

SYST VDN

Valve



QUICK FACTS

- Valve SYST VDN215 is Included in:
 - PARASOL Zenith (except 1800 cooling)
 - WISE Parasol
 - PARASOL VAV
 - ADAPT Parasol
 - PARASOL EX
 - ADAPT Parasol EX
 - WISE PARASOL EX
 - PRIMO T-VS
 - SYST RK
- Valve SYST VDN220 is included in:
 - PARASOL Zenith (1800 cooling)
- Constant stroke length of the pin irrespective of the set k_v -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 k_v -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.

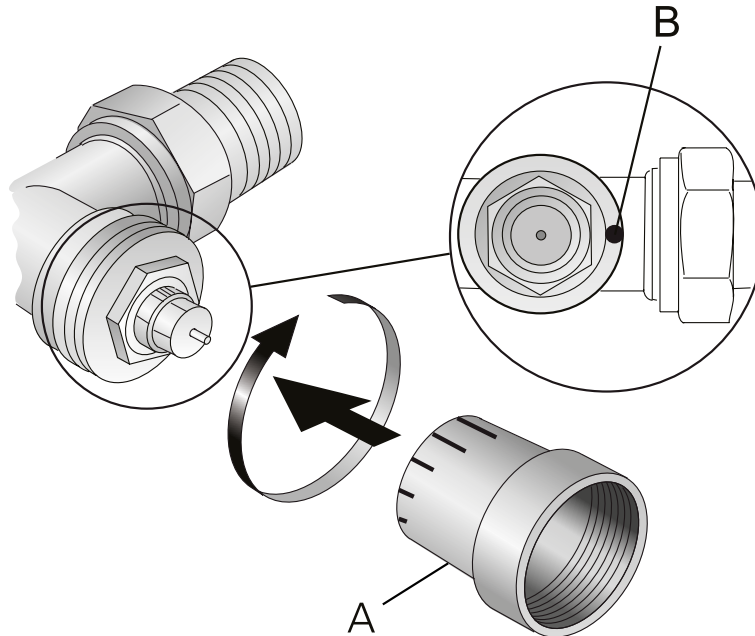


Figure 1. Commissioning of k_v -value

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.

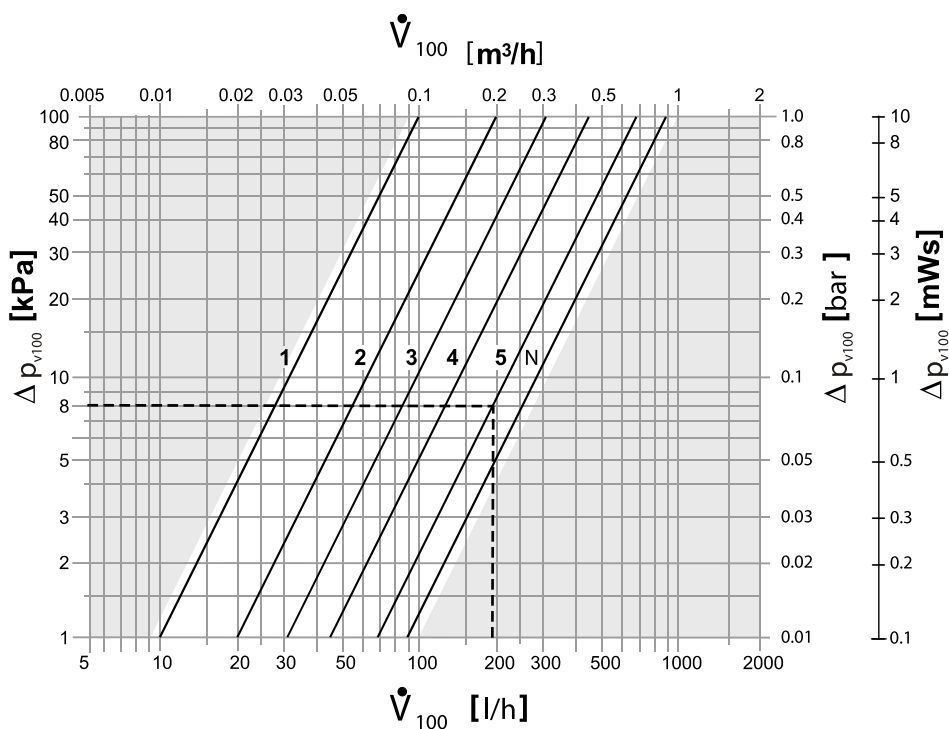
Table 1. k_v -value (m^3/h) for different settings (KP 2K)

