BJ Champion Valve & Machine, LP

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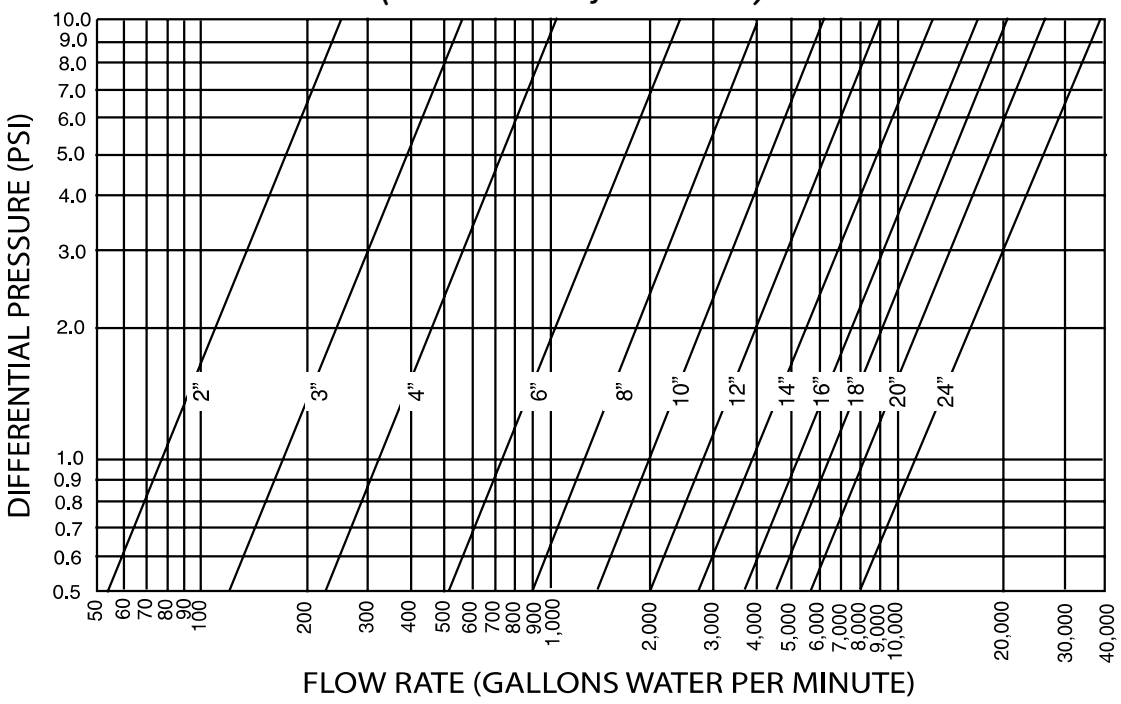
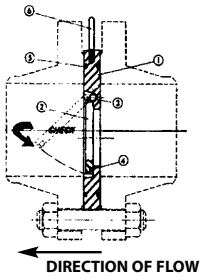
(located minutes from Houston)





FLOW COEFFICIENTS (C_v) FULL OPEN VALVES

VALVE SIZE	C_v
2	82
3	185
4	330
6	740
8	1310
10	2050
12	2950
14	4020
16	5250
18	6650
20	8200
24	11800

The equations listed below are the basis for the above nomogram. The nomogram is a method for solving the equations below quickly and simply when the service fluid is water.

LIQUID (INCOMPRESSIBLE FLOW)

$$C_V = Q\sqrt{\frac{G}{\Delta P}} \qquad Q = C_V\sqrt{\frac{\Delta P}{G}} \qquad \Delta P = \left[\frac{Q}{C_V}\right]^2 G$$

GAS (COMPRESSIBLE FLOW)

$$C_V = \frac{Q}{963}\sqrt{\frac{GT}{P_1^2 - P_2^2}} \qquad Q = C_V\ 963\sqrt{\frac{P_1^2 - P_2^2}{GT}}$$

WHERE:

- Q = FLOW (LIQUIDS–GPM, GASES–SCFH)
- C_V = Flow Coefficient
- P_1 = Inlet Pressure (PSIA)
- P_2 = Outlet Pressure (PSIA)
- ΔP = Pressure Drop (P1 - P2)
- T = Absolute Temperature (°F + 460)
- G = Specific Gravity (Water = 1)