A Series Constant Pressure (Automatic) Valves

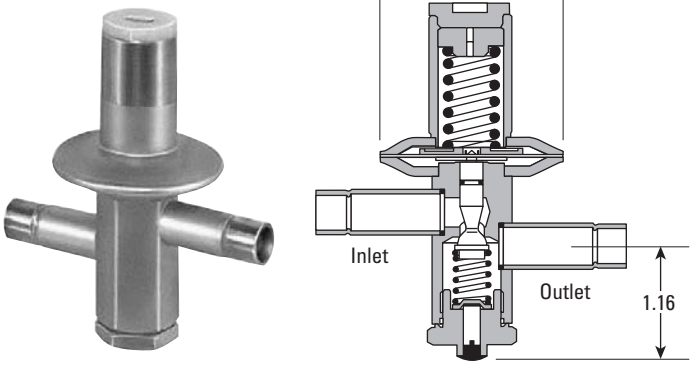
Specifications

- 0-90 psig adjustment range
- Bypass bleeds available
- Construction: Brass, copper and stainless steel
- Optional external equalizer
- U.L. recognized for maximum operating pressure of 500 psig high side, 225 psig low side

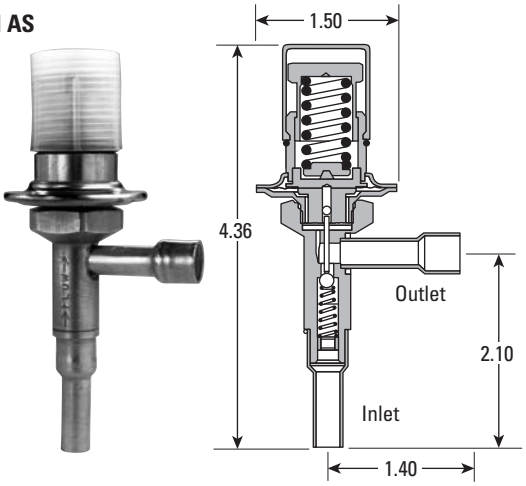
Model No.	Equalizer	Connections (Inches)	
		Inlet	Outlet
A1	Internal	1/4 SAE	1/4 NPTF
A2*	Internal	1/4 SAE	1/2 SAE
A3	Internal	3/8 SAE	1/2 SAE
A4	Internal	1/4 SAE	1/2 SAE
AS	Internal	1/4 ODF	3/8 ODF
A7	Internal	3/8 ODF	3/8 ODF
AT	Internal	1/4 SAE 1/4 ODF 8 mm ODF	1/4 NPTF 8 mm ODF

