

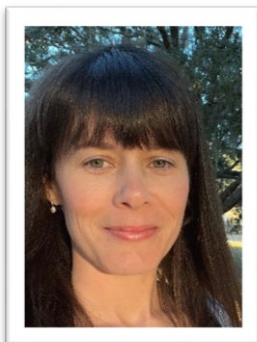
# POTAIN®

## TRAINING 2024

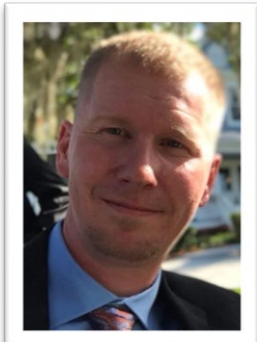
### Course catalog

*Shady Grove – Pennsylvania, USA*

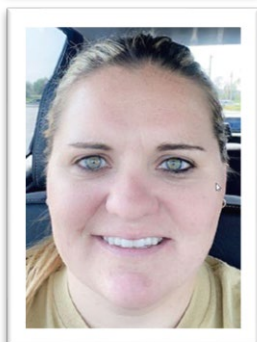




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## Our Capabilities:

Our factory-certified instructors offer operating systems, components, maintenance, and repair training on all our products: Grove, GMK, Manitowoc, National Crane, and Potain.

The Manitowoc Product Support Training Center is an innovative leader in advanced crane industry training. Our onsite and online training curriculum is designed with your profits and your safety in mind. With professional and experienced instructors, our training helps you develop the product knowledge you need to be as productive as possible.

Please contact us if you are interested in Spanish-language instruction.

## Our Facilities:

**Shady Grove, PA:** This site offers multiple state of the art classrooms. A large hands-on simulator lab to include simulators of multiple generations of Grove domestic, GMK All Terrain and National Boom Truck operating systems. A multiple bay training building is also used to accommodate multiple products for troubleshooting and is currently equipped with a GMK4100L-1 dedicated solely for training purposes. A current CCS Potain tower crane is onsite dedicated solely for training purposes.

Available lab workstations:

- Three generations of GMK simulators to include RCL's
- Four generations of Grove domestic RCL simulators
- Four generations of Grove domestic simulators
- GHC simulator to include the RCL
- Multiple National Boom Truck simulators to include RCL's
- EPIC Hydraulic/Electrical Simulators
- Hydraulic and Electrical workstations
- Tower crane erection / dismantling / troubleshooting
- Mobile crane operation
- CCS equipped immersive operator simulator

**Manitowoc, WI:** This site offers multiple state of the art classrooms. 2 large hands-on simulators labs to include simulators of multiple generations of Manitowoc EPIC, Canbus and Crane Control Systems.

Available lab workstations:

- 4 generations of Lattice Crane simulators, from conventional cranes to CCS generation;
- 8 hydraulic benches with pumps and motors that can simulate the function of the machines.
- Small Crawler simulator for the small Crawler range.
- A CCS cabin simulator with wireless remote
- Also available in Portugal, Dubai and Brazil:
  - Epic Simulators
  - Canbus Version 1 and version 2 Simulator;
  - Crane in the box Simulator
  - CCS Simulator

Contact us for more information about our global training centers located in Wilhelmshaven, Germany; Monterrey, Mexico; Sao Paulo, Brazil and Dubai, UAE.

## **Our Address:**

1565 Buchanan Trail East  
Shady Grove, PA 17256

## **Local Airports:**

Baltimore/Washington (BWI) International Airport  
Washington Dulles (IAD) International Airport  
Harrisburg, PA (MDT) International Airport  
Hagerstown Regional Airport (HGR)

Rental Car: A rental car will be required for transportation to and from the airport. A rental car will also be required for daily transportation to and from the Manitowoc Training Facility.

If transportation service is required; arrangements must be made prior to the start of class by contacting Toni Pagliaro at [Toni.Pagliaro@manitowoc.com](mailto:Toni.Pagliaro@manitowoc.com). **\*\*Please note\*\*** all transportation fees incurred will be billed in addition to the cost of the training course you are attending.

