

Instruction Sheet

PA-00200

June 2007

ACP Automatic Expansion Valve

ACP Automatic Expansion Valve

GENERAL INFORMATION

The ACP Valve is an automatic expansion valve developed for small cooling units where the load is reasonably constant, such as room air conditioners, domestic refrigerators, drink dispensers, food dispensers, ice cream cabinets bottle coolers, home freezers, ice cube makers, ice cream freezers and milk coolers.

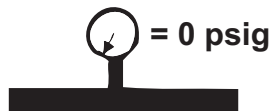
- Designed for use with: R-12, R-22, R-134a, R-401A, R-402A, R-404A, R-407A, R-407B, R-502 and R-507
- Maximum Working Pressure: 500 psig
- Maximum Working Temp.: 300°F
- UL file number: SA5312
- CSA file number: LR44005

SAFETY INSTRUCTIONS

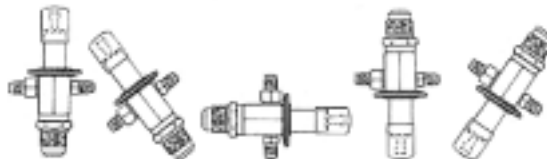
1. **WARNING:** Read Installation and Safety instructions thoroughly. Failure to follow instructions may result in valve failure, system damage, and/or personal injury.
2. Do not use on service conditions or fluids not specifically cataloged without prior approval in writing of the Emerson Climate Technologies Flow Controls Division Applications Engineering Department.
3. Foreign matter in the ACP valve may cause diaphragm failure, flooding, or starving. To insure that the system is thoroughly clean and dry, we recommend the use of an Emerson EK liquid line filter-drier.
4. Proper valve sizing is important. An oversized valve may result in erratic control. An undersized valve may considerably reduce system capacity.
5. Do not exceed Maximum Working Pressure (450 PSIG).
6. Do not exceed Maximum Temperature Limits (300°F).

INSTALLATION

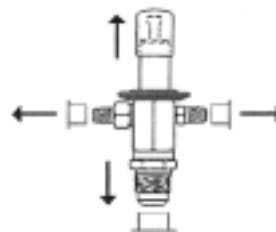
1. **WARNING:** Before opening any system, make sure the pressure in the system is brought to and remains at atmospheric pressure. Failure to comply may result in system damage and/or personal injury.



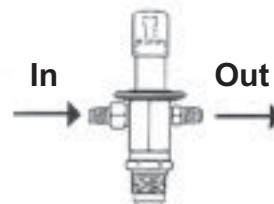
2. Valves may be installed in any position, but should be located as close as possible to the distributor or evaporator inlet. Refer to page 2 for valve dimensions.



3. Remove the necessary seal cap from the valve entrances.



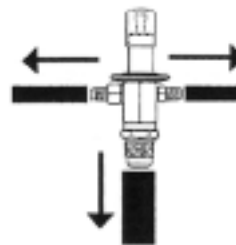
4. Be sure valve is installed so that its flow design corresponds to the flow direction through the piping. Failure to comply will result in valve malfunction.



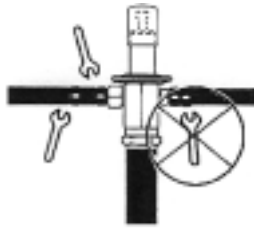
Note: Look in the valve body for reference.

5a. For SAE ACP Valves

- 1a) Install SAE line connections to valve.



2a) Use a back up wrench on wrench flats and do not over tighten.



5b. For ODF ACP Valves

WARNING: The valve body and power head must under no circumstances be subjected to temperature in excess of 300°F.

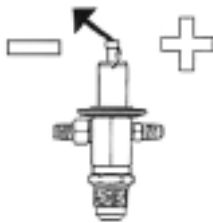
1b) To avoid internal damage of the valve, protect them with wet cloths, chill blocks or other suitable heat protector.



2b) Direct flaming braze away from valve body.



- Check for leaks, sufficient system refrigerant, and be sure no flash gas is present in liquid at the valve inlet.
- When viewed from the top, turning the adjusting screw in a clockwise direction raises the valve outlet pressure and turning counterclockwise, lowers the outlet pressure.