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

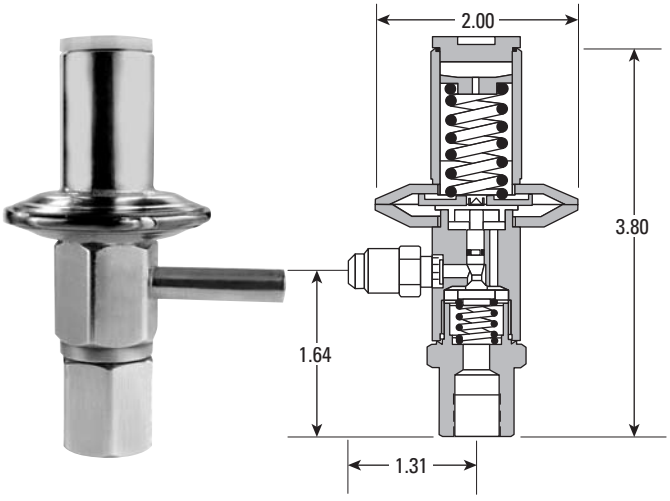
Model A7



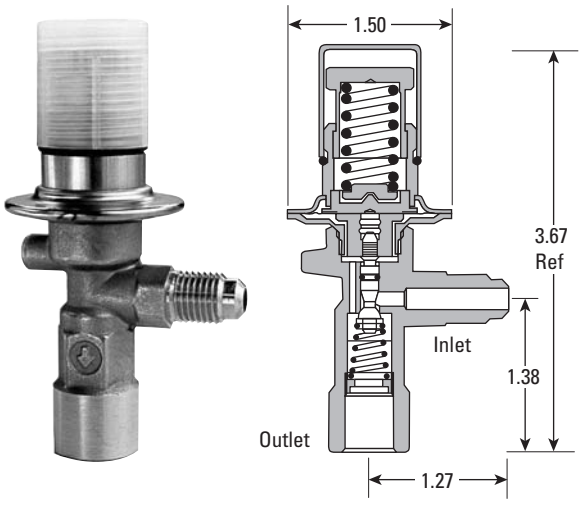
Model AS



Model AT

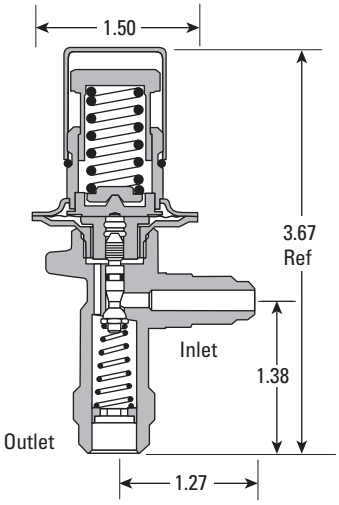


Model A1

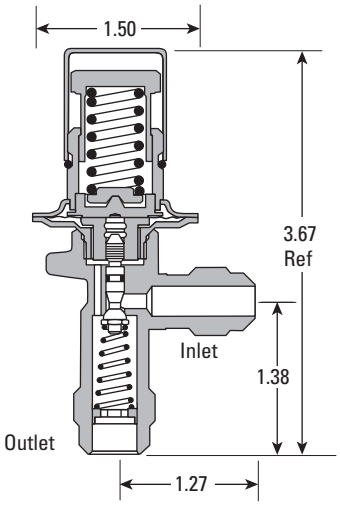


A Series Constant Pressure (Automatic) Valves

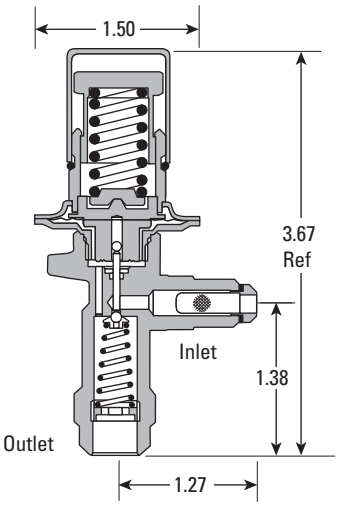
Model A2



Model A3



Model A4



Capacity Tables

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

Valve Type	Orifice	Nominal Capacity (Tons)	Capacity Range (Tons)	Evaporator Temperature °F																	
				40°F						20°F						0°F					
				Pressure Drop (PSI)																	
				40	60	80	100	120	140	60	80	100	120	140	160	60	80	100	120	140	160
A1, A2, AT	B	2	1 to 2	1.63	2.00	2.31	2.58	2.83	3.06	1.90	2.19	2.45	2.69	2.90	3.10	1.70	1.96	2.19	2.40	2.60	2.78
A4	—	1/2	1/4 to 3/4	0.61	0.75	0.87	0.97	1.06	1.15	0.71	0.82	0.92	1.01	1.09	1.16	0.64	0.74	0.82	0.90	0.97	1.04
A7-AA	AA	1/2	1/8 to 1/2	0.41	0.50	0.58	0.65	0.71	0.76	0.48	0.55	0.61	0.67	0.73	0.78	0.43	0.49	0.55	0.60	0.65	0.69
A7-A	A	1	1/4 to 1	0.82	1.00	1.15	1.29	1.41	1.53	0.95	1.10	1.23	1.34	1.45	1.55	0.85	0.98	1.10	1.20	1.30	1.39
A7-B	B	2	1 to 2	1.63	2.00	2.31	2.58	2.83	3.06	1.90	2.19	2.45	2.69	2.90	3.10	1.70	1.96	2.19	2.40	2.60	2.78
A7-C	C	3	1-1/2 to 3	2.45	3.00	3.46	3.87	4.24	4.58	2.85	3.29	3.68	4.03	4.35	4.65	2.55	2.94	3.29	3.61	3.90	4.16
AS, ASB20	—	1	1/4 to 1	0.82	1.00	1.15	1.29	1.41	1.53	0.95	1.10	1.23	1.34	1.45	1.55	0.85	0.98	1.10	1.20	1.30	1.39