## **Recommended Hotels:**

1. Homewood Suites, 1650 Pullman Lane, Hagerstown, MD 21740  
Phone: (301) 665-3816
2. Springhill Suites by Marriott, 17280 Valley Mall, Hagerstown, MD 21740  
Phone: (301) 582-0011
4. Holiday Inn Express, 241 Railway Lane, Hagerstown, MD 21740  
Phone: (301) 745-5644
4. Courtyard by Marriott, 17270 Valley Mall Road, Hagerstown, MD 21740  
Phone: (301) 582-0043

Hotel arrangements, hotel expenses, transportation, breakfast and evening meals are the student's responsibilities.

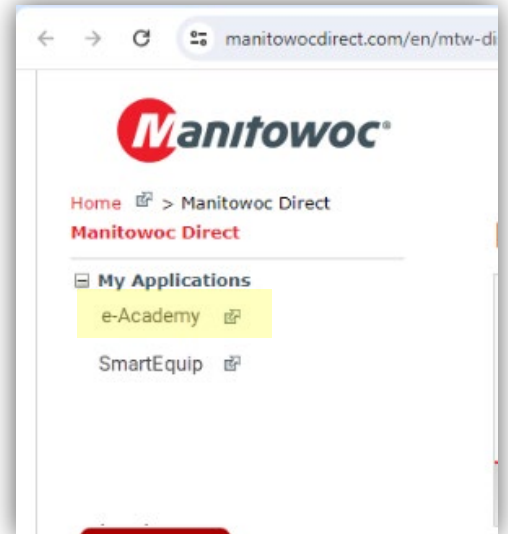
Manitowoc does provide a catered lunch Monday-Thursday. No lunches are served on Fridays. Coffee, sodas, and bottled water are available daily in the training cafeteria at no cost to the students. Snacks are available anytime in the Training Cafeteria vending machine.

## Request an Account:

To register to attend a training class, students must have a Manitowoc Direct account with access to the Manitowoc e-Academy application. Please visit this website and complete the required fields:

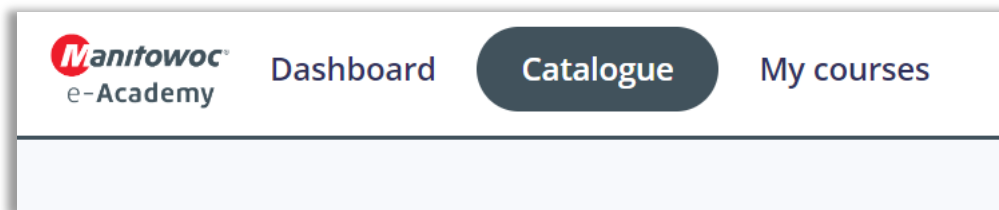
<http://www.manitowoccranes.com/en/manitowoc-direct/manitowoc-direct-request-access>

Once registered, users should login to Manitowoc Direct, click to expand My Applications, then select e-Academy to enter our website.



## Manitowoc e-Academy:

Once logged in, you will see a Catalogue section where you will find our available courses, with upcoming dates listed.



Any registration/payment questions should be directed to Toni Pagliaro by calling 717-593-5918, or by email: [toni.pagliaro@manitowoc.com](mailto:toni.pagliaro@manitowoc.com).



**Section 1** Self-erecting Tower Courses

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**Section 2** Top-slewing Tower Courses

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**Section 3** e-Learning Modules

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# Self-erecting Tower Cranes

**POTAIN®**

| Course                | Page | Course name   |
|-----------------------|------|---|
| GMA IGOT130 EOD       | 08   | IGOT130 Erection, Operation, and Disassembly          |
| GMA IGOT85A EOD       | 09   | IGOT85A Erection, Operation, and Disassembly          |
| GMA IGOT99 EOD        | 10   | IGOT99 Erection, Operation, and Disassembly           |
| HUP EOD & Maintenance | 11   | HUP Erection, Operation, Disassembly, and Maintenance |



## Aim of training course:

This course is to carry out the Erection and Dismantling of the IGOT130 self-erecting tower crane in horizontal and raised jib configuration, to include removal and installation of the transportation dolly. Classroom presentations will be reinforced with practical hands-on operation of the IGOT130 Tower crane. A nomenclature presentation will be provided showcasing the IGOT130. Operational safety instructions for tower cranes will be reviewed, with a focus on safe operating practices. Site preparation will also be reviewed. Erection and dismantling procedures will be reviewed in detail, followed by a machine walk-around.

