

A Series

Thermostatic Expansion Valves

The A-series is used for heat pump, air conditioning, food services and commercial applications.

Features

- Stainless steel power element prevents corrosion and valve failure
- Compact size allows installation in limited spaces
- Hermetic construction
- Mass spectrometer tested to ensure less than 0.10 oz/year external leakage rate



Options

- ZW195 charge available for R-410A systems
- Adjustable or non-adjustable superheat
- SAE or ODF connections standard – Chatleff or Aeroquip are available
- External or internal equalizer
- Internal check valve allows reverse flow for heat pump applications, eliminating the need for external piping and external check valve
- Bleed type pressure equalization to accommodate PSC type compressors
- Pressure limiting charges (MOP) available

Specifications

Maximum working pressure: 700 psig
UR/CUR file number: SA 5312

Model Nomenclature Example: ACEB 2HC30IN3/8X1/2ODFANG

A	A	C	E	B	2	H	C	30 IN	3/8 X 1/2	ODF	ANG
Series	Superheat Adjustment	Internal Check Valve	Equalizer	Bleed Hole	Capacity	Refrigerant Code	Charge Code	Capillary Tube Length	Inlet X Outlet Connection Sizes	Connection Type	Configuration
Hermetic Design	A = Adjustable N = Non-Adjustable	(Optional) Reverse Flow Bypass Application	E = External (Omit for Internal)	(Optional) (Omit for No Bleed Hole)	Nominal Rating in Tons (See Nominal Capacity Table Below)	+F = R-12 • H = R-22 +M = R-134a • N = R-407C *P = R-507 *R = R-502 *S = R-404A Z = R-410A B = R-448A /R-449A D = R-450A /R-513A T = R-290	C = Medium Temp CA = Heat Pump W(MOP)* = Press Limiting Z = Low Temp AA = Wide Range A = Medium & Low Temp	30 IN & 5 FT (std)	1/4 x 3/8 3/8 x 1/2 1/2 x 5/8 5/8 x 7/8	SAE= Flare ODF = Solder Chatleff (Optional) Aeroquip (Optional)	S/T = Straight-Thru ANG = 90° Angle

A Series – Nominal* Capacity Table in Tons (kW)

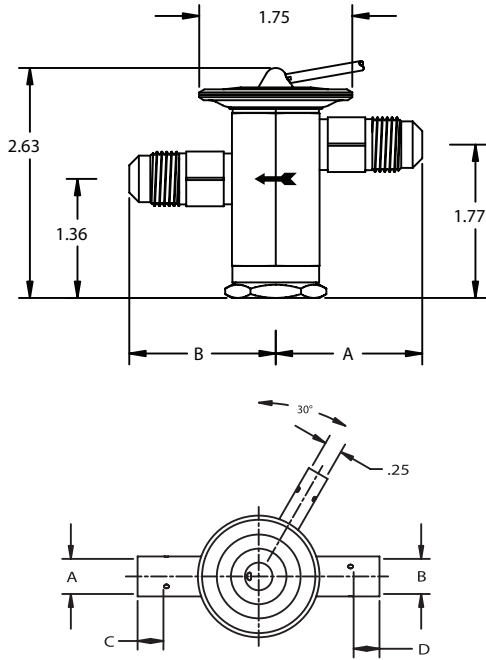
R-12	R-134a	R-450A/R-513A	R-22/R-290	R-410A	R-502	R-507/R-404A	R-448A/R-449A	R-407C
–	1/8 (0.4)	1/8 (0.4)	1/5 (0.7)	–	–	1/8 (0.4)	1/5 (0.7)	1/5
1/8 (0.4)	1/4 (0.9)	1/5 (0.7)	1/4 (0.9)	1/4 (0.9)	1/8 (0.4)	1/4 (0.9)	1/4 (0.9)	1/4 (0.9)
1/4 (0.9)	1/2 (1.8)	1/4 (0.9)	1/2 (1.8)	1/2 (1.8)	1/4 (0.9)	1/2 (1.8)	1/2 (1.8)	1/2 (1.8)
1/2 (1.8)	3/4 (2.7)	1/2 (1.8)	1 (3.5)	1 (3.5)	1/2 (1.8)	3/4 (2.7)	1 (3.5)	1 (3.5)
1 (3.5)	1 (3.5)	3/4 (2.7)	1-1/2 (5.3)	1-1/2 (5.3)	1 (3.5)	1 (3.5)	1-1/2(5.3)	1-1/4 (4.4)
–	1-1/2 (5.3)	1 (3.5)	2 (7.0)	2 (7.0)	–	1-1/4 (4.4)	2 (7.0)	2 (7.0)
1-1/2 (5.3)	2 (7.0)	1-1/2 (5.3)	2-1/2 (8.8)	3 (11.0)	1-1/2 (5.3)	2 (7.0)	2-1/2 (8.8)	2-1/2 (8.8)
2 (7.0)	2-1/2 (9.0)	2 (7.0)	3 (11.0)	4 (14.0)	2 (7.0)	2-1/4 (8.0)	3-1/2 (12.0)	3-1/4 (11.5)
2-1/2 (9.0)	3 (11.0)	2-1/2 (9.0)	4 (14.0)	5 (17.0)	2-1/2 (8.8)	2-1/2 (8.8)	4 (14.0)	4 (14.0)
3 (11.0)	4 (14.0)	3 (11.0)	5 (17.0)	–	3 (11.0)	3-1/2 (12.0)	5-1/2 (20.0)	5-1/4 (19.0)

