



2-Way Valve Kit Installation Instructions

US/CND

2-Way Valve Kit Installation Instructions

1. Warnings

⚠ This instruction sheet must be read in conjunction with the main installation manual supplied with the appliance. Please consult the main manual for general information and safety rules

⚠ To avoid reducing system performance, the water inlets and outlets must be connected as shown in the various drawings.

2. Description

Each 2-way valve set (S2_A2WMVS) is comprised of one inlet valve and one lockshield valve, both with $\frac{3}{4}$ " EK outlets. A two piece insulation kit is available separately for cooling applications (S2_AVI694 + S2_AVI997).

A separately purchased electric (24V) valve actuator is also available to operate the inlet valve upon a call for heating or cooling (item: S2_SRN560037A).

3. System requirements

The minimum recommended pipe diameters vary according to the model:

MINIMUM PIPELINE DIAMETERS					
Model	VS 7-2P	VS 9-2P	VS 11-2P	VS 13-2P	VS 15-2P
	VSI 7-2P	VSI 9-2P	VSI 11-2P	VSI 13-2P	VSI 15-2P
	VS 7-4P	VS 9-4P	VS 11-4P	VS 13-4P	VS 15-4P
	VSI 7-4P	VSI 9-4P	VSI 11-4P	VSI 13-4P	VSI 15-4P
Minimum Recommended Pipeline diameters mm (imperial)	14 ($\frac{1}{2}$)	14 ($\frac{1}{2}$)	16 ($\frac{1}{2}$)	18 ($\frac{3}{4}$)	20 ($\frac{3}{4}$)

4. Side cover removal

To access the hydraulic connections remove the appropriate side cover:

- Remove the top grille by removing the two fixing screws.

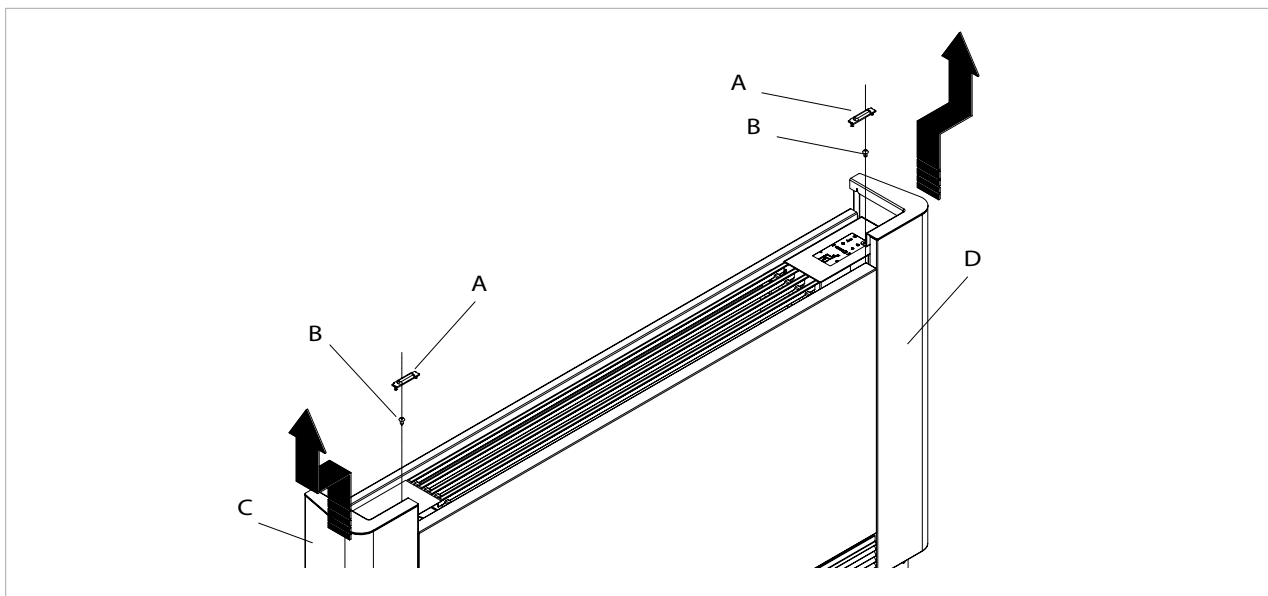
- Lift the cover A that protects the screw, remove the screw B that fixes side cover. Move the cover slightly to outwards and lift it up.