Maintenance procedures and operator's manuals will be reviewed in detail during the course. Each student will be expected to demonstrate proficiency in all aspects of crane setup and operation.

### Prerequisites

- Must be over 18 years old
- Must bring their PPE

### Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

### Number of participants

- 6 participants

## Program:

- Have a basic understanding of how to read and interpret documents provided with Potain machines.
- Be able to Erect & dismantle the IGOT130
- Conduct pre-operational checks and be aware of basic maintenance checks.

## Teaching Methods:

20% detailed theoretical classroom instruction and 80% hands-on exercises.

## Hardware/Software Provided:

None

## Equipment:

- Training room
- Technical Documents
- Crane

## Cost:

- \$3,100 per student course fee\*  
*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.



## Aim of training course:

This course is to carry out the Erection and Dismantling of the IGOT85A self-erecting tower crane in horizontal and raised jib configuration, to include removal and installation of the transportation dolly. All classroom presentations will be reinforced with practical hands-on operation of the IGOT85A Tower crane. A nomenclature presentation will be provided showcasing the HDT80. Operational safety instructions for tower cranes will be reviewed, with a focus on safe operating practices. Site preparation will also be reviewed in the classroom. Erection and dismantling procedures will be reviewed in detail, followed by a machine walk around.

Maintenance procedures and operator's manuals will be reviewed in detail during the course. Each student must demonstrate proficiency in all aspects of crane setup and operation.

### Prerequisites

- Must be over 18 years old
- Must bring their PPE

### Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

### Number of participants

- 6 participants

## Program:

- Have a basic understanding of how to read and interpret documents provided with Potain machines.
- Be able to Erect & dismantle the IGOT85A.
- Conduct pre-operational checks and be aware of basic maintenance checks.

## Teaching Methods:

20% detailed theoretical classroom instruction and 80% hands-on exercises.

## Hardware/Software Provided:

None

## Equipment:

- Training room
- Technical Documents
- Crane

## Cost:

- \$3,100 per student course fee\*  
*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

## Aim of training course:

This course is to carry out the Erection and Dismantling of the IGOT99 crane in horizontal and raised jib configurations, to include removal and installation of the transportation dolly.

Course material includes:

- Specifics of the erection of IGOT99
- Analysis of erection sequences of IGOT99
- Commissioning of the crane
- Working Principle:
  - Erection Sequence
  - Raised jib erection
  - Commissioning procedure
  - Practical exercises
- Mechanisms controlled by frequency converters of the IGOT99 crane

Each student will be expected to demonstrate proficiency in all aspects of crane setup and operation.

## Prerequisites

- Must be over 18 years old
- Must bring their PPE

## Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

## Number of participants

- 6 participants

## Program:

- Have a basic understanding of how to read and interpret documents provided with Potain machines.
- Be able to Erect & dismantle the IGOT99
- Conduct pre-operational checks and be aware of basic maintenance checks.

## Teaching Methods:

20% detailed theoretical classroom instruction and 80% hands-on exercises.

## Hardware/Software Provided:

None

## Equipment:

- Training room
- Technical Documents
- Crane

## Cost:

- \$3,100 per student course fee\*

*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

## Aim of training course:

This course assumes no basic service and operational knowledge of the Potain HUP Self-Erecting Tower Crane machines.

This class includes

- Erection of HUP Cranes
- Analysis of erection sequences of HUP cranes
- Commissioning of the HUP crane

Working principles:

- Commissioning procedure
- Erect, operate, and dismantle the HUP Crane
- Practical exercises

Mechanisms controlled by frequency converters of HUP cranes:

- Hoisting winch LVF OPTIMA (KEB)
- Slewing mechanism RVF+51 (ABB)
- Trolley winch DVF (MCG71)
- Improvement of troubleshooting methods for HUP Cranes
- Study of radio control equipment
- Study of processing unit V3

## Prerequisites

- Must be over 18 years old
- Must bring their PPE

## Duration

- 3 days
- Tuesday 7:30 am to Thurs 4:00 pm

## Number of participants

- 6 participants

## Program:

- Have basic understanding of the HUP crane and how it works
- Conduct commissioning of the HUP crane
- Erect, operate, and dismantle the HUP Crane
- Have basic understanding of how to navigate and function the CCS system as it pertains to the HUP Crane
- Basic troubleshooting knowledge of the HUP Crane

## Teaching Methods:

20% detailed theoretical classroom instruction and 80% hands-on exercises.

