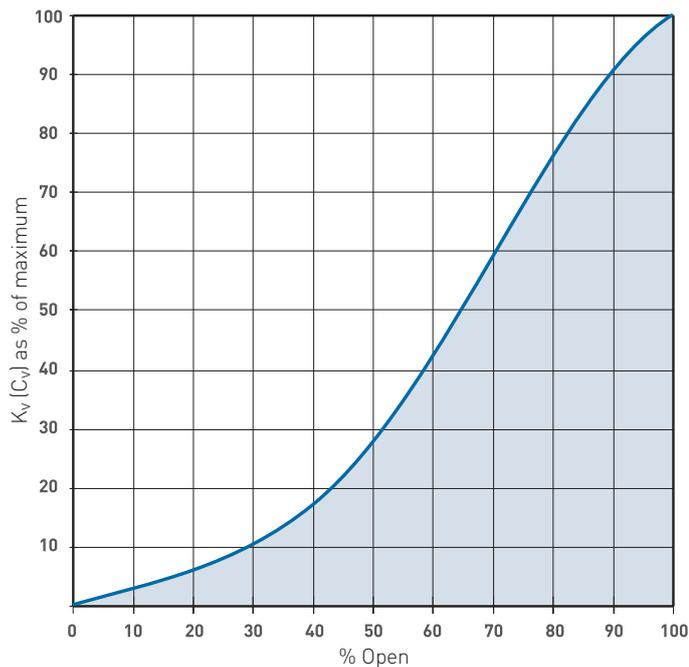


KEYSTONE KNIFE GATE VALVES

FIGURE 952

Flow rate characteristics for V-ported knife gate valves

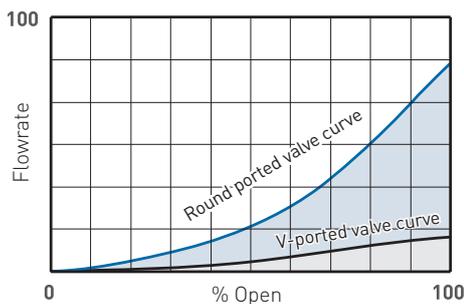


NOTE

This graph allows you to establish the K_v (C_v) value of any given sized V-ported K-Nife valve through its range of opening from 0-100%.

Example

Find the K_v value of a DN 100 F952 V-ported valve at its 70% open position. From the graph, follow the 70% open line up to where it intersects the characteristic curve, then follow the horizontal line across to find the K_v % value. e.g. 58% of max. K_v value. From the K_v Values table, find the fully open K_v value for a DN 100 valve, e.g., DN 100 valve = K_v 183. Now calculate the 58% of the fully open 183 valve e.g., 183 x 0.58 = 106
 ∴ The K_v value of a DN 100 F952 round ported valve at 70% open is K_v = 106



NOTE

Typical comparison between round ported and V-ported K-Nife valves.

K_v (C_v) VALUES

Valve size DN (NPS)	Valve full open	
	K _v value	C _v value
50 (2)	47	54
65 (2½)	61	71
80 (3)	119	138
100 (4)	183	212
125 (5)	235	271
150 (6)	384	444
200 (8)	799	923
250 (10)	1398	1615
300 (12)	2144	2477

DEFINITIONS

K_v = The volume of water in m³/hr that will pass through a given opening at a pressure drop of 1 bar (100 kPa) at 20°C.

C_v = The volume of water in US gpm that will pass through a given opening at a pressure drop of 1 psi at 60°F.

$C_v = 1.155 K_v$ or $K_v = 0.865 C_v$

NOTE

This data is based on flow tests carried out by a certified NATA laboratory in accordance with I.S.A. S75.02 - 1982

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