

KCH__AY

DESCRIPTION

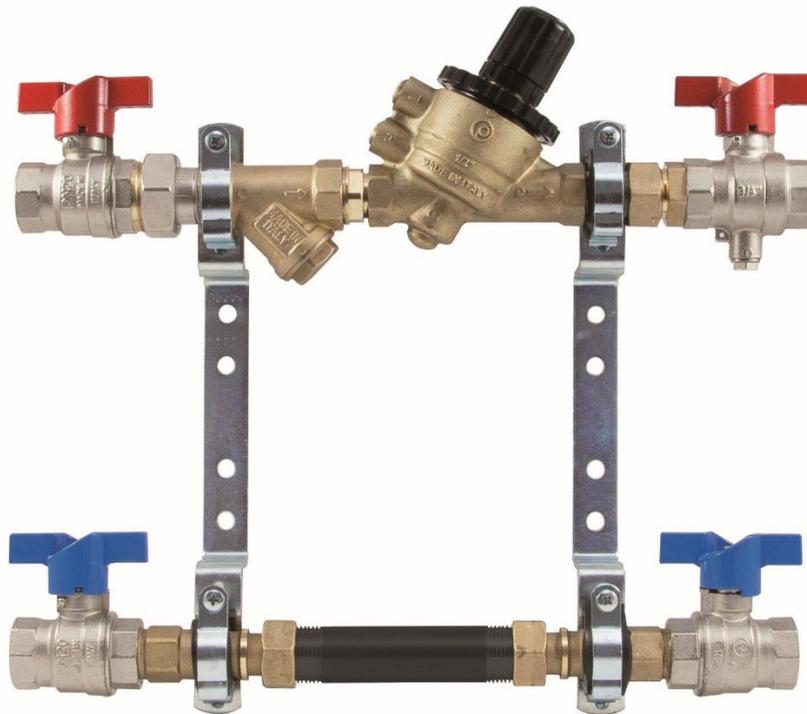
Pettinaroli heat accounting kit **KCH__AY** for central heating installation with PICV **EVOPICV 91-1** to get a perfect control of the lodging heating system.

The Pettinaroli **KCH__AY** is a suitable kit for metering and recording of heat consumption of a single accommodation in a central heating system. The kit allows to implement an accurate temperature control of the lodging by means of the PICV **EVOPICV 91-1**, along with heat consumption metering:

this means the user can get large cost and energy savings and a fair heating cost allocation among all the users.

The kit maximizes the central heating benefits: the best energy efficiency in heat production guaranteeing the freedom of an individual system. Moreover, it can reduce energy waste by balancing instantaneously the water flow rate incoming in the lodging. No waste, max freedom and comfort.

The PICV valve **EVOPICV 91-1** keeps the incoming flow rate constant and it is at the same time a zone valve (if it is coupled with an On/Off room thermostat and actuator) or a control valve (if it is coupled with a proportional room thermostat and actuator).



ADVANTAGES

- Automatic balancing:
 - User: the total incoming flow rate is kept constant
 - Installer: no balancing of main risers
- Accommodation temperature and flow rate control with a single valve
- Quick installation, control valve and zone valve are the same component, ready to be mounted.
- Just one room thermostat to control all apartment temperature
- Lighter design with the ballvalve with integrated probe housing for temperature sensor
- Heat meter: plastic sleeve, 110 mm long which can be removed and replaced with a suitable energy meter, thanks to two 3/4" free nuts.

