

BCG 1.0A

Gas Measurement

Cockpit

Notes:

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Introduction

The Gas Measurement Cockpit is the single entry point for measurement specialists who need to design, monitor, maintain and enhance complex, measurement standard based quantity conversion implementations that run within the Oil & Gas ERP system.

It is part of the product Bulk Calculations Gas Version 1.0A (BCG 10A).

The Gas Measurement Cockpit provides an easy to use user interface and is structured so that measurement experts and technical consultants can organize their work along the clear structure that the cockpit provides.

1. Installation

The technical implementation is provided as a part of a QuantityWare support package CSP.

Please follow the standard SAP instructions for importing support packages into your system via transaction SPAM.

SAP Oil & Gas must be installed

QuantityWare BCG 10A must be installed.

Customizing settings are included in this package, which are needed in every client in which this standard is used.

On ERP releases 4.72 and below, the related customizing transport (defined in Note000006) must be imported into all necessary clients, or distributed to them from client 000.

On releases ERP 2005 (ECC 6.00) or newer, BC Set /QTYW/BCG_10A must be activated in the relevant clients.

Authorization profiles /QTYW/ALL must be updated if already assigned to a user that wants to work with the Gas Measurement Cockpit. In order to print lists, authorization profile QTYW/LIST must be assigned to a user as well.

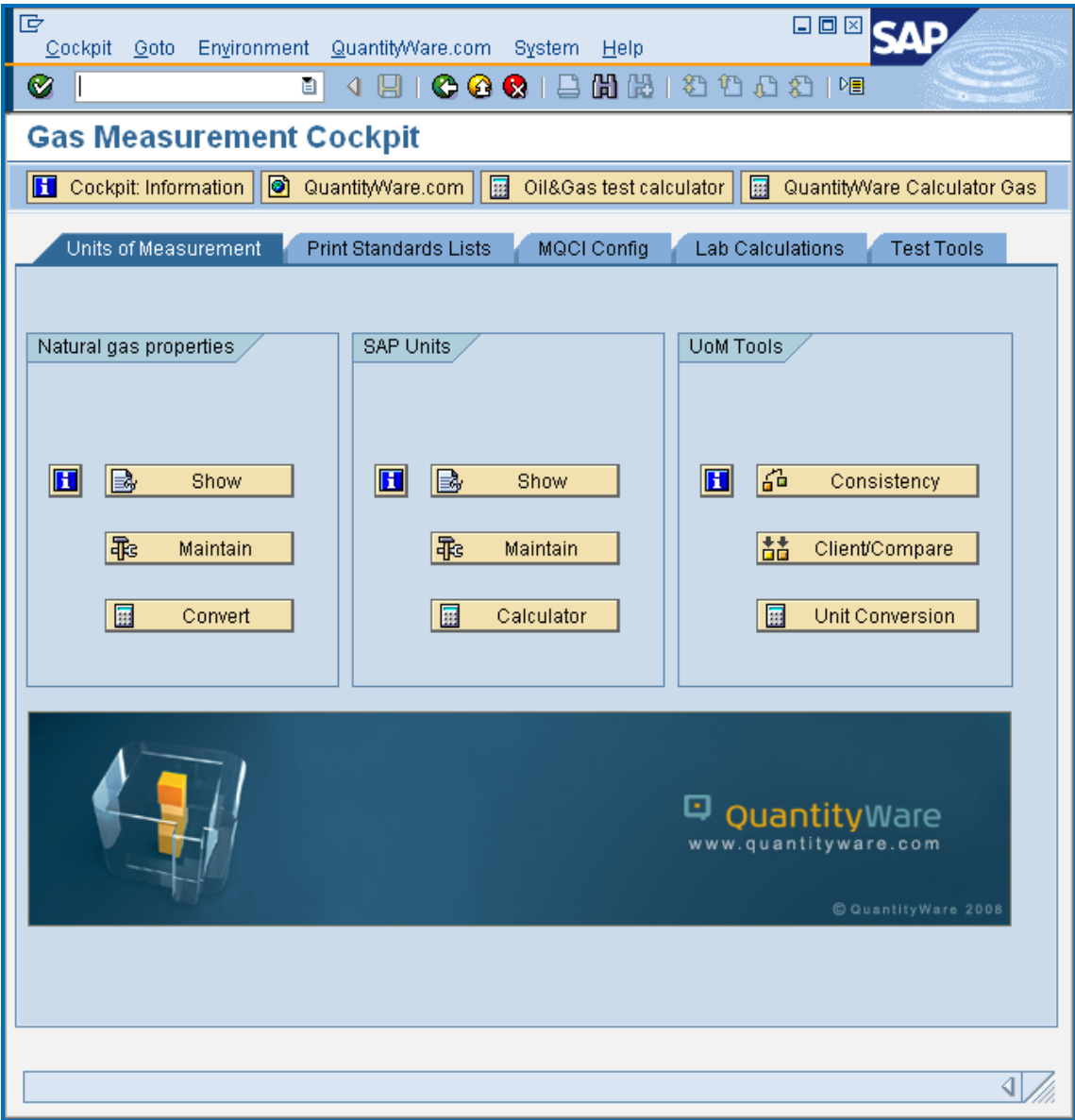
Please refer to the QuantityWare BCG 10A Installation Guide for more information.

