8	66.6	71.9	76.8	81.5	36.7	44.9	51.9	58.0	63.6	68.6	73.4	77.8
QREV15-24SC-C	44.1	54.0	62.3	69.7	76.3	82.5	88.2	93.5	42.2	51.7	59.7	66.8	73.2	79.0	84.5	89.6	40.3	49.4	57.0	63.8	69.9	75.5	80.7	85.6

Table 86: R449A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.65	1.58	1.51	1.45	1.38	1.31	1.24	1.17	1.10	1.03	0.96	0.88	0.81	0.73	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Quick Response Expansion Valve Selection Guide (Continued)

Table 87: R449A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.53	0.65	0.76	0.84	0.93	1.00	1.07	1.13	0.51	0.63	0.73	0.81	0.86	0.96	1.03	1.09	0.49	0.60	0.70	0.78	0.85	0.92	0.99	1.04
QREV02-24SC	1.32	1.62	1.87	2.09	2.29	2.47	2.65	2.81	1.27	1.56	1.80	2.01	2.21	2.38	2.55	2.70	1.22	1.49	1.72	1.93	2.11	2.28	2.44	2.59
QREV03-24SC	1.72	2.10	2.43	2.72	2.98	3.21	3.44	3.64	1.65	2.02	2.34	2.61	2.86	3.09	3.31	3.51	1.58	1.94	2.24	2.50	2.74	2.96	3.17	3.36
QREV04-24SC	2.11	2.59	2.99	3.34	3.66	3.95	4.23	4.48	2.03	2.49	2.88	3.22	3.52	3.80	4.07	4.31	1.95	2.39	2.75	3.08	3.37	3.64	3.90	4.13
QREV05-24SC	2.90	3.56	4.11	4.59	5.03	5.43	5.81	6.16	2.79	3.42	3.95	4.42	4.84	5.23	5.59	5.93	2.68	3.28	3.79	4.23	4.64	5.01	5.35	5.68
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	6.5	8.0	9.2	10.3	11.3	12.2	13.0	13.8	6.3	7.7	8.8	9.9	10.8	11.7	12.5	13.3	6.0	7.3	8.5	9.5	10.4	11.2	12.0	12.7
QREV10-24SC	7.7	9.4	10.9	12.2	13.3	14.4	15.4	16.3	7.4	9.1	10.5	11.7	12.8	13.9	14.8	15.7	7.1	8.7	10.0	11.2	12.3	13.3	14.2	15.1
QREV11-24SC	8.9	11.0	12.7	14.1	15.5	16.7	17.9	19.0	8.6	10.5	12.2	13.6	14.9	16.1	17.2	18.3	8.2	10.1	11.7	13.0	14.3	15.4	16.5	17.5
QREV12-24SC	10.1	12.4	14.3	16.0	17.6	19.0	20.3	21.5	9.8	12.0	13.8	15.4	16.9	18.3	19.5	20.7	9.4	11.5	13.2	14.8	16.2	17.5	18.7	19.8
QREV13-24SC	11.4	14.0	16.1	18.0	19.7	21.3	22.8	24.2	11.0	13.4	15.5	17.3	19.0	20.5	21.9	23.3	10.5	12.9	14.9	16.6	18.2	19.7	21.0	22.3
QREV14-24SC	12.6	15.4	17.8	19.9	21.8	23.6	25.2	26.7	12.1	14.8	17.1	19.2	21.0	22.7	24.2	25.7	11.6	14.2	16.4	18.4	20.1	21.7	23.2	24.6
QREV15-24SC	13.8	17.0	19.6	21.9	24.0	25.9	27.7	29.4	13.3	16.3	18.8	21.1	23.1	24.9	26.6	28.3	12.8	15.6	18.0	20.2	22.1	23.9	25.5	27.1

Table 88: R449A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.48	0.59	0.68	0.76	0.83	0.90	0.96	1.02	0.47	0.58	0.66	0.74	0.81	0.88	0.94	1.00	0.45	0.55	0.63	0.71	0.77	0.83	0.89	0.95
QREV02-24SC	1.19	1.46	1.69	1.88	2.06	2.23	2.38	2.53	1.16	1.42	1.65	1.84	2.02	2.18	2.33	2.47	1.10	1.35	1.56	1.75	1.91	2.07	2.21	2.34
QREV03-24SC	1.55	1.90	2.19	2.45	2.68	2.90	3.10	3.28	1.51	1.85	2.14	2.39	2.62	2.83	3.02	3.20	1.43	1.76	2.03	2.27	2.49	2.68	2.87	3.04
QREV04-24SC	1.90	2.33	2.69	3.01	3.30	3.56	3.81	4.04	1.86	2.28	2.63	2.94	3.22	3.48	3.72	3.94	1.76	2.16	2.50	2.79	3.06	3.30	3.53	3.74
QREV05-24SC	2.62	3.20	3.70	4.14	4.53	4.89	5.23	5.55	2.55	3.13	3.61	4.04	4.42	4.78	5.11	5.42	2.42	2.97	3.43	3.83	4.20	4.54	4.85	5.14
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	5.9	7.2	8.3	9.3	10.1	10.9	11.7	12.4	5.7	7.0	8.1	9.0	9.9	10.7	11.4	12.1	5.4	6.6	7.7	8.6	9.4	10.2	10.9	11.5
QREV10-24SC	6.9	8.5	9.8	11.0	12.0	13.0	13.9	14.7	6.8	8.3	9.6	10.7	11.7	12.7	13.5	14.4	6.4	7.9	9.1	10.2	11.1	12.0	12.9	13.6
QREV11-24SC	8.1	9.9	11.4	12.7	14.0	15.1	16.1	17.1	7.9	9.6	11.1	12.4	13.6	14.7	15.7	16.7	7.5	9.2	10.6	11.8	12.9	14.0	14.9	15.8
QREV12-24SC	9.1	11.2	12.9	14.5	15.8	17.1	18.3	19.4	8.9	10.9	12.6	14.1	15.5	16.7	17.8	18.9	8.5	10.4	12.0	13.4	14.7	15.9	16.9	18.0
QREV13-24SC	10.3	12.6	14.5	16.2	17.8	19.2	20.5	21.8	10.0	12.3	14.2	15.8	17.4	18.7	20.0	21.3	9.5	11.7	13.5	15.0	16.5	17.8	19.0	20.2
QREV14-24SC	11.3	13.9	16.0	17.9	19.7	21.2	22.7	24.1	11.1	13.6	15.7	17.5	19.2	20.7	22.2	23.5	10.5	12.9	14.9	16.6	18.2	19.7	21.0	22.3
QREV15-24SC	12.5	15.3	17.6	19.7	21.6	23.3	24.9	26.5	12.2	14.9	17.2	19.2	21.1	22.8	24.3	25.8	11.6	14.2	16.4	18.3	20.0	21.6	23.1	24.5

