



te-sa
heating passion



ISO 9001 Cert. n. 2325

100-EN01

Thermostatisable valves Thermostatic controls Series 11

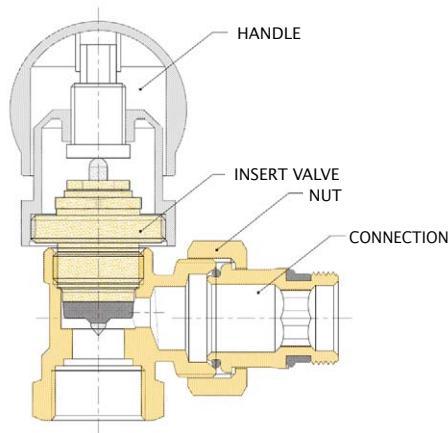
Te-sa thermostatic valves are ideal for regulating individual room temperatures as they consist of a thermostatisable valve combined with a thermostatic head which vary the flow of the heat transfer fluid according to changes in the ambient temperature.

Each heating fixture kit is composed of a thermostatic head art. 116, a thermostatisable valve Series 11 and a lockshield Series 10 and is available in various diameters.

The thermostatic heads are proportional regulators that do not require any auxiliary power for operation.

An integrated liquid sensor adjusts the ambient temperature by varying the flow of the heat transfer fluid. Their stylish chrome-plated or white High Tech design makes them suitable for any environment. **Te-sa** thermostatisable valves are supplied as standard with a manual control knob.

Adjustment is made according to the number of turns by which the valve is opened, as shown in the graphs below.



No particular force is required to open and close the valves and it is advisable to adjust them delicately to prevent damaging the various components over time. The thermostatic valve control device, or temperature regulator, consists of a liquid sensor that expands or contracts as the ambient temperature varies.

When the temperature increases, the sensor expands varying the position of the control pin and causing the obturator stem to restrict the passage of the heat transfer fluid; conversely, when the temperature decreases the sensor contracts and opens the valve passage assisted by a contrast spring.

Regulation is proportional to the temperature detected by the sensor and is obviously faster and more accurate if the sensor is positioned within the ambient air flow.

Te-sa produces the following thermostatic heads to meet most installation requirements:

Art. 116 - head with integrated sensor for installation on heating elements; suitable for radiators installed in positions in which the ambient air flow is not restricted.

Art. 116S - head with remote sensor with 2 m connection wire; suitable for radiators located in recesses or behind curtains that limit ambient air circulation. The sensor is mounted on a free part of the wall that receives ambient air movement.

A characteristic advantage of thermostatisable valves is that the thermostatic heads can be installed after installation of the heating system.



Technical specifications: valves and lockshields

Materials:

Body:	Brass UNI EN 12165 - CW617N
Insert valve:	Brass UNI EN 12164 - CW614N
O-Rings:	EPDM Perox
Valve knob:	ABS
Lockshield cap:	ABS

Operating specifications:

Useable fluids:	Water - Glycolated solutions
Maxim glycol percentage:	30%
Maximum operating pressure:	10 bar
Maximum operating temperature:	100 °C

Thermostatic control specifications

Conformity: EN 215

Thermostatic sensor: liquid type TWB-400

Rated pressure: PN 10

Temperature adjustment range: 8-28°C

Hysterisis: 0.8 °K

Recommended installation position: horizontal

▲	❄	1	2	3	4	5
0°C	8°C	12°C	16°C	20°C	24°C	28°C

▲ = full shut-off position

❄ = antifreeze protection position

Temperature setting

The desired ambient temperature is set by aligning the positions from ❄ to 5 with the arrow indicated on the head.

It should be noted that the temperature settings, which are factory calibrated, may not correspond to the actual ambient temperature value as this varies in relation to the position in which the head is installed.

