System 1® Version 6.X (or Higher) RulePaks

Description

**RulePak software** is a system extender to System 1® software. A RulePak is a pre-configured set of rules designed specifically to perform real-time data validation, real-time calculations and analysis, and real-time detection of specific events and malfunctions. RulePaks are developed using domain knowledge of experts from within GE, including Bently Nevada and other GE businesses, and Partners of GE.

A RulePak is imported into the System 1 Optimization and Diagnostics Platform, via the Decision Support Manager. Once imported, you can apply the imported RulePak on a single problem machine, multiple machines or machine trains across your business. Generic asset RulePaks are available as well as specific asset RulePaks for a particular asset type. RulePaks typically provide mechanical, operation, and instrumentation analysis, as well as provide condition-based maintenance capabilities. The outputs from these RulePaks can drive highly configurable user notifications with Actionable Information®.

RulePaks are imported and applied in combination with various System 1 Application Packages to provide a complete diagnostic package. Although RulePaks are intended to give you pre-configured, model-based logic and equations with usable outputs, you may want to combine some of your knowledge with outputs from RulePaks to make custom rules using Decision Support Studio. Also, the outputs from RulePaks as well as custom rules can drive notifications with default advisories that are user-configurable.

RulePaks provide the following benefits:

- Maximize plant availability
- Optimize plant maintainability
- Mitigate Operational Risks
- Rapid application of expertise from outside your business
- Asset life extension

RulePaks have the following capabilities:

- Configurable advisories
- Robust IT security
- Easy plug-in to System 1 platform
- RulePaks can be deployed across your business
- Can drive user notifications with Actionable Information®
Specifications

System 1® Version

These RulePaks are compatible for use with System 1® version 6.0, or a higher version. The product CD contains RulePaks developed for specific versions of System 1. Services/Customer should ensure that the highest RulePak version of compatibility be installed, or upgraded, according to the customers version of System 1.

Ordering Information

Step 1

3061/00 RulePaks System
3061/00–AXX–BXX

A Order Type
0 1 New Order (CD, Key, Binder)
9 8 Replacement Licenses (Key)
9 9 Update (CD)

B Option Type

Note: Enter the RulePak options. See Step 3 for the available RulePaks.

0 0 None
0 1 Option 1
0 2 Option 2
0 3 Option 3
0 4 Option 4
0 5 Option 5
0 6 Option 6
0 7 Option 7
0 8 Option 8
0 9 Option 9
1 0 Option 10

Step 2 Software (3061/01)

Note: Option A is for information only and is the value chosen under Step 1.

RulePak™ CD & License Media
3061/01–AXX–BXX

A Order Type
0 1 New Order (CD, Key, Binder)
9 8 Replacement Licenses (Key)
9 9 Update (CD)

B License Protection Type
0 0 None
0 1 USB
0 2 Floppy

Step 3 See the following list of catalog numbers and their corresponding RulePaks. These options must be ordered via the 3061/00 catalog number. They cannot be ordered via their own internal catalog numbers.

Steam Turbine RulePaks
3061/02–AXX–BXX

A Steam Turbine Power Generation
0 0 None
0 1 Steam Turbine Power Gen (2 Brg, 1 rotor)

B Mechanical Drive
0 0 None
0 1 Steam Turbine Mechanical Drive (2 Brg, 1 rotor)

Industrial Gas Turbine RulePaks
3061/03–AXX–BXX

A Power Generation
0 0 None
0 1 Industrial Gas Turbine Power Gen (2 Brg, 1 rotor)
0 2 Industrial Gas Turbine Power Gen (4 Brg, 2 rotor)

B Mechanical Drive
0 0 None
0 1 Industrial Gas Turbine Mechanical Drive (2 Brg, 1 rotor)
0 2 Industrial Gas Turbine Mechanical Drive (4 Brg, 2 rotor)