Table 89: R448A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.74	1.67	1.60	1.52	1.45	1.37	1.30	1.22	1.14	1.06	0.98	0.90	0.82	0.74	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 90: R450A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 1 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV01-24SC	1.34	1.90	2.33	2.69	3.01	3.29	3.56	3.80	1.28	1.82	2.23	2.57	2.87	3.15	3.40	3.63	1.22	1.73	2.12	2.45	2.74	3.00	3.24	3.46
QREV02-24SC	3.33	4.71	5.76	6.66	7.44	8.15	8.80	9.41	3.18	4.50	5.51	6.36	7.11	7.79	8.42	9.00	3.03	4.29	5.25	6.06	6.78	7.43	8.02	8.57
QREV03-24SC	4.32	6.11	7.48	8.64	9.66	10.6	11.4	12.2	4.13	5.84	7.16	8.26	9.24	10.1	10.9	11.7	3.94	5.57	6.82	7.87	8.80	9.64	10.4	11.1
QREV04-24SC	5.32	7.52	9.21	10.6	11.9	13.0	14.1	15.0	5.08	7.19	8.80	10.2	11.4	12.5	13.5	14.4	4.84	6.85	8.39	9.68	10.8	11.9	12.8	13.7
QREV05-24SC	7.30	10.3	12.7	14.6	16.3	17.9	19.3	20.7	6.98	9.87	12.1	13.9	15.6	17.1	18.5	19.8	6.65	9.41	11.5	13.3	14.9	16.3	17.6	18.8
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV09-24SC	16.3	23.1	28.3	32.7	36.5	40.0	43.2	46.2	15.6	22.1	27.1	31.3	34.9	38.3	41.3	44.2	14.9	21.1	25.8	29.8	33.3	36.5	39.4	42.1
QREV10-24SC	19.4	27.4	33.5	38.7	43.3	47.4	51.2	54.8	18.5	26.2	32.1	37.0	41.4	45.3	49.0	52.4	17.6	24.9	30.5	35.3	39.4	43.2	46.7	49.9

Quick Response Expansion Valve Selection Guide (Continued)

Table 90: R450A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C (Part 2 of 2)

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV11-24SC	22.5	31.8	39.0	45.0	50.3	55.1	59.5	63.6	21.5	30.4	37.3	43.0	48.1	52.7	56.9	60.9	20.5	29.0	35.5	41.0	45.8	50.2	54.2	58.0
QREV12-24SC	25.5	36.1	44.2	51.0	57.1	62.5	67.5	72.2	24.4	34.5	42.3	48.8	54.6	59.8	64.6	69.0	23.2	32.9	40.3	46.5	52.0	56.9	61.5	65.8
QREV13-24SC	28.7	40.5	49.6	57.3	64.1	70.2	75.8	81.1	27.4	38.8	47.5	54.8	61.3	67.1	72.5	77.5	26.1	36.9	45.2	52.2	58.4	64.0	69.1	73.9
QREV14-24SC	31.7	44.8	54.9	63.4	70.8	77.6	83.8	89.6	30.3	42.8	52.5	60.6	67.7	74.2	80.1	85.7	28.9	40.8	50.0	57.7	64.5	70.7	76.4	81.6
QREV15-24SC	34.8	49.2	60.3	69.6	77.9	85.3	92.1	98.5	33.3	47.1	57.7	66.6	74.4	81.6	88.1	94.2	31.7	44.9	54.9	63.4	70.9	77.7	83.9	89.7

Table 91: R450A Application Capacity Ratings in kW at Evaporator Temperature -20°C to -40°F

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV01-24SC	1.16	1.64	2.01	2.32	2.60	2.85	3.08	3.29	1.10	1.56	1.90	2.20	2.46	2.69	2.91	3.11	1.04	1.47	1.80	2.07	2.32	2.54	2.74	2.93
QREV02-24SC	2.88	4.07	4.99	5.76	6.44	7.05	7.62	8.14	2.72	3.85	4.72	5.45	6.09	6.67	7.21	7.70	2.57	3.63	4.45	5.13	5.74	6.29	6.79	7.26
QREV03-24SC	3.74	5.29	6.47	7.48	8.36	9.16	9.89	10.6	3.54	5.00	6.13	7.07	7.91	8.66	9.36	10.0	3.33	4.71	5.77	6.67	7.45	8.17	8.82	9.43
QREV04-24SC	4.60	6.50	7.96	9.19	10.3	11.3	12.2	13.0	4.35	6.15	7.53	8.70	9.73	10.7	11.5	12.3	4.10	5.80	7.10	8.20	9.17	10.0	10.9	11.6
QREV05-24SC	6.32	8.93	10.9	12.6	14.1	15.5	16.7	17.9	5.98	8.45	10.4	11.9	13.4	14.6	15.8	16.9	5.63	7.97	9.76	11.3	12.6	13.8	14.9	15.9
	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16	2	4	6	8	10	12	14	16
QREV09-24SC	14.1	20.0	24.5	28.3	31.6	34.6	37.4	40.0	13.4	18.9	23.2	26.7	29.9	32.8	35.4	37.8	12.6	17.8	21.8	25.2	28.2	30.9	33.4	35.7
QREV10-24SC	16.7	23.7	29.0	33.5	37.4	41.0	44.3	47.4	15.8	22.4	27.4	31.7	35.4	38.8	41.9	44.8	14.9	21.1	25.9	29.9	33.4	36.6	39.5	42.2
QREV11-24SC	19.5	27.5	33.7	38.9	43.5	47.7	51.5	55.1	18.4	26.0	31.9	36.8	41.2	45.1	48.7	52.1	17.4	24.5	30.1	34.7	38.8	42.5	45.9	49.1
QREV12-24SC	22.1	31.2	38.2	44.1	49.4	54.1	58.4	62.4	20.9	29.5	36.2	41.8	46.7	51.2	55.3	59.1	19.7	27.8	34.1	39.4	44.0	48.2	52.1	55.7
QREV13-24SC	24.8	35.1	42.9	49.6	55.4	60.7	65.6	70.1	23.5	33.2	40.6	46.9	52.4	57.5	62.1	66.3	22.1	31.3	38.3	44.2	49.4	54.2	58.5	62.5
QREV14-24SC	27.4	38.8	47.5	54.8	61.3	67.1	72.5	77.5	25.9	36.7	44.9	51.8	58.0	63.5	68.6	73.3	24.4	34.6	42.3	48.9	54.6	59.9	64.7	69.1
QREV15-24SC	30.1	42.6	52.2	60.2	67.3	73.8	79.7	85.2	28.5	40.3	49.4	57.0	63.7	69.8	75.4	80.6	26.9	38.0	46.5	53.7	60.1	65.8	71.1	76.0

