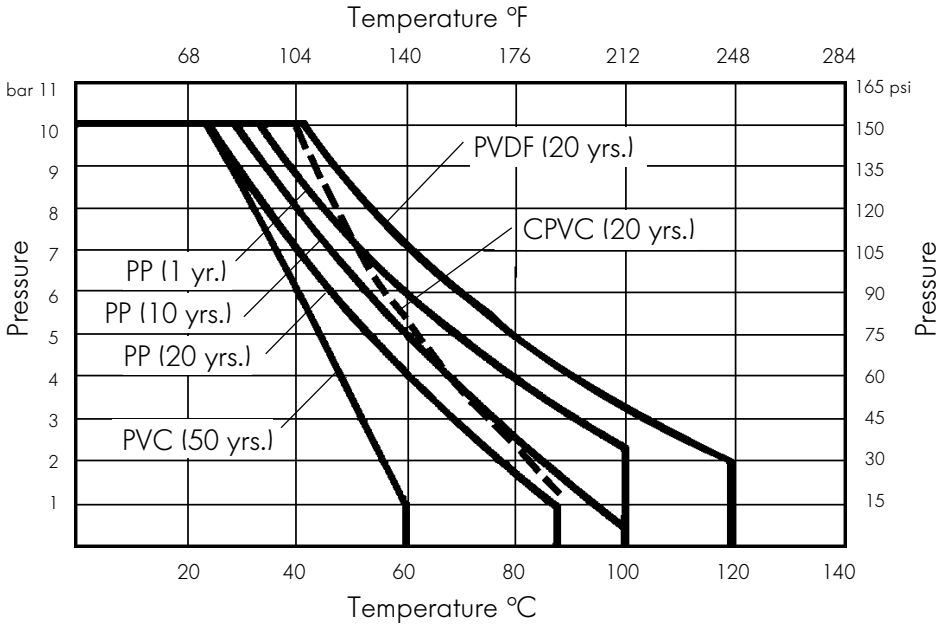
Technical Data for Ball Valves

Pressure/Temperature Diagram

Ball Valves (except Type 106)

All pressures are given in atmospheric excess pressure values. Ambient temperature max. 122°F/ 50°C.



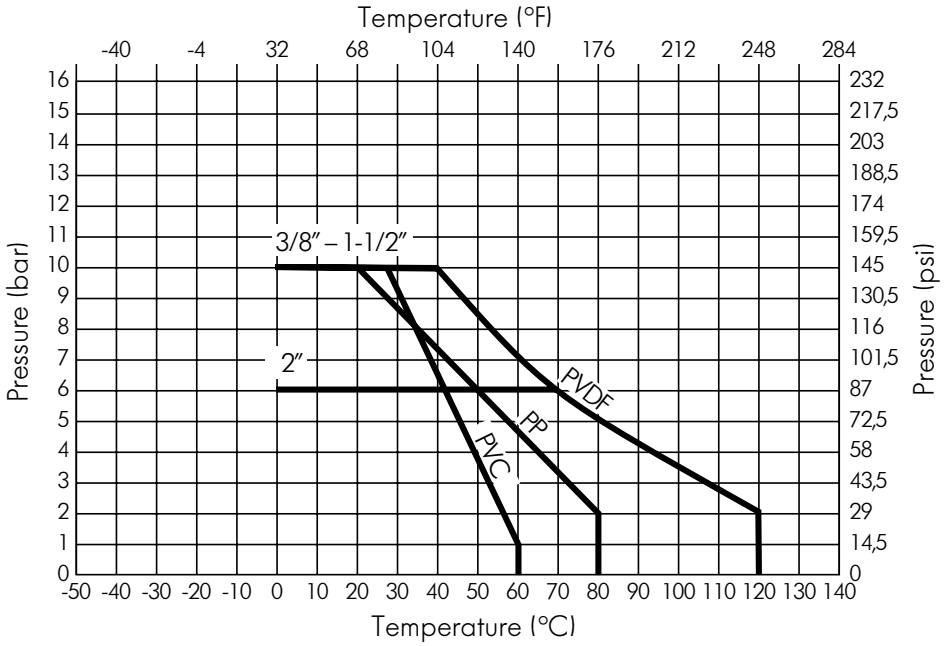
Safety factors for selected Thermoplastics