A Cover

B Fixing screws

C Left panel

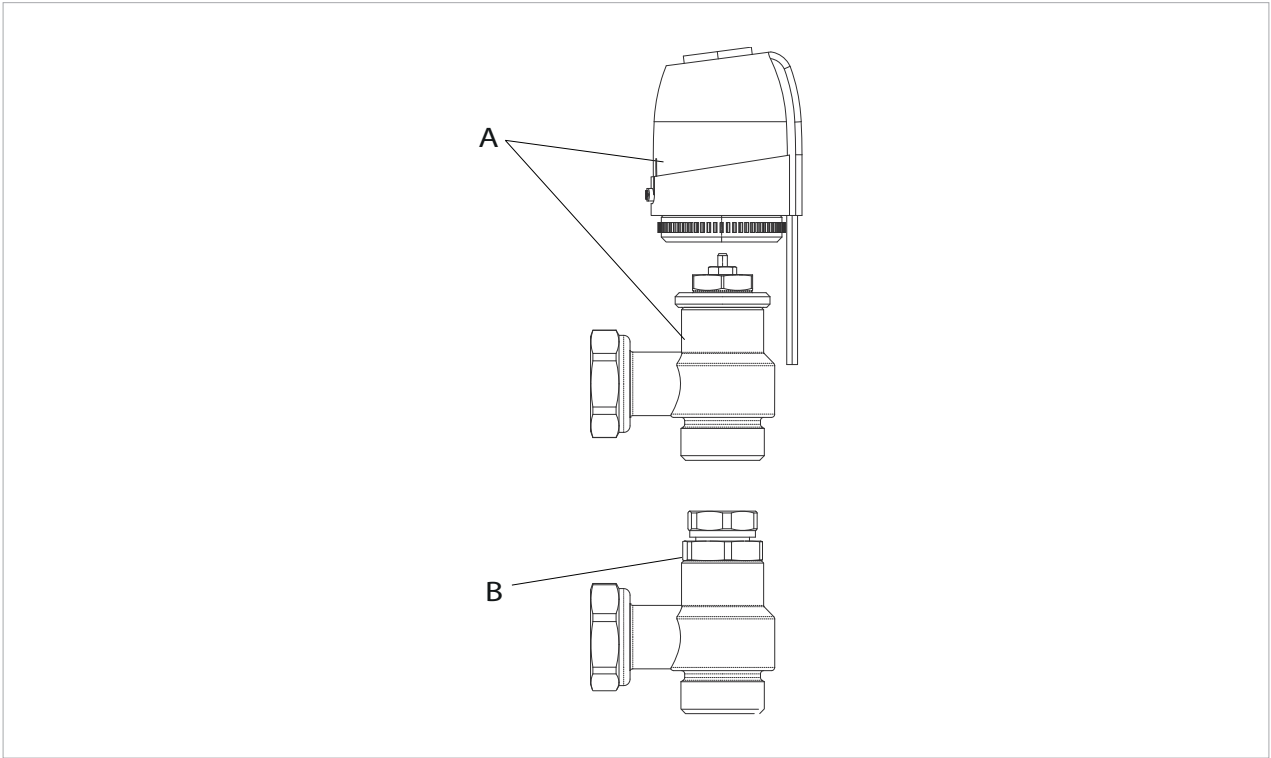
D Right panel



5. 2-way valve kit diagrams (standard and with 90° Eurocone adapter)

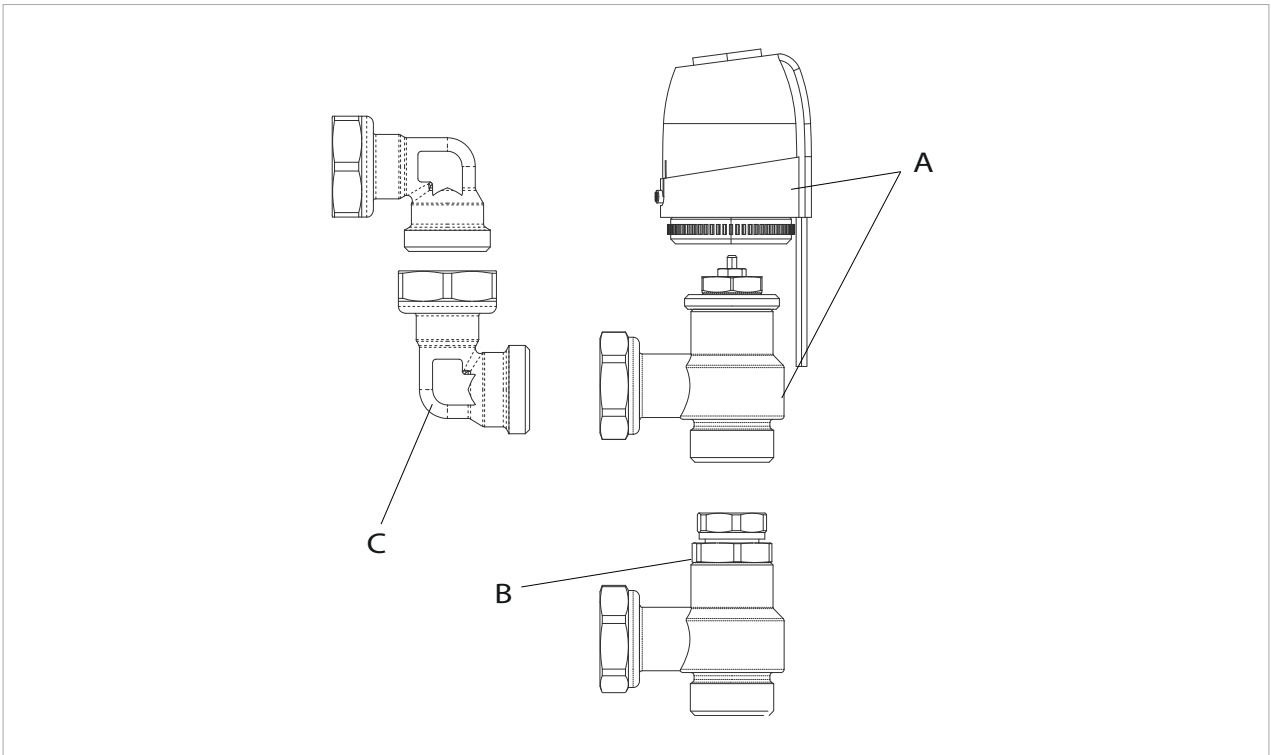
A Automatic valve with optional thermoelectric head

