



TIEMME BOX 1 (Art.4490)
TIEMME BOX 2 (Art.4491)
TIEMME BOX 3 (Art.4492)

Built-in solutions for the regulation of underfloor or underfloor/radiators combined heating circuits

Technical description

TIEMME BOXES guarantee the temperature regulation of a single zone of the underfloor or wall heating system also in centralized systems.

The possibility to accurately regulate each service results non only in having the correct environmental comfort, but also in consuming the right amount of energy, in order to reduce energy and thermal consumption of the installation.

In particular:

4490001 TIEMME BOX 1 allows the heating regulation based on the room temperature

4490002 TIEMME BOX 2 limits the return flow temperature of the heating circuit (RTL)

4490003 TIEMME BOX 3 adjusts the environmental comfort and limits the return flow temperature (RTL)

TIEMME BOXES are equipped with inspectionable box.

Technical Features

Max operating temperature:	90 °C *
Max operating pressure:	10 bar
Fluid:	water (with glycol <50%)
Connections:	G 3/4" Eurocone

* Make sure that the flow temperature of the system is suitable for the functioning of an underfloor heating system.

Finish

All models are available with lid and external knob in 2 versions: white or chrome-plated.

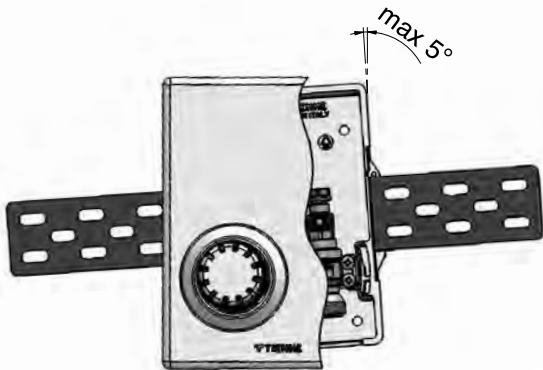
	Code	Room temperature monitoring	It limits the return flow temperature	White	Chrome-plated (on request)
TIEMME BOX 1	4490001	X		X	
	4490021	X			X
TIEMME BOX 2	4490002		X	X	
	4490022		X		X
TIEMME BOX 3	4490003	X	X	X	
	4490023	X	X		X

Installation

You can install on all types of wall (both brickwork and plasterboard).

The lid allows the compensation of an eventual out of square assembly of the box up to 5°

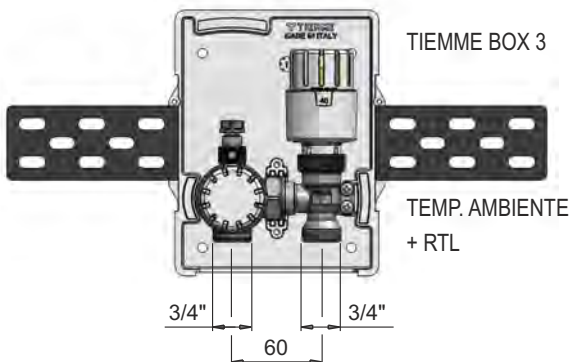
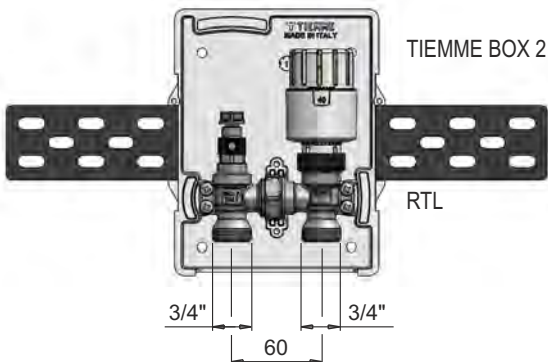
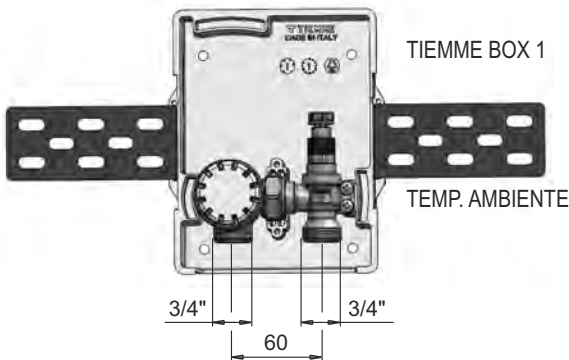
The box and its flanges allow the compensation of the recess depth up to 30 mm.



Notes for the project design

Depending on the pressure drop in the tubes, all Tiemme BOX models are suitable for heating surfaces up to 20 square meters (200mm pitch, no.1 radiant circuit). For each heating circuit, the length of the internal tubes with a diameter of 12 mm (16x2 mm) must not exceed 100 meters.

