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# NGC8106

## Composite sampler replacement

ABB is pleased to offer the NGC8106. Based upon the industry leading NGC platform, the NGC8106 is a perfect replacement for composite samplers. The user can now enjoy real-time data instead of monthly averages, and shipping and sample collection errors have been virtually eliminated. Add-in a multivariable transmitter and the NGC8106 becomes a total energy meter. Or utilize the remote communications on the 8106 to transmit real gas quality data to an existing flow computer.



Scan the QR code for more information.  
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## Composite samplers

Natural gas is exchanged on the basis of how much energy it contains. One must not only know the quantity of gas going through a receipt point, but they must also know the quality of gas going through the receipt point.

Their most common primary metering device to measure gas quantity is an orifice plate meter with a flow computer. The orifice plate causes a pressure drop in the meter tube. The flow computer senses the pressure drop and calculates the volume based upon standard equations. Orifice plate meters are simple, low-cost and installed on a very large percentage of gas wells.

For gas quality, a gas chromatograph is required to provide a gas composition from which the heating value is calculated. However, most sites do not have enough gas volume to justify purchasing a chromatograph. To alleviate this problem, composite samplers were installed on measurement sites where the flow was too low to justify a dedicated GC. A composite sampler is a device containing a sample bottle. On a periodic basis, either time or volume based, the sampler will put an aliquot of gas in the sample bottle. The sample bottles are collected either monthly or quarterly depending upon the sales contract, and sent to a lab for analysis.

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## Problems with composite samplers

### Data is not real-time

Typically it takes one month to collect sample before it is sent to the laboratory for analysis. Although the analysis probably only takes a week, it could still be another three weeks before the technician is back at the site to collect the next sample bottle. By the time the gas quality data is entered into the flow computer it could be anywhere from 1-2 months old.

### Data is not accurate

Although the lab analysis is very accurate it is only as good as the sample handling practices that were used to obtain the sample. If the sample bottle is not properly purged or clean when it was installed then the analysis data will be corrupted. The error gets magnified when applied across a whole month of gas production.

### Data is difficult to obtain and not cost effective

Shipping requirements and DOT regulations make it increasingly difficult to ship samples to the central laboratory. These problems with composite sampler had to be tolerated because the cost of a GC was too much to put on these lower volume stations, UNTIL NOW.

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## Solution: NGC8106

### Data that is real-time

ABB is pleased to introduce the NGC8106. Based upon the industry leading NGC platform, the NGC8106 is a perfect replacement for composite samplers. The user can now enjoy real-time data instead of monthly averages, and shipping and sample collection errors have been virtually eliminated. Add-in a multivariable transmitter and the NGC8106 becomes a total energy meter. Or utilize the remote communications on the 8106 to transmit real gas quality data to an existing flow computer.

### Data that is accurate

The NGC8106 is a single stream manual calibration device, it is intended to be calibrated monthly or quarterly, so there is no need to leave an expensive calibration blend at each GC site.

### Easy to use and cost effective

The use of the NGC8106 eliminates many of the problems associated with composite samplers. There are no sample transport issues, no analysis costs, no lag in getting the gas quality information into the gas accounting system and instant alarming of potential data loss. While the initial cost of the NGC and its installation may be higher than a composite sampler. The sampler's ongoing operation and maintenance costs make the NGC8106 a viable economic alternative.