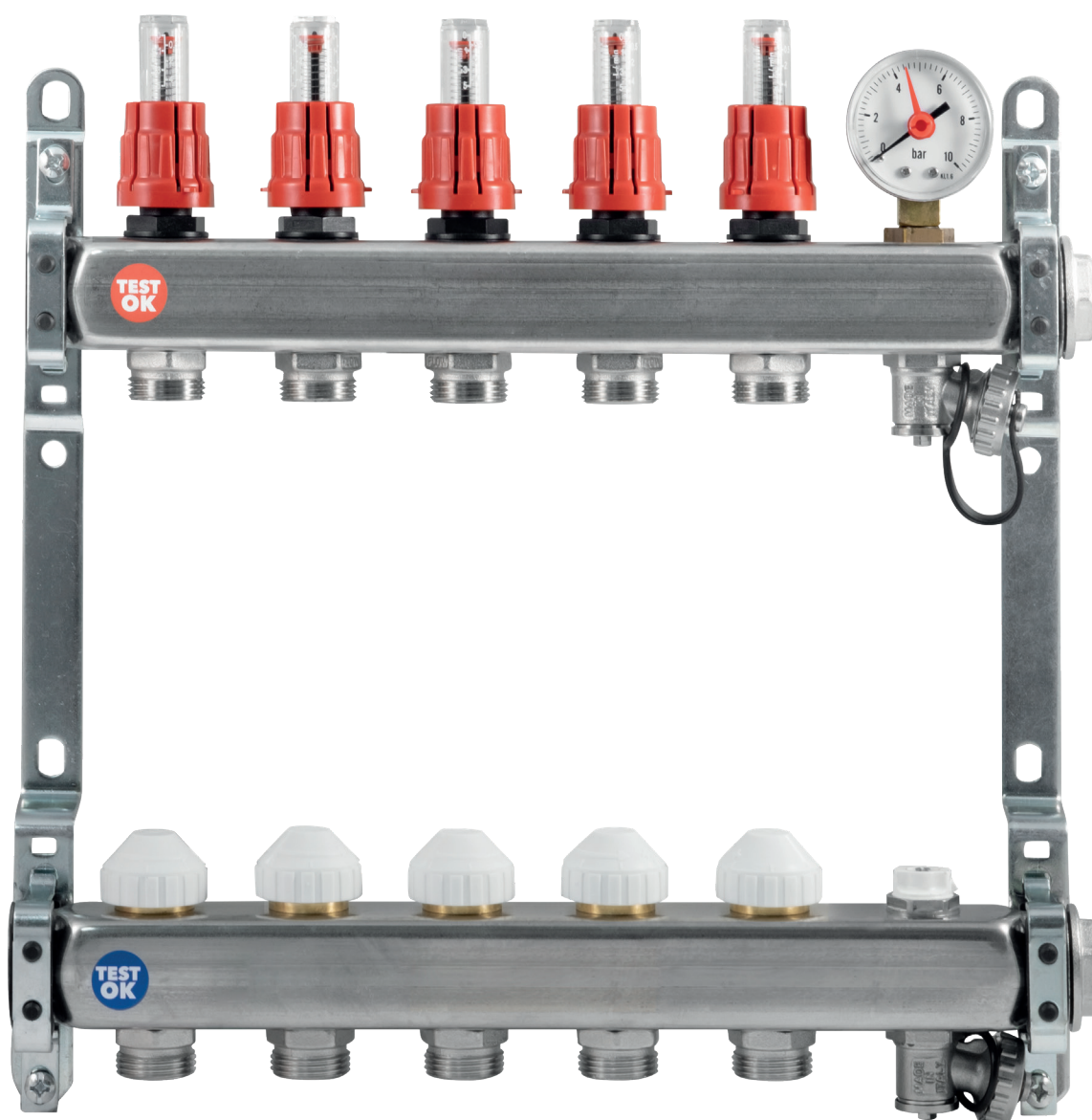


# STAINLESS STEEL MANIFOLDS 741 SERIES

DATA SHEET





## FEATURES

Comisa distribution manifolds are made strating from an AISI 304 stainless steel bar.

The manifolds are assembled internally with automatic machineries and 100% tested complete with accessories to guarantee the tightness.

