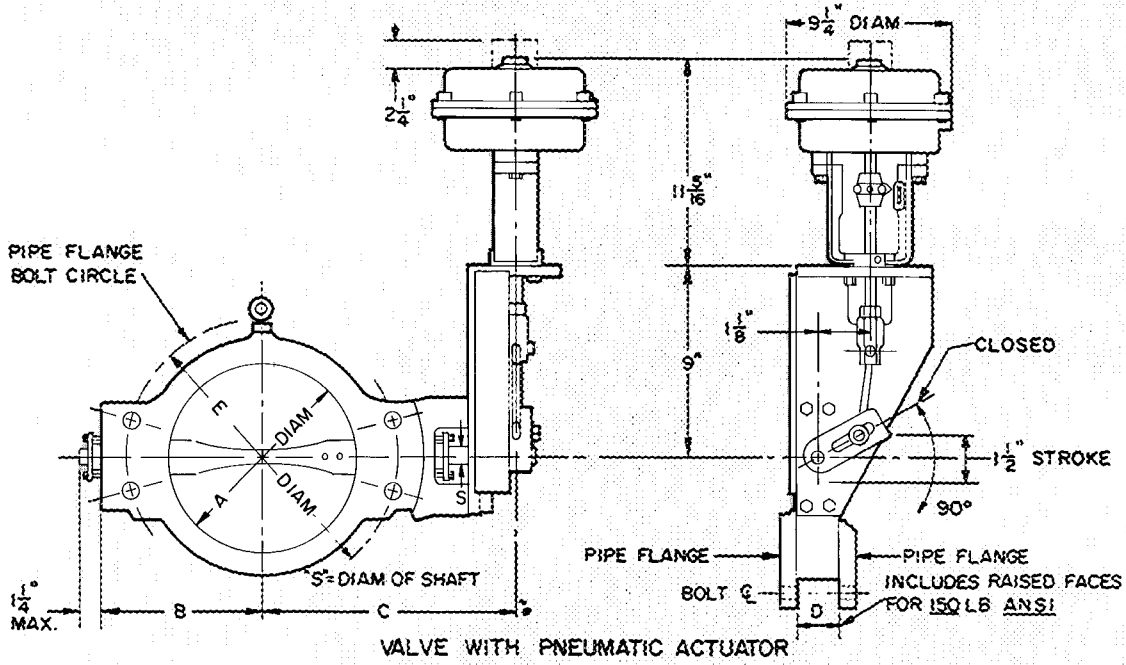
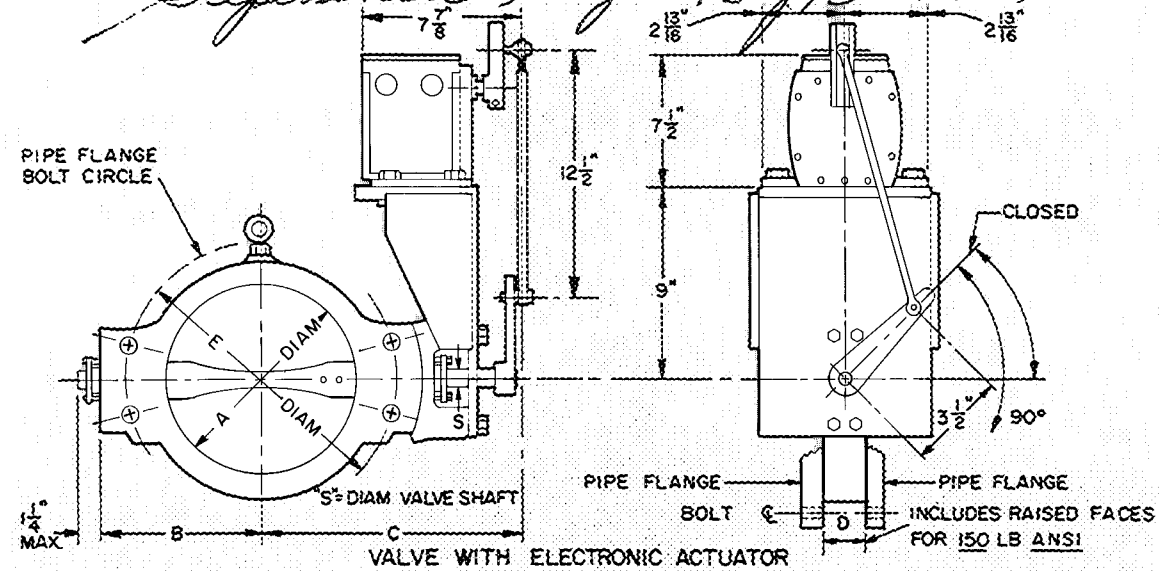


Hermetic Absorption Liquid Chillers

Steam Control Valve Data

Separated by 16JB-4XA 5/72



DIMENSIONS (in.)

PIPE SIZE	VALVE					FLANGE				
	A	B	C		D	S	E	Diam	Bolt Holes	
			Elec	Pneu					No.	Diam
2	2	3 1/4	6 5/8	7 3/8	1 3/8	3/8	4 3/4	6	4	5/8
2 1/2	2 1/2	3 3/4	7 1/8	7 7/8	1 1/2	3/8	5 1/2	7	4	5/8
3	3	4	7 3/8	7 7/8	1 5/8	3/8	6	7 1/2	4	5/8
4	4	4 1/4	8 3/8	8 3/8	1 3/4	3/4	7 1/2	9	8	3/4
5	5	5 1/4	8 3/4	9 3/8	1 5/8	1/2	8 1/2	10	8	3/4

Elec - Electric (Honeywell, Type M944A or M7044)
Pneu - Pneumatic (Honeywell, Type 05)

NOTES:
1. Minimum four flange bolts thru valve body. Balance to clear valve body O.D.
2. Valves listed are butterfly type with 125 lb ANSI body rating.