Please install just energy meters which have the following features:

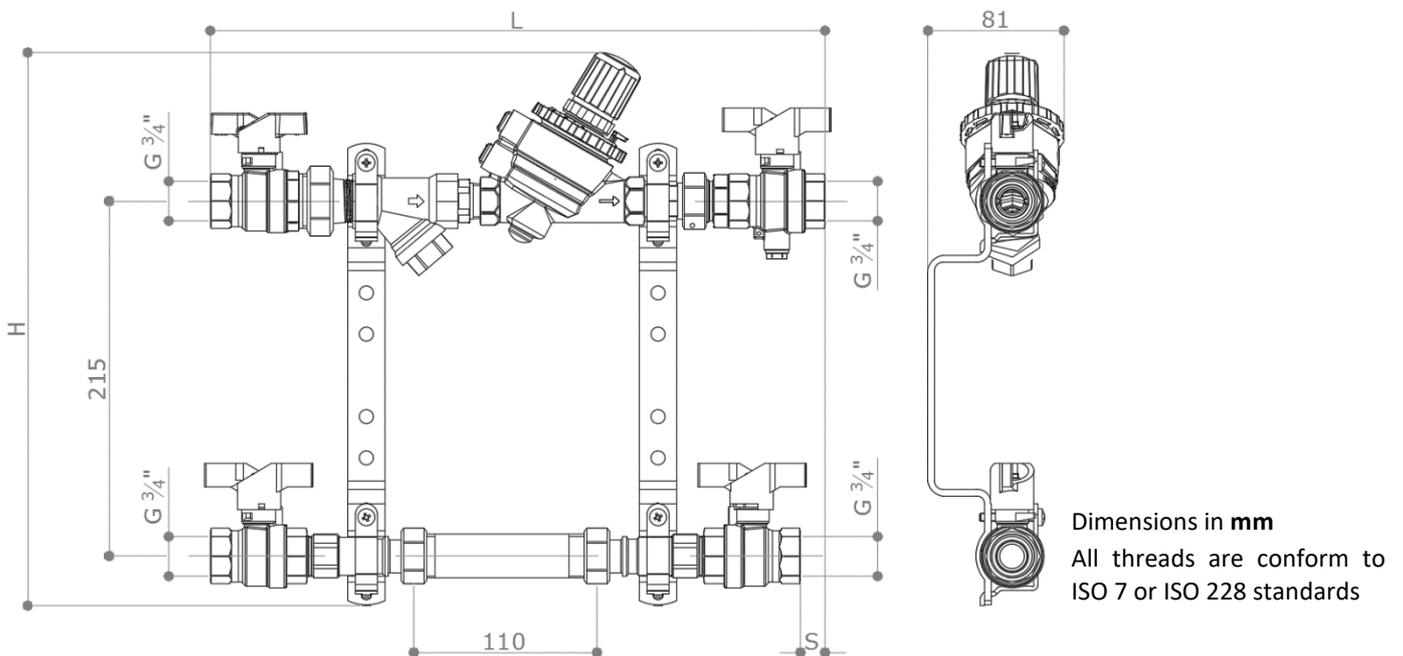
- 110 mm centre to centre distance;
 - Integrated temperature sensor to measure the temperature sensor on the return leg;
 - External temperature sensor (to be placed on the flow leg) compatible with probe housing connection (see details below);
 - Connections: 3/4" flat end.
- High flow rate range (15 l/h to 1500 l/h) according to the variation.

HOW THE METERING KIT IS MADE

- 2 x 52CEB ballvalve with blue butterfly
- 1 x 52CES ballvalve with red butterfly handle and probe housing for temperature sensor (not included); supplied with cap
- 1 x 52CE/3 ballvalve with red butterfly handle
- 1 x brass Y strainer
- 1 x PICV valve **EVOPICV 91-1** to be selected among:
 - 91VL1 1/2": max flow rate 150 l/h
 - 91L1 1/2": max flow rate 600 l/h
 - 91H1 1/2": max flow rate 780 l/h
 - 91L1 3/4": max flow rate 1000 l/h
 - 91H1 3/4": max flow rate 1500 l/h
- 1 x plastic sleeve
- 2 x brackets to install the kit into the wall box