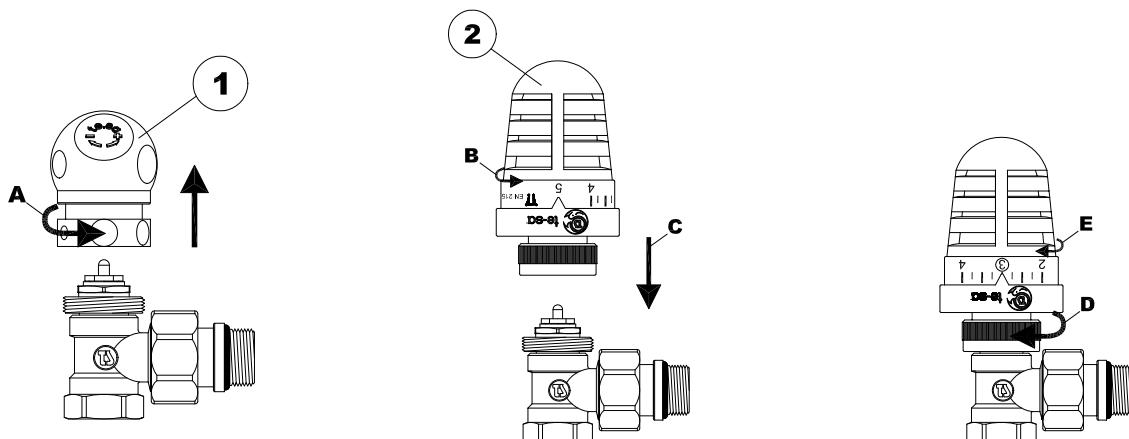
For example, if the head is installed on the lower part of the heating element and the temperature is set to position 3 (20 °C), given that the ambient air reference temperature is measured at 1.5 m above floor level the actual temperature will certainly be higher.

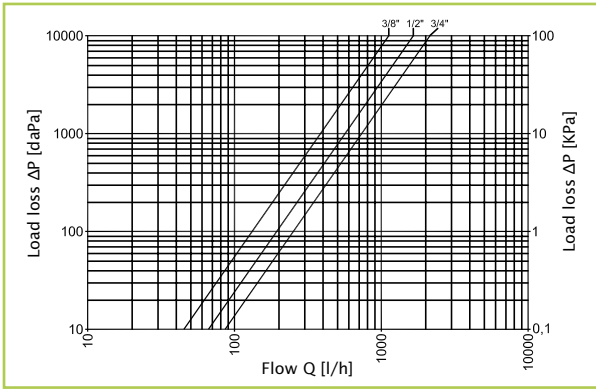
This shows that the ideal position to obtain the desired temperature must be modified according to localised requirements.

Thermostatic head installation instructions

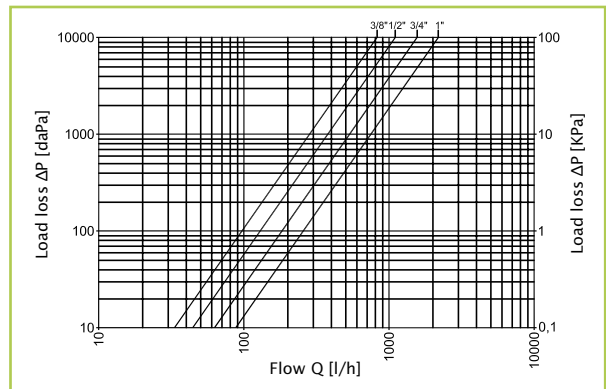
To install the thermostatic head on the thermostatisable valve proceed as follows:

- unscrew the manual control knob ring nut (1) and remove the knob;
- turn the thermostatic head (2) to the maximum value;
- attach the head onto the valve body by fitting the hexagonal insert valve nut into the recess on the head;
- fully tighten head lock ring nut;
- turn the knob until the desired temperature setting is aligned with the arrow.

