# Luffing Tower Crane Training Pack
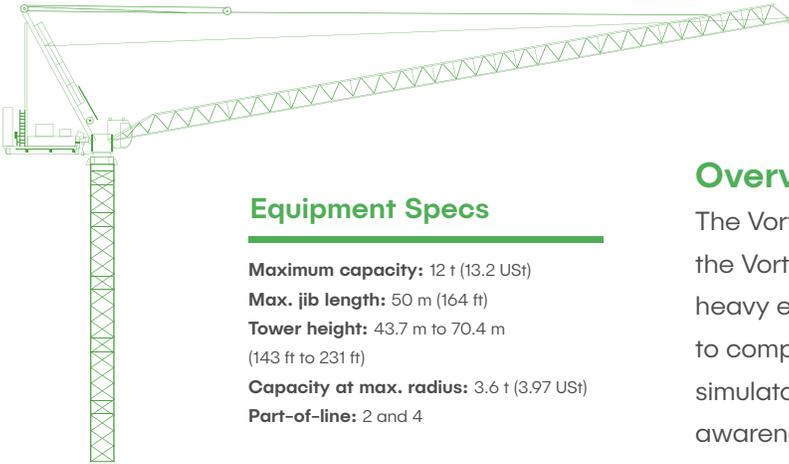
Equipment Specs

Maximum capacity: 12 t (13.2 USt)
Max. jib length: 50 m (164 ft)
Tower height: 43.7 m to 70.4 m (143 ft to 231 ft)
Capacity at max. radius: 3.6 t (3.97 USt)
Part-of-line: 2 and 4

Overview /

The Vortex® Tower Crane Training Module is part of the Vortex Training suite for construction cranes and heavy equipment. From hook and load management to complex blind lifts, operators who train with Vortex simulators develop the skills, coordination, and worksite awareness they need to master safe lift operations.

Key features & benefits /

With the Tower Crane Training Module, operators gain valuable experience in safe lifting operations, with no wear and tear to the crane, and no risk to themselves or others. Operators build real skills faster than traditional training alone and learning organizations save instructor time and reduce equipment costs.

A progressive learning program covering basic craning skills such as hook and load control to working at height with various load types and more advanced lifts.

Performance metrics and reporting that provides students with the feedback on their operating and lifting skills.