Valve Type	Orifice	Nominal Capacity (Tons)	Capacity Range (Tons)	Evaporator Temperature °F																	
				-10°F						-20°F						-40°F					
				Pressure Drop (PSI)																	
				80	100	120	140	160	180	80	100	120	140	160	180	80	100	120	140	160	180
A1, A2, AT	B	2	1 to 2	1.64	1.83	2.01	2.17	2.32	2.46	1.34	1.50	1.64	1.77	1.89	2.01	0.88	0.98	1.07	1.16	1.24	1.32
A4	—	1/2	1/4 to 3/4	0.61	0.69	0.75	0.81	0.87	0.92	0.50	0.56	0.62	0.66	0.71	0.75	0.33	0.37	0.40	0.44	0.47	0.49
A7-AA	AA	1/2	1/8 to 1/2	0.41	0.46	0.50	0.54	0.58	0.61	0.33	0.37	0.41	0.44	0.47	0.50	0.22	0.25	0.27	0.29	0.31	0.33
A7-A	A	1	1/4 to 1	0.82	0.92	1.00	1.08	1.16	1.23	0.67	0.75	0.82	0.89	0.95	1.00	0.44	0.49	0.54	0.58	0.62	0.66
A7-B	B	2	1 to 2	1.64	1.83	2.01	2.17	2.32	2.46	1.34	1.50	1.64	1.77	1.89	2.01	0.88	0.98	1.07	1.16	1.24	1.32
A7-C	C	3	1-1/2 to 3	2.46	2.75	3.01	3.25	3.48	3.69	2.01	2.25	2.46	2.66	2.84	3.01	1.32	1.47	1.61	1.74	1.86	1.97
AS, ASB20	—	1	1/4 to 1	0.82	0.92	1.00	1.08	1.16	1.23	0.67	0.75	0.82	0.89	0.95	1.00	0.44	0.49	0.54	0.58	0.62	0.66

■Gold areas are standard conditions.

Refrigerant	Liquid Temperature Entering AEV							
	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 -40°F to 40°F since the variation in the actual factors across this range is insignificant.

AEV Capacity = AEV Rating x CF Liquid Temperature – Example: Actual capacity of an A7-B using R-409A at a 20°F evaporator, 120 psi pressure drop across the AEV, and a 80°F liquid temperature entering the AEV = 2.69 (from rating chart) x 1.19 (CF liquid temperature) = 3.20 tons

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

Valve Type	Orifice	Nominal Capacity (kW)	Capacity Range (kW)	Evaporator Temperature °C																	
				10°C						0°C						-10°C					
				Pressure Drop (BAR)																	
				3	4	6	7	8	10	4	6	7	8	10	11	4	6	7	8	10	11
A1, A2, AT	B	7	4 to 7	6.21	7.17	8.79	9.49	10.1	11.3	6.89	8.44	9.11	9.74	10.9	11.4	6.46	7.91	8.54	9.13	10.2	10.7
A4	—	3	1 to 3	2.33	2.69	3.30	3.56	3.80	4.25	2.58	3.16	3.42	3.65	4.08	4.28	2.42	2.97	3.20	3.42	3.83	4.02
A7-AA	AA	2	1/2 to 2	1.55	1.79	2.20	2.37	2.54	2.84	1.72	2.11	2.28	2.44	2.72	2.86	1.61	1.98	2.14	2.28	2.55	2.68
A7-A	A	4	1 to 4	3.11	3.59	4.39	4.75	5.07	5.67	3.44	4.22	4.56	4.87	5.45	5.71	3.23	3.95	4.27	4.57	5.10	5.35
A7-B	B	7	4 to 7	6.21	7.17	8.79	9.49	10.1	11.3	6.89	8.44	9.11	9.74	10.9	11.4	6.46	7.91	8.54	9.13	10.2	10.7
A7-C	C	11	5 to 11	9.32	10.8	13.2	14.2	15.2	17.0	10.3	12.7	13.7	14.6	16.3	17.1	9.69	11.9	12.8	13.7	15.3	16.1
AS, ASB20	—	4	1 to 4	3.11	3.59	4.39	4.75	5.07	5.67	3.44	4.22	4.56	4.87	5.45	5.71	3.23	3.95	4.27	4.57	5.10	5.35

