OE Series

The OE series valve utilizes balanced port construction to provide optimum operation on medium to large tonnage air conditioning and refrigeration systems. Two brass body styles with copper ODF connections and a removable thermostatic power element provide the stability and control required in a variety of applications, especially where there are wide changes in load conditions. Body Style 1 has an R-22 nominal capacity up to 30 tons, while Body Style 2 extends the capacity range to 70 tons.

Applications

- Air Conditioning
- Process Chillers
- Commercial Refrigeration

Features and Benefits

- Balanced port design
- Removable power element
- Field adjustable superheat
- 1/4" sweat external equalizer
- 60" capillary tube

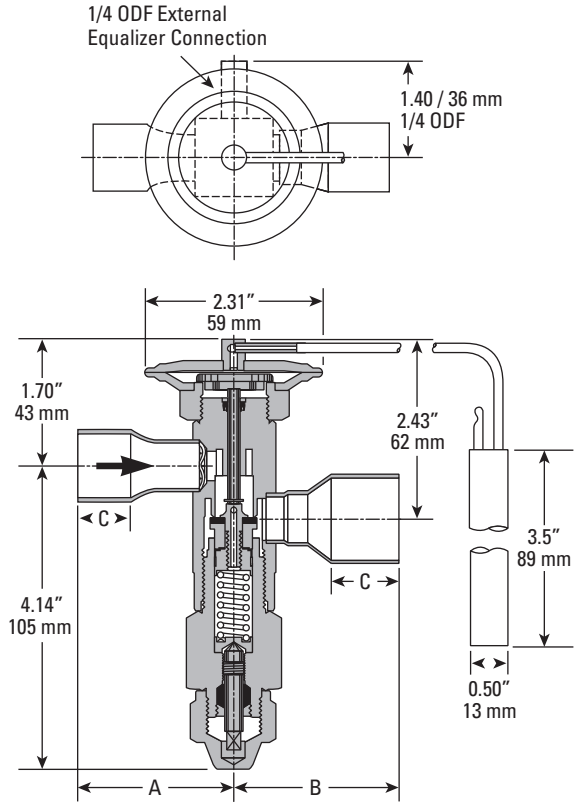
Specifications

Refrigerant	Refrigerant Designation	Nominal Capacity (Tons)	Valve Description	Rainbow Charges™	Standard Tubing Length Feet (m)	Connection - (Inches)		External Equalizer Connection (Inches)
						Inlet	Outlet	
R-12 R-134a R-401A R-401B	J	9	OE-9-J	W	5 (1.5)	7/8 ODF	1-1/8 ODF	1/4 ODF
		12	OE-12-J				1-3/8 ODF	
		16	OE-16-J			1-1/8 ODF		
		23	OE-23-J					
		32	OE-32-J					
		40	OE-40-J					
R-402A R-402B R-404A R-502 R-507	S	9	OE-9-S	W Z X35	5 (1.5)	7/8 ODF	1-1/8 ODF	1/4 ODF
		12	OE-12-S				1-3/8 ODF	
		21	OE-21-S			1-1/8 ODF		
		30	OE-30-S					
		35	OE-35-S					
		45	OE-45-S					
R-22 R-407C R-422D	V	15	OE-15-V	W X110	5 (1.5)	7/8 ODF	1-1/8 ODF	1/4 ODF
		20	OE-20-V				1-3/8 ODF	
		30	OE-30-V			1-1/8 ODF		
		40	OE-40-V					
		55	OE-55-V					
		70	OE-70-V					
R-410A	Z	20	OE-20-Z	X200	5 (1.5)	7/8 ODF	1-3/8 ODF	1/4 ODF
		25	OE-25-Z					
		35	OE-35-Z			1-1/8 ODF		
		50	OE-50-Z					
		60	OE-60-Z					

OE Series

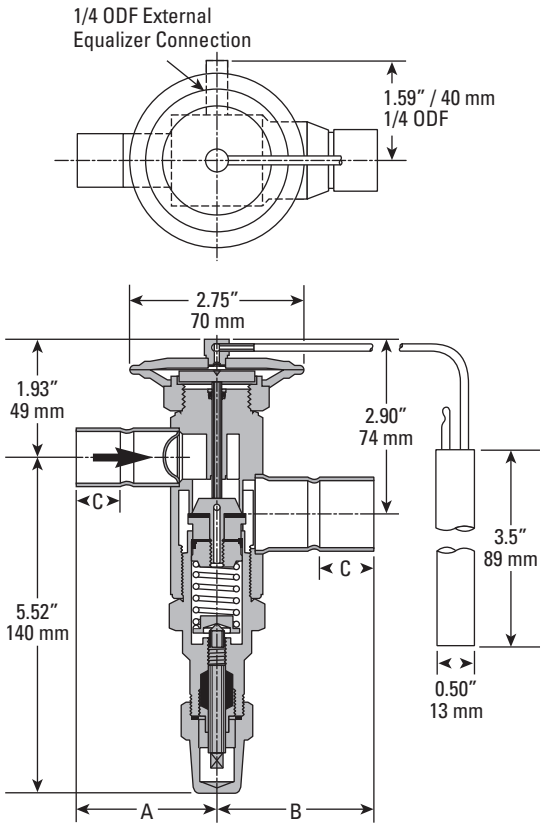
Dimensions – Inches

Type OE with Number 83 & 85 Element



Fitting Size Straight Thru ODF Solder	A	B	C
7/8	2.09″ 53 mm	—	0.75″ 19 mm
1-1/8	2.21″ 56 mm	2.23″ 57 mm	0.91″ 23 mm
1-3/8	—	2.39″ 61 mm	0.97″ 25 mm

Type OE with Number 33 & 85-3 Element



Fitting Size Straight Thru ODF Solder	A	B	C
7/8	2.09″ 53 mm	—	0.78″ 20 mm
1-1/8	2.69″ 68 mm	—	0.91″ 23 mm
1-3/8	—	2.84″ 72 mm	0.97″ 25 mm
1-5/8	—	3.12″ 79 mm	1.09″ 28 mm

Replacement Elements

Refrigerant Designation	Element	
V	KT-83-VW KT-83-VX100	KT-33-VW KT-33-VX100
Z	KT-85-ZX200	KT-85-3-ZX200
S	KT-83-SW KT-83-SZ KT-83-SX35	KT-33-SW KT-33-SZ KT-33-SX35
J	KT-83-JW	KT-33-JW

Capacity Tables

R-22 Capacities in Tons (R-407C Refrigerant & Liquid Temperature Correction Factor below)