In heating surfaces >20 square meters and/or with tubes with a length of >100 meters, a T-piece fitting can be used, making certain that the lengths of each of the two circuits are the same in order to simplify hydraulic self-balancing. It is recommended that the total pressure drop (collector + Tiemme box) does not exceed the indicative value of 25kPa or by the value defined by the thermal engineer who is responsible for the project design.





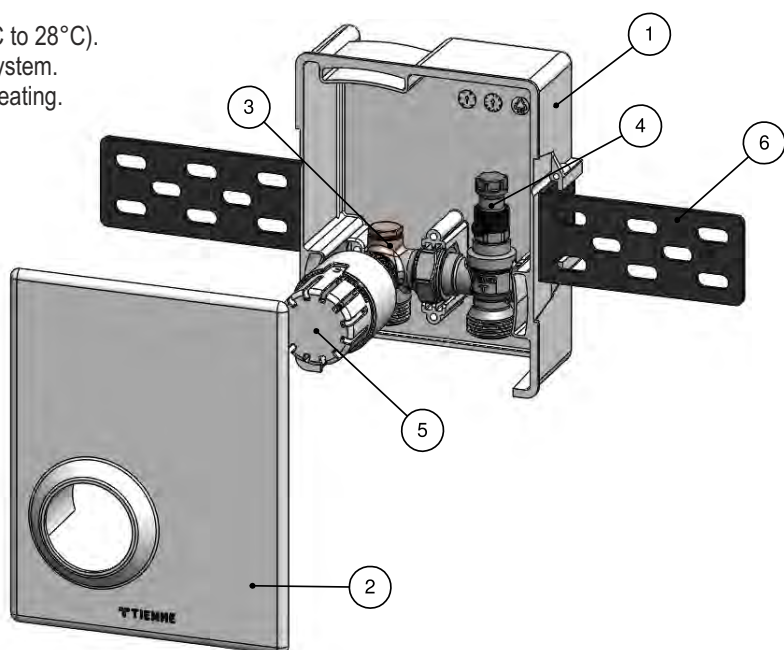
TIEMME BOX 1 (Art. 4490)

Description

It allows the room temperature regulation of a single zone (regulation from 6°C to 28°C).
It can be installed both on flow and on return of the low-temperature heating system.
It can be used both on spiral and serpentine circuits with underfloor and wall heating.

Composed of:

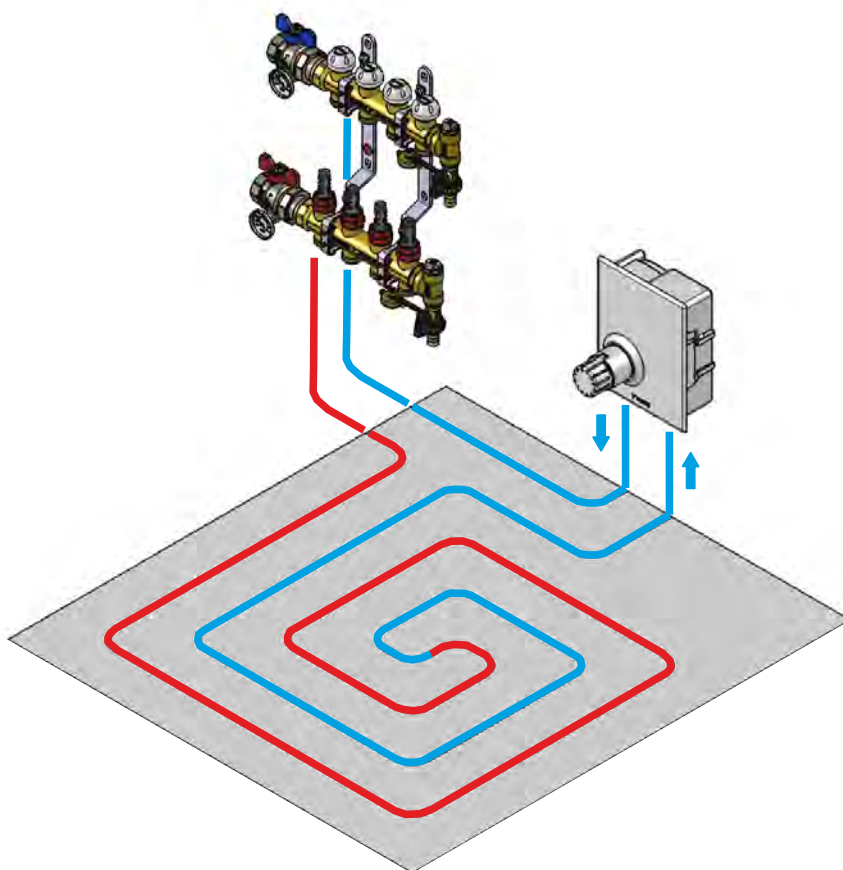
- ① Casing for built-in installation
- ② Cover plate
- ③ Thermostatic valve with presetting for room temperature and flow rate regulation
- ④ Vent
- ⑤ Thermostatic head
- ⑥ Fixing bracket



