



KOMPTECH[®]

Technology for a better environment

TOPTURN X

Self-propelled compost turner



TOPTURN X Self-propelled compost turner



INTRODUCTION

The TOPTURN X is designed for the most demanding applications. Hydrostatic drive combined with a solid telescopic frame allows full mobility on any terrain. It features optimal working conditions for the driver and ensures ideal windrow rotting conditions with its large, hydraulically-driven turning roller. The choice of three sizes means the right machine size for any operation.

Highlights

- *Wheel drive for outstanding traction and quick mobility*
- *Track drive for maximum mobility on unpaved ground*
- *Large-dimensioned turning roller for high throughput and perfect mixing at low wear*
- *Simple transport and comfortable access through swivelling cabin*
- *Optional: Side displacement unit for maximum site space utilization*



APPLICATION



IN OPERATION

When windrow composting pure green waste, when mixing with bio waste and sewage sludge, and for residual and household waste, the turning of the rotting process is controlled. A turning process must improve ventilation and provide thorough mixing of the different rotting zones.

It was according to precisely these criteria that the TOPTURN X was developed. The interplay between the large roller with conveyor and throwing elements and the powerful drive guarantees the perfect windrow is created behind the turner. Loosely stacked, with a triangular cross-section, the windrow helps itself to the necessary fresh air using the "chimney" effect. Decomposition is aerobic and odour emissions are inhibited. The intensive mixing balances out moisture and nutrient differences, creating the perfect living conditions for microorganisms.

There are also perfect conditions in the cab of the TOPTURN – for the driver. Once the desired speed has been set and the machine is on course, the driver can lean back and let the machine do the rest.



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PERFECT TURNING

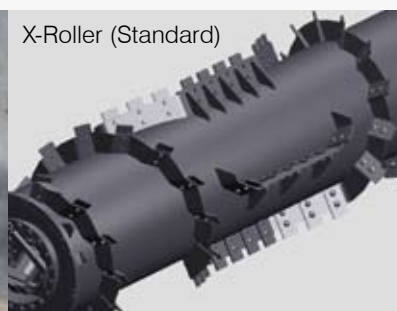
A large dimensioned and powerful hydraulically driven roller with effective conveyor and throwing tools accelerates the turning and rotting processes. This ensures all materials are mixed before passing through the roller so nothing is missed. Also available for operations with high mixing requirements is a specially designed mixing roller (X53).

Together with the reversibility feature, the infinitely adjustable roller speed provides perfect tailoring to any working environment: on start-up with low speed, in the windrow with highest speed and at the windrow end with low reverse run. The hydraulic plough-shaped guide blades steer the material into the feed area, keep the lane clean and, with their sturdy design, allow driving within overlapping windrows.

- Large roller diameter (up to 1750 mm) ensures mixing of the entire cross-section of windrow
- High centrifugal mass of roller provides continuous, engine protecting work
- Accurate positioning of the conveyor and throwing tools guarantees perfect windrow shape
- Special roller design for thorough mixing
- Robust tools made of high-tensile steel are easy to exchange
- Rubber coated guide blades allow easy movement through overlapping windrows



X-Roller (Standard)



Mixing roller (X53)



JUST DRIVE

Wheel or caterpillar tracks? - this is not a philosophical question at Komptech, but rather a decision made by our customers. You decide between the wheeled and the tracked chassis version depending on usage. A separate hydraulic circuit delivers the drive power, while the right hand determines the direction of travel – the sensitive joystick steering is used to select direction and speed. The load-dependent automatic drive (X67 standard) guarantees a relaxing working environment. Simply set the desired turning performance and the machine assumes the rest of the control function.

Wheeled chassis

The wheeled chassis impressively shows off its benefits on asphalt and concrete surfaces. Power is delