

Biomethane – Joint GDN Calibration & Test Gas Replacement Procedure

Introduction - Calibration and Test Gas Bottle Change Procedure

These procedures relate to Flow Weighted Average Calorific Value (FWACV) at GDN Biomethane Entry Points. This note is intended for biomethane operators to advise on the correct procedure for the exchange of gas calibration bottle, both the daily and Ofgem test gases attached to the Ofgem Official CVDD unit. Please ensure your own on-site procedure replicates the steps detailed below.

Any queries relating to this procedure please contact the gas quality team in the relevant network (contact details listed in table 1.1).

When the calibration gas or test gas cylinders require changing, certain information in the DANINT suite of files and the Calorific Value Determining Device (CVDD) controller configuration will require updating.

This procedure refers to Danview and Dango, however it will be the same for Encalview, Encalgo, Gasptview and GasPTO.

Please ensure that when the new cylinder has been fitted, the gas is purged up to the isolation valves on the CVDD.

Once a Calibration or Ofgem gas bottle is exchanged it is **imperative** that the GDN is informed (contact details in table 1.1).

Disclaimer: This joint GDN procedure has been developed to help DFOs manage calibration and test gas bottle change procedures. GDN contact details are listed in table 1.1 on page 4. If you have any questions, please do get in touch with the relevant GDN. This procedure was issued in May 2021.

1. Calibration Gas Bottle Replacement Procedure (not GasPTOs)

1. Check that the replacement bottle is a Type 4 gas composition and certified by a company (e.g. Effectech) with the correct UKAS ISO17025 accreditation, as per letter of approval for the CVDD from Ofgem. You must not use any other gas cylinders for this purpose as this will result in a loss of record at your site.
2. Undertake the Calibration Cylinder exchange, ensuring that when the new cylinder has been fitted, the gas is suitably purged up to the isolation valves on the CVDD. Ensure there are no leaks and rectify where found.

NOTE: *In order to ensure that the area of work remains within acceptable limits, a gas detection device should be used to ensure the atmosphere is below 20% LEL during this process.*

3. Open CVDD software (i.e. Mon2000, Mon2020, RGC3000) and go online with the CVDD. The Dango software may need to be closed to enable communication port availability for the CVDD software.
4. Save the as found (AF) configuration files with an appropriate file naming convention to distinguish between files.
5. Update the gas composition from the new cylinder certificate and save.
6. Update the CV value (Primary Superior Calorific) from the new cylinder certificate and save.
7. From the Danview screen select "F8 second set" and then "F1" to update the feeder description for stream 1. Enter the new cylinder number as per certificate E.g. for a cylinder number of "ABC/123456" enter the number e.g. "ABC/123456" and save and exit. If letters are not acceptable within the Danview / Encalview software, then use the numbers only.
8. Re-select "F1" feeder description to ensure the detail has been saved, then exit.
9. From the CVDD software, start a "single stream sequence" for stream 1 and confirm the analysis report is representative of the calibration certificate.
10. From CVDD software, run manual normal calibration and confirm that it has passed. If not the investigate reasons for failure and repeat step 10.
11. Once a successful calibration has been achieved save the as left (AL) CVDD configuration files with an appropriate file naming convention to distinguish between files.
12. Close CVDD software.
13. Re-start Dango, after 1 analysis check that the 'System1' alarm is clear.
14. Run an ad-hoc 35day test by selecting F11 in DanView/EncalView.
15. Complete entry in Ofgem Log with the details of the new bottle and the date completed.
16. Send the calibration gas certificate in original PDF format to the GDN. Cadent also require the certificate in xml format.
17. Ensure that the successful 35-day test is in the outbox for automatic collection & analyser saved calibration results from CVDD software to the DGN (contact details in table 1.1) immediately following completion cylinder change.

2. Ofgem Test Gas Bottle Replacement Procedure

1. Check that the replacement bottle is issued from an Ofgem-approved lab.
2. Undertake the Test Gas Cylinder exchange, ensuring that when the new cylinder has been fitted, the gas is suitably purged up to the isolation valves on the CVDD. Ensure there are no leaks and rectify where found.

NOTE: *In order to ensure that the area of work remains within acceptable limits, a gas detection device should be used to ensure the atmosphere is below 20% LEL during this process.*

3. From the Control menu select 'Single Stream', Select stream number '2 – Stream 2' in menu box, tick 'Purge stream for 60 seconds' and 'Continuous operation' and press ok.
4. From the Danview/Encalview/GasPTview screen, select "F10" to update test gas details as per the certificate and save and exit. If letters are not acceptable within the Danview / Encalview software, then use the numbers only.

NOTE: *Where the composition states <0.001, a zero (0) must be entered.*

5. Re-select "F10" to double check you have correctly entered the values from the certificate and ensure details have been saved then exit.
6. Press F9 on Danview/Encalview/GasPTview to update configuration.
7. Within the CVDD application confirm the current analysis report is representative of the certificate values.
8. Once the composition is within tolerance halt the CVDD.
9. Press "F11" to run a 35-day test.
10. Ensure 35-day test has passed, this will either be displayed in the top right hand box on Danview/Encalview/GasPTview or can be determined by looking at the test results which can be found in D:\DATA, File TSTYMMDD.BG*.
11. Restart Dango and check that after 1 complete analysis cycle there is no 'System1' alarm.
12. Complete entry in Ofgem Log with the details of the new bottle and the date completed.
13. Send the test gas calibration certificate in original PDF format & 35-day test results (BG* .tst file) to GDN. Cadent also require the certificate in xml format.
14. Ensure that the successful 35 day test is in the outbox for automatic collection & analyser saved calibration results from CVDD software to the GDN (contact details in table 1.1) immediately following completion cylinder change.

3. GDN contact details

Table 1.1:

Gas Quality Team email addresses:
FWACV.SustainableGas@cadentgas.com
GasQualityEnquiries@northerngas.co.uk
gasquality@sgn.co.uk
gasquality@wwutilities.co.uk