Functioning

The room temperature regulation is carried out through the use of a thermostatic valve with continuous proportional regulation (art.9553) included in the box. When the room temperature increases or decreases, the shut-off valve inside the TIEMME BOX opens or closes. When the desired room temperature in the environment has been reached, the circuit closes completely. If the room temperature decreases, the circuit is reopened to allow the passage of the heating fluid.

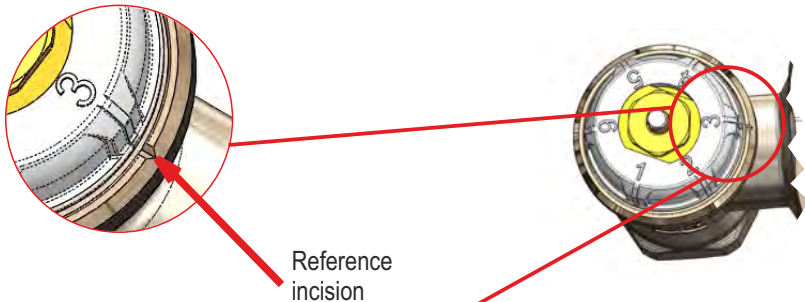
Application example





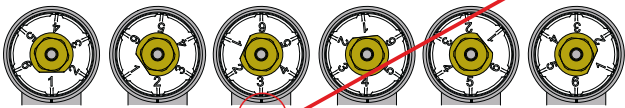
Instructions for room temperature and flow rate regulation

The thermostatic valve for the room temperature regulation is equipped with spare headwork with fixed-orifice pre-setting that, by means of a 6-position selector, allows the partialization of the water flow rate, with the result of balancing the system in an accurate way.



Kv TABLE

Position:



Kv value:

0,09 0,14 0,2 0,3 0,55 0,8

The thermostatic head allows adjusting the room temperature in a simple and intuitive way.
Adjustment range:6 – 28°C
Antifreeze intervention:6°C

Adjustment scale

I	...	I	...	I	...	I	...	I	...	I		
0		❄		1		2		3		4		5
↓		↓		↓		↓		↓		↓		↓
OFF		6°C		12°C		16°C		20°C		24°C		28°C



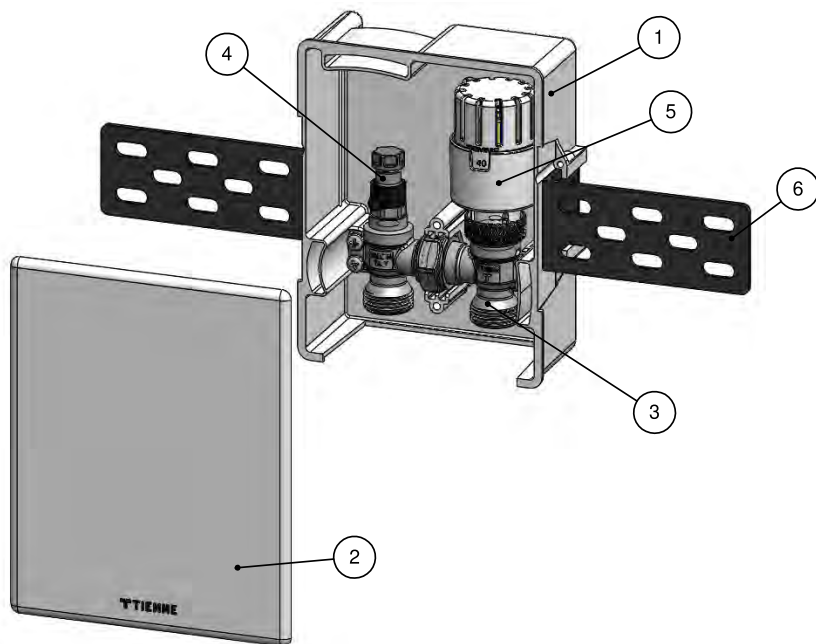
TIEMME BOX 2 (Art. 4491)

Description

It guarantees the limitation of the heating circuit water temperature (regulation from 0°C to 50°C).
It can be installed on the return flow of the underfloor heating system
It can be used both on spiral and serpentine circuits.