**The threads of main connections are made in compliance with ISO228.**

The secondary circuits are connected through fittings with 3/4 "Eurocone thread assembled on the manifold with o-ring seal and glued to avoid any unscrewing should the compression fitting be disassembled. All the fittings and accessories of the manifolds are equipped with a soft seal o' ring sealing and do not require any intermediate sealing element.

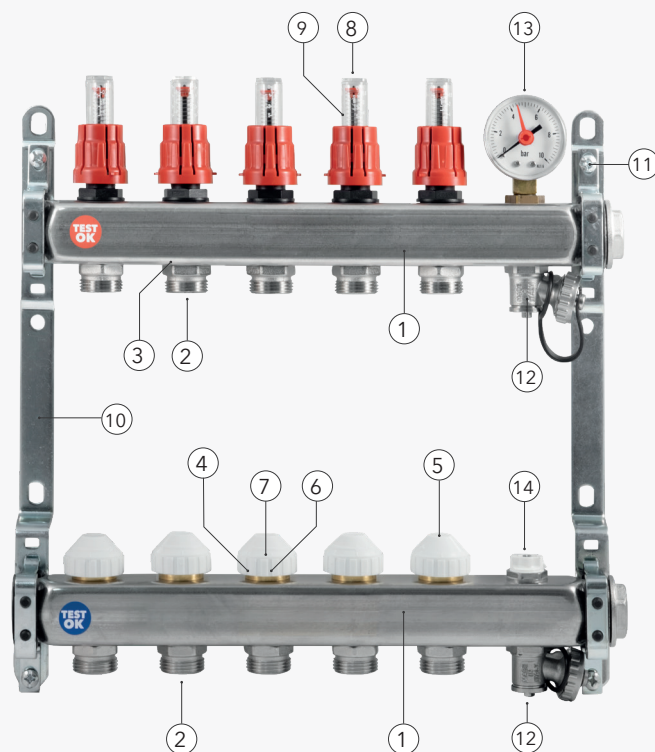
The manifolds are produced with a nickel-plated finish and with side interaxes of 50 mm  
Comisa manifolds are equipped with shut-off and balancing valves, with regulators and flow meters and give the possibility of an immediate verification of the system balancing by reading the flow rate. The flow meters also allow the adjustment and balancing of the individual outlets with memory of position in the event of temporary closure for maintenance operations, the adjustment can be blocked through a block cap. The glass and the measuring spring can be disassembled and cleaned while the system is operating.

This manifold must be installed on the inlet circuit.

The protection cap, where required, is necessary to protect the threading and, occasionally, to intercept the flow.

TECHNICAL FEATURES	VALUE
Max working temperature	70° C
Max differential pressure	1 bar
Maximum <b>working</b> pressure with flow meter	6 bar
Maximum <b>testing</b> pressure	10 bar
Flowmeters regulation range	0.5 ÷ 5 l/min
Flowmeters regulation precision	± 10%
Fluids allowed	water according to UNI 8065:2019 std. water and glychole mix (max 30%)
Interaxis distance	50 mm
Recommended tightening torque	40 Nm

TECHNICAL FEATURES WITH ELECTRO-THERMAL CONTROL	VALUE
Fluid operating temperature	0°C ÷ 100°C
Room working temperature	0°C ÷ 60°C
Max relative humidity (without condensation)	80%

