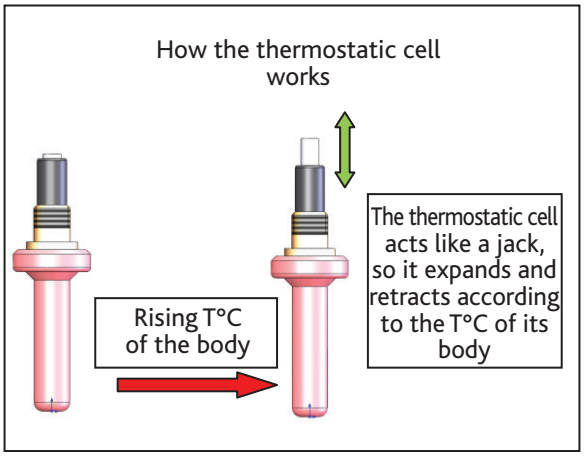
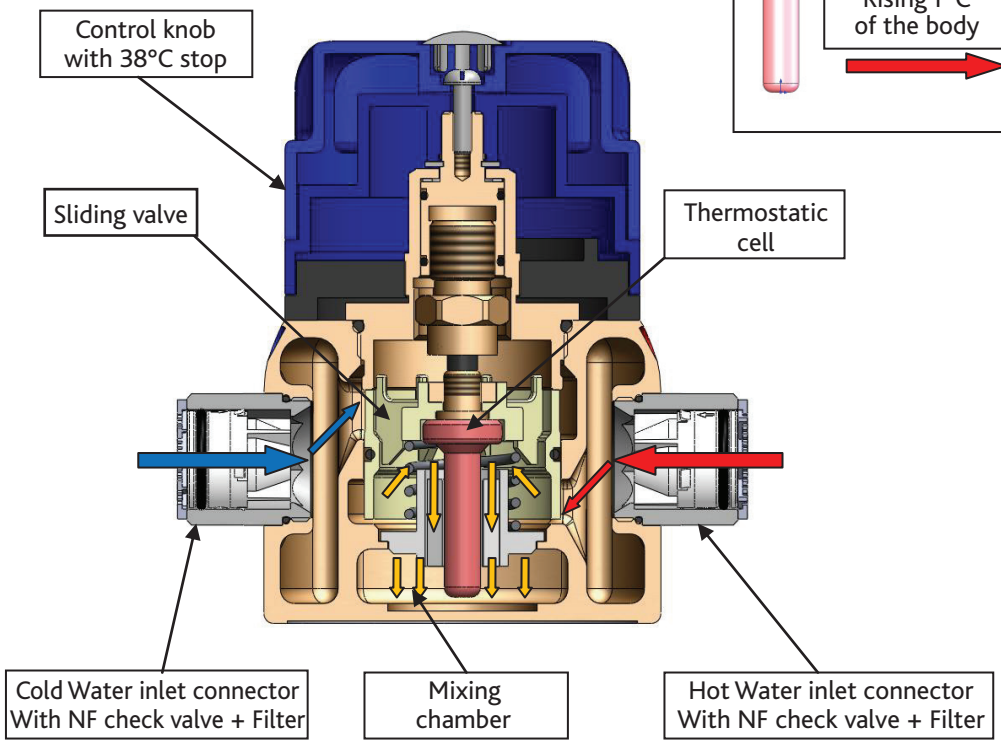
THERMOSTATIC MIXING VALVES

ADVANTAGES OF GROUP THERMOSTATIC MIXING VALVES

- **Anti-scald safety valve:** The inner workings of the mixers also ensure user safety in the event of the cold water supply cutting out, as the mixer automatically stops the hot water supply.
- **Simplified maintenance:** No need to dismantle the mixer to change or clean an internal part, so easy to descale and disinfect.
  The check valves and filters are both accessible from the outside without needing to dismantle the bonnet, which means you can retain your settings.
- **Reaction and accuracy of control:** Using an internal thermostatic element means your temperature control is accurate to within a degree, and it thus reacts immediately in the event of pressure or inflow disturbances.
- **Integrated NF non-return valves:** Avoiding all contact between hot and cold water.
- **Comprehensive range:** A comprehensive range and various additional options are available to meet customer expectations.



