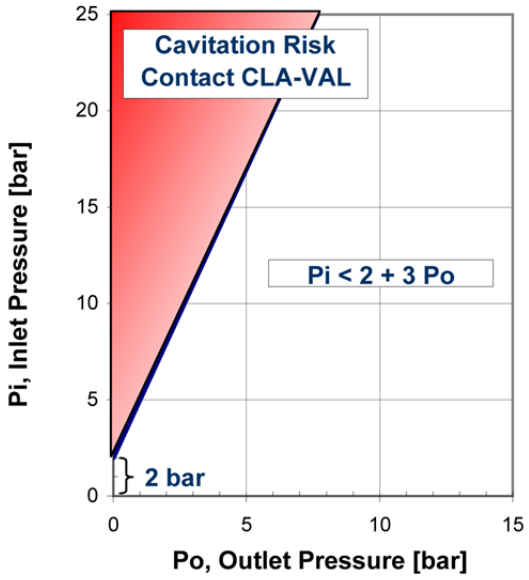
Cavitation / Flow Chart



- **Valve Sizing Example**

Pipe Diameter : 100 [mm]

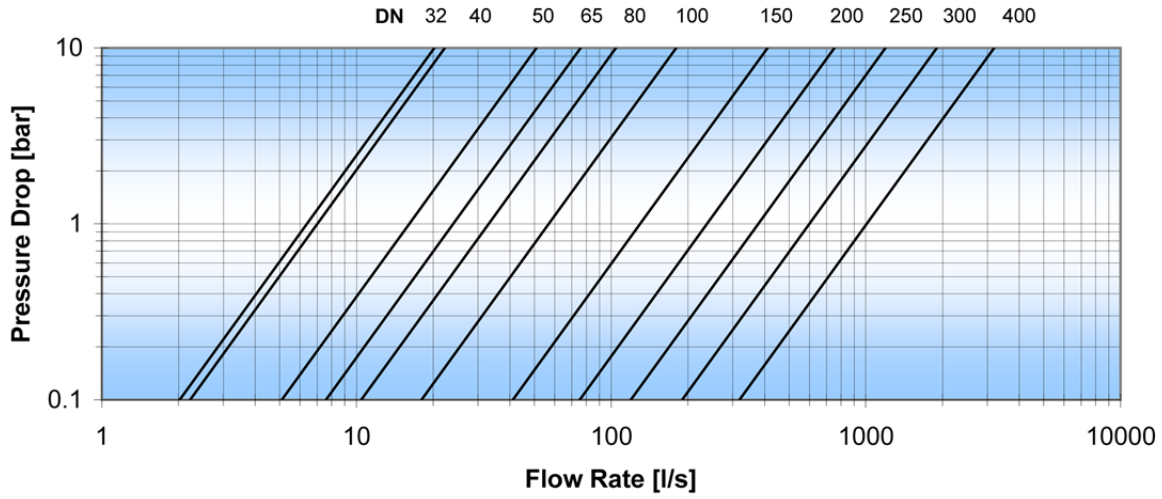
Peak Flow : 20 [l/s]

} **AE DN 100 [mm]**

Inlet Pressure : 15 [bar]

Outlet Pressure : 5 [bar]

} **Below Cavitation Risk**



Notes

o Diagram to be used as a guide only.

More Information

		Sheet #
☑	Quick Valve Selection	000141DE
☑	Sizing Software	Run CLA-VAL Software

To obtain a more accurate calculation please contact CLA-VAL

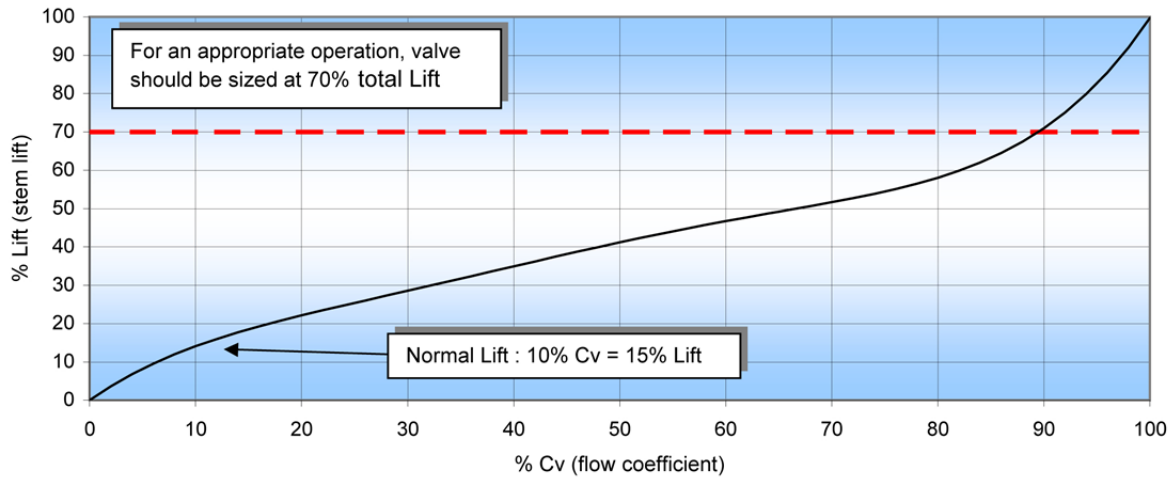
Performance Chart

Flanged [mm] DN	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Screwed [in] DN	1 1/4"	1 1/2"	2"	2 1/2"	3"	-	-	-	-	-	-	-	-	-	-	-
Hytrol AE																
Kv (m3/h)	23	25	58	86	119	205	-	468	857	1361	2164	-	3632	-	-	-
Cv (l/s) @ 1 bar	6	7	16	24	33	57	-	130	238	378	601	-	1009	-	-	-
ζ (-)	3.2	6.4	3.0	3.8	4.6	3.8	-	3.7	3.5	3.4	2.8	-	3.1	-	-	-
Normal Flow (l/s)																
@ velocity 1 m/s	0.6	1	1.6	2.7	4	6		14	25	39	56		100			
to	to	to	to	to	to	-	to	to	to	to	-	to	-	-	-
@ velocity 3 m/s	2.4	3.8	6	10	15	24		53	94	147	212		377			
Max. Flow (l/s)																
Continious @ v=4 m/s	3	5	8	13	20	31	-	71	126	196	283	-	502	-	-	-
Intermittent @ v=5.5 m/s	4	7	11	18	28	43	-	97	173	270	389	-	691	-	-	-

$$Q = Kv\sqrt{\Delta p}$$
$$Q = Cv\sqrt{\Delta p}$$
$$\Delta H = \zeta \frac{v^2}{2g}$$

Q : rate of flow (m3/h)
Kv : flow coefficient (m3/h)
Cv : flow coefficient (l/s)
Δp : head loss (bar)

ΔH : head loss (m)
v : average pipe velocity (m/s)
g : gravitational constant (9.81m/s2)
ζ : resistance coefficient (-)



Notes

- Kv or Cv = m3/h or l/s @ 100kPa (1 bar) head loss with 15°C water (valve totally open).
- Minimum Opening Pressure: 0.2 [bar].
- Minimum Differential Pressure: 0.5 [bar].

More Information

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For lower opening Pressure or differential pressure, please contact CLA-VAL