B Lockshield valve



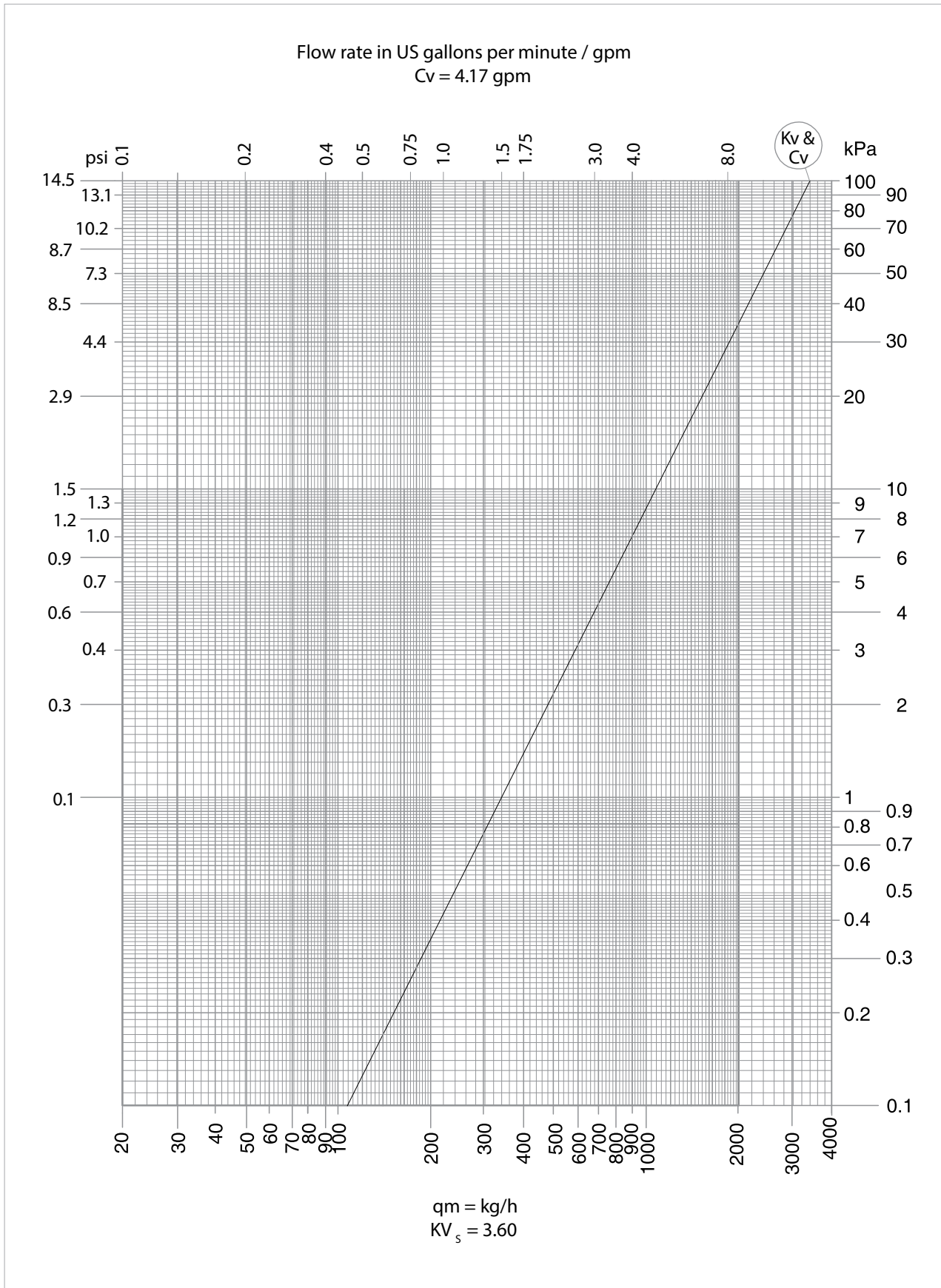
A Automatic valve with thermoelectric head B
Lockshield valve

