# **Temperature limiter N170M3**

Temperature limiter for industrial applications

## **Technical data sheet**





wattswater.fr



#### Description

The N170M3 temperature limiter automatically mixes hot and cold water. He is insensitive to scale thank to its internal design which does not present any narrow passage. Equipped with a scald protection with residual flow, the N170M3 is particularly intended for industrial installations.

- High quality regulation thanks to a high sensitivity thermostatic cartridge
- Water saving: the N170M3 allows to optimize and use the capacities of the hot water generator.
- Safety guaranteed by an overheating limiter which prevents accidental damage to the thermostatic cartridge
- Robust



#### N170M3

Temperature limiter for industrial applications

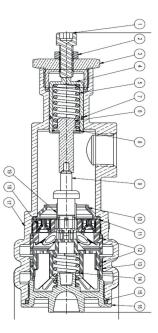
Reference	DN		Setting range	Min. Flow Rate	Weight (Kg)	
neierenee	mm	"		(L/min)	troight (Rg)	
2229111N	20	3/4"	32/82°C	11	2,2	
2229112N	25	1"	32/82°C	15	2,2	
2229113N	32	1"1/4	32/82°C	15	4,3	
2229114N	40	1"1/2	32/82°C	19	4,1	
2229115N	50	2"	32/82°C	20	4,7	

For DN50 : hot water inlet 2" and cold water inlet 1"1/2

Technical features		
PN	10	
Maxi. dynamic pressure	8,5 bar	
Max. hot water temperature	85°C	
Max. cold water temperature	3°C	
Setting range	See table above	
Minimum flow rate	See table above	
Max. differential between inlets	1 bar	

#### Nomenclature and materials

N°DesignationMaterials1ScrewStainless steel2Hex jam nutStainless steel3Front capBrass4Overload housingBrass5Coil springStainless steel6Overload insertBrass7O'ringElastomer8Return ringStainless steel9Wax motorImage: Stainless steel10Funnel boosterPlastic11FunnelPlastic12O'ringElastomer13PlungerPlastic14Coil springStainless steel15O'ringElastomer16Cap seatBronze17BodyBronze18Check assemblyPlastic				
2Hex jam nutStainless steel3Front capBrass4Overload housingBrass5Coil springStainless steel6Overload insertBrass7O'ringElastomer8Return ringStainless steel9Wax motorImage: Stainless steel10Funnel boosterPlastic11FunnelPlastic12O'ringElastomer13PlungerPlastic14Coil springStainless steel15O'ringElastomer16Cap seatBronze17BodyBronze18Check assemblyPlastic	N°	Designation	Materials	
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5Coil springStainless steel6Overload insertBrass7O'ringElastomer8Return ringStainless steel9Wax motorImage: Stainless steel10Funnel boosterPlastic11FunnelPlastic12O'ringElastomer13PlungerPlastic14Coil springStainless steel15O'ringElastomer16Cap seatBronze17BodyBronze18Check assemblyPlastic	3	Front cap	Brass	
6Overload insertBrass7O'ringElastomer8Return ringStainless steel9Wax motor10Funnel boosterPlastic11FunnelPlastic12O'ringElastomer13PlungerPlastic14Coil springStainless steel15O'ringElastomer16Cap seatBronze17BodyBronze18Check assemblyPlastic	4	Overload housing	Brass	
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8Return ringStainless steel9Wax motor10Funnel boosterPlastic11FunnelPlastic12O'ringElastomer13PlungerPlastic14Coil springStainless steel15O'ringElastomer16Cap seatBronze17BodyBronze18Check assemblyPlastic	6	Overload insert	Brass	
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13PlungerPlastic14Coil springStainless steel15O'ringElastomer16Cap seatBronze17BodyBronze18Check assemblyPlastic	11	Funnel	Plastic	
14 Coil springStainless steel15 O'ringElastomer16 Cap seatBronze17 BodyBronze18 Check assemblyPlastic	12	O'ring	Elastomer	
15 O'ringElastomer16 Cap seatBronze17 BodyBronze18 Check assemblyPlastic	13	Plunger	Plastic	
16 Cap seatBronze17 BodyBronze18 Check assemblyPlastic	14	Coil spring	Stainless steel	
17 BodyBronze18 Check assemblyPlastic	15	O'ring	Elastomer	
18 Check assembly Plastic	16	Cap seat	Bronze	
	17	Body	Bronze	
	18	Check assembly	Plastic	
19 Motor adaptator Plastic	19	Motor adaptator	Plastic	





