

ULTRAMIX®



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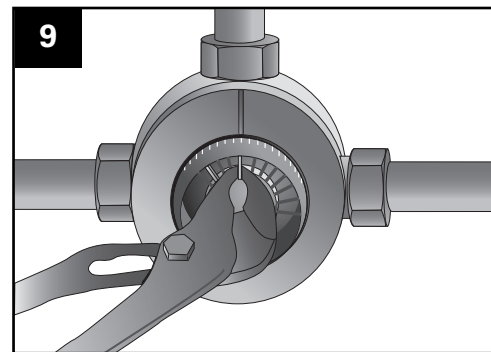
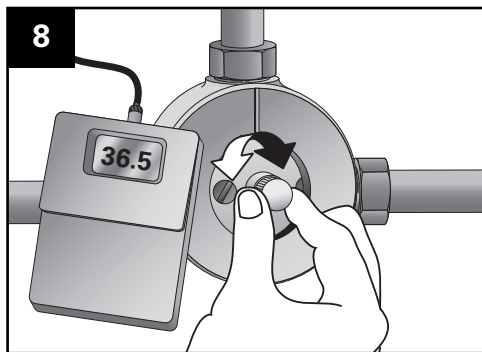
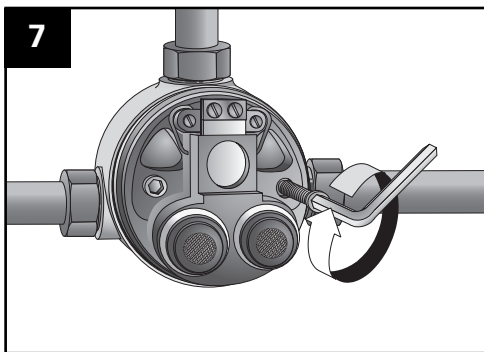
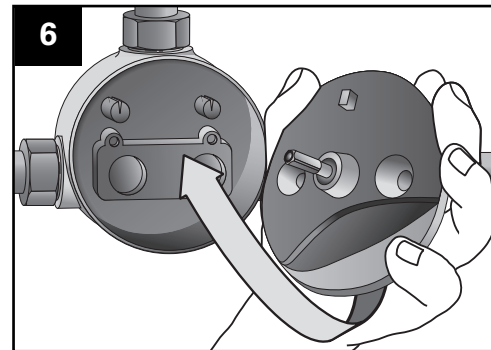
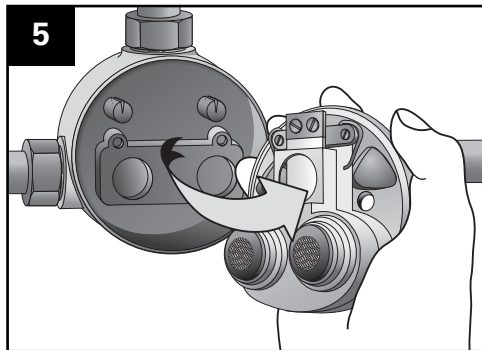
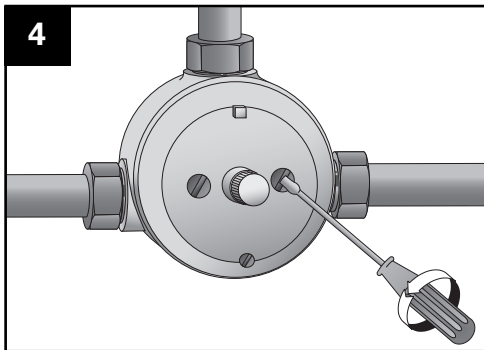
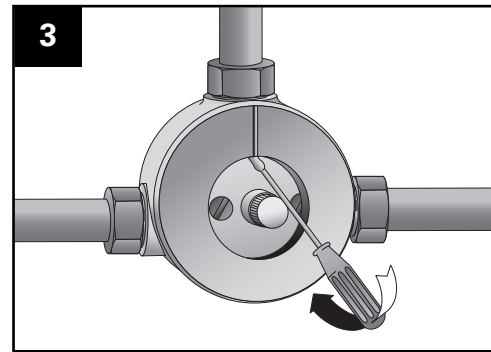
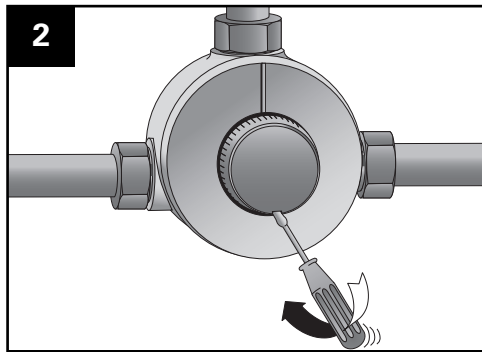
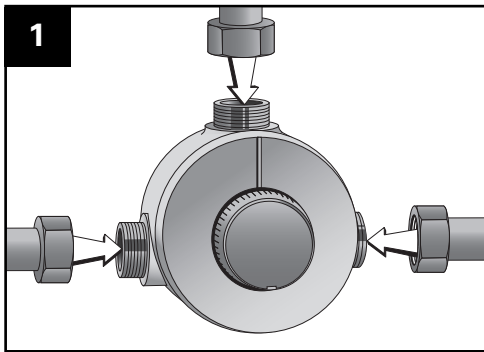
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- 4 - 5 **F** Mitigeurs thermostatiques avec mécanisme interchangeable, comprenant filtres et clapets anti-retour
- 6 - 7 **UK** Thermostatic mixing valves with interchangeable cartridges, filters and no return valves
- 8 - 9 **D** Thermostatische Mischbatterien mit auswechselbarem Mechanismus, Filtern und Rückschlagventilen
- 10 - 11 **NL** Thermostatische mengkranen met verwisselbaar mechanisme, met filters en terugslakleppen
- 12 - 13 **E** Mitigadores termostáticos con mecanismo intercambiable, que incluye filtros y válvulas antirretorno
- 14 - 15 **I** Miscelatori termostatici con meccanismo intercambiabile, includente filtri e valvole antirritorno
- 16 - 17 **PL** Termostatyczne zawory mieszające z wymiennymi wkładami, filtrami i zaworami zwrotnymi