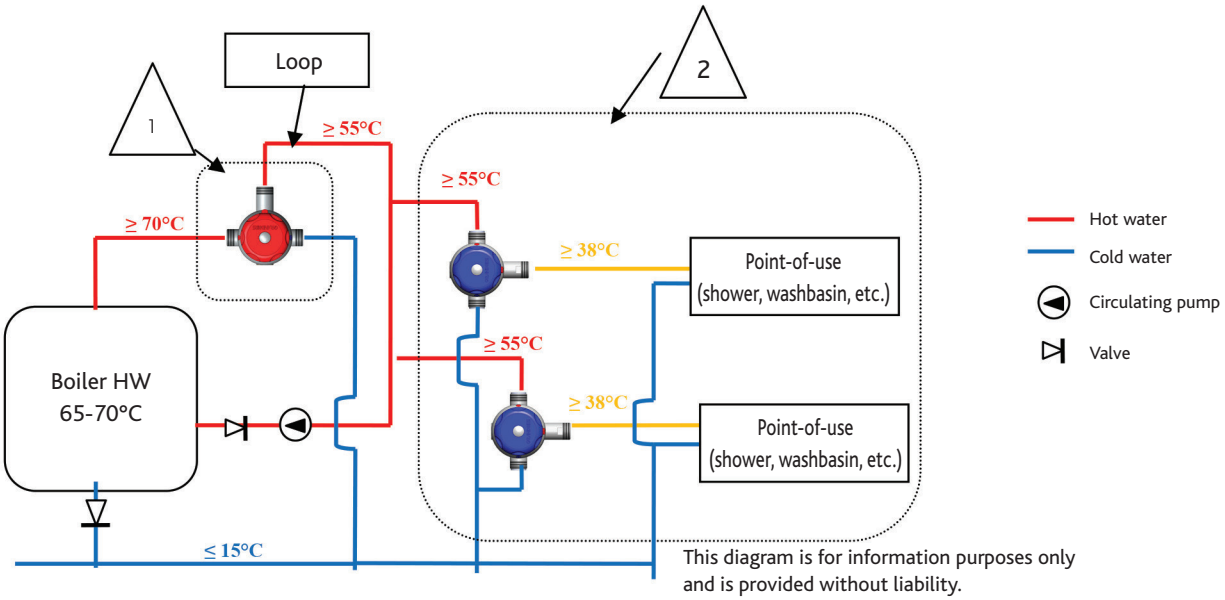


THERMOSTATIC MIXING VALVES

PRESENTATION GROUP AND ADVANTAGES:

This is designed for public facilities such as hospitals, with the aim of supplying water with a constant set temperature to a range of points-of-use (showers, washbasins, etc.).
Regardless of variations in pressure or temperature that may occur upstream, the group mixing valve automatically regulates and stabilises the temperature of the mixed water supply according to a pre-defined setting.
Mixing valve with 38°C factory setting, which can be changed by the installer.

INSTALLATION ADVICE



This diagram is for information purposes only and is provided without liability.

1

Example 1: Group mixing valve on the loop --> SE model
This will regulate the T°C of the loop (from 55°C to 70°C according to the set T°C), which will reduce energy expenditure and slow down ageing of the network. However, the safety T°C will need to be extended to the point-of-use.

2

Example 2: Group mixing valve outside the loop --> ST model
This will provide a mixed water T°C <50°C (from 32°C to 45°C according to the set T°C), so compliant with the Decree of 30/11/05.
Warning: the water volume between the point-of-use and the group mixing valve must not exceed 3 litres (Decree of 30/11/05).

3

Example 3: No loop --> ST or SE model
Water supply at points-of-use up to 50°C max. (Decree of 30/11/05). Where T°<50°C, stagnant water may lead to development of *Legionella*. Plan for drains to eliminate this risk.

CHOICE OF A GROUP MIXER

In the meantime, the total flow necessary for the water supply network to be supplied by the mixer should be determined.