Table 92: R450A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.61	1.55	1.48	1.42	1.35	1.29	1.22	1.16	1.09	1.03	0.96	0.89	0.83	0.76	0.69

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 93: R450A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°C

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160
QREV01-24SC	0.31	0.44	0.54	0.62	0.70	0.76	0.82	0.88	0.30	0.42	0.51	0.59	0.66	0.72	0.78	0.84	0.28	0.39	0.48	0.56	0.62	0.68	0.74	0.79
QREV02-24SC	0.77	1.09	1.33	1.54	1.72	1.89	2.04	2.18	0.73	1.03	1.27	1.46	1.64	1.79	1.94	2.07	0.69	0.98	1.20	1.38	1.55	1.69	1.83	1.96
QREV03-24SC	1.00	1.42	1.73	2.00	2.24	2.45	2.65	2.83	0.95	1.34	1.65	1.90	2.12	2.33	2.51	2.69	0.90	1.27	1.56	1.80	2.01	2.20	2.38	2.54
QREV04-24SC	1.23	1.74	2.13	2.46	2.75	3.01	3.26	3.48	1.17	1.65	2.02	2.34	2.61	2.86	3.09	3.30	1.10	1.56	1.91	2.21	2.47	2.71	2.92	3.12
QREV05-24SC	1.69	2.39	2.93	3.38	3.78	4.14	4.47	4.78	1.61	2.27	2.78	3.21	3.59	3.93	4.25	4.54	1.52	2.15	2.63	3.03	3.39	3.72	4.01	4.29
	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160
QREV09-24SC	3.8	5.4	6.6	7.6	8.5	9.3	10.0	10.7	3.6	5.1	6.2	7.2	8.0	8.8	9.5	10.2	3.4	4.8	5.9	6.8	7.6	8.3	9.0	9.6
QREV10-24SC	4.5	6.3	7.8	9.0	10.0	11.0	11.9	12.7	4.3	6.0	7.4	8.5	9.5	10.4	11.3	12.0	4.0	5.7	7.0	8.0	9.0	9.9	10.6	11.4
QREV11-24SC	5.2	7.4	9.0	10.4	11.7	12.8	13.8	14.7	4.9	7.0	8.6	9.9	11.1	12.1	13.1	14.0	4.7	6.6	8.1	9.4	10.5	11.5	12.4	13.2
QREV12-24SC	5.9	8.4	10.2	11.8	13.2	14.5	15.6	16.7	5.6	7.9	9.7	11.2	12.5	13.7	14.8	15.9	5.3	7.5	9.2	10.6	11.9	13.0	14.0	15.0
QREV13-24SC	6.6	9.4	11.5	13.3	14.8	16.3	17.6	18.8	6.3	8.9	10.9	12.6	14.1	15.4	16.7	17.8	6.0	8.4	10.3	11.9	13.3	14.6	15.8	16.8
QREV14-24SC	7.3	10.4	12.7	14.7	16.4	18.0	19.4	20.7	7.0	9.8	12.1	13.9	15.6	17.1	18.4	19.7	6.6	9.3	11.4	13.2	14.7	16.1	17.4	18.6
QREV15-24SC	8.1	11.4	14.0	16.1	18.0	19.7	21.3	22.8	7.7	10.8	13.3	15.3	17.1	18.7	20.3	21.7	7.2	10.2	12.5	14.5	16.2	17.7	19.1	20.5

Quick Response Expansion Valve Selection Guide (Continued)