ENERGY METER NOT INCLUDED

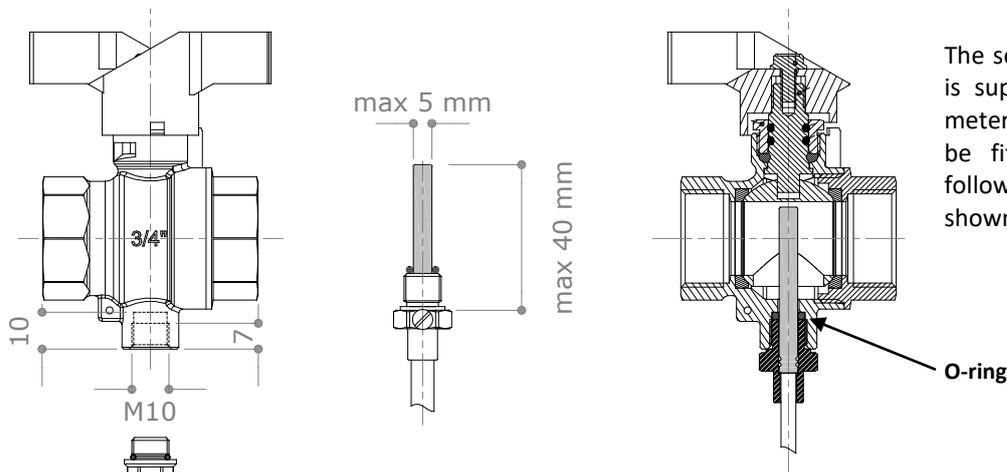
DIMENSIONS



	KCH01AY	KCH06AY	KCH08AY	KCH10AY	KCH15AY
Flow rate	150 l/h	600 l/h	780 l/h	1000 l/h	1500 l/h
L	369	369	369	374	374
S	15	15	15	16	16

	H
Without actuator	334
With A542O2, A542O4, A544O2, A544O4	357
With VA7481, VA7482	383

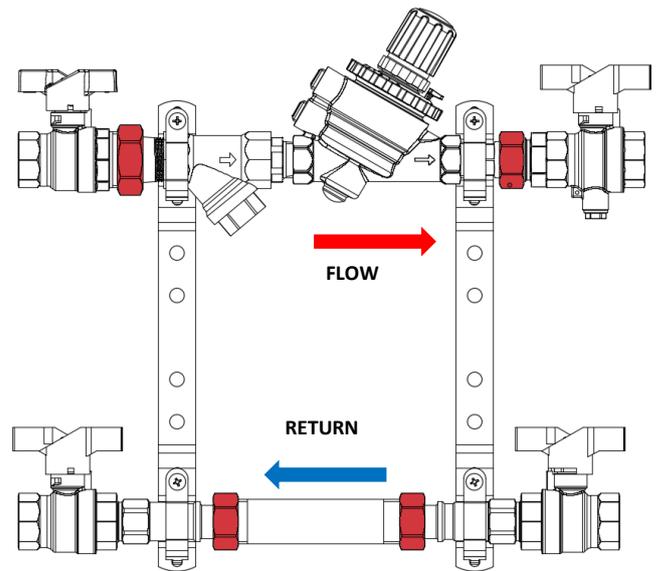
Connection detail of the temperature sensor



The sensor is not included. It is supplied with the energy meter. Be sure it is suitable to be fitted onto the probe, following the prescriptions shown beside.

INSTALLATION

Arrows point the flow direction supposing that the kit is connected to the main on the left side and to the lodging on the right ones. If the rise reaches the kit on the right side, the higher part of the kit has to be removed from brackets and turned 180°. The lower part has not a preferential flow direction (unless the energy meter is installed). Following the flow direction reported on strainer, PICV and energy meter (once it is installed) is mandatory. To install the kit, loosen the free nuts indicated in the picture, mount the 4 valves to pipes ensuring the seal with suitable sealants and place two sections between ballvalves; tighten free nuts with maximum torque 50 Nm.