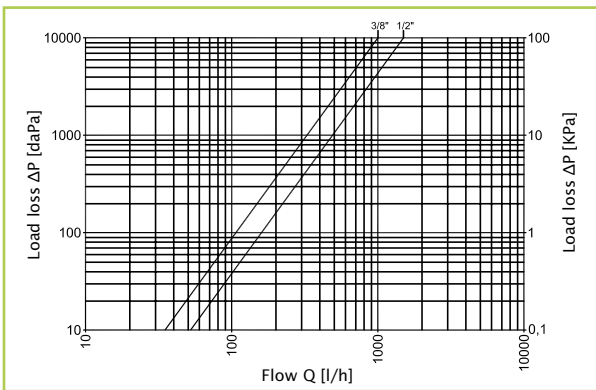




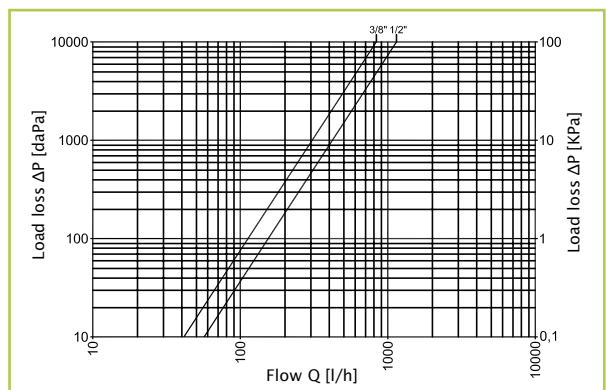
Series 110T/1 - 110C/1



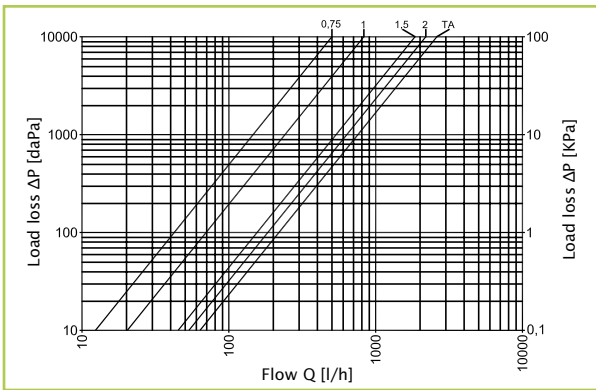
Series 112T/1 - 112C/1



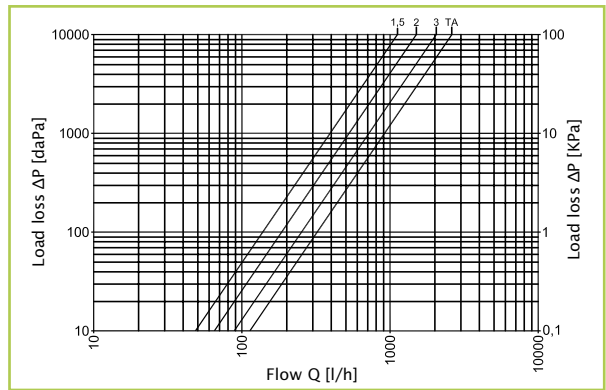
Series 114T/1 - 114C/1



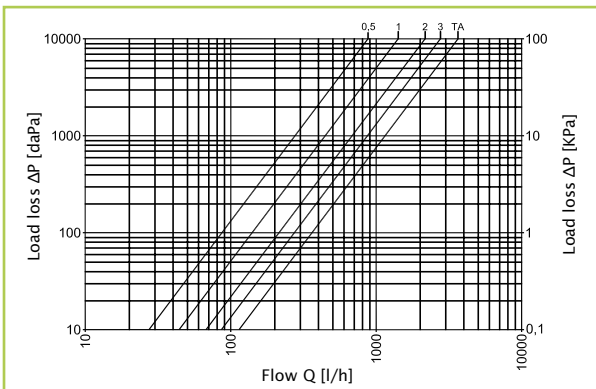
Series 115T/1 - 115C/1



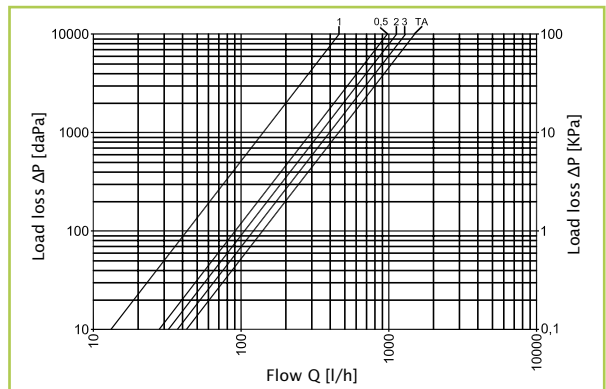
Series 101/1 - 03 - 3/8"