All capacities shown are at 100°F condensing, 40°F evaporator temperature.

*See Extended Capacity Tables for ratings at a wide range of conditions per ARI standard 750.

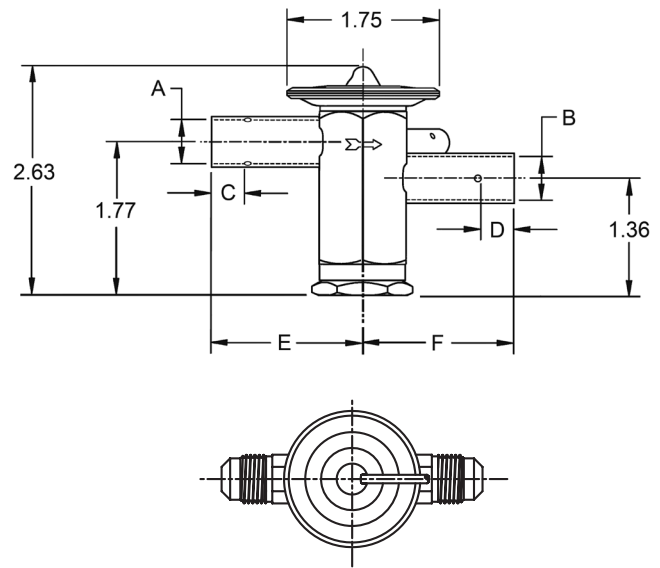
ANCE SAE Dimensional Data (in.)

Connection Size		A	B
Inlet	Outlet		
3/8 SAE	3/8 SAE	1.67	1.67



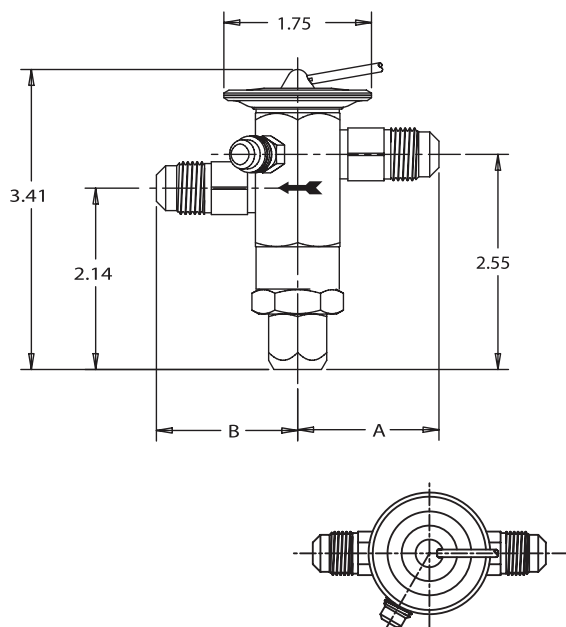
ANCE ODF Dimensional Data (in.)

