ENGINEERING
TOMORROW

Data Sheet

RLV-KDV H-Piece for Valve Radiators - Blockable and Drainable, with integrated differential pressure control

Application

The valve has an integrated differential pressure control, that ensures constant pressure over the radiator valve. The flow adjustment presetting is done on the radiator valve. Based on constant pressure.

RLV-KDV is a combined H-piece and lockshield valve for valve radiators in two-pipe systems. With RLV-KDV every radiator in the system is working under defined pressure conditions and ensures constant differential pressure over the radiator in full and partial load.

As a result the heating system is self balancing and working on optimal conditions in full and partial demand. This is reducing the return temperature, saves energy and prevents claims due to noise in the radiator.

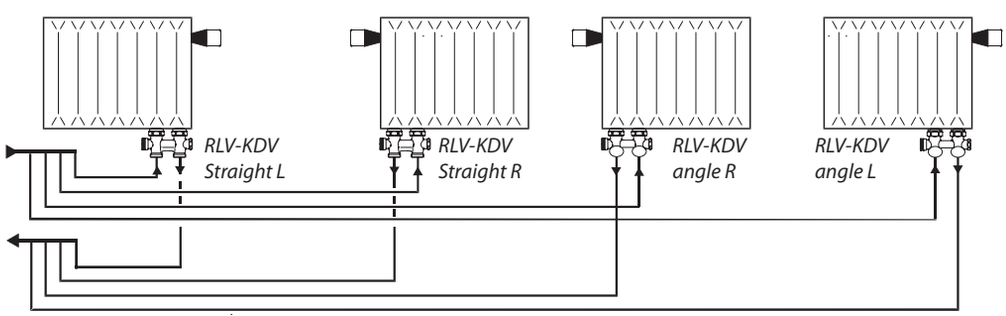
It is available in Straight, Right / Left, and Angle, Right / Left, versions, with centre distance of 50 mm. Self sealing connection pieces ensure that RLV-KDV can be used both for radiators with an internal thread of G ½ and with an external thread of G ¾ A.

A fill and drain tap is available as an accessory. Connection to copper, soft steel, PEX and Alupex pipes is made with Danfoss compression fittings. See separate datasheet.

In order to avoid deposition and corrosion, the composition of the hot water should be in accordance with the VDI 2035 guideline (Verein Deutscher Ingenieure).

System

Two-pipe system with valve radiators, typical connection types.

