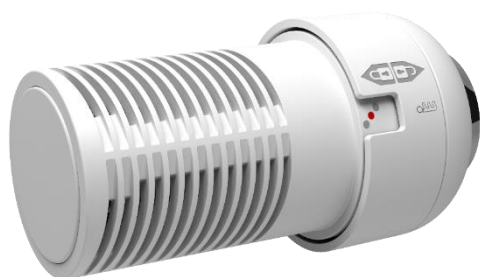


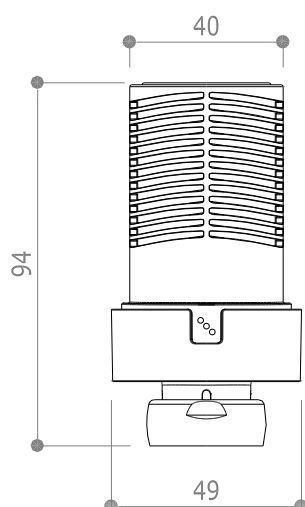
DESCRIPTION

**108L**

"Optimax" thermostatic head with liquid sensor incorporated with temperature locking device, for all Pettinaroli thermostatic valves (M28 x 1,5).

The actuator is certified **EN 215** n°49 standard when mounted on 760P (DN10, DN15) or 761P (DN10, DN15) valves.

DIMENSIONS



The thermostatic head is provided with two flat half-shells to prevent disassembly of the head (which allows the user to freely manipulate the temperature selector, but not the removal of the same) and with two rounded half-shells to lock the head at a given temperature

MATERIALS

House parts	ABS
Thermostatic sensor	Liquid
Spring	AISI 302
Ring nut	CW614N (DIN 50930 part.6) CuZn39Pb3
Internal components	POM
Inner locking ring	PP

FULL RANGE

106CN	Wax sensor
107L	Liquid sensor
107LHN	Liquid sensor, for Heimeier connection
107LR	Liquid sensor with anti theft device
107LOD	Liquid sensor, for Danfoss connection or similar
107LD	Embedded remote liquid sensor, regulator incorporated
107LKIT	Embedding remote liquid sensor
108L	Liquid sensor - EN 215 n°49 certified
109L	Liquid sensor

APPROVAL

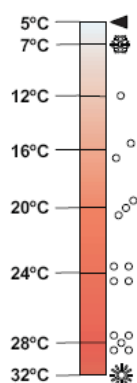


028 Certificate EN 215 n°49



Certificate 051

TECHNICAL DATA



The following technical details refer to the actuator mounted on 760P (DN10, DN15) and 761P (DN10, DN15) valves.

Max. differential pressure	0.8 bar
Differential pressure influence (D)	0.25K
Liquid sensor hysteresis (C)	0.43K
Flow temperature influence (W)	0.24K
Response time (Z)	20 minutes
Nominal flow rate 760P (qmN)	155 Kg/h
Nominal flow rate 761P (qmN)	175 Kg/h
Max temperature	110°C
7°C min. setting of the temperature selector	
Variation Temporelle Δθv (NF 433)	0.3 K
Control accuracy CA (EN 215/2019)	0.2 K
Energy Efficiency Indicator	< 0.50 Class A

$$\Delta P = \left[\frac{Q}{Kv} \right]^2$$

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

Where

Q is the flow rate [m³/h]

Kv is the flow rate factor [m³/h]

ΔP is the pressure drop across the valve [bar]