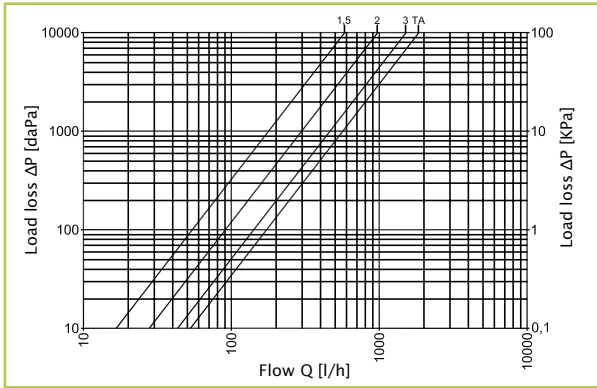
Series 101/1 - 04 - 1/2"



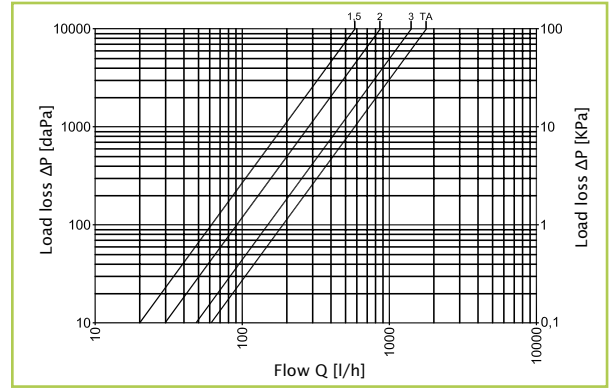
Series 101/1 - 05 - 3/4"



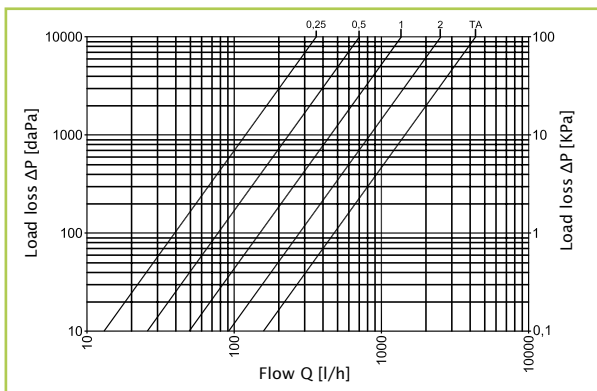
Series 103/1 - 03 - 3/8"



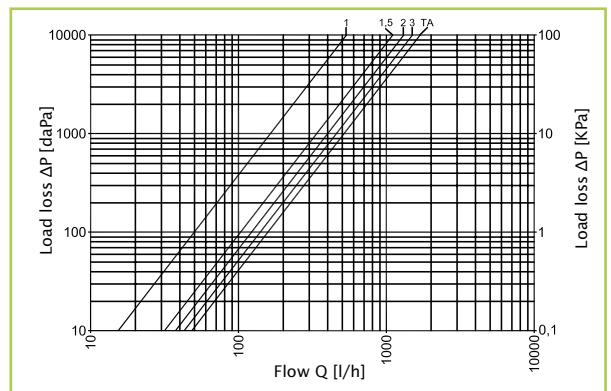
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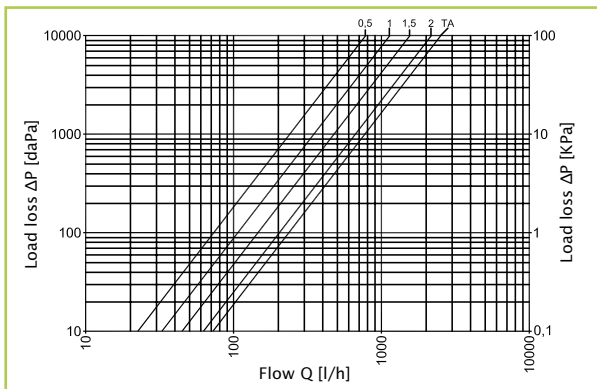
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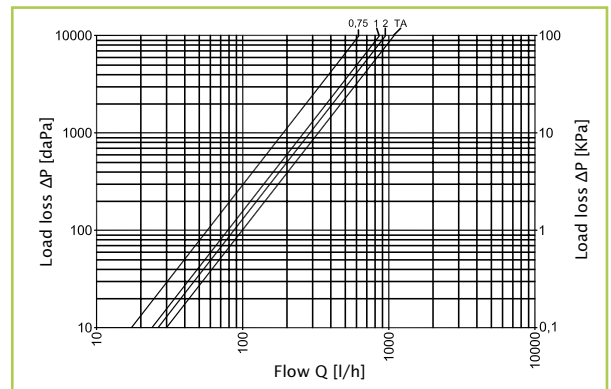
Series 127/1 - 06 - 1"