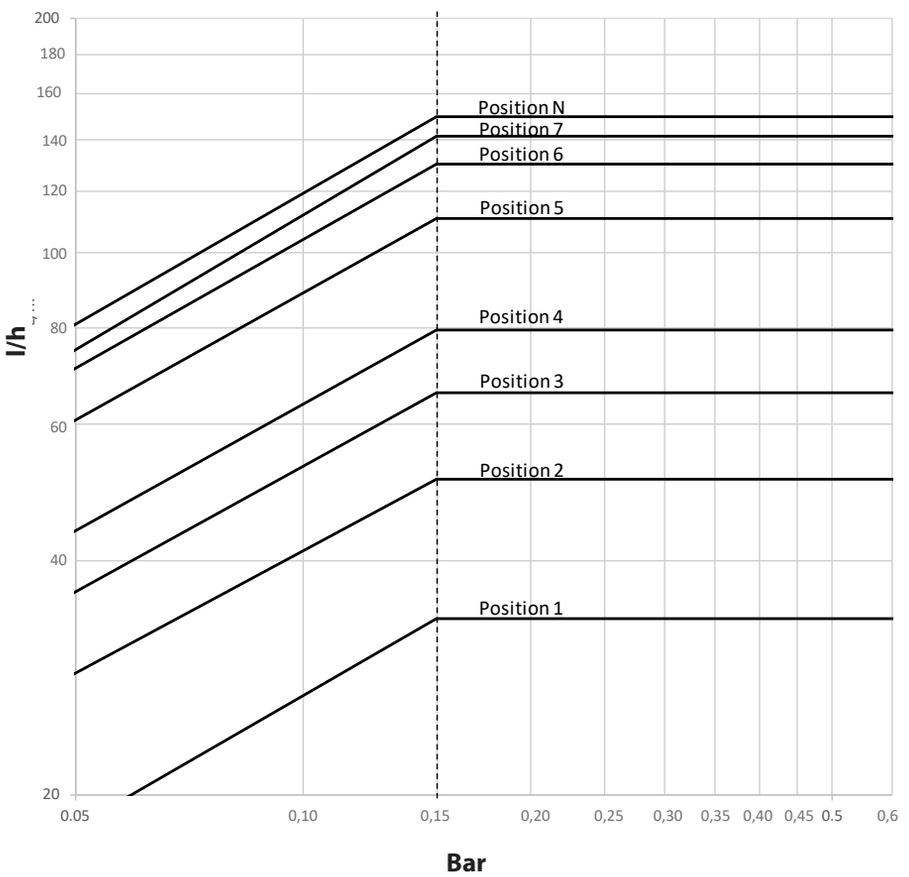


Ordering and data

Type	Version	Connection		Max. operation pressure	Test pressure	Max. water temp.	△p min	Code no.
		Radiator	System					
RLV-KDV with constant differential pressure control	Straight R & L	G ½	G ¾ A	10 bar	16 bar	95 °C	0.15 bar	**013G7870**
	Angle Right							**013G7871**
	Angle Left							**013G7872**
	Straight R & L	G ¾	G ¾ A					**013G7873**
	Angle Right							**013G7874**
	Angle Left							**013G7875**

Capacities

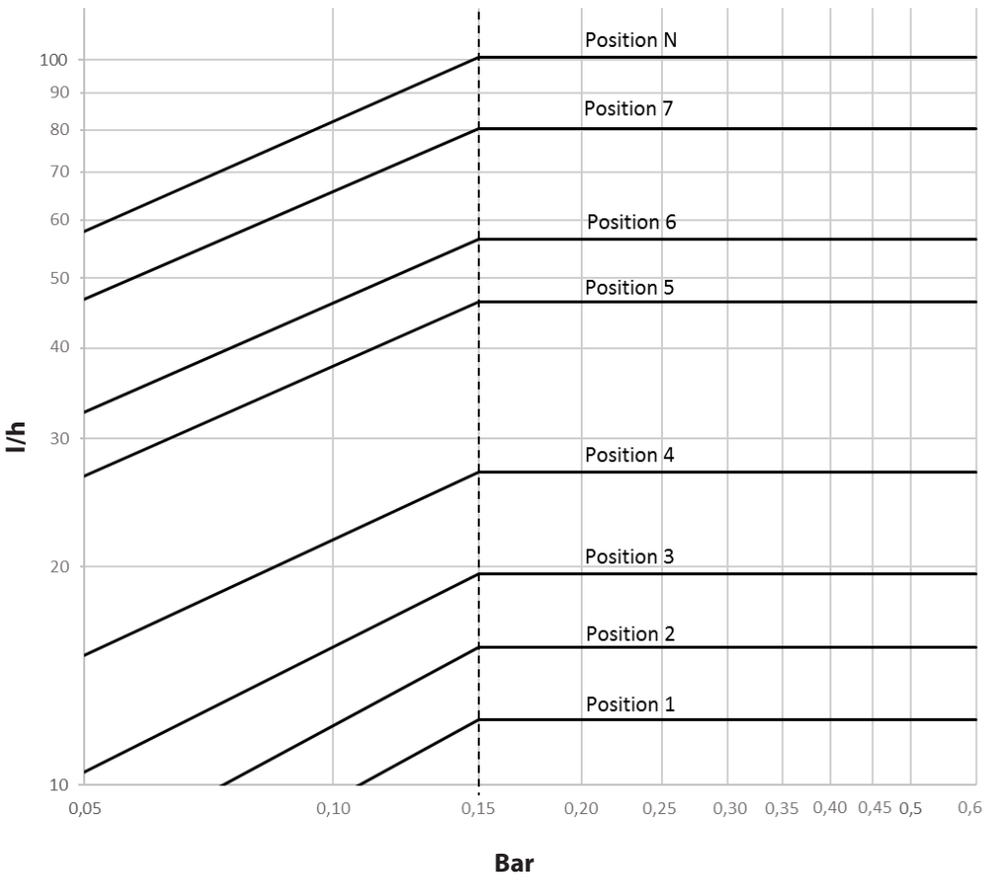
RA-N									KVS
Presetting	1	2	3	4	5	6	7	N	**N**
Value xp2	0.14	0.21	0.26	0.32	0.46	0.59	0.73	0.87	**1.05**
l/h	34	51	66	79	110	130	141	150	**158**