Valve Type	Orifice	Nominal Capacity (kW)	Capacity Range (kW)	Evaporator Temperature°C																	
				-20°C						-30°C						-40°C					
				Pressure Drop (BAR)																	
				6	7	8	10	11	12	6	7	8	10	11	12	6	7	8	10	11	12
A1, A2, AT	B	7	4 to 7	6.77	7.31	7.81	8.74	9.16	9.57	5.01	5.41	5.78	6.47	6.78	7.08	3.25	3.51	3.75	4.20	4.40	4.60
A4	—	3	1 to 3	2.54	2.74	2.93	3.28	3.44	3.59	1.88	2.03	2.17	2.42	2.54	2.66	1.22	1.32	1.41	1.57	1.65	1.72
A7-AA	AA	2	1/2 to 2	1.69	1.83	1.95	2.18	2.29	2.39	1.25	1.35	1.45	1.62	1.70	1.77	0.81	0.88	0.94	1.05	1.10	1.15
A7-A	A	4	1 to 4	3.38	3.65	3.91	4.37	4.58	4.78	2.50	2.70	2.89	3.23	3.39	3.54	1.63	1.76	1.88	2.10	2.20	2.30
A7-B	B	7	4 to 7	6.77	7.31	7.81	8.74	9.16	9.57	5.01	5.41	5.78	6.47	6.78	7.08	3.25	3.51	3.75	4.20	4.40	4.60
A7-C	C	11	5 to 11	10.1	11.0	11.7	13.1	13.7	14.4	7.51	8.11	8.68	9.70	10.2	10.6	4.88	5.27	5.63	6.30	6.60	6.90
AS, ASB20	—	4	1 to 4	3.38	3.65	3.91	4.37	4.58	4.78	2.50	2.70	2.89	3.23	3.39	3.54	1.63	1.76	1.88	2.10	2.20	2.30

■Gold areas are standard conditions.

Refrigerant	Liquid Temperature Entering AEV							
	-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 -40°C to 10°C since the variation in the actual factors across this range is insignificant.

AEV Capacity = AEV Rating x CF Liquid Temperature – Example: Actual capacity of an A7-B using R-409A at a 0°C evaporator, 8 bar pressure drop across the AEV, and a 30°C liquid temperature entering the AEV = 9.74 (from rating chart) x 1.18 (CF liquid temperature) = 11.5 kW

Capacity Tables

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

Valve Type	Orifice	Nominal Capacity (Tons)	Capacity Range (Tons)	Evaporator Temperature°F																	
				40°F						20°F						0°F					
				Pressure Drop (PSI)																	
				75	100	125	150	175	200	75	100	125	150	175	200	75	100	125	150	175	200
A1, A2, AT	B	3	1-1/2 to 3	2.60	3.00	3.35	3.67	3.97	4.24	2.55	2.94	3.29	3.60	3.89	4.16	2.29	2.64	2.95	3.23	3.49	3.73
A4	—	1	1/2 to 1	0.87	1.00	1.12	1.22	1.32	1.41	0.85	0.98	1.10	1.20	1.30	1.39	0.76	0.88	0.98	1.08	1.16	1.24
A7-AA	AA	3/4	1/5 to 3/4	0.65	0.75	0.84	0.92	0.99	1.06	0.64	0.74	0.82	0.90	0.97	1.04	0.57	0.66	0.74	0.81	0.87	0.93
A7-A	A	1-1/2	1/2 to 1-1/2	1.30	1.50	1.68	1.84	1.98	2.12	1.27	1.47	1.64	1.80	1.94	2.08	1.14	1.32	1.48	1.62	1.75	1.87
A7-B	B	3	1-1/2 to 3	2.60	3.00	3.35	3.67	3.97	4.24	2.55	2.94	3.29	3.60	3.89	4.16	2.29	2.64	2.95	3.23	3.49	3.73
A7-C	C	5	3-1/2 to 5	4.33	5.00	5.59	6.12	6.61	7.07	4.24	4.90	5.48	6.00	6.48	6.93	3.81	4.40	4.92	5.39	5.82	6.22
AS, ASB20	—	1-1/2	1/2 to 1-1/2	1.30	1.50	1.68	1.84	1.98	2.12	1.27	1.47	1.64	1.80	1.94	2.08	1.14	1.32	1.48	1.62	1.75	1.87

