



# Lindab **LinFlow-S**

2-way control valves



# 2-way control valves

# LinFlow-S



## Description

2-way control valve, with push fitting connection and tool-less presetting, to be controlled by thermoelectric actuators. The valves are specially developed for the demands of chilled beams and other waterborne products.

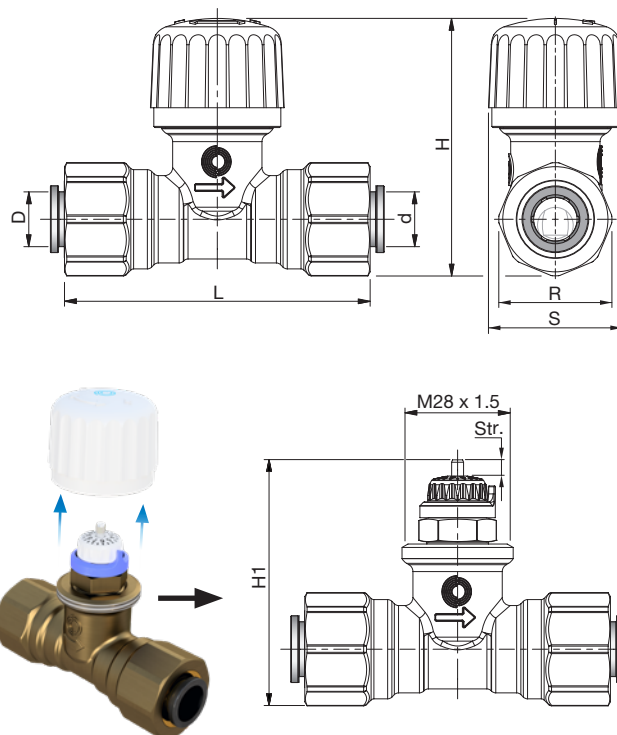
Equipped with Lindab thermostatic actuators, the valves can achieve a linear valve characteristic (best with APR-40405), which guarantees best temperature control and lowest energy loss during operation. The special valves show extremely low sound generation in combination with Lindab chilled beams which offer 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 angled version, go to [LinFlow-A](#) .

## Dimensions

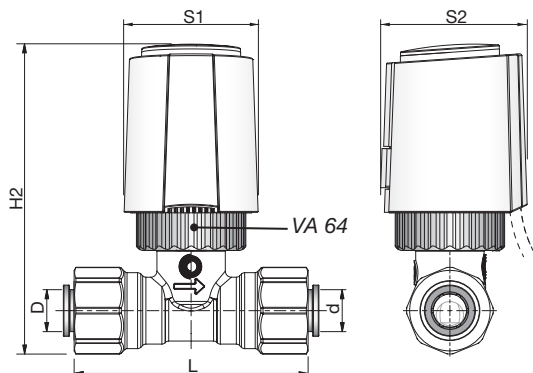


Picture 1: Valve dimensions

D x d	L	H	H1	R	S	Str.	Weight [g]
12 x 12	77	65	62	28.5	33.7	3	280
15 x 15	77	65	62	28.5	33.7	3	258

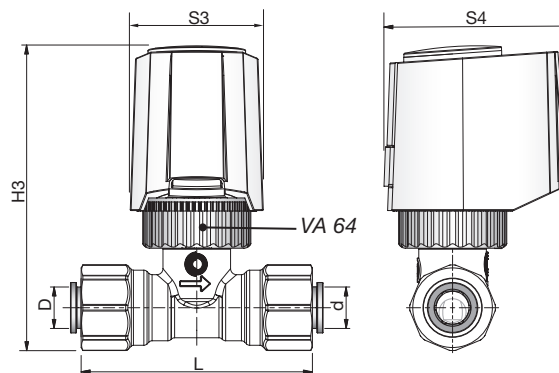
Table 1: Valve dimensions in [mm].

