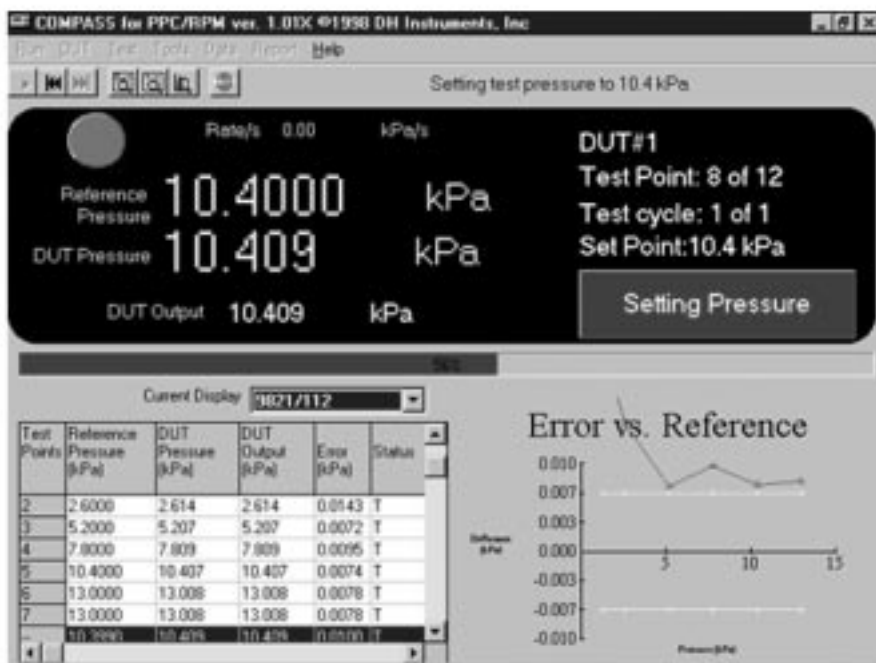




## for PPC/RPM™ Pressure Calibration Assistance Software

### WHY COMPASS FOR PPC/RPM

Most pressure calibration processes can benefit from automation. While automated calibration components are easily obtained, most users do not have access to the necessary software development and hardware integration resources needed to develop them into an automated calibration system. COMPASS for PPC/RPM provides the missing link needed to get from automated hardware components to a fully automated calibration system... and without consuming your internal engineering resources or facing the uncertainty usually associated with getting automated systems on-line.



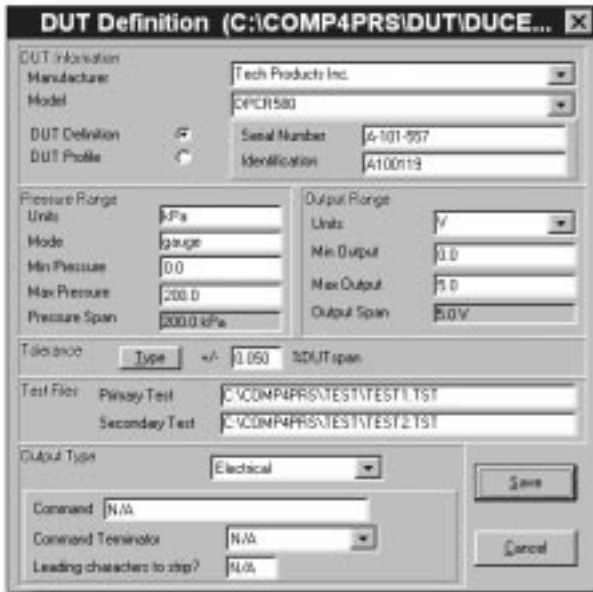
### IMPORTANT COMPASS FOR PPC/RPM FEATURES INCLUDE

- Usable on any IBM-PC or compatible computer running a 32 bit version of Windows®: Windows 95, 98 or NT.
- Run complete automated calibration sequences on single or multiple DUTs unattended, including leak testing and pretest exercising.
- Handles up to 50 RS232, IEEE 488, analog or visual output instruments per test.
- Calculates and reports linearity and hysteresis for each DUT.
- Readily adapts level of automation to test hardware and DUTs so COMPASS can be used for all your pressure calibrations even with standards other than **DHI** PPCs or RPMs.
- Creates standard data files for easy downloading into other software tools.
- On-board test report generation with simple template editing to produce calibration reports just the way you want them.
- Includes special analog gauge calibration mode with manual jog to set pressure to gauge cardinal point.
- Supported by a detailed User's Manual and complete context sensitive on-board HELP.