GUIDANCE FOR PROBABLE FLOW RATE CALCULATION				
		Number of fittings	Flow rate	Total gross flow rate
WASHBASINS	timer taps		x 3-6 l/pm	
	standard taps		x 12 l/pm	
SHOWERS	timer taps		x 6 l/pm	
	standard taps		x 12 l/pm	
BATH TUBS			x 20 l/pm	
	Total gross flow rate for all fittings =			

Next, the simultaneity coefficient should be determined in order to determine the PROBABLE FLOW RATE.
The simultaneity coefficient will depend on the number of points-of-use and on the type of site (hotel, hospital, school, caravan park, etc.)
see the French building code 60.11

EXAMPLES OF SIMULTANEOUS USE FOR CALCULATING FLOW RATES IN GROUP FACILITIES

The examples of simultaneous use below are given to help calculate water supply flow rates:

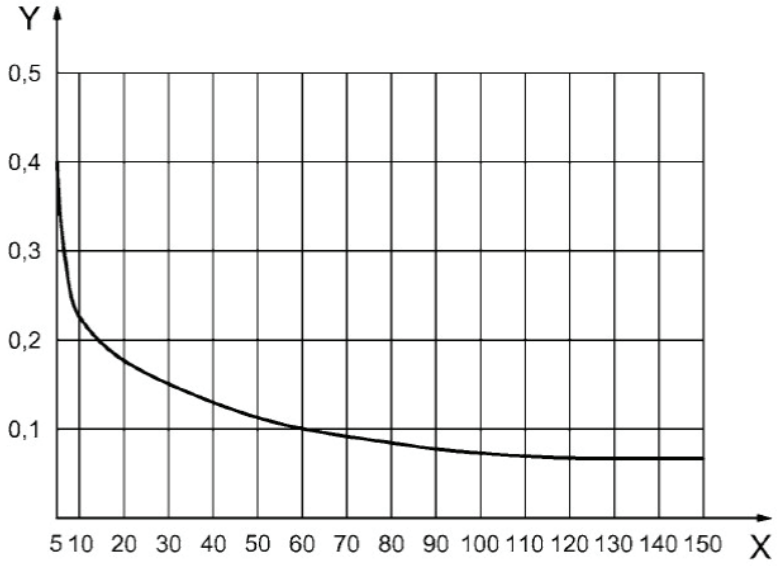
■ Fittings other than flush valves: the flow rate used as a basis for calculating the diameter of a pipe system is obtained by multiplying the sum of the flow rates of the fittings by a factor given in the table and the formula (on page 18), according to the number of fittings. However, when a water supply is planned for one or more washing machines, only one of these machines is taken into account in calculating the total flow rates for fittings.

■ Flush valves: as flush valves only operate for a few seconds, they are not accounted for in the calculation in the same way as the other fittings. For flush valves then, the following should be considered:

- For 3 installed flushes: only 1 flush in operation
- For 4 to 12 installed flushes: 2 flushes in operation
- For 13 to 24 installed flushes: 3 flushes in operation
- For 25 to 50 installed flushes: 4 flushes in operation
- For over 50 installed flushes: 5 flushes in operation

The flow rate thus obtained for the flush valves will need to be added to the total flow rate obtained from the other fittings after having applied the simultaneity coefficient according to the graph on page 18.

