Lindab **LinFlow-A**

2-way control valves

2-way control valves LinFlow-A

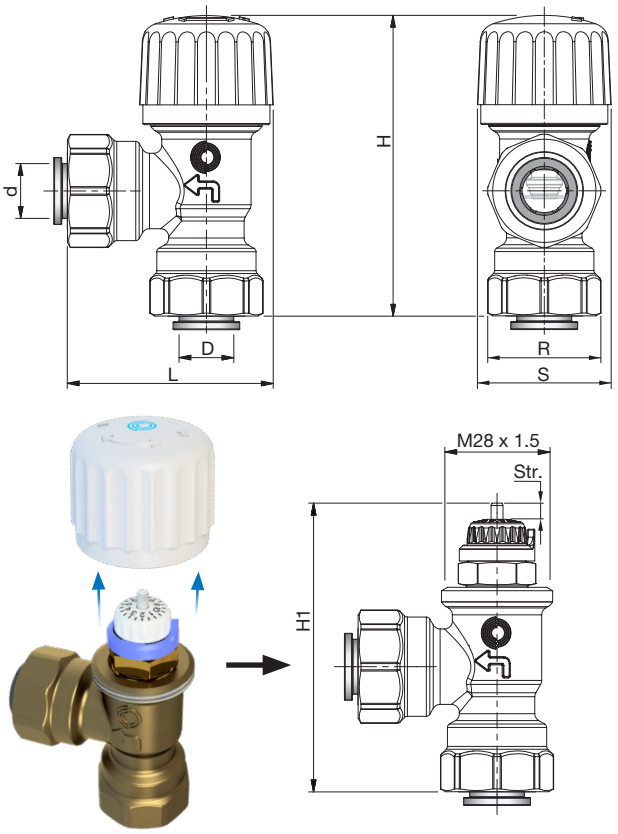
Description

2-way control valve with push fitting connection and toolless presetting to be controlled by thermoelectric actuators.
The valves are specially developed for the demands of chilled beams and other waterborne products.
Equipped with Lindab thermostatic actuators, the valves can achieve a linear valve characteristic (best with APR-40405), which guarantees best temperature control and lowest energy loss during operation. The special valves show extremely low sound generation in combination with Lindab chilled beams which offers a wider range for recommended pressure loss over the beam.
A white protective cap with Lindab logo and a printed logo on the valve body easily identifies the models.

- Specially developed for chilled beams
- Fast push fitting connections (for copper pipes)
- Toolless presetting
- Brass finish
- Connection to actuator: M28 x 1.5 [mm]

For straight version, go to LinFlow-S .

Dimensions

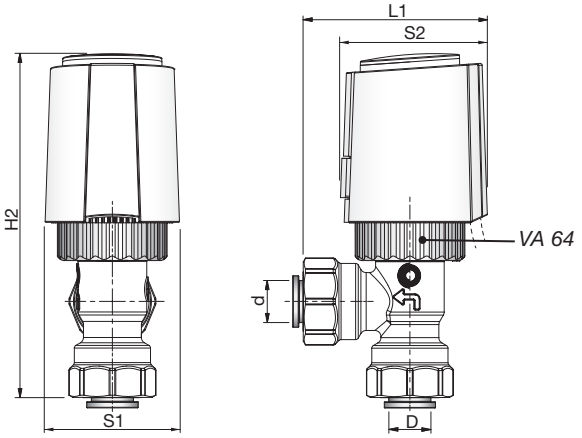


Picture 1: Valve dimensions

D x d	L	H	H1	R	S	Str.	Weight [g]
12 x 12	51.8	75.5	72.5	28.5	33.7	3	238

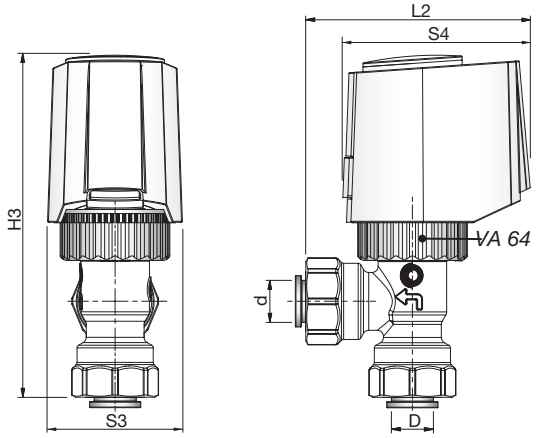
Table 1: Valve dimensions in [mm].