⚠ WARNING: If you import the customizing template into a pre-existing client, any pre-existing entries listed within the template (transport or BC-Set) will be OVERWRITTEN!

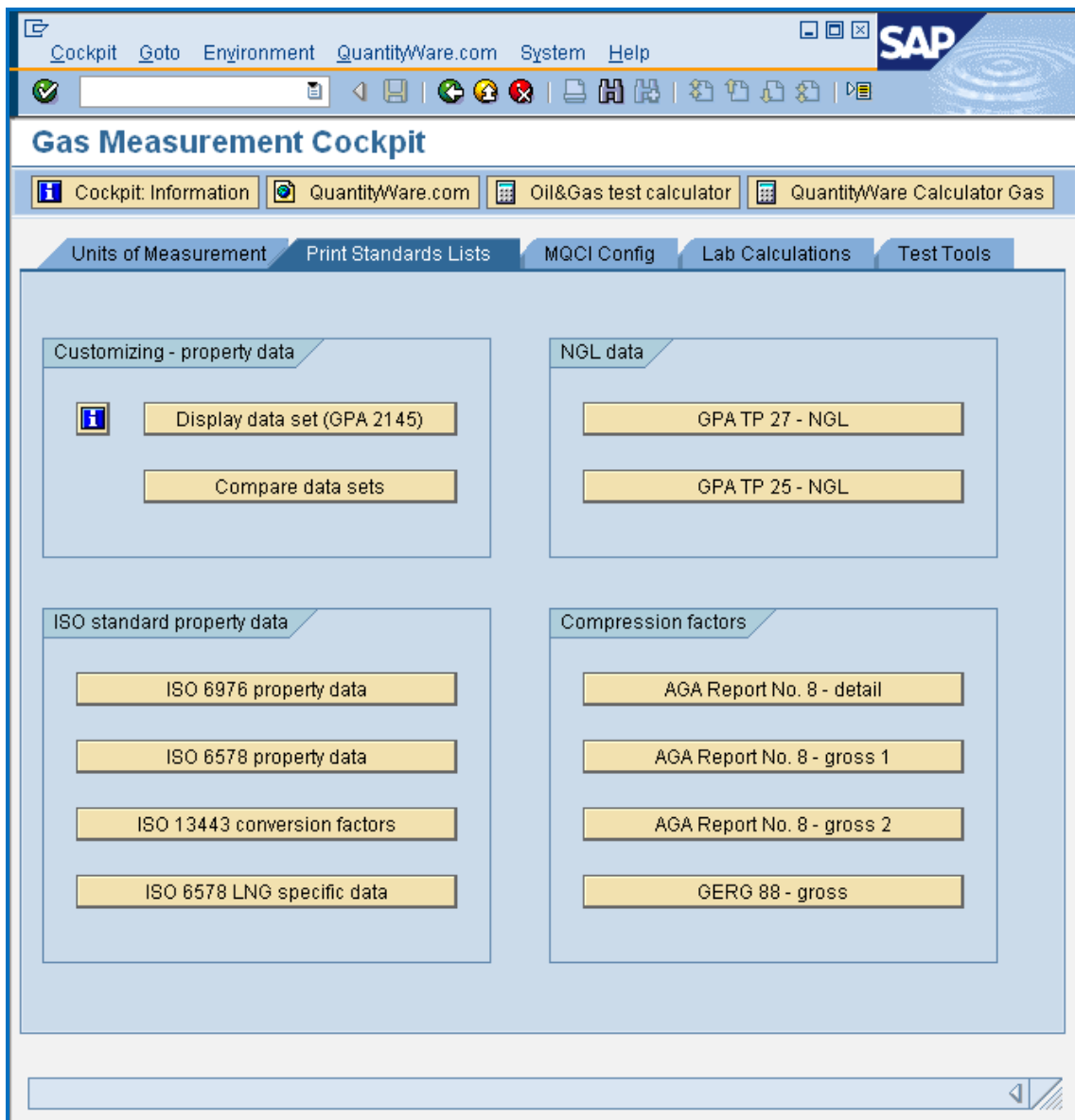
2. Structure of the Gas Measurement Cockpit