## 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	L	H2	H3	S1	S2	S3	S4
12 x 12	77	102	101	44.3	48.4	44.3	61.5
15 x 15	77	102	101	44.3	48.4	44.3	61.5

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

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## LinFlow-S with adapter and actuator

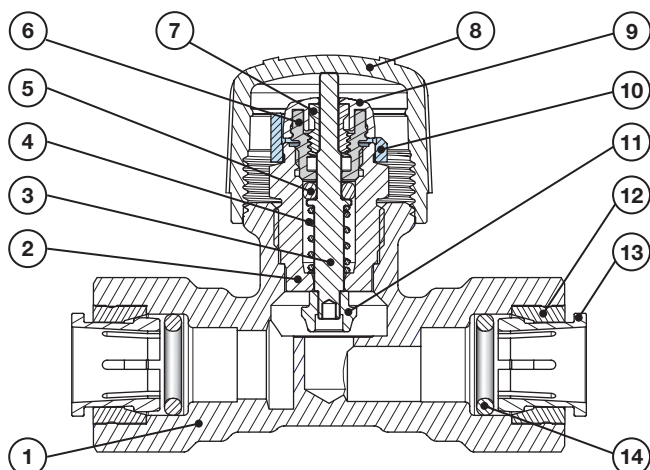


Picture 4: Remove the handwheel (8), do the pre-setting of the valve, the adapter VA 64 and actuator can easily be attached.

## Technical data

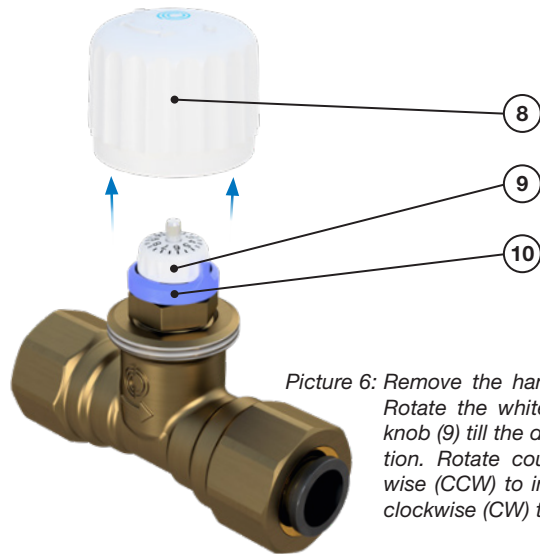
### Materials:

- |                         |                             |
|-------------------------|-----------------------------|
| 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                      |

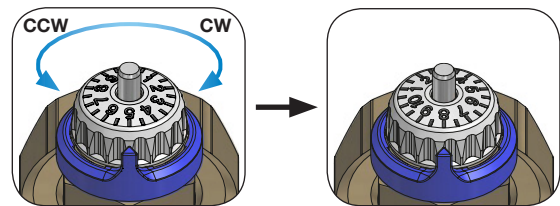


Picture 5: Section view of LinFlow-S showing internal parts.

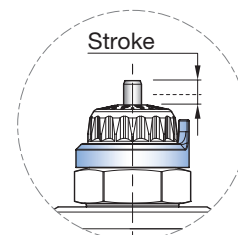
## Presetting of valves



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: Stem stroke 0 - 3 [mm]

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

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

## Pressure drop diagrams / Presetting position

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

Where:

$q_w$  : is the water flow rate [m<sup>3</sup>/h]

$K_v$  : is the flow rate factor [m<sup>3</sup>/h]

$\Delta p_w$  : is the pressure drop across the valve [bar]

Depending on the selected valve size, find presetting position for the desired  $K_v$  value in the corresponding diagram on the following pages.