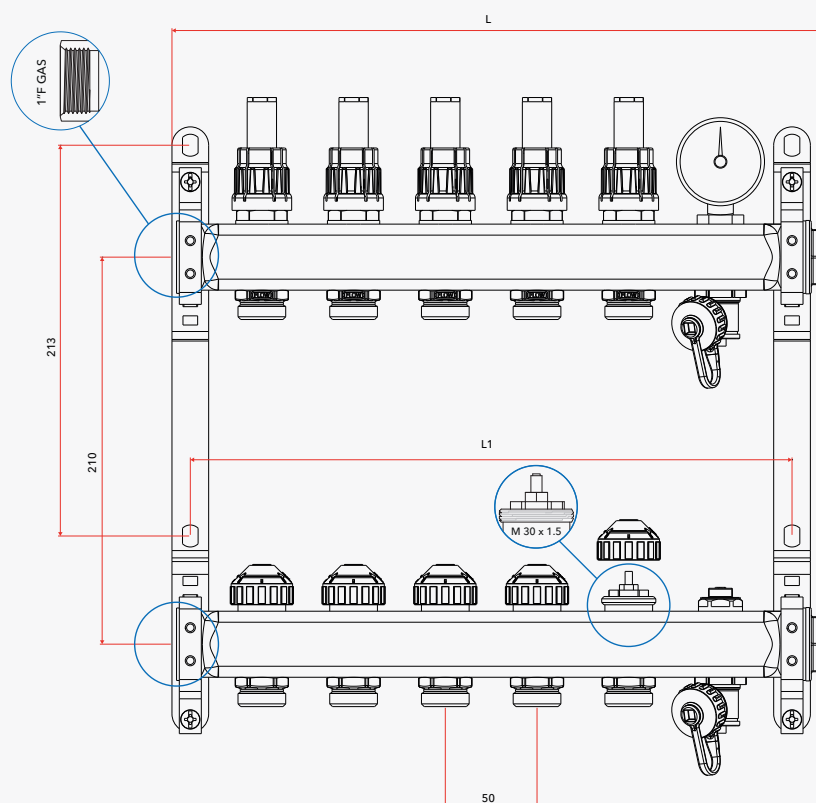


COMPONENT	MATERIAL	STANDARD
1.Manifold	STAINLESS STEEL AISI 304	-
2. Connecting fitting	BRASSCW617N-DW	UNI EN 12165:2016
3. Gaskets	EPDM RUBBER	-
4. Thermostatic valve	BRASS CW614N-DW	UNI EN 12164:2016
5. Protection cap for thermo-static valve	PLASTIC	-
6. Spindle	STAINLESS STEEL	-
7. Packing gland	TEFLON (PTFE)	-
8. Flowmeter	THERMO-RESISTANT PLASTIC MATERIAL	-
9. Spring	STAINLESS STEEL	-
10. Bracket	ALLOY / ALLUMINIO FE ZNB	-
11. Screw	ALLOY FE ZNB	-
12. Drain valve	BRASS CW617N	UNI EN 12164 UNI EN 12165
13. Pressure gauge	BRASS CW617N + PLASTIC	-
14. Air vent	BRASS + PLASTIC	-



## DIMENSIONS

FRONT VIEW

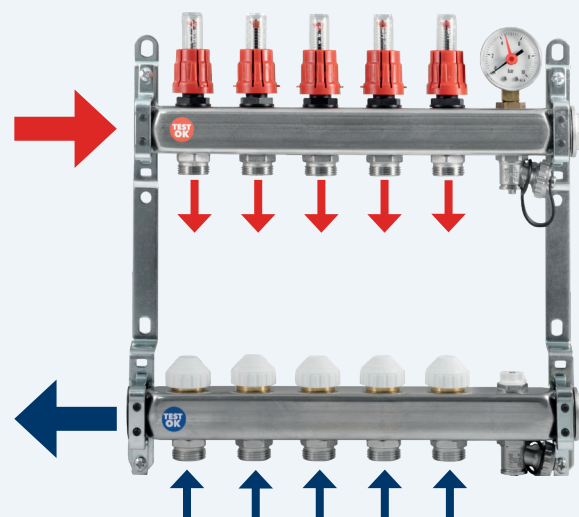


SIDE VIEW



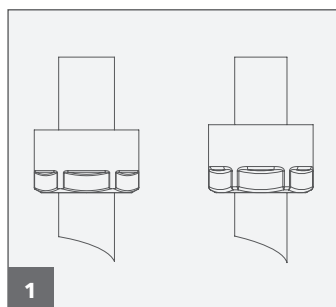
TECH. CODE	OUTLETS	L (mm)	L1 (mm)
CL074100203N	2	205	175
CL074100303N	3	255	225
CL074100403N	4	305	275
CL074100503N	5	355	325
CL074100603N	6	405	375
CL074100703N	7	455	425
CL074100803N	8	505	475
CL074100903N	9	555	525
CL074101003N	10	605	575
CL074101103N	11	655	625
CL074101203N	12	705	675