Connection Size		A ± .002	B ± .002	C MIN	D MIN	E	F
Inlet	Outlet						
1/4 ODF	3/8 ODF	0.25	0.38	0.32	0.32	1.70	1.73
3/8 ODF	3/8 ODF	0.38	0.38	0.32	0.32	1.70	1.73
3/8 ODF	1/2 ODF	0.38	0.50	0.32	0.38	1.73	1.73
1/2 ODF	1/2 ODF	0.50	0.50	0.38	0.38	1.73	1.73



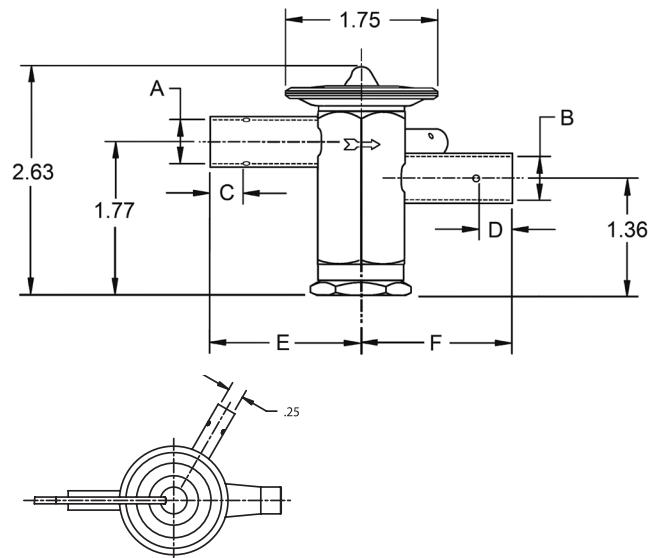
AACE SAE Dimensional Data (in.)

Connection Size		A	B
Inlet	Outlet		
3/8 SAE	3/8 SAE	1.67	1.67



AACE ODF Dimensional Data (in.)

Connection Size		A ± .002	B ± .002	C MIN	D MIN	E	F
Inlet	Outlet						
1/4 ODF	3/8 ODF	0.25	0.38	0.32	0.32	1.70	1.73
3/8 ODF	3/8 ODF	0.38	0.38	0.32	0.32	1.70	1.73
3/8 ODF	1/2 ODF	0.38	0.50	0.32	0.38	1.73	1.73
1/2 ODF	1/2 ODF	0.50	0.50	0.38	0.38	1.73	1.73



Ordering Information

Without Internal Check Valve

Refrigerant	Series	Tons*	Charge	Connections	Cap Tube	PCN		
R-410A	AAE	1-1/2	ZW195	3/8 X 1/2 ODF S/T	30 IN	066515		
			ZW195	3/8 X 3/8 ODF S/T	30 IN	064595		
			ZW195	3/8 X 1/2 ODF S/T	30 IN	065579		
		3	ZW195	CHATLEFF	30 IN	015776		
			ZW195	1/2 X 5/8 ODF S/T	30 IN	065580		
			ZW195	CHATLEFF	30 IN	015794		
R-134a R-12	AA	1/8	MC	1/4 X 3/8 ODF S/T	30 IN	066030		
			MC	1/4 X 1/2 ODF S/T	30 IN	065821		
		1/4	MC	1/4 X 3/8 ODF S/T	30 IN	062051		
			MC	1/4 X 1/2 ODF S/T	5 FT	065623		
		1	MC	3/8 X 1/2 ODF S/T	30 IN	065776		
			MC	1/4 X 3/8 SAE S/T	30 IN	058985		
	1/2	MC	1/4 X 1/2 ODF S/T	5 FT	065624			
		MZ	1/4 X 3/8 SAE S/T	30 IN	058986			
		MC	1/4 X 1/2 ODF S/T	5 FT	065630			
	AAE	1	MC	3/8 X 1/2 ODF S/T	5 FT	065631		
			AA	1/4	HC	1/4 X 3/8 ODF S/T	5 FT	056315
					HC	1/4 X 1/2 ODF S/T	5 FT	055932
	1/2	HC		1/4 X 1/2 ODF S/T	5 FT	065626		
		HC		3/8 X 3/8 ODF S/T	30 IN	056547		
	1/2	HC		3/8 X 1/2 SAE S/T	5 FT	057828		
HC		1/4 X 1/2 ODF S/T		5 FT	065632			
R-22 R-407C	AAE	1/2	HC	3/8 X 1/2 ODF S/T	5 FT	065633		
			HC	3/8 X 1/2 SAE ST	5 FT	057987		
			HC	1/4 X 3/8 ODF ST	30 IN	059582		
		1	HC	1/4 X 1/2 ODF S/T	5 FT	065634		
			HC	3/8 X 1/2 ODF S/T	5 FT	065635		
			HC	3/8 X 1/2 ODF S/T	5 FT	064424		
	2	HC	3/8 X 1/2 ODF S/T	5 FT	064425			
		HCA	3/8 X 1/2 ODF S/T	30 IN	049632			
		HAA	3/8 X 1/2 ODF S/T	30 IN	063648			
		HAA	CHATLEFF	30 IN	013938			
		HCA	3/8 X 1/2 ODF S/T	30 IN	049633			
		HC	3/8 X 1/2 ODF S/T	5 FT	062376			
		3	HC	3/8 X 1/2 SAE S/T	5 FT	056686		
			HCA	3/8 X 1/2 ODF S/T	30 IN	049634		
			HCA	1/2 X 5/8 ODF S/T	30 IN	060643		
		4	HC	1/2 X 5/8 ODF S/T	5 FT	061960		
			HCA	3/8 X 1/2 ODF S/T	30 IN	049638		
			HCA	1/2 X 1/2 ODF S/T	30 IN	061247		
5	HAA		3/8 X 1/2 ODF S/T	30 IN	063649			
	HAA		CHATLEFF	30 IN	013939			
	HC		1/2 X 5/8 ODF S/T	5 FT	059565			
	HC	5/8 X 7/8 ODF S/T	30 IN	061805				
	HCA	3/8 X 1/2 ODF S/T	30 IN	054024				
	HCA	1/2 X 5/8 ODF S/T	30 IN	059683				
AAEB	2	HCA	3/8 X 5/8 ODF S/T	5 FT	062088			
		HCA	3/8 X 1/2 ODF S/T	30 IN	059616			
		HCA	3/8 X 1/2 ODF S/T	30 IN	059603			
		HCA	1/2 X 1/2 ODF S/T	30 IN	059605			
		HCA	1/2 X 1/2 ODF S/T	30 IN	059607			