2.1. Overview

As shown below, the Gas Measurement Cockpit provides the following tab pages:

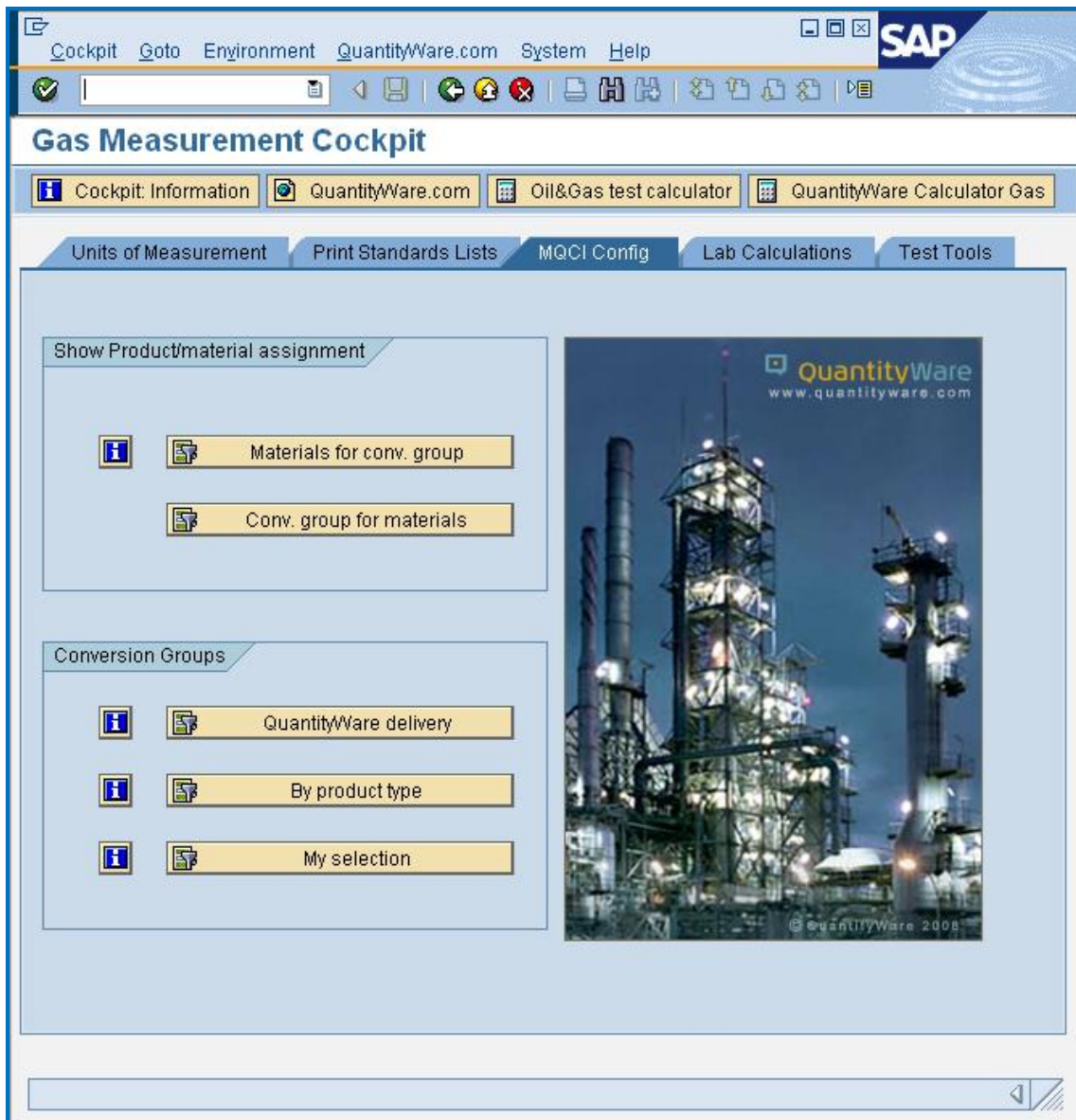


- **Units of Measurement:** Here you define, create, change, display and monitor unit of measurement (UoM) settings. Detailed documentation of the UoM concepts is provided. You perform natural gas property conversions between different reference conditions, e.g. heating values or densities. All calculations and results can be easily printed for further processing.