Table 94: R450A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160
QREV01-24SC	0.27	0.38	0.47	0.54	0.61	0.66	0.72	0.77	0.26	0.37	0.46	0.53	0.59	0.64	0.70	0.74	0.25	0.35	0.43	0.49	0.55	0.60	0.65	0.70
QREV02-24SC	0.67	0.95	1.16	1.34	1.50	1.64	1.78	1.0	0.65	0.92	1.13	1.30	1.46	1.59	1.72	1.84	0.61	0.86	1.06	1.22	1.36	1.49	1.61	1.72
QREV03-24SC	0.87	1.23	1.51	1.74	1.95	2.14	2.31	2.47	0.85	1.20	1.46	1.69	1.89	2.07	2.24	2.39	0.79	1.12	1.37	1.58	1.77	1.94	2.10	2.24
QREV04-24SC	1.07	1.52	1.86	2.14	2.40	2.63	2.84	3.03	1.04	1.47	1.80	2.08	2.32	2.55	2.75	2.94	0.97	1.38	1.69	1.95	2.18	2.39	2.58	2.75
QREV05-24SC	1.47	2.08	2.55	2.95	3.29	3.61	3.90	4.17	1.43	2.02	2.47	2.86	3.19	.50	3.78	4.04	1.34	1.89	2.32	2.68	2.99	3.28	3.54	3.78
	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160	20	40	60	80	100	120	140	160
QREV09-24SC	3.3	4.7	5.7	6.6	7.4	8.1	8.7	9.3	3.2	4.5	5.5	6.4	7.1	7.8	8.5	9.0	3.0	4.2	5.2	6.0	6.7	7.3	7.9	8.5
QREV10-24SC	3.9	5.5	6.8	7.8	8.7	9.6	10.3	11.0	3.8	5.4	6.6	7.6	8.5	9.3	10.0	10.7	3.5	5.0	6.1	7.1	7.9	8.7	9.4	10.1
QREV11-24SC	4.5	6.4	7.9	9.1	10.1	11.1	12.0	12.8	4.4	6.2	7.6	8.8	9.8	10.8	11.6	12.4	4.1	5.8	7.1	8.2	9.2	10.1	10.9	11.7
QREV12-24SC	5.1	7.3	8.9	10.3	11.5	12.6	13.6	14.6	5.0	7.1	8.6	10.0	11.2	12.2	13.2	14.1	4.7	6.6	8.1	9.4	10.5	11.5	12.4	13.2
QREV13-24SC	5.8	8.2	10.0	11.6	12.9	14.2	15.3	16.4	5.6	7.9	9.7	11.2	12.5	13.7	14.8	15.9	5.3	7.4	9.1	10.5	11.7	12.9	13.9	14.9
QREV14-24SC	6.4	9.0	11.1	12.8	14.3	15.7	16.9	18.1	6.2	8.8	10.7	12.4	13.9	15.2	16.4	17.5	5.8	8.2	10.1	11.6	13.0	14.2	15.4	16.4
QREV15-24SC	7.0	9.9	12.2	14.0	15.7	17.2	18.6	19.9	6.8	9.6	11.8	13.6	15.2	16.7	18.0	19.3	6.4	9.0	11.1	12.8	14.3	15.6	16.9	18.0

Table 95: R450A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.70	1.63	1.56	1.49	1.41	1.34	1.27	1.20	1.13	1.06	0.99	0.91	0.84	0.77	0.69

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 96: R507A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.39	1.70	1.96	2.19	2.40	2.59	2.77	2.94	1.33	1.63	1.88	2.10	2.30	2.48	2.65	2.81	1.26	1.55	1.79	2.00	2.19	2.36	2.53	2.68
QREV02-24SC	3.43	4.20	4.85	5.42	5.94	6.42	6.86	7.28	3.29	4.02	4.65	5.19	5.69	6.15	6.57	6.97	3.13	3.83	4.42	4.95	5.42	5.85	6.26	6.64
QREV03-24SC	4.45	5.46	6.30	7.04	7.72	8.33	8.91	9.45	4.27	5.23	6.03	6.75	7.39	7.98	8.53	9.05	4.06	4.98	5.75	6.42	7.04	7.60	8.12	8.62
QREV04-24SC	5.48	6.71	7.75	8.66	9.49	10.3	10.9	11.6	5.25	6.43	7.42	8.30	9.09	9.82	10.5	11.1	5.00	6.12	7.07	7.90	8.65	9.35	9.99	10.6
QREV05-24SC	7.53	9.22	10.7	11.9	13.0	14.1	15.1	15.9	7.21	8.83	10.2	11.4	12.5	13.5	14.4	15.3	6.86	8.41	9.71	10.9	11.9	12.8	13.7	14.6
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	16.8	20.6	23.8	26.6	29.2	31.5	33.7	35.7	16.1	19.8	22.8	25.5	27.9	30.2	32.3	34.2	15.4	18.8	21.7	24.3	26.6	28.7	30.7	32.6
QREV10-24SC	20.0	24.4	28.2	31.6	34.6	37.3	39.9	42.3	19.1	23.4	27.0	30.2	33.1	35.8	38.2	40.5	18.2	22.3	25.7	28.8	31.5	34.0	36.4	38.6
QREV11-24SC	23.2	28.4	32.8	36.7	40.2	43.4	46.4	49.2	22.2	27.2	31.4	35.1	38.5	41.6	44.4	47.1	21.2	25.9	29.9	33.4	36.6	39.6	42.3	44.9
QREV12-24SC	26.3	32.2	37.2	41.6	45.6	49.2	52.6	55.8	25.2	30.9	35.6	39.8	43.6	47.1	50.4	53.4	24.0	29.4	33.9	37.9	41.6	44.9	48.0	50.9
QREV13-24SC	29.5	36.2	41.8	46.7	51.2	55.3	59.1	62.7	28.3	34.7	40.0	44.7	49.0	52.9	56.6	60.0	26.9	33.0	38.1	42.6	46.7	50.4	53.9	57.2
QREV14-24SC	32.7	40.0	46.2	51.6	56.6	61.1	65.3	69.3	31.3	38.3	44.2	49.5	54.2	58.5	62.6	66.3	29.8	36.5	42.1	47.1	51.6	55.7	59.6	63.2
QREV15-24SC	35.9	44.0	50.8	56.8	62.2	67.2	71.8	76.1	34.4	42.1	48.6	54.4	59.5	64.3	68.8	72.9	32.7	40.1	46.3	51.8	56.7	61.2	65.5	69.4

