AUGUST 2020

ACS1000 Upgrade Campaign 2020
### Three common problems users face when the drive is aging

Every stop in production results in lost revenue

<table>
<thead>
<tr>
<th>Long downtime in case of failure</th>
<th>Drive replacement is costly</th>
<th>Buying spares alone isn’t efficient</th>
</tr>
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<tbody>
<tr>
<td>![Gear icon] () 🔄 ⌛️</td>
<td>![List icon] 📊 + 🔄</td>
<td>![Cylinder icon] 🔄  🔧</td>
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</tbody>
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Drive failure can lead to:

1. Stop of production
2. Loss of revenue

Replacing a complete drive instead of some components results in:

1. Increased cost of ownership
2. Lower sustainability

Buying and installing spares when components fail, provokes:

1. Frequent downtime
2. Higher cost of maintenance
Upgraded ACS1000 helps to increase operational performances

**Increased uptime**
1. Operation with the highest reliability provided
2. The number of failures is reduced

**Lifetime extension**
1. Modern components extend the lifetime
2. New software brings novel benefits

**Maintenance agreements**
1. One time replacement of critical components
2. Remote access, and online monitoring of drive performances
Component upgrade
Modern components and software enable features that improve performances and reliability

Control boards and software

1. New boards that can be maintained in future

2. Modern software enables:
   i. Improved supervision
   ii. Power loss ride-through
   iii. Data logger
   iv. Rectifier protection

Critical hardware components

1. Extended life-cycle support
2. Optimized fan speed
3. Energy savings
4. Reduced noise level
5. Enhance the drive with emergency stop category 1

Connectivity

Neta device allows to connect the drive to ABB’s cloud to:

1. Enable remote support
2. Monitor the drive's performance and condition
Tailored combination of upgrades according to the drive needs

<table>
<thead>
<tr>
<th>Upgrade offering</th>
<th>Offering highlights</th>
<th>Prerequisite for Main Board Upgrade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gate Unit PCAB Upgrade</td>
<td>Bringing the gate units of the ACS1000W (frames W2 and W3) to an actual status.</td>
<td>X</td>
</tr>
<tr>
<td>Auxiliary Power Concept Upgrade</td>
<td>Get rid of maintenance-intense batteries and ensure spare part availability.</td>
<td>X</td>
</tr>
<tr>
<td>WCU Pump Upgrade</td>
<td>Upgrade the water cooling system to ensure spare parts availability.</td>
<td>X</td>
</tr>
<tr>
<td>Main Board Upgrade (AMC34)</td>
<td>Extend the life-cycle support of your drive and unlock new feature upgrades and service agreements.</td>
<td></td>
</tr>
<tr>
<td>EC Fan Upgrade</td>
<td>Safe energy and reduce noise level by the intelligent air cooling system that optimizes the fan speed.</td>
<td></td>
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</table>
Advanced services: Early detection of problem signals and immediate action
Real time monitoring of the drive’s performance and condition combined with remote support

Condition Monitoring self-service:
1. Collecting drive performance data and continuously monitoring them
2. Current condition of the drive with simple traffic lights
3. User-defined alerts based on drive condition parameters (automatic notification via email)

ABB support features based on cloud data:
1. Remote troubleshooting in case of an incident
2. Annual expert reports with maintenance recommendations

Ask for ABB Ability™ services!
Upgrade offer with option to include drive care packages

Order upgrade

August 2020

Delivery of ACS1000 upgrade

15th of December 2020

January ‘21

<table>
<thead>
<tr>
<th>Initial Care (1st year)</th>
<th>Complete Care</th>
<th>Preventive Care</th>
</tr>
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<tbody>
<tr>
<td>ABB Ability™ Condition Monitoring for drives &amp; Remote Assistance</td>
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<tr>
<td>Repair parts as well as labor</td>
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<tr>
<td>Preventive maintenance kits and labor</td>
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</table>

1 Prerequisite but not integrated in the Complete Care contract