Valve Type	Nominal Capacity (Tons) or Orifice Designation	Evaporator Temperature°F																							
		40°F								20°F								0°F							
		Pressure Drop (PSI)																							
		75	100	125	150	175	200	225	250	75	100	125	150	175	200	225	250	75	100	125	150	175	200	225	250
N	1	0.87	1.0	1.1	1.2	1.3	1.4	1.5	1.6	0.85	0.98	1.1	1.2	1.3	1.4	1.5	1.5	0.75	0.87	0.97	1.1	1.2	1.2	1.3	1.4
N	3	2.6	3.0	3.4	3.7	4.0	4.3	4.5	4.7	2.5	2.9	3.3	3.6	3.9	4.1	4.4	4.6	2.3	2.6	2.9	3.2	3.5	3.7	3.9	4.1
H(E), HC(E)	1-1/2	1.3	1.5	1.7	1.8	2.0	2.1	2.3	2.4	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.3	1.1	1.3	1.5	1.6	1.8	1.9	2.0	2.1
H(E), HC(E)	3	2.6	3.0	3.4	3.7	4.0	4.2	4.4	4.5	2.6	2.9	3.3	3.6	3.9	4.2	4.3	4.4	2.3	2.6	3.0	3.2	3.5	3.7	3.8	3.9
H(E), HC(E)	5	4.3	5.0	5.6	6.1	6.6	7.1	7.2	7.3	4.2	4.9	5.5	6.0	6.5	6.9	7.0	7.1	3.8	4.4	4.9	5.4	5.8	6.2	6.3	6.4
SCE	AAA	0.30	0.35	0.39	0.43	0.46	0.50	0.53	0.55	0.30	0.34	0.38	0.42	0.45	0.48	0.51	0.54	0.26	0.30	0.33	0.37	0.40	0.42	0.45	0.47
C(E), EC(E), SCE	AA	0.52	0.60	0.67	0.73	0.79	0.85	0.90	0.95	0.51	0.58	0.65	0.72	0.77	0.83	0.88	0.92	0.44	0.51	0.57	0.63	0.68	0.72	0.77	0.81
C(E), EC(E), SCE	A	1.5	1.8	2.0	2.1	2.3	2.5	2.6	2.8	1.5	1.7	1.9	2.1	2.3	2.4	2.6	2.7	1.3	1.5	1.7	1.9	2.0	2.2	2.3	2.4
C(E), EC(E), SCE	B	2.8	3.2	3.6	3.9	4.2	4.5	4.8	5.1	2.7	3.1	3.5	3.8	4.1	4.4	4.7	4.9	2.4	2.8	3.1	3.4	3.7	3.9	4.2	4.4
C(E), EC(E), SCE	C	4.3	5.0	5.6	6.1	6.6	7.1	7.5	7.9	4.2	4.9	5.5	6.0	6.5	6.9	7.3	7.7	3.8	4.4	4.9	5.3	5.8	6.2	6.5	6.9
C(E), EC(E), SCE	D	6.9	8.0	9.0	9.8	10.6	11.3	12.0	12.7	6.8	7.8	8.7	9.6	10.3	11.0	11.7	12.3	6.0	7.0	7.8	8.5	9.2	9.9	10.5	11.0
EBSE	8	7.4	8.5	9.5	10.4	11.2	12.0	12.8	13.4	6.8	7.9	8.8	9.6	10.4	11.1	11.8	12.4	5.7	6.5	7.3	8.0	8.6	9.2	9.8	10.3
EBSE	11	10.0	11.5	12.9	14.1	15.2	16.3	17.3	18.2	9.2	10.7	11.9	13.0	14.1	15.1	16.0	16.8	7.6	8.8	9.9	10.8	11.7	12.5	13.2	14.0
EBSE	15	13.4	15.5	17.3	18.9	20.5	21.9	23.2	24.4	12.6	14.6	16.3	17.8	19.3	20.6	21.9	23.0	9.4	10.9	12.2	13.3	14.4	15.4	16.3	17.2
EBSE	20	19.3	22.3	25.0	27.4	29.5	31.6	33.5	35.3	17.7	20.4	22.8	25.0	27.0	28.9	30.6	32.3	13.1	15.1	16.9	18.5	20.0	21.4	22.7	23.9
OE	15	13.0	15.0	16.8	18.4	19.8	21.2	22.5	23.7	12.0	13.9	15.5	17.0	18.4	19.6	20.8	22.0	10.1	11.7	13.0	14.3	15.4	16.5	17.5	18.4
OE	20	19.2	22.2	24.8	27.2	29.4	31.4	33.3	35.1	17.8	20.6	23.0	25.2	27.2	29.1	30.8	32.5	14.9	17.2	19.3	21.1	22.8	24.4	25.9	27.3
OE	30	26.4	30.5	34.1	37.4	40.4	43.1	45.8	48.2	24.5	28.2	31.6	34.6	37.4	39.9	42.4	44.7	20.5	23.7	26.5	29.0	31.3	33.5	35.5	37.5
OE	40	34.9	40.3	45.1	49.4	53.3	57.0	60.5	63.7	33.7	38.9	43.5	47.6	51.5	55.0	58.3	61.5	24.8	28.6	32.0	35.1	37.9	40.5	42.9	45.3
OE	55	47.6	55.0	61.5	67.4	72.8	77.8	82.5	87.0	46.0	53.1	59.3	65.0	70.2	75.1	79.6	83.9	33.8	39.1	43.7	47.9	51.7	55.3	58.6	61.8
OE	70	63.2	73.0	81.6	89.4	96.6	103	110	115	61.0	70.5	78.8	86.3	93.2	99.6	106	111	44.9	51.9	58.0	63.5	68.6	73.3	77.8	82.0

These ratings are based on vapor free 100°F liquid refrigerant entering the expansion valve, and a maximum of 7°F change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	0°F	20°F	40°F	60°F	80°F	100°F	120°F	140°F
	Correction Factor							
R-22	1.57	1.45	1.34	1.23	1.12	1.00	0.88	0.76
R-407C	1.58	1.45	1.32	1.18	1.04	0.89	0.74	0.57

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of 0°F. However, they may be used for any evaporator temperature from 0°F to 40°F since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an SCE-B using R-407C at a 40°F evaporator, 125 psi pressure drop across the TEV, and a 80°F liquid temperature entering the TEV = 3.58 (from rating chart) x 1.04 (CF liquid temperature) = 3.72 tons

R-22 Capacities in Kilowatts (R-407C Refrigerant & Liquid Temperature Correction Factor below)

