

This document describes the preferred calibration procedure of the WatchGas QGM. If you require any assistance, feel free to contact us at info@watchgas.nl

Equipment

To calibrate the WatchGas QGM the follow equipment is needed:

- WatchGas QGM
- WatchGas QGM Calibration adapter
- 0.5 L/min regulator
- Last-O-More hose
- WatchGas IR link (optional)
- Calibration gas

The use of the WatchGas IR link and IR link software is not required, but it's certainly recommended. Span values can only be changed using the IR link software.

The WatchGas QGM can only measure O₂, LEL, CO and H₂S. Please refer to our well-priced list of calibration gases. Note that these gases are available in a multi-gas mixture. Calibrating using a multi-gas mixture is most cost and time efficient.

Adequate safety measures should be taken when working with these type of gases. Avoid personal exposure at all times by working under a fume hood and/or wearing personal protective equipment.

List with commonly used calibration gases

Description	Size	Article Number
18%O ₂ / 2.2%CH ₄ / 50CO / 10H ₂ S in N ₂	116L	CAL-C017064
18%O ₂ / 2.2%CH ₄ / 50CO / 10H ₂ S in N ₂	34L	CAL-C009147
18%O ₂ / 2.5%CH ₄ / 2%CO ₂ / 50CO / 15H ₂ S in N ₂	58L	CAL-C015013
100ppm I-C ₄ H ₈ in Air	34L	CAL-C008920
100ppm I-C ₄ H ₈ in Air	116L	CAL-C006392
18%O ₂ / 2.2%CH ₄ / 50CO / 10H ₂ S in N ₂	58L	CAL-C011916
18%O ₂ / 2.2%CH ₄ / 0.5%CO ₂ / 100CO / 25H ₂ S in N ₂	58L	CAL-C012017
18%O ₂ / 2.5%CH ₄ / 100CO / 25H ₂ S in N ₂	34L	CAL-A1069841
100% N ₂ (UHP)	116L	CAL-A0961956
18%O ₂ / 2.2%CH ₄ / 0.5%CO ₂ / 100CO / 25H ₂ S in N ₂	34L	CAL-C009266
100ppm I-C ₄ H ₈ in Air	58L	CAL-C015004
50ppm NH ₃ in N ₂	58L	CAL-C011793
20.9% / 1.1%CH ₄ / 200ppm CO in N ₂	116L	CAL-C019604
15%O ₂ / 1.45%CH ₄ /2.5%CO ₂ / 60CO / 20H ₂ S in N ₂	58L	CAL-C012032
18%O ₂ / 2.2%CH ₄ / 100CO / 25H ₂ S in N ₂	58L	CAL-C011921
15%O ₂ / 1.45%CH ₄ / 60CO / 20H ₂ S in N ₂	34L	CAL-C009154
18%O ₂ / 2.2%CH ₄ / 100CO / 25H ₂ S in N ₂	34L	CAL-A0915728
18%O ₂ / 2.2%CH ₄ / 50CO in N ₂	116L	CAL-A0975762
10ppm H ₂ S in N ₂	116L	CAL-C017065
25ppm H ₂ S in N ₂	58L	CAL-C011126

Manual calibration using the IR link

To calibrate the WatchGas QGM using the IR link, use the following steps:

1. Turn on the device and wait for all sensor to warm-up.
2. Place the device onto the IR link and start the IR link software
3. Check all settings using the IR link software. Verify that calibration gas concentrations match the concentrations in the gas cylinder.
4. Open the calibration window and start the Zero Calibration. This will take 10 seconds.
5. Connect the 0.5 L/min regulator to the gas cylinder. Attach the Last-O-More hose and calibration adapter.
6. Connect the Calibration adaptor to the device.
7. Start the Span Calibration in the IR link software. Start gas flow. Span Calibration will take 90 seconds. Ensure the device and IR link stay connected during this time.
8. The calibration result is shown in the device for each sensor individually. Afterwards, the device will return to measurement mode.
9. Turn off gas flow and disconnect the calibration adapter. Wait for the gas readings to return to 0.
10. Reboot the device and verify calibration result by applying the same concentration of calibration gas, preferably from another cylinder.



Automatic calibration using the WatchGas QGM Docking station

To calibrate the WatchGas QGM with Docking Station, use the following steps:

1. Turn on the device and wait for all sensor to warm-up.
2. Turn on the docking station. Ensure the docking station is configured correctly and there's sufficient gas remaining on the internal gas cylinder.
3. Place the QGM in the docking station.
4. Press the Calibration button.
5. The docking station will now preform the Zero and Span Calibration automatically.
6. When the Calibration is finished, remove the device from the docking station.



Manual calibration

To calibrate the WatchGas QGM by hand, use the following steps:

1. Turn on the device and wait for all sensor to warm-up.
2. Press the single button 8 times to reach the calibration menu, indicated by the gas cylinder icon in the upper right corner. The calibration gas concentrations are also displayed. Press and hold the button.
3. When in the calibration menu start a Zero Calibration by pressing and holding the button. The Zero Calibration will take 10 seconds.
4. Connect the 0.5 L/min regulator to the gas cylinder. Attach the Last-O-More hose and calibration adapter.
5. Connect the Calibration adaptor to the device
6. Press and hold the button to start the Span Calibration. Start the gas flow. The span calibration takes 90 seconds.
7. The calibration result is shown for each sensor individually. Afterwards, the device will return to measurement mode.
8. Turn off gas flow and disconnect the calibration adapter. Wait for the gas readings to return to 0.
9. Reboot the device and verify calibration result by applying the same concentration of calibration gas, preferably from another cylinder.

