SYST VDN

Stright valve

Quick facts

- Constant stroke length of the pin irrespective of the set kv-value gives accurate control even at low flows.

Type	Dim.	K_v (m^3/h)
SYST VDN215	DN15 (1/2")	0.07-0.89
SYST VDN220	DN20 (3/4")	0.22-1.41

Commissioning

The kv-value shows the water quantity 100 $\dot{V}$ in m^3/h for a pressure drop Δp_{v100} across the valve of 1 bar.

On delivery, the valves are fully open (position N: SYST VDN215: k_v 0.89 and SYST VDN220: k_v 1.41).
The required k_v-value is set during commissioning.

The flow rate can be set by adjusting the valve cone setting. This is easily done using the protective housing (supplied with the unit) with a k_v-value having marks of different length (see table 1). The lift height is always the same, regardless of setting.

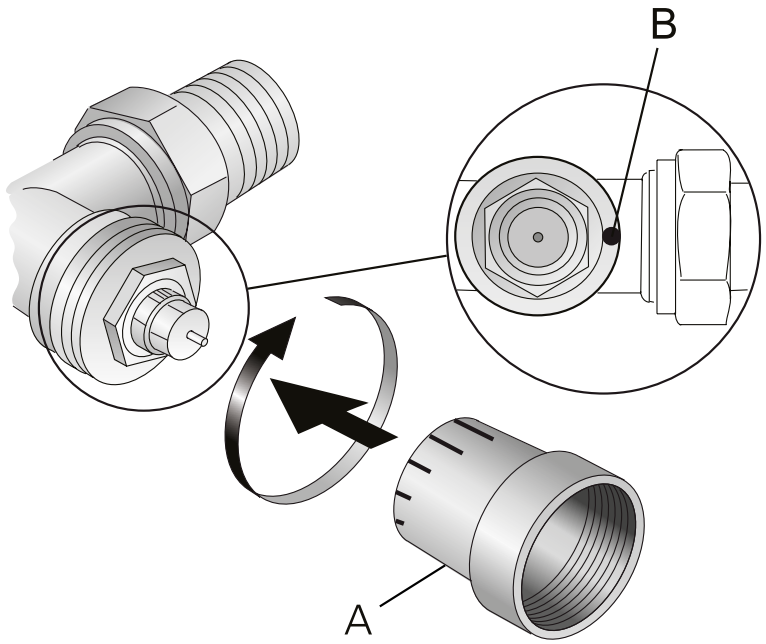


Figure 1. Commissioning of k_v-value
A = Protective housing, rotatable through 180°
B = Marking on the outlet side of the valve

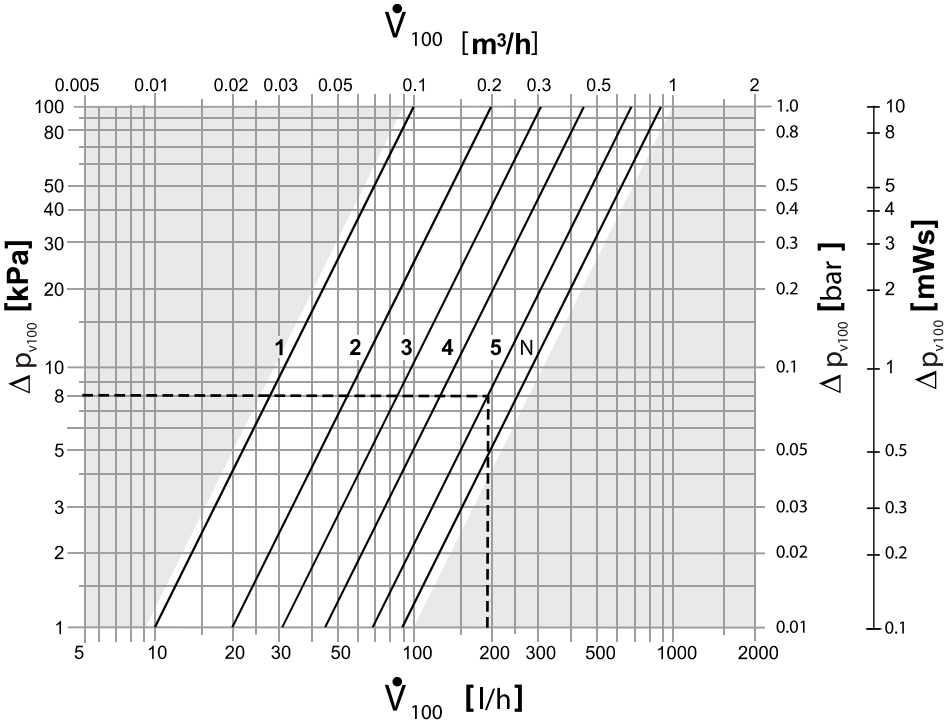
1. Fit the protective housing A over the valve.
2. Turn the protective housing until the desired reference mark is centred with mark B on the valve.

