



Elastomer Hinge Check Valve Service Life:

When operated between 2.5-18 ft/sec (internal velocity) and a maximum pressure drop of 1psi, the valve will last a minimum of 10,000 cycles*. A cycle is defined as the valve opening and closing. For maximum life, the valve needs to be operated in the fully opened or closed position. The piping should be designed to facilitate laminar flow and symmetric flow across the valve to prevent fluttering of the valve. Each flutter of a valve acts as a “cycle” impacting the life of a valve. USV recommends a straight, unobstructed length of at least 4-6x internal pipe diameter upstream and downstream of the valve to ensure steady flow conditions.

*Service life is based on water as the fluid. Pressure rating is dependent on the type of body material selected, and will be defined on the corresponding product’s technical drawing. Rated pressure is CWP (cold working pressure) and is defined as 32°F to 100°F. Pressure rating of the valves may be reduced at elevated temperatures; pressure/temperature relationship depends on the style and material. Temperature rating is dependent on the seal material that is selected, and service life can be affected by deterioration of the seal via high-temperature exposure or material/media incompatibility. Springs are designed to infinite life and are not an expected failure point.

Techno™ Flow Coefficients (Cv) vs. Conventional Designs

Size	Techno Elastomer Hinge	Conventional Duo Disc Design	Conventional Swing Check Design	Conventional Lift Check Valve
1	37	—	22	17
1 ¼	65	—	39	—
1 ½	83	—	55	35
2	145	75	65	63
2 ½	350	95	90	100
3	590	190	135	148
4	920	375	215	260
5	1400	480	680	415
6	2800	820	1270	620
8	4900	1590	2350	1030
10	7200	2900	3850	1630
12	9000	4500	4750	2370
14	11000	5900	7400	3500
16	13000	8700	9550	5100
18	15000	10900	13000	6400
20	28000	14300	22000	7700
24	39000	23000	—	11100
30	58000	37000	—	—
36	75000	59000	—	—

Flow Coefficient Comparisons (Cv) – GPM of water @ 60°F and 1 PSI Pressure Drop. TECHNO is a trademark of US Valve.