Valve Type	Orifice	Nominal Capacity (Tons)	Capacity Range (Tons)	Evaporator Temperature °F																	
				-10°F						-20°F						-40°F					
				Pressure Drop (PSI)																	
				100	125	150	175	200	225	125	150	175	200	225	250	125	150	175	200	225	250
A1, A2, AT	B	3	1-1/2 to 3	2.22	2.48	2.72	2.94	3.14	3.33	2.05	2.24	2.42	2.59	2.75	2.89	1.38	1.51	1.63	1.74	1.85	1.94
A4	—	1	1/2 to 1	0.74	0.83	0.91	0.98	1.05	1.11	0.68	0.75	0.81	0.86	0.92	0.96	0.46	0.50	0.54	0.58	0.62	0.65
A7-AA	AA	3/4	1/5 to 3/4	0.56	0.62	0.68	0.73	0.78	0.83	0.51	0.56	0.61	0.65	0.69	0.72	0.34	0.38	0.41	0.43	0.46	0.49
A7-A	A	1-1/2	1/2 to 1-1/2	1.11	1.24	1.36	1.47	1.57	1.67	1.02	1.12	1.21	1.29	1.37	1.45	0.69	0.75	0.81	0.87	0.92	0.97
A7-B	B	3	1-1/2 to 3	2.22	2.48	2.72	2.94	3.14	3.33	2.05	2.24	2.42	2.59	2.75	2.89	1.38	1.51	1.63	1.74	1.85	1.94
A7-C	C	5	3-1/2 to 5	3.70	4.14	4.53	4.89	5.23	5.55	3.41	3.74	4.03	4.31	4.58	4.82	2.29	2.51	2.71	2.90	3.08	3.24
AS, ASB20	—	1-1/2	1/2 to 1-1/2	1.11	1.24	1.36	1.47	1.57	1.67	1.02	1.12	1.21	1.29	1.37	1.45	0.69	0.75	0.81	0.87	0.92	0.97

■Gold areas are standard conditions.

Refrigerant	Liquid Temperature Entering AEV							
	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 refrigerantdensity and net refrigerating effect, and are based on an evaporator temperature of 0°F. However, they may be used for any evaporator temperature from -40°F to 40°F since the variation in the actual factors across this range is insignificant.

AEV Capacity = AEV Rating x CF Liquid Temperature – Example: Actual capacity of an A7-B using R-407C at a 40°F evaporator, 125 psi pressure drop across the AEV, and a 80°F liquid temperature entering the AEV = 3.35 (from rating chart) x 1.04 (CF liquid temperature) = 3.48 tons