Best-of-class tower crane simulation that ensures real skills development and behaves like the real crane.
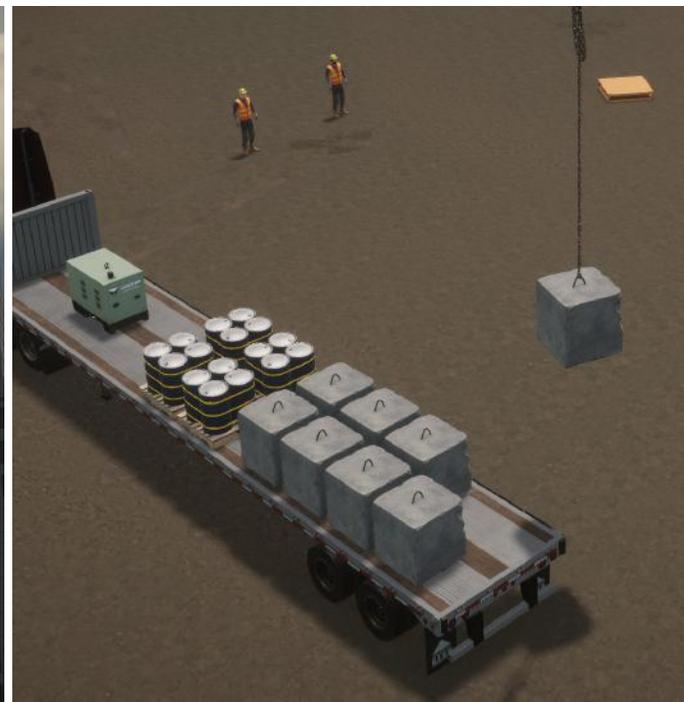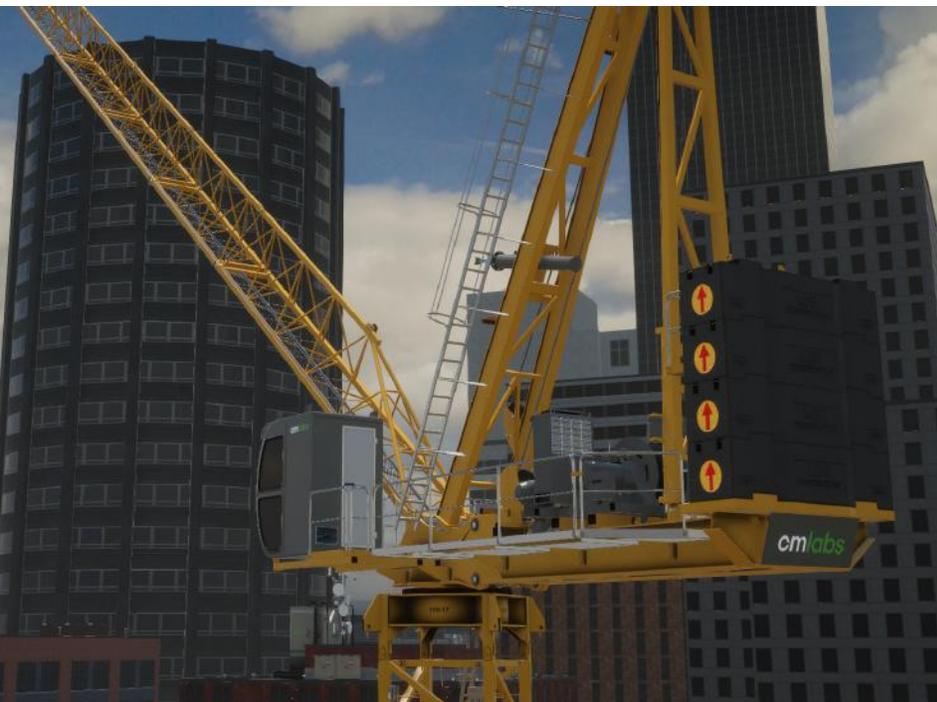
Crane simulation

The Tower Crane Training Module provides the most realistic simulation-based training on the market. This ensures that students can transfer their skills directly from the simulator to the real world. There is no risk of negative training as with other game-based simulators.

Simulation of the crane is built on proven Vortex dynamics. Just as in real life, the simulated mast and jib bend and torque according to the weight of the load, dynamic movements, and actual crane characteristics.

All rigging and hoisting cables are simulated from the load to the drum using actual engineering properties, so that they behave appropriately as lines are placed under tension or the load is released. This means that all loads pendulum, snag, and collide just as they would in the real world, providing valuable experience to students without endangering them or others. Cables will collide with worksite obstructions and the crane boom.

Vortex simulators provide leading worksite visuals; the view from the cab accurately matches the view inside a real crane. An in-cab LMI is displayed on a touch screen mounted to the right of the operator chair, and displays key operational information as well as additional controls. Operators configure and learn LMI operation just like the real crane.

Supported Vortex Hardware Platforms

The Vortex Tower 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 Tower Crane Training Module features progressive learning exercises—from beginner to advanced—designed to gradually build student skill and confidence:

- ✓ Understand the controls, start up and shutdown
- ✓ LMI configuration and alarms
- ✓ Hook and load management and pendulum control
- ✓ Work in adverse wind and weather
- ✓ Unload materials on the worksite
- ✓ Move loads within the building site
- ✓ Erect steel structures and concrete panels
- ✓ Change part of line with pulley block
- ✓ Work at different heights and longer hook lines
- ✓ Practice CCO zigzag corridor and barrel test courses

Performance measurement

The Tower Crane Training Module gives trainers objective insight into student performance and abilities. Student exercises can be recorded and played back for after-action lift team performance review. Trainers can measure key student performance metrics such as:

- ✓ Tasks completed and time
- ✓ Pendulums and load or hook collisions
- ✓ Rough load handling
- ✓ CCO test violations
- ✓ Instructor comments and bookmarks

The optional student management system allows instructors to generate reports from excavator training sessions, and review current and past performance.