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# LinFlow-S

## LinFlow-S-12

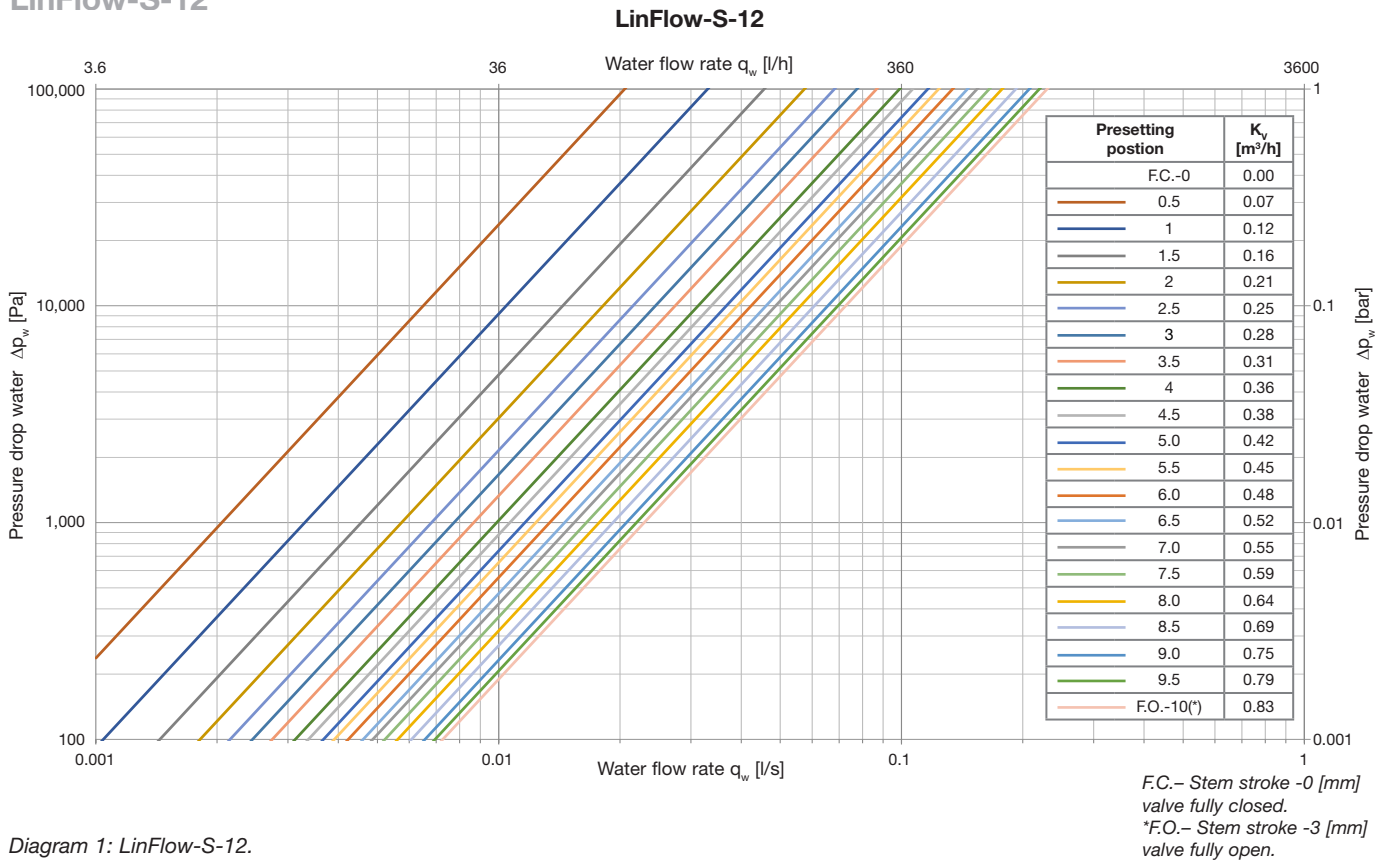


Diagram 1: LinFlow-S-12.