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

Valve Type	Orifice	Nominal Capacity (kW)	Capacity Range (kW)	Evaporator Temperature °C																	
				10°C						0°C						-10°C					
				Pressure Drop (BAR)																	
				5	7	9	10	12	14	5	7	9	10	12	14	7	9	10	12	14	16
A1, A2, AT	B	11	5 to 11	9.01	10.7	12.1	12.7	14.0	15.1	8.83	10.4	11.8	12.5	13.7	14.8	10.1	11.5	12.1	13.3	14.3	15.3
A4	—	4	2 to 4	3.00	3.55	4.03	4.25	4.65	5.02	2.94	3.48	3.95	4.16	4.56	4.92	3.37	3.83	4.03	4.42	4.77	5.10
A7-AA	AA	3	3/4 to 3	2.25	2.66	3.02	3.18	3.49	3.77	2.21	2.61	2.96	3.12	3.42	3.69	2.53	2.87	3.03	3.31	3.58	3.83
A7-A	A	5	2 to 5	4.50	5.33	6.04	6.37	6.98	7.54	4.41	5.22	5.92	6.24	6.84	7.38	5.06	5.74	6.05	6.63	7.16	7.65
A7-B	B	11	5 to 11	9.01	10.7	12.1	12.7	14.0	15.1	8.83	10.4	11.8	12.5	13.7	14.8	10.1	11.5	12.1	13.3	14.3	15.3
A7-C	C	18	12 to 18	15.0	17.8	20.1	21.2	23.3	25.1	14.7	17.4	19.7	20.8	22.8	24.6	16.9	19.1	20.2	22.1	23.9	25.5
AS, ASB20	—	5	2 to 5	4.50	5.33	6.04	6.37	6.98	7.54	4.41	5.22	5.92	6.24	6.84	7.38	5.06	5.74	6.05	6.63	7.16	7.65

Valve Type	Orifice	Nominal Capacity (kW)	Capacity Range (kW)	Evaporator Temperature °C																	
				-20°C						-30°C						-40°C					
				Pressure Drop (BAR)																	
				9	10	12	14	16	17	9	10	12	14	16	17	9	10	12	14	16	17
A1, A2, AT	B	11	5 to 11	9.79	10.3	11.3	12.2	13.1	13.5	7.25	7.64	8.37	9.04	9.67	9.96	4.83	5.09	5.58	6.03	6.44	6.64
A4	—	4	2 to 4	3.26	3.44	3.77	4.07	4.35	4.48	2.42	2.55	2.79	3.01	3.22	3.32	1.61	1.70	1.86	2.01	2.15	2.21
A7-AA	AA	3	3/4 to 3	2.45	2.58	2.83	3.05	3.26	3.36	1.81	1.91	2.09	2.26	2.42	2.49	1.21	1.27	1.40	1.51	1.61	1.66
A7-A	A	5	2 to 5	4.89	5.16	5.65	6.10	6.53	6.73	3.63	3.82	4.19	4.52	4.83	4.98	2.42	2.55	2.79	3.01	3.22	3.32
A7-B	B	11	5 to 11	9.79	10.3	11.3	12.2	13.1	13.5	7.25	7.64	8.37	9.04	9.67	9.96	4.83	5.09	5.58	6.03	6.44	6.64
A7-C	C	18	12 to 18	16.3	17.2	18.8	20.3	21.8	22.4	12.1	12.7	14.0	15.1	16.1	16.6	8.06	8.49	9.30	10.0	10.7	11.1
AS, ASB20	—	5	2 to 5	4.89	5.16	5.65	6.10	6.53	6.73	3.63	3.82	4.19	4.52	4.83	4.98	2.42	2.55	2.79	3.01	3.22	3.32

■Gold areas are standard conditions.

Refrigerant	Liquid Temperature Entering AEV							
	-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 -40°C to 10°C since the variation in the actual factors across this range is insignificant.

AEV Capacity = AEV Rating x CF Liquid Temperature – Example: Actual capacity of an A7-B using R-407C at a 10°C evaporator, 7 bar pressure drop across the AEV, and a 30°C liquid temperature entering the AEV = 10.7 (from rating chart) x 1.02 (CF liquid temperature) = 10.9 kW

