

Size	Model	Flow GPM @ 4 ft/s (ASHRAE)	Cv	Meter Km	DP=1"	DP=5"	DP=100"	DP=200"	Meter Flow Factor (MF)
					GPM	GPM	GPM	GPM	
1/2"	Low	3.8	0.75	0.0614	0.1346	0.30	1.35	1.90	0.1346
	High		2.25	0.1899	0.4163	0.93	4.16	5.89	0.4163
3/4"	Low	6.65	2.7	0.1291	0.4967	1.11	4.97	7.02	0.4967
	High		7	0.3302	1.2704	2.84	12.70	17.97	1.2704
1"		10.8	5.2	0.1586	0.9889	2.21	9.89	13.99	0.9889
1-1/4"		18.65	13	0.2124	2.2921	5.13	22.92	32.42	2.2921
1-1/2"		25.4	16	0.203	2.9816	6.67	29.82	42.17	2.9816
2"		41.9	30	0.1994	4.8274	10.79	48.27	68.27	4.8274

Km is determined from lab. Calibration

CV's are used only to determine permanent pressure drops, $PSID=(Flow/Cv)^2$

MF's are used to calculate flow rates $[GPM=MF \times \sqrt{dp, in. h_2o}]$

$DP=(GPM/MF)^2$

Permanenet Pressure Loss=12% of dp generated

$MF=5.6664 \times (ID^2) \times Km$

ID in inches

Example 1: GPM=15
Size=1-1/4"

$DP=(GPM/MF)^2$
 $DP=(15/2.2921)^2$
DP=42.83"H2O

Pressure Loss: 12% of dp=5.2"H2O

Example 2: DP=10"H2O
Size=3/4"
Model=High

$GPM=MF \times \sqrt{DP}$
 $GPM=1.2704 \times \sqrt{10}$
GPM=4.02

For the same valve:
 $(GPM1/GPM2)=\sqrt{DP1/DP2}$

For the same valve:
 $DP1=DP2 \times (GPM1/GPM2)^2$