Dimensions with actuator A-40405



Picture 2: Valve with adapter VA 64 and actuator A-40405.

Dimensions with actuator APR-40405



Picture 3: Valve with adapter VA 64 and actuator APR-40405.

D x d	L1	L2	H2	H3	S1	S2	S3	S4
12 x 12	60.4	73.6	113	112	44.3	48.4	44.3	61.5

Table 2: Valve and actuator dimensions in [mm].

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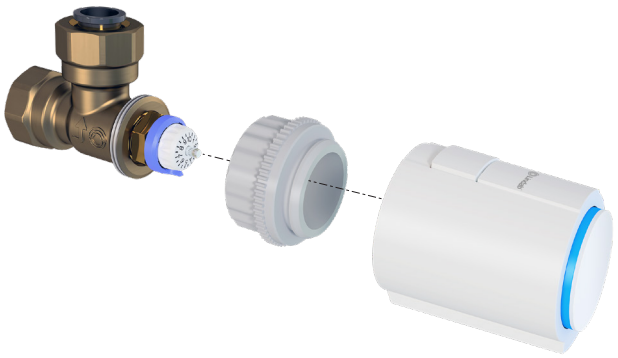
LinFlow-A with adapter and actuator

Valve LinFlow-A *Adapter VA 64* *Actuator APR-40405*

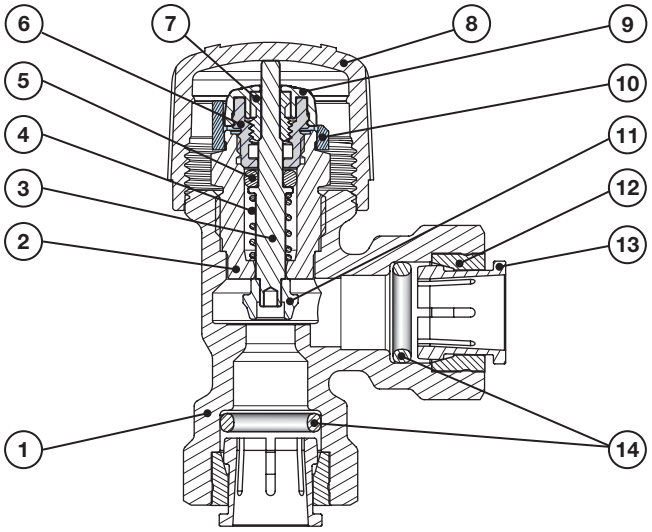


Picture 4: Remove the handwheel (8), do the presetting of the valve, the adapter VA 64 and actuator can easily be attached.

Technical data

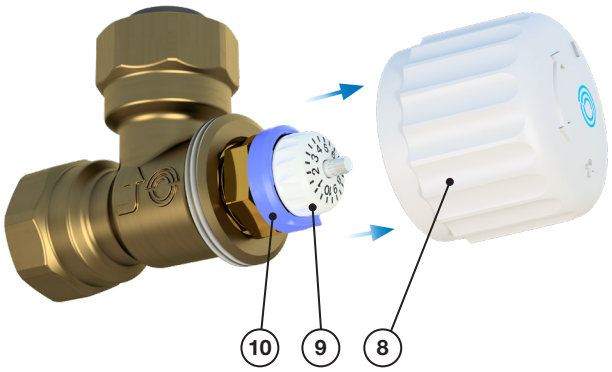
Materials:

1.	**Body**	CW617N (EN 12165) CuZn40Pb2
2.	**Headwork**	CW614N (EN 12164) CuZn39Pb3
3.	**Stem**	AISI303
4.	**Spring**	AISI302
5.	**O-Ring**	EPDM-X
6.	**Gland**	CW614N (EN 12164) CuZn39Pb3
7.	**Presetting screw**	CW614N (EN 12164) CuZn39Pb3
8.	**Handwheel**	ABS
9.	**Presetting knob**	nylon GF
10.	**Presetting ring**	nylon GF
11.	**Shutter**	CW614N (EN 12164) CuZn39Pb3
12.	**Half Cartridge body**	CW614N (EN 12164)CuZn39Pb3
13.	**Clip**	Acetal copolymer
14.	**O-Rings**	EPDM-X

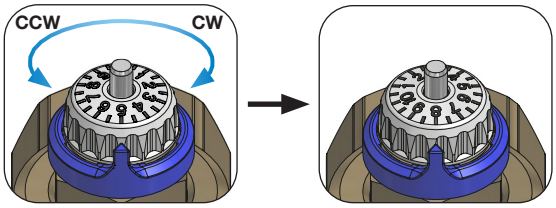


Picture 5: Section view of LinFlow-A showing internal parts.

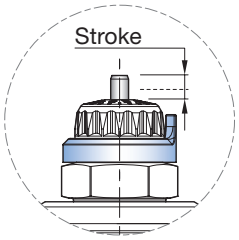
Presetting of valves



Picture 6: Remove the handwheel (8). Rotate the white presetting knob (9) till the desired position. Rotate counter clockwise (CCW) to increase and clockwise (CW) to decrease.



Picture 7: Example: changing the position from 5 to 8, (Increasing). Turn the presetting knob (CCW) until the blue presetting ring indicator reads 8.



Picture 8: Stern stroke 0 - 3 [mm]

F.C.-Stern stroke -0 [mm]
=> valve fully closed

F.O.-Stern stroke -3 [mm]
=> valve fully open

Pressure drop diagrams / Presetting position

$$\Delta p_w = \left(\frac{q_w}{K_V} \right)^2 \qquad q_w = K_V \times \sqrt{\Delta p_w}$$

Where:

q_w : is the water flow rate [m³/h]
K_V : is the flow rate factor [m³/h]
Δp_w : is the pressure drop across the valve [bar]

Find presetting position for the desired K_V value in the corresponding diagram 1 on the following pages.

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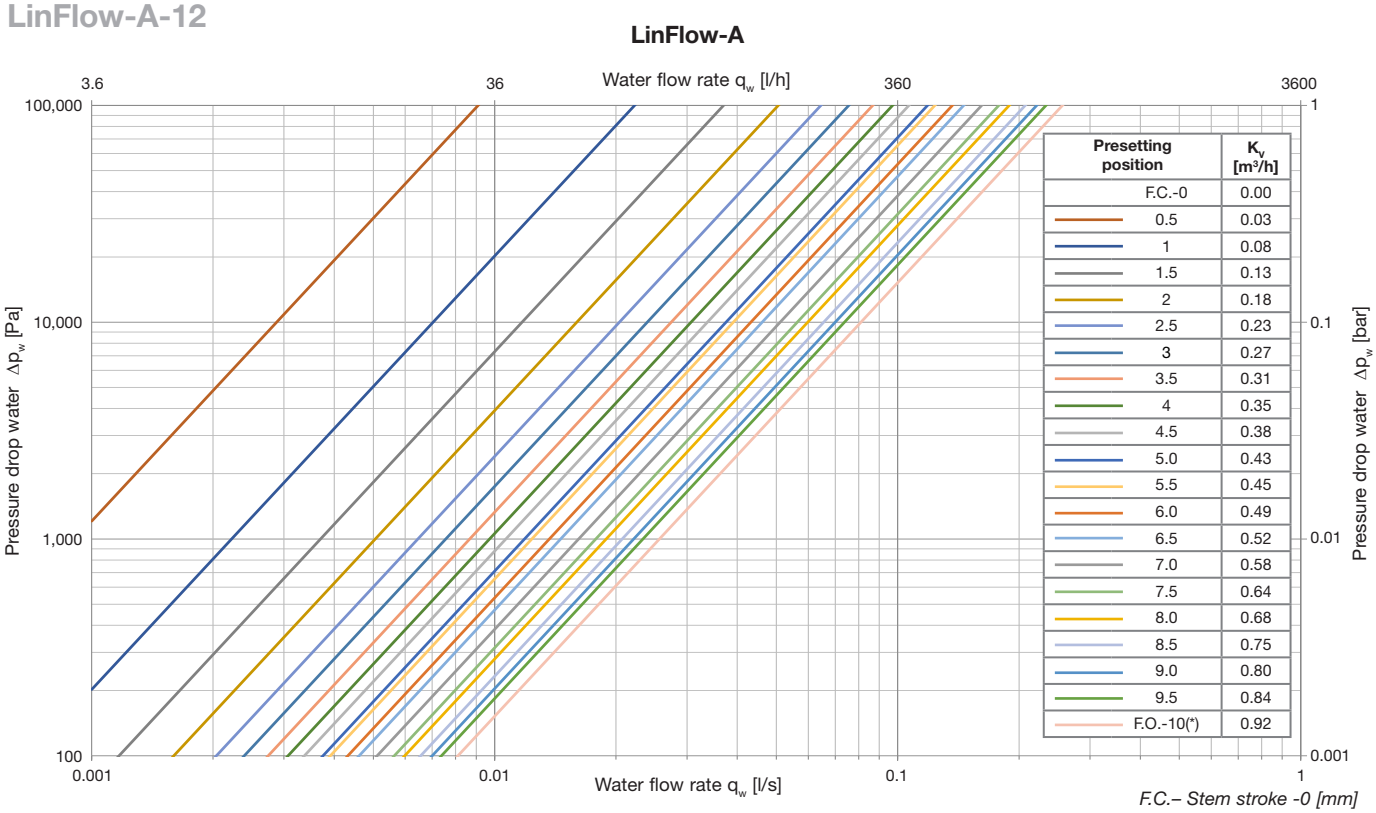
LinFlow-A-12