- **Print Standards Lists:** Here you can display and print lists of physical property data sets, compression factors and LNG specific data, as well as volume correction factors for

NGL. Natural gas and LNG long term contracts specify detailed calculation procedures and property data to be utilized for custody transfer, which you can monitor and verify.



- MQCI Config.: Here you can display and monitor the MQCI conversion group settings for various selection criteria and control the assignment of your conversion groups to your material/product master data.



- ➔ Lab Calculations: Here you perform natural gas and LNG property calculations based on various measurement standards, based on real laboratory data and you prepare quantity conversion default data for goods movement calculations, starting with a sophisticated gas component analyzer tool.
- ➔ Test Tools: Here you can execute all QuantityWare test reports and your own tests that ensure the correctness of the quantity conversion implementations in your system (see section: Installation Test for details).

The tab page that is active when you leave the Gas Measurement Cockpit transaction will be the one you see when you next use the Gas Measurement Cockpit.

From the menu you have access via the following menu points to relevant transactions and information resources:

- Goto: navigate to all QuantityWare customizing transactions and create or change data if the client settings allow this.
- Environment: navigate to related applications like the QuantityWare calculator or the tank management transaction.
- QuantityWare.com: navigate to the relevant QuantityWare website pages.

2.2. Methodology

The 5 tab strips are organized so that they group complex implementation project sub tasks, as well as regular monitoring and error analysis tasks in a structured way.

UoM Definitions – Units of Measurement

Correct UoM definitions and intra-conversion factors are the basis of all quantity conversions. You need to ensure that all UoM are correctly defined. For example, you frequently need to control whether heating values that you report are accurate, or data from business partners is consistent with your data. You also need to define whether stock quantities for a specific UoM are kept within your system.

Standards – Print Standards Lists

When either adding a new product line or changing conversions for existing products, the “second task package” is the definition of the correct measurement standard, or several standards, as well as specific rules which may apply for different countries/business contracts. You need to compare legacy system results with available standards - a process which can be very cumbersome and time consuming. During normal operations, you may also need to explain your conversion results to an independent inspector or customer and thus need to print the relevant data.

Conversion configuration – MQCI config.

The third and most complex task package is to decide which conversion group needs to be assigned to your materials at which plant. You obtain an overview of the QuantityWare delivered conversion groups, organized via product groups, and inspect and cross check the

settings. You then perform trial conversions (using the Oil & Gas calculators available in the push button menu) and inspect the results.

Once you have identified the relevant conversion group, you copy it as recommended to your name space (Q* to Z*), access is provided via the menu path: Goto -> MQCI settings.

Laboratory calculations – Lab calculations

The basis of all natural gas property calculations is the molar composition of a natural gas or LNG. Here you can enter any molar composition, or analyze composition data from standard movement default tables, and perform calculations using laboratory data. All data can be printed out in great detail, ensuring maximum transparency and accuracy of your calculations.

