

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 20°C, 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 60°F, 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:

$$Cv = Kv \times 1,17$$

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)

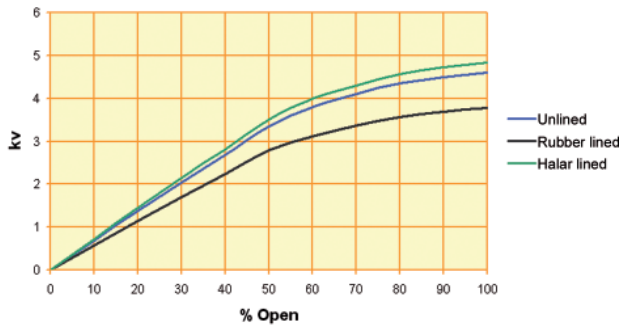
How to use the graphs:

The flow graphs in the following sheets provide the valve flow rate across the valve body at a determine opening degree.

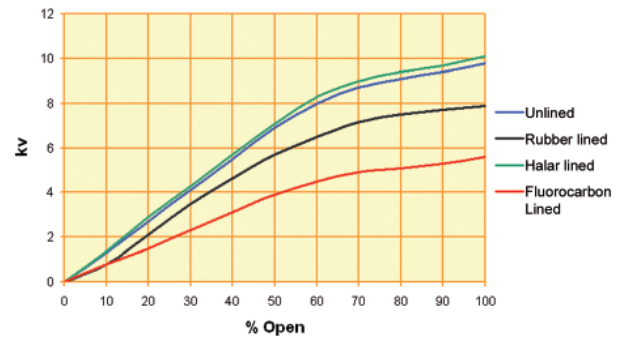
Choose the graph heading the valve Nominal Diameter which is being looked for; consider the valve inner lining features from a choice of unlined, rubber lined, ECTFE (Halar) lined or Fluoropolymer coated valve bodies and plot an intersection line upwards from the opening degree (in case of throttling) or full open to the colour representing the lining. The vertical axis will give the Kv value expressed in M³/h.

Flow Coefficients Kv (m³/h)