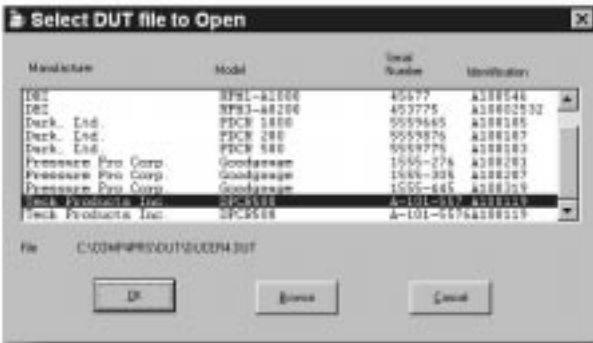


## SETTING UP DEVICES TO BE TESTED (DUTs)

Individual device under test (DUT) definitions are defined and stored as \*.dut files. The DUT file provides all of the information needed to identify a DUT and test it. Primary and secondary test files can



be linked to the DUT file so that the appropriate test procedures are automatically recalled when a DUT is tested. DUT profiles can be used to abbreviate setting up DUTs that are tested by type rather than by



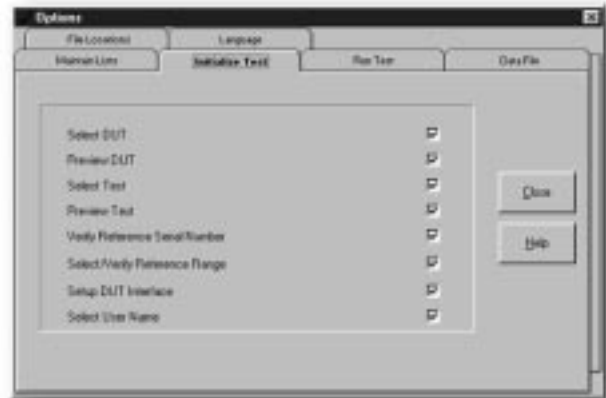
specific serial or ID number. A DUT selection tool allows DUT identification without having to keep track of \*.dut file names.

## SETTING UP TEST DEFINITIONS

Test sequences and characteristics are defined and stored as \*.tst files. The \*.tst files can be associated with specific DUTs. The test files specify the test procedure including the increments to be run (as a percent DUT span or in pressure units).



Initialize Test and Run Test Options allow operation to be customized to specific user preferences.



## CONFIGURING TEST HARDWARE

COMPASS for PPC/RPM makes setting up test hardware simple. Individual test system elements and their characteristics are set up in the Configuration Settings Tool. Then, specific elements to configure or reconfigure a test system can be



selected at any time under a CONFIGURATION tab with pull down component lists. This allows hardware setups to be changed, for example to select a different calibration reference, without programming or interfacing skills.



## RUNNING TESTS

Running a test starts with the selection of a DUT to be tested. Once the DUT is selected, the user may choose to run the primary or secondary test associated with that DUT or another test selected from the available test definition files. In a multiple DUT test, the DUTs are identified and communications tested in an initialization array. After initialization, test execution begins. Unless a manual parameter has been specifically set up, test execution is fully automated and can run unattended.

Test execution follows the sequential steps below:

- 1) Leak test as defined in test file (if leak test included).
- 2) Exercise DUT as defined in test file (if cycle at start of test is included).

- 3) Set test pressure (automatically or manually as specified).
- 4) Allow pressure jog to adjust pressure prior to readings (if specified).
- 5) Wait for dwell time.
- 6) Take reference and test readings for each DUT for averaging time (automatically or manually as specified).
- 7) Store data to file, update test progress screen, update test plot screen.
- 8) Set next pressure.
- 9) After last pressure, present "Test Notes" screen.
- 10) Present post test options screen.

While running a test, complete test information is available through a status line, a real time results array and error plot. Audible prompts are available



to indicate when operator intervention is needed, when an out of tolerance condition is encountered and when a test has completed. An icon tool bar allows DUT and test details to be reviewed while the test is still running.

## DATA HANDLING AND REPORT GENERATION

For each test a data file is created. The data file contains exhaustive information about the DUT and reference as well as the test data. This includes error, linearity and hysteresis values calculated from the test data. The data file is designed to be easily imported into third party applications, such as a spreadsheet program, for further analysis or report generation.

The COMPASS Report function is available to create, view and print fully formatted test reports from data files. Extensive template based editing capabilities are included allowing the report to be formatted to your exact requirements. The template allows all test data to be selectively placed in the report. An error graph can also be included in the report.



In addition to the Report Editor, an advanced Plot function is provided to generate a variety of plots quickly and simply without leaving COMPASS. The plots

can be created, viewed and printed. Available plots include error in pressure units, error in % FS, error % of reading and error vs. best fit straight line.



### COMPASS ORDERING AND USE INFORMATION

The COMPASS for PPC/RPM package is delivered on 3.5" floppy installation disks with a User's Manual.

To use COMPASS for PPC/RPM, the following is required:

- An IBM PC or compatible running a 32 bit version of Windows (Win95, 98 or NT) and 7 MB free hard disk space.

Other items that can be used are:

- CEC or National Instruments IEEE 488 interface in the PC to read remote references, DMMs and/or DUTs.
- **DHI** PPC or RPM pressure reference to provide automated pressure setting and/or reading capability.

- Any third party pressure reference to provide manual pressure setting and/or reading capability.
- Any DMM with an RS232 or IEEE 488 interface to provide automated data acquisition for electrical output DUTs.
- Any multiplexer with an RS232 or IEEE 488 interface to provide automated data acquisition for multiple electrical output DUTs.

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*Due to a policy of continual product improvement, all product specifications, descriptions and features are subject to change without notice.*

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