Angle

$$q_{mNH} = 155 \text{ kg/h}$$

$$a = 0.92$$

ΔT [°C]	Kv	
	3/8"	1/2"
1K	0.28	0.28
2K	0.54	0.54
T.O.	1.60	1.70

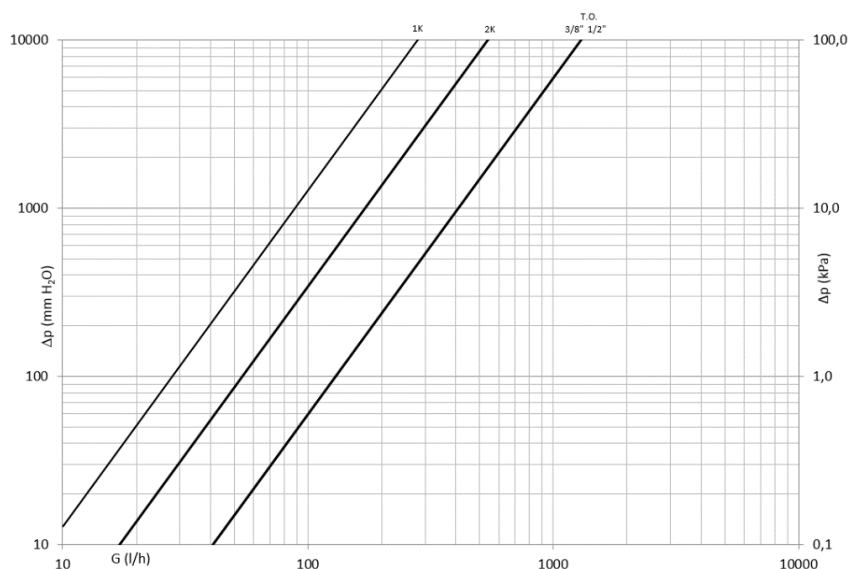
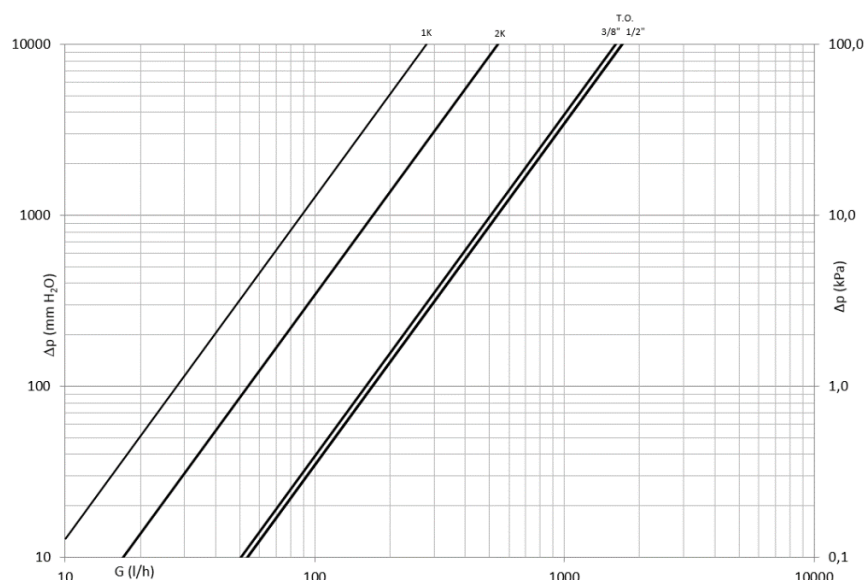
Straight

$$q_{mNH} = 175 \text{ kg/h}$$

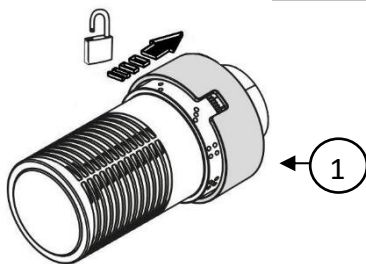
$$a = 0.81$$

ΔT [°C]	Kv	
	3/8"	1/2"
1K	0.28	0.28
2K	0.54	0.54
T.O.	1.30	1.30

T.O.: Total Open

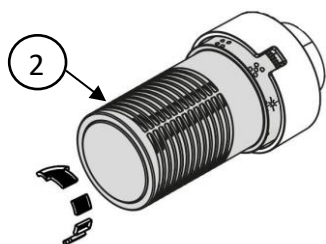


INSTALLATION INSTRUCTIONS

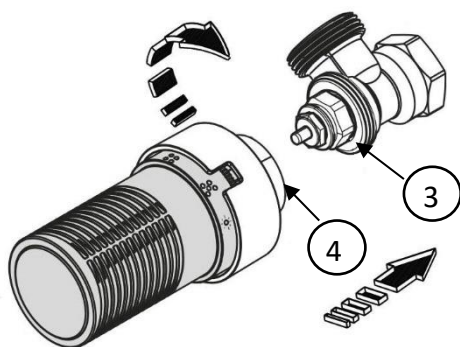


The flow direction has to be in accordance with the arrow on the valve body. The suggested thermostatic head installation is the horizontal position;

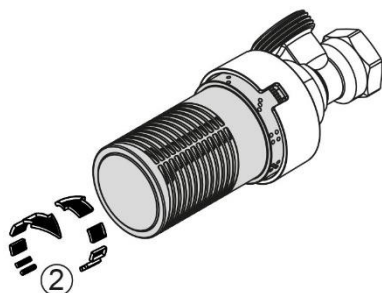
1. Slide the cursor forward



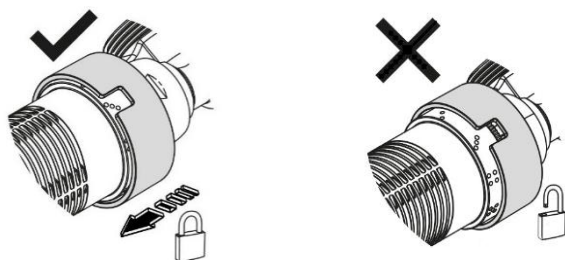
2. Turn the operating device (2) counterclockwise until you reach the position "completely open" identified by the symbol ☀



3. insert the hexagon (3) of the headwork into the thermostatic head and screw the nut M28 x 1.5 (4)



4. Select the desired position by turning the device



5. NB: Return the cursor to its original position.

During summer time it is advisable to set the thermostatic head to completely open position.

To lock the head to a given temperature, select a position, and then apply the two rounded half-shells.

To prevent the removal of the head, while guaranteeing the possibility of selecting different positions, apply the two rounded half-shells.

