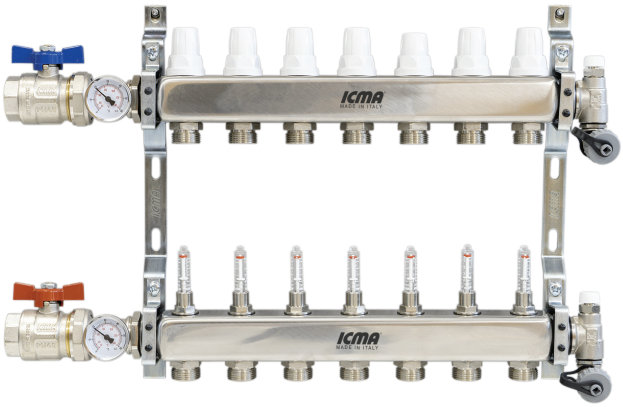
Pre-assembled 1” and 1”1/4 stainless steel manifolds - K071 - K073 - K075 - K077 - K079 - K081

Function

ICMA pre-assembled stainless steel manifold kits are designed to enhance distribution of the heat transfer fluid in underfloor heating systems to improve control of the thermal emission in each area of the plant.

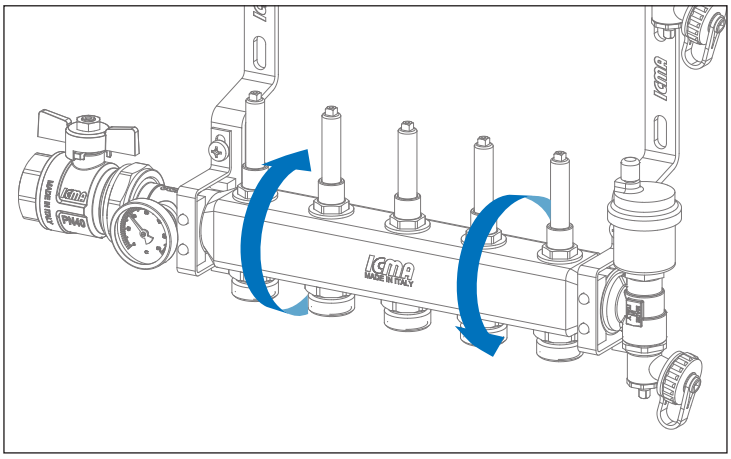
The kits are supplied with all the accessories required for the installation, filling, and management of low-temperature underfloor heating systems. They also guarantee a simple and precise adjustment of the heat transfer fluid flow rate in every circuit loop, as well as means of fluid shut-off.

Their conformation, due to the shape of the fixing brackets, facilitates the connection with derivation pipes during installation, and ensures space-saving even in very small installation spaces.



Tilting

The manifolds are designed to rotate around their own axis, thus facilitating the insertion of pipes.



Products

Article	Description	Connection for electrothermic actuator	Page
K069	Manifolds kit with ICMA Memory Plus flowmeters and valves with thermostatic option, ball valves, automatic air vent valve groups, drain cocks.	M28x1,5	11
K071	Manifolds unit with adjustment lockshields and valves with thermostatic option. Brackets with anti-vibration supports.	M28x1,5	12
K073	Manifolds unit with ICMA memory flowmeters and valves with thermostatic option. Brackets with antivibration supports.	M28x1,5	13
K073 208L	Manifolds unit with ICMA memory flowmeters and valves with thermostatic option. Brackets with antivibration supports for the installation of manifolds in cabinets with 110mm. depth.	M28x1,5	14
K073179L	Manifolds unit with TACONOVA memory flowmeters and valves with thermostatic option. Brackets with antivibration supports for the installation of manifolds in cabinets with 110mm. depth.	M28x1,5	15
K073179QU	Manifolds unit with TACONOVA memory flowmeters and valves with thermostatic option. Brackets with antivibration supports for fastening on the square section of the manifold bar	M28x1,5	16

K073 INV	Manifold kit with manual/thermostatic regulation and shutoff and flow regulators.	M28x1,5	17
K074	Manifold kit with manual/thermostatic regulation and shutoff and flow regulators.	M30x1,5	18
K074 208L	Manifold kit with manual/thermostatic regulation and shutoff and flow regulators. Brackets with antivibration supports for the installation of manifolds in cabinets with 110mm. depth.	M30x1,5	19
K075	Manifolds unit with ICMA memory flowmeters and valves with thermostatic option, ball valves, manual air vent valve groups, drain cocks.	M28x1,5	20
K077	Manifolds unit with ICMA memory flowmeters and valves with thermostatic option, ball valves, automatic air vent valve groups, drain cocks.	M28x1,5	21
K077 208L	Manifolds unit with ICMA memory flowmeters and valves with thermostatic option, ball valves, automatic air vent valve groups, drain cocks. Brackets with antivibration supports for the installation of manifolds in cabinets with 110mm. depth.	M28x1,5	22
K079	Manifolds unit with adjustment lockshields and valves with thermostatic option, ball valves, manual air vent valve groups, drain cocks.	M28x1,5	23
K081	Manifolds unit with adjustment lockshields and valves with thermostatic option, ball valves, automatic air vent valve groups, drain cocks.	M28x1,5	24
K081 208L	Manifolds unit with adjustment lockshields and valves with thermostatic option, ball valves, automatic air vent valve groups, drain cocks. Brackets with antivibration supports for the installation of manifolds in cabinets with 110mm. depth.	M28x1,5	25

Technical specifications

Materials

Flow manifold	
Manifold:	stainless steel
Flowmeters	
Headwork:	Brass
Bottom connection:	Brass
Glass flow idicator:	PA12 transparent
Measuring stem:	PA12
Inner tube:	PPE
Spring:	Stainless steel
Hydraulic seals:	Perox EPDM

Return manifold	
Manifold:	stainless steel
Thermostatic valve:	
Headwork:	Brass
Bottom connection:	Brass
Stem and spring:	stainless steel
Knob:	ABS White
Hydraulic seals:	Perox EPDM

Shut-off ball valves	
Body:	Brass
Cap and pipe union:	Brass
Sphere and sleeve:	Brass
Knob:	Aluminium
Ball seat gaskets:	PTFE
Hydraulic seals:	NBR, FKM

For the following articles, please see the specific technical data sheets:	
Automatic air vent valves G1/2”	Articles 700-707
Manual air vent valves G1/2”	Article 705
Fill/drain cocks G1/2”	Article 172
M-F swivel intermediate fitting G1”	Article 204
Temperature gauge holder	Article 185
Temperature gauge 0÷60 °C	Article 206
Fixing brackets	Article 208

Performance

Working fluids:	Water and glycol solutions
Max. percentage of glycol:	30 %
Maximum operating pressure at 20 °C with water:	0.6 MPa (6 bar) if flow meters are present
	1 MPa (10 bar) if flow meters are not present
Minimum operating fluid temperature:	5 °C
Maximum operating fluid temperature:	80 °C if the ICMA CG1168AE06- CG1169AE06- CG1180AE06 flowmeters are installed
	70 °C if the TACONOVA C06179AD05 flowmeter is installed
	90°C if flow meters are not present.
Temperature gauge scale:	0÷60 °C
Manifold bar dimensions	G 1” / G 1” ¼
Kv data:	See page 26

Flowmeters	
Flowmeter scale for manifolds G1”:	0÷4 l/min
Flowmeter scale for manifolds G1” with TACONOVA C06179AD06 flowmeter:	0÷5 l/min
Flowmeter scale for manifolds G1” ¼:	0÷8 l/min
Connections	
Main connections:	G1” F / G1¼” F (ISO 228-1)
Centre distance main connections:	207 mm
Outlets – connections:	G3/4” M
Outlets – centre distance:	50 mm

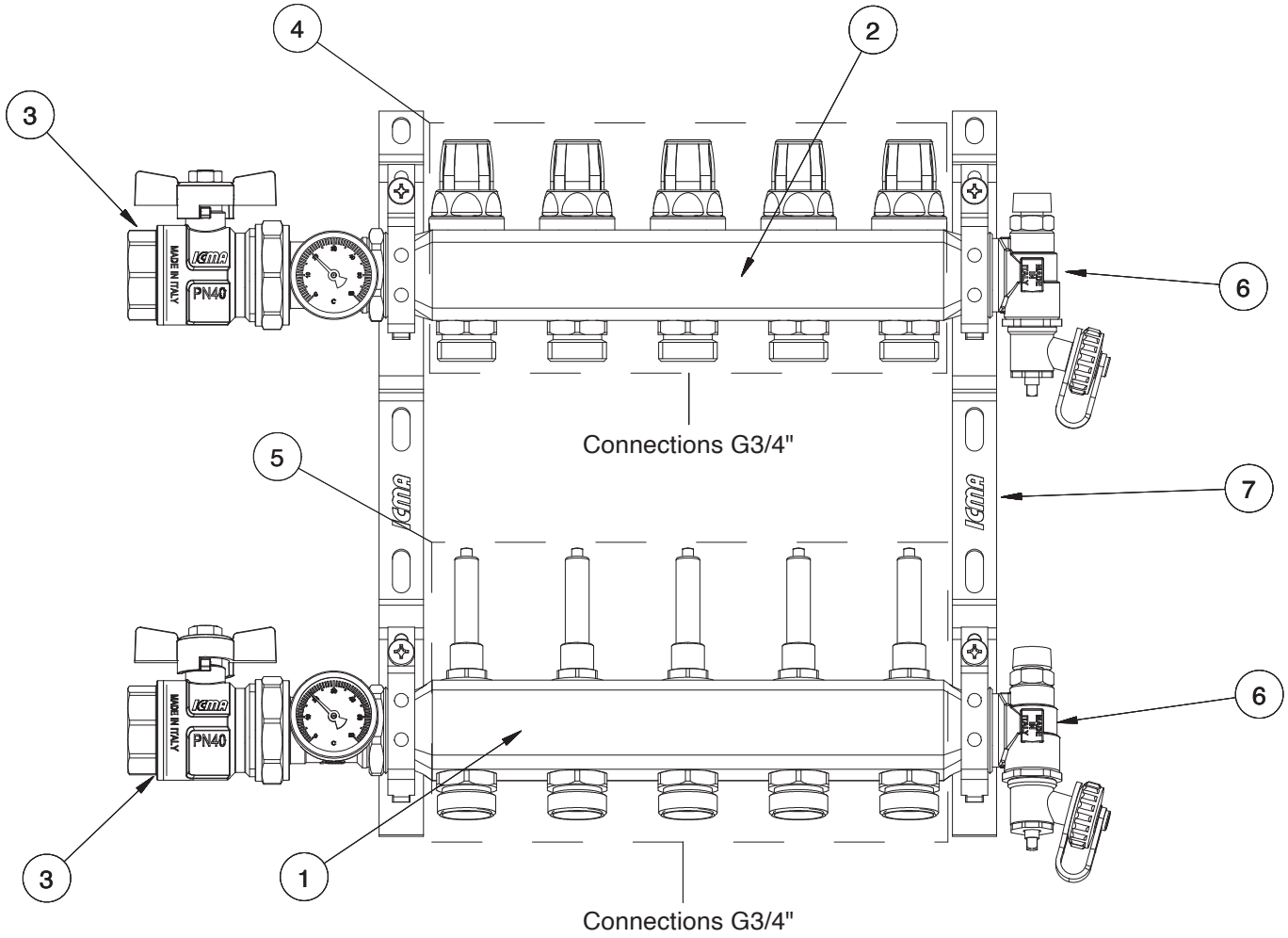
Electrothermic actuator art. 979 - 980 - 982 - 983		
Version:	normally closed	
Operating temperature:	5°C ÷ 50°C	
Max. operating pressure:	10 bar	
Electric supply:	230V	24 V
Frequency:	50÷60 Hz	
Running power consumption:	2 W	
Type of movement:	Linear	
Complete opening time:	3-4 min	
Actuator stroke:	5 mm	
Dynamic force:	100 N	
Valve connection:	M28x1.5 – M30x1.5	
International protection rating:	IP53	