Table 97: R507A Application Capacity Ratings in kW at Evaporator Temperature -20°C to 40°C (Part 1 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV01-24SC	1.20	1.47	1.69	1.89	2.07	2.24	2.39	2.54	1.13	1.38	1.59	1.78	1.95	2.11	2.25	2.39	1.05	1.29	1.49	1.67	1.83	1.97	2.11	2.24
QREV02-24SC	2.96	3.63	4.19	4.68	5.13	5.54	5.92	6.28	2.79	3.42	3.94	4.41	4.83	5.22	5.58	5.91	2.61	3.20	3.69	4.13	4.52	4.88	5.22	5.54
QREV03-24SC	3.85	4.71	5.44	6.08	6.66	7.20	7.69	8.16	3.62	4.43	5.12	5.73	6.27	6.77	7.24	7.68	3.39	4.15	4.79	5.36	5.87	6.34	6.78	7.19
QREV04-24SC	4.73	5.79	6.69	7.48	8.19	8.85	9.46	10.0	4.45	5.45	6.30	7.04	7.71	8.33	8.91	9.45	4.17	5.11	5.89	6.59	7.22	7.80	8.34	8.84
QREV05-24SC	6.50	7.96	9.19	10.3	11.3	12.2	13.0	13.8	6.12	7.49	8.65	9.67	10.6	11.5	12.2	12.9	5.73	7.01	8.10	9.06	9.92	10.7	11.5	12.2
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV09-24SC	14.5	17.8	20.6	23.0	25.2	27.2	29.1	30.9	13.7	16.8	19.4	21.7	23.7	25.6	27.4	29.0	12.8	15.7	18.1	20.3	22.2	24.0	25.6	27.2
QREV10-24SC	17.2	21.1	24.4	27.2	29.8	32.2	34.5	36.6	16.2	19.9	22.9	25.6	28.1	30.3	32.4	34.4	15.2	18.6	21.5	24.0	26.3	28.4	30.4	32.2

Quick Response Expansion Valve Selection Guide (Continued)

Table 97: R507A Application Capacity Ratings in kW at Evaporator Temperature -20°C to 40°C (Part 2 of 2)

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
QREV11-24SC	20.0	24.5	28.3	31.7	34.7	37.5	40.1	42.5	18.9	23.1	26.7	29.8	32.7	35.3	37.7	40.0	17.6	21.6	25.0	27.9	30.6	33.0	35.3	37.4
QREV12-24SC	22.7	27.8	32.1	35.9	39.3	42.5	45.4	48.2	21.4	26.2	30.2	33.8	37.0	40.0	42.8	45.4	20.0	24.5	28.3	31.6	34.7	37.4	40.0	42.5
QREV13-24SC	25.5	31.2	36.1	40.3	44.2	47.7	51.0	54.1	24.0	29.4	34.0	38.0	41.6	44.9	48.0	50.9	22.5	27.5	31.8	35.5	38.9	42.1	45.0	47.7
QREV14-24SC	28.2	34.5	39.9	44.6	48.8	52.7	56.4	59.8	26.5	32.5	37.5	42.0	46.0	49.7	53.1	56.3	24.8	30.4	35.1	39.3	43.0	46.5	49.7	52.7
QREV15-24SC	31.0	38.0	43.8	49.0	53.7	58.0	62.0	65.7	29.2	35.7	41.3	46.1	50.5	54.6	58.4	61.9	27.3	33.4	38.6	43.2	47.3	51.1	54.6	57.9

Table 98: R507A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	-5	0	5	10	15	20	25	30	35	40	45	50	55	60
Correction Factor														
1.87	1.78	1.69	1.60	1.51	1.42	1.32	1.23	1.13	1.04	0.94	0.84	0.74	0.63	0.52

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 99: R507A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.39	0.48	0.56	0.62	0.68	0.74	0.79	0.84	0.37	0.46	0.53	0.59	0.65	0.70	0.75	0.79	0.35	0.43	0.50	0.56	0.61	0.66	0.71	0.75
QREV02-24SC	0.98	1.20	1.38	1.54	1.69	1.83	1.95	2.07	0.93	1.14	1.31	1.47	1.61	1.73	1.85	1.97	0.87	1.07	1.24	1.38	1.51	1.64	1.75	1.85
QREV03-24SC	1.27	1.55	1.79	2.00	2.20	2.37	2.54	2.69	1.20	1.47	1.70	1.90	2.09	2.25	2.41	2.55	1.14	1.39	1.61	1.80	1.97	2.12	2.27	2.41
QREV04-24SC	1.56	1.91	2.21	2.47	2.70	2.92	3.12	3.31	1.48	1.81	2.09	2.34	2.57	2.77	2.96	3.14	1.40	1.71	1.97	2.21	2.42	2.61	2.79	2.96
QREV05-24SC	2.14	2.62	3.03	3.39	3.71	4.01	4.29	4.55	2.03	2.49	2.88	3.22	3.52	3.81	4.07	4.32	1.92	2.35	2.71	3.03	3.32	3.59	3.84	4.07
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.8	5.9	6.8	7.6	8.3	9.0	9.6	10.2	4.6	5.6	6.4	7.2	7.9	8.5	9.1	9.7	4.3	5.3	6.1	6.8	7.4	8.0	8.6	9.1
QREV10-24SC	5.7	7.0	8.0	9.0	9.8	10.6	11.4	12.1	5.4	6.6	7.6	8.5	9.3	10.1	10.8	11.4	5.1	6.2	7.2	8.0	8.8	9.5	10.2	10.8
QREV11-24SC	6.6	8.1	9.3	10.4	11.4	12.4	13.2	14.0	6.3	7.7	8.9	9.9	10.9	11.7	12.5	13.3	5.9	7.2	8.4	9.3	10.2	11.1	11.8	12.5
QREV12-24SC	7.5	9.2	10.6	11.8	13.0	14.0	15.0	15.9	7.1	8.7	10.1	11.2	12.3	13.3	14.2	15.1	6.7	8.2	9.5	10.6	11.6	12.5	13.4	14.2
QREV13-24SC	8.4	10.3	11.9	13.3	14.6	15.7	16.8	17.8	8.0	9.8	11.3	12.6	13.8	14.9	16.0	16.9	7.5	9.2	10.7	11.9	13.0	14.1	15.1	16.0
QREV14-24SC	9.3	11.4	13.1	14.7	16.1	17.4	18.6	19.7	8.8	10.8	12.5	14.0	15.3	16.5	17.7	18.7	8.3	10.2	11.8	13.2	14.4	15.6	16.6	17.7
QREV15-24SC	10.2	12.5	14.5	16.2	17.7	19.1	20.4	21.7	9.7	11.9	13.7	15.3	16.8	18.2	19.4	20.6	9.1	11.2	12.9	14.5	15.8	17.1	18.3	19.4