Valve Type	Nominal Capacity (kW) or Orifice Designation	Evaporator Temperature°C																							
		5°C								-5°C								-15°C							
		Pressure Drop (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
N	4	2.6	3.2	3.7	4.2	4.5	4.9	5.3	5.6	2.6	3.1	3.6	4.1	4.4	4.8	5.1	5.4	2.4	2.9	3.3	3.7	4.1	4.4	4.7	5.0
N	11	7.9	9.7	11.2	12.5	13.6	14.7	15.8	16.7	7.7	9.4	10.9	12.2	13.3	14.3	15.4	16.3	7.0	8.6	9.9	11.2	12.2	13.1	14.1	14.9
H(E), HC(E)	5	4.0	4.9	5.7	6.4	7.0	7.5	8.0	8.5	3.9	4.8	5.6	6.2	6.8	7.4	7.9	8.3	3.6	4.4	5.0	5.6	6.2	6.7	7.1	7.6
H(E), HC(E)	11	8.0	9.8	11.4	12.7	13.9	15.0	16.1	17.0	7.9	9.6	11.1	12.4	13.6	14.7	15.7	16.7	7.1	8.7	10.1	11.3	12.3	13.3	14.3	15.1
H(E), HC(E)	18	13.4	16.4	18.9	21.2	23.2	25.1	26.8	28.4	13.1	16.1	18.5	20.7	22.7	24.5	26.2	27.8	11.9	14.6	16.8	18.8	20.6	22.2	23.8	25.2
SCE	AAA	0.92	1.1	1.3	1.5	1.6	1.7	1.8	2.0	0.90	1.1	1.3	1.4	1.6	1.7	1.8	1.9	0.81	0.99	1.1	1.3	1.4	1.5	1.6	1.7
C(E), EC(E), SCE	AA	1.6	1.9	2.2	2.5	2.7	2.9	3.1	3.3	1.5	1.9	2.2	2.4	2.7	2.9	3.1	3.3	1.4	1.7	2.0	2.2	2.4	2.6	2.8	2.9
C(E), EC(E), SCE	A	4.6	5.6	6.5	7.3	8.0	8.6	9.2	9.7	4.5	5.5	6.3	7.1	7.8	8.4	9.0	9.5	4.1	5.0	5.8	6.5	7.1	7.7	8.2	8.7
C(E), EC(E), SCE	B	8.4	10.3	11.9	13.3	14.5	15.7	16.8	17.8	8.2	10.0	11.6	13.0	14.2	15.3	16.4	17.4	7.5	9.2	10.6	11.9	13.0	14.0	15.0	15.9
C(E), EC(E), SCE	C	13.1	16.1	18.5	20.7	22.7	24.5	26.2	27.8	12.8	15.7	18.1	20.3	22.2	24.0	25.6	27.2	11.7	14.4	16.6	18.6	20.3	22.0	23.5	24.9
C(E), EC(E), SCE	D	21.0	25.7	29.7	33.2	36.3	39.2	42.0	44.5	20.5	25.1	29.0	32.4	35.5	38.3	41.0	43.5	18.8	23.0	26.5	29.7	32.5	35.1	37.5	39.8
EBSE	28	22.4	27.4	31.6	35.4	38.7	41.8	44.7	47.4	20.9	25.5	29.5	33.0	36.1	39.0	41.7	44.2	17.9	22.0	25.3	28.3	31.0	33.5	35.8	38.0
EBSE	39	30.3	37.0	42.8	47.8	52.4	56.6	60.5	64.2	28.2	34.6	39.9	44.6	48.9	52.8	56.4	59.9	24.3	29.7	34.3	38.3	42.0	45.4	48.5	51.4
EBSE	53	40.6	49.8	57.5	64.2	70.4	76.0	81.3	86.2	38.5	47.1	54.4	60.9	66.7	72.0	77.0	81.6	30.9	37.8	43.6	48.8	53.5	57.7	61.7	65.5
EBSE	70	58.8	72.0	83.1	92.9	102	110	118	125	54.2	66.4	76.7	85.7	93.9	101	108	115	43.0	52.6	60.8	67.9	74.4	80.4	85.9	91.2
OE	53	39.5	48.3	55.8	62.4	68.3	73.8	78.9	83.7	36.8	45.1	52.0	58.2	63.7	68.9	73.6	78.1	31.9	39.1	45.1	50.5	55.3	59.7	63.8	67.7
OE	70	58.4	71.5	82.6	92.3	101	109	117	124	54.5	66.7	77.0	86.1	94.3	102	109	116	47.2	57.8	66.8	74.7	81.8	88.4	94.5	100
OE	105	80.2	98.3	113	127	139	150	160	170	74.8	91.6	106	118	130	140	150	159	64.9	79.5	91.8	103	112	121	130	138
OE	141	106	130	150	167	183	198	212	224	102	125	145	162	177	192	205	217	81.5	99.8	115	129	141	152	163	173
OE	193	144	177	204	228	250	270	289	306	140	171	198	221	242	261	279	296	111	136	157	176	193	208	222	236
OE	246	192	235	271	303	332	359	383	407	185	227	262	293	321	347	371	393	148	181	209	233	256	276	295	313

These ratings are based on vapor free 40°C liquid refrigerant entering the expansion valve, and a maximum of 4°C change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
	Correction Factor							
R-22	1.52	1.42	1.32	1.21	1.11	1.00	0.89	0.78
R-407C	1.53	1.41	1.28	1.15	1.02	0.88	0.74	0.59

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of -15°C. However, they may be used for any evaporator temperature from -15°C to 5°C since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an SCE-B using R-407C at a 5°C evaporator, 8 bar pressure drop across the TEV, and a 30°C liquid temperature entering the TEV = 12.1 (from rating chart) x 1.02 (CF liquid temperature) = 12.3 kW

Capacity Tables

R-134a Capacities in Tons (R-401A, R-409A Refrigerant & Liquid Temperature Correction Factor below)

Valve Type	Nominal Capacity (Tons) or Orifice Designation	Evaporator Temperature °F																							
		40°F								20°F								0°F							
		Pressure Drop (PSI)																							
		40	60	80	100	120	140	160	180	40	60	80	100	120	140	160	180	40	60	80	100	120	140	160	180
N	1/2	0.59	0.72	0.83	0.93	1.0	1.1	1.2	1.3	0.56	0.69	0.79	0.89	0.98	1.1	1.1	1.2	0.49	0.61	0.70	0.78	0.85	0.92	0.99	1.1
N	2	1.8	2.2	2.5	2.8	3.1	3.3	3.5	3.8	1.7	2.1	2.4	2.7	2.9	3.1	3.4	3.6	1.5	1.8	2.1	2.3	2.6	2.8	3.0	3.1
C(E), EC(E), SCE	AA	0.35	0.43	0.50	0.56	0.61	0.66	0.70	0.74	0.34	0.41	0.47	0.53	0.58	0.63	0.67	0.71	0.32	0.39	0.45	0.50	0.55	0.60	0.64	0.68
C(E), EC(E), SCE	A	1.0	1.3	1.5	1.6	1.8	1.9	2.1	2.2	0.99	1.2	1.4	1.6	1.7	1.8	2.0	2.1	0.86	1.1	1.2	1.4	1.5	1.6	1.7	1.8
C(E), EC(E), SCE	B	1.9	2.3	2.7	3.0	3.3	3.5	3.8	4.0	1.8	2.2	2.6	2.9	3.1	3.4	3.6	3.8	1.6	1.9	2.2	2.5	2.7	3.0	3.2	3.4
C(E), EC(E), SCE	C	3.0	3.6	4.2	4.7	5.1	5.5	5.9	6.3	2.8	3.5	4.0	4.5	4.9	5.3	5.6	6.0	2.5	3.0	3.5	3.9	4.3	4.6	4.9	5.2
C(E), EC(E), SCE	D	4.7	5.8	6.7	7.5	8.2	8.8	9.4	10.0	4.5	5.5	6.4	7.1	7.8	8.4	9.0	9.6	3.9	4.8	5.6	6.2	6.8	7.4	7.9	8.4
EBSE	5	5.0	6.1	7.1	7.9	8.7	9.4	10.0	10.6	4.0	4.9	5.6	6.3	6.9	7.4	7.9	9.4	3.4	4.2	4.8	5.4	5.9	6.4	6.8	7.2
EBSE	7	6.9	8.4	9.7	10.9	11.9	12.9	13.8	14.6	5.5	6.7	7.7	8.6	9.5	10.2	10.9	11.6	4.7	5.8	6.6	7.4	8.1	8.8	9.4	10.0
EBSE	9	9.1	11.2	12.9	14.4	15.8	17.1	18.2	19.4	6.9	8.4	9.7	10.9	11.9	12.9	13.7	14.6	5.5	6.8	7.8	8.7	9.6	10.3	11.0	11.7
EBSE	12	13.1	16.0	18.5	20.7	22.6	24.4	26.1	27.7	9.9	12.1	14.0	15.6	17.1	18.5	19.7	20.9	7.7	9.5	10.9	12.2	13.4	14.5	15.4	16.4
OE	9	8.9	10.8	12.5	14.0	15.3	16.6	17.7	18.8	7.6	9.3	10.8	12.0	13.2	14.2	15.2	16.1	6.6	8.1	9.3	10.4	11.4	12.6	13.2	14.0
OE	12	11.5	14.1	16.3	18.2	19.9	21.5	23.0	24.4	9.9	12.1	14.0	15.6	17.1	18.5	19.8	21.0	8.6	10.5	12.1	13.6	14.9	16.0	17.1	18.2
OE	16	15.2	18.7	21.6	24.1	26.4	28.5	30.5	32.3	13.1	16.0	18.5	20.7	22.7	24.5	26.2	27.8	11.4	13.9	16.1	18.0	19.7	21.3	22.7	24.1
OE	23	22.6	27.7	32.0	35.8	39.2	42.3	45.2	48.0	21.2	25.9	29.9	33.5	36.7	39.6	42.3	44.9	17.5	21.4	24.7	27.6	30.3	32.7	34.9	37.1
OE	32	31.5	38.6	44.5	49.8	54.5	58.9	63.0	66.8	29.5	36.1	41.7	46.6	51.0	55.1	58.9	62.5	24.3	29.8	34.4	38.4	42.1	45.5	48.6	51.6
OE	40	39.3	48.2	55.6	62.2	68.1	73.6	78.7	83.5	36.8	45.1	52.1	58.2	63.8	68.9	73.6	78.1	30.4	37.2	43.0	48.0	52.6	56.9	60.8	64.5