Aeroderivative Gas Turbine RulePaks
3061/04–AXX

A Power Generation
0 1 Aeroderivative Gas Turbine

Electric Motor Mechanical RulePaks
3061/14–AXX

A Motors
0 1 Small (<100hp) Electric Motor FFB (2 Brg, 1 rotor)
0 2 Medium (<1000hp) Electric Motor FFB (2 Brg, 1 rotor)
0 3 Large (>1000hp) Electric Motor FFB (2 Brg, 1 rotor)
Electrical Equipment RulePaks
3061/15-AXX
A Induction Electric Motors
   01 Induction Electric Motor REB - PQM
   02 Induction Electric Motor REB – 269UR
   03 Induction Electric Motor REB – 369UR
   04 Induction Electric Motor REB – 469UR
   05 Induction Electric Motor REB – M60UR
   51 Induction Electric Motor FFB - PQM
   52 Induction Electric Motor FFB – 269UR
   53 Induction Electric Motor FFB – 369UR
   54 Induction Electric Motor FFB – 469UR
   55 Induction Electric Motor FFB – M60UR

Hydro Turbine RulePaks
3061/16-AXX-BXX-CXX-DXX
A Partial Discharge
   00 None
   01 Partial Discharged
B Air Gap
   00 None
   01 Air Gap
C Process
   00 None
   01 Process
D Vibration
   00 None
   01 Vibration

Power Turbine RulePaks
3061/17-AXX
A Type
   02 Power Turbine FFB (2 Brg, 1 rotor)

Generator RulePaks
3061/18-AXX
A Type
   01 Generator (2 Brg, 1 rotor)

Rotating Exciter Mechanical RulePaks
3061/19-AXX
A Type
   02 Simply Supported Exciter

Rotating Compressor RulePaks
3061/20-AXX-BXX-CXX
A Centrifugal Type
   00 None
   01 Centrifugal Compressor (2 Brg, 1 rotor)
B Axial
   00 None
   01 Axial Compressor (2 Brg, 1 rotor)
C Screw
   00 None
   01 Screw Compressor

Integral-Gear Compressor RulePaks
3061/21-AXX
A Type
   01 Integral-Gear Compressor

Dry Gas Seal RulePaks
3061/22-AXX
A Type
   01 Tandem
   02 Tandem w/Intermediate Labyrinth
   03 Double (not available)
   04 Single (not available)

Fan / Blower RulePaks
3061/23-AXX-BXX-CXX
A Centrifugal Type
   00 None
   01 Centrifugal Fan / Blower (2 Brg, 1 rotor)
B Axial
   00 None
   01 Axial Fan / Blower (2 Brg, 1 rotor)*
C Radial
   00 None
   01 Radial Fan / Blower (2 Brg, 1 rotor)*
*applies to fixed, variable, and adjustable pitch machines

Reciprocating Compressor Cylinder RulePaks
3061/26-AXX
A Type
   01 Hydrogen
   02 LDPE
   03 Flare Gas
   04 Natural Gas
Reciprocating Compressor Impact/Impulse RulePaks
3061/27-AXX

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>01</td>
<td>Hydrogen</td>
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<tr>
<td>02</td>
<td>LDPE</td>
</tr>
<tr>
<td>03</td>
<td>Flare Gas</td>
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<tr>
<td>04</td>
<td>Natural Gas</td>
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Centrifugal Pump RulePaks
3061/30–AXX

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>01</td>
<td>Centrifugal Pump - REB</td>
</tr>
<tr>
<td>02</td>
<td>Centrifugal Pump - FFB (2 Brg, 1 rotor)</td>
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Canned Motor Pump RulePaks
3061/33–AXX

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<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>01</td>
<td>Canned Motor Pump</td>
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Reactor Coolant Pump RulePaks
3061/35–AXX

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<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>01</td>
<td>Reactor Coolant Pump</td>
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Gearbox RulePaks
3061/50–AXX

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<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>01</td>
<td>Gearbox (speed increasing, 4 Brg, 2 rotor)</td>
</tr>
<tr>
<td>02</td>
<td>Gearbox (speed decreasing, 4 Brg, 2 rotor)</td>
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</table>

Wind Turbine RulePaks
3061/56–AXX

<table>
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<tr>
<th>Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>01</td>
<td>1.5 MW Wind Turbine/Gen Gearbox</td>
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