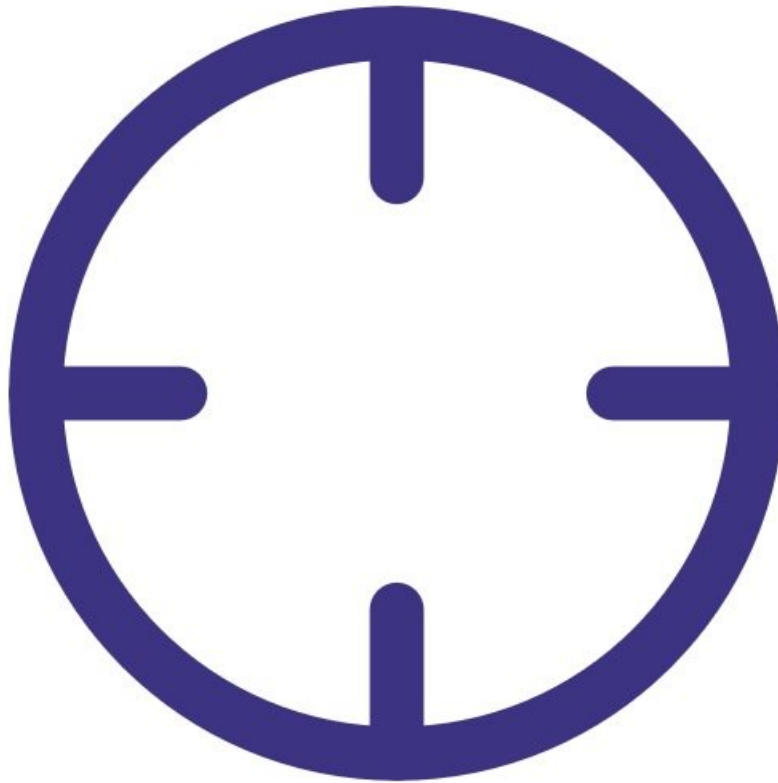




Check flow of gas module

Learn how to measure the flow rate of individual gas modules.

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INTRODUCTION

If your monitor's inlet flow rate is lower than expected, it could be because one of the modules has a leak or is blocked. To check this, perform a leak check on the individual gas modules.

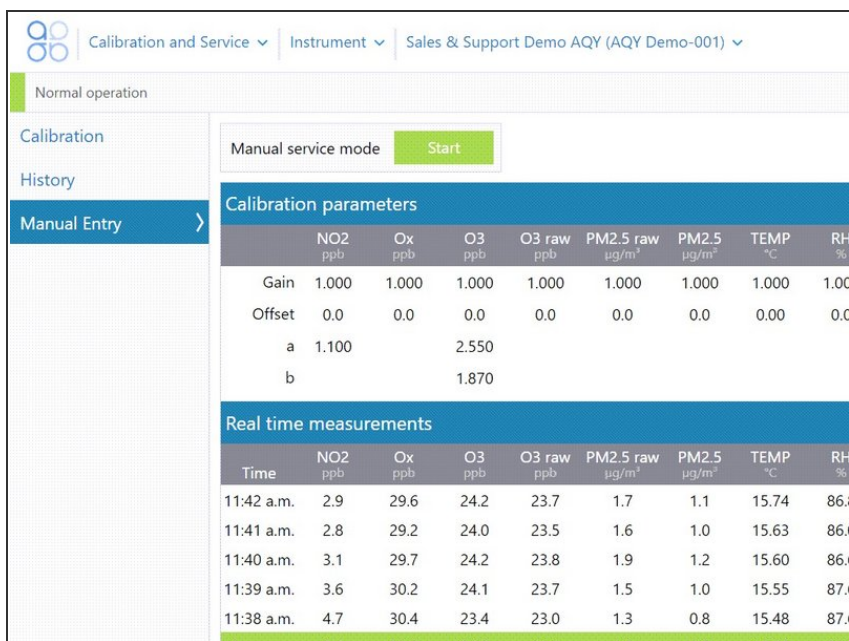
To understand how often you should perform this service activity, [click here](#).



PARTS:

- [Flowmeter - TSI 4140](#) (1)
 - [Zero filter and flow assembly](#) (1)
-

Step 1 — Enter service mode



The screenshot shows the 'Manual service mode' interface. It includes a 'Start' button for entering manual service mode. Below this are two tables: 'Calibration parameters' and 'Real time measurements'.

	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m³	PM2.5 µg/m³	TEMP °C	RH %
Gain	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Offset	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0
a	1.100		2.550					
b			1.870					

Time	NO2 ppb	Ox ppb	O3 ppb	O3 raw ppb	PM2.5 raw µg/m³	PM2.5 µg/m³	TEMP °C	RH %
11:42 a.m.	2.9	29.6	24.2	23.7	1.7	1.1	15.74	86.1
11:41 a.m.	2.8	29.2	24.0	23.5	1.6	1.0	15.63	86.1
11:40 a.m.	3.1	29.7	24.2	23.8	1.9	1.2	15.60	86.1
11:39 a.m.	3.6	30.2	24.1	23.7	1.5	1.0	15.55	87.1
11:38 a.m.	4.7	30.4	23.4	23.0	1.3	0.8	15.48	87.1

- [Enter service mode](#) so any fluctuations in the data caused from this activity can be excluded from air quality reports.

Step 2 — Learn expected flow rates



- Read the PDF attached to the end of this user guide to understand the expected flow rate for each gas module.

Step 3 — Attach flow meter



- Disconnect the incoming PFA tubing from the the inlet port (white ring) of the gas module.
- Attach a high-quality flowmeter such as the TSI 4040 or the Bios Defender DryCal to the inlet port (white ring) of the gas module.
- Reconnect the PFA tubing to the gas module's inlet port.
- Repeat these steps for each gas module.

Step 4 — Record in journal

Instrument ▾ Air Quality Monitor (AQM65 04082015-437) ▾

All journal types ▾

User entry | Cloud user - John Wagner

1. Site Inspection:	No new local emission sources Instrument in good condition No obstructions to monitoring equipment	2. Instrument inspection:	Cooling fan operational PM and gas inlet secure Instrument has been running at stable
3. Equipment:	Aeroqual Gas dilution calibrator: Aircal 1000 Aeroqual Ozone calibrator: AQM O3Cal Aeroqual Flow meter: AQM R7	4 Gas cylinders:	CO 1000 ppm in Air (expiry March) SO2 20 ppm in Air (expiry December) NO2 20 ppm in Air (expiry November)
4. Flow rate check:	Expected flow rate = 0.450 ml per min, Measured flow rate = 0.452 ml per min Main inlet flow rate OK, individual module flow rates were not measured.	5. Open door and change gas inlet filter	
6. Zero calibration	All modules passed zero calibration, all modules were stable and all offsets were within acceptable limits.		
7. Span Calibration	CO @ 10.00 ppm Module response was 8.95 ppm gain adjustment to 1.15 pass SO2 @ 0.2 ppm Module response was 0.210 ppm gain adjustment to 0.92 pass NO2 @ 0.2 ppm Module response was 0.090 ppm gain adjustment to 2.10 pass (module may need replacing soon contact A		
8 Pack up. Next scheduled calibration 3 months from now. June 2017.			

- [Record the results from this service activity in the monitor's journal.](#)
- [Exit service mode.](#)

For further support, contact [Technical Support](#).