F.C.– Stem stroke -0 [mm] valve fully closed.
**F.O.– Stem stroke -3 [mm] valve fully open.*

Diagram 1: LinFlow-A.

2-way control valves LinFlow-A

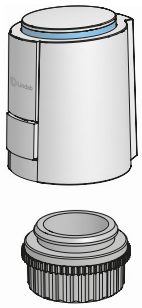
Technical data

Max. static pressure:	at 23 [°C] 10 [bar] - non shock at 70 [°C] 7 [bar] - non shock
Pressure class:	PN10
Max. differential pressure:	2.5 [bar]
Max. temperature:	70 [°C]
K_v´s setting:	0.03 - 0.92 (according to diagram 1).

The valves can be use in combination with both copper and PEX pipes. Support sleeves should be used for PEX (please refer to the supplier data sheet).

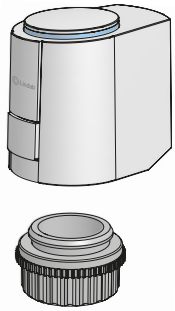
Available thermoelectric actuators and adapter

A-40405



Thermoelectric actuator A-40405 24 V on/off NC, 1m, non-halogen cable (684601)
Adapter VA 64 M28x1.5 (686565)

APR-40405



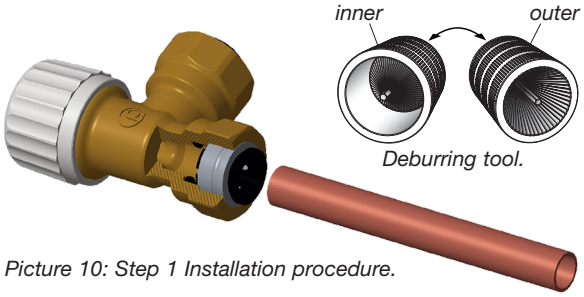
Thermoelectric actuator APR-40405 24 V mod. NC, 1m, non-halogen cable (684667)
Adapter VA 64 M28x1.5 (686565)

Picture 9: Available actuators and adapter.

For additional information please refer to the "Actuators" document.