## LinFlow-S-15

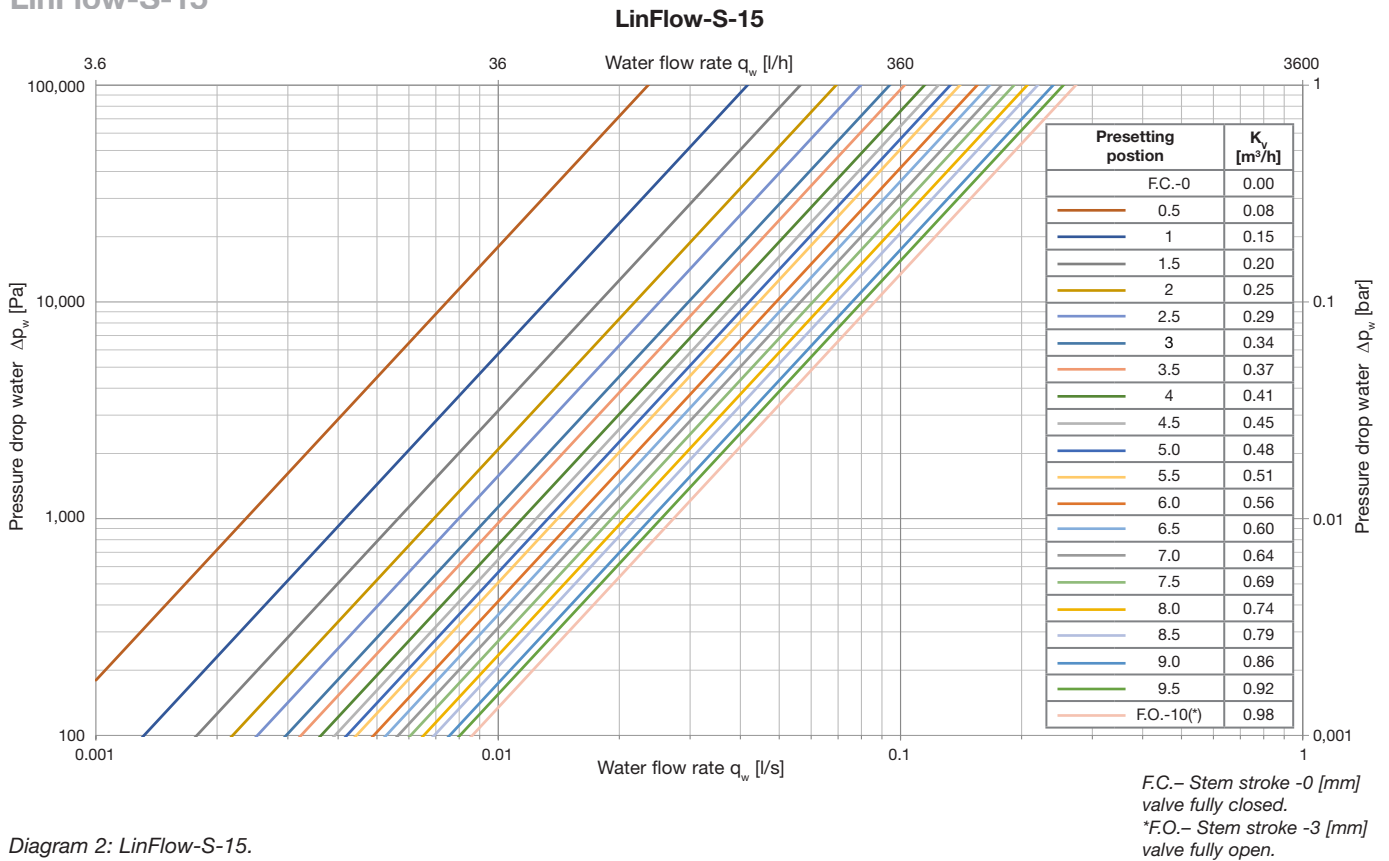


Diagram 2: LinFlow-S-15.

# 2-way control valves

# LinFlow-S

## Technical data

Max. static pressure: at 23 [°C] 10 [bar] - non shock  
 at 70 [°C] 7 [bar] - non shock

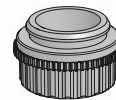
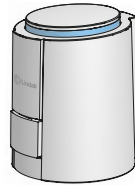
Pressure class: PN10  
 Max. differential pressure: 2.5 [bar]  
 Max. temperature: 70 [°C]

$K_v$ 's setting LinFlow-S-12: 0.07 - 0.83 (according to diagram 1).  
 $K_v$ 's setting LinFlow-S-15: 0.08 - 0.98 (according to diagram 2).

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).

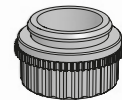
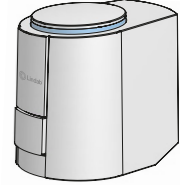
## Available thermoelectric actuators and adapter

**A-40405**



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

**APR-40405**



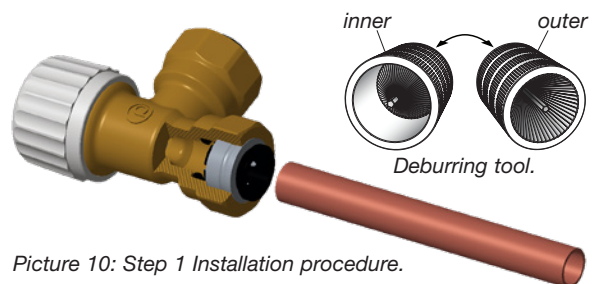
Thermoelectric actuator  
 APR-40405 24 V mod. NC,  
 1m, non-halogen cable  
 (684667)  
 Adapter VA 64 M28x1.5  
 (686565)

Picture 9: Available actuators and [adapter](#).