## Hardware/Software Provided:

None

## Equipment:

- Training room
- Technical Documents
- Crane

## Cost:

- \$2,500 per student course fee\*

*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

# Top-slewing Tower Cranes

**POTAIN®**

| Course            | Page | Course Description                        |
|-------------------|------|---|
| Potain Schematics | 13   | Overview of Potain schematic reading      |
| Potain Climb      | 14   | Learn top climbing procedure              |
| Potain CCS 1 & 2  | 15   | Overview of Potain CCS system             |
| Potain CCS 3      | 16   | CCS Programming                           |
| GME EOD           | 17   | Learn erection and dismantling procedures |



## Aim of training course:

This course requires no service knowledge of Potain Tower Cranes or their schematics.

The course is designed to be an intense learning of the Potain French Schematics. The course will go through the complete schematics of a contactor driven slewing and hoisting system, along with a frequency driven trolley and includes the Drivers stand drawings and all options.

The course will consist of classroom time utilizing current French schematics to trace the entire system from power in to the last circuit and how they interface, along with the schematic layouts and component symbols used on the French schematics.

### Prerequisites

- Must be over 18 years old
- Must bring their PPE

### Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

### Number of participants

- 8 participants

## Program:

- Understand the layout and proper use of the French Schematics
- Have more thorough understanding of how to use a Multi-meter
- Understand how to read the schematics so they can tell what type of contactor goes in a particular spot
- Understand how to find an electrical circuit that seems to go or come in from nowhere
- Be able to successfully navigate the schematics to answer questions and trouble shoot the Tower Crane electrical systems

## Teaching Methods:

Detailed theoretical classroom instruction and exercises.

## Hardware/Software Provided:

None

## Equipment:

- Training room
- Technical Documents

## Cost:

- \$2,100 per student course fee\*

*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.



## Aim of training course:

The course includes the analysis of information contained in the top climbing chapter of the crane manual. This top climbing course also contains a "hands-on" segment that requires students to physically climb and secure themselves to an erected tower crane using the documented safety procedures found in the crane manual. Each student will have the opportunity to learn and perform dual roles in the top climbing procedure. The roles taught are:

**Crew Member:** Students will learn to be a member of the crew and will learn the wind restrictions for top climbing the crane. They will learn to follow the correct top climbing sequential steps, observe/ confirm the proper balance and movement of components, and the component's interaction with each other. They will report to the crew lead person any improper movement, lack of clearances or

imbalance in the moving members. Students will learn the proper method of preparing, lifting and landing the mast on the mono-rail beams, and finally, the actual insertion and securing of the mast onto the crane. They will learn the correct operation of the climbing pump, cylinder tilting, yoke engagement and locking, and the proper operation of the safety dogs.

**Crew Lead:** After successfully being a member of the crew, each student will have the opportunity to become the lead person and direct the crew in the proper operation and sequence of the climbing cage and general climbing operation. This will include the insertion and removal of a mast section thus successfully completing a full insertion/removal cycle of the top climbing operation. The crew lead will control the pump used in the process of climbing. Each student will be tested on their practical knowledge of the proper methods, procedures, and restrictions involved to safely top climb the erected tower crane. Each student will also take a written exam during the class.

## Prerequisites

- Must be over 18 years old
- Must bring their PPE
- Potain Schematics

## Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

## Number of participants

- 6 participants

## Cost:

- \$3,100 per student course fee\*

*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

## Aim of training course:

The course has an in-depth look at the new Potain CCS system. All Potain Tower Crane models ending in "9" are CCS machines.

You will be introduced to CCS technology and the CAN bus system. You will learn about the new joysticks, load pins, modules, display screen, and encoders used in the system. You will be introduced to the Jog Dial and menus on the Display Screen and how to navigate them.

You will learn about the different Load Curves as it pertains to the Potain Plus system. You will perform hands on calibration of the limit switches, load limiters and safety devices controlled by the CCS.

You will study the CAN Networks and their components, wiring diagrams, frequency converters and how they relate to the CCS system.