When using M30x1.5 electrothermal actuators

Brand	**Innoakt**	**Imi hydronic**	**Taconova**	**Taconova**	**Intellisys**	**Caleffi**	**Siemens**
Model	INN920066PL	Emo-t	TOPDRIVE 257.2055.000	NOVADRIVE 257.2855.000	MCA230	656102	STA321.65L10
Threaded connection	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5	M30x1.5
Electric supply (V):	230V	230	230	230	230	230	230
Actuator stroke (mm):	4 ± 0.5 mm	4,7	4	4	3	-	6,5
Dynamic force (N)	110	125	100 ±7	90	90	-	125
Version:	NC	NC	NC	NC	NC	NC	NC
Complete opening time (min)	3-5	4	3	3	-	2-3	4.5
Frequency (Hz)	50-60	50-60	-	-	50-60	-	50-60
Running power consumption (W):	2	2,5	1,6	1,6	-	-	1,2
International protection rating:	IP54	IP54	IP44	IP40	IP54	IP44	IP54
Operating temperature (°C):	-5 ÷ +60	+5 ÷ +50	+0 ÷ +60	+0 ÷ +50	+2 ÷ +50	+0 ÷ +50	+0 ÷ +50
Max. operating pressure (bar):	6	10	10	10	10	10	10

Compatibility also with 24V and NO versions if present in the manufacturer’s catalogue.

Components

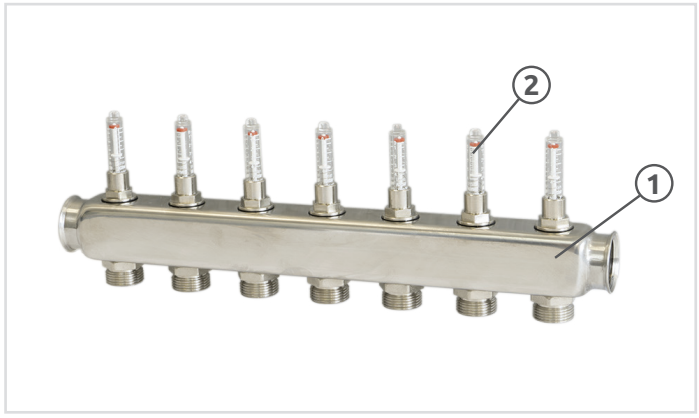


1. Flow manifold
2. Return manifold
3. Shut-off ball valves with O-ring sealed pipe union (equipped with 0-60° temperature gauge)
4. Shut-off thermostatic valves for electrothermal actuators
5. Flowmeter with built-in flow control valves
   Adjustment range:
   - 0/4 L/Min in G1” manifolds
   - 0/5 L/Min in G1” manifolds with TACONOVA C06179AD06 flowmeter
   - 0/8 L/Min in G1”¼ manifolds
6. Terminal connection with anti-leak gasket:
   automatic floating valves in articles K077 and K081
   manual air vent valves with revolving drain knob in articles K075 and K079
7. Fixing brackets with anti-vibration gaskets

Components description

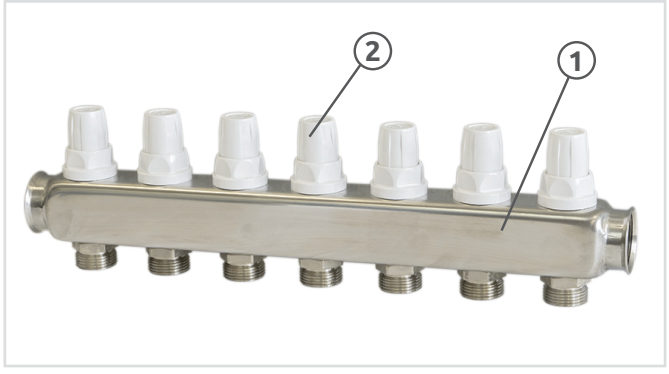
Flow manifold

The flow manifold consists of a stainless steel bar (1) and of a variable number of flowmeters equipped with control valves (2). On the transparent glass with graduated scale (3) placed in the upper part of the flowmeter, the flow rate value of every loop of the underfloor system can be read in real time. (The flowmeter reading scale depends on the manifold: for G1’’ manifolds the scale is 0÷4 l/min, for G1”¼ manifolds it is 0÷8 l/min).
By means of the control valve, it is possible to adjust the flow of the individual loops. This considerably facilitates and speeds up the circuit calibration.
Moreover, the same valve allows each circuit to be shut off, isolating it from the system.
For the operation of the control valve, please see chapter on page 9.



Return manifold

The return manifold consists of a stainless steel bar (1) and of a variable number of shut-off thermostatic valves (2).
The thermostatic valves can be manually opened and closed to cut off every individual circuit.
By fully screwing (rotate clockwise) the upper part of the white cap (3) placed over the valve, it is possible to block the fluid flow (5) isolating it from the rest of the circuit.
The shut-off valves are also set up for the installation of electrothermal actuators (6), which allow to maintain the set ambient temperature, if connected to a thermostat.
To do this, unscrew both parts of the white knob (3 and 4) completely from the valve body, hook the ring nut (7) and then the actuator.
It will still be possible to remove the actuator and reinstall the manually controlled knob at any time.
For the installation of the actuators see the specific instruction sheet contained in each actuator package.



Accessories

Shut-off valves

Art. 215 - Full bore ball valve with pipe union, red/blue coated Aluminum T-handle, flat seat connection. Antiblow stem. Thread ISO 228.

Art.	Size	Color	Code
215	1”	Red	87251AF11
215	1”	Blue	87251AF12

Art. 225 - Full bore angle ball valve, red/blue coated Aluminum T-handle, M/F connection thread, Double O-ring, anti-blow stem. Thread ISO 228.

Art.	Size	Color	Code
225	1”	Red	87225AF11
225	1”	Blue	87225AF12

Art. 216 - Full bore ball valve with swivel connection with O-ring and temperature gauge holder. (temperature gauge art. 206 0-60° inculded). Thread ISO 228.

Art.	Size	Color	Code
216	1”	Red	87216AF11
216	1”	Blue	87216AF12
216	1”1/4	Red	87216AF11
216	1”1/4	Blue	87216AF12

Art. 226 - Full bore angle ball valve. Swivel connection. Falt seat union. Temperature gauge (art. 206 0-60° included).
Thread ISO 228.

Art.	Size	Color	Code
216	1”	Red	87216AF11
216	1”	Blue	87216AF12
216	1”1/4	Red	87216AF11
216	1”1/4	Blue	87216AF12

Air vent valves

Art. 700 - Automatic float air vent valve.

Art.	Size	Code
700	1/2”	82700AD06

Art. 705 - Manual swiveling air vent valve with O-ring.

Art.	Size	Code
705	1/2”	82705AD06

Taps

Art. 185 - End cap with temperature gauge and sealing gasket for manifolds

Art.	Size	Code
185	1”	87185AF06

Art. 173 - End cap with O-ring for manifolds

Art.	Size	Code
173	3/4”	87173AE05
173	1”	87173AF06
173	1”1/4	87173AG06

Art. 209 - Swivel cap with automatic air vent and drain valve.

Art.	Size	Code
209	1”	87209AF06
209	1”1/4	87209AG06

Art. 269 - Cap with leakproof gasket and automatic or manual air vent and drain valve.

Art.	Size	Code
269	1”	87269AF06
269	1”1/4	87269AG06
269 c/701	1”	87269AF06701
269 c/701	1”1/4	87269AG06701

Pre-assembled 1” and 1”1/4 stainless steel manifolds - K071 - K073 - K075 - K077 - K079 - K081

Fill/Drain cock

Art. 1300 - Bracket complete with anti-vibration supports. 40 mm square connection. Interaxe between the 2 manifolds: 200 mm. Allows fastening on the square section of the manifold bar. Allow the installation of manifolds in cabinets with 110 mm (art. 196)

Art.	Size	Code
1300	1”	C111300AF06

Art. 208H - Bracket complete with anti-vibration supports. Interaxe between the 2 manifolds: 260 mm. It allows the installation of circulators with 180 mm. length.

