Crawler Crane Training Pack

Simulated Equipment Specs

80t (85USt) crawler crane

Boom length: 30m (100ft)

Engine power: 210kW (280HP)

Line pull: 75Kn (17,000lb)

Overview /

The Crawler Crane Simulator Training Pack is part of CM Labs' catalogue of construction equipment training packs. From basic controls and crane positioning to hook and load management, operators who train on Vortex simulators develop the aptitude, skills, and worksite awareness they need to master safe and efficient crawler crane operations.

With the Crawler Crane Training Pack, trainees gain valuable experience with lift planning and operations — in a safe environment, without incurring the expenses of operating a real crawler crane. It is also ideal for experienced operators looking to expand their skills from smaller lifting equipment to larger cranes.
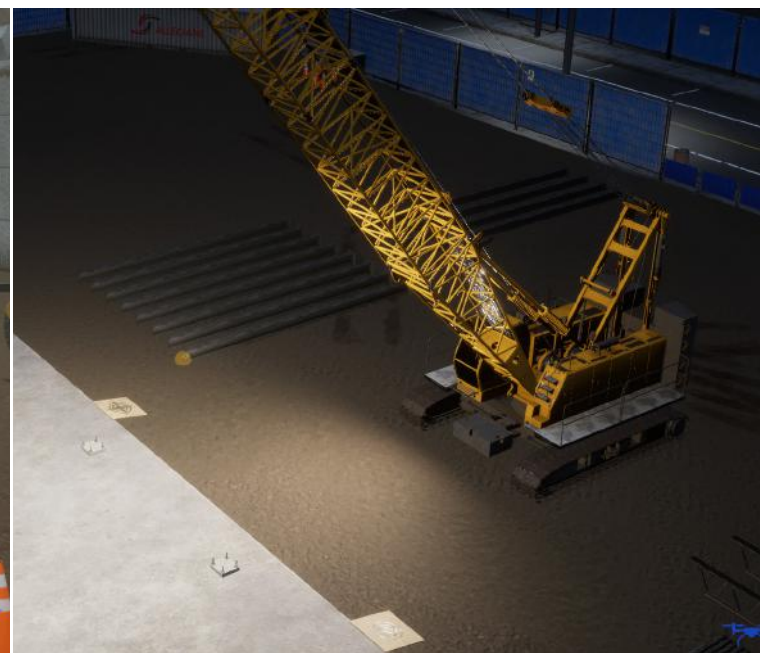
A progressive learning program covering skills ranging from lift planning, crane set-up, and hook/load control, to working in confined spaces and preparing for certification exams.

Performance metrics and reporting that provides trainers with objective indications of trainee strengths as well as areas that require further development.

Best-of-class simulation that ensures the simulated crane travels and lifts just like the real thing. This helps trainees understand how the crane works and how it reacts to operator behaviour.
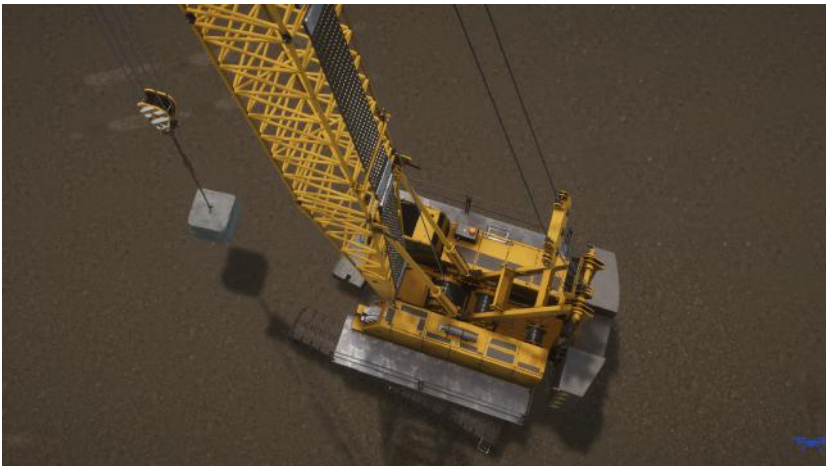
Crane simulation

The Crawler Crane Training Pack provides a complete engineering-grade simulation of the crawler crane, from tracks to boom tip. This includes all hoisting lines, blocks, rigging, and the complete power plant from engine to hoist drums and hydraulics – so the simulated crane travels and lifts just like the real thing. This helps trainees understand how the crane works and how it reacts to operator behaviour.

It also means trainers can expose novices to the kinds of operations that you would not expose them to on the real crane, so they can get valuable lifting experience before ever setting foot on the job site.

An operator touchscreen displays key operating information, updated in real time, including maximum load, current load, center of mass, and more. It also includes additional controls, such as brake switches, operator point of view controls, and working lights.

From the instructor operating station, trainers have access to a wide variety of tools for injecting lift challenges such as snagged loads, shifting load center of gravity, and rigging failures, as well as real worksite challenges, including changing weather and time of day.

Supported Vortex Hardware Platforms

The Vortex Crawler Crane Training Pack can be installed on any Vortex simulator hardware platform, with different configurations to meet your budget, space, and training requirements. Vortex simulators are built to last, designed for years of 24/7 operator training.

Vortex Edge laptop-based instructional platform

Vortex Trainer portable single display trainer

Vortex Advantage with one, three, or five immersive displays

Learning program

The Crawler Crane Training Pack features progressive learning exercises—from beginner to advanced—designed to gradually build skill and confidence:

- ✓ Understanding the controls, start up and shutdown
- ✓ Load management indicator configuration and alarms
- ✓ Hook and load management and pendulum control
- ✓ Complex lifts in confined spaces
- ✓ Nighttime operations
- ✓ Practicing for operator certification exams
- ✓ Lift planning and load charts

Trainees learn the basics of standard crawler crane work, including lift planning, load charts, set-up, travelling and positioning, and complex lifts. They'll also learn the fundamentals of safety systems including anti-2-block, and load moment pre-warning and limit alarms.

Performance measurement

As trainees work their way through Crawler Crane Training Pack exercises, the Vortex simulator tracks and reports on objective performance metrics such as:

- ✓ Time to complete tasks
- ✓ Pendulums and load/hook collisions
- ✓ Rough load handling
- ✓ Load trajectories
- ✓ Fuel consumption
- ✓ Ground pressure
- ✓ Idle time

With the optional instructor operating station, instructors can generate reports from training sessions, and review current and past performance.

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