## Prerequisites

- Must be over 18 years old
- Must bring their PPE
- Potain Schematics

## Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

## Number of participants

- 6 participants

## Program:

- Have basic understanding of the CCS system and how it works
- Conduct commissioning of the CCS crane
- Have basic understanding of how to navigate and function the CCS system using the Jog Dial and Display

## Teaching Methods:

Detailed theoretical classroom instruction and hands-on exercises.

## Hardware/Software Provided:

None

## Equipment:

- Training room
- Technical Documents
- Simulators

## Cost:

- \$2,100 per student course fee\*

*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

## Aim of training course:

The course teaches how to program the software in Potain tower cranes with the CCS control system. All Potain Tower Crane models ending in "9" are CCS machines.

The material covers programming the SCM and CMT through the Display using a flash drive.

The course material also covers uploading software to CCS modules using a laptop and service software.

## Program:

- Program SCM modules through display
- Program CMT through display
- Program CCS modules using laptop and service software

## Teaching Methods:

Detailed theoretical classroom instruction and hands-on exercises.

## Hardware/Software Provided:

CCS download cable and service software

## Equipment:

- Training room
- Technical Documents
- Simulators

## Cost:

- \$2,800 per student course fee\*

*\*dealer pricing may vary*

## Dates:

- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

## Prerequisites

- Must be over 18 years old
- Must bring their PPE
- Potain CCS 1 & 2

## Duration

- 2 days
- Tues 7:30 am to Wed 4:00 pm OR
- Thurs 7:30 am to Fri 4:00 pm

## Number of participants

- 6 participants

## Aim of training course:

The course includes the analysis of information contained in the erection and dismantling chapters of the crane manual. This course also contains a "hands-on" segment that requires students to physically assemble and rig a tower crane using the documented safety procedures found in the crane manual. Each student will have the opportunity to learn and perform dual roles in the erection and dismantling procedure. The roles taught are:

**Crew Member:** Students will learn to be a member of the crew and will learn the wind restrictions for erecting and dismantling the crane. They will learn to follow the correct sequential steps, observe/ confirm the proper balance and movement of components, and the components' fit up with each other. They will report to the crew lead person any improper movement, lack of clearances or imbalance in

the moving members. Students will learn the proper method of arrangement, rigging, and setting of components throughout the process. They will also be instructed in the pre-operation checks necessary before releasing the crane for work.

**Crew Lead:** After successfully being a member of the crew, each student will have the opportunity to become the lead person and direct the crew in the proper sequence of the erection and dismantling operation as time allows. This will include assembling of mast sections as well as the jib, counter jib, ballasting, and all other necessary components to make the crane completely operational. The crew lead will also oversee and direct operation of the assist crane to be used for the erection and dismantling process. Each student will be tested on their practical knowledge of the proper methods, procedures, and restrictions involved in safely erecting and dismantling the tower crane. Each student will also take a written exam during the class.