Art.	Size	Code
208H	1”	87208AF06H

Art. 208 - Bracket complete with anti-vibration supports. Interaxe between the 2 manifolds: 210 mm.

Art.	Size	Code
208	1”	87208AF06
208	1”1/4	87208AG06

Art. 208L - Bracket complete with anti-vibration supports. Interaxe between the 2 manifolds: 210 mm. Allow the installation of manifolds in cabinets with 110mm. depth (Art. 197).

Art.	Size	Code
208L	1”	87208AF06L

Fittings for multilayer pipes

Fittings for single or multilayer plastic pipes
Art. 101 - thread for fitting G 3/4”
They ensure a simple and safe connection between the multilayer pipe and the outlets of the flow and return manifolds. The seals on the pipe and on the manifold are made with EPDM Perox O-Ring rings. Low pressure drops are guaranteed thanks to their reduced internal surface roughness.

Boxes for manifolds

Art. 196 - box for underfloor heating systems with lock. Adjustable height (from 630 mm to 930 mm) and depth (from 90 mm to 110 mm). It is possible to regulate the internal position of the manifold (up-down and laterally).
For manifolds without circulating pump. Sheet frame and cover thickness 1 mm for a high constructive solidity.

Art.	Width	Code
196	500	87196OE09
196	700	87196OF09
196	850	87196OK09
196	1000	87196OG09
196	1200	87196OH09

Fixing bracket

Art. 172 - Fixing bracket with anti-vibration seal.
Centre distance between the two manifolds 210 mm.

Art.	Size	Code
172	1/2”	87172AD06

Electrothermal actuators

Art. 982 - Electrothermal actuator with micro switch.
When the actuators are not energized, the valves are normally closed

Art.	Size	Tensione	Code
982	28x1,5	24 volt	82982NC54
982	28x1,5	230 volt	82982NC53

Art. 983 - Electrothermic on-off actuator normally closed.

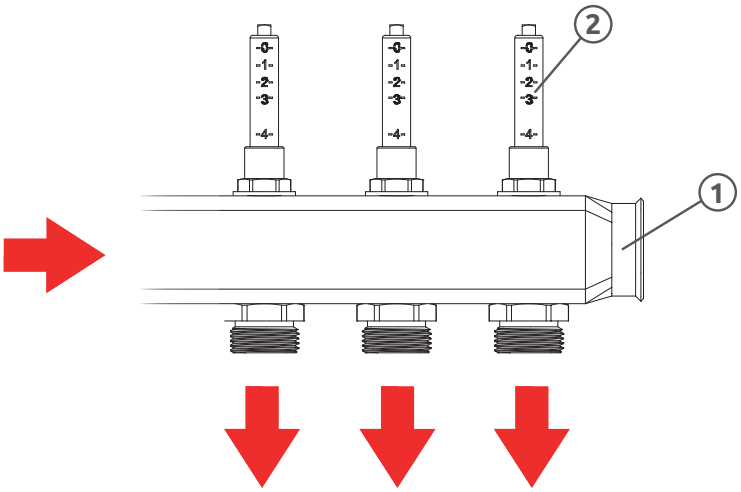
Art.	Size	Voltage	Code
983	28x1,5	24 volt	82983NC54
983	28x1,5	230 volt	82983NC53

Art. 197 - box for underfloor heating systems with lock. Adjustable height (from 630 mm to 930 mm) and depth (from 110 mm to 130 mm). It is possible to regulate the internal position of the manifold (up-down and laterally).
For manifolds with circulating pump. Sheet frame and cover thickness 1 mm for a high constructive solidity

Art.	Width	Code
197	500	87197OC09
197	700	87197OF09
197	850	87197OK09
197	1000	87197OG09
197	1200	87197OH09

Use of flowmeters with built-in control valve

The flow manifold consists of a bar (1) on which flowmeters with built-in control valve are installed.
Flowmeters are used to indicate the flow rate value of each individual loop of the system in real time, while the built-in control valves allow a precise calibration. This simplifies and speeds up the calibration process of the entire circuit.

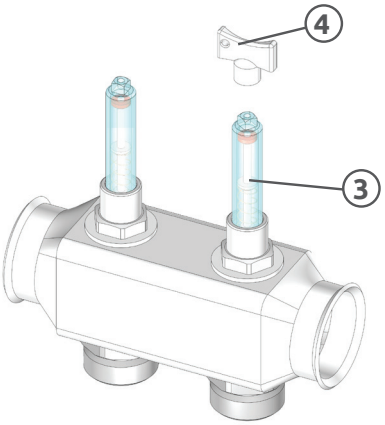


Flow regulation

To adjust the flow rate, rotate the glass flow indicator (3) located in the upper part of the flowmeter.
To facilitate this operation, a special key (4) is supplied. Insert the key into the flow indicator.

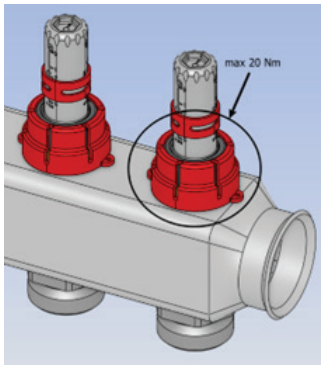
- **By rotating the glass clockwise, the flow rate decreases**
- **By rotating the glass counter clockwise, the flow rate increases**

Fully close each control valve to shut off the corresponding circuit.



Assembly of the TACONOVA C06179AD06 flowmeter

The TACONOVA C06179AD05 flowmeter is usually installed in the flow pipe bar of the manifold. It can be installed in a horizontal or vertical position.
The manifold must be adapted to the manufacturer’s standards to ensure correct operation.
During assembly on the manifold, the tightening torque must not exceed 20 Nm.
The sight glass can be disassembled during maintenance operations.
Tampering can be prevented by the use of a lead seal.
The regulating valve can be closed.

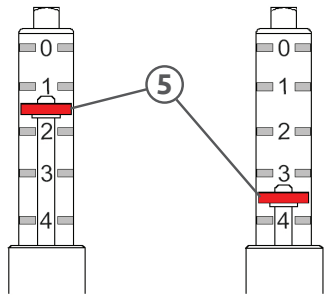


Flow rate reading

On the outside of the flow indicator, a graduated scale is printed, while inside are a white rod and a small red disc. These two rise and fall inside the glass cone, depending on the variations of the fluid flow. The position of the red disc indicates the flow rate value of the fluid going through the cone and the corresponding loop of the underfloor heating system. The flowmeter reading range is the following:

0÷4 l/min in G1” manifolds
0÷5 l/min for G1” section manifolds with TACONOVA C06179AD06 flowmeter
0÷8 l/min in G1” ¼ manifolds

Reading examples



Flow rate 1,5 l/min **Flow rate 3,5 l/min**

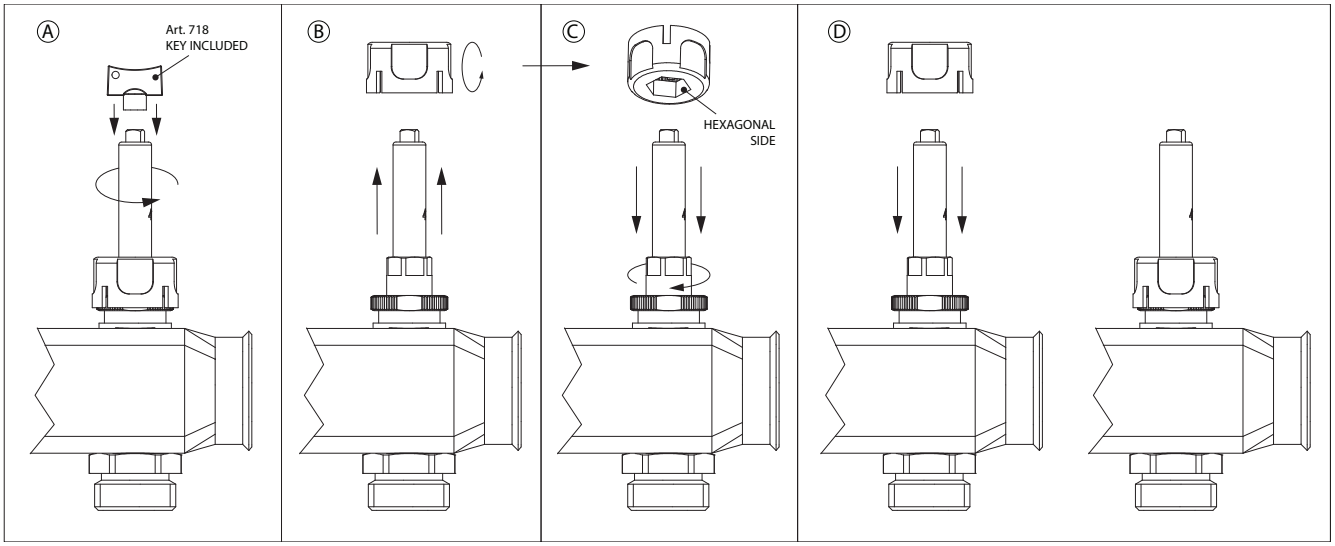
Use of flowmeters with memory-plus system

Use

The Memory-Plus flowmeter is installed on distribution manifolds for radiant floor heating systems and the actual flow rate of fluid circulating in each circuit to be displayed in real time. The accuracy of the flowmeter allows the calibration of the flow even at low flow rates. Available for flow rates: 0-4l/min and 0-8 l/min.