Composed of:

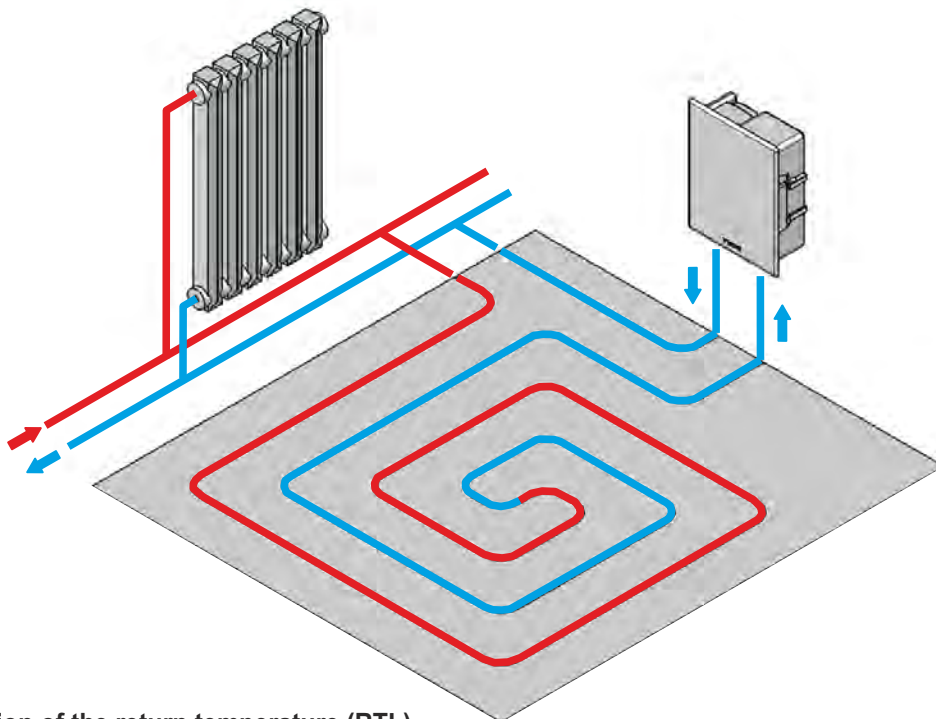
- ① Casing for built-in installation
- ② Cover plate
- ③ Thermostatic valve for the limitation of the return temperature (RTL)
- ④ Vent
- ⑤ Thermostatic head
- ⑥ Fixing bracket



Functioning

The heating system fluid temperature regulation is carried out through the use of a thermostatic valve with continuous proportional regulation that detects temperature through thermal conduction.
When the desired return fluid temperature of the system has been set, through the rotation of the thermostatic head knob, the fluid passage will be closed every time its temperature is higher than the set limit and it will be reopened when temperature decreases.

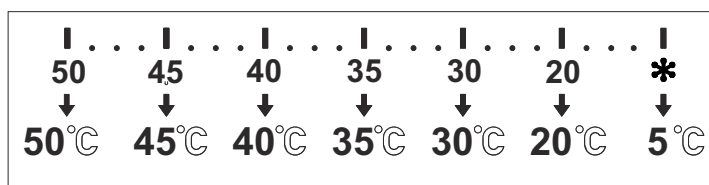
Application example



Instructions for the limitation of the return temperature (RTL)

The thermostatic head allows limiting the heating circuit return temperature in a simple and intuitive way.
Adjustment range: 0 – 50°C

Adjustment scale





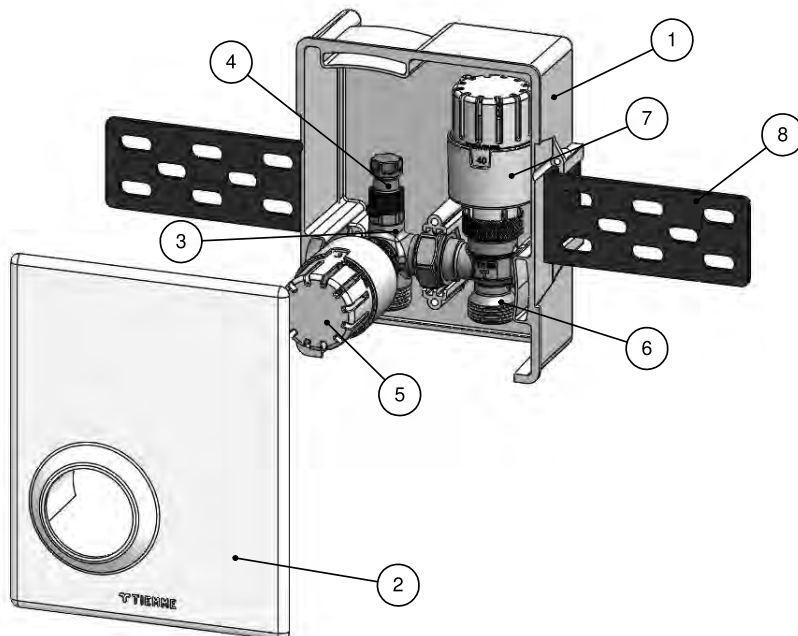
TIEMME BOX 3 (Art.4492)