WATTS
INDUSTRIES

A Division of Watts Water Technologies Inc.



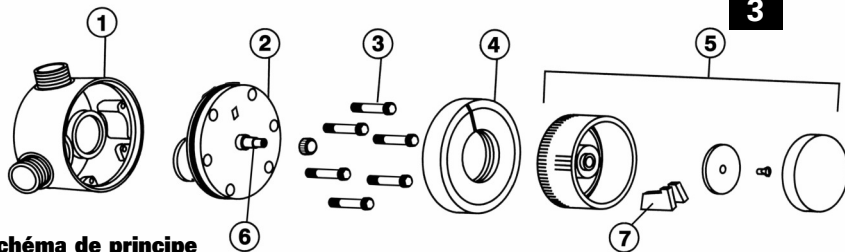
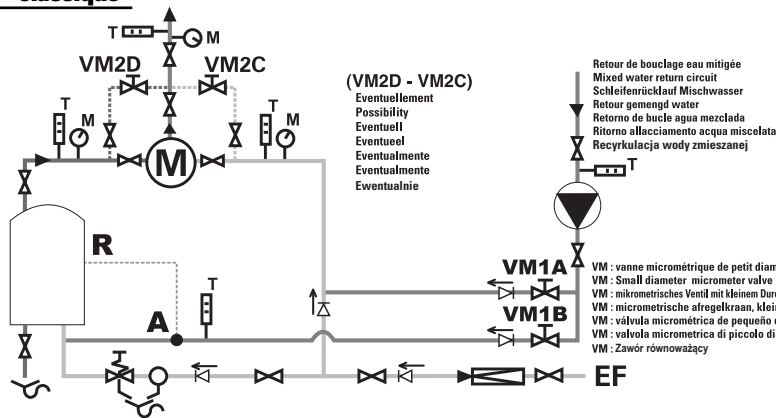


Schéma de principe d'un retour de boucle d'eau mitigée "classique"



SYMBOLS
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SYMBOLS
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SIMBOLI
SYMBOL

