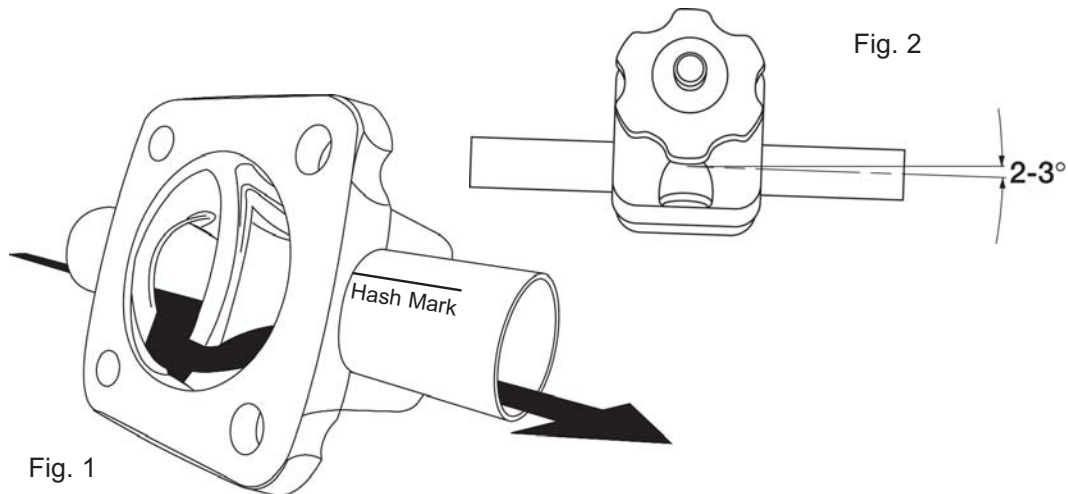


Installation Instructions for Optimum Drainage

HC4 Diaphragm Valves



HC4/007/01/11.02

Self drainage is required in hygienic piping systems for four reasons:

- It permits a high standard of CIP cleaning and reduces the tendency of solids deposition.
- It allows condensate to drain freely during steam sterilization.
- It minimizes fluid retention in the pipework essential when small volumes of valuable products are being manufactured.
- Reduces the risk of process contamination.

The diaphragm valve has outstanding self draining characteristics when compared with other valve types, and this feature has contributed in making the valve a standard for hygienic/aseptic application requirements.

Factors which affect drainability are:

- Valve size and end specification
- Internal surface finish
- Drain orientation (as shown in Fig. 1)
- Surface tension and viscosity of media
- Pipe run angle - generally recommended at 2 to 3 degrees (Fig. 2)

Valves with body orientation indicators are available on request (the marks must be located in a plane cutting the vertical centerline of the pipe).

Please note that drainability in a process system is ultimately the responsibility of the system designer and/or end user as a result of the variance factors denoted above.

Hash marks are supplied on tube ends to indicate self drain position. The marks must be located on a plane cutting the vertical centerline of the pipe.

Standard Forged Body Drain Angles

Size (DN)	O/D	I/D	Wall	Specification	Drain Angle
DN8	0.25	0.12	0.065	16 gauge	38
DN15	0.50	0.37	0.065	16 gauge	37
DN20	0.75	0.62	0.065	16 gauge	33
DN25	1.00	0.87	0.065	16 gauge	30
DN40	1.50	1.37	0.065	16 gauge	27
DN50	2.00	1.87	0.065	16 gauge	25
DN65	2.50	2.37	0.065	16 gauge	20
DN80	3.00	2.87	0.065	16 gauge	25

Non-Standard Forged Body Drain Angles

Size (DN)	Drain Angles		
	Sch 5.	Sch. 10	Sch. 40
DN8	N/A	N/A	N/A
DN15	23	24	24
DN20	25	25	27
DN25	22	24	25
DN40	19	21	22
DN50	18	19	21
DN65	16	17	20
DN80	20	21	23

