



DIGITAL TRAINER – TH TRUCK SIMULATOR





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Digital Trainer – TH is a training simulator for Sandvik trucks and offers an efficient and flexible tool for operator training. Digital Trainer lets the operator start practicing before the actual truck arrives on-site. For follow-up training, the simulator can be used while the equipment remains available for productive work. Even though Digital Trainer – TH does not totally remove the need for training with the real equipment, it significantly improves overall training efficiency.

Naturally, pre-training with the simulator helps improve safety as the operator gets familiar with the equipment functionalities, supervised by an experienced trainer, prior to entering the underground environment.

INCREASED PROFITABILITY

- Thorough training helps to avoid component breakdowns and unnecessary stresses, reducing overall maintenance cost and increasing profitability

HIGHER PRODUCTIVITY & UTILIZATION

- A skilled operator knows how to best utilize the equipment the most efficient way, improving productivity
- Improved truck utilization: The truck can be used for productive operation while the operator is being trained with the simulator

SAFETY & OPERATOR COMFORT

- Premium ergonomics, real controls
- Unexpected situations can be practiced beforehand
- Trainer nearby for support

SKILLS AND CONFIDENCE



HANDS-ON WELL IN ADVANCE

One of the main benefits of simulator training is that practicing can be started well before the actual equipment arrives on site. By the time the truck is ready for hauling, the operator has already had an opportunity to get familiar with the new Toro™ family truck, as the Digital Trainer features the exact same functionalities as the Sandvik Intelligent Control System in the truck. Pre-training with the simulator aids in proper equipment use which improves operational efficiency, without increasing engine hours or operating costs.



INDIVIDUALLY TAILORED LEARNING

To be able to create an effective program for an individual operator, the training exercises are divided in different levels: beginner, basic and experienced. This way, a more experienced operator can benefit from a tailor-made training program. Digital Trainer can be used for identifying development areas where more practice is needed. Practicing the specifically defined areas with a simulator improves performance with the real equipment, safely and without disturbance to mine production.



GET READY FOR THE UNEXPECTED

As the trainee advances and is ready to take on the next challenge, the trainer can feed unexpected situations to the simulator. Practicing timely and correct responses to fault and alarm messages, such as signals from the brake system, hydraulic system or the engine, help the operator take quick and correct action in real life, decreasing potential damage and risk of production loss. Digital Trainer is also equipped with Eclipse™ fire suppression system functionality, which can simulate a fire in the equipment, allowing the operator to learn both the automatic and manual fire suppression system operation.



LEARN NEW FUNCTIONALITIES

The software backbone, Sandvik Intelligent Control System, is continuously being developed to enable introduction of improvements and new functionalities. To get a full understanding of the newest features, the simulator software can be updated with the latest available control system before uploading it to the truck itself, allowing the operators to get familiar with the changes prior to real equipment operation.

INCREASED PRODUCTIVITY

REACH THE EQUIPMENT FULL POTENTIAL

A skilled operator knows how to utilize the equipment the most efficient way without compromising safety or the equipment itself. Efficient and smooth operating practices improve the individual equipment productivity but may also have a significant effect on optimizing the whole mine operation, contributing to a seamless process. As all the equipment functions are used as intended, the possibilities for disturbances and losses are minimized.

HIGHER UTILIZATION

Digital Trainer offers a tool which increases the equipment utilization, as the truck itself is not needed while the trainee is practicing with the simulator. Further, once the operator has learned the best practices, the resulting accurate operation and timely responses to the control system signals reduce the time spent on the workshop.

REDUCED COSTS

Underground tunnels pose unique challenges for the operators and for the equipment. Hits to tunnel walls and roof, hauling rocks and keeping up to speed with only a minimum number of stops, puts the equipment at risk of damage. Thorough training helps to avoid component breakdowns and unnecessary stresses, reducing overall maintenance costs.

THOROUGH TRAINING HELPS TO AVOID
COMPONENT BREAKDOWNS AND UNNECESSARY
STRESS, REDUCING MAINTENANCE COSTS &
INCREASING PROFITABILITY.



OPERATOR COMFORT WITH AUTHENTIC CONTROLS

PREMIUM ERGONOMICS

Toro™ TH551i and Toro™ TH663i truck cabins offer premium operator ergonomics and comfort. To ensure ergonomics during training hours, Digital Trainer features the same controls and elements as the ones used in the truck cabin.