<p>Eau chaude Hot water Warmwasser Warm water Agua caliente Acqua calda Woda gorąca</p>	<p>Sens d'écoulement Flow direction Fließrichtung Vloei richting Sentido del flujo Senso di scorrimento Kierunek przepływu</p>	<p>Soupape de sûreté Safety valve Sicherheitsventil Veiligheidsklep Válvula de seguridad Valvola di sicurezza Zawór bezpieczeństwa</p>	<p>Vidange Drain Ablass Leegloop Vaciado Scarico Spust</p>	<p>Purgeur d'eau Water drain cock Wasserabscheider Ontluchter Purgador de agua Scaricatore d'acqua Zawór spustowy</p>
<p>Eau froide Cold water Kaltwasser Koud water Acqua fria Acqua fredda Woda zimna</p>	<p>Vanne d'arrêt Stop valve Absperventil Afsluitkraan Válvula de parada Valvola d'arresto Zawór odcinający</p>	<p>Pompe Pump Pumpe Pomp Bomba Pompa Pompa</p>	<p>Réducteur de pression Pressure reducing valve Druckminderer Vaciado Scarico Riduttore di pressione Reduktor ciśnienia</p>	<p>Thermomètre Thermometer Thermometer Thermometer Termómetro Termometro Termometr</p>
<p>Eau Mitigée Mixed water Mischwasser Gemengd water Agua mezclada Acqua miscelata Woda mieszana</p>	<p>Clapet de non retour Non-return valve Rückschlagventil Afsluitkraan Válvula antirretorno Valvola di non ritorno Zawór zwrotny</p>	<p>Mitigeur thermostatique Thermostatic mixing valve Thermostatischer Mischer Thermostatisch mengkranen Grifo mezclador termostático Miscelatore termico Termostatyczny zawór mieszający</p>	<p>Robinet de réglage Adjustment valve Regelhahn Regelkraan Grifo de regulación Rubinetto di regolazione Zawór regulacyjny</p>	<p>Manomètre Pressure gauge Manometer Manometer Manómetro Manometro Manometr</p>

F

- Corps
- Mécanisme (tampon-cartouche)
- Vis (2 ou 6 selon modèle)
- Capot
- Ensemble manette
- Axe de commande
- Butées mini. et maxi.

UK

- Body
- Mechanism (cover-cartridge)
- Screws (2 or 6 depending on model)
- Cover
- Knob assembly
- Control axle
- Max. and min. temperature stops

D

- Gehäuse
- Vorrichtung (Deckel mit Thermostateinsatz)
- Schrauben (2 oder 6 je nach Modell)
- Kappe
- Baugruppe Bedienelement
- Steuerachse
- Min. und Max.-Begrenzungen

NL

- Lichaam
- Mechanisme (deksel-patroon)
- Schroef (2 of 6 naargelang van het model)
- Kap
- Knopgeheel
- Bedieningsas
- Minimum- en maximaanslagen

E

- Cuerpo
- Mecanismo (tampón-cartucho)
- Tornillo (2 o 6 según modelo)
- Tapa
- Conjunto manilla
- Eje de mando
- Topes min. y máx.

I

- Corpo
- Meccanismo (tampone-cartuccia)
- Vite (2 - 6 secondo modello)
- Calotta
- Baugruppe Bedienelement
- Asse di comando
- Arresti min. e max.

PL

- Korpus
- Wkład termostatyczny
- Śruby (2 do 6 szt. w zależności od modelu)
- Plastikowa osłona
- Pokręto nastawcze z akcesoriami
- Oś mechanizmu termostaticznego
- Wkładki - blokadki końcowe zakresu temperatury

1 - 1 IMPLEMENTING OF THE THERMOSTATIC MIXING VALVE.

- Draw the site of the thermostatic mixing valve on the wall.
- Position it.

1 - 2 CONNECTING. Figure 1

- When the outlet is in horizontal position, the hot water has to be connected on the left side and the cold water on the right side.
- Connect the mixed water outlet.
- Recommended pipings with a velocity of 2 m/s (see marks).
- Foresee an accessible stop valve on each piping.

1 - 3 RINSING AND PUTTING INTO WATER. Figures 2 to 7

- Next it is essential to rinse the pipes and thermostatic mixing valve (see rinsing instructions and kit delivered in this box).
- Refit the mechanism ②.

1 - 4 TRIMMING OF THE MIXER.

- Refit the cover-cartridge ② and its screws ③.

1 - 5 TEMPERATURE SETTING. VERY IMPORTANT

- Open the two water supplies once again.
- Calibrate the temperature. **Figure 8**
 - Turn the cover to one of the four possible positions.
 - Run the water at normal temperature of use by operating the axle of the thermostatic mixing valve.
 - Measure the temperature with a thermometer.
 - Place the knob on the axle.
 - Match the graduation for the temperature measured with the cover indexing.