Chatleff Gasket Kit – KG-10045 (PCN: 066031)

* For interchangeable refrigerant charges R-134a/R-12, R-404A/R-507/R-502 and R-22/R-290/R-407C the tons of capacity shown in the table are for the first (primary) refrigerant listed. Consult the Nominal Capacity Table for determining the tons of capacity for the secondary refrigerants listed.

Example: A 1/4 ton R-12 valve is required. What R-134a ton valve should be selected?

Solution: From the Nominal Capacity Table, a 1/2 ton R-134a valve is equivalent to a 1/4 ton R-12 valve.

Without Internal Check Valve (cont.)

Refrigerant	Series	Tons*	Charge	Connections	Cap Tube	PCN	
R-404A R-507 R-502	AA	1/8	SC	1/4 X 3/8 ODF S/T	30 IN	065921	
			SC	1/4 X 1/2 ODF S/T	30 IN	063503	
		1/4	SW45	1/4 X 3/8 ODF S/T	5 FT	065676	
			SZ	1/4 X 3/8 ODF S/T	5 FT	065675	
			SC	1/4 X 1/2 ODF S/T	30 IN	063504	
		1/2	SW45	1/4 X 1/2 ODF S/T	5 FT	065685	
			SZ	1/4 X 1/2 ODF S/T	5 FT	065682	
			SZ	3/8 X 1/2 ODF S/T	30 IN	063925	
		3/4	SC	3/8 X 1/2 ODF S/T	30 IN	066200	
			SW45	3/8 X 1/2 ODF S/T	30 IN	065686	
			SZ	3/8 X 1/2 ODF S/T	30 IN	065149	
		1	SC	3/8 X 1/2 ODF S/T	30 IN	066201	
			SW45	3/8 X 1/2 ODF S/T	30 IN	066506	
			SZ	3/8 X 1/2 ODF S/T	30 IN	063926	
		AAE	1/4	SC	1/4 X 1/2 ODF S/T	30 IN	066422
				SW45	1/4 X 1/2 ODF S/T	30 IN	066508
				SZ	1/4 X 1/2 ODF S/T	30 IN	066435
				SC	1/4 X 1/2 ODF S/T	30 IN	066423
	SC			3/8 X 1/2 ODF S/T	5 FT	066085	
	SW45			1/4 X 1/2 ODF S/T	5 FT	065636	
	1/2		SW45	3/8 X 1/2 ODF S/T	5 FT	065688	
			SZ	1/4 X 1/2 ODF S/T	30 IN	066436	
			SZ	3/8 X 1/2 ODF S/T	5 FT	065687	
	3/4		SC	3/8 X 1/2 ODF S/T	5 FT	066086	
			SW45	3/8 X 1/2 ODF S/T	30 IN	065609	
			SZ	1/4 X 1/2 ODF S/T	30 IN	066437	
	1		SC	3/8 X 1/2 ODF S/T	5 FT	066087	
			SW45	3/8 X 1/2 ODF S/T	5 FT	065637	
			SZ	3/8 X 1/2 ODF S/T	5 FT	065183	
	1-1/4		SC	3/8 X 1/2 ODF S/T	5 FT	066081	
			SW45	3/8 X 1/2 ODF S/T	5 FT	066079	
			SZ	3/8 X 1/2 ODF S/T	5 FT	066080	
		SC	3/8 X 1/2 ODF S/T	5 FT	066448		
		SC	3/8 X 1/2 SAE S/T	30 IN	061882		
		SW45	3/8 X 1/2 ODF S/T	5 FT	065698		
	2	SZ	3/8 X 1/2 ODF S/T	5 FT	065697		
		SC	3/8 X 1/2 ODF S/T	30 IN	065330		
		SW45	3/8 X 1/2 ODF S/T	5 FT	065690		
	2-1/4	SZ	3/8 X 1/2 ODF S/T	5 FT	065689		
		SW45	3/8 X 1/2 ODF S/T	5 FT	066082		
		SZ	3/8 X 1/2 ODF S/T	5 FT	066083		
	2-1/2	SC	3/8 X 1/2 ODF S/T	5 FT	066084		
		SC	3/8 X 1/2 SAE S/T	30 IN	061885		
		SW45	1/2 X 5/8 ODF S/T	5 FT	065148		
	3	SZ	1/2 X 5/8 ODF S/T	5 FT	065691		
		SC	3/8 X 1/2 ODF S/T	30 IN	066510		
		SW45	3/8 X 1/2 ODF S/T	5 FT	065693		
	SZ	3/8 X 1/2 ODF S/T	5 FT	065692			