Table 100: R507A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV01-24SC	0.34	0.42	0.48	0.54	0.59	0.64	0.68	0.73	0.33	0.41	0.47	0.52	0.57	0.62	0.66	0.70	0.31	0.38	0.43	0.49	0.53	0.58	0.62	0.65
QREV02-24SC	0.85	1.04	1.20	1.34	1.47	1.58	1.69	1.80	0.82	1.00	1.16	1.29	1.42	1.53	1.64	1.74	0.76	0.93	1.08	1.20	1.32	1.42	1.52	1.62
QREV03-24SC	1.10	1.35	1.56	1.74	1.90	2.06	2.20	2.33	1.06	1.30	1.50	1.68	1.84	1.99	2.13	2.26	0.99	1.21	1.40	1.56	1.71	1.85	1.98	2.10
QREV04-24SC	1.35	1.66	1.91	2.14	2.34	2.53	2.71	2.87	1.31	1.60	1.85	2.07	2.27	2.45	2.62	2.77	1.22	1.49	1.72	1.92	2.11	2.28	2.43	2.58
QREV05-24SC	1.86	2.28	2.63	2.94	3.22	3.48	3.72	3.94	1.80	2.20	2.54	2.84	3.11	3.36	3.59	3.81	1.67	2.05	2.36	2.64	2.89	3.13	3.34	3.54
	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270	60	90	120	150	180	210	240	270
QREV09-24SC	4.2	5.1	5.9	6.6	7.2	7.8	8.3	8.8	4.0	4.9	5.7	6.4	7.0	7.5	8.0	8.5	3.7	4.6	5.3	5.9	6.5	7.0	7.5	7.9
QREV10-24SC	4.9	6.0	7.0	7.8	8.5	9.2	9.9	10.5	4.8	5.8	6.7	7.5	8.3	8.9	9.5	10.1	4.4	5.4	6.3	7.0	7.7	8.3	8.9	9.4
QREV11-24SC	5.7	7.0	8.1	9.1	9.9	10.7	11.5	12.1	5.5	6.8	7.8	8.8	9.6	10.4	11.1	11.7	5.1	6.3	7.3	8.1	8.9	9.6	10.3	10.9
QREV12-24SC	6.5	8.0	9.2	10.3	11.2	12.2	13.0	13.8	6.3	7.7	8.9	9.9	10.9	11.7	12.6	13.3	5.8	7.2	8.3	9.2	10.1	10.9	11.7	12.4
QREV13-24SC	7.3	8.9	10.3	11.5	12.6	13.6	14.6	15.5	7.1	8.6	10.0	11.2	12.2	13.2	14.1	15.0	6.6	8.0	9.3	10.4	11.4	12.3	13.1	13.9
QREV14-24SC	8.1	9.9	11.4	12.7	14.0	15.1	16.1	17.1	7.8	9.5	11.0	12.3	13.5	14.6	15.6	16.5	7.2	8.9	10.3	11.5	12.6	13.6	14.5	15.4
QREV15-24SC	8.9	10.9	12.5	14.0	15.3	16.6	17.7	18.8	8.6	10.5	12.1	13.5	14.8	16.0	17.1	18.2	8.0	9.8	11.3	12.6	13.8	14.9	15.9	16.9

Quick Response Expansion Valve Selection Guide (Continued)

Table 101: R507A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**
Correction Factor														
1.98	1.88	1.79	1.69	1.59	1.49	1.39	1.29	1.19	1.08	0.98	0.87	0.76	0.65	0.52

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.

Table 102: R513A Application Capacity Ratings in kW at Evaporator Temperature 10°C to -10°C

Valve Model	10°C								0°C								-10°C							
	Pressure Drop Across Valve (bar)																							
	2	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**
QREV01-24SC	1.20	1.69	2.07	2.39	2.68	2.93	3.17	3.39	1.14	1.62	1.98	2.28	2.55	2.80	3.02	3.23	1.09	1.53	1.88	2.17	2.43	2.66	2.87	3.07
QREV02-24SC	2.96	4.19	5.13	5.93	6.63	7.26	7.84	8.38	2.83	4.00	4.90	5.66	6.32	6.93	7.48	8.00	2.69	3.80	4.65	5.37	6.01	6.58	7.11	7.60
QREV03-24SC	3.85	5.44	6.67	7.70	8.61	9.43	10.2	10.9	3.67	5.19	6.36	7.34	8.21	9.00	9.72	10.4	3.49	4.93	6.04	6.98	7.80	8.55	9.23	9.87
QREV04-24SC	4.73	6.70	8.20	9.47	10.6	11.6	12.5	13.4	4.52	6.39	7.82	9.03	10.1	11.1	11.9	12.8	4.29	6.07	7.43	8.58	9.60	10.5	11.4	12.1
QREV05-24SC	6.51	9.20	11.8	13.0	14.6	15.9	17.2	18.4	6.21	8.78	10.8	12.4	13.9	15.2	16.4	17.6	5.90	8.34	10.2	11.8	13.2	14.4	15.6	16.7
	2	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**
QREV09-24SC	14.6	20.6	25.2	29.1	32.6	35.7	38.5	41.2	13.9	19.6	24.1	27.8	31.1	34.0	36.7	39.3	13.2	18.7	22.9	26.4	29.5	32.3	34.9	37.3
QREV10-24SC	17.2	24.4	29.9	34.5	38.6	42.2	45.6	48.8	16.5	23.3	28.5	32.9	36.8	40.3	43.5	46.5	15.6	22.1	27.1	31.3	35.0	38.3	41.4	44.2
QREV11-24SC	20.0	28.3	34.7	40.1	44.8	49.1	53.0	56.7	19.1	27.0	33.1	38.2	42.8	46.8	50.6	54.1	18.2	25.7	31.5	36.3	40.6	44.5	48.1	51.4
QREV12-24SC	22.7	32.2	39.4	45.5	50.8	55.7	60.1	64.3	21.7	30.7	37.6	43.4	48.5	53.1	57.4	61.3	20.6	29.1	35.7	41.2	46.1	50.5	54.5	58.3
QREV13-24SC	25.5	36.1	44.2	51.1	57.1	62.5	67.6	72.2	24.4	34.4	42.2	48.7	54.5	59.7	64.4	68.9	23.1	32.7	40.1	46.3	51.8	56.7	61.2	65.5
QREV14-24SC	28.2	39.9	48.9	56.4	63.1	69.1	74.7	79.8	26.9	38.1	46.6	53.8	60.2	65.9	71.2	76.1	25.6	36.2	44.3	51.2	57.2	62.7	67.7	72.4
QREV15-24SC	31.0	43.9	53.7	62.0	69.4	76.0	82.1	87.7	29.6	41.8	51.3	59.2	66.2	72.5	78.3	83.7	28.1	39.8	48.7	56.2	62.9	68.9	74.4	79.5