Description

It allows the room temperature regulation of a single zone (regulation from 6°C to 28°C) and guarantees the limitation of the heating circuit water temperature (regulation from 0°C to 50°C). It can be installed on the return flow of the underfloor heating system. It can be used both on spiral and serpentine circuits.

Composed of:

- ① Casing for built-in installation
- ② Cover plate
- ③ Thermostatic head with pre-setting for room temperature and flow rate regulation
- ④ Vent
- ⑤ Thermostatic head
- ⑥ Thermostatic valve for the limitation of the return temperature (RTL)
- ⑦ Thermostatic head
- ⑧ Fixing bracket



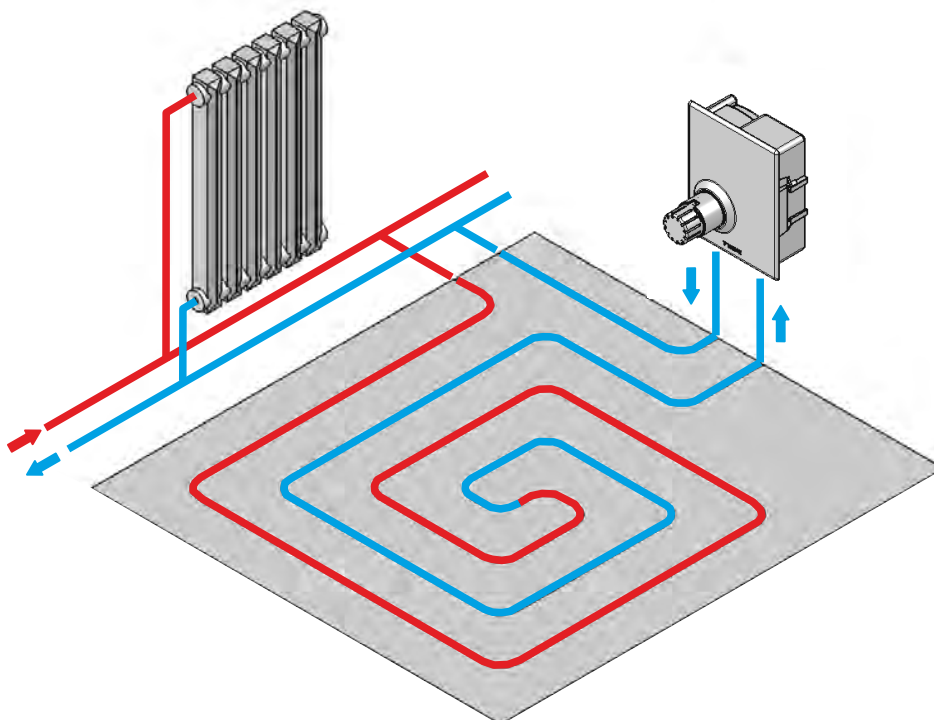
Functioning

The room temperature regulation is carried out through the use of a thermostatic valve with continuous proportional regulation (art.9553) included in the box. When the room temperature increases or decreases, the shut-off valve inside the TIEMME BOX opens or closes. When the desired room temperature in the environment has been reached, the circuit closes completely. If the room temperature decreases, the circuit is reopened to allow again the passage of the heating fluid.

The heating system fluid temperature regulation is carried out through the use of a thermostatic valve with continuous proportional regulation through thermal conduction.

When the desired return fluid temperature of the system has been set, through the rotation of the thermostatic head knob, the fluid passage will be closed every time its temperature is higher than the set limit and it will be reopened when temperature decreases.

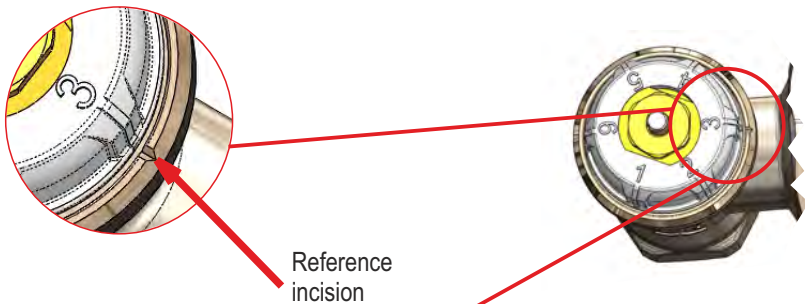
Application example





Instructions for room temperature and flow rate regulation

The thermostatic valve for the room temperature regulation is equipped with spare headwork with fixed-orifice pre-setting that, by means of a 6-position selector, allows the partialization of the water flow rate, with the result of balancing the system in an accurate way.