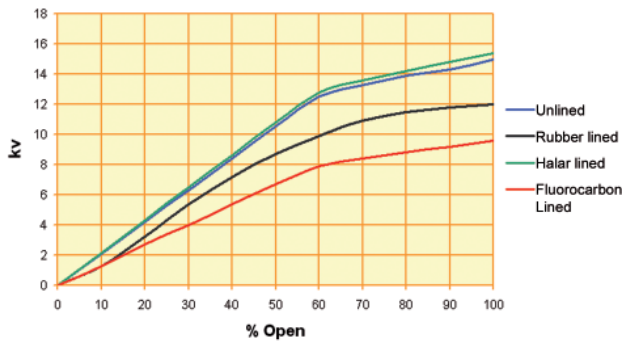
Weir Type DN15



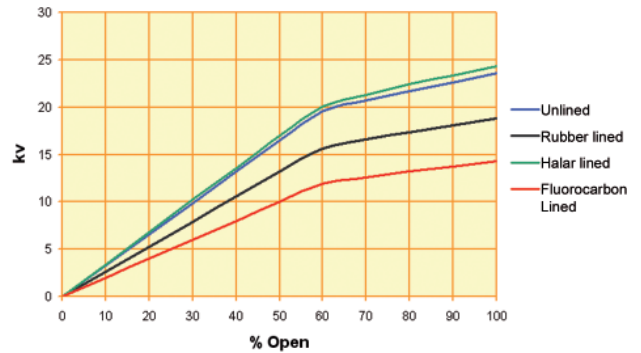
Weir Type DN20



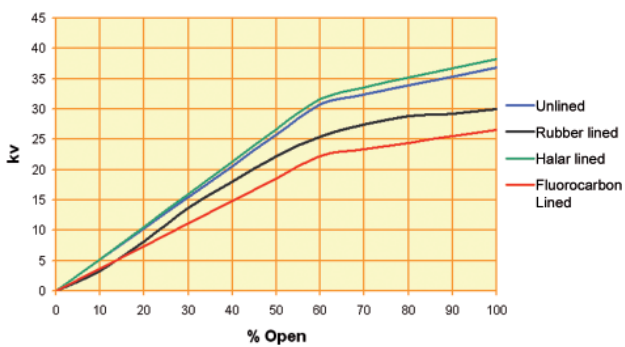
Weir Type DN25



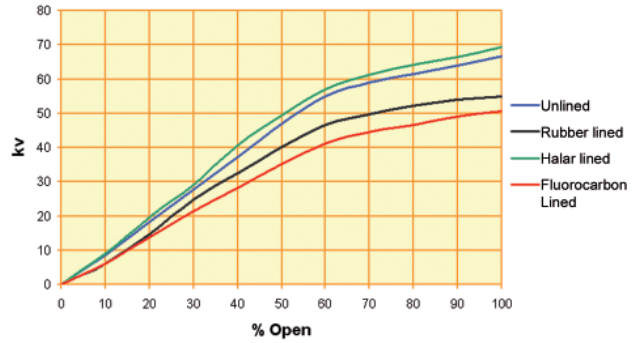
Weir Type DN32



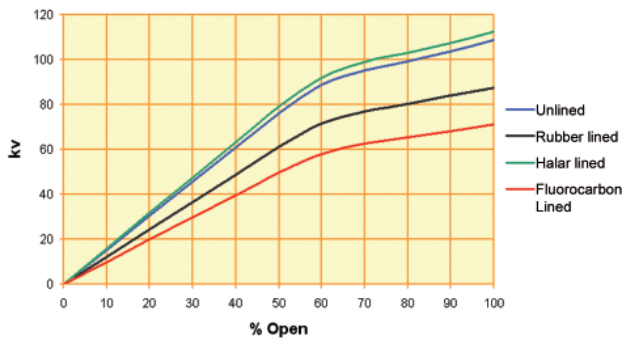
Weir Type DN40



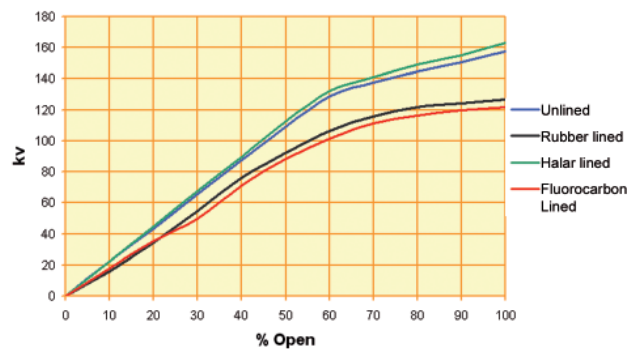
Weir Type DN50



Weir Type DN65

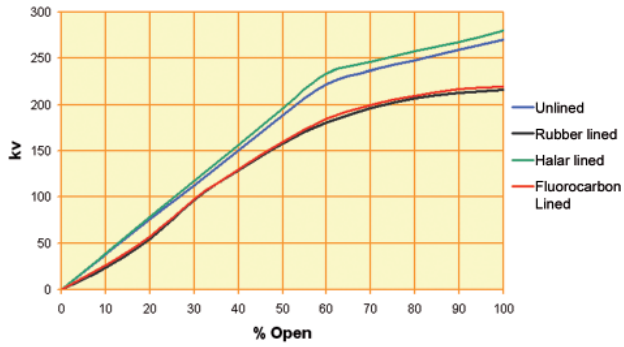


Weir Type DN80

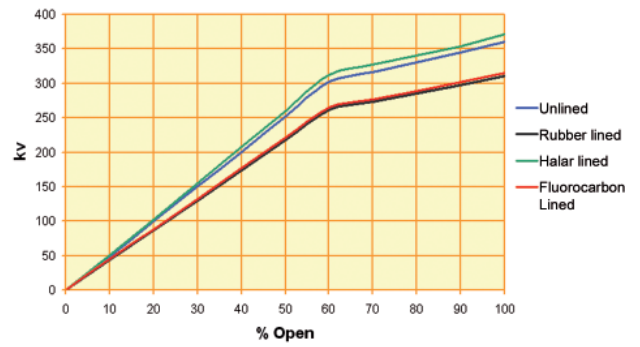


Flow Coefficients Kv (m³/h)

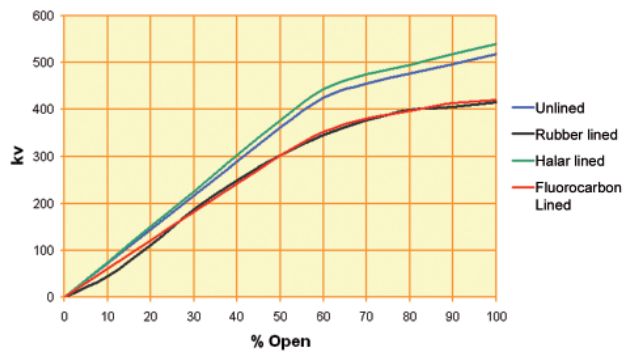
Weir Type DN100



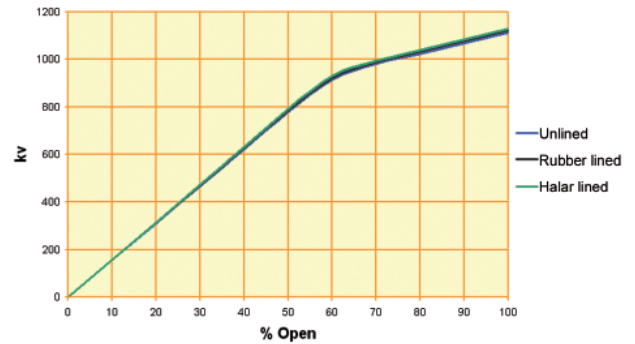
Weir Type DN125



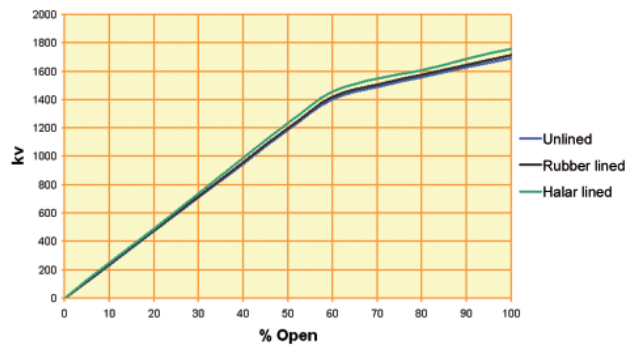
Weir Type DN150



Weir Type DN200



Weir Type DN250



Weir Type DN300