C 90° curved union AZ5H00AI020300N0



6. Pressure loss diagram


Below is the pressure loss diagram of the 2 way valve in the completely open position.



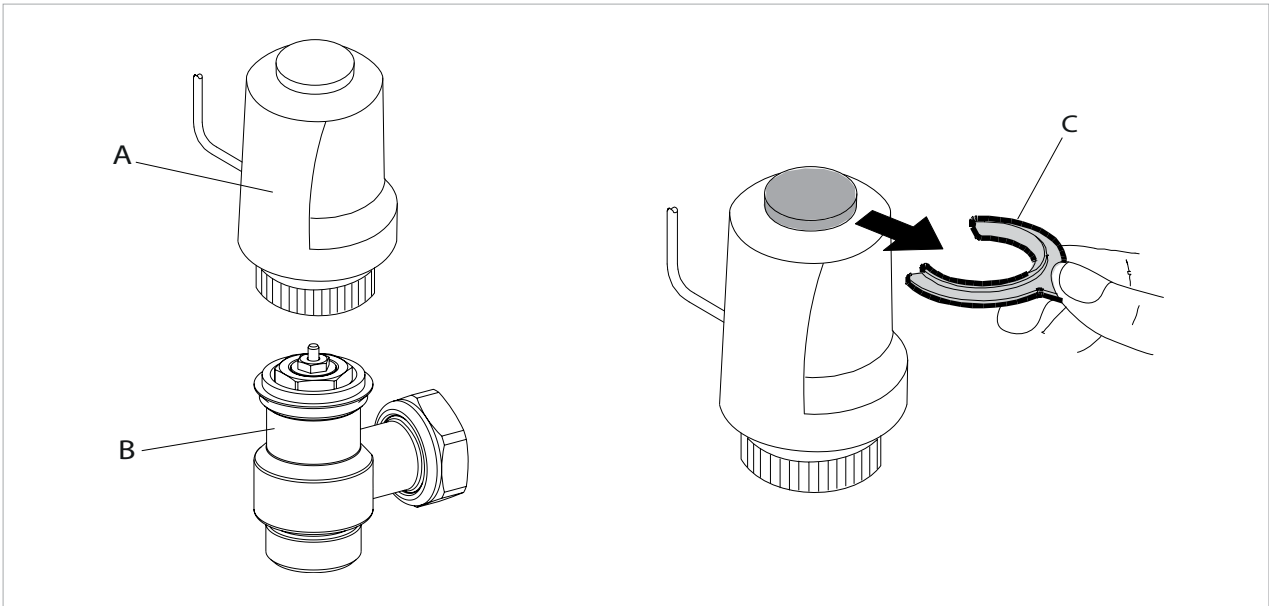
7. Mounting of the thermostatic head

- To mount the thermostatic head (A), tighten the head onto the valve body
- To facilitate mounting, filling and venting without power, the thermostatic head is supplied with a red plastic clip to keep it in an open position.

B Valve body

 Remove the clip from the thermostatic head before starting the system.