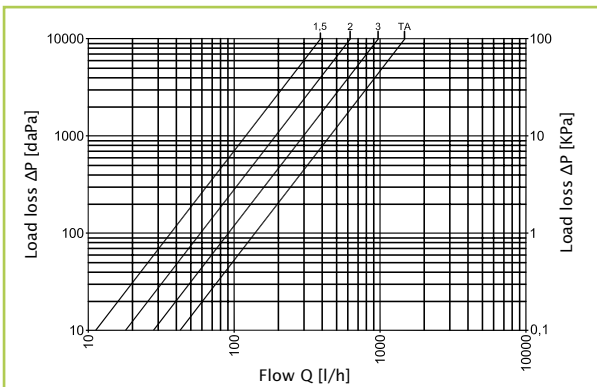
Series 105/1 - 03 - 3/8"



Series 105/1 - 04 - 1/2"



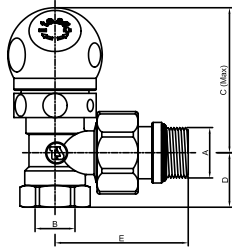
Series 107/1 - 03 - 3/8"



Series 107/1 - 04 - 1/2"

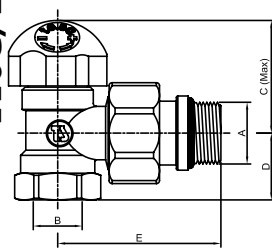
Dimensions

110T/I



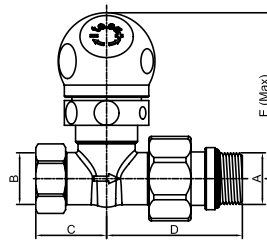
Art.	A	B	C	D	E
110T/1-03	3/8"	3/8"	60	17	50
110T/1-04	1/2"	1/2"	60	22,5	54
110T/1-05	3/4"	3/4"	60	23,5	60

110C/I



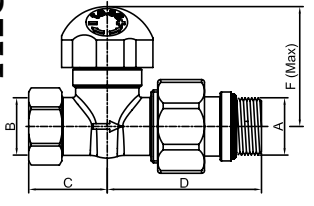
Art.	A	B	C	D	E
110C/1-03	3/8"	3/8"	36,5	17	50
110C/1-04	1/2"	1/2"	36,5	22,5	54
110C/1-05	3/4"	3/4"	36,5	23,5	60

112T/I



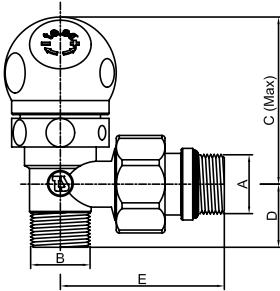
Art.	A	B	C	D	E
112T/1-03	3/8"	3/8"	30	50	69
112T/1-04	1/2"	1/2"	28	54	69
112T/1-05	3/4"	3/4"	28	57	69
112T/1-06	1"	1"	36	64	74

112C/I



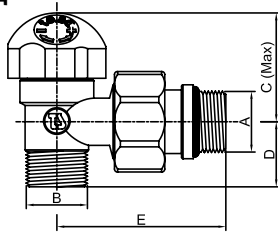
Art.	A	B	C	D	E
112C/1-03	3/8"	3/8"	30	50	47
112C/1-04	1/2"	1/2"	28	54	47
112C/1-05	3/4"	3/4"	28	57	47
112C/1-06	1"	1"	36	64	52