Table 1. k_v-value (m^3/h) for different settings (KP 2K)

		1	2	3	4	5	N(k_v)
A							
B	SYST VDN215	0.07	0.17	0.28	0.36	0.45	0.89
B	SYST VDN220	0.22	0.35	0.44	0.52	0.60	1.41

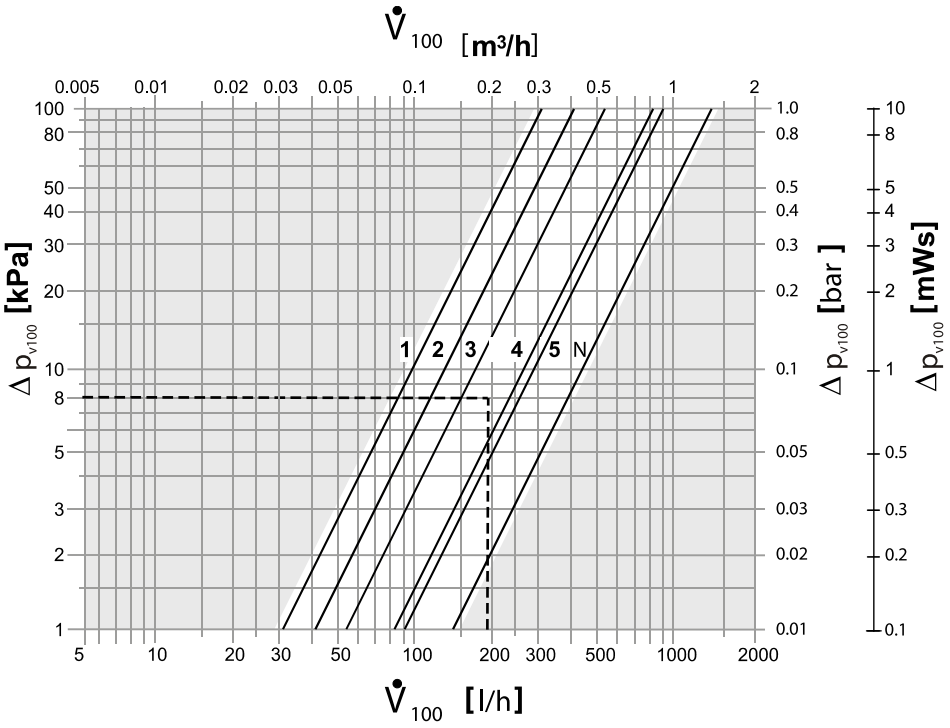
A = Reference mark
B = k_v-value

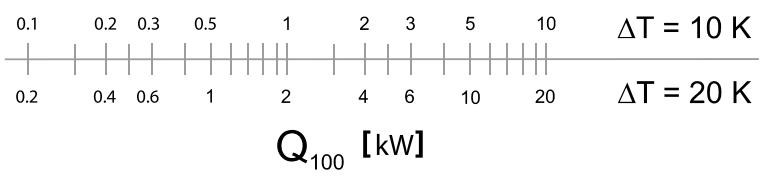
SYST VDN215



Ex: Water flow 0.05 l/s ≃ 180 l/h → approx. 8 kPa at K_v ref 5.
Current water flow for a product in a specific operating mode can be read from ProSelect

SYST VDN220



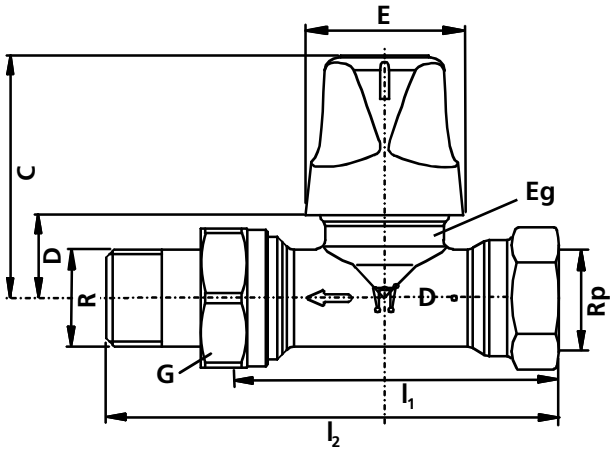


Technical data

Functional data	Enclosure class	PN 10	
	Permissible media [1]	Cold and hot water, water with propylene-glycol, water with ethylene-glycol <30 %; Recommendation: Water treatment according to VDI 2035	
	Media temperature	1…120 °C	
	Permissible operating pressure	1000 kPa (10 bar)	
	Pressure difference Δp_{max}	max. 60 kPa (0.6 bar)	
	Pressure difference Δp_{v100}	5…20 kPa (0.05…0.2 bar): recommended range	
	Lifting height	min. 1.2 mm	
Norms and standards	Environmentally compatibility	ISO 14001 (environment)	
		ISO 9001 (quality)	
		SN 36350 (environmentally friendly products)	
		RL 2002/95/EC (RoHS)	
Material	Valve casing	brass, matt, nickel plated	
	Connection nipple	brass, matt, nickel plated	
	Protective housing	polypropylene	
	O-ring	EPDM	
Dimensions / Weight	See section Dimensions below		
	Installation length	EN 215	
	Thread	Rp female thread	according to ISO 7-1
		R male thread	according to ISO 7-1
		G thread	according to ISO 228-1
		Eg thread	M30 x 1.5 mm
Tightening torque cone coupling	SYST VDN215	60 Nm	
	SYST VDN220	80 Nm	
Maintenance	The valves are maintenance free.		

[1] From an environment protection standpoint propylene-glycol is preferable.

Dimensions



		Dimensions (mm)					Thread (inch)			Thread (mm)	Weight
Type	DN	1_1	1_2	C	D	E	Rp	R	G	Eg	(kg)
SYST VDN215	15	55	82	53	18	35	½	½B	¾	M30 x 1.5	0.265
SYST VDN220	20	65	98	60	25	35	¾	¾B	1	M30 x 1.5	0.385