Based on a 50 year operating life at 68°F/20°C with water

Material	Safety factor
PVC	2.5
CPVC	2.75
PVDF	2
PP	2.1

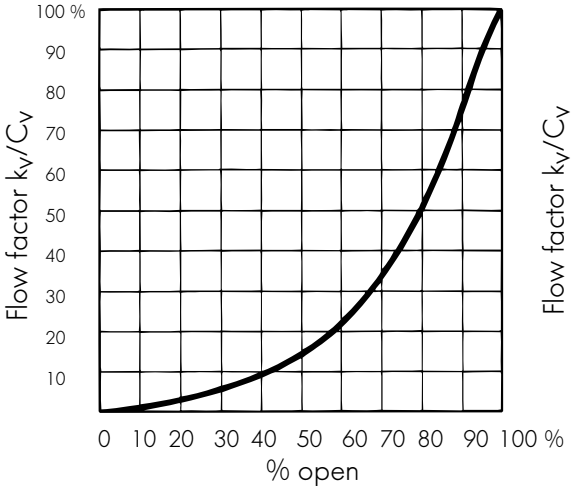
1 bar = 14.5 psi ≈ 15 psi

Ball Valve Type 106

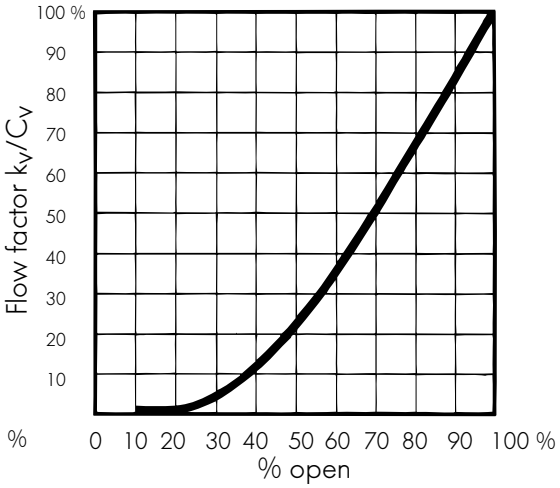


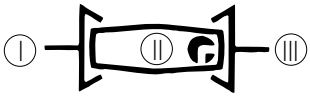
Flow Characteristics

for ball valves (2-way)



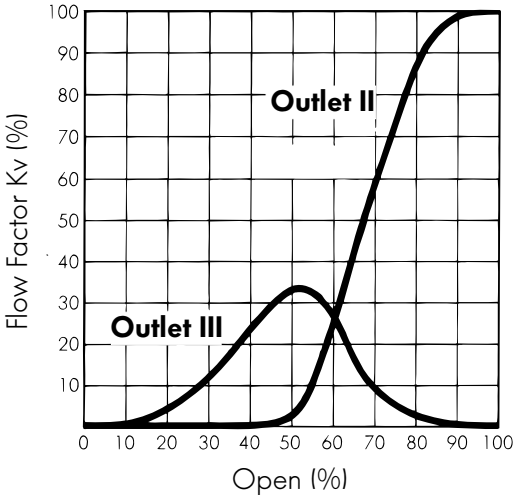
for Multiport (3-way) ball valves, vertical model, L-port



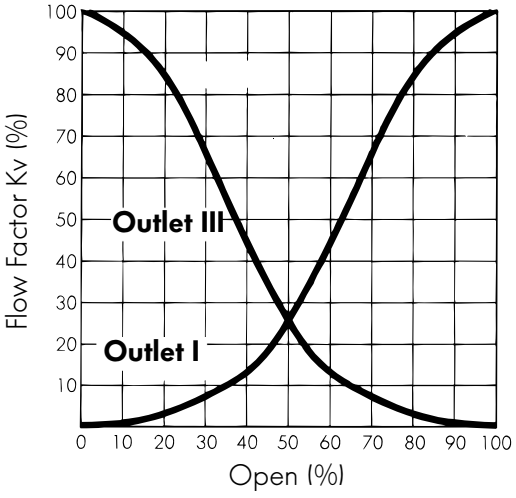


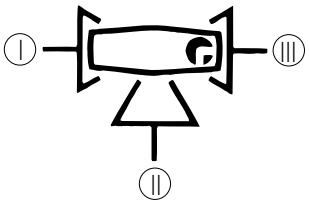
for Multiport (3-way) ball valves, vertical model, 3-way