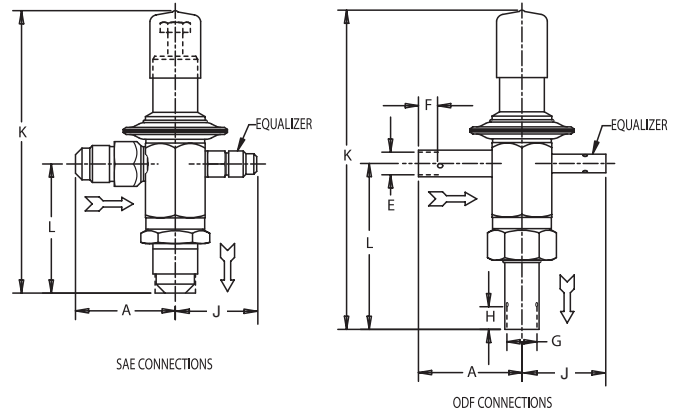


SERVICE

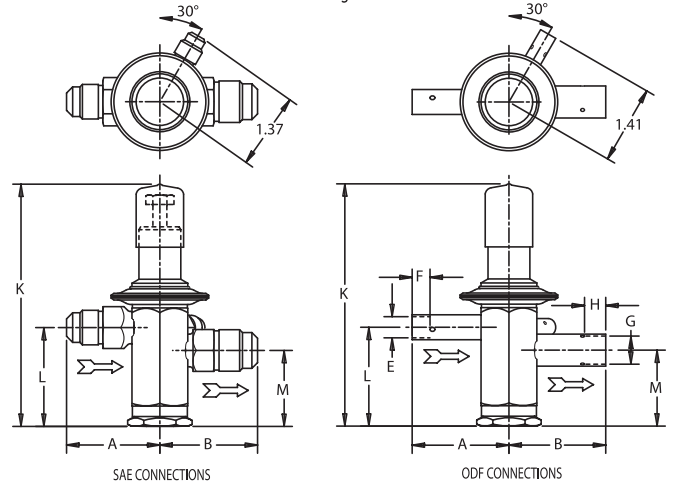
When it should become necessary to remove the valve or any part of the valve from the system, all previously mentioned Safety and Installation Instructions should be followed exactly.

DIMENSIONAL DATA

ACPE Angle



ACPE Straight-Thru



ACP(E) VALVE TYPE	INLET	OUTLET	A	B	E DIA.	F MIN.	G DIA.	H MIN.	K	L
ANGLE SAE	1/4	3/8	1.50	-	-	-	-	-	4.50	2.13
	3/8		1.64							
	1/2	3/8 - 1/2	1.72							
	1/4		1.50						4.61	2.23
	3/8	5/8	1.64							
	1/2		1.72							
ANGLE ODF	1/4		1.25	-	.25	.32	.37	.32	4.55	2.17
	3/8	3/8			.37	.32		.38		
		1/2	1.19		.50	.38	.62	.50	4.73	2.36
	1/2				.50	.38		.50		
	5/8	5/8	1.38		.62	.50	.62	.50	4.73	2.36
	1/4		1.25		.25	.32		.32		
	3/8		1.19		.37	.32	.50	.38	4.55	2.17
	1/4	1/2	1.25		.25	.32		.38		
	1/2	7/8	1.19		.50	.38	.87	.75	5.11	2.73

ACP(E) VALVE TYPE	INLET	OUTLET	A	B	E DIA.	F MIN.	G DIA.	H MIN.	K	L	M	
STRAIGHT-THRU SAE	1/4	3/8	1.50	1.64		-	-	-				
	3/8		1.64									
	1/2		1.72									
	1/4	5/8	1.50	1.96								
	3/8		1.64									
	1/2		1.72									
STRAIGHT-THRU ODF	1/4	3/8	1.25	1.19	.25	.32			4.25	1.88	1.48	
	3/8		1.19		.37	.32						.37
	1/2					.50	.38	.50				.38
	5/8	5/8				1.38	.62	.50				.62
	1/4		1.25			.25	.32					
	3/8		1.19		.37	.32						
	1/4	1/2	1.25	1.19	.25	.32	.50	.38				
	1/2	7/8	1.19	1.75	.50	.38	.87	.75				
	3/8				.37	.32	.87	.75				