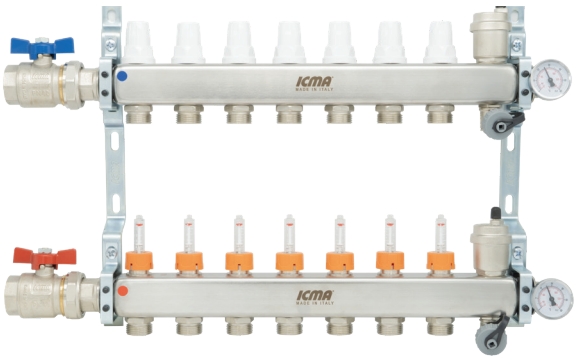
Operation

The Memory-Plus flowmeter allows to store the desired flow rate value and to open/close the meter without losing the previous calibration.
For a proper calibration of the flow rate:
Fully rotate the flow indicator anti-clockwise (1), using the opening and closing key supplied art. 718.
Remove lock ring (3).
Slowly rotate the headwork clockwise (2) until the desired flow rate is displayed on the flow indicator.
Turn the lock ring (3) upside down so that the hexagonal shape is facing down to adjust the flow rate.
To ensure that the flow rate value is stored unchanged, place the block ring (3) back on the headwork (2) and on milled brass part underneath (4). It is now possible to open/close the flowmeter without losing the previous calibration.
During normal operation, the flow indicator should always be fully open.



K069

Stainless steel manifolds kit with ICMA Memory Plus flowmeters and valves with thermostatic option.
connection to the ball valve with gasket with plane seat and o-ring, 2 brackets (art.208) with anti-vibration supports , 2 3/8” automatic air vents (art. 700), (art. 172). 2 1/2” drain cocks (art. 172) , 2 1” thermometer caps with o-ring (art.185), 2 0-60° thermometers (art.206). Suitable for 3/4” Euroconus. Choose thermostatic and electrothermic actuators with 28x1,5 connection thread.



Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 197
K069	1"	2	87K069PG32	3/4” EK.	285 mm	500 mm
K069	1"	3	87K069PH32	3/4” EK.	335 mm	500 mm
K069	1"	4	87K069PJ32	3/4” EK.	385 mm	500 mm
K069	1"	5	87K069PK32	3/4” EK.	435 mm	700 mm
K069	1"	6	87K069PL32	3/4” EK.	485 mm	700 mm
K069	1"	7	87K069PM32	3/4” EK.	535 mm	700 mm
K069	1"	8	87K069PQ32	3/4” EK.	585 mm	700 mm
K069	1"	9	87K069PR32	3/4” EK.	635 mm	850 mm
K069	1"	10	87K069PS32	3/4” EK.	685 mm	850 mm
K069	1”	11	87K069PT32	3/4” EK.	735 mm	850 mm
K069	1"	12	87K069PU32	3/4” EK.	785 mm	1000 mm
K069	1"	13	87K069PV32	3/4” EK.	835 mm	1000 mm
K069	1"	14	87K069PW32	3/4” EK.	885 mm	1200 mm

K071

Stainless steel manifold kit with manual/thermostatic regulation and shutoff.
It includes:
• N° 2 fixing brackets (art.208) with anti-vibration seals;
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196	Suggested box art. 197
K071	1"	2	87K071PG32	3/4” EK.	125 mm	500 mm	
K071	1"	3	87K071PH32	3/4” EK.	175 mm	500 mm	
K071	1"	4	87K071PJ32	3/4” EK.	225 mm	500 mm	
K071	1"	5	87K071PQ32	3/4” EK.	275 mm	700 mm	
K071	1"	6	87K071PK32	3/4” EK.	325 mm	700 mm	
K071	1"	7	87K071PR32	3/4” EK.	375 mm	700 mm	
K071	1"	8	87K071PL32	3/4” EK.	425 mm	700 mm	
K071	1"	9	87K071PS32	3/4” EK.	475 mm	850 mm	
K071	1"	10	87K071PM32	3/4” EK.	525 mm	850 mm	
K071	1”	11	87K071PT32	3/4” EK.	575 mm	850 mm	
K071	1"	12	87K071PU32	3/4” EK.	625 mm	1000 mm	
K071	1"	13	87K071PV32	3/4” EK.	675 mm	1000 mm	
K071	1"	14	87K071PW32	3/4” EK.	725 mm	1000 mm	
K071	1"	15	87K071PY32	3/4” EK.	775 mm	1000 mm	
K071	1”1/4	2	87K071DG32	3/4” EK.	125 mm		600 mm
K071	1”1/4	3	87K071DH32	3/4” EK.	175 mm		600 mm
K071	1”1/4	4	87K071DJ32	3/4” EK.	225 mm		600 mm
K071	1”1/4	5	87K071DQ32	3/4” EK.	275 mm		700 mm
K071	1”1/4	6	87K071DK32	3/4” EK.	325 mm		700 mm
K071	1”1/4	7	87K071DR32	3/4” EK.	375 mm		700 mm
K071	1”1/4	8	87K071DL32	3/4” EK.	425 mm		700 mm
K071	1”1/4	9	87K071DS32	3/4” EK.	475 mm		850 mm
K071	1”1/4	10	87K071DM32	3/4” EK.	525 mm		850 mm
K071	1”1/4	11	87K071DT32	3/4” EK.	575 mm		850 mm
K071	1”1/4	12	87K071DU32	3/4” EK.	625 mm		1000 mm
K071	1”1/4	13	87K071DV32	3/4” EK.	675 mm		1000 mm
K071	1”1/4	14	87K071DW32	3/4” EK.	725 mm		1000 mm
K071	1”1/4	15	87K071DY32	3/4” EK.	775 mm		1000 mm

K073

Stainless steel manifold kit with manual/thermostatic regulation and shutoff and flow regulators. The flow regulators allow to close and regulate the flow. It includes:
• N° 2 fixing brackets (art.208) with anti-vibration seals;
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196	Suggested box art. 197
K073	1"	2	87K073PG32	3/4” EK.	125 mm	500 mm	
K073	1"	3	87K073PH32	3/4” EK.	175 mm	500 mm	
K073	1"	4	87K073PJ32	3/4” EK.	225 mm	500 mm	
K073	1"	5	87K073PQ32	3/4” EK.	275 mm	700 mm	
K073	1"	6	87K073PK32	3/4” EK.	325 mm	700 mm	
K073	1"	7	87K073PR32	3/4” EK.	375 mm	700 mm	
K073	1"	8	87K073PL32	3/4” EK.	425 mm	700 mm	
K073	1"	9	87K073PS32	3/4” EK.	475 mm	850 mm	
K073	1"	10	87K073PM32	3/4” EK.	525 mm	850 mm	
K073	1”	11	87K073PT32	3/4” EK.	575 mm	850 mm	
K073	1"	12	87K073PU32	3/4” EK.	625 mm	1000 mm	
K073	1"	13	87K073PV32	3/4” EK.	675 mm	1000 mm	
K073	1"	14	87K073PW32	3/4” EK.	725 mm	1000 mm	
K073	1"	15	87K073PY32	3/4” EK.	775 mm	1000 mm	
K073	1”1/4	2	87K073DG32	3/4” EK.	125 mm		600 mm
K073	1”1/4	3	87K073DH32	3/4” EK.	175 mm		600 mm
K073	1”1/4	4	87K073DJ32	3/4” EK.	225 mm		600 mm
K073	1”1/4	5	87K073DQ32	3/4” EK.	275 mm		700 mm
K073	1”1/4	6	87K073DK32	3/4” EK.	325 mm		700 mm
K073	1”1/4	7	87K073DR32	3/4” EK.	375 mm		700 mm
K073	1”1/4	8	87K073DL32	3/4” EK.	425 mm		700 mm
K073	1”1/4	9	87K073DS32	3/4” EK.	475 mm		850 mm
K073	1”1/4	10	87K073DM32	3/4” EK.	525 mm		850 mm
K073	1”1/4	11	87K073DT32	3/4” EK.	575 mm		850 mm
K073	1”1/4	12	87K073DU32	3/4” EK.	625 mm		1000 mm
K073	1”1/4	13	87K073DV32	3/4” EK.	675 mm		1000 mm
K073	1”1/4	14	87K073DW32	3/4” EK.	725 mm		1000 mm
K073	1”1/4	15	87K073DY32	3/4” EK.	775 mm		1000 mm

K073 208L

Stainless steel manifold kit with manual/thermostatic regulation and shutoff and flow regulators. The flow regulators allow to close and regulate the flow. It includes:
• N° 2 fixing brackets (art.208L) with anti-vibration seals;
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K073	1"	2	87K073PG32 208L	3/4” EK.	125 mm	500 mm
K073	1"	3	87K073PH32 208L	3/4” EK.	175 mm	500 mm
K073	1"	4	87K073PJ32 208L	3/4” EK.	225 mm	500 mm
K073	1"	5	87K073PQ32 208L	3/4” EK.	275 mm	700 mm
K073	1"	6	87K073PK32 208L	3/4” EK.	325 mm	700 mm
K073	1"	7	87K073PR32 208L	3/4” EK.	375 mm	700 mm
K073	1"	8	87K073PL32 208L	3/4” EK.	425 mm	700 mm
K073	1"	9	87K073PS32 208L	3/4” EK.	475 mm	850 mm
K073	1"	10	87K073PM32 208L	3/4” EK.	525 mm	850 mm
K073	1”	11	87K073PT32 208L	3/4” EK.	575 mm	850 mm
K073	1"	12	87K073PU32 208L	3/4” EK.	625 mm	1000 mm
K073	1"	13	87K073PV32 208L	3/4” EK.	675 mm	1000 mm
K073	1"	14	87K073PW32 208L	3/4” EK.	725 mm	1200 mm
K073	1"	15	87K073PY32 208L	3/4” EK.	775 mm	1200 mm

ART. K073179 - TACONOVA FLOWMETER - BRACKETS 208L

Stainless steel manifolds unit with TACONOVA memory flowmeters and valves with thermostatic option.
connection to the ball valve with gasket with plane seat and o-ring, 2 brackets (art.208L) with anti-vibration supports , 2 3/8” automatic air vents (art. 700), 2 rubinetti per scarico acqua da 1/2” (art. 172). 2 1/2” drain cocks (art. 172)**. Suitable for 3/4” Euroconus. Choose thermostatic and electrothermic actuators with 28x1,5 connection thread.**

