

Pipe Design: Control Valves P-108

P-Engineering help our clients ensure correct operation of Control Valves. We use CONVAL software from FIRST to assist and control sizing of the Control Valve for the precise application:
Valves:

- Valve Data from Database from all major Manufacturer – Samson, Emerson, Spirax Sarco etc.
- Media Physics from Large Database
- Sizing
 - General size - K_v
 - Stem/Seat Layout.
 - Working Range
- Verification of any
 - Cavitation Problem
 - Freezing Problem
- Noise Calculation

Above Sizing and Selection Calculation of the ensures correct Function of the Control Valve within the whole Operation Area.

Additional Pressure Reduction

If additional pressure Reduction is needed additional Office Plates can be calculated for trimming the pressure loss across the Control Valve.

Supplier Calculation

Why not just trust Supplier Sizing? Well, sometimes it is better to have full control of the calculation yourself.

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Safety relief valve		ISO 4126-1:2004
Calculation standard		ISO 4126-1:2004
Valve manufacturer		ESBE
Valve		441442 DN 20-200
Material		9794 4040-48.0
Valve selection		AG: 12272; DN 150 x DN 250, Typ...
23 Valve from database		
Rated coefficient of discharge (gas/vapour)	$K_{dR} (G)$	0.7
24 Narrowest flow cross-section	$A_0 (G)$	13.272.0 mm ²
25 Narrowest flow diameter	$d_0 (G)$	125.0 mm
26 Size and pressure class		Metric
Seat	DN 150	150.0 mm
Outlet	DN 250	250.0 mm

Pictures from various Unit for Central Heating and Hot Tap Water. For the first the Central Heating the Control Valve did not fit perfectly as District Heating Supply was not according to Specification and the Stem in the Valve was delivered too large.