These ratings are based on vapor free 100°F liquid refrigerant entering the expansion valve, and a maximum of 7°F change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	0°F	20°F	40°F	60°F	80°F	100°F	120°F	140°F
	Correction Factor							
R-134a	1.69	1.56	1.42	1.29	1.14	1.00	0.85	0.71
R-401A	1.75	1.62	1.49	1.36	1.23	1.09	0.95	0.81
R-409A	1.65	1.54	1.42	1.31	1.19	1.06	0.94	0.81

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of 0°F. However, they may be used for any evaporator temperature from 0°F to 40°F since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an SCE-B using R-409A at a 20°F evaporator, 120 psi pressure drop across the TEV, and a 80°F liquid temperature entering the TEV = 3.12 (from rating chart) x 1.19 (CF liquid temperature) = 3.72 tons

R-134a Capacities in Kilowatts (R-401A, R-409A Refrigerant & Liquid Temperature Correction Factor below)

Valve Type	Nominal Capacity (kW) or Orifice Designation	Evaporator Temperature °C																							
		5°C								-5°C								-15°C							
		Pressure Drop (BAR)																							
		2.5	4.0	5.5	7.0	8.5	10.0	11.5	13.0	2.5	4.0	5.5	7.0	8.5	10.0	11.5	13.0	2.5	4.0	5.5	7.0	8.5	10.0	11.5	13.0
N	3	1.9	2.4	2.9	3.2	3.6	3.9	4.1	4.4	1.9	2.3	2.7	3.1	3.4	3.7	4.0	4.2	1.7	2.1	2.5	2.8	3.1	3.3	3.6	3.8
N	7	5.8	7.3	8.6	9.7	10.7	11.5	12.4	13.2	5.5	7.0	8.2	9.3	10.2	11.1	11.9	12.7	5.0	6.3	7.4	8.3	9.2	9.9	10.7	11.3
C(E), EC(E), SCE	AA	1.2	1.5	1.7	1.9	2.1	2.3	2.5	2.6	1.1	1.4	1.6	1.8	2.0	2.2	2.4	2.5	1.1	1.3	1.6	1.8	1.9	2.1	2.3	2.4
C(E), EC(E), SCE	A	3.4	4.3	5.0	5.6	6.2	6.7	7.2	7.7	3.2	4.1	4.8	5.4	6.0	6.5	6.9	7.4	2.9	3.7	4.3	4.9	5.4	5.8	6.2	6.6
C(E), EC(E), SCE	B	6.2	7.8	9.2	10.3	11.4	12.3	13.2	14.1	5.9	7.5	8.8	9.9	10.9	11.8	12.7	13.5	5.3	6.7	7.9	8.9	9.8	10.6	11.4	12.1
C(E), EC(E), SCE	C	9.6	12.2	14.3	16.1	17.8	19.3	20.7	22.0	9.2	11.7	13.7	15.5	17.0	18.5	19.8	21.1	8.3	10.5	12.3	13.9	15.3	16.6	17.8	18.9
C(E), EC(E), SCE	D	15.4	19.5	22.9	25.8	28.4	30.8	33.1	35.2	14.8	18.7	21.9	24.7	27.3	29.6	31.7	33.7	13.3	16.8	19.7	22.2	24.5	26.5	28.5	30.3
EBSE	18	16.5	20.8	24.4	27.6	30.4	33.0	35.3	37.6	13.4	17.0	19.9	22.5	24.7	26.8	28.8	30.6	11.6	14.6	17.1	19.3	21.3	23.1	24.8	26.3
EBSE	25	22.7	28.7	33.7	38.0	41.9	45.4	48.7	51.8	18.5	23.4	27.4	30.9	34.1	37.0	39.7	42.2	15.9	20.1	23.6	26.6	29.4	31.9	34.2	36.3
EBSE	32	30.2	38.2	44.7	50.5	55.6	60.3	64.7	68.8	23.5	29.7	34.9	39.3	43.3	47.0	50.4	53.6	19.1	24.1	28.3	31.9	35.2	38.2	40.9	43.5
EBSE	42	43.2	54.6	64.1	72.3	79.6	86.4	92.6	98.5	33.7	42.7	50.0	56.4	62.2	67.4	72.3	76.9	26.9	34.0	39.9	45.0	49.6	53.8	57.7	61.4
OE	32	29.1	36.8	43.2	48.7	53.7	58.2	62.4	66.4	25.4	32.2	37.7	42.6	46.9	50.9	54.6	58.0	22.3	28.3	33.1	37.4	41.2	44.7	47.9	50.9
OE	42	37.8	47.9	56.1	63.3	69.8	75.7	81.2	86.3	33.1	41.8	49.0	55.3	61.0	66.1	70.9	75.4	29.0	36.7	43.1	48.6	53.5	58.1	62.3	66.2
OE	56	50.1	63.4	74.4	83.9	92.4	100	108	114	43.8	55.4	65.0	73.3	80.8	87.6	93.9	100	38.5	48.7	57.1	64.4	70.9	76.9	82.5	87.7
OE	81	74.1	93.7	110	124	137	148	159	169	69.8	88.3	104	117	129	140	150	159	60.0	75.9	89.0	100	111	120	129	137
OE	110	103	130	153	172	190	206	221	235	97.2	123	144	163	179	194	208	222	83.4	106	124	140	154	167	179	190
OE	140	129	163	191	216	238	258	276	294	121	154	180	203	224	243	260	277	104	132	155	175	192	209	224	238