114T/I



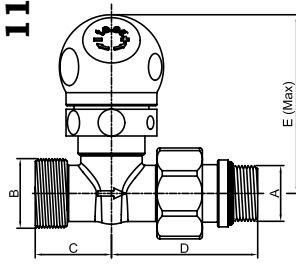
Art.	A	B	C	D	E
114T/1-03	3/8"	3/8"	65	20,5	49
114T/1-04	1/2"	1/2"	65	23,5	56
114T/1-04S	1/2"	3/4"	65	22	61

114C/I



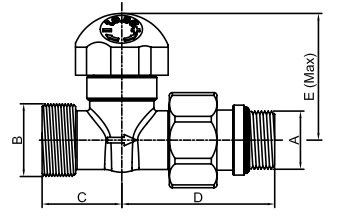
Art.	A	B	C	D	E
114C/1-03	3/8"	3/8"	43	20,5	49
114C/1-04	1/2"	1/2"	43	23,5	56
114C/1-04S	1/2"	3/4"	43	22	61

115T/I



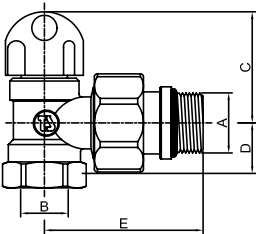
Art.	A	B	C	D	E
115T/1-03	3/8"	3/8"	30	50	68
115T/1-04	1/2"	1/2"	30	53	68
115T/1-05	3/4"	3/4"	28,5	58	68

115C/I



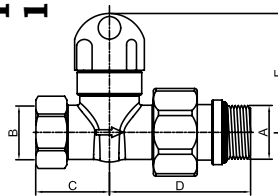
Art.	A	B	C	D	E
115C/1-03	3/8"	1/2"	30	50	46
115C/1-04	1/2"	1/2"	30	53	46
115C/1-04S	1/2"	3/4"	28,5	58	46

101/I



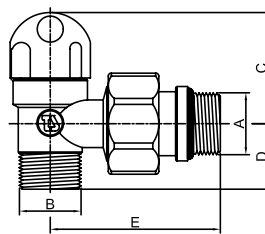
Art.	A	B	C	D	E
101/1-03	3/8"	3/8"	36,5	17	50
101/1-04	1/2"	1/2"	36,5	22,5	54
101/1-05	3/4"	3/4"	36,5	23,5	60

**103/I
127/I**



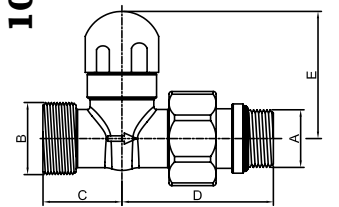
Art.	A	B	C	D	E
103/1-03	3/8"	3/8"	30	50	45
103/1-04	1/2"	1/2"	28	54	45
103/1-05	3/4"	3/4"	28	57	45
127/1-06	1"	1"	36	64	45

105/I



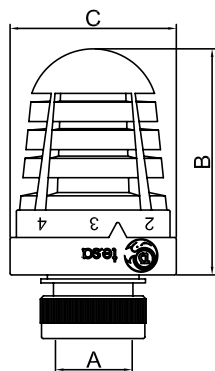
Art.	A	B	C	D	E
105/1-03	3/8"	3/8"	41	20,5	49
105/1-04	1/2"	1/2"	41	23,5	56
105/1-04S	1/2"	3/4"	41	22	61

107/I



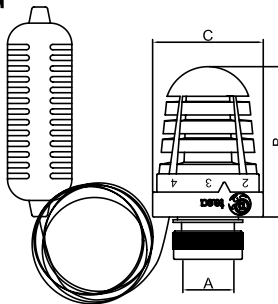
Art.	A	B	C	D	E
107/1-03	3/8"	3/8"	30	50	44
107/1-04	1/2"	1/2"	30	53	44
107/1-04S	1/2"	3/4"	28,5	58	44

116



Art.	A	B	C
116	Ø30x1,5	70	51,5

116S



Art.	A	B	C
116S	Ø30x1,5	70	51,5

110T / 110C / 101 Valve and angle lockshield for iron pipe



Angle thermostatisable valve for iron pipe 3/8", 1/2" or 3/4" F. Connection to radiator 3/8", 1/2" or 3/4" M with union and O-ring seal. Brass valve body, manual adjustment knob ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 110T/1-03 **1/2"**: 110T/1-04 **3/4"**: 110T/1-05