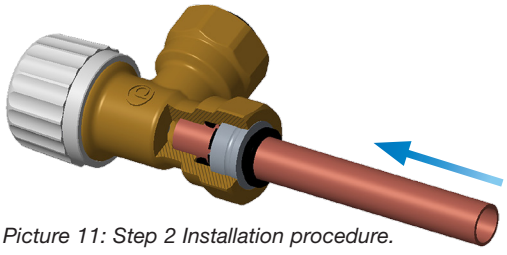
Installation procedure

(1) Cut the pipe in the desired length, using a pipe cutter. Prepare the ends of the pipe, by using a deburring tool to prevent O-rings seal being damaged. When properly prepared, 1 mm of the outer surface of the pipe ends should be angled at 30°. It is important that the pipe is properly deburred. It's recommended to use pipe liners on thin walled copper pipes and PEX. Push the pipe into the pipe stop.



Picture 10: Step 1 Installation procedure.

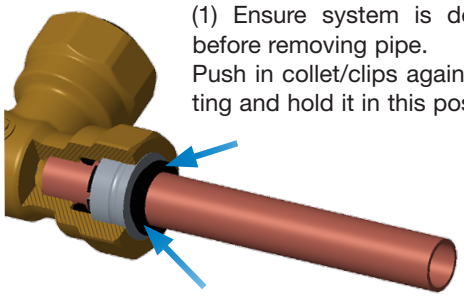
(2) The fitting will grip the pipe before it seals. Be careful that the pipe is fully inserted till to the pipe stop, also pull the pipe to check it is secure. The stainless-steel collet/clips teeth grip the pipe whilst the O-rings provide a permanent leak proof seal.



Picture 11: Step 2 Installation procedure.

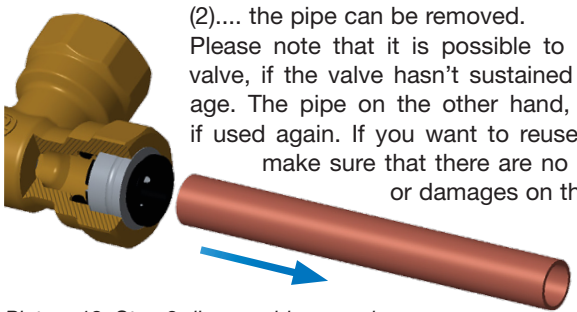
Disassembly procedures

(1) Ensure system is depressurised before removing pipe.
Push in collet/clips against face of fitting and hold it in this position.....



Picture 12: Step 1 disassembly procedure.

(2).... the pipe can be removed.
Please note that it is possible to reuse the valve, if the valve hasn't sustained any damage. The pipe on the other hand, may leak if used again. If you want to reuse the pipe, make sure that there are no scratches or damages on the pipe.



Picture 13: Step 2 disassembly procedure.

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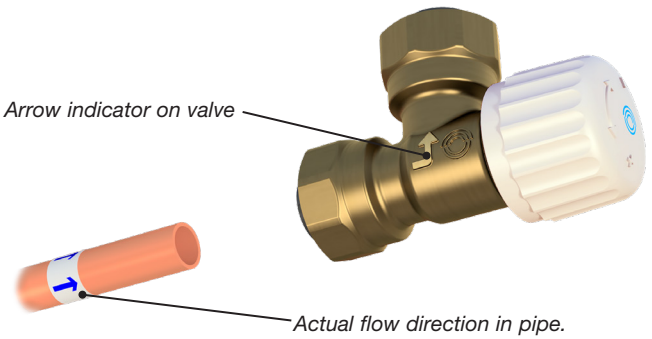
Use conditions

The valve must be mounted with the arrow in the direction of the water flow indicated on the valve's body. Mounting it in the wrong direction CANNOT GUARANTEE THE CORRECT OPERATION OF THE VALVE.



Picture 14: Flow direction in pipe and correct mounting of valve.

Accessories

For additional accessories, e.g. flexible hoses, refer to the accessories document.

Order code

Product	**LinFlow-A**	**12**
Type:		
LinFlow-A (angled)		
Dimensions:		
12 [mm]		

For straight version, go to LinFlow-S .

Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

Lindab | For a better climate