## Prerequisites

- Must be over 18 years old
- Must bring their PPE
- Potain CCS 1 & 2

## Duration

- 4.5 days
- Monday 7:30 am to Friday 12:00 pm

## Number of participants

- 6 participants

## Cost:

- \$3,100 per student course fee\*

*\*dealer pricing may vary*

## Dates:

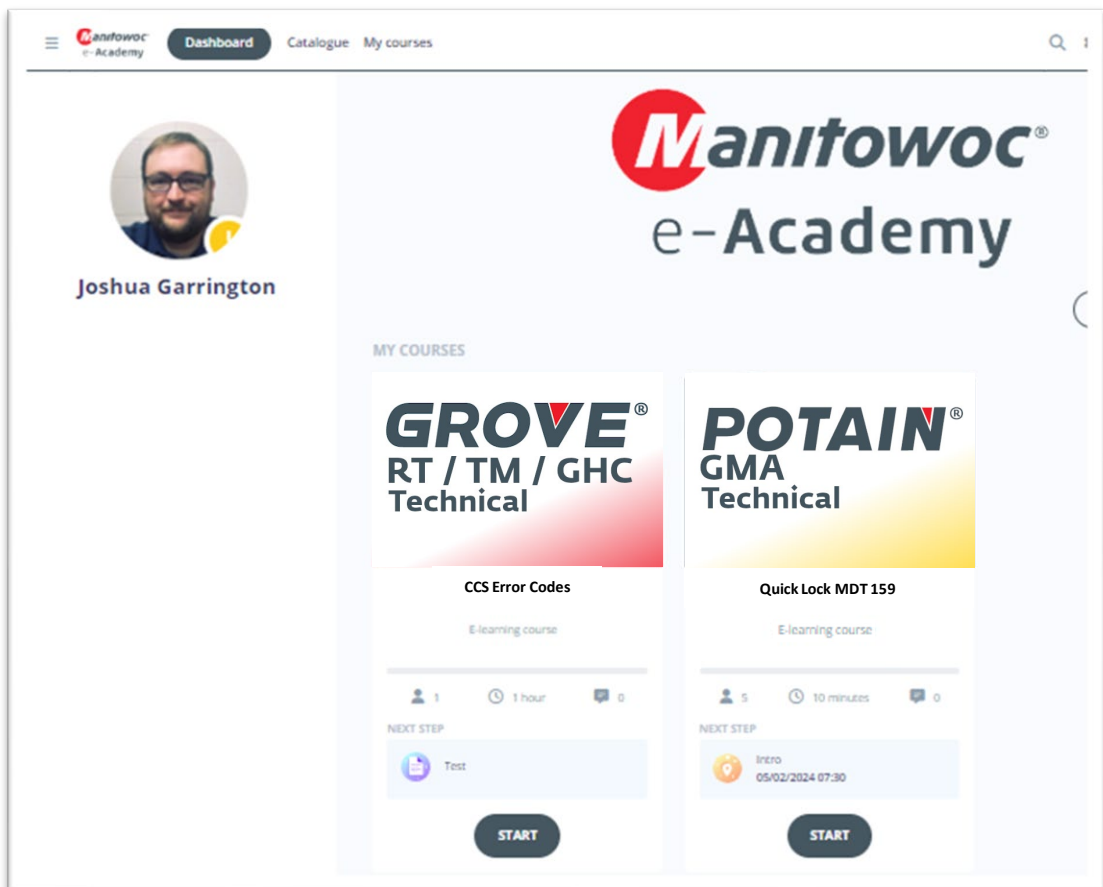
- Check the Manitowoc e-Academy in Manitowoc Direct for available course sessions.

## Supplemental Training Materials:

Manitowoc e-Academy includes dozens of approximately 15-30 minute long technical e-Learning modules for all skill levels.

These materials are best used to supplement, reinforce, or review the material covered during instructor-led training courses.

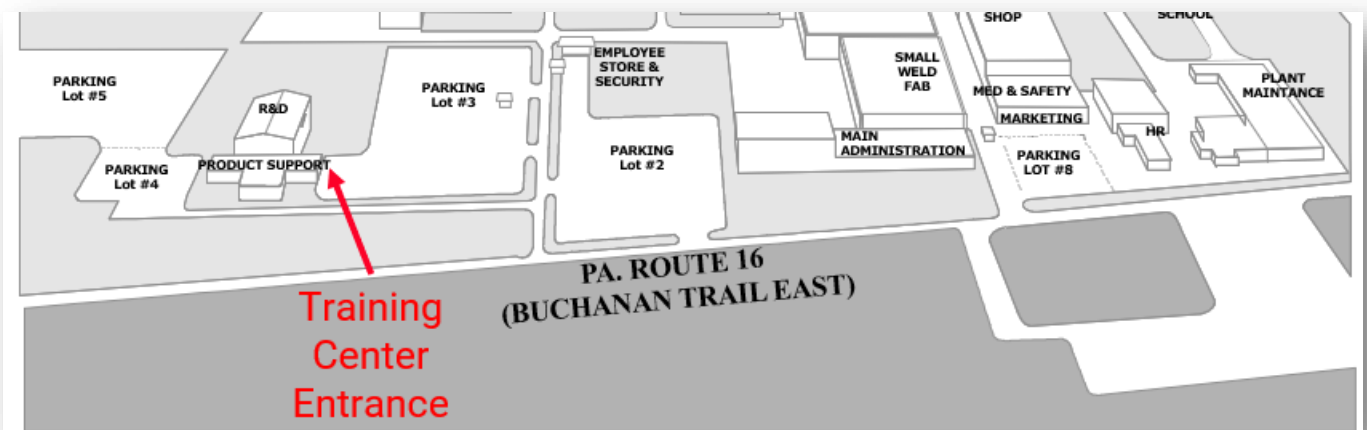
e-Learning modules are free of charge.