Test – Installation and compliance testing

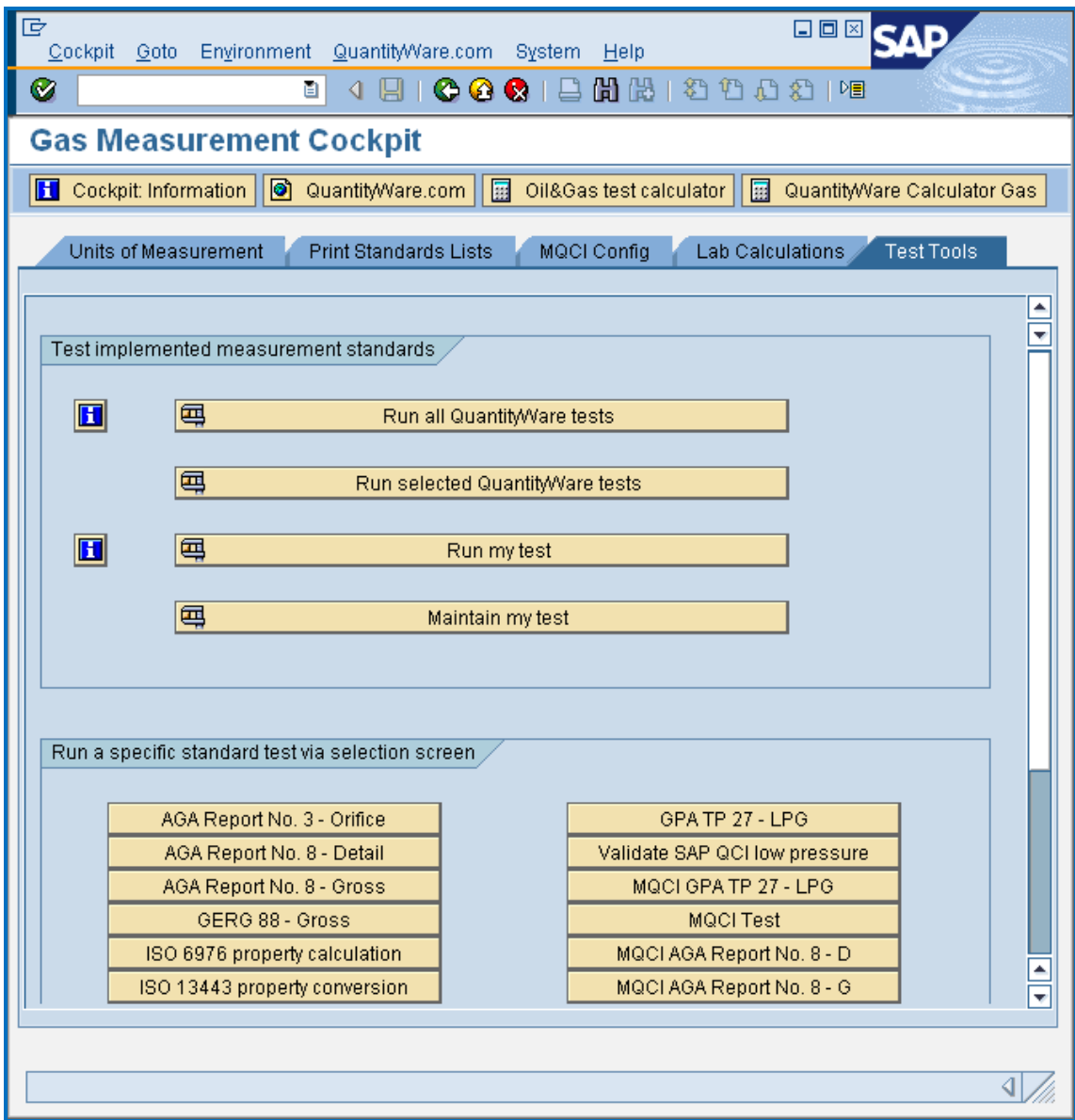
All conversion settings need rigorous testing and quality control. All QuantityWare test reports can be executed from here. You can also use the QuantityWare test tool to develop your own tests without any ABAP programming. All your tests can be executed with one click at any time; you can transport the tests easily within your system landscape, and write log data of the test execution, thus ensuring compliance and quantity assurance. This brings maximum security to your business operators for their day to day business as well as for your company profits.

2.3. Documentation

Detailed online documentation is available within the Cockpit, which explains all measurement concepts and all available tools.

3. Installation test

The Gas Measurement Cockpit does not require a separate installation test. It is the central access point to all QuantityWare test tools that are delivered with BCG 10A:



From this tab, you can either:

- Run all available test reports (requires BC Set for BCG 10A to be activated in your client) with one click and obtain the test result within seconds.
- Run your selection of QuantityWare test programs which you combine to one test run.
- Run your own tests that you have created in house based on your specific configuration settings (e.g. rounding of UoM). Test creation is extremely simplified with the QuantityWare test tool.

All test reports contain a listed print out of all tests performed, so that if executed individually, these lists can be inspected, printed and compared with manually calculated results.

▲ *QuantityWare recommends that you create your own customer specific tests that contain your manually calculated results (cross checked by at least 2 experts) and check the system calculation against these results. This way, a high degree of automation is ensured, as well as system compatibility with your measurement standards during the productive usage.*