These ratings are based on vapor free 40°C liquid refrigerant entering the expansion valve, and a maximum of 4°C change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
	Correction Factor							
R-134a	1.64	1.52	1.39	1.26	1.13	1.00	0.87	0.73
R-401A	1.70	1.59	1.46	1.34	1.22	1.09	0.96	0.83
R-409A	1.61	1.50	1.40	1.29	1.18	1.07	0.95	0.83

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of -15°C. However, they may be used for any evaporator temperature from -15°C to 5°C since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an SCE-B using R-409A at a -5°C evaporator, 8.5 bar pressure drop across the TEV, and a 30°C liquid temperature entering the TEV = 11.2 (from rating chart) x 1.18 (CF liquid temperature) = 13.2 kW

Capacity Tables

R-404A Capacities in Tons (R-507 Refrigerant & Liquid Temperature Correction Factor below)

Valve Type	Nominal Capacity (Tons) or Orifice Designation	Evaporator Temperature °F															
		40°F								20°F							
		Pressure Drop (PSI)															
		75	100	125	150	175	200	225	250	75	100	125	150	175	200	225	250
N	1/2	0.57	0.66	0.74	0.81	0.87	0.94	1.0	1.1	0.54	0.63	0.70	0.77	0.83	0.89	0.94	1.0
N	2	1.7	2.0	2.2	2.4	2.6	2.8	3.0	3.1	1.6	1.9	2.1	2.3	2.5	2.7	2.8	3.0
SCE	AAA	0.20	0.23	0.26	0.28	0.30	0.33	0.34	0.36	0.19	0.22	0.24	0.27	0.29	0.31	0.33	0.34
C(E), EC(E), SCE	AA	0.34	0.39	0.44	0.48	0.52	0.56	0.59	0.62	0.32	0.37	0.42	0.46	0.49	0.53	0.56	0.59
C(E), EC(E), SCE	A	1.0	1.2	1.3	1.4	1.5	1.6	1.7	1.8	0.95	1.1	1.2	1.3	1.5	1.6	1.7	1.7
C(E), EC(E), SCE	B	1.8	2.1	2.4	2.6	2.8	3.0	3.2	3.3	1.7	2.0	2.2	2.5	2.7	2.8	3.0	3.2
C(E), EC(E), SCE	C	2.9	3.3	3.7	4.1	4.4	4.7	5.0	5.2	2.7	3.1	3.5	3.8	4.2	4.4	4.7	5.0
C(E), EC(E), SCE	D	4.6	5.3	5.9	6.5	7.0	7.5	7.9	8.4	4.3	5.0	5.6	6.1	6.6	7.1	7.5	7.9
EBSE	6	4.9	5.7	6.4	7.0	7.6	8.1	8.6	9.0	4.4	5.0	5.6	6.2	6.7	7.1	7.5	8.0
EBSE	7-1/2	6.7	7.7	8.7	9.5	10.2	11.0	11.6	12.2	5.9	6.8	7.6	8.4	9.0	9.7	10.2	10.8
EBSE	10	8.3	9.5	10.7	11.7	12.6	13.5	14.3	15.1	7.5	8.6	9.6	10.5	11.4	12.2	12.9	13.6
EBSE	13	11.8	13.6	15.2	16.7	18.0	19.3	20.5	21.6	10.8	12.5	14.0	15.3	16.5	17.7	18.7	19.8
OE	9	8.4	9.7	10.8	11.9	12.8	13.7	14.5	15.3	7.2	8.3	9.2	10.1	10.9	11.7	12.4	13.1
OE	12	11.5	13.2	14.8	16.2	17.5	18.7	19.9	20.9	9.8	11.3	12.6	13.8	14.9	16.0	16.9	17.9
OE	21	18.5	21.4	23.9	26.2	28.3	30.3	32.1	33.8	15.8	18.3	20.4	22.4	24.1	25.8	27.4	28.9
OE	30	26.6	30.8	34.4	37.7	40.7	43.5	46.2	48.7	25.0	28.9	32.3	35.4	38.2	40.8	43.3	45.7
OE	35	30.9	35.7	39.9	43.7	47.2	50.4	53.5	56.4	29.0	33.5	37.4	41.0	44.3	47.3	50.2	52.9
OE	45	39.7	45.9	51.3	56.2	60.7	65	69	73	37.3	43.0	48.1	52.7	56.9	60.8	65	68

Valve Type	Nominal Capacity (Tons) or Orifice Designation	Evaporator Temperature °F															
		0°F								-10°F							
		Pressure Drop (PSI)															
		75	100	125	150	175	200	225	250	75	100	125	150	175	200	225	250
N	1/2	0.47	0.54	0.61	0.66	0.72	0.77	0.81	0.86	0.30	0.35	0.39	0.43	0.46	0.49	0.52	0.55
N	2	1.4	1.6	1.8	2.0	2.2	2.3	2.4	2.6	0.93	1.1	1.2	1.3	1.4	1.5	1.6	1.7
SCE	AAA	0.18	0.21	0.23	0.25	0.27	0.29	0.31	0.32	0.17	0.20	0.22	0.24	0.26	0.28	0.30	0.31
C(E), EC(E), SCE	AA	0.30	0.35	0.39	0.43	0.46	0.50	0.53	0.56	0.28	0.32	0.36	0.39	0.42	0.45	0.48	0.51
C(E), EC(E), SCE	A	0.8	1.0	1.1	1.2	1.3	1.3	1.4	1.5	0.53	0.61	0.68	0.75	0.81	0.86	0.91	0.96
C(E), EC(E), SCE	B	1.5	1.7	1.9	2.1	2.3	2.5	2.6	2.7	0.99	1.2	1.3	1.4	1.5	1.6	1.7	1.8
C(E), EC(E), SCE	C	2.4	2.7	3.0	3.3	3.6	3.8	4.1	4.3	1.5	1.7	1.9	2.1	2.3	2.4	2.6	2.7
C(E), EC(E), SCE	D	3.8	4.3	4.9	5.3	5.7	6.1	6.5	6.9	1.9	2.2	2.5	2.7	2.9	3.1	3.3	3.5
EBSE	6	3.6	4.1	4.6	5.1	5.5	5.8	6.2	6.5	2.9	3.4	3.8	4.1	4.5	4.8	5.1	5.4
EBSE	7-1/2	4.8	5.6	6.3	6.9	7.4	7.9	8.4	8.8	3.7	4.3	4.8	5.3	5.7	6.1	6.5	6.8
EBSE	10	5.6	6.5	7.3	7.9	8.6	9.2	9.7	10.3	4.8	5.5	6.1	6.7	7.3	7.8	8.2	8.7
EBSE	13	7.9	9.1	10.2	11.2	12.1	12.9	13.7	14.4	6.8	7.8	8.7	9.5	10.3	11.0	11.7	12.3
OE	9	5.6	6.5	7.2	7.9	8.6	9.2	9.7	10.2	4.3	5.0	5.6	6.1	6.6	7.1	7.5	7.9
OE	12	7.7	8.9	9.9	10.8	11.7	12.5	13.3	14.0	6.9	7.9	8.9	9.7	10.5	11.2	11.9	12.6
OE	21	11.1	12.8	14.3	15.7	16.9	18.1	19.2	20.2	8.2	9.5	10.6	11.7	12.6	13.5	14.3	15.1
OE	30	17.8	20.6	23.0	25.2	27.2	29.1	30.9	32.5	12.3	14.3	15.9	17.5	18.9	20.2	21.4	22.5
OE	35	20.7	23.8	26.7	29.2	31.5	33.7	35.8	37.7	13.4	15.5	17.3	19.0	20.5	21.9	23.2	24.5
OE	45	26.6	30.7	34.3	37.6	40.6	43.4	46	49	15.4	17.8	19.9	21.8	23.6	25.2	26.8	28.2