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K073	1"	2	87K073179PG32L	3/4” EK.	125 mm	500 mm
K073	1"	3	87K073179PH32L	3/4” EK.	175 mm	500 mm
K073	1"	4	87K073179PJ32L	3/4” EK.	225 mm	500 mm
K073	1"	5	87K073179PQ32L	3/4” EK.	275 mm	700 mm
K073	1"	6	87K073179PK32L	3/4” EK.	325 mm	700 mm
K073	1"	7	87K073179PR32L	3/4” EK.	375 mm	700 mm
K073	1"	8	87K073179PL32L	3/4” EK.	425 mm	700 mm
K073	1"	9	87K073179PS32L	3/4” EK.	475 mm	850 mm
K073	1"	10	87K073179PM32L	3/4” EK.	525 mm	850 mm
K073	1”	11	87K073179PT32L	3/4” EK.	575 mm	850 mm
K073	1"	12	87K073179PU32L	3/4” EK.	625 mm	1000 mm
K073	1"	13	87K073179PV32L	3/4” EK.	675 mm	1000 mm
K073	1"	14	87K073179PW32L	3/4” EK.	725 mm	1000 mm
K073	1"	15	87K073179PY32L	3/4” EK.	775 mm	1000 mm

ART. K073179 - TACONOVA FLOWMETER - BRACKETS 1300

Stainless steel manifolds unit with TACONOVA memory flowmeters and valves with thermostatic option.
connection to the ball valve with gasket with plane seat and o-ring, 2 brackets (art.1300) with anti-vibration supports , 2 3/8” automatic air vents (art. 700), 2 rubinetti per scarico acqua da 1/2” (art. 172). 2 1/2” drain cocks (art. 172). **Suitable for 3/4” Euroconus. Choose thermostatic and electrothermic actuators with 28x1,5 connection thread.**

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K073	1"	2	87K073179PG32QU	3/4” EK.	125 mm	500 mm
K073	1"	3	87K073179PH32QU	3/4” EK.	175 mm	500 mm
K073	1"	4	87K073179PJ32QU	3/4” EK.	225 mm	500 mm
K073	1"	5	87K073179PQ32QU	3/4” EK.	275 mm	700 mm
K073	1"	6	87K073179PK32QU	3/4” EK.	325 mm	700 mm
K073	1"	7	87K073179PR32QU	3/4” EK.	375 mm	700 mm
K073	1"	8	87K073179PL32QU	3/4” EK.	425 mm	700 mm
K073	1"	9	87K073179PS32QU	3/4” EK.	475 mm	850 mm
K073	1"	10	87K073179PM32QU	3/4” EK.	525 mm	850 mm
K073	1”	11	87K073179PT32QU	3/4” EK.	575 mm	850 mm
K073	1"	12	87K073179PU32QU	3/4” EK.	625 mm	1000 mm
K073	1"	13	87K073179PV32QU	3/4” EK.	675 mm	1000 mm
K073	1"	14	87K073179PW32QU	3/4” EK.	725 mm	1000 mm
K073	1"	15	87K073179PY32QU	3/4” EK.	775 mm	1000 mm

K073 INV.

Stainless steel manifold kit with manual/thermostatic regulation and shutoff and flow regulators. The flow regulators allow to close and regulate the flow. It includes:

• N° 2 fixing brackets (art.208) with anti-vibration seals;

Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K073	1"	2	87K073PG32INV	3/4” EK.	125 mm	500 mm
K073	1"	3	87K073PH32INV	3/4” EK.	175 mm	500 mm
K073	1"	4	87K073PJ32INV	3/4” EK.	225 mm	500 mm
K073	1"	5	87K073PQ32INV	3/4” EK.	275 mm	700 mm
K073	1"	6	87K073PK32INV	3/4” EK.	325 mm	700 mm
K073	1"	7	87K073PR32INV	3/4” EK.	375 mm	700 mm
K073	1"	8	87K073PL32INV	3/4” EK.	425 mm	700 mm
K073	1"	9	87K073PS32INV	3/4” EK.	475 mm	850 mm
K073	1"	10	87K073PM32INV	3/4” EK.	525 mm	850 mm
K073	1”	11	87K073PT32INV	3/4” EK.	575 mm	850 mm
K073	1"	12	87K073PU32INV	3/4” EK.	625 mm	1000 mm
K073	1"	13	87K073PV32INV	3/4” EK.	675 mm	1000 mm
K073	1"	14	87K073PW32INV	3/4” EK.	725 mm	1000 mm
K073	1"	15	87K073PY32INV	3/4” EK.	775 mm	1000 mm

K074

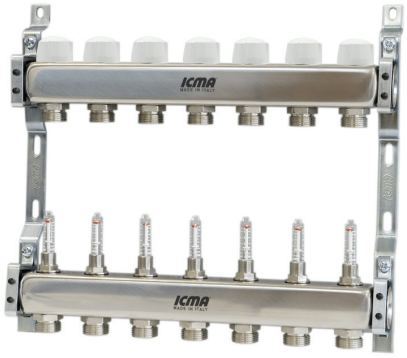
Stainless steel manifold kit with manual/thermostatic regulation and shutoff and flow regulators. The flow regulators allow to close and regulate the flow. It includes:
• N° 2 fixing brackets (art.208) with anti-vibration seals;
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 30x1,5.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K074	1"	2	87K074PG32	3/4” EK.	125 mm	500 mm
K074	1"	3	87K074PH32	3/4” EK.	175 mm	500 mm
K074	1"	4	87K074PJ32	3/4” EK.	225 mm	500 mm
K074	1"	5	87K074PQ32	3/4” EK.	275 mm	700 mm
K074	1"	6	87K074PK32	3/4” EK.	325 mm	700 mm
K074	1"	7	87K074PR32	3/4” EK.	375 mm	700 mm
K074	1"	8	87K074PL32	3/4” EK.	425 mm	700 mm
K074	1"	9	87K074PS32	3/4” EK.	475 mm	850 mm
K074	1"	10	87K074PM32	3/4” EK.	525 mm	850 mm
K074	1”	11	87K074PT32	3/4” EK.	575 mm	850 mm
K074	1"	12	87K074PU32	3/4” EK.	625 mm	1000 mm
K074	1"	13	87K074PV32	3/4” EK.	675 mm	1000 mm
K074	1"	14	87K074PW32	3/4” EK.	725 mm	1000 mm
K074	1"	15	87K074PY32	3/4” EK.	775 mm	1000 mm

K074 208L

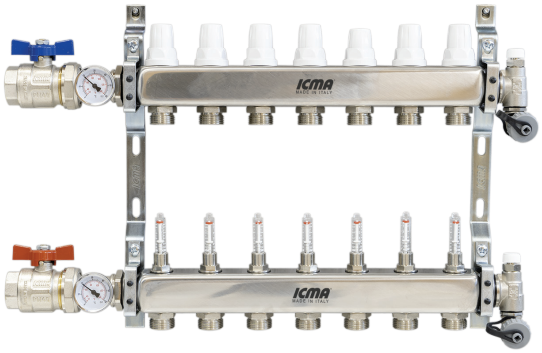
Stainless steel manifold kit with manual/thermostatic regulation and shutoff and flow regulators. The flow regulators allow to close and regulate the flow. It includes:
• N° 2 fixing brackets (art.208L) with anti-vibration seals;
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 30x1,5.



Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K074	1"	2	87K074PG32 208L	3/4” EK.	125 mm	500 mm
K074	1"	3	87K074PH32 208L	3/4” EK.	175 mm	500 mm
K074	1"	4	87K074PJ32 208L	3/4” EK.	225 mm	500 mm
K074	1"	5	87K074PQ32 208L	3/4” EK.	275 mm	700 mm
K074	1"	6	87K074PK32 208L	3/4” EK.	325 mm	700 mm
K074	1"	7	87K074PR32 208L	3/4” EK.	375 mm	700 mm
K074	1"	8	87K074PL32 208L	3/4” EK.	425 mm	700 mm
K074	1"	9	87K074PS32 208L	3/4” EK.	475 mm	850 mm
K074	1"	10	87K074PM32 208L	3/4” EK.	525 mm	850 mm
K074	1”	11	87K074PT32 208L	3/4” EK.	575 mm	850 mm
K074	1"	12	87K074PU32 208L	3/4” EK.	625 mm	1000 mm
K074	1"	13	87K074PV32 208L	3/4” EK.	675 mm	1000 mm
K074	1"	14	87K074PW32 208L	3/4” EK.	725 mm	1200 mm
K074	1"	15	87K074PY32 208L	3/4” EK.	775 mm	1200 mm

K075



Stainless steel manifold kit with manual/thermostatic regulation and shut-off and flow regulators. It includes:
- N° 2 ball valves (art. 216);
- Shut-off ball valves with o-ring sealed pipe union
- N° 2 fixing brackets (art.208) with anti-vibration seals;
- N° 2 3/8” manual air vent valves (art. 701);
- N° 2 1/2” drain valves (art. 172);

Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

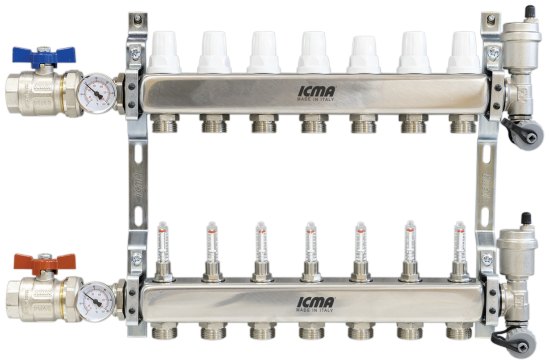
Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196	Suggested box art. 197
K075	1”	2	87K075PG32	3/4” EK.	285 mm	500 mm	
K075	1”	3	87K075PH32	3/4” EK.	335 mm	500 mm	
K075	1”	4	87K075PJ32	3/4” EK.	385 mm	500 mm	
K075	1”	5	87K075PQ32	3/4” EK.	435 mm	700 mm	
K075	1”	6	87K075PK32	3/4” EK.	485 mm	700 mm	
K075	1”	7	87K075PR32	3/4” EK.	535 mm	700 mm	
K075	1”	8	87K075PL32	3/4” EK.	585 mm	700 mm	
K075	1”	9	87K075PS32	3/4” EK.	635 mm	850 mm	
K075	1”	10	87K075PM32	3/4” EK.	685 mm	850 mm	
K075	1”	11	87K075PT32	3/4” EK.	735 mm	850 mm	
K075	1”	12	87K075PU32	3/4” EK.	785 mm	1000 mm	
K075	1”	13	87K075PV32	3/4” EK.	835 mm	1000 mm	
K075	1”	14	87K075PW32	3/4” EK.	885 mm	1200 mm	
K075	1”	15	87K075PY32	3/4” EK.	935 mm	1200 mm	
K075	1”1/4	2	87K075DG32	3/4” EK.	300 mm		600 mm
K075	1”1/4	3	87K075DH32	3/4” EK.	350 mm		600 mm
K075	1”1/4	4	87K075DJ32	3/4” EK.	400 mm		600 mm
K075	1”1/4	5	87K075DQ32	3/4” EK.	450 mm		700 mm
K075	1”1/4	6	87K075DK32	3/4” EK.	500 mm		700 mm
K075	1”1/4	7	87K075DR32	3/4” EK.	550 mm		700 mm
K075	1”1/4	8	87K075DL32	3/4” EK.	600 mm		700 mm
K075	1”1/4	9	87K075DS32	3/4” EK.	650 mm		850 mm
K075	1”1/4	10	87K075DM32	3/4” EK.	700 mm		850 mm
K075	1”1/4	11	87K075DT32	3/4” EK.	750 mm		850 mm
K075	1”1/4	12	87K075DU32	3/4” EK.	800 mm		1000 mm
K075	1”1/4	13	87K075DV32	3/4” EK.	850 mm		1000 mm
K075	1”1/4	14	87K075DW32	3/4” EK.	900 mm		1200 mm
K075	1”1/4	15	87K075DY32	3/4” EK.	950 mm		1200 mm

K077

Stainless steel manifold kit with manual/thermostatic regulation and shut-off and flow regulators. It includes:
- N° 2 ball valves (art. 216);
- Shut-off ball valves with o-ring sealed pipe union
- N° 2 fixing brackets (art.208) with anti-vibration seals;
- N° 2 3/8” automatic air vent valves (art. 700);
- N° 2 1/2” drain valves (art. 172);

Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

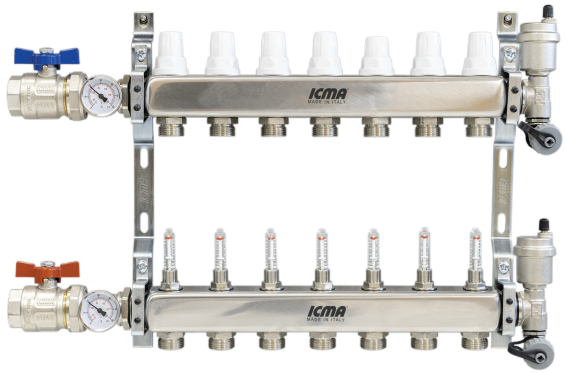


Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196	Suggested box art. 197
K077	1”	2	87K077PG32	3/4” EK.	285 mm	500 mm	
K077	1”	3	87K077PH32	3/4” EK.	335 mm	500 mm	
K077	1”	4	87K077PJ32	3/4” EK.	385 mm	500 mm	
K077	1”	5	87K077PQ32	3/4” EK.	435 mm	700 mm	
K077	1”	6	87K077PK32	3/4” EK.	485 mm	700 mm	
K077	1”	7	87K077PR32	3/4” EK.	535 mm	700 mm	
K077	1”	8	87K077PL32	3/4” EK.	585 mm	700 mm	
K077	1”	9	87K077PS32	3/4” EK.	635 mm	850 mm	
K077	1”	10	87K077PM32	3/4” EK.	685 mm	850 mm	
K077	1”	11	87K077PT32	3/4” EK.	735 mm	850 mm	
K077	1”	12	87K077PU32	3/4” EK.	785 mm	1000 mm	
K077	1”	13	87K077PV32	3/4” EK.	835 mm	1000 mm	
K077	1”	14	87K077PW32	3/4” EK.	885 mm	1200 mm	
K077	1”	15	87K077PY32	3/4” EK.	935 mm	1200 mm	
K077	1”1/4	2	87K077DG32	3/4” EK.	300 mm		600 mm
K077	1”1/4	3	87K077DH32	3/4” EK.	350 mm		600 mm
K077	1”1/4	4	87K077DJ32	3/4” EK.	400 mm		600 mm
K077	1”1/4	5	87K077DQ32	3/4” EK.	450 mm		700 mm
K077	1”1/4	6	87K077DK32	3/4” EK.	500 mm		700 mm
K077	1”1/4	7	87K077DR32	3/4” EK.	550 mm		700 mm
K077	1”1/4	8	87K077DL32	3/4” EK.	600 mm		700 mm
K077	1”1/4	9	87K077DS32	3/4” EK.	650 mm		850 mm
K077	1”1/4	10	87K077DM32	3/4” EK.	700 mm		850 mm
K077	1”1/4	11	87K077DT32	3/4” EK.	750 mm		850 mm
K077	1”1/4	12	87K077DU32	3/4” EK.	800 mm		1000 mm
K077	1”1/4	13	87K077DV32	3/4” EK.	850 mm		1000 mm
K077	1”1/4	14	87K077DW32	3/4” EK.	900 mm		1200 mm
K077	1”1/4	15	87K077DY32	3/4” EK.	950 mm		1200 mm

K077 208L

Stainless steel manifold kit with manual/thermostatic regulation and shut-off and flow regulators. It includes:
• N° 2 ball valves (art. 216);
• Shut-off ball valves with o-ring sealed pipe union
• N° 2 fixing brackets (art.208L) with anti-vibration seals;
• N° 2 3/8” automatic air vent valves (art. 700);
• N° 2 1/2” drain valves (art. 172);
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.



Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K077	1”	2	87K077PG32 208L	3/4” EK.	285 mm	500 mm
K077	1”	3	87K077PH32 208L	3/4” EK.	335 mm	500 mm
K077	1”	4	87K077PJ32 208L	3/4” EK.	385 mm	500 mm
K077	1”	5	87K077PQ32 208L	3/4” EK.	435 mm	700 mm
K077	1”	6	87K077PK32 208L	3/4” EK.	485 mm	700 mm
K077	1”	7	87K077PR32 208L	3/4” EK.	535 mm	700 mm
K077	1”	8	87K077PL32 208L	3/4” EK.	585 mm	700 mm
K077	1”	9	87K077PS32 208L	3/4” EK.	635 mm	850 mm
K077	1”	10	87K077PM32 208L	3/4” EK.	685 mm	850 mm
K077	1”	11	87K077PT32 208L	3/4” EK.	735 mm	850 mm
K077	1”	12	87K077PU32 208L	3/4” EK.	785 mm	1000 mm
K077	1”	13	87K077PV32 208L	3/4” EK.	835 mm	1000 mm
K077	1”	14	87K077PW32 208L	3/4” EK.	885 mm	1200 mm
K077	1”	15	87K077PY32 208L	3/4” EK.	935 mm	1200 mm

K079

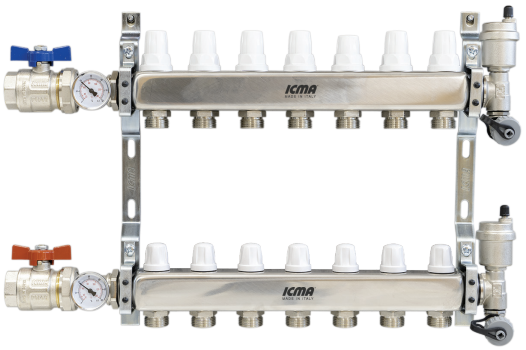
Stainless steel manifold kit with manual/thermostatic regulation.
It includes:
• N° 2 ball valves (art. 216);
• Shut-off ball valves with o-ring sealed pipe union
• N° 2 fixing brackets (art.208) with anti-vibration seals;
• N° 2 3/8” manual air vent valves (art. 701);
• N° 2 1/2” drain valves (art. 172);
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196	Suggested box art. 197
K079	1”	2	87K079PG32	3/4” EK.	285 mm	500 mm	
K079	1”	3	87K079PH32	3/4” EK.	335 mm	500 mm	
K079	1”	4	87K079PJ32	3/4” EK.	385 mm	500 mm	
K079	1”	5	87K079PQ32	3/4” EK.	435 mm	700 mm	
K079	1”	6	87K079PK32	3/4” EK.	485 mm	700 mm	
K079	1”	7	87K079PR32	3/4” EK.	535 mm	700 mm	
K079	1”	8	87K079PL32	3/4” EK.	585 mm	700 mm	
K079	1”	9	87K079PS32	3/4” EK.	635 mm	850 mm	
K079	1”	10	87K079PM32	3/4” EK.	685 mm	850 mm	
K079	1”	11	87K079PT32	3/4” EK.	735 mm	850 mm	
K079	1”	12	87K079PU32	3/4” EK.	785 mm	1000 mm	
K079	1”	13	87K079PV32	3/4” EK.	835 mm	1000 mm	
K079	1”	14	87K079PW32	3/4” EK.	885 mm	1200 mm	
K079	1”	15	87K079PY32	3/4” EK.	935 mm	1200 mm	
K079	1”1/4	2	87K079DG32	3/4” EK.	300 mm		600 mm
K079	1”1/4	3	87K079DH32	3/4” EK.	350 mm		600 mm
K079	1”1/4	4	87K079DJ32	3/4” EK.	400 mm		600 mm
K079	1”1/4	5	87K079DQ32	3/4” EK.	450 mm		700 mm
K079	1”1/4	6	87K079DK32	3/4” EK.	500 mm		700 mm
K079	1”1/4	7	87K079DR32	3/4” EK.	550 mm		700 mm
K079	1”1/4	8	87K079DL32	3/4” EK.	600 mm		700 mm
K079	1”1/4	9	87K079DS32	3/4” EK.	650 mm		850 mm
K079	1”1/4	10	87K079DM32	3/4” EK.	700 mm		850 mm
K079	1”1/4	11	87K079DT32	3/4” EK.	750 mm		850 mm
K079	1”1/4	12	87K079DU32	3/4” EK.	800 mm		1000 mm
K079	1”1/4	13	87K079DV32	3/4” EK.	850 mm		1000 mm
K079	1”1/4	14	87K079DW32	3/4” EK.	900 mm		1200 mm
K079	1”1/4	15	87K079DY32	3/4” EK.	950 mm		1200 mm

