Data Sheet

U-Bend Garnitures for Steel-Pipe Convectors - Used with Valves Type RA-N and RA-G

Application

U-bend 013L1922

U-bend 013L1921

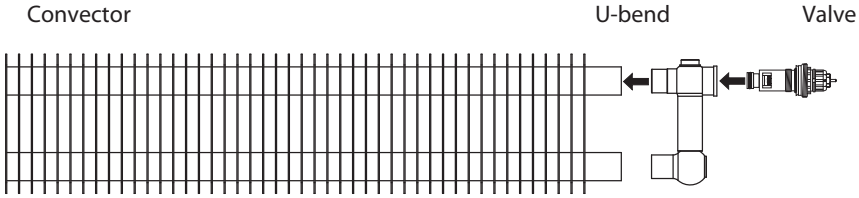
Danfoss U-bend garnitures are designed for incorporation into steel-pipe convectors as housing for the Danfoss integrated valves types with reinforced stuffing box to avoid damage on the valve at low temperature:

- RA-N 013G8370
- RA-G 013G8670

As the U-bend garnitures are made of steel, the connection to the convector pipes can be done by a simple welding process.

This means that the thermostatic valve function will be integrated into the convector and by that offer a compact, simple and nice installation.

System



Codes and Technical Data

U-bend garnitures

Type	Sensor connection	Max. water temperature	**Code no.**
U-bend, to be used with RA-N 013G8370	RA 2000	120˚C	**013L1922**
U-bend, to be used with RA-G 013G8670	RA 2000	120˚C	**013L1921**

Integrated valves for U-bend garnitures

Valve type	Differential pressure [1]		Test pressure	Work pressure	Max water temperature	Code no.
	Recomm.	Technical				
Integrated valve type RA-N	0.05 - 0.2 bar	0.6 bar	16 bar	10 bar	120˚C	**013G8370**
Integrated valve type RA-G	0.05 - 0.1 bar	0.15 bar	16 bar	10 bar	120˚C	**013G8670**

1) *The technical differential pressure indicates the upper limit for a proper valve function. In most two-pipe systems the recommended differential pressure is sufficient. In order to achieve a noiseless function we recommend in smaller systems to apply automatic bypass valves or automatic balancing valves. If pump differential pressure exceeds the recommended max. valve differential pressure it is recommended that an automatic balancing valve type ASV-P/PV is added to the system.*

Accessories and Spare Parts

Part	Code no.
Cover cap, black, for 013G8370	**013G8439**
Cover cap, green, for 013G8670	**013G8469**

Technical Data, Flow

Pre-setting values, U-bend 013L1922 + RA-N 013G8370

U-bend + integrated valve	Presetting								
	k_v-values [2]								k_{vs}
	1	2	3	4	5	6	7	N	N
U-bend 013L1922 + RA-N 013G8370	0.14	0.21	0.26	0.32	0.46	0.59	0.73	0.87	1.05

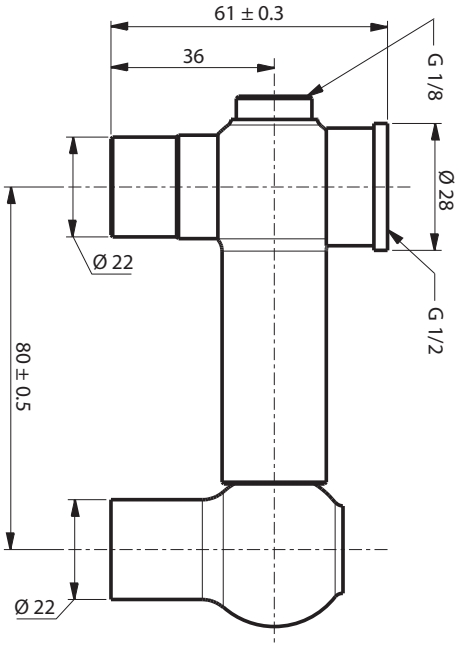
2) *kv-values indicate the flow volume (Q) in m3/h at a pressure loss (Δp) across the valve of 1 bar. kv = Q / √Δp. At setting N, the kv-value in accordance with EN 215 can be stated as Xp = 2 K. At lower preset values, Xp will be reduced until approximately Xp 0.5 at presetting 1. The table shows the average measured values for integrated valves with radiator. The kvs-values indicate the valve capacity, when the valve is fully open. If a remote temperature adjuster is used, the P-band is increased by a factor of 1.1. If an RAW sensor is used, the P-band is increased by a factor of 1.2.*

k_v-values, U-bend 013L1921 + RA-G 013G8670

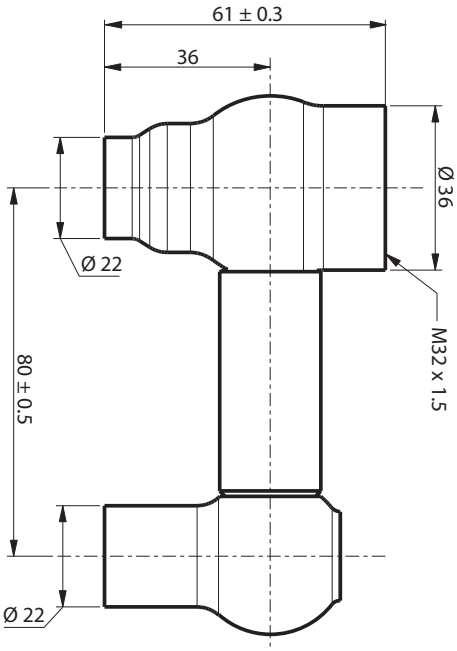
U-bend + integrated valve	k_v-value [3] (m^3/h at Δp =1 bar)					
	P-band (K)					kvs
	0.5	1.0	1.5	2.0	3.0	
U-bend 013L1921 + RA-N 013G8370	0.55	1.11	1.63	2.14	3.07	4.56

3) *The kv-value indicates the flow volume (Q) in m3/h at a given lift and a pressure drop (p) across the valve at 1 bar. kv = Q / √Δp. The kvs-value states the flow Q at a maximum lift, i.e. at fully open valve. If a remote temperature adjuster is used, the P-band is increased by a factor of 1.1. If an RAW sensor is used, the P-band is increased by a factor of 1.2.*

Design and Dimensions



U-bend 013L1922



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