Inlet, spigot I



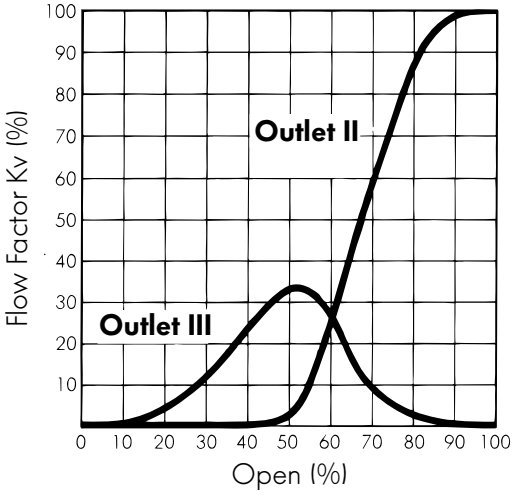
Inlet, spigot II



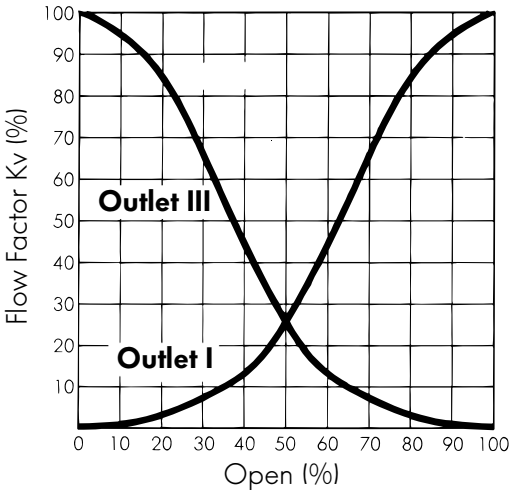


for Multiport (3-way) ball valves, horizontal model, L-port

Inlet, spigot I



Inlet, spigot II



Pressure Loss Characteristics

C_V/k_V Values

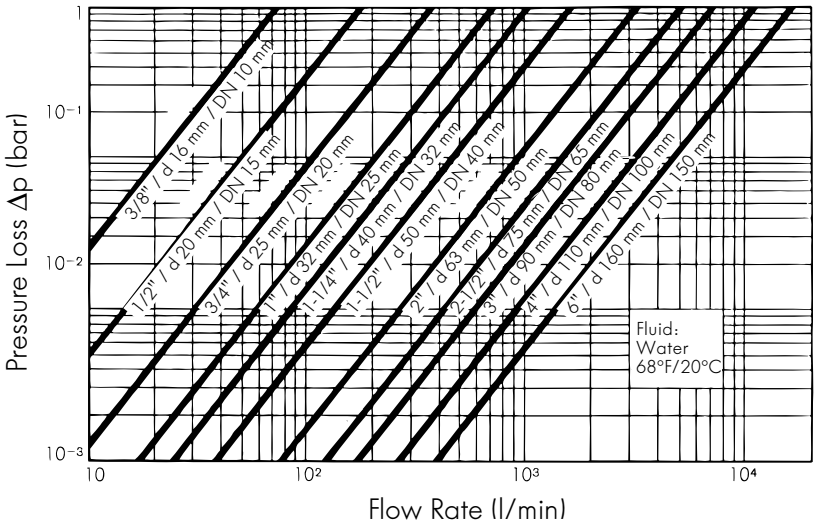
Inch size	C_V	k_V	d mm size
1/4	2.20	32	12
3/8	4.97	71	16
1/2	12.95	185	20
3/4	24.50	350	25
1	49.01	700	32
1 1/4	70.02	1000	40
1 1/2	112.04	1600	50
2	217.08	3100	63
2 1/2	350.00	5000	75
3	490.00	7000	90
4	770.00	11000	110
6	1120.00	16000	160

1 bar = 14.5 psi ≈ 15 psi
1 gal = 3.785 liters

$K_V \div 14.28 = C_V$

$\Delta p = \left(\frac{Q}{C_V}\right)^2$ Q = gpm, p = psi

for ball valves (2-way)



C_V/k_V Values

Inch size	C_V	k_V	d mm size
3/8	3.43	49	16
1/2	5.39	77	20
3/4	10.22	146	25
1	18.20	260	32
1 1/4	30.60	437	40
1 1/2	46.70	667	50
2	90.54	1293	63

1 bar = 14.5 psi ≈ 15 psi
1 gal = 3.785 liters

$K_V \div 14.28 = C_V$

$\Delta p = \left(\frac{Q}{C_V}\right)^2$ Q = gpm, p = psi

for Multiport (3-way) ball valve