K081

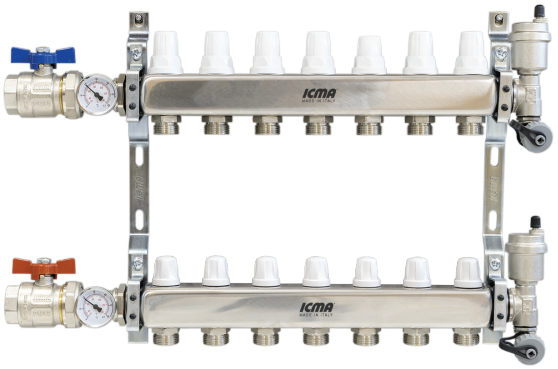
Stainless steel manifold kit with manual/thermostatic regulation. It includes:
• N° 2 ball valves (art. 216);
• Shut-off ball valves with o-ring sealed pipe union
• N° 2 fixing brackets (art.208) with anti-vibration seals;
• N° 2 3/8” automatic air vent valves (art. 700);
• N° 2 1/2” drain valves (art. 172);
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.



Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196	Suggested box art. 197
K081	1”	2	87K081PG32	3/4” EK.	285 mm	500 mm	
K081	1”	3	87K081PH32	3/4” EK.	335 mm	500 mm	
K081	1”	4	87K081PJ32	3/4” EK.	385 mm	500 mm	
K081	1”	5	87K081PQ32	3/4” EK.	435 mm	700 mm	
K081	1”	6	87K081PK32	3/4” EK.	485 mm	700 mm	
K081	1”	7	87K081PR32	3/4” EK.	535 mm	700 mm	
K081	1”	8	87K081PL32	3/4” EK.	585 mm	700 mm	
K081	1”	9	87K081PS32	3/4” EK.	635 mm	850 mm	
K081	1”	10	87K081PM32	3/4” EK.	685 mm	850 mm	
K081	1”	11	87K081PT32	3/4” EK.	735 mm	850 mm	
K081	1”	12	87K081PU32	3/4” EK.	785 mm	1000 mm	
K081	1”	13	87K081PV32	3/4” EK.	835 mm	1000 mm	
K081	1”	14	87K081PW32	3/4” EK.	885 mm	1200 mm	
K081	1”	15	87K081PY32	3/4” EK.	935 mm	1200 mm	
K081	1”1/4	2	87K081DG32	3/4” EK.	300 mm		600 mm
K081	1”1/4	3	87K081DH32	3/4” EK.	350 mm		600 mm
K081	1”1/4	4	87K081DJ32	3/4” EK.	400 mm		600 mm
K081	1”1/4	5	87K081DQ32	3/4” EK.	450 mm		700 mm
K081	1”1/4	6	87K081DK32	3/4” EK.	500 mm		700 mm
K081	1”1/4	7	87K081DR32	3/4” EK.	550 mm		700 mm
K081	1”1/4	8	87K081DL32	3/4” EK.	600 mm		700 mm
K081	1”1/4	9	87K081DS32	3/4” EK.	650 mm		850 mm
K081	1”1/4	10	87K081DM32	3/4” EK.	700 mm		850 mm
K081	1”1/4	11	87K081DT32	3/4” EK.	750 mm		850 mm
K081	1”1/4	12	87K081DU32	3/4” EK.	800 mm		1000 mm
K081	1”1/4	13	87K081DV32	3/4” EK.	850 mm		1000 mm
K081	1”1/4	14	87K081DW32	3/4” EK.	900 mm		1200 mm
K081	1”1/4	15	87K081DY32	3/4” EK.	950 mm		1200 mm

K081 208L



Stainless steel manifold kit with manual/thermostatic regulation. It includes:
• N° 2 ball valves (art. 216);
• Shut-off ball valves with o-ring sealed pipe union
• N° 2 fixing brackets (art.208L) with anti-vibration seals;
• N° 2 3/8” automatic air vent valves (art. 700);
• N° 2 1/2” drain valves (art. 172);
Suitable for 3/4” Euroconus fittings. Choose thermostatic and electrothermal actuators with 28×1,5 connection thread.

Product range

Art.	Head connection size	Outlets	Code	Thread connection	Manifold total length	Suggested box art. 196
K081	1”	2	87K081PG32 208L	3/4” EK.	285 mm	500 mm
K081	1”	3	87K081PH32 208L	3/4” EK.	335 mm	500 mm
K081	1”	4	87K081PJ32 208L	3/4” EK.	385 mm	500 mm
K081	1”	5	87K081PQ32 208L	3/4” EK.	435 mm	700 mm
K081	1”	6	87K081PK32 208L	3/4” EK.	485 mm	700 mm
K081	1”	7	87K081PR32 208L	3/4” EK.	535 mm	700 mm
K081	1”	8	87K081PL32 208L	3/4” EK.	585 mm	700 mm
K081	1”	9	87K081PS32 208L	3/4” EK.	635 mm	850 mm
K081	1”	10	87K081PM32 208L	3/4” EK.	685 mm	850 mm
K081	1”	11	87K081PT32 208L	3/4” EK.	735 mm	850 mm
K081	1”	12	87K081PU32 208L	3/4” EK.	785 mm	1000 mm
K081	1”	13	87K081PV32 208L	3/4” EK.	835 mm	1000 mm
K081	1”	14	87K081PW32 208L	3/4” EK.	885 mm	1200 mm
K081	1”	15	87K081PY32 208L	3/4” EK.	935 mm	1200 mm

Manifold hydraulic characteristics

The system composed of two manifolds, one for flow and one for return, and the circuits that connect them can be schematized as many circuits in parallel, one for each outlet/inlet and a series of elements that make up the single circuit. The total pressure drop of the system can be assimilated to that of the single circuit with the greatest distributed loss, which in turn is given by the sum of the pressure drops of the individual components of that circuit.

$$\Delta P_{circuito} = \Delta P_{CM} + \Delta P_{D} + \Delta P_{T} + \Delta P_{R} + \Delta P_{V} + \Delta P_{CR}$$

Equation 1. The total losses of the single circuit is given by the sum of the losses of the individual components

Where:

ΔP_{CM} = is the flow manifold loss
ΔP_{D} = is the lockshield loss
ΔP_{T} = is the pipe loss
ΔP_{R} = is the radiator loss
ΔP_{V} = is the shut-off valve loss
ΔP_{CR} = is the return manifold loss

The largest $\Delta P_{circuito}$ is equivalent to that of the system.

Conservative evaluation because the entire flow rate of the manifold is being approximated to that of the inlet.

Kv table and Q/ΔP diagram

The Kv value of each component is given by the equation.

