

## Note: 000059

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### Overview

Number	000059
Description	BCG – Supported Products – Wet & Dry Natural Gases
Version	3 from 10.07.2017
Status	Released to Customer
Language	EN
Responsible	Markus Seng
Product	BCG
Category	Documentation

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### Symptom

QuantityWare BCG supports quantity conversions for dry natural gases including LNG, as well a NGL calculations. The products supported with BCG are clearly defined in the BCS Supported Products documentation. The BCG configuration template contains conversion groups for dry natural gas conversions based on the measurement standards defined in the BCG Supported Standards documentation. Low pressure as well as high pressure pipeline scenarios are supported for dry natural gases.

- You wish to also enter “wet gas” measurement data into your ERP system utilizing BCG conversion groups. Is this possible?

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### Cause

N/A

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## Solution

In addition to the full support of dry natural gas calculations and conversions, the effects of water vapor on calorific value as defined in EN ISO 6976:2005 Annex F2 – Excluded volume effect - have been considered to a limited extent in BCG conversion groups. In order to refer all calculated energy and volume quantity values to a uniform and consistent basis, standardized energy units always have to be defined as either SD or ID, in the UoM group as well as in related business documents and pricing.

- It is, however, possible to enter a saturated-gas (“wet gas”) calorific value for the quantity conversion calculations (using the Heating value class indicator SW/IW (Superior/Inferior – wet)), which is then corrected to the corresponding SD/ID (Superior/Inferior – Dry) unsaturated calorific value utilizing the EN ISO 6976:2005 Annex F2 formula.
- SAP PRA low pressure natural gas calculations also support wet natural gases to this limited extent. As described in SAP note 358610, for testing purposes, SAP has delivered an inactive BAdI implementation for wet to dry conversions, OIU\_WET\_DRY\_EXAMPLE, which customers may use as a basis for their specific requirements and own developments. The saturation correction logic of this example is not documented, but apparently identical with the EN ISO 6976:2005 Annex F2 calculation. This logic is hard coded for pressure values in PSI only and allows the adjustment of energy values to either SD/ID or SW/IW values. It does not adjust the calorific value as specified in EN ISO 6976:2005 Annex F2.

In order to allow data entry of SW/IW energy values from SAP PRA systems, BCG conversion groups, in addition to the supported entry of a saturated-gas calorific value, also support SW/IW energy UoM transaction quantity values in conjunction with an unsaturated (“dry”) calorific value or saturated (“wet”) calorific value.

It is important to note that the literature-definition of a “wet” gas varies considerably; many relationships can be found correlating water vapor to dew point. Experimental and theoretical studies on this matter are still being pursued, thus even a theoretical definition of a “wet” gas can be challenging.

As we can see from the above, for financial-value driven ERP systems utilizing QuantityWare BCG, a clear definition of the field measurement data relevant for the internal quantity conversions is absolutely mandatory and needs to be considered with enough lead time in an implementation project. Simply put:

- *Successful calculations implementation depends upon a clearly defined calculations scenario and customer specification! An accurate and detailed specification will lead to an efficient implementation in the timeframes described in our PAIG document. Without such a specification, implementation success is unlikely.*

## Transport Reference

No SAP-based transport

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## Validity

SAP Release	From SP	To SP	In SP Shipment
ECC600	0	-	-
S/4 HANA	0	-	-