Capacity Tables

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

Valve Type	Orifice	Nominal Capacity (Tons)	Capacity Range (Tons)	Evaporator Temperature °F																	
				40°F						20°F						0°F					
				Pressure Drop (PSI)																	
				75	100	125	150	175	200	75	100	125	150	175	200	75	100	125	150	175	200
A1, A2, AT	B	2	1 to 2	1.73	2.00	2.24	2.45	2.65	2.83	1.66	1.92	2.15	2.35	2.54	2.72	1.51	1.74	1.95	2.13	2.30	2.46
A4	—	1/2	1/4 to 3/4	0.65	0.75	0.84	0.92	0.99	1.06	0.62	0.72	0.80	0.88	0.95	1.02	0.57	0.65	0.73	0.80	0.86	0.92
A7-AA	AA	1/2	1/8 to 1/2	0.43	0.50	0.56	0.61	0.66	0.71	0.42	0.48	0.54	0.59	0.63	0.68	0.38	0.44	0.49	0.53	0.58	0.62
A7-A	A	1	1/4 to 1	0.87	1.00	1.12	1.22	1.32	1.41	0.83	0.96	1.07	1.18	1.27	1.36	0.75	0.87	0.97	1.07	1.15	1.23
A7-B	B	2	1 to 2	1.73	2.00	2.24	2.45	2.65	2.83	1.66	1.92	2.15	2.35	2.54	2.72	1.51	1.74	1.95	2.13	2.30	2.46
A7-C	C	4	1-1/2 to 4	3.46	4.00	4.47	4.90	5.29	5.66	3.33	3.84	4.29	4.70	5.08	5.43	3.01	3.48	3.89	4.26	4.60	4.92
AS, ASB20	—	1	1/4 to 1	0.87	1.00	1.12	1.22	1.32	1.41	0.83	0.96	1.07	1.18	1.27	1.36	0.75	0.87	0.97	1.07	1.15	1.23

Valve Type	Orifice	Nominal Capacity (Tons)	Capacity Range (Tons)	Evaporator Temperature °F																	
				-10°F						-20°F						-40°F					
				Pressure Drop (PSI)																	
				100	125	150	175	200	225	125	150	175	200	225	250	125	150	175	200	225	250
A1, A2, AT	B	2	1 to 2	1.48	1.65	1.81	1.96	2.09	2.22	1.36	1.49	1.61	1.73	1.83	1.93	0.87	0.96	1.03	1.10	1.17	1.23
A4	—	1/2	1/4 to 3/4	0.56	0.62	0.68	0.73	0.78	0.83	0.51	0.56	0.61	0.65	0.69	0.72	0.33	0.36	0.39	0.41	0.44	0.46
A7-AA	AA	1/2	1/8 to 1/2	0.37	0.41	0.45	0.49	0.52	0.56	0.34	0.37	0.40	0.43	0.46	0.48	0.22	0.24	0.26	0.28	0.29	0.31
A7-A	A	1	1/4 to 1	0.74	0.83	0.91	0.98	1.05	1.11	0.68	0.75	0.81	0.86	0.92	0.96	0.44	0.48	0.52	0.55	0.59	0.62
A7-B	B	2	1 to 2	1.48	1.65	1.81	1.96	2.09	2.22	1.36	1.49	1.61	1.73	1.83	1.93	0.87	0.96	1.03	1.10	1.17	1.23
A7-C	C	4	1-1/2 to 4	2.96	3.31	3.63	3.92	4.19	4.44	2.73	2.99	3.23	3.45	3.66	3.86	1.74	1.91	2.06	2.21	2.34	2.47
AS, ASB20	—	1	1/4 to 1	0.74	0.83	0.91	0.98	1.05	1.11	0.68	0.75	0.81	0.86	0.92	0.96	0.44	0.48	0.52	0.55	0.59	0.62

■Gold areas are standard conditions.

Refrigerant	Liquid Temperature Entering AEV							
	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 -40°F to 40°F since the variation in the actual factors across this range is insignificant.