C Red plastic clip

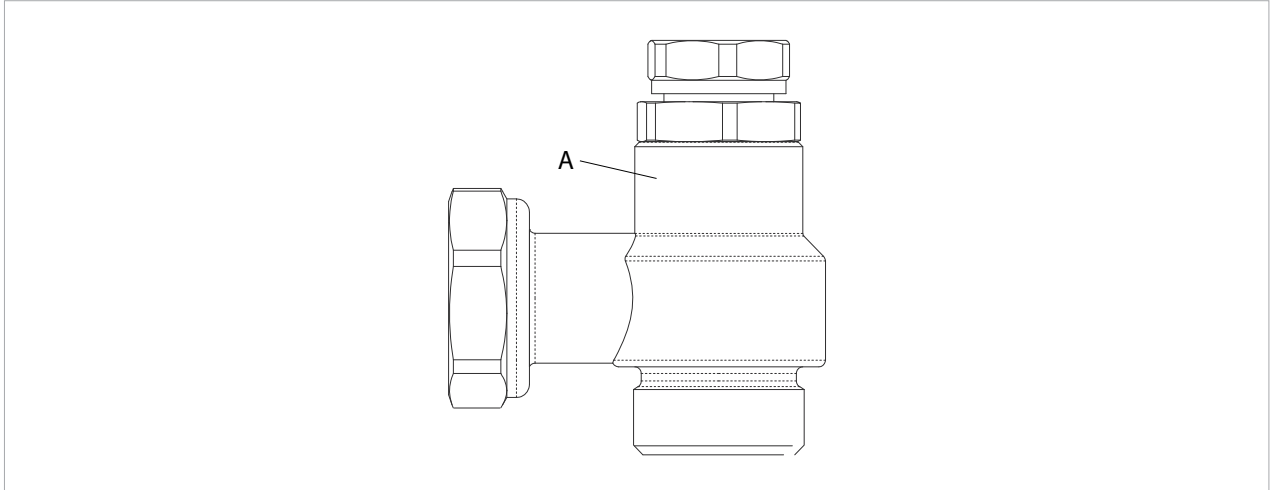


8. Lockshield valve adjustment

The lockshield valve has an adjustment that enables balancing of system load losses.

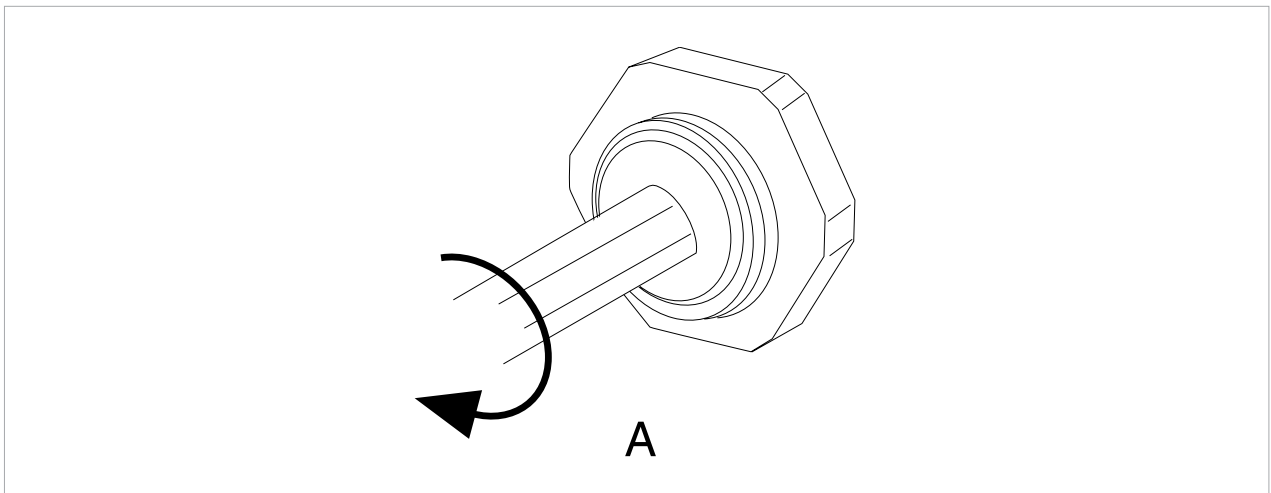
To ensure correct adjustment and balancing of the system, follow the procedure below:

A Lockshield valve



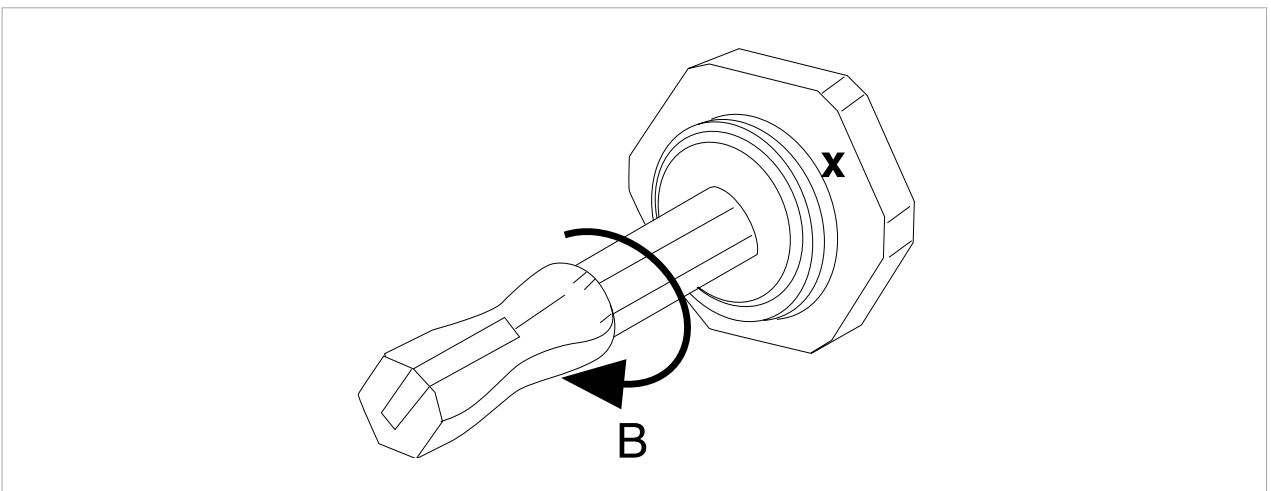
- Use a screwdriver to loosen and remove the slotted grub screw inside the hexagonal head

- Use a 5 mm Allen key to close the adjustment screw



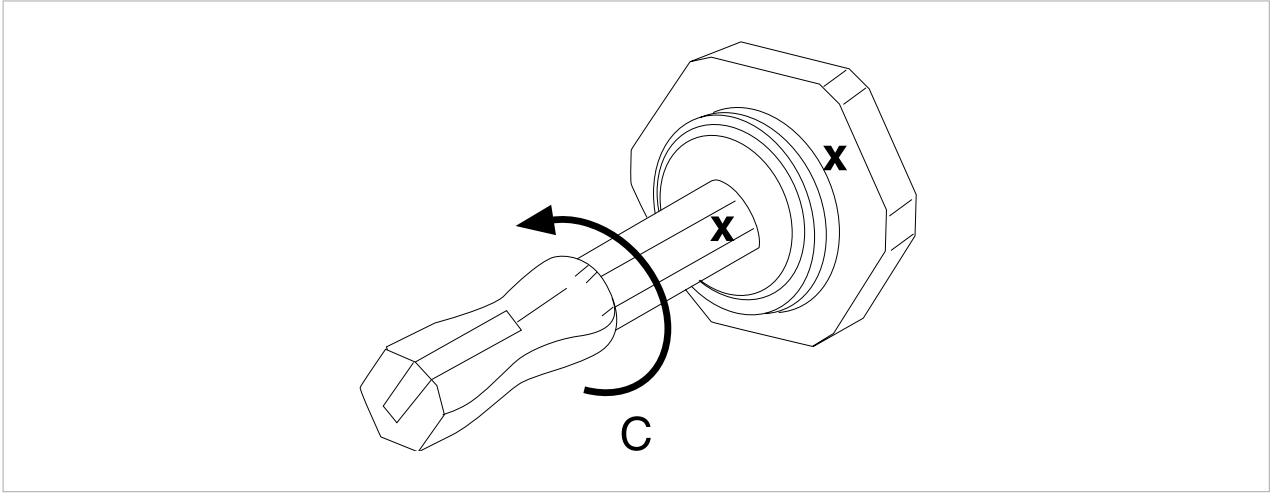
- Re-tighten the slotted grub screw

- Mark the reference point for the adjustment with an "x" (B)

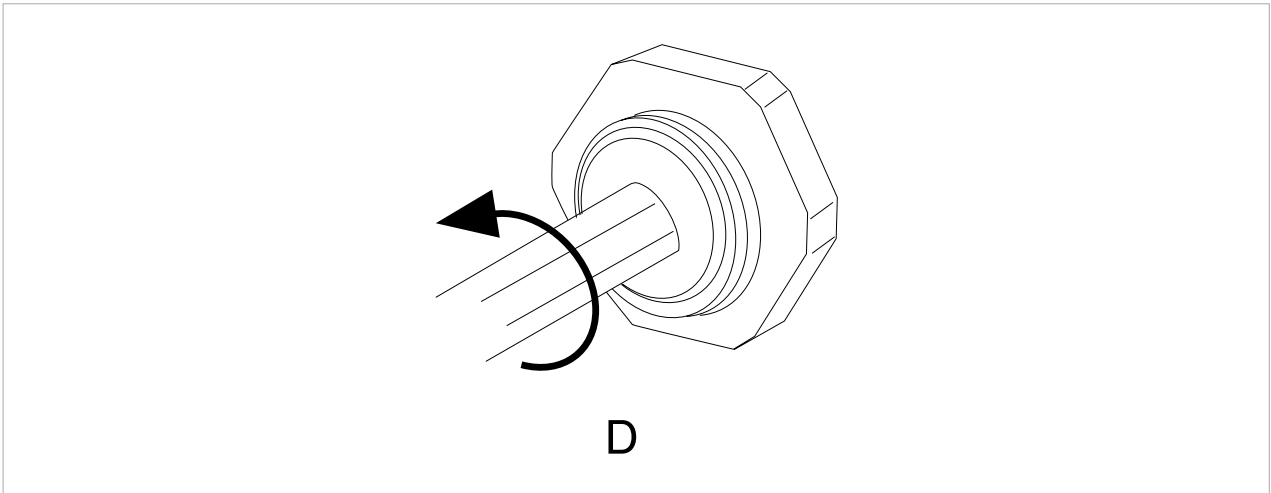


- Align the screwdriver with the "x"
- Open with a number of turns (C) according

to diagram Δp-Q
The number of turns refers to the micrometric screw.



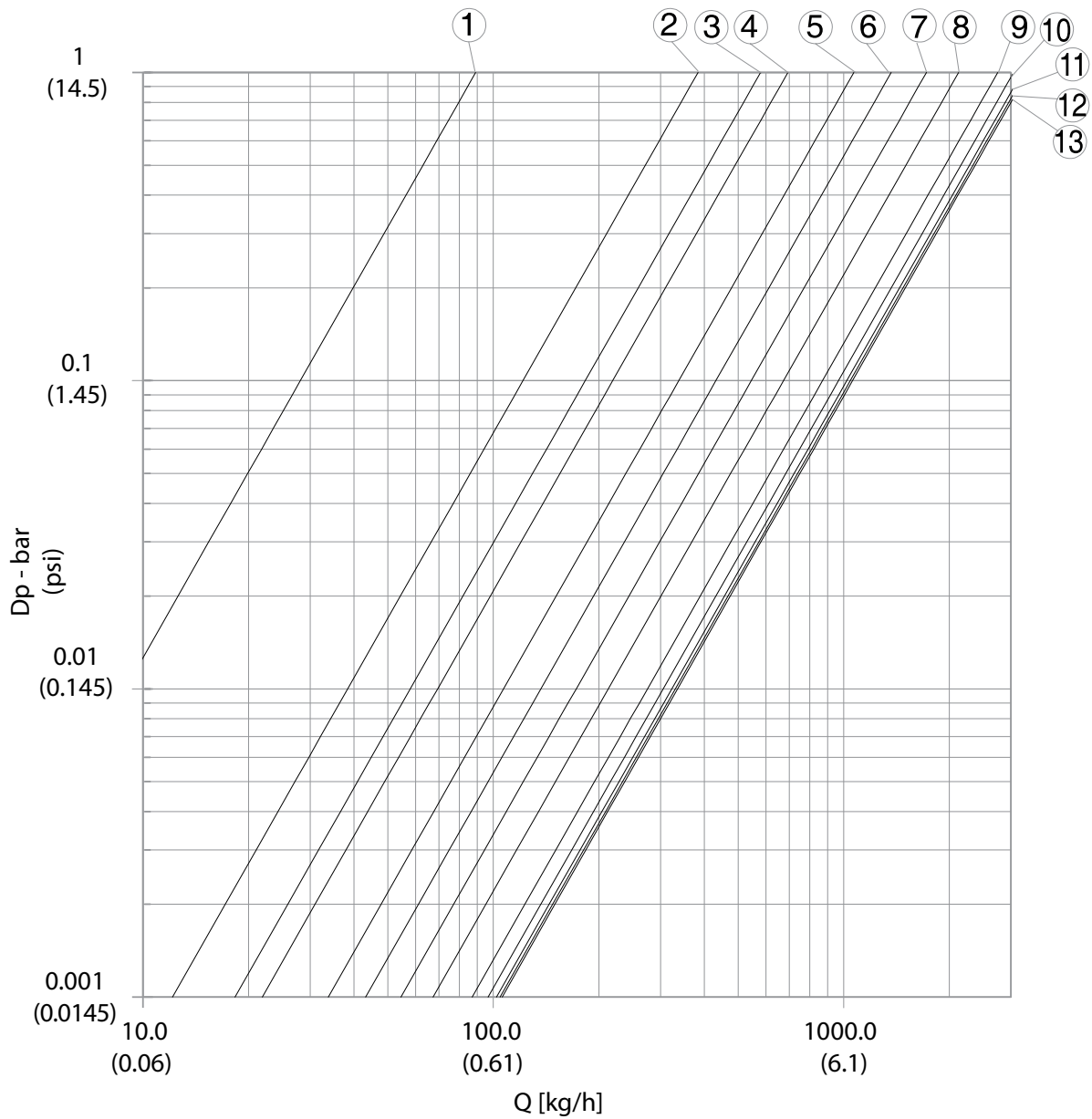
- Fully open the screw.



Now the pre-adjustment has been set and will not change even after opening and closing with the Allen key.


9. Lockshield Pressure Loss

Pressure drop diagram for lockshield valve at different adjustment points:



RETURN VALVE SETTINGS													
Pos.	1	2	3	4	5	6	7	8	9	10	11	12	13
Turns	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.5	4	4.5	5	5.5
Kv	0.09	0.38	0.58	0.69	1.07	1.37	1.72	2.13	2.75	3.06	3.23	3.31	3.35
Cv	0.10	0.44	0.67	0.80	1.24	1.59	1.99	2.47	3.18	3.54	3.74	3.84	3.88

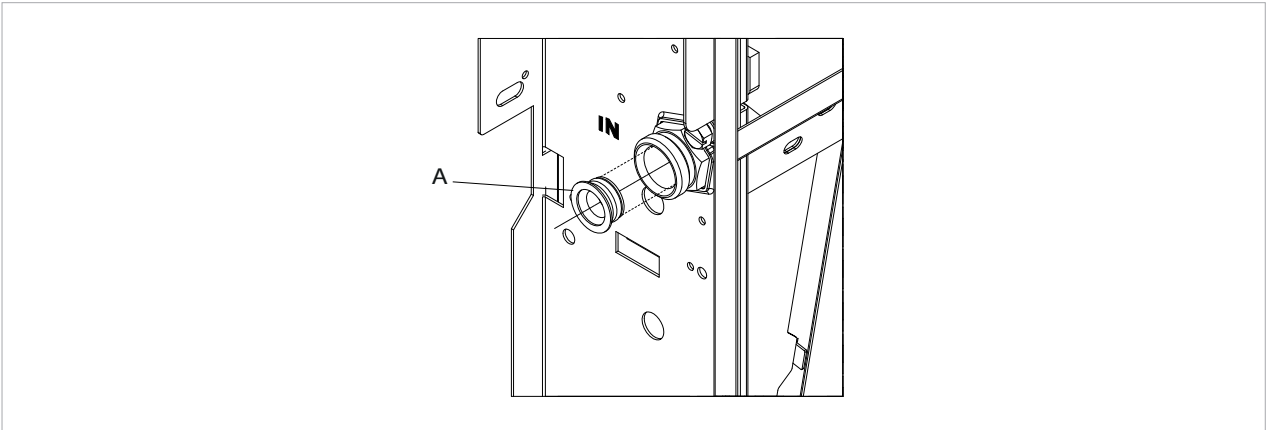
10. Connections

 The choice and sizing of the pipe connections must be made by a qualified installer.

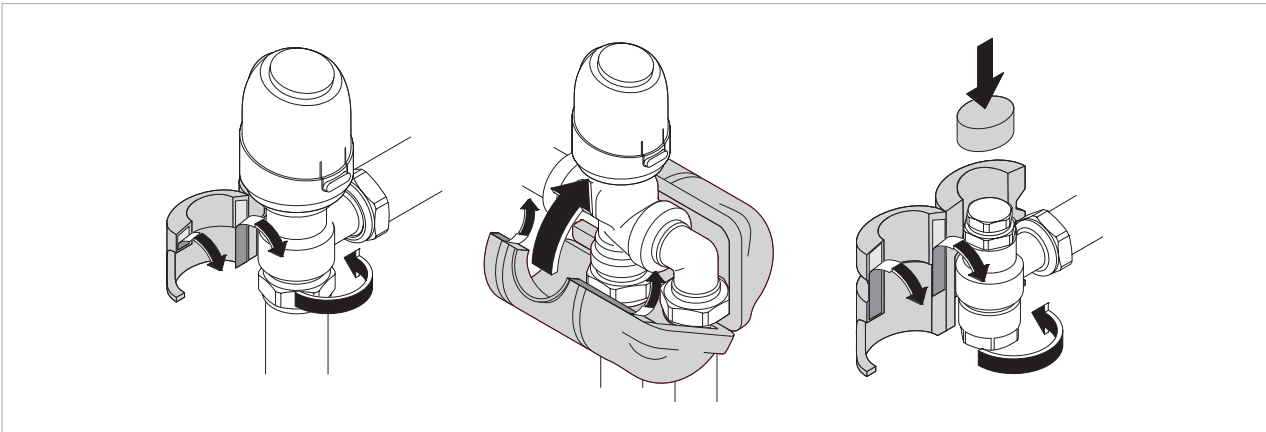
Fit the Eurocone adapter as necessary when making the connections:





- Fit the valve connections to the unit and tighten.
- Check for leaks
- Cover the connections with insulating material - item: S2_AVI694 + S2_AVI997).

A Eurocone adapter



11. Optional Valve insulation - for cooling applications



-  The pipe connections and fittings must be thermally insulated.
-  Avoid partial insulation of the pipes.
-  Avoid over-tightening the pipes to avoid damage to the insulation.
-  Carefully check that the insulation is tight, in order to prevent condensate escaping.



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