Fig. 1 - Electronic and Pneumatic Valves

Table 1 – Steam Control Valve Selection

PRESS. (psig)	Inlet	14	13	12	11	10	20	20	20	
	Outlet	12	11	10	9	8	14	12	10	
Steam Capacity Range (lb/hr)*										
VALVE SIZE (in.)	2	Min	775	760	744	729	712	1,355	1,489	1,582
		Max	1,534	1,499	1,465	1,429	1,392	2,378	2,427	2,427
	2½	Min	1,220	1,196	1,172	1,147	1,121	2,132	2,343	2,490
		Max	2,591	2,533	2,474	2,414	2,352	4,017	4,099	4,099
	3	Min	1,964	1,925	1,886	1,846	1,805	3,432	3,771	4,009
		Max	5,163	5,048	4,930	4,810	4,687	8,005	8,169	8,169
	4	Min	3,365	3,299	3,231	3,163	3,092	5,880	6,461	6,868
		Max	8,257	8,073	7,885	7,693	7,496	12,802	13,064	13,064
	5	Min	5,204	5,103	5,000	4,895	4,787	9,176	10,138	10,837
		Max	15,579	15,209	14,832	14,446	14,051	22,615	22,620	22,620

*Min flow rate at 60° valve opening; max flow rate at 90°.

Valves may be selected by duty other than listed in above table by using following formula:

$$Q = 0.85 C_s P_1 \sin \left[\frac{3417}{C_1} \sqrt{\frac{PD}{P_1}} \right]_{\text{Deg}}$$

Cs = Flow coefficient (see Table 2)

C1 = Sizing coefficient (see Table 2)

P1 = Valve inlet pressure (psia)

PD = Pressure Drop across valve (psi)

NOTE: Value between brackets [] is the corrected angle (degree) of disc opening. If this angle is greater than 90°, use unity (1) for “sin []” in the formula.

where:

Q = Flow Rate (lb/hr)

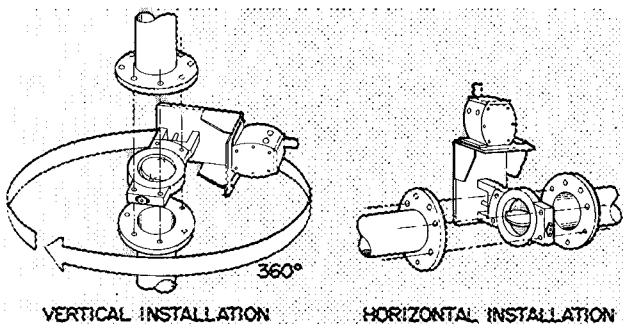
0.85 = Allowance factor for entry and exit losses caused by different pipe dimensions.

Table 2 – Butterfly Valve Coefficients

COEFF	VALVE SIZE (in.)	FISHTAIL DISC OPENINGS (Degrees)									
		0	10	20	30	40	50	60	70	80	90
C1	2 thru 4	27.90	27.30	29.90	30.0	31.0	29.8	27.2	23.0	19.1	18.1
	5 thru 72	27.90	27.30	29.90	35.0	34.5	31.5	28.7	24.4	19.1	16.0
Cs (Steam)	2	0.55	2.47	7.15	12.6	22.2	36.6	53.7	71.0	76.4	82.3
	2½	1.40	3.85	11.50	19.8	35.1	58.0	84.5	114.0	127.0	139.0
	3	1.70	5.76	16.70	29.8	56.0	87.0	136.0	184.0	238.0	277.0
	4	2.30	10.50	29.60	52.5	94.7	152.0	233.0	316.0	390.0	443.0
	5	2.80	15.90	46.00	82.6	152.0	241.0	378.0	510.0	660.0	767.0

INSTALLATION

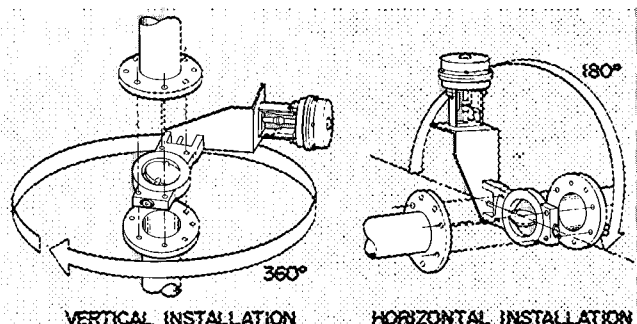
Valves can be installed in vertical or horizontal piping as shown in Fig. 2 and 3.



NOTES:

1. Horizontal installation can be only in two positions, either as shown or 180° down (motor shaft must be horizontal).
2. Vertical installation can be positioned anywhere within 360° as shown.

Fig. 2 – Electronic Valves



NOTES:

1. Horizontal installation can be positioned only within the 180° shown.
2. Vertical installation can be positioned anywhere within 360° as shown.

Fig. 3 – Pneumatic Valves

Manufacturer reserves the right to change any product specifications without notice.

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