THERMOSTATIC MIXING VALVES



X = number of devices installed
Y = coefficient of simultaneous use

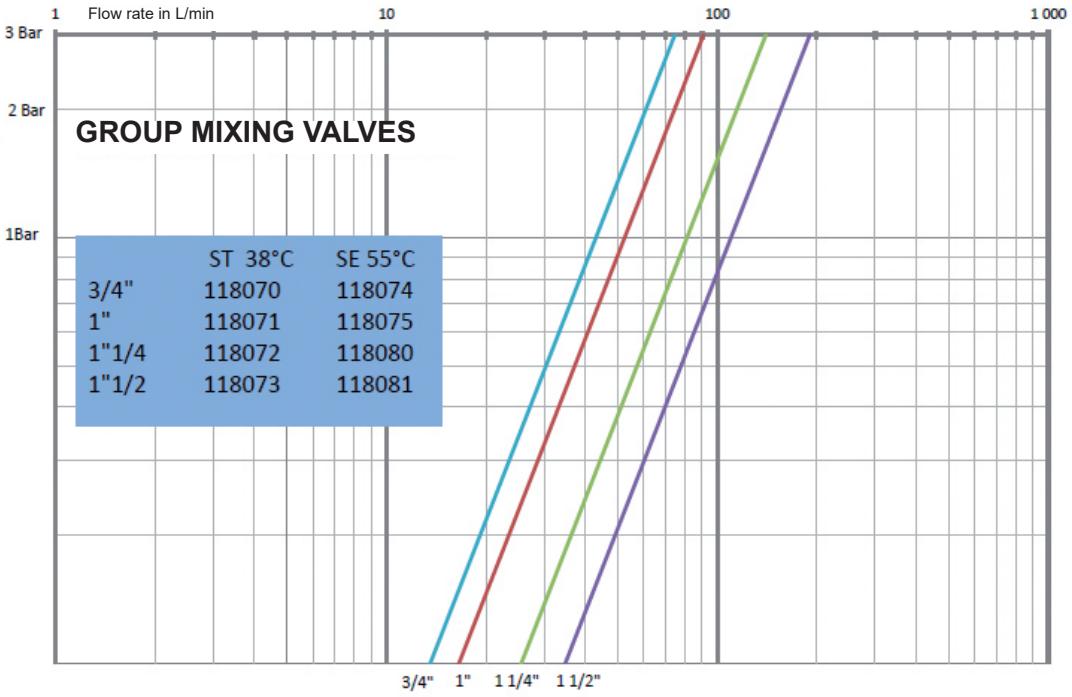
Calculation formula for the simultaneity coefficient (recommended in the French building code):

$$y = \frac{0.8}{\sqrt{x - 1}}$$

This formula is valid for x > 5

Total gross flow rate X simultaneity coefficient = TOTAL PROBABLE FLOW RATE of mixed water

	X		=	



For optimal operation, it is recommended that your supply pressure is 3 bars and does not go beyond pressure drops of 1 bar.

Then if we obtain a probable flow rate of 80 L/min the closest mixer to this value at 1 bar pressure drop would be the 1"1/4 model.

This selection guide is not contractual, it is designed to help determine the most appropriate products on the basis of theoretical conditions. The installer is responsible for the selection of products.

Thermostatic mixing valves for group facilities

ACS CERTIFIED PRODUCT

BELGAQUA

- 3 to 190 L/min flow rate depending on the model
- Recommanded pressure: 2-4 bars
- Max. pressure: 10 bars
- Max. hot water temperature: 85°C
- Option of reversing the outlet position for the mixed water
- Anti-scald mixed water safety cut-off
- System of 1 to 21 points-of-use

KEY FEATURES:

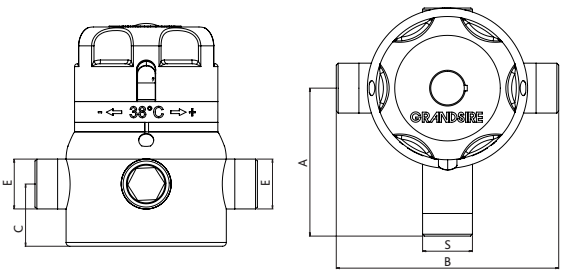
- Solid brass CW617N, chrome-plated finish
- Handle with 38°C lock
- Integrated NF check valves

ST and SE Thermostatic mixers

ST: thermostatic mixing valve for supply point with mixed water at 38°C (adjustment range: 32-45°C) with blue adjustment ring.
SE: thermostatic mixing valve for hot water distribution in the circulating loop > 55°C (adjustment range: 45-60°C) with red adjustment ring.

Interchangeability between models from major market players (contact us).