These ratings are based on vapor free 100°F liquid refrigerant entering the expansion valve, and a maximum of 7°F change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	0°F	20°F	40°F	60°F	80°F	100°F	120°F	140°F
	Correction Factor							
R-404A	2.04	1.84	1.64	1.43	1.22	1.00	0.77	0.53
R-507	1.95	1.76	1.56	1.37	1.18	0.98	0.76	0.50

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of 0°F. However, they may be used for any evaporator temperature from -10°F to 40°F since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an SCE-B using R-507 at a 20°F evaporator, 175 psi pressure drop across the TEV, and a 80°F liquid temperature entering the TEV = 1.91 (from rating chart) x 1.18 (CF liquid temperature) = 2.25 tons

Capacity Tables

R-404A Capacities in Kilowatts (R-507 Refrigerant & Liquid Temperature Correction Factor below)

Valve Type	Nominal Capacity (kW) or Orifice Designation	Evaporator Temperature °C															
		5°C								-5°C							
		Pressure Drop (BAR)															
		4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
N	3	1.7	2.1	2.4	2.7	3.0	3.2	3.4	3.6	1.6	2.0	2.3	2.6	2.8	3.0	3.3	3.4
N	7	5.1	6.2	7.2	8.1	8.8	9.6	10.2	10.8	4.9	5.9	6.9	7.7	8.4	9.1	9.7	10.3
SCE	AAA	0.59	0.72	0.84	0.93	1.0	1.1	1.2	1.3	0.56	0.69	0.80	0.89	0.97	1.1	1.1	1.2
C(E), EC(E), SCE	AA	1.0	1.2	1.4	1.6	1.8	1.9	2.0	2.2	0.97	1.2	1.4	1.5	1.7	1.8	1.9	2.1
C(E), EC(E), SCE	A	3.0	3.7	4.2	4.7	5.2	5.6	6.0	6.3	2.8	3.5	4.0	4.5	4.9	5.3	5.7	6.0
C(E), EC(E), SCE	B	5.4	6.7	7.7	8.6	9.4	10.2	10.9	11.5	5.2	6.3	7.3	8.2	9.0	9.7	10.3	11.0
C(E), EC(E), SCE	C	8.5	10.4	12.0	13.5	14.8	15.9	17.0	18.1	8.1	9.9	11.5	12.8	14.0	15.2	16.2	17.2
C(E), EC(E), SCE	D	13.6	16.7	19.3	21.5	23.6	25.5	27.3	28.9	13.0	15.9	18.3	20.5	22.5	24.3	25.9	27.5
EBSE	21	14.4	17.7	20.4	22.8	25.0	27.0	28.9	30.6	12.9	15.8	18.3	20.4	22.4	24.1	25.8	27.4
EBSE	26	19.6	24.0	27.7	31.0	33.9	36.7	39.2	41.6	17.5	21.5	24.8	27.7	30.3	32.8	35.0	37.2
EBSE	35	24.1	29.5	34.1	38.1	41.8	45.1	48.2	51.2	22.0	27.0	31.1	34.8	38.1	41.2	44.0	46.7
EBSE	46	34.4	42.2	48.7	54.4	59.6	64.4	68.9	73.0	31.9	39.0	45.1	50.4	55.2	59.6	63.7	67.6
OE	32	24.5	30.0	34.7	38.8	42.5	45.9	49.1	52.0	21.3	26.1	30.1	33.7	36.9	39.9	42.6	45.2
OE	42	33.6	41.1	47.5	53.1	58.1	62.8	67.1	71.2	29.2	35.7	41.2	46.1	50.5	54.5	58.3	61.8
OE	74	54.2	66.4	76.7	85.7	93.9	101	108	115	47.1	57.7	66.6	74.5	81.6	88.1	94.2	99.9
OE	110	77.6	95.1	110	123	134	145	155	165	73.4	89.9	104	116	127	137	147	156
OE	120	90.0	110	127	142	156	168	180	191	85.1	104	120	134	147	159	170	180
OE	160	116	142	164	183	200	216	231	245	109	134	155	173	189	205	219	232

Valve Type	Nominal Capacity (kW) or Orifice Designation	Evaporator Temperature °C															
		-15°C								-25°C							
		Pressure Drop (BAR)															
		4	6	8	10	12	14	16	18	4	6	8	10	12	14	16	18
N	3	1.4	1.8	2.0	2.3	2.5	2.7	2.9	3.1	0.86	1.1	1.2	1.4	1.5	1.6	1.7	1.8
N	7	4.3	5.3	6.1	6.8	7.5	8.1	8.6	9.2	2.6	3.2	3.7	4.2	4.6	5.0	5.3	5.6
SCE	AAA	0.53	0.65	0.75	0.84	0.92	1.0	1.1	1.1	0.48	0.59	0.68	0.77	0.84	0.91	1.0	1.0
C(E), EC(E), SCE	AA	0.91	1.1	1.3	1.4	1.6	1.7	1.8	1.9	0.79	1.0	1.1	1.2	1.4	1.5	1.6	1.7
C(E), EC(E), SCE	A	2.5	3.1	3.6	4.0	4.4	4.7	5.1	5.4	1.5	1.8	2.1	2.4	2.6	2.8	3.0	3.2
C(E), EC(E), SCE	B	4.6	5.6	6.5	7.3	8.0	8.6	9.2	9.8	2.8	3.5	4.0	4.5	4.9	5.3	5.6	6.0
C(E), EC(E), SCE	C	7.2	8.8	10.2	11.4	12.5	13.5	14.4	15.3	4.2	5.2	6.0	6.7	7.3	7.9	8.4	8.9
C(E), EC(E), SCE	D	11.5	14.1	16.3	18.2	20.0	21.6	23.1	24.5	5.3	6.5	7.5	8.4	9.2	9.9	10.6	11.3
EBSE	21	10.9	13.4	15.5	17.3	18.9	20.5	21.9	23.2	8.0	9.8	11.3	12.6	13.8	14.9	16.0	16.9
EBSE	26	14.8	18.2	21.0	23.5	25.7	27.8	29.7	31.5	10.2	12.4	14.4	16.1	17.6	19.0	20.3	21.6
EBSE	35	17.6	21.6	24.9	27.9	30.5	33.0	35.2	37.4	13.1	16.0	18.5	20.7	22.7	24.5	26.2	27.8
EBSE	46	25.0	30.6	35.4	39.5	43.3	46.8	50.0	53.0	18.6	22.8	26.4	29.5	32.2	34.9	37.3	39.6
OE	32	17.4	21.3	24.6	27.5	30.1	32.5	34.8	36.9	12.1	14.8	17.0	19.1	20.9	22.5	24.1	25.6
OE	42	23.8	29.1	33.6	37.6	41.2	44.5	47.6	50.5	19.2	23.5	27.2	30.4	33.3	35.9	38.4	40.7
OE	74	35.5	43.5	50.2	56.1	61.5	66.4	71.0	75.3	23.0	28.2	32.5	36.4	39.9	43.1	46.0	48.8
OE	110	56.8	69.6	80.4	89.9	98.5	106	114	121	34.5	42.2	48.7	54.5	59.7	64.5	68.9	73.1
OE	120	65.9	80.7	93.2	104	114	123	132	140	37.4	45.8	52.9	59.2	64.8	70.0	74.8	79.4
OE	160	84.7	104	120	134	147	158	169	180	43.1	52.8	61.0	68.2	74.7	80.7	86.3	91.5

