Valves Flow Data

A valve flow coefficient represents the standard flow rate which flows through the valve at a given opening, referred to pre-established conditions:

* Kv value is the volume of water at 20ºC, in cubic meters per hour (m3/h), that will flow through the valve at a static pressure drop of 1 bar across the valve

* Cv value is the volume of water at 60ºF, in gallons per minute (gpm), that will flow through the valve at a static pressure drop of 1 psi across the valve

Conversion from Kv to Cv can be roughly calculated by means of the following expression:
Cv = Kv x 1,17

Flow rate through the valve with other liquids can be calculated with the following expressions

$Kv = q (SG / dp)^{1/2}$
where
q = water flow (cubic meter per hour)
SG = specific gravity (1 for water)
dp = pressure drop (bar)

$Cv = q (SG / dp)^{1/2}$
where
q = water flow (US gallons per minute)
SG = specific gravity (1 for water)
dp = pressure drop (psi)

Straight Through Kv (m³/h) values with valve fully open *

DN mm	Ductile iron	Rubber Lined	Halar® Lined
15	7,5	5,5	7,6
20	18	13,5	18,5
25	32	26	33
32	47	39	48
40	64	56	67
50	110	90	116
65	204	165	214
80	293	222	302
100	504	406	524
125	792	618	813
150	1440	1105	1510
200	2211	1895	2290
250	3446	2960	3596
300	5168	4250	5314

*Since Straight Through Diaphragm Valves are only suitable for on/off service we only provide Kv values for valves fully open.