#### **Application**

The N170M3 automatically mixes hot and cold water in collective or industrial installations such as :

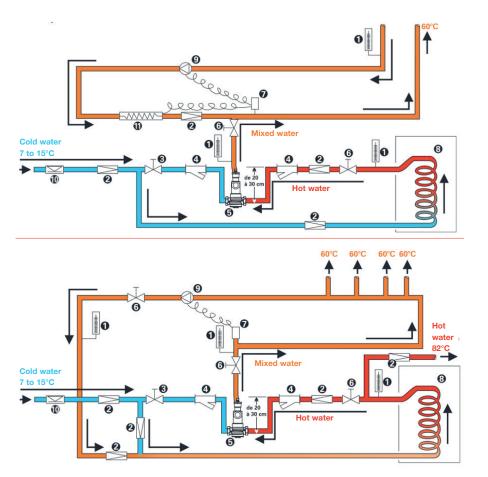
- Washing stations
- Industrial processes
- etc...

#### Installation

During the installation be careful with the hot and cold water inlets engraved on the body of the mixing valve.

It must be installed with:

- On the cold water inlet: a pressure reducing valve, a non-return valve, a shut-off valve and a filter,
- On the hot water inlet: a thermometer, a shut-off valve, a non-return valve and a filter
- On the mixed water outlet: a thermometer and a shut-off valve







## Setting

Setting the temperature in the case of a mixed water loop:

- 1. Turn off the recirculation pump.
- 2. Open enough tap points to obtain the minimum flow rate of the N170M3 limiter.

3. Loosen the lock nut. Turn the temperature adjustment screw clockwise to decrease or counterclockwise to increase the mixed water temperature.

Allow sufficient time for the mixing valve to react before readjusting.

It is recommended to install a temperature control thermometer (at least 1.8m from the limiter) on the mixed water pipe. It should be checked at least once a month under normal operating conditions.

4. When the desired temperature is reached, tighten the locknut. Turn the recirculation pump on and close any open faucets.

## Commissioning

- Turn on the cold water supply first to avoid any damage on the thermostat.
- To adjust the temperature of the mixed water, loosen the locknut to release the adjustment screw (located at the top of the limiter).
- Turn the screw clockwise for colder water and counterclockwise for hotter water. Mixed water can only be adjusted using a thermometer placed near the mixer on the mixed water circuit.
- The inertia of the thermometer recommends a few minutes of waiting for an accurate reading of the mixed water temperature.



### **Repair kits**

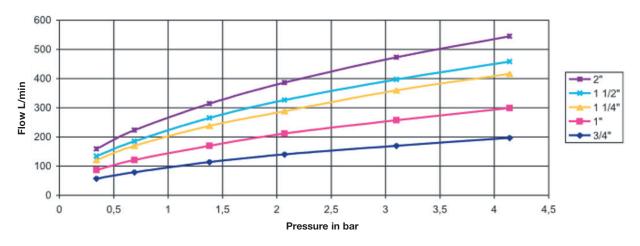
#### Complete kit for N170M3 limiter

Composed of setting screw, cover, thermostatic cartridge, lock-nut, plunger, spring and O'ring

Ref.	For DN
220887490	3/4"
220887490	1"
220125153	1"1/4
220125153	1"1/2
220125153	2"

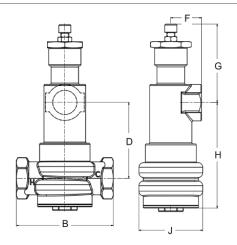
#### Operating

N170M3 – Headloss chart



#### Sizing

DN	B (mm)	D (mm)	F (mm)	G (mm)	H (mm)	J (mm)
3/4	114	89	36	92	124	75
1"	116	89	36	92	124	75
1"1/4	154	87	44	94	133	114
1"1/2	154	87	44	94	133	114
2"	164	81	52	98	137	114



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