Kv TABLE

Position:						
	1	2	3	4	5	6
Kv value:	0,09	0,14	0,2	0,3	0,55	0,8

The thermostatic head allows adjusting the room temperature in a simple and intuitive way.
Adjustment range:6 – 28°C
Antifreeze intervention:6°C

Adjustment scale

I	...	I	...	I	...	I	...	I	...	I	...	I
0		❄		1		2		3		4		5
↓		↓		↓		↓		↓		↓		↓
OFF		6°C		12°C		16°C		20°C		24°C		28°C

Instructions for the limitation of the return temperature (RTL)

The thermostatic head allows limiting the heating circuit return temperature in a simple and intuitive way.
Adjustment range:0 – 50°C

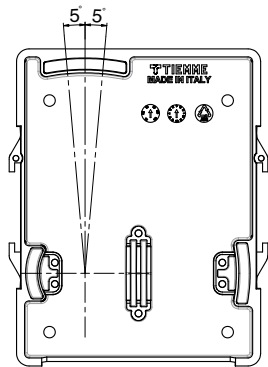
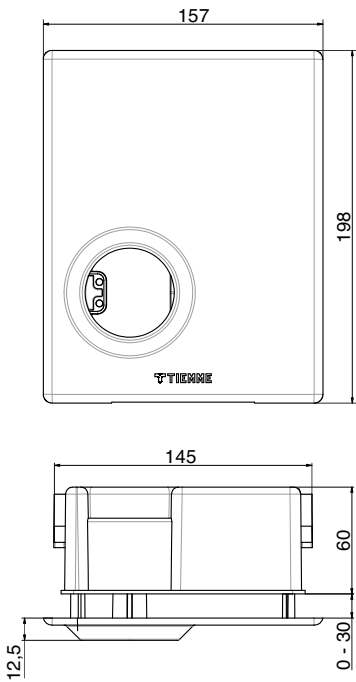
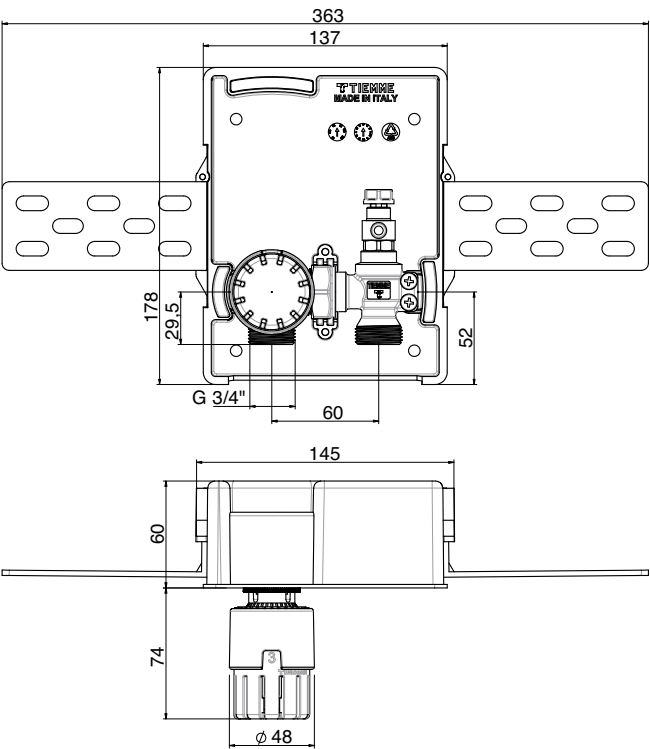
Adjustment scale

I	...	I	...	I	...	I	...	I	...	I	...	I
50		45		40		35		30		20		*
↓		↓		↓		↓		↓		↓		↓
50°C		45°C		40°C		35°C		30°C		20°C		5°C