Description	Flow rate L/mm	A	B	C	Inlets	Outlet	Number of points-of-use	Packaging	Model code ST	Model code SE
3/4"	75	78.5	118	33	M3/4"	M3/4"	1 to 7	1/box	118070	118074
1"	90	80	160	33	M1"	M1"	1 to 10	1/box	118071	118075
1" 1/4	140	88	178	36	M1"1/4	M1"1/4	1 to 15	1/box	118072	118080
1" 1/2	190	98	196	32	M1"1/2	M1"1/2	1 to 21	1/box	118073	118081



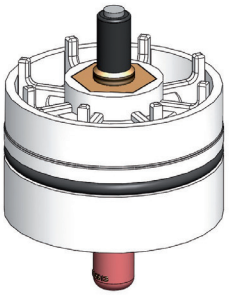
Renovation models

Dimensional equivalences with market models

Description	Spacing mm		ST mixing valve code	SE mixing valve code
3/4"	A	81	118270	118370
	B	118		
1"	A	95	118271	118371
	B	144		
1"1/4	A	107	118272	118372
	B	178		
1"1/2	A	128	118273	118373
	B	218		

THERMOSTATIC MIXING VALVES

After-sales Service kit

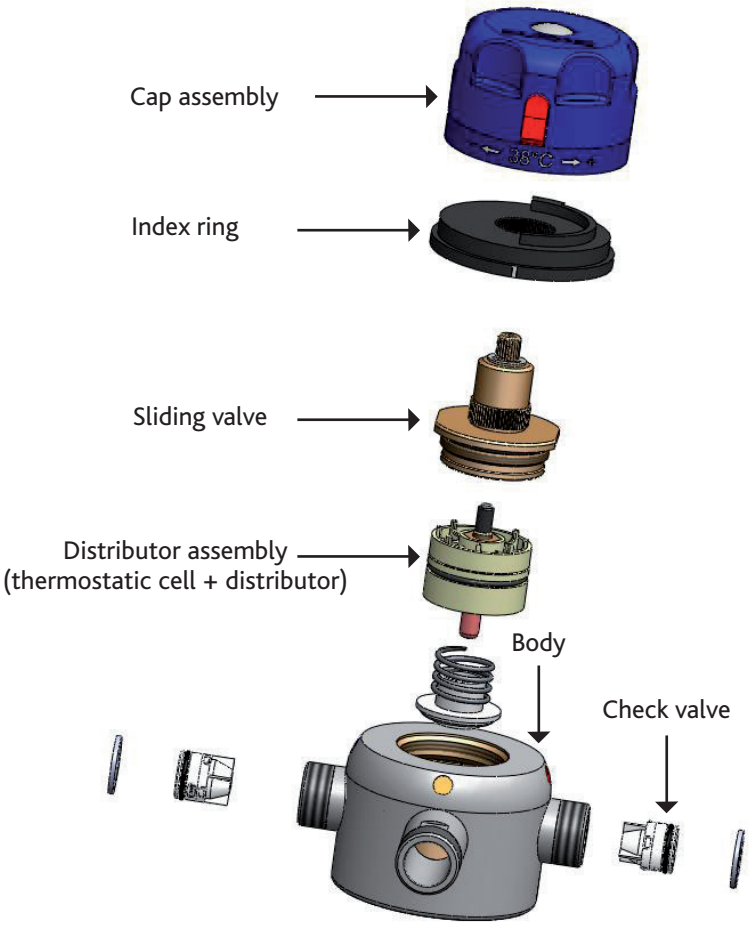


Mixing valves for group facilities do not require any particular maintenance.
If for some reason, after having made sure that the inlet, pressure, flow rate and temperature configurations are correct, the device is no longer operationally compliant, the distributor assembly will need to be replaced, along with the thermostat, using the After-sales service kit.
WARNING: it is very important to clearly identify the ST or SE model as their thermostatic cells are different. This maintenance operation does not require any particular tools.

After-sales service ST or SE models

Description	ST mixing valve code	ST After-sales service kit code	SE mixing valve code	SE After-sales service kit code
3/4"	118070	118170	118074	118174
1"	118071	118171	118075	118175
1"1/4	118072	118172	118080	118180
1"1/2	118073	118173	118081	118181

(see page 19)



Kits which can also equip the Renovation models