These ratings are based on vapor free 40°C liquid refrigerant entering the expansion valve, and a maximum of 4°C change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
	Correction Factor							
R-404A	1.98	1.79	1.60	1.41	1.21	1.00	0.79	0.56
R-507	1.89	1.71	1.53	1.35	1.17	0.98	0.78	0.53

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of -15°C. However, they may be used for any evaporator temperature from -25°C to 5°C since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an SCE-B using R-507 at a -5°C evaporator, 12 bar pressure drop across the TEV, and a 30°C liquid temperature entering the TEV = 6.72 (from rating chart) x 1.17 (CF liquid temperature) = 7.86 kW

Capacity Tables

R-410A Capacities in Tons

Valve Type	Nominal Capacity (Tons) or Orifice Designation	Evaporator Temperature °F																	
		40°F						20°F						0°F					
		Pressure Drop (PSI)																	
		120	160	200	240	280	320	120	160	200	240	280	320	120	160	200	240	280	320
H(E), HC(E)	1-1/2	1.3	1.5	1.7	1.8	2.0	2.1	1.3	1.5	1.6	1.8	1.9	2.1	1.2	1.4	1.6	1.7	1.9	2.0
H(E), HC(E)	3	2.6	3.0	3.4	3.7	4.0	4.2	2.6	2.9	3.3	3.6	3.9	4.2	2.4	2.8	3.2	3.5	3.7	4.0
H(E), HC(E)	5	4.3	5.0	5.6	6.1	6.6	7.1	4.4	4.9	5.5	6.0	6.5	6.9	4.1	4.7	5.3	5.8	6.2	6.7
ECE	AA	0.62	0.72	0.80	0.88	0.95	1.0	0.61	0.70	0.78	0.86	0.93	0.99	0.53	0.61	0.69	0.75	0.81	0.87
ECE	A	1.8	2.1	2.3	2.6	2.8	3.0	1.8	2.1	2.3	2.5	2.7	2.9	1.6	1.8	2.0	2.2	2.4	2.6
ECE	B	3.3	3.8	4.3	4.7	5.1	5.4	3.2	3.7	4.2	4.6	5.0	5.3	2.9	3.3	3.7	4.1	4.4	4.7
ECE	C	5.2	6.0	6.7	7.3	7.9	8.5	5.1	5.9	6.5	7.2	7.7	8.3	4.5	5.2	5.8	6.4	6.9	7.4
ECE	D	8.3	9.6	10.7	11.7	12.7	13.6	8.1	9.4	10.5	11.5	12.4	13.2	7.2	8.4	9.3	10.2	11.1	11.8
ECE	12-1/2	10.8	12.5	14.0	15.3	16.5	17.7	10.6	12.2	13.6	14.9	16.1	17.2	9.4	10.9	12.2	13.3	14.4	15.4
ECE	15	12.6	14.5	16.2	17.8	19.2	20.5	12.3	14.1	15.8	17.3	18.7	20.0	10.9	12.6	14.1	15.5	16.7	17.9
OE	20	17.3	20.0	22.4	24.5	26.5	28.3	16.9	19.5	21.8	23.9	25.8	27.6	15.9	18.4	20.6	22.5	24.3	26.0
OE	25	20.8	24.0	26.8	29.4	31.7	33.9	20.3	23.4	26.2	28.7	31.0	33.1	19.1	22.1	24.7	27.0	29.2	31.2
OE	35	28.6	33.0	36.9	40.4	43.7	46.7	27.9	32.2	36.0	39.4	42.6	45.5	26.3	30.3	33.9	37.2	40.1	42.9
OE	50	43.3	50.0	55.9	61.2	66.1	70.7	42.2	48.8	54.5	59.7	64.5	69.0	39.8	46.0	51.4	56.3	60.8	65.0
OE	60	52.0	60.0	67.1	73.5	79.4	84.8	50.7	58.5	65.4	71.7	77.4	82.8	47.8	55.2	61.7	67.5	73.0	78.0

These ratings are based on vapor free 100°F liquid refrigerant entering the expansion valve, and a maximum of 7°F change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	0°F	20°F	40°F	60°F	80°F	100°F	120°F	140°F
	Correction Factor, CF Liquid Temperature							
R-410A	1.79	1.63	1.47	1.32	1.16	1.00	0.83	0.62

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of 0°F. However, they may be used for any evaporator temperature from 0°F to 40°F since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an HCE-3 using R-410A at a 40°F evaporator, 160 psi pressure drop across the TEV, and a 80°F liquid temperature entering the TEV = 3.00 (from rating chart) x 1.16 (CF liquid temperature) = 3.48 tons