A		1	2	3	4	5	N(k_v)
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

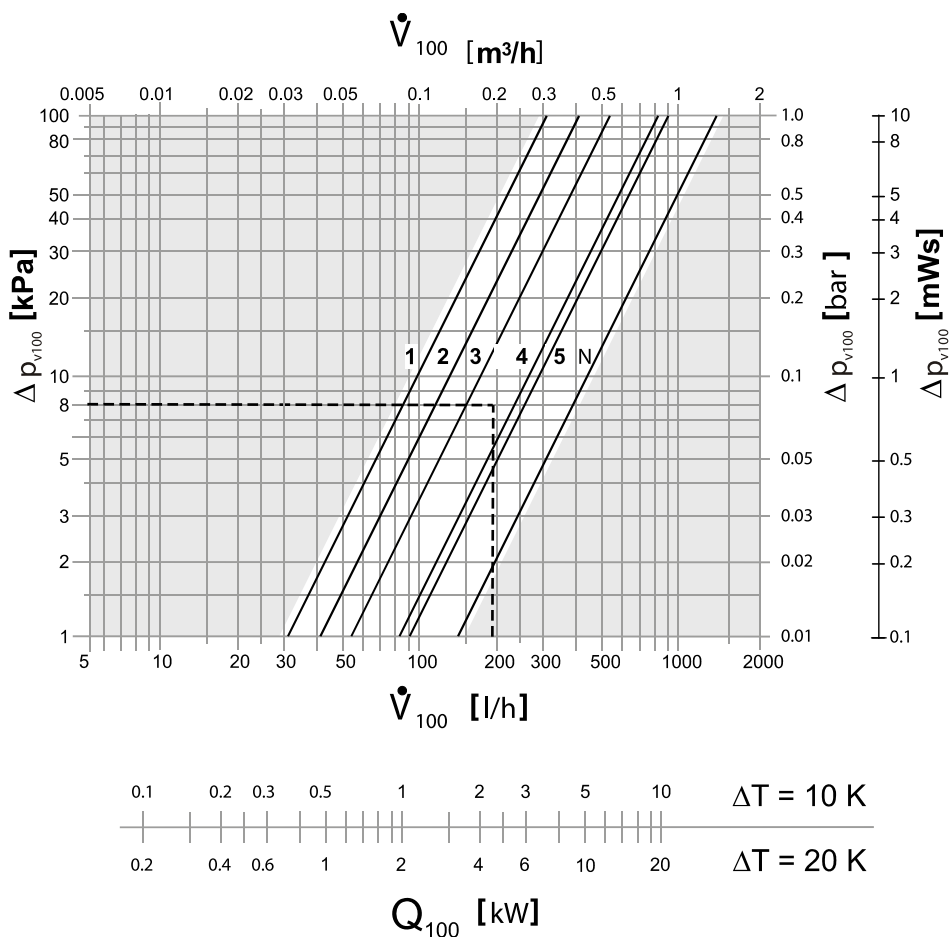
SYST VDN215



Ex: Water flow 0.05 $\text{l/s} \approx 180 \text{ l/h} \rightarrow$ 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

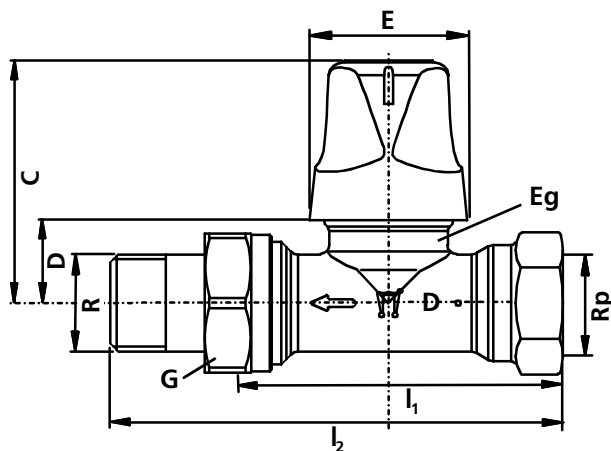


Technical data

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
Norms and standards	Lifting height	min. 1.2 mm
	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
Tightening torque cone coupling	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	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



Type	DN	Dimensions (mm)					Thread (inch)			Thread (mm)	Weight (kg)
		l ₁	l ₂	C	D	E	Rp	R	G	Eg	
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