Angle thermostatisable valve for iron pipe 3/8", 1/2" or 3/4" F. Connection to radiator 3/8", 1/2" or 3/4" M with union and O-ring seal. Brass valve body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 110C/1-03 **1/2"**: 110C/1-04 **3/4"**: 110C/1-05



Angle lockshield for iron pipe 3/8", 1/2" or 3/4" F. Connection to radiator 3/8", 1/2" or 3/4" M with union and O-ring seal. Brass lockshield body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codici: **3/8"**: 101/1-03 **1/2"**: 101/1-04 **3/4"**: 101/1-05

112T / 112C / 103 Valve and straight lockshield for iron pipe



Straight thermostatisable valve for iron pipe 3/8", 1/2", 3/4" or 1" F. Connection to radiator 3/8", 1/2", 3/4" or 1" M with union and O-ring seal. Brass valve body, manual adjustment knob ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 112T/1-03 **1/2"**: 112T/1-04 **3/4"**: 112T/1-05 **1"**: 112T/1-06



Straight thermostatisable valve for iron pipe 3/8", 1/2", 3/4" or 1" F. Connection to radiator 3/8", 1/2", 3/4" or 1" M with union and O-ring seal. Brass valve body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 112C/1-03 **1/2"**: 112C/1-04 **3/4"**: 112C/1-05 **1"**: 112C/1-06



Straight lockshield for iron pipe 3/8", 1/2", 3/4" or 1" F. Connection to radiator 3/8", 1/2", 3/4" or 1" M with union and O-ring seal. Brass lockshield body. Protection cap ABS white RAL 9010, brass for model 1". Stem with EPDM O-ring seal.
Codes: **3/8"**: 103/1-03 **1/2"**: 103/1-04 **3/4"**: 103/1-05 **1"**: 127/1-06

114T / 114C / 105 Valve and angle lockshield for copper pipe



Angle thermostatisable valve for copper, PEX and multilayer pipe 3/8", 1/2" or 3/4" M. Connection to radiator 3/8" or 1/2" M with union and O-ring seal. Brass valve body, manual adjustment knob ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 114T/1-03 **1/2"**: 114T/1-04 **1/2"x3/4"**: 114T/1-045



Angle thermostatisable valve for copper, PEX and multilayer pipe 3/8", 1/2" or 3/4" M. Connection to radiator 3/8" or 1/2" M with union and O-ring seal. Brass valve body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 114C/1-03 **1/2"**: 114C/1-04 **1/2"x3/4"**: 114C/1-045



Angle lockshield for copper, PEX and multilayer pipe 3/8", 1/2" or 3/4" M. Connection to radiator 3/8" or 1/2" M with union and O-ring seal. Brass valve body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 105/1-03 **1/2"**: 105/1-04 **1/2"x3/4"**: 105/1-045

115T / 115C / 107 Valve and straight lockshield for copper pipe



Straight thermostatisable valve for copper, PEX and multilayer pipe 3/8", 1/2" or 3/4" M. Connection to radiator 3/8" or 1/2" M with union and O-ring seal. Brass valve body, manual adjustment knob ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 115T/1-03 **1/2"**: 115T/1-04 **1/2"x3/4"**: 115T/1-045



Straight thermostatisable valve for copper, PEX and multilayer pipe 3/8", 1/2" or 3/4" M. Connection to radiator 3/8" or 1/2" M with union and O-ring seal. Brass valve body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 115C/1-03 **1/2"**: 115C/1-04 **1/2"x3/4"**: 115C/1-045



Straight lockshield for copper, PEX and multilayer pipe 3/8", 1/2" or 3/4" M. Connection to radiator 3/8" or 1/2" M with union and O-ring seal. Brass valve body, protection cap ABS white RAL 9010. Stem with EPDM O-ring seal.
Codes: **3/8"**: 107/1-03 **1/2"**: 107/1-04 **1/2"x3/4"**: 1075/1-045

116 Thermostatic head



Thermostatic head for thermostatisable radiator valves. Integrated fluid type sensor. With antifreeze protection and full shut-off.

116S



Thermostatic head

Thermostatic head for thermostatisable radiator valves. Remote fluid type sensor. With antifreeze protection and full shut-off.