AEV Capacity = AEV Rating x CF Liquid Temperature – Example: Actual capacity of an A7-B using R-507 at a 20°F evaporator, 175 psi pressure drop across the AEV, and a 80°F liquid temperature entering the AEV = 2.54 (from rating chart) x 1.18 (CF liquid temperature) = 3.00 tons

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

Valve Type	Orifice	Nominal Capacity (kW)	Capacity Range (kW)	Evaporator Temperature °C																	
				10°C						0°C						-10°C					
				Pressure Drop (BAR)																	
				5	7	9	10	12	14	5	7	9	10	12	14	5	7	9	10	12	14
A1, A2, AT	B	7	4 to 7	6.06	7.17	8.14	8.58	9.39	10.1	5.88	6.96	7.89	8.32	9.11	9.84	5.58	6.60	7.48	7.89	8.64	9.33
A4	—	3	1 to 3	2.27	2.69	3.05	3.22	3.52	3.80	2.21	2.61	2.96	3.12	3.42	3.69	2.09	2.48	2.81	2.96	3.24	3.50
A7-AA	AA	2	1/2 to 2	1.52	1.79	2.03	2.14	2.35	2.54	1.47	1.74	1.97	2.08	2.28	2.46	1.39	1.65	1.87	1.97	2.16	2.33
A7-A	A	4	1 to 4	3.03	3.59	4.07	4.29	4.70	5.07	2.94	3.48	3.95	4.16	4.56	4.92	2.79	3.30	3.74	3.94	4.32	4.67
A7-B	B	7	4 to 7	6.06	7.17	8.14	8.58	9.39	10.1	5.88	6.96	7.89	8.32	9.11	9.84	5.58	6.60	7.48	7.89	8.64	9.33
A7-C	C	14	5 to 14	12.1	14.3	16.3	17.2	18.8	20.3	11.8	13.9	15.8	16.6	18.2	19.7	11.2	13.2	15.0	15.8	17.3	18.7
AS, ASB20	—	4	1 to 4	3.03	3.59	4.07	4.29	4.70	5.07	2.94	3.48	3.95	4.16	4.56	4.92	2.79	3.30	3.74	3.94	4.32	4.67

Valve Type	Orifice	Nominal Capacity (kW)	Capacity Range (kW)	Evaporator Temperature °C																	
				-20°C						-30°C						-40°C					
				Pressure Drop (BAR)																	
				7	9	10	12	14	16	9	10	12	14	16	17	9	10	12	14	16	17
A1, A2, AT	B	7	4 to 7	5.67	6.43	6.77	7.42	8.02	8.57	4.80	5.06	5.54	5.99	6.40	6.60	3.09	3.26	3.57	3.86	4.12	4.25
A4	—	3	1 to 3	2.13	2.41	2.54	2.78	3.01	3.21	1.80	1.90	2.08	2.24	2.40	2.47	1.16	1.22	1.34	1.45	1.55	1.59
A7-AA	AA	2	1/2 to 2	1.42	1.61	1.69	1.86	2.00	2.14	1.20	1.26	1.39	1.50	1.60	1.65	0.77	0.81	0.89	0.96	1.03	1.06
A7-A	A	4	1 to 4	2.83	3.21	3.39	3.71	4.01	4.28	2.40	2.53	2.77	2.99	3.20	3.30	1.55	1.63	1.78	1.93	2.06	2.12
A7-B	B	7	4 to 7	5.67	6.43	6.77	7.42	8.02	8.57	4.80	5.06	5.54	5.99	6.40	6.60	3.09	3.26	3.57	3.86	4.12	4.25
A7-C	C	14	5 to 14	11.3	12.9	13.5	14.8	16.0	17.1	9.60	10.1	11.1	12.0	12.8	13.2	6.18	6.52	7.14	7.71	8.24	8.50
AS, ASB20	—	4	1 to 4	2.83	3.21	3.39	3.71	4.01	4.28	2.40	2.53	2.77	2.99	3.20	3.30	1.55	1.63	1.78	1.93	2.06	2.12

■Gold areas are standard conditions.

Refrigerant	Liquid Temperature Entering AEV							
	-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 -40°C to 10°C since the variation in the actual factors across this range is insignificant.

AEV Capacity = AEV Rating x CF Liquid Temperature – Example: Actual capacity of an A7-B using R-507 at a 0°C evaporator, 12 bar pressure drop across the AEV, and a 30°C liquid temperature entering the AEV = 9.11 (from rating chart) x 1.17 (CF liquid temperature) = 10.7 kW