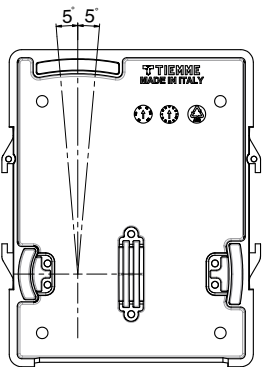
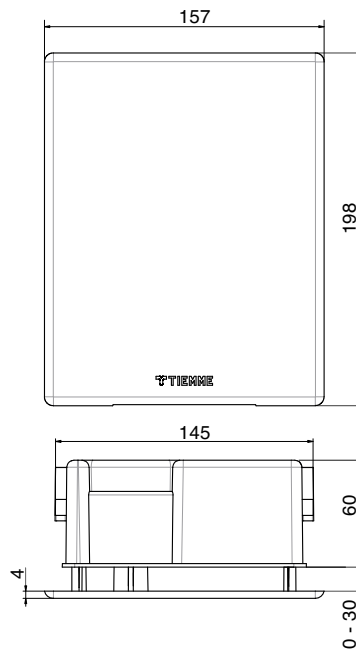
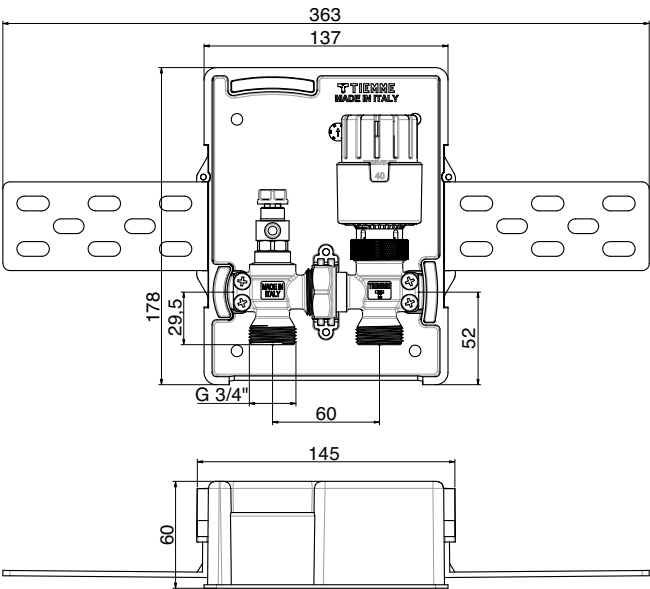


