Course Description

G175
ACS800 single drive crane control program (+N697), operation and programming

Course Duration
The course duration is 2 days.

Course type
Classroom course

Course Goal
The goal of this course is to teach students to:
1. Understand motions of hoists, trolleys and long travels in different industrial cranes such as gantry, boom and tower cranes;
2. Perform basic dimensioning of crane drives;
3. Program and modify crane applications made by using the Crane Control Program.

Student Profile
This course is intended for electricians, technicians, and engineers, who commission, install, operate and service ACS800 with Crane Control Program application software and sales people.

Prerequisites
- Either course G152 or G156 (or equivalent knowledge). For course names and durations, please refer to the accompanying figures of learning paths.

Description
This course belongs to a learning path that may utilize blended learning. Please see the accompanying figure for possible learning paths.

Course Objectives
Upon completion of this course, students will be able to:
- Describe different industrial crane systems
- Crane drive basic dimensioning
- Describe safety functions
- Describe Crane Control Program features
- Make settings and start-up to the Crane Control Program

Main Topics
- Crane basics and terminology
- Basic dimensioning of crane drive
- Safety control
- Control and reference interfaces
- DriveAP with the Crane Control
- Brake control logic
- Load speed control
- Master/Follower and shaft synchro control
- Speed match and Speed monitoring
- Service counters
- Hands-on exercises
## Course agenda

### G175

**ACS800 single drive crane control program (+N697), operation and programming**

<table>
<thead>
<tr>
<th>Day 1</th>
<th>Day 2</th>
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<tbody>
<tr>
<td><strong>08:30</strong> Course Information</td>
<td><strong>08:30</strong> Safety control</td>
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<td><strong>08:35</strong> Basic of the crane systems</td>
<td><strong>09:30</strong> Coffee break</td>
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<td><strong>09:30</strong> Coffee break</td>
<td><strong>09:45</strong> Master-Follower</td>
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<tr>
<td><strong>09:45</strong> Basic of crane drive dimensioning</td>
<td><strong>09:45</strong> Master-Follower</td>
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<td>- exercises</td>
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<td>- common load</td>
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<td>- separate loads, Shaft &amp; Position</td>
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<td><strong>10:15</strong> ACS 800 Crane Control Product</td>
<td><strong>10:45</strong> Master-Follower</td>
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<tr>
<td>Overview</td>
<td>- Exercise</td>
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<td><strong>11:00</strong> Start-up of ACS800 with Crane</td>
<td><strong>12:00</strong> Lunch</td>
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<td>Control (ID-run)</td>
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<tr>
<td><strong>12:00</strong> Lunch</td>
<td><strong>13:00</strong> Speed and Torque monitoring</td>
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<td><strong>13:00</strong> Start-up procedure</td>
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<td><strong>13:00</strong> Start-up of ACS800 with Crane</td>
<td><strong>14:15</strong> Coffee break</td>
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<td>Control - exercises</td>
<td><strong>14:30</strong> Power optimization</td>
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<td><strong>15:00</strong> Service Counters</td>
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<td><strong>13:30</strong> Flexible control platform</td>
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<td><strong>14:15</strong> Coffee break</td>
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<td><strong>14:30</strong> Flexible control platform:</td>
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<td>- exercises</td>
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<tr>
<td><strong>15:00</strong> Mechanical Brake Control and</td>
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<td>Torque Proving</td>
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<td><strong>16:00</strong> End of the day</td>
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Learning Paths

ACS800 drives
Learning paths

Would you like to take a course via the Internet?
Yes
- G152e 1-2 days
  ACS800 Single Drive Fundamentals Internet course

No
- G152A 1 day
  ACS800 Single Drive Fundamentals

Would you have knowledge of ACS600 single drives?
Yes
- G152B 2 days
  ACS800 Single Drive Fundamentals

No
- G156 1.5 days
  ACS800-07,-17,-37 Single Drive Start-Up & Service Hands-On Training

Would you like to take a course via the Internet?
Yes
- G163e 1-2 days
  ACS800 liquid-cooled drives Internet course

No
- G163A 1 day
  ACS800 liquid-cooled drives

Would you like to take a course via the Internet?
Yes
- G160e 1-2 days
  ACS800 Multidrive Fundamentals Internet Course

No
- G160 1.5 days
  ACS800 Multidrive Start-Up & Service Hands-On Training

Course code | Duration | Course name
--- | --- | ---
G152 | 2 days | ACS800 Drives DriveAP Programming
G158 | 2 days | ACS800 Drives Motion Control
G170 | 2 days | ACS800 Drives Intelligent Pump Control
G172 | 2.5 days | ACS800 Drives Winder/Inline Control
G173 | 2 days | ACS800 Drives Template Control
G174 | 2 days | ACS800 Drives PCP/ESP & Rod Pump Control
G175 | 2 days | ACS800 Drives Crane Control Program (+N697)
G176 | 2 days | ACS800 Drives Winch Control Program (+N698)
G161 | 2.5 days | ACS800 Multidrive Operation and Maintenance

* The duration of the Internet courses depends on personal professional background and study pace