To set the required temperature limits : Figure 9

- Turn the knob until the corresponding graduation is opposite the index.
- Move the metal strip into the slot immediately :
 - to the left for the maximum temperature,
 - to the right for the minimum temperature.

1 - 6 CLOSED CIRCUIT WITH BOOSTER

- The return of the mixed water must be distributed between the cold water ($\pm 80\%$) and the hot water production ($\pm 20\%$) by micrometric valves, see diagram page 3.

FLOW DIAGRAM FOR A COMPLETE MIXED WATER CIRCUIT**See diagram page 3**

VM1 - VM2 - Micrometer valves to stabilise circuit temperature.

VM1 A - Open between 70 and 90% - **VM1 B** - Open between 30 and 10%.

Remarks :

1. If there is a restart point on the water container (R) the return circuit should be connected here (A).
2. It may be useful to have two **VM2**, micrometer valves, especially for installation renovation : the pump will not have to take the additional loss of load from the mixing valve into consideration. In this case, VM1A and VM1B are unnecessary, adjustment will be carried out on VM2 valves.

VM2 C - Open between 70 and 90% - **VM2 D** - Open between 30 and 10%.

Note : Other variations are possible. For example, for several circuits at equal or different temperatures.

2 - CHARACTERISTICS**2 - 1 WATER SUPPLY**

The thermostatic mixing valve can be supplied with any system of hot water production, even by instantaneous production, insofar as the generator stays capable to produce a very low hot water flow.

- Max. running pressure : 10 bar.
- Min. running pressure : 1 bar.
- Recommended running pressure : 2-4 bar.
- Cold water temperature : 5 - 20°C.
- Hot water temperature : 55 - 85°C.
- Max. hot water temperature : 85°C.
- Min. difference between inlet temperatures : 5°C.

For circulating loop and recirculation systems : ΔT minimum (HOT water - COLD water) must be 35°C (according EN1111 standard).

- Max. pressure difference : 1,5 bar.

2 - 2 ANTI-SCALD SAFETY

Immediate integrated safety in the case of cold or hot water being interrupted (Δ Hot water / Mixed water $> 10^\circ\text{C}$).

2 - 3 OPTIONS

- Special regulation ranges with knobs 5-40°C, 10-50°C, 30-70°C.
- Special vandal-proof "High Protection" version.

3 - RUNNING ANOMALIES

Carefully check that the anomaly is due to the thermostatic mixing valve.

Stated anomalies	Causes and solutions
☹ - The water does not run with the desired temperature.	☺ - Check both water inlets.
☹ - The mixed water runs, but insufficiently.	☺ - Hot or cold water production is insufficient. ☺ - Pressure of hot water > cold water pressure. ☺ - Filters are blocked.
☹ - By installation of a new thermostatic mixing valve : only hot or cold water runs.	☺ - The water inlets are reversed.
☹ - The mixed water temperature follows the position of the knob but with some discrepancy.	☺ - The order system is disturbed. ☺ - Repeat the calibration.
☹ - The mixed water does not come out of the thermostatic mixing valve or only in an extreme knob position.	☺ - The water supply does not work.
☹ - The mixed water runs by jerks and the flow is low, except for extreme temperatures.	☺ - One of the water inlets is insufficient. ☺ - Check filters of the mechanism.

4 - MAINTENANCE

4 - 1 ROUTINE MAINTENANCE

4 - 1 - 1 CHECKING THE MECHANISM

If the flow rate drops or the temperature becomes unstable, check the condition of the mechanism.

If necessary, clean and descale the mechanism using a weak acid (vinegar, etc.). Brush the filters.

If this is not sufficient, replace the mechanism (4-2).

4 - 1 - 2 CHECKING THE TEMPERATURE

From time to time check that the temperature of the running water matches the temperature indicated on the knob.

4 - 1 - 3 DRAINAGE IN THE EVENT OF FROST

If the thermostatic mixing valve has to be left exposed to frost, it is essential to drain it :

- either by opening a drainage cap at the low outlet,
- or by opening the plug of the thermostatic mixing valve.

4 - 2 REPLACING THE MECHANISM

4 - 2 - 1 OPENING THE CASE

To open the case easily, proceed as follows :

- close the hot and cold water stop valves and open the drawing taps to reduce the pressure inside the mixer,
- turn the screws ③ of the plug ② by a single turn,
- close the drawing taps and open the supply tap for a second so that the pressure lifts the plug ②.
- remove the plug and fit the new cover-cartridge.

Proceed as described in the INSTALLATION section.