R-410A Capacities in Kilowatts

Valve Type	Nominal Capacity (kW) or Orifice Designation	Evaporator Temperature °C																	
		5°C						-5°C						-15°C					
		Pressure Drop (BAR)																	
		8	11	14	17	20	23	8	11	14	17	20	23	8	11	14	17	20	23
H(E), HC(E)	5	4.5	5.3	5.9	6.6	7.1	7.6	4.4	5.2	5.8	6.4	6.9	7.5	4.3	5.0	5.7	6.3	6.7	7.3
H(E), HC(E)	11	9.0	10.5	11.9	13.1	14.2	15.2	8.8	10.3	11.6	12.8	13.9	14.9	8.6	10.0	11.3	12.5	13.3	14.5
H(E), HC(E)	18	15.0	17.6	19.8	21.8	23.7	25.4	14.7	17.2	19.4	21.4	23.2	24.9	14.3	16.7	18.9	20.8	22.3	24.2
ECE	AA	2.1	2.5	2.8	3.0	3.3	3.5	2.0	2.4	2.7	3.0	3.2	3.5	1.8	2.2	2.4	2.7	2.9	3.1
ECE	A	6.1	7.1	8.1	8.9	9.6	10.3	6.0	7.0	7.9	8.7	9.4	10.1	5.5	6.4	7.2	8.0	8.6	9.3
ECE	B	11.1	13.1	14.7	16.2	17.6	18.9	10.9	12.8	14.4	15.9	17.2	18.5	10.0	11.7	13.2	14.5	15.8	16.9
ECE	C	17.4	20.4	23.0	25.4	27.5	29.5	17.0	19.9	22.5	24.8	26.9	28.8	15.6	18.3	20.6	22.7	24.6	26.4
ECE	D	27.8	32.6	36.8	40.6	44.0	47.2	27.2	31.9	36.0	39.7	43.0	46.2	24.9	29.2	33.0	36.3	39.4	42.3
ECE	44	36.3	42.5	48.0	52.9	57.4	61.5	35.5	41.6	46.9	51.7	56.1	60.2	32.5	38.1	43.0	47.4	51.4	55.1
ECE	53	42.1	49.5	55.7	61.4	66.5	71.4	41.2	48.3	54.4	60.0	65.1	69.8	37.7	44.2	49.9	54.9	59.6	63.9
OE	70	57.3	67.1	75.8	83.5	90.5	97.1	56.2	65.9	74.3	81.9	88.8	95.2	53.7	62.9	70.9	78.1	84.7	90.9
OE	88	68.7	80.6	90.9	100	109	117	67.4	79.0	89.2	98.2	107	114	64.3	75.4	85.1	93.8	102	109
OE	123	94.5	111	125	138	149	160	92.7	109	123	135	147	157	88.4	104	117	129	140	150
OE	176	143	168	189	209	226	243	140	165	186	205	222	238	134	157	177	195	212	227
OE	211	172	201	227	250	272	291	168	198	223	246	266	286	161	189	213	234	254	273

These ratings are based on vapor free 40°C liquid refrigerant entering the expansion valve, and a maximum of 4°C change in superheat.

Refrigerant	Liquid Temperature Entering TEV							
	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C
	Correction Factor, CF Liquid Temperature							
R-410A	1.73	1.59	1.44	1.30	1.15	1.00	0.84	0.65

These factors include corrections for liquid refrigerant density and net refrigerating effect, and are based on an evaporator temperature of -15°C. However, they may be used for any evaporator temperature from -15°C to 5°C since the variation in the actual factors across this range is insignificant.

TEV Capacity = TEV Rating x CF Liquid Temperature – Example: Actual capacity of an HCE-3 using R-410A at a 5°C evaporator, 11 bar pressure drop across the TEV, and a 30°C liquid temperature entering the TEV = 10.5 (from rating chart) x 1.15 (CF liquid temperature) = 12.1 kW

A Series Constant Pressure (Automatic) Valves

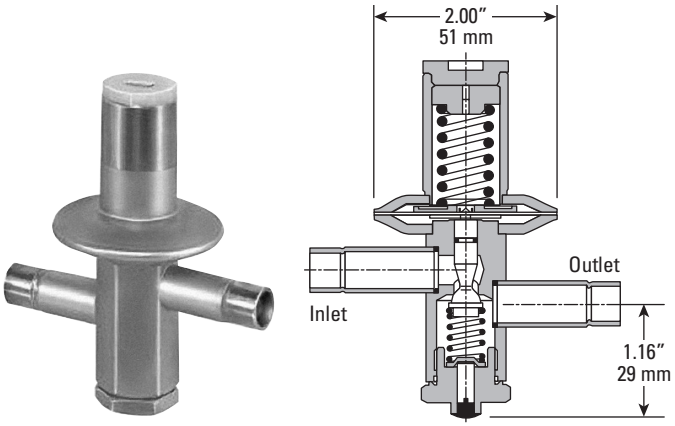
Specifications

- 0-90 psig adjustment range
- Bypass bleeds available
- Construction: Brass, copper and stainless steel
- Internally equalized
- U.L. recognized for maximum operating pressure of 500 psig high side, 400 psig low side

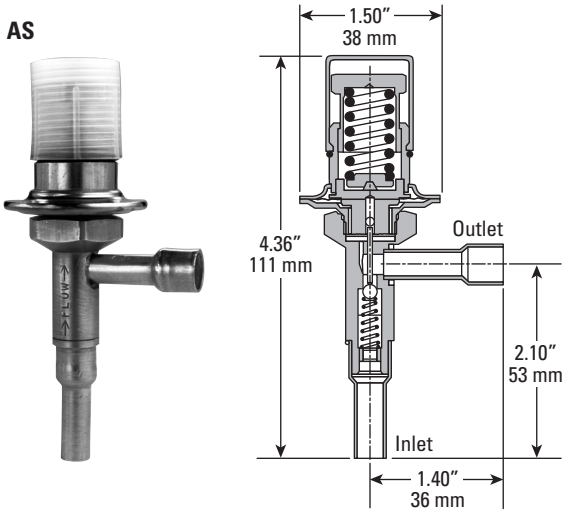
Model No.	Equalizer	Connections (Inches)	
		Inlet	Outlet
AS	Internal	1/4 ODF	3/8 ODF
A1	Internal	1/4 ODF	1/4 NPTF
A1	Internal	1/4 SAE	1/4 NPTF
A2*	Internal	1/4 SAE	1/2 SAE
A3	Internal	3/8 SAE	1/2 SAE
A4	Internal	1/4 SAE	1/2 SAE
A4	Internal	3/8 SAE	1/2 SAE
A7	Internal	1/4 ODF	1/4 ODF
A7	Internal	1/4 ODF	3/8 ODF
A7	Internal	3/8 ODF	3/8 ODF
A7	Internal	3/8 SAE	3/8 SAE
AT	Internal	1/4 SAE	1/4 NPTF
AT	Internal	1/4 ODF	1/4 NPTF

*1/2" x 3/8" SAE flare adaptor available.

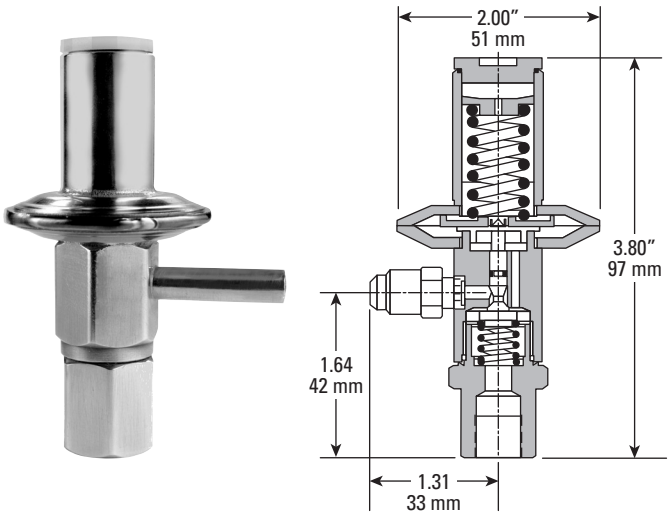
Model A7



Model AS



Model AT



Model A1