Table 103: R513A Application Capacity Correction Factor in kW at Evaporator Temperature -20°C to -40°C

Valve Model	-20°C								-30°C								-40°C							
	Pressure Drop Across Valve (bar)																							
	2	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**
QREV01-24SC	1.03	1.45	1.78	2.05	2.30	2.52	2.72	2.91	0.97	1.37	1.68	1.94	2.16	2.37	2.56	2.74	0.91	1.29	1.57	1.82	2.03	2.23	2.40	2.57
QREV02-24SC	2.54	3.60	4.40	5.09	5.69	6.23	6.73	7.19	2.40	3.39	4.15	4.79	5.36	5.87	6.34	6.78	2.25	3.18	3.90	4.50	5.03	5.51	5.95	6.36
QREV03-24SC	3.30	4.67	5.72	6.61	7.38	8.09	8.74	9.34	3.11	4.40	5.39	6.23	6.96	7.63	8.24	8.81	2.92	4.13	5.06	5.84	6.53	7.16	7.73	8.26
QREV04-24SC	4.06	5.74	7.04	8.12	9.08	9.95	10.8	11.5	3.83	5.41	6.63	7.66	8.56	9.38	10.1	10.8	3.59	5.08	6.22	7.19	8.04	8.80	9.51	10.2
QREV05-24SC	5.58	7.89	9.67	11.2	12.5	13.7	14.8	15.8	5.26	7.44	9.11	10.5	11.8	12.9	13.9	14.9	4.94	6.98	8.55	9.88	11.0	12.1	13.1	13.9
	2	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**2**	**4**	**6**	**8**	**10**	**12**	**14**	**16**
QREV09-24SC	12.5	17.7	21.6	25.0	27.9	30.6	33.0	35.3	11.8	16.6	20.4	23.5	26.3	28.8	31.1	33.3	11.1	15.6	19.1	22.1	24.7	27.1	29.2	31.3
QREV10-24SC	14.8	20.9	25.6	29.6	33.1	36.2	39.1	41.8	13.9	19.7	24.2	27.9	31.2	34.2	36.9	39.4	13.1	18.5	22.7	26.2	29.3	32.1	34.6	37.0
QREV11-24SC	17.2	24.3	29.8	34.4	38.5	42.1	45.5	48.6	16.2	22.9	28.1	32.4	36.2	39.7	42.9	45.9	15.2	21.5	26.4	30.4	34.0	37.3	40.3	43.0
QREV12-24SC	19.5	27.6	33.8	39.0	43.6	47.8	51.6	55.2	18.4	26.0	31.8	36.8	41.1	45.0	48.6	52.0	17.3	24.4	29.9	34.5	38.6	42.3	45.7	48.8
QREV13-24SC	21.9	31.0	37.9	43.8	49.0	53.7	58.0	62.0	20.6	29.2	35.8	41.3	46.2	50.6	54.6	58.4	19.4	27.4	33.6	38.8	43.3	47.5	51.3	54.8
QREV14-24SC	24.2	34.2	41.9	48.4	54.1	59.3	64.1	68.5	22.8	32.3	39.5	45.6	51.0	55.9	60.4	64.5	21.4	30.3	37.1	42.8	47.9	52.5	56.7	60.6
QREV15-24SC	26.6	37.6	46.1	53.2	59.5	65.2	70.4	75.3	25.1	35.5	43.4	50.2	56.1	61.4	66.4	71.0	23.5	33.3	40.8	47.1	52.6	57.7	62.3	66.6

Table 104: R513A Application Capacity Correction Factor at Evaporator Temperature °C

Liquid Temperature at Expansion Valve Inlet (°C)														
-10	**-5**	**0**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**
Correction Factor														
1.68	1.61	1.54	1.47	1.39	1.32	1.25	1.18	1.10	1.03	0.96	0.88	0.81	0.73	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of -20°C. However, these factors may be used for evaporator temperatures from -40°C to +10°C since variability is negligible.

Table 105: R513A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 1 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	25	**50**	**75**	**100**	**125**	**150**	**175**	**200**	**25**	**50**	**75**	**100**	**125**	**150**	**175**	**200**	**25**	**50**	**75**	**100**	**125**	**150**	**175**	**200**
QREV01-24SC	0.31	0.44	0.54	0.62	0.69	0.76	0.82	0.88	0.29	0.41	0.51	0.59	0.66	0.72	0.78	0.83	0.28	0.39	0.48	0.55	0.62	0.68	0.73	0.78
QREV02-24SC	0.77	1.08	1.33	1.53	1.72	1.88	2.03	2.17	0.73	1.03	1.26	1.45	1.62	1.78	1.92	2.05	0.68	0.97	1.18	1.37	1.53	1.68	1.81	1.93

Quick Response Expansion Valve Selection Guide (Continued)

Table 105: R513A Application Capacity Ratings in Tons at Evaporator Temperature 40°F to 0°F (Part 2 of 2)