(Capacities comply to all radiators inside a -+ 10% span depending on the radiator type and size.)

Capacities

RA-U									KVS
Presetting	1	2	3	4	5	6	7	N	**N**
Value xp2	0.04	0.05	0.07	0.09	0.13	0.18	0.24	0.34	**0.55**
l/h	13	16	17	28	49	59	85	106	**114**



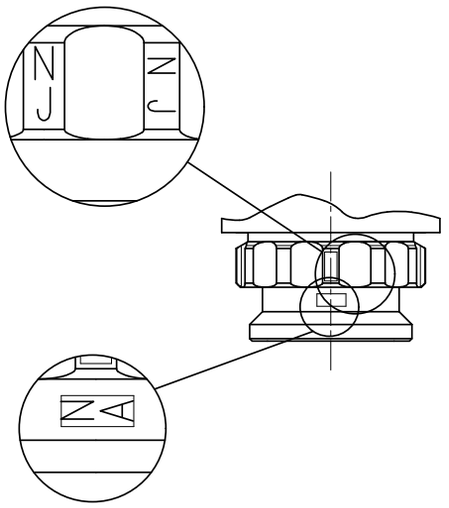
(Capacities comply to all radiators inside a -+ 10% span depending on the radiator type and size.)

1 **New setup with Danfoss Built-in-valve:**
When installing the Danfoss Dynamic H-Piece, then after finding the l/h needed for the radiator, go into the graph for the valve type (N or U) and pre-set the Built-in-valve according to the graph.

2 **Replacing old H-Piece with Dynamic H-Piece, using Danfoss Built-in-valve:**
When replacing the H-Piece, first identify the Built-in-valve type mounted on radiator (N or U). This is done according to the Danfoss Valve Marking (see below). Hereafter, find the required l/h and use graph of the Built-in-valve type above to find the pre-setting of the Built-in-valve.

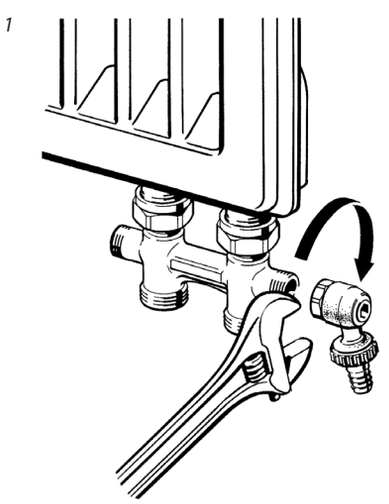
3 **Build-in valves from other manufacturers:**
When mounting on radiator with Built-in-valve from other manufacturer, then first find the required l/h needed for the radiator. Thereafter, look in the graph above to find the danfoss pre-setting. Then, use Capacity table to find the kv-valvue for the found pre-setting. Use this kv-value to pre-set the Built-in-valve with the help from manufactures data.