Dimensions

TIEMME BOX 1

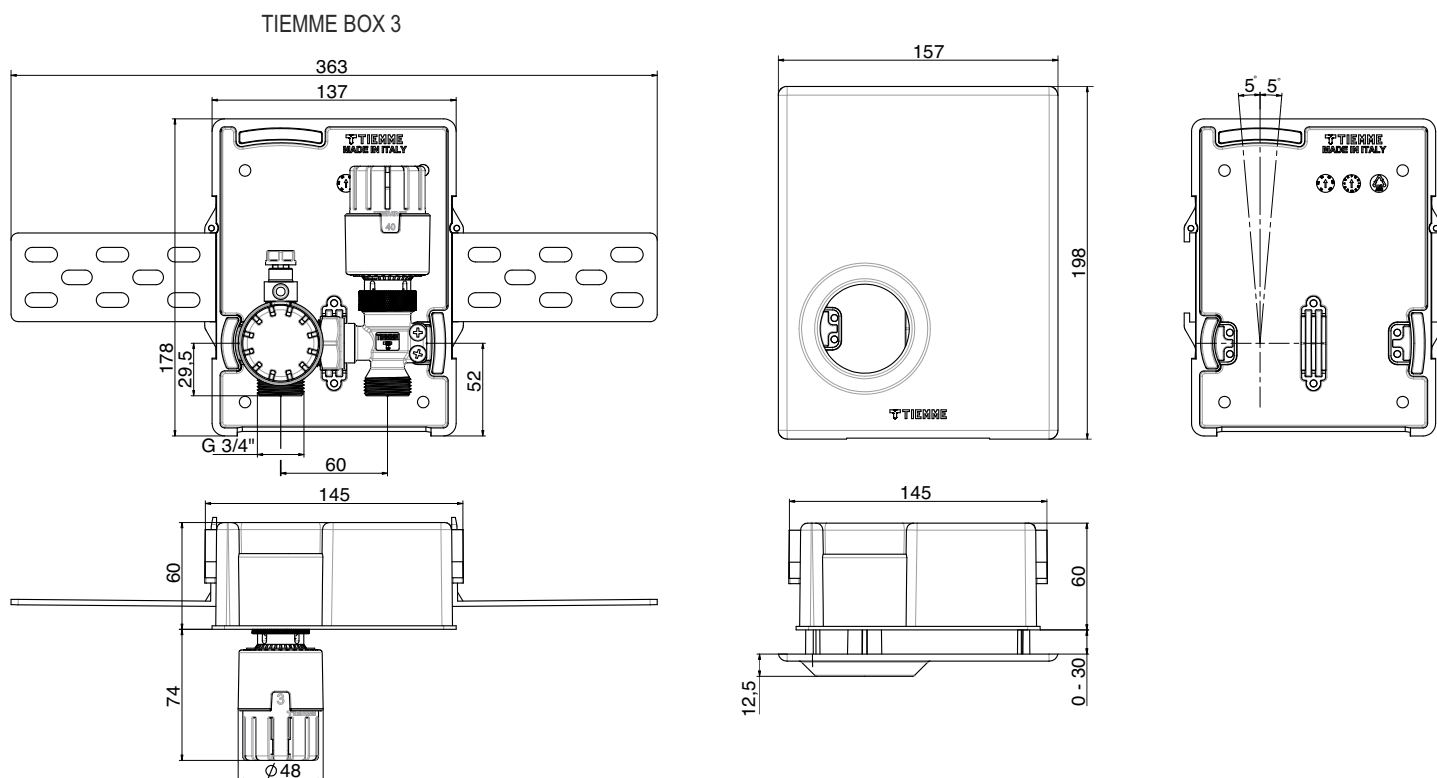


TIEMME BOX 2

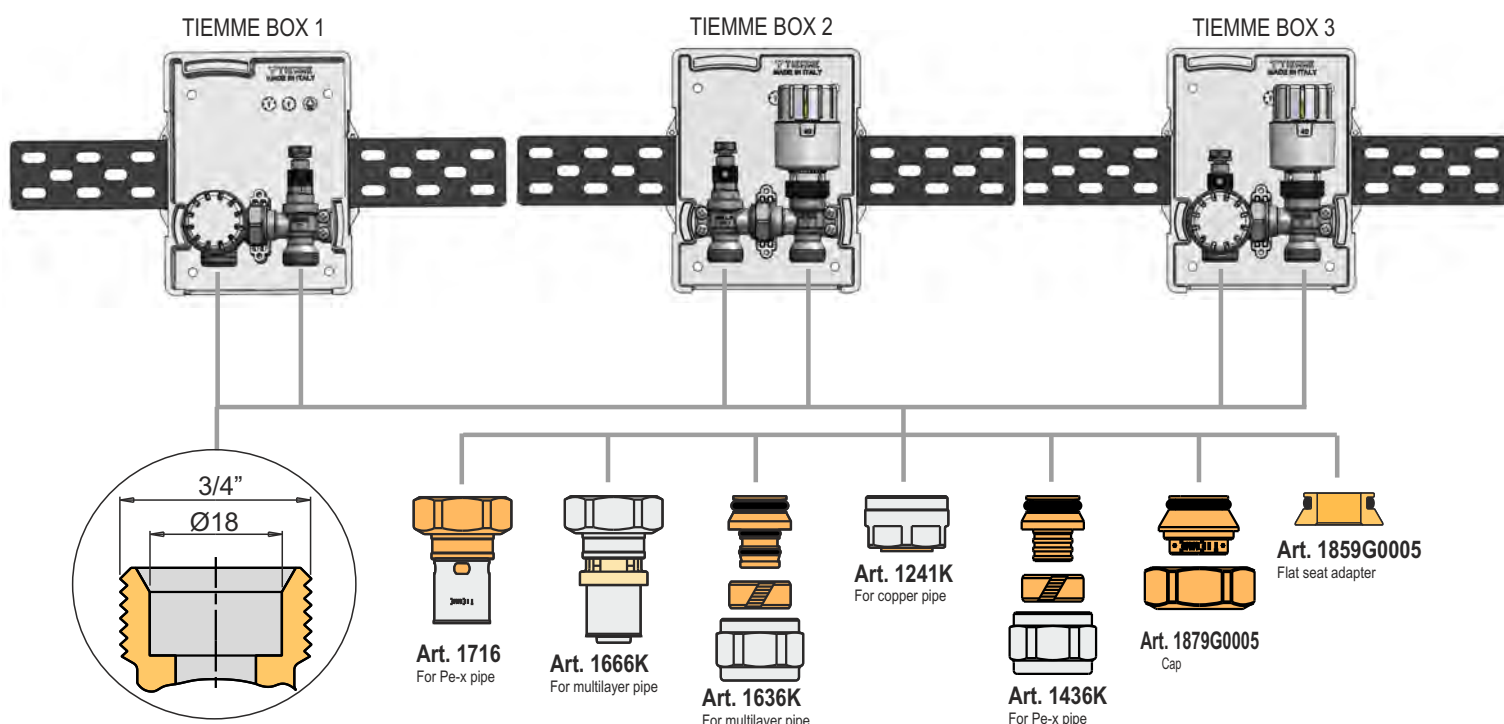




Dimensions



CONNECTIONS GUIDE



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