MOTION BASE

Digital Trainer operator compartment is mounted on a motion base platform supported by two electrical actuators, resulting in an authentic feel of driving a truck. A speaker is mounted in the Digital Trainer operator compartment to simulate the engine sound and other equipment functions where hearing the sounds is important for learning.

REAL USER INTERFACE DISPLAY

The Digital Trainer comes with the truck's actual 5.7" display with adjustable contrast and brightness. The clear symbols provide all the needed information and alarms on one large display giving the trainee more time to keep eyes on the task at hand.

3D VIEW OF THE MINE WORKING AREA

To simulate the mine environment and truck behavior, Digital Trainer is equipped with three 43" HD displays providing a 3D view of the working area. The three screens are secured tightly in a mounting frame for improved rigidity and connected to the simulation computer with HDMI cables. The displays with the mounting frame have been designed for easy removal and packing for transportation.

The user interface with all its functionalities is the same as in Toro™ TH551i and Toro™ TH663i trucks. The control system display view can also be extended to be shown on the trainer's interface. To meet the local needs, the Sandvik Intelligent Control System is available in 17 different languages.

TRAINER INTERFACE

In addition to the actual Digital Trainer's operator compartment for the trainee, the simulator comes with a trainer interface. The trainer interface consists of an external display that can be connected to the simulator with an HDMI cable, delivered with the simulator. The trainer position can be placed outside of the simulator working zone.

The trainer can create exercises, monitor progress, and create unexpected error situations during the training. The basic functionalities of the trainer interface include setting up and modifying exercises, simulating fault situations, generating the trainee performance reports, among others.



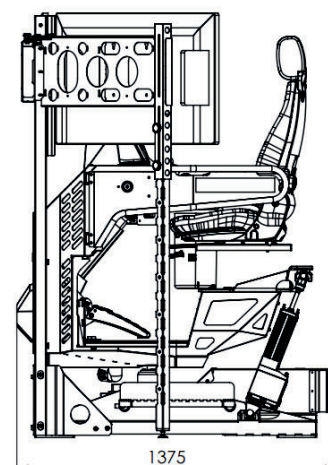
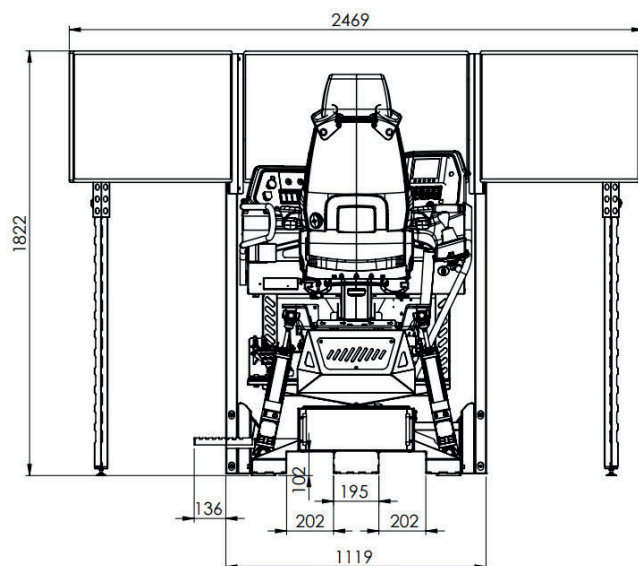
KEY SPECIFICATIONS

User interface:	5.7" color display
Main displays:	3x43" full HD display with mounting frames
External display:	Desktop monitor
Simulation computer:	Windows 11 PC with powerful 3D graphic board
Power supply:	110 240 V AC, 16 A
Product model:	Toro™ TH551i and Toro™ TH663i
Motion base cylinders:	2 x electrical AC cylinders
Sound bar:	Integrated in the dashboard
SimTrainer software language:	English
Control system display language:	Control system available in 17 different languages
Simulator net weight:	410 Kg
Gross weight:	560 Kg (with transportation box)

DIMENSIONS

The dimensions of simulator when in operating condition are:
Length = 1375 mm; Width = 2469 mm; Height = 1822 mm

The dimensions for the transportation box are:
Length = 1879 mm; Width = 1289 mm; Height = 1599 mm





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