CRANE SIMULATION SYSTEM

Redefine Effective Crane Operations Around The World
LEADING-EDGE SIMULATION TRAINING

Through realistic training environments offered by our Crane Simulators, we are obsessed with a deep sense of purpose to address specialised training needs for ports, construction and other heavy machinery.

For every Crane Simulation product, AGIL™, our unique solutioning approach, acts as the heart of our conscious innovation. We constantly ask and challenge if each is incisive, inventive and intuitive to help solve real-world problems. With emerging technology and experiential thinking, we have effected transformative training for our customers all over the world.

Remote Crane Simulation (RCS)

Enable port automation

More than 20 ports around the world have had their operations automated and the numbers continue to grow. Adopting the Remote Crane Simulator (RCS) enables a skilled workforce that operates remote cranes safely and efficiently.

Decrease training costs

Training with live machinery costs time, resources and productivity. By learning the procedures prior to using actual equipment, RCS helps to eliminate errors and reduce operator incidents.

Reduce workflow bottlenecks

Through simulation, potential workflow gaps can be quickly identified and solved, ensuring high productivity levels.

Our suite of solutions are suitable for:

- Construction
- Fleet owners
- Heavy machinery
- Lifting and port equipment
CABIN OPERATIONS SYSTEM

For customers seeking simulation-based training solutions for operators, we offer flexible hardware configurations that cater to any training requirement.

The Vortex Advantage platform runs both port and construction equipment training packs, and provides a full range of training benefits:

- Modular equipment, plug-and-play and highly customisable
- Professional grade controls and operating experience
- Rotating display (3-screen option) and swappable controls
- Multi-platform adaptability. Ability to bundle with cranes or earth moving vehicles

Realistic Port Equipment Simulators

Our crane and port simulators are powered by CM Labs’ high fidelity Vortex Studio real-time simulation platform, and incorporate other unique adjustable features of the mechanical engineering layer based on real data and real machines.

The simulated models are backed by a massive verification database that has been proven and validated by subject matter experts.

True-to-life simulation

The crane simulator training pack accurately reproduces equipment behaviour, based on load charts and specifications from crane manufacturers.

It simulates:
- Gantry, trolley and boom movement
- Spreader system, hoisting system and rigging
- Bulk handling
- Integrated machine control system
- Cable movement and mechanical stress
- Weather conditions

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Vortex Master

Vortex Trainer

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Basic Operations to Advanced Scenario-based Training

Training includes progressive learning programs from skills familiarisation to advanced loading and unloading techniques. Operators can learn how to manage a wide range of incidents and operational conditions such as machine faults, day or night times, weather and wind conditions.

Instructor Operating Station

The Instructor Operating Station (IOS) is an all-in-one solution for monitoring and assessing trainees. It offers smart 360 degree insights, operating metrics and performance data during the training session. The training solution gives trainees and instructors the ability to customize the scoring system and establish their own benchmarks.

Intelligent Training Assessment

Reports can be customized to highlight scores, including the instructor’s bookmarks, notes and charts. The training system objectively documents trainee readiness, ultimately training a safer and more effective operator. It also helps improve the training focus of future training sessions based on the operator’s assessment results.

Benefits

- Our customers have reported improvements in productivity and training standards.
- Exceeds training and operational standards by 40%  
- Operators are trained faster by at least 33%  
- Up to 150% increase in rate of successful operator training  and 50% higher operator readiness  
- Increased safety awareness and productivity in operators  
- Faster refreshment of skills and procedures  
- Faster emergency response  
- Reduced training costs and risks  
- Objective assessments supported by data analytics  
- Easy to use for self-paced learning  
- Easy to maintain

1. Flinders Adelaide Container Terminal
2. Ports of Auckland Limited (POAL)
3. DP World Melbourne, Australia
4. Multiple Projects
In collaboration with CMLabs, we provide solutions, maintenance and support services to address your crane simulation needs.