FLOW SCHEME  
/ SCHEMA DEI FLUSSI

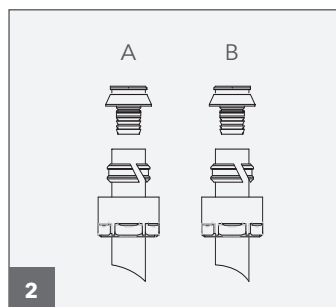




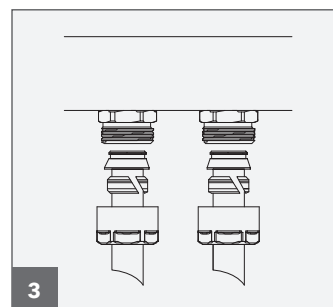
## PIPE INSTALLATION



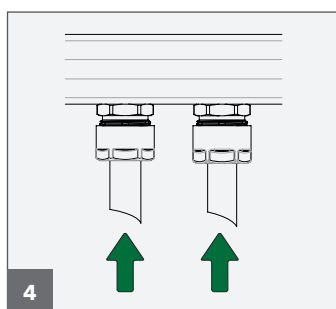
1. Cut the multilayer pipe in a perpendicular way and then calibrate it. Place the nut on the pipe.



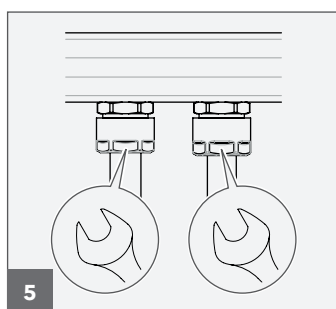
2. Insert the pipe in the cut olive and then place the hose union into the pipe



3. Insert the hose union into the threaded terminals



4. Push the pipe up to the stop and turn the nut manually

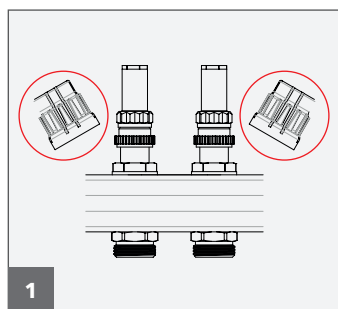


5. Hold the fitting on the manifold with a SW 26 wrench and tighten the nut with another wrench SW 27. For the tightening torque, please refer to the technical features table.

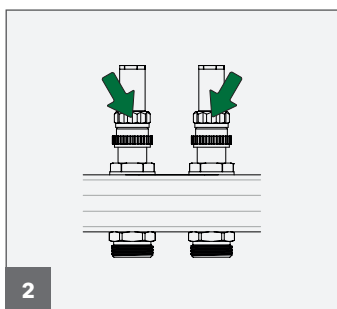
## FLOW REGULATION: FLOWMETERS

The theoretical flow rate value of an hydraulic circuit, assigned by the technician, is given by the adjustment carried out through the flowmeters positioned on the delivery manifold.

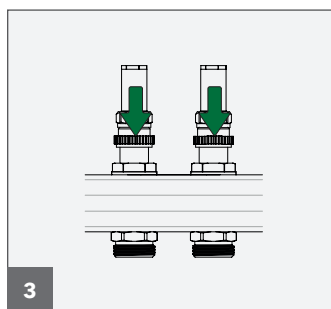
The adjustment must be carried out with the valve on the return fully open. Since the flow rates of each ring affect each other, each single heating ring has to be adjusted until the flow rates in l/min laid down in the project are satisfactorily reached.



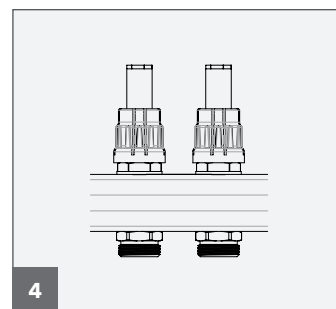
1. Remove the red fixing collar from the flowmeters



2. Set the flowmeter adjustment to the project value by manually rotating the ring indicated by the arrow. It is not necessary to use tools.



3. Screw the red "memory stop" ring nut counter-clockwise (left thread) until it reaches the end of the stroke. It is not necessary to use tools.



