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N₂O CALIBRATION KIT SUBSCRIPTION

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N₂O Wastewater Sensor



Step by step
calibration
procedure

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Follow these few steps to calibrate the N₂O Wastewater Sensor. We **recommend re-calibrating every second month**, or if the average wastewater temperature changes by more than 3 degrees Celsius.

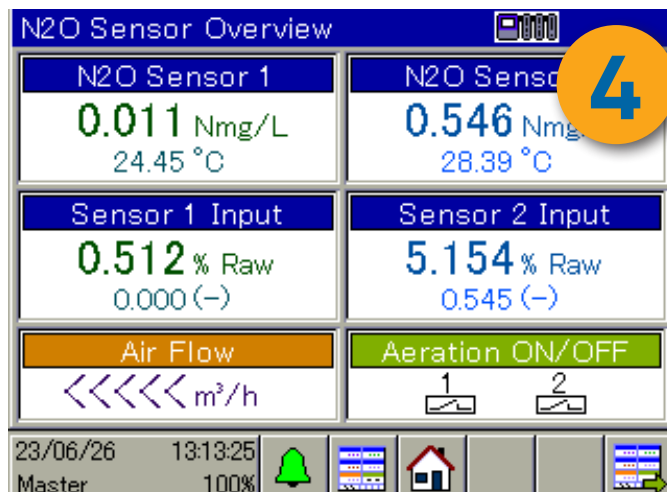


After you have installed the N₂O Wastewater Sensor or replaced the sensor head, let the sensor **stabilize overnight**. This will give the best calibration result. We recommend that you leave the sensor in clean water to avoid cleaning, except if there is a risk of frost.



Fill a stable bucket with **4 liters (NOTE: 2 liters for MR and 0.5 liters for HR sensors)** of tap water. The tap water temperature should be close to that of the process water. Measure the tap water temperature* and place the sensor in the bucket. Let the sensor signal stabilize (min. 1 minute).

*This temperature must be entered in step **10** below !



On the controller screen, check for a stable sensor signal. Press the grey button on the bottom left, reading Operator (Password: 1234) to access the **Device menu**.

Device menu

- Exit
- Logon/logoff
- Calibration
 - IN6 Air Flow
 - IN11 N2O Sensor 1
 - Two-point calibration

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Follow the pathway to begin the calibration. Select **Two-point calibration** for N₂O Sensor 1 or 2 as depicted above.

Reference

Measuring value

0.001 Nmg/L

1: Wait for stable value
2: Press OK-key

Calibration step 1/2

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Reference input

Value 1

0.000 Nmg/L

1: Enter value of reference
2: Press OK-key


Reference Value 1

0.000 Nmg/L

7 8 9 Exp
4 5 6
1 2 3
0 ± .

1: Enter
2: Press

When the signal is stable, press OK to open 'Reference input'. Press the blue number field, input 0 as 'value 1'. Then press OK.



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Break the ampule's neck. Continue immediately to use the syringe and needle to slowly draw out **5 mL (NOTE: 10 mL for HR sensors)** of the liquid. Inject the stock solution to the tap water. Stir gently with the N₂O Sensor to dissolve the solution in the water.
IMPORTANT: Inject the stock solution under water to avoid contact with air.

Reference

Measuring value

1.462 Nmg/L

1: Wait for stable value
2: Press OK-key

Calibration step 2/2

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Reference input

Value 2

0.000 Nmg/L

1: Enter value of reference
2: Press OK-key

Reference Value 2

0.94 Nmg/L

7 8 9 Exp
4 5 6
1 2 3
0 ± .

1: Enter
2: Press

You will now see the reading increase. **IMPORTANT:** Press OK just after the signal has stabilized, as the signal will start to drop shortly after. Press the blue number field and enter the value 0.94. Press OK. Check that the zero point is close to 0 and that the Slope is between 15% and 150%.

N2

Device menu

- Exit
- Logon/logoff
- Calibration
- User level
- Configuration
- Parameterization

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Finally enter the **Device menu** again (check step 5). Access the **User level** to set the temperature of the tap water from step 3.

User level

OK Cancel

CalTemp1 +19.500 °C

CalTemp2 +22.000 °C

A1 +19.686

A2 +0.0017

B1 +7.3549

B2 +0.0361

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For the calibrated sensor, enter the water temperature of the tap water used for calibration and press **OK**. Well done! You have successfully calibrated the sensor.
We recommend that you calibrate again in two months.