With Internal Check Valve

Refrigerant	Series	Tons*	Charge	Connections	Cap Tube	PCN	
R-410A	AAE	1-1/2	ZW195	3/8 X 1/2 ODF S/T	5 FT	065871	
			ZW195	CHATLEFF	30 IN	016432	
		2	ZW195	3/8 X 1/2 ODF S/T	5 FT	065872	
			ZW195	CHATLEFF	30 IN	016615	
		3	ZW195	3/8 X 1/2 ODF S/T	5 FT	065873	
			ZW195	CHATLEFF	30 IN	015795	
		4	ZW195	3/8 X 1/2 ODF S/T	5 FT	065874	
			ZW195	CHATLEFF	30 IN	016433	
		5	ZW195	1/2 X 5/8 ODF S/T	5 FT	065875	
			ZW195	CHATLEFF	30 IN	015796	
		AAECB	1-1/2	ZW195	3/8 X 1/2 ODF S/T	30 IN	065946
				ZW195	3/8 X 1/2 ODF S/T	30 IN	065942
	ZW195			3/8 X 1/2 ODF S/T	30 IN	065943	
	ZW195			3/8 X 1/2 ODF S/T	30 IN	065944	
	ZW195			3/8 X 1/2 ODF S/T	30 IN	065945	
	ZW195			3/8 X 1/2 ODF S/T	30 IN	065945	
	1		HCA	3/8 X 1/2 ODF S/T	30 IN	063795	
			HCA	3/8 X 1/2 ODF S/T	5 FT	058923	
			HCA	3/8 X 1/2 ODF S/T	30IN	063676	
			HAA	3/8 X 1/2 ODF S/T	30 IN	064102	
			HAA	CHATLEFF	30 IN	014091	
			HCA	3/8 X 1/2 ODF S/T	5 FT	065868	
	R-22 R-407C	AAE	3	HCA	1/2 X 5/8 ODF S/T	5 FT	065797
				HCA	3/8 X 1/2 ODF S/T	5 FT	065869
HAA			3/8 X 1/2 ODF S/T	30 IN	064103		
5		HAA	1/2 X 5/8 ODF S/T	5 FT	065863		
		HAA	CHATLEFF	30 IN	014092		
		HCA	3/8 X 1/2 ODF S/T	30 IN	065842		
AAECB	1-1/2	HCA	3/8 X 1/2 ODF S/T	30 IN	065959		
		HCA	3/8 X 1/2 ODF S/T	30 IN	065941		
	4	HCA	3/8 X 1/2 ODF S/T	30 IN	065941		
		HCA	3/8 X 5/8 ODF S/T	30 IN	065844		