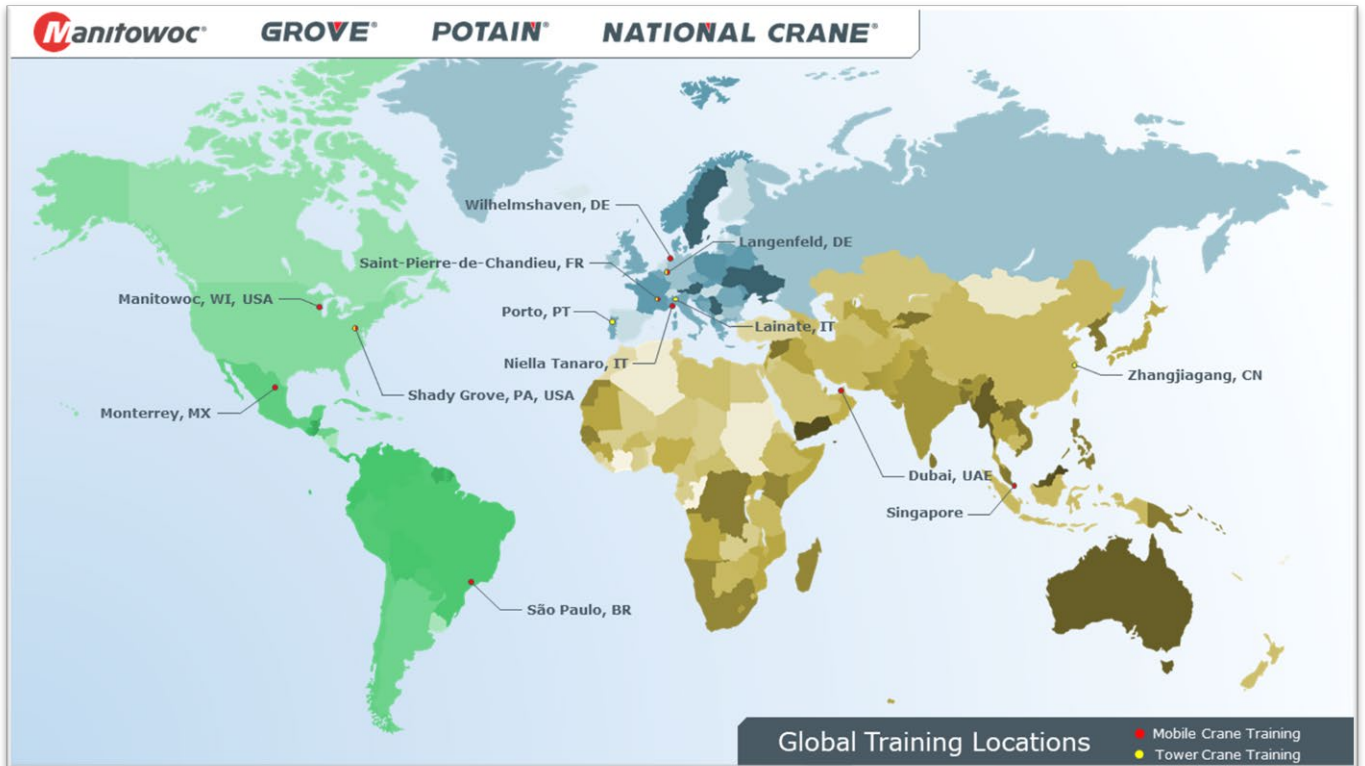


# Address/Map

**Manitowoc Training Center**  
1565 Buchanan Trail East  
Shady Grove, PA 17256  
[www.manitowoccranes.com](http://www.manitowoccranes.com)



## Manitowoc Training Centers



### Manitowoc Customer Support when you need it.

The assurance of the world's most advanced crane service and support to get you back to work fast.



### Manitowoc Finance helps you get right to work generating profits for your business.

Financial tools that help you capitalize on opportunity with solutions that fit your needs.

This document is non-contractual. Constant improvement and engineering progress make it necessary that we reserve the right to make specification, equipment, and price changes without notice. Illustrations shown may include optional equipment and accessories and may not include all standard equipment.