Danfoss valve marking

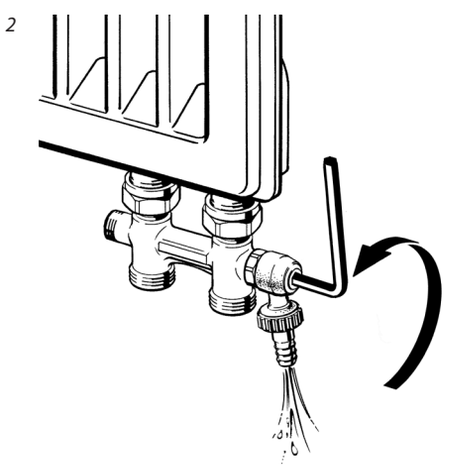


Valve Type	Marking
RA-N	NA, ND, NI, NJ, NK, NE, NM, NL, NO, NG
RA-U	UA, UD, UI, UJ, UK, UO

Draining the radiator



To drain the radiator, first unscrew the cover caps. Then shut off the inlet and return flow.

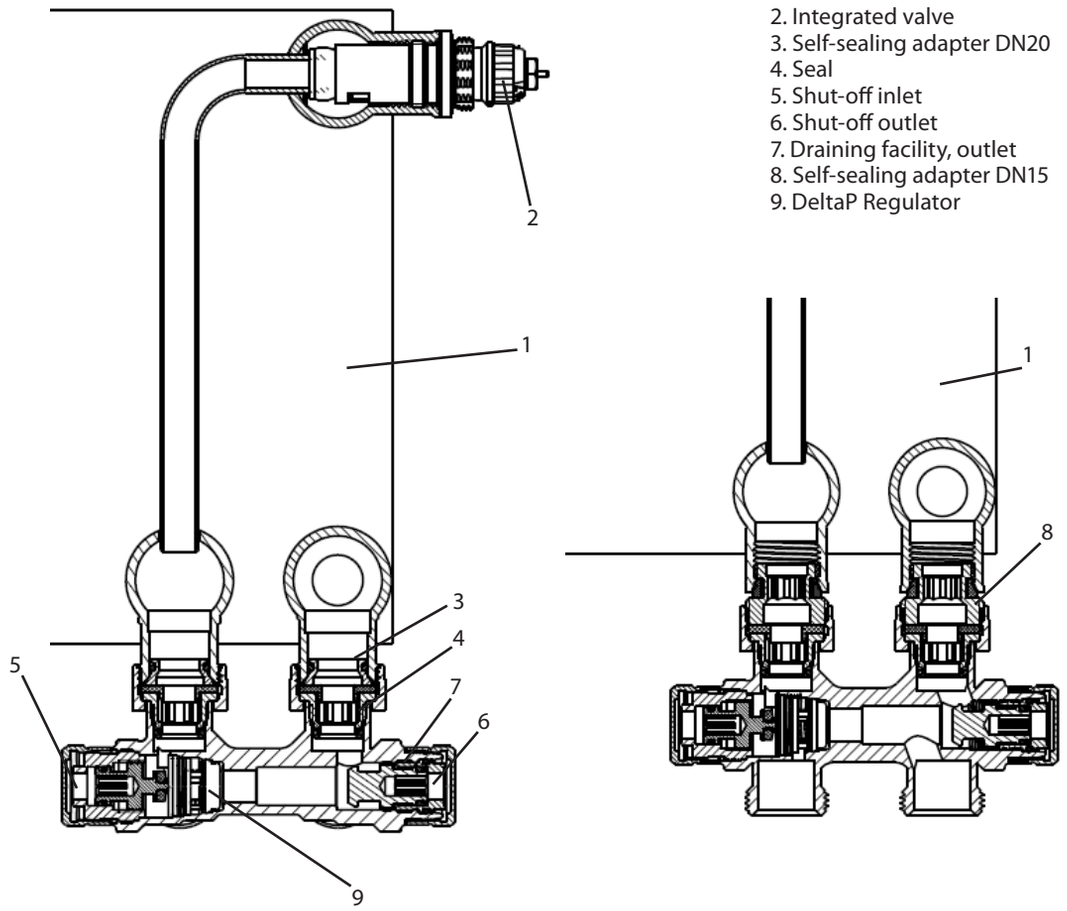


When the drain tap has been mounted (1), open by turning the Allen key (2).