TECHNICAL FEATURES

Nominal pressure*	10 bar	Fluid*	Water or water-glycol 50%
Max temperature*	90°C	Filtering capacity	Ø 500 µm
Min differential pressure	da 25 kPa a 35 kPa	Connections	G 3/4" Female
Max differential pressure	600 kPa	Probe housing	M10 Female
Centre to centre distance meter	110 mm	Energy meter connection	3/4" flat end

PICV PRESETTING RANGE

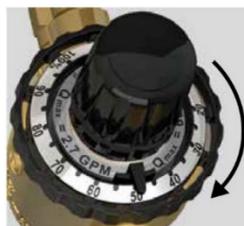
The maximum flow rate delivered by the PICV can be preset during the commissioning by means of the black graduated gear. Follow the table below to know flow rates and presetting range of every available PICV:

Model	KCH01AY	KCH06AY	KCH08AY	KCH10AY	KCH15AY
	150 l/h 91VL1 1/2"	600 l/h 91L1 1/2"	780 l/h 91H1 1/2"	1000 l/h 91L1 3/4"	1500 l/h 91H1 3/4"
Pre-setting %	Flow rate [l/h]				
100	150	600	780	1000	1500
90	135	540	702	900	1350
80	120	480	624	800	1200
70	105	420	546	700	1050
60	90	360	468	600	900
50	75	300	390	500	750
40	60	240	312	400	600
30	45	180	234	300	450
20	30	120	156	200	-
10	15	60	78	100	-

In order to preset the valve and install the actuator, follow the instruction below:



Lift up the lock pin to unlock the selector gear



Turn the selector wheel to the target position



Push the lock pin to lock the selector in the final position

* whit plastic sleeve on. Verify technical specifications of the energy meter.



Assembling of valve and thermoelectric actuator



Assembling of valve and electro mechanic actuator



Correct (SX) and incorrect (DX) handle removal



For more information please refer to PICV technical manual available on Pettinaroli website www.pettinaroli.com.

ACCESSORIES

- *Thermoelectric actuators:*

24 V	230V
A544O2 (on/off, 2 wires)	A542O2 (on/off, 2 wires)
A544O4 (on/off, 4 wires and microswitch)	A542O4 (on/off, 4 wires and microswitch)
A544P3 (proportional, 3 wires)	



- *Electro mechanical actuators:*

24 V	230V
VA7481 (on/off and 3 floating)	VA7481 (on/off and 3 floating)
VA7482 (proportional)	



- *Analogic room thermostat:*

24 V	230V
T24HC (no display)	T22HC (no display)



- *Digital room thermostat:*

24 V	230V
T24HCD (with display)	T22HCD (with display)



- *Digital room chrono-thermostat:*

24 V	230V
T24HCDT (with display and timer)	T22HCDT (with display and timer)



- *Wall box C70*

Suggested size:

- Only for **KCH__AY: C70/2** (600 x 450 x 110÷165 mm); we suggest to install the box in the wall with at least 120 mm depth (needed depth depends on energy meter dimensions)



- *Wall box C80*

Suggested size:

- Only for **KCH__AY: C80/2** (600 x 700 x 105÷140 mm); we suggest to install the box in the wall with at least 120 mm depth (needed depth depends on energy meter dimensions)



STRAINER MAINTENANCE

Higher the amount of dirt in the water, more frequent the filter maintenance. By the way, a yearly strainer cleaning is suggested in order to avoid high pressure losses and permanent scales development on the metal mesh. Strainer cleaning has to be done following this path:

- Close the filter isolating ballvalves (upstream and downstream);
- Open the strainer cap and remove the metal net;
- Clean the metal net by using running water and a plastic brush;
- Visual check of the filtering surface (in case of strainer damage or permanent scales, replace the metal net);
- Place the strainer in the cap and tighten the cap to the filter body;
- Open the filter isolating ballvalves.

WARNING: in new installations or generally after the system filling phase, it is highly suggested to clean the filter after a week of operation in order to remove the dirt produced by installation remains.