$$Kv = \frac{Q}{\sqrt{\Delta P}}$$

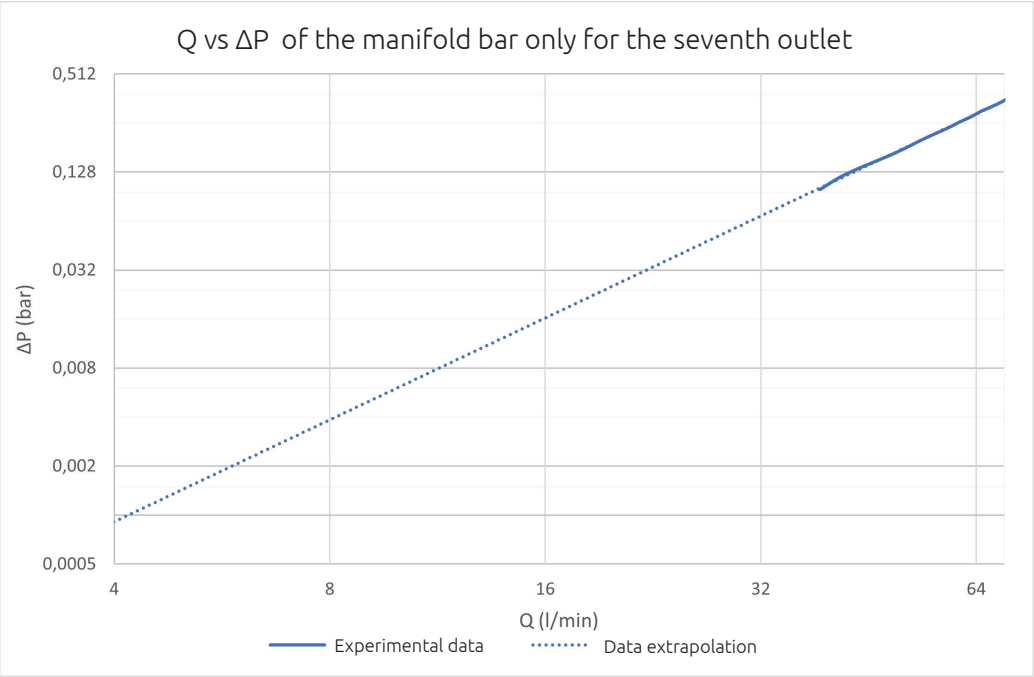
Reversing the equation, we obtain

$$\Delta P \quad \frac{Q^2}{Kv^2}$$

• Q = Circuit flow rate

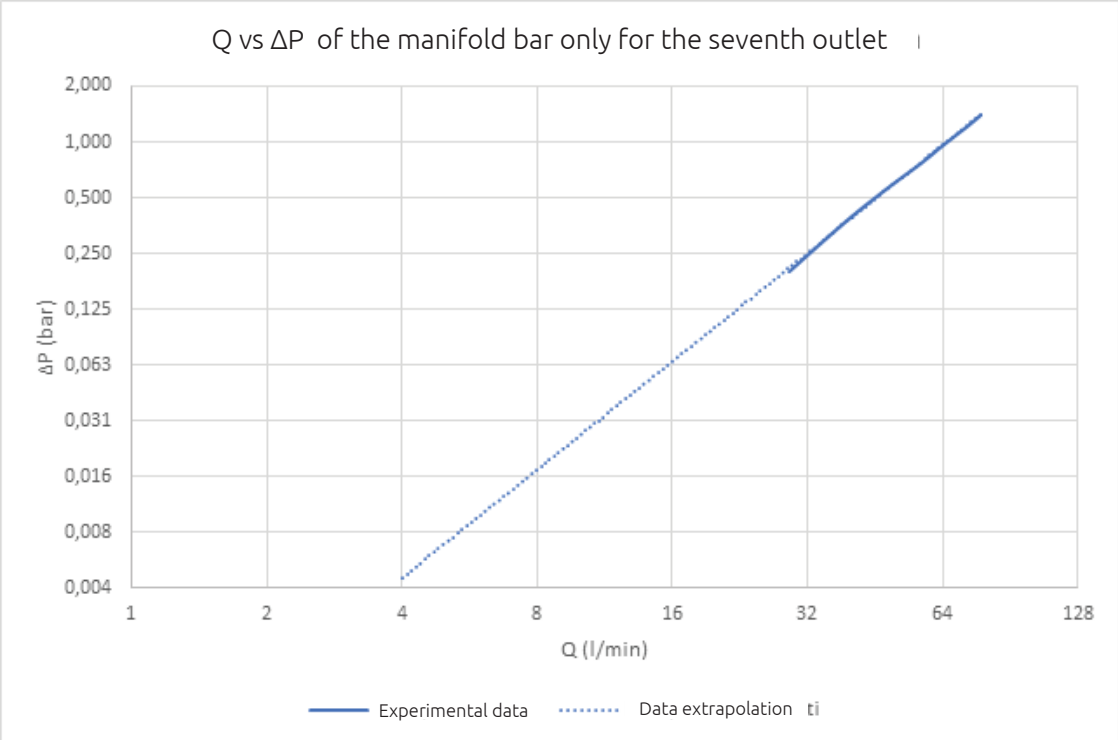
1” version

Outlets	Average Kv
2-15	7,36



1”1/4 Version

Outlets	Average Kv
1-15	3,89

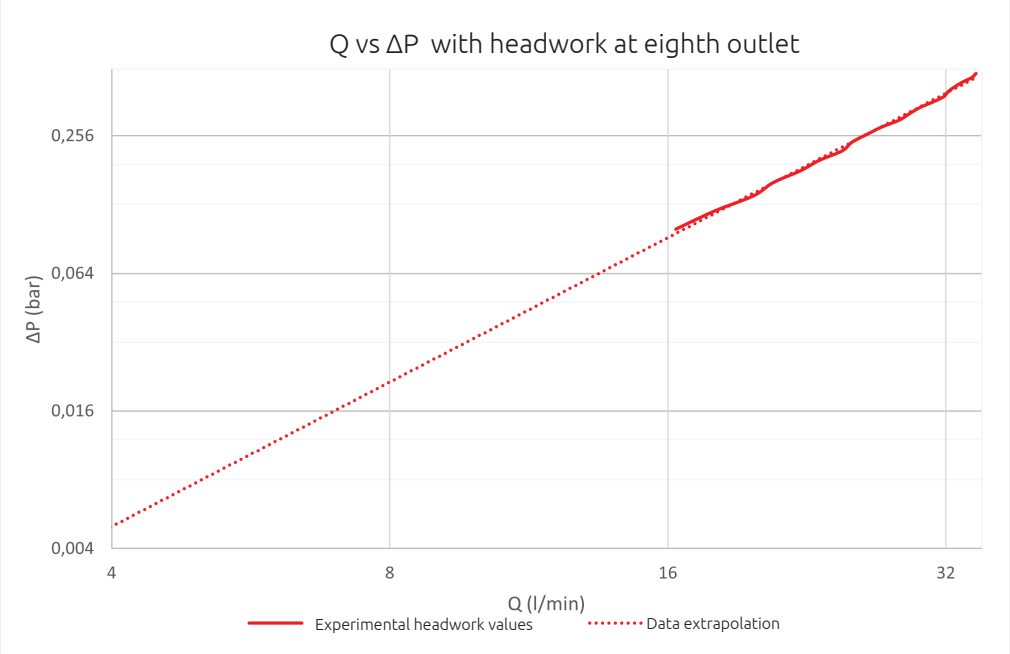


Kv value of the flow meter art. CG1168AE06 for 1” manifolds and art. CG1180AE06 for 1”1/4 manifolds.

No. of turns	Kv
0.25	0.05
0.5	0.3
0.75	0.62
1	0.88
1.5	1.05
2	1.12
2.5	1.16
All open	1.21

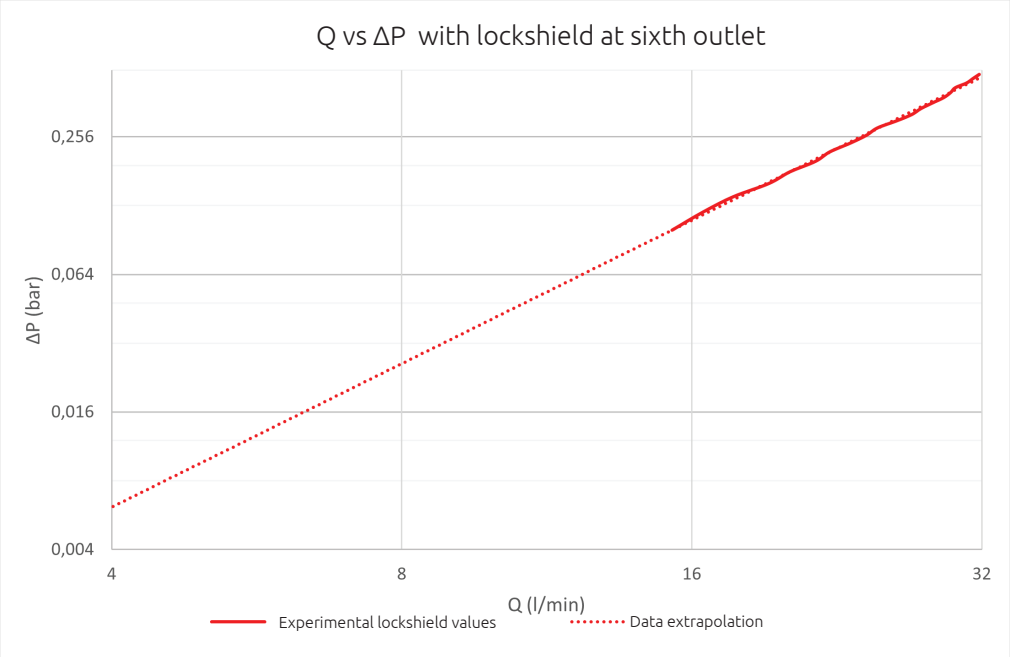
Headwork Kv value art. CG120AE01

No. of turns	Kv
1	0.85
2	1.75
3	2.25
All open	2.9



Calibration lockshield Kv value art. CG0121AE01

No. of turns	Kv
All open	2.59



Use of the calibration lockshield

In order to balance the individual circuits and achieve the desired flow rates in each, calibration lockshields are used, with a pressure drop of ΔPD. Each lockshield must be pre-adjusted based on its pressure drop and the ratio between the pressure drop of its circuit and that of the circuit with the highest pressure drop, which represents the system’s maximum loss.

Practical example of loss calculation

The circuit for which the pressure losses need to be calculated is the most unfavorable one, i.e., the one with the highest losses. Given identical components and tube lengths, the circuit with the highest losses is the one in which the greatest flow rate occurs. The hydraulic characteristics of the circuit components, with a typical assumed flow rate of 1 m³/h = 16.7 l/min, are to be derived from the diagrams above and inserted into Equation 1, which, for convenience, we repeat below.

$$\Delta P_{circuito} = \Delta P_{CM} + \Delta P_{D} + \Delta P_{T} + \Delta P_{F} + \Delta P_{V} + \Delta P_{CR}$$

Now, simulating a typical system, let’s assume that three circuits exit from the supply manifold with the following flow rates:

- Q1= 0.1 m3/h
- Q2= 0.16 m3/h
- Q3= 0.2 m3/h

We also consider that a typical pipe has approximately 14 mm of pressure loss per meter. Following the previous reasoning, we need to calculate the pressure losses for circuit 3, the one with the highest flow rate. Remember that the pressure drop is defined as:

$$Kv = \frac{Q^2}{Kv^2}$$

Let’s calculate the individual contributions:

$$(\Delta P_{CM} + \Delta P_{CR}) = 2 * \frac{(0.46 \frac{m^3}{h})^2}{(7.36 \frac{m^3}{h})^2} \text{ kPa} = 0.78 \text{ kPa}$$

$$\Delta P_D = \frac{(0.2 \frac{m^3}{h})^2}{(2.49 \frac{m^3}{h})^2} \text{ kPa} = 0.64 \text{ kPa}$$

$$\Delta P_F = \frac{(0.2 \frac{m^3}{h})^2}{(1.21 \frac{m^3}{h})^2} \text{ kPa} = 2.73 \text{ kPa}$$

$$\Delta P_T = \frac{14 \text{ mm c.a.}}{m} * 100 \text{ m} = 14 \text{ kPa}$$

$$\Delta P_V = 2 * \frac{(0.46 \frac{m^3}{h})^2}{(41.4 \frac{m^3}{h})^2} \text{ kPa} = 0.03 \text{ kPa}$$

A properly sized pump must guarantee a flow rate of 0.46 m³/h with a head of at least 19 kPa, which is approximately 1.9 meters. For example, the pump P328 has its operating point clearly within the characteristic curves, marked as the Red point in the gray curves in the image below. Therefore, it would be perfectly suitable for a system of this type.