Valve Model	40°F								20°F								0°F							
	Pressure Drop Across Valve (psid)																							
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV03-24SC	1.00	1.41	1.73	1.99	2.23	2.44	2.64	2.82	0.94	1.33	1.63	1.89	2.11	2.31	2.49	2.67	0.89	1.26	1.54	1.78	1.99	2.18	2.35	2.51
QREV04-24SC	1.23	1.73	2.12	2.45	2.74	3.00	3.24	3.46	1.16	1.64	2.01	2.32	2.59	2.84	3.07	3.28	1.09	1.55	1.89	2.19	2.44	2.68	2.89	3.09
QREV05-24SC	1.68	2.38	2.92	3.37	3.76	4.12	4.45	4.76	1.59	2.25	2.76	3.19	3.56	3.90	4.22	4.51	1.50	2.12	2.60	3.00	3.36	3.68	3.97	4.25
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV09-24SC	3.8	5.3	6.5	7.5	8.4	9.2	10.0	10.7	3.6	5.0	6.2	7.1	8.0	8.7	9.4	10.1	3.4	4.8	5.8	6.7	7.5	8.2	8.9	9.5
QREV10-24SC	4.5	6.3	7.7	8.9	10.0	10.9	11.8	12.6	4.2	6.0	7.3	8.4	9.4	10.3	11.2	11.9	4.0	5.6	6.9	8.0	8.9	9.7	10.5	11.3
QREV11-24SC	5.2	7.3	9.0	10.4	11.6	12.7	13.7	14.7	4.9	6.9	8.5	9.8	11.0	12.0	13.0	13.9	4.6	6.5	8.0	9.3	10.3	11.3	12.2	13.1
QREV12-24SC	5.9	8.3	10.2	11.8	13.2	14.4	15.6	16.6	5.6	7.9	9.6	11.1	12.5	13.6	14.7	15.7	5.2	7.4	9.1	10.5	11.7	12.8	13.9	14.8
QREV13-24SC	6.6	9.3	11.4	13.2	14.8	16.2	17.5	18.7	6.3	8.8	10.8	12.5	14.0	15.3	16.5	17.7	5.9	8.3	10.2	11.8	13.2	14.4	15.6	16.7
QREV14-24SC	7.3	10.3	12.6	14.6	16.3	17.9	19.3	20.7	6.9	9.8	12.0	13.8	15.5	16.9	18.3	19.5	6.5	9.2	11.3	13.0	14.6	16.0	17.2	18.4
QREV15-24SC	8.0	11.4	13.9	16.1	17.9	19.7	21.2	22.7	7.6	10.7	13.2	15.2	17.0	18.6	20.1	21.5	7.2	10.1	12.4	14.3	16.0	17.5	18.9	20.2

Table 106: R513A Application Capacity Ratings in Tons at Evaporator Temperature -10°F to -40°F

Valve Model	-10°F								-20°F								-40°F							
	Pressure Drop Across Valve (psid)																							
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV01-24SC	0.27	0.38	0.46	0.54	0.60	0.66	0.71	0.76	0.26	0.37	0.45	0.52	0.58	0.63	0.69	0.73	0.24	0.34	0.42	0.48	0.54	0.59	0.64	0.68
QREV02-24SC	0.66	0.94	1.15	1.33	1.48	1.62	1.75	1.87	0.64	0.91	1.11	1.28	1.43	1.57	1.70	1.81	0.60	0.85	1.04	1.20	1.34	1.46	1.58	1.69
QREV03-24SC	0.86	1.22	1.49	1.72	1.92	2.11	2.28	2.43	0.83	1.18	1.44	1.67	1.86	2.04	2.20	2.36	0.78	1.10	1.35	1.55	1.74	1.90	2.05	2.20
QREV04-24SC	1.06	1.50	1.83	2.12	2.37	2.59	2.80	2.99	1.02	1.45	1.77	2.05	2.29	2.51	2.71	2.90	0.96	1.35	1.65	1.91	2.14	2.34	2.53	2.70
QREV05-24SC	1.45	2.06	2.52	2.91	3.25	3.56	3.85	4.11	1.41	1.99	2.44	2.81	3.15	3.45	3.72	3.98	1.31	1.86	2.27	2.62	2.93	3.21	3.47	3.71
	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200	25	50	75	100	125	150	175	200
QREV09-24SC	3.3	4.6	5.6	6.5	7.3	8.0	8.6	9.2	3.1	4.5	5.5	6.3	7.0	7.7	8.3	8.9	2.9	4.2	5.1	5.9	6.6	7.2	7.8	8.3
QREV10-24SC	3.9	5.5	6.7	7.7	8.6	9.4	10.2	10.9	3.7	5.3	6.5	7.5	8.3	9.1	9.9	10.6	3.5	4.9	6.0	7.0	7.8	8.5	9.2	9.8
QREV11-24SC	4.5	6.3	7.8	9.0	10.0	11.0	11.9	12.7	4.3	6.1	7.5	8.7	9.7	10.6	11.5	12.3	4.0	5.7	7.0	8.1	9.0	9.9	10.7	11.4
QREV12-24SC	5.1	7.2	8.8	10.2	11.4	12.4	13.4	14.4	4.9	7.0	8.5	9.8	11.0	12.0	13.0	13.9	4.6	6.5	7.9	9.2	10.3	11.2	12.1	13.0
QREV13-24SC	5.7	8.1	9.9	11.4	12.8	14.0	15.1	16.1	5.5	7.8	9.6	11.0	12.4	13.5	14.6	15.6	5.2	7.3	8.9	10.3	11.5	12.6	13.6	14.6
QREV14-24SC	6.3	8.9	10.9	12.6	14.1	15.5	16.7	17.8	6.1	8.6	10.6	12.2	13.7	15.0	16.2	17.3	5.7	8.1	9.9	11.4	12.7	13.9	15.1	16.1
QREV15-24SC	6.9	9.8	12.0	13.9	15.5	17.0	18.3	19.6	6.7	9.5	11.6	13.4	15.0	16.4	17.8	19.0	6.3	8.8	10.8	12.5	14.0	15.3	16.6	17.7

Table 107: R513A Application Capacity Correction Factor at Evaporator Temperature °F

Liquid Temperature at Expansion Valve Inlet (°F)														
0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
Correction Factor														
1.77	1.70	1.62	1.54	1.46	1.38	1.30	1.22	1.14	1.06	0.98	0.90	0.82	0.74	0.65

Liquid temperature correction factors account for changes in liquid density and refrigerating effect and are based upon an average evaporator temperature of 0°F. However, these factors may be used for evaporator temperatures from -40°F to +40°F since variability is negligible.