Accessories

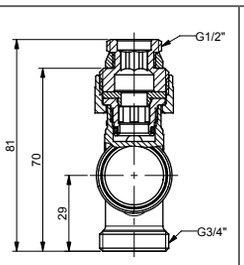
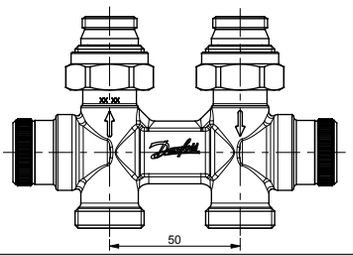
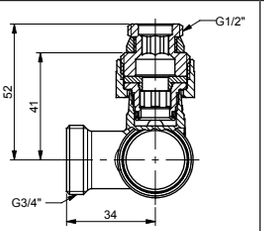
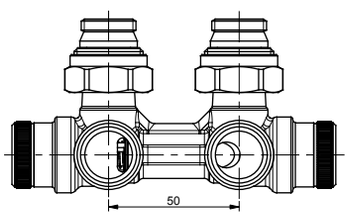
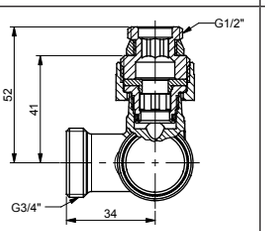
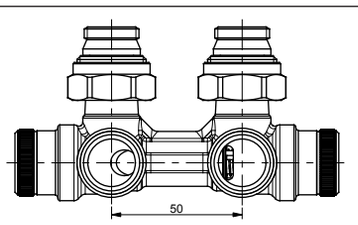
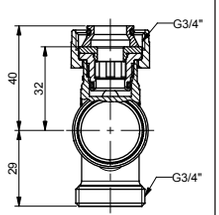
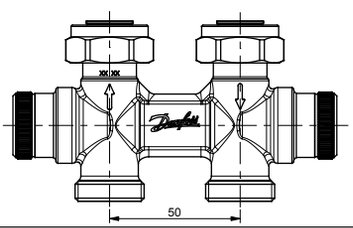
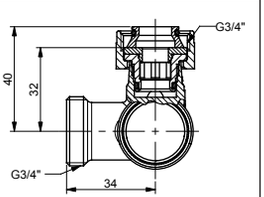
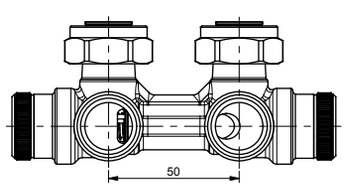
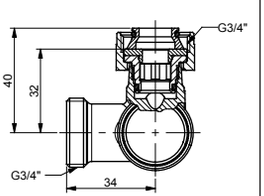
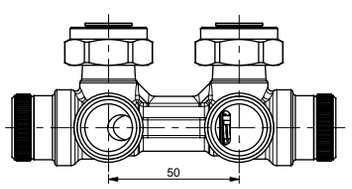
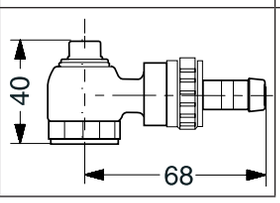
Product		Code no.
	Fill and drain tap without nickel plating, with ¾" external thread and hose nozzle	**003L0152**
	Self-sealing connection nippel for valve radiator with G ½ internal thread	**003L0249**
	△p tool for pump optimization	**013G7855**
	△p Controller (Sparepart)	**013G7869**

Design



Materials in contact with water	
Valve body and other brass parts	MS58
Spring	SS EN 10270-3
Membrane	EPDM
O-rings	EPDM/NBR
Valve plate	NBR
Washer	CW452K
Seal	EPDM

Dimensions

Radiator Connection	Version			Code no.
G½	Staight R & L			**013G7870**
	Angle Right			**013G7871**
	Angle Left			**013G7872**
G¾	Staight R & L			**013G7873**
	Angle Right			**013G7874**
	Angle Left			**013G7875**
	Access			

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