

Simulation Based Education and Training for Machine Operators

TENSTAR SIMULATION AB is dedicated to delivering simulation based education and training tools for the construction industry. TENSTAR products promote a better environment, a safer workplace, greater and more cost-effective opportunities for worker training and student practice.

TENSTAR SIMULATION AB was founded by Freddy Lund and Magnus Björkman, two leading entrepreneurs with strong connections to the Swedish construction industry.

Freddy Lund has life-long experience as the former owner of Scanlaser AB, a European provider of machine control solutions. While Magnus Björkman has an extensive background as the founder and co-owner of Tension Graphics; a Swedish school for games development.

In 2005, a joint project between - amongst others - leading machine operator schools and Maskinentreprenörerna (The association of Swedish Earth Moving Contractors), led to the first version of TENSTAR's simulation based training tool for excavators. At the time, the goal was to develop a tool that would help make machine operator's education more effective as well as to contribute to the recruitment of young people to the construction industry.

TENSTAR's simulators are built on powerful technology giving realistic environments and self-instructive exercises. Development is continuously on-going to include more exercises and other construction machinery and accessories.

For a low investment and minimal operating cost, TENSTAR offers fun and efficient operator training in a safe and controlled workplace, whilst promoting a better environment. In brief, TENSTAR products include:

- TENSTAR DIGGER (Excavator) offering a full-scale training tool, including professional driving seat and controls, for the education of both new and experienced excavator drivers (*shown on next page*).
- TENSTAR TRUCK offering a full-scale training tool, including professional driving seat and controls, for the education of long haulage truck drivers.
- TENSTAR CARGO offering a full-scale training tool, including professional steering console, for the education of both new and experienced crane operators.
- TENSTAR TIMBER offering a full-scale training tool, including professional driving seat and controls, for the education of timber forwarder operators.
- TENSTAR LOADER offering a training tool, including professional driving seat and controls, for the education and re-training of wheel loader drivers.
- TENSTAR MOBILE UNIT is a movable simulator and can be placed where it is needed for the moment.

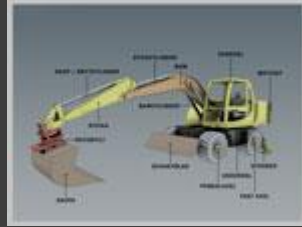


TENSTAR MOBILE UNIT is a specially designed simulator where everything is combined in a single unit; driver's seat, levers, steering wheel, pedals, multiple screen and computer. All power cables are well protected, with only one cable to connect to the outlet.

For more information and to download a demo of TENSTAR DIGGER, please visit <http://www.tenstarsimulation.com/>

TENSTAR DIGGER - EXCAVATOR SIMULATOR Educational Workflow

The educational workflow is divided into five separate sections, each one optimized for a category of focused training exercises.



Section 1 - Introduction

A series of exercises that focuses on pre-maintenance of the excavator and the functions of the levers.



Section 2 - Driving

A series of driving exercises where the operator gets the opportunity to train mobility with forward and backward driving.



Section 3 - Training

A series of excavating exercises where the operator gets the opportunity to train advanced pallet, dipper and bucket combinations.



Section 4 - Safety

A series of safety exercises where the operator needs to deal with complex real-life situations, incl. surrounding and unexpected objects like co-workers, vehicles and spectators.



Section 5 - Practicing machine control

A series of training exercises where the operator can simulate working with machine control. Machine control offers a series advantages such as reduced engineering time and less re-work.