For additional information please refer to the "[Actuators](#)" document.

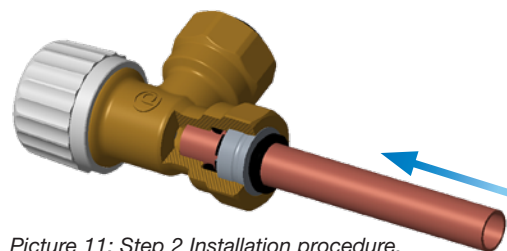
## Installation procedure

(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.



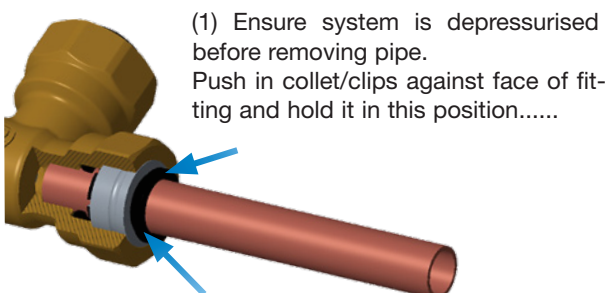
Picture 10: Step 1 Installation procedure.

(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 provides a permanent leak proof seal.

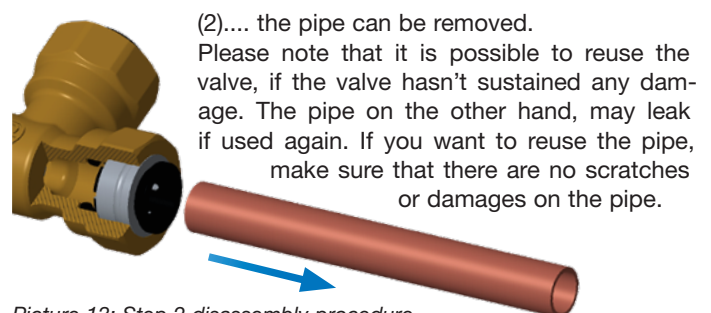


Picture 11: Step 2 Installation procedure.

## Disassembly procedures



Picture 12: Step 1 disassembly procedure.



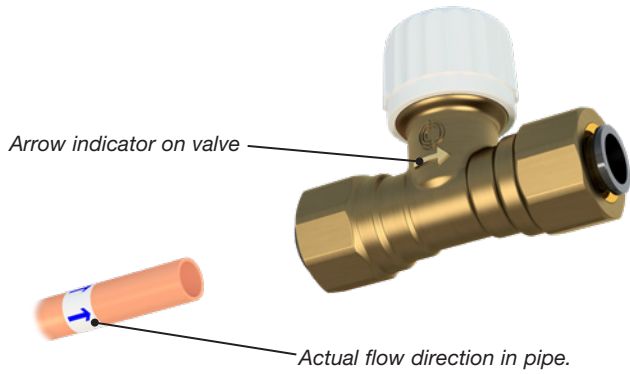
Picture 13: Step 2 disassembly procedure.

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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-S	bb
Type:		
LinFlow-S (straight)		
Dimensions:		
12 [mm]		
15 [mm]		

For angled version, go to [LinFlow-A](#) .



## Good Thinking

**At Lindab**, good thinking is a philosophy that guides us in everything we do. We have made it our mission to create a healthy indoor climate – and to simplify the construction of sustainable buildings. We do that by designing innovative products and solutions that are easy to use, as well as offering efficient availability and logistics. We are also working on ways to reduce our impact on our environment and climate. We do that by developing methods to produce our solutions using a minimum of energy and natural resources, and by reducing negative effects on the environment. We use steel in our products. It's one of few materials that can be recycled an infinite number of times without losing any of its properties. That means less carbon emissions in nature and less energy wasted.

**We simplify construction**