

Bently Performance* SE*

Helping protect and manage all machinery

fact sheet

The Bently PERFORMANCE SE software extends the functionality of System 1* to include on-line thermodynamic performance monitoring of machinery. Since it is completely integrated with System 1 database and display modules, Bently PERFORMANCE SE provides comprehensive information on the condition of machines in combined mechanical and thermodynamic formats.

Bently PERFORMANCE SE includes the engineering services necessary to evaluate customer's requirements for performance-related calculations and to fully implement them. Bently PERFORMANCE SE is sold as an engineered system to ensure that it is installed, configured, and commissioned to match your application and to meet industry standards for accuracy and repeatability.

Bently PERFORMANCE SE provides extensive, highly configurable capabilities for both simple and complex performance-related calculations.

Actual: Calculations for Current Ambient Conditions

Expected: Expected output for comparison to Actual outputs

Corrected Actual: Actual outputs are transposed to Standard Day Conditions (ISO or Site specific rating).

Corrected Expected: Expected outputs are transposed to Standard Day Conditions. Enables unambiguous performance trending.

It performs these computations based on standard machine templates and feeds this information back into the System 1 software. Once in the System 1 software, all performance data can be viewed from any System 1 display. By using these displays to correlate and compare performance data and vibration data, you can understand the overall health of your machinery more completely. Because Bently PERFORMANCE SE co-resides on the System 1 server, it enjoys identical capabilities for networking and remote access as System 1 software.

Bently Manual Input Software can be used to provide data points that are not otherwise available through System 1 Data Acquisition. These additional points added using the Bently Manual Input can be used in performance calculations and can be viewed and trended in System 1 Display.

Integration of Bently PERFORMANCE SE data with plant control and automation systems can be accomplished using System 1 numerous interface options for importing and exporting data using industry-standard, open protocols. This integration allows measurements for performance-related calculations to be obtained from existing machine control, plant control, and process control systems. It also

Applications

- Gas Turbine Generators
- Gas Turbine Mechanical Drives
- Compressor Stations
- LNG Trains
- Refineries
- Pipelines
- And many others...

Supported Asset Types

- Gas Turbines
- Steam Turbines
- Compressors
- Pumps
- Generators
- HP/IP/LP Steam Turbines
- Heat Recovery Steam Generators
- Feed Heaters
- Condensers
- Chillers
- Plant Heat Balance
- Turbo-expanders
- Reciprocating Compressors/Engines
- Custom Asset types available (contact your GE representative)
- And many others...



allows alarms, calculated variables, trends and other System 1 and PERFORMANCE SE data to be exported and shared as required with other plant systems and computers.

Benefits

- Detects inconsistent measurements
- Determines machine degradation by comparing measured data with expected data ('new & clean')
- Calculates performance under reference conditions
- Clear analytical displays, e.g. compressor maps, generator D-curves, XY- plots
- Provides tight integration with System 1

Capabilities

Gas Turbine Modeling

Single / two shaft / three shaft / aero derivatives

Steam Turbine Modeling

Condensing, non-condensing, with/without extraction, and with/without induction

Compressors/ Pumps

Air / process / side stream compressors

Generators

Accurate Real Gas Calculations using extensive library of gas properties and Equations of State

Hydrocarbon Processing Pedigree

Traditional Displays / Plots

- Bar graphs
- Multi-variable Plots
- Trend Plots
- Train Diagrams
- Compressor Maps
- Multi-purpose Performance Maps

SI / English units

Tight integration with System 1, Decision

SupportSM with RuleDeskTM to enable intelligent alarms and customization of knowledge-based rules.

Services = Solutions

Software Support Plan

To ensure that the value that Bently PERFORMANCE SE brings to your assets will be sustained and even grow over time, Bently Nevada offers a Technical Support Plan which will:

- Correct any nonconformance that is preventing the software from operating in accordance with published specifications.
- Enable you to contact Bently Nevada's Corporate Product Service for technical assistance with the software.
- Give you access to all product enhancements - usually 2 per year.
- Allow you to download new software releases via our software Update site on the World Wide Web at www.ge-mcs.com/bently.

Free software revisions and updates are features of this support. Contact your local GE Sales Professional for more information on this plan.