4. Replace the handwheel. By turning it clockwise, it is possible to close the single circuit. Turning the handwheel counter-clockwise the circuit will re-open up to the set project value



## FLOWMETERS: DISASSEMBLE AND CLEANING

The cup and spring can be disassembled for cleaning:

1. Close the flow meter and the corresponding valve placed on the return manifold.
2. Unscrew the glass by forcing on the ring nut and remove it.
3. There will be a slight, but negligible loss during the operation.
4. The glass can now be cleaned without difficulty.
5. Reassembly is carried out by reversing the operations.

## TROUBLESHOOTING

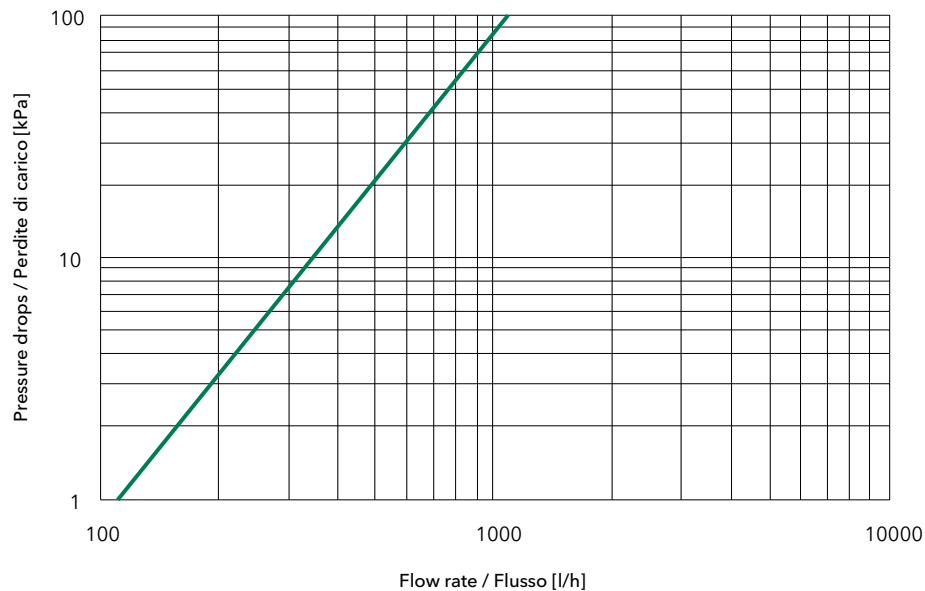
Issue	Solution
The system is noisy.	If the valves for the electrothermal regulation beat creating noise, check that the water flow is not reversed. Check that there is no air in the system.
Flowmeters do not mark the flow rate.	Check that the water flow is not inverted (the manifold must be installed on the inlet circuit).
The electrothermal actuators do not close.	Check that the plastic adapter is well screwed onto the body of the valve.



On our manifolds, **use only Comisa accessories** that have a **soft seal with gasket**. All the fittings and accessories of the manifolds (drain valves, terminals, caps, etc.) are equipped with this seal and do not require any intermediate sealing element (such as ptfe, hemp, etc.) whose use could cause the onset of cracks.



## FLUID DYNAMICS FEATURES (FLOW)



**Kv = 1.1 m³/h**

ON SINGLE OUTPUT

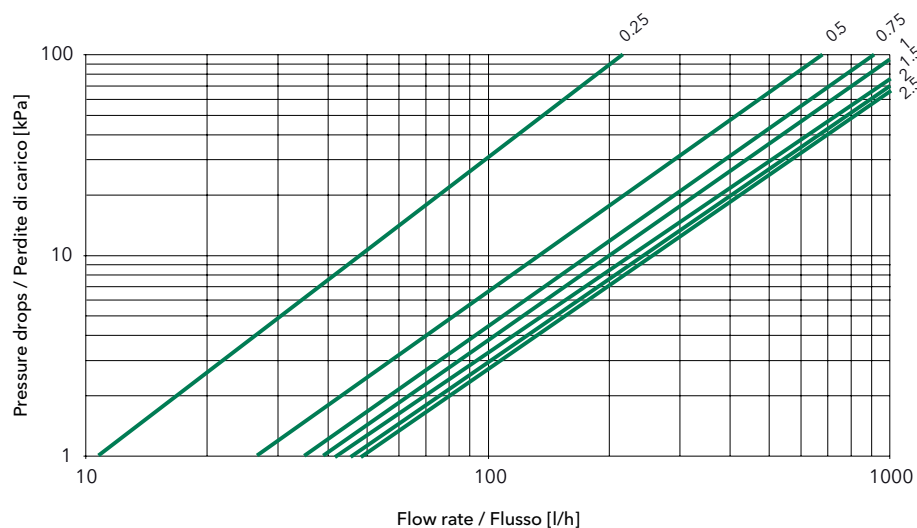
MAX SUGGESTED MANIFOLD FLOW

**2.450 l/h**



**Fully open flowmeter diagram**

## SHUT-OFF VALVE DIAGRAM (RETURN MANIFOLD)



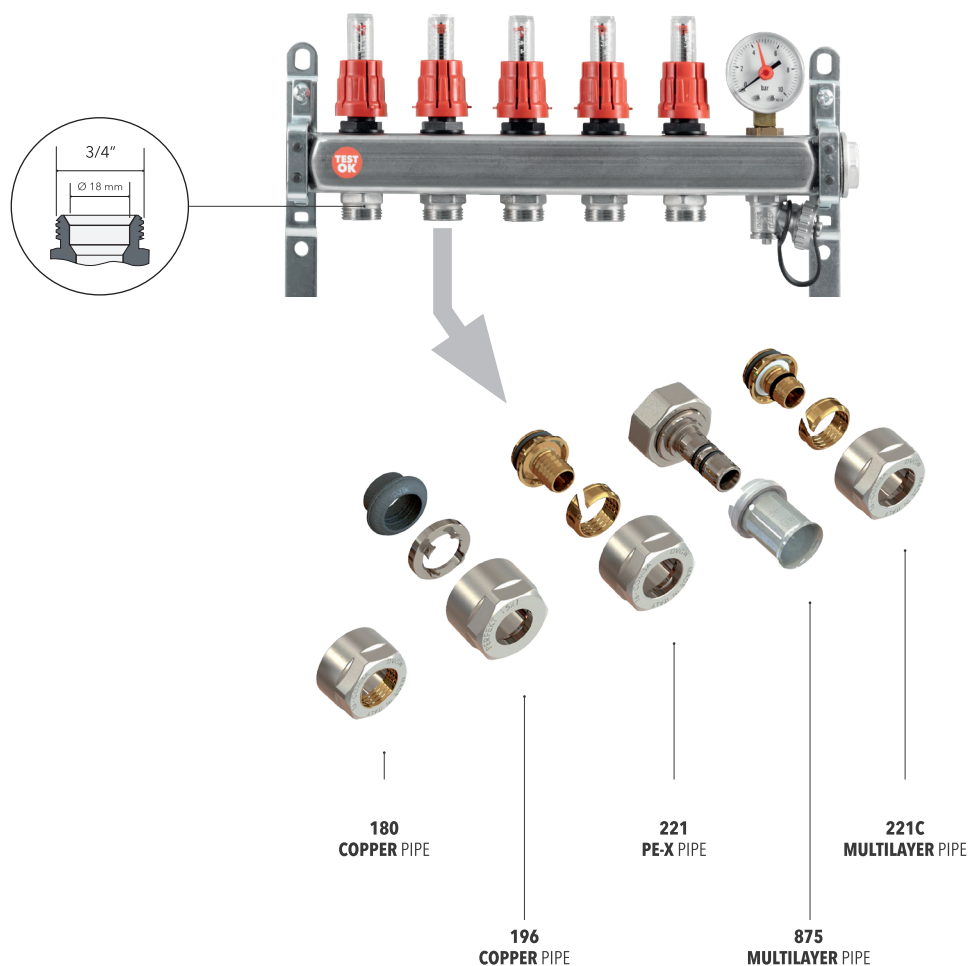
Regulation (turns)	Kv [m³/h]
0.25	0.22
0.5	0.68
0.75	0.91
1	1.05
1.5	1.22
2	1.30
2.5	1.35

MAX SUGGESTED MANIFOLD FLOW

**2.860 l/h**



## ADAPTORS 3/4" EUROCONE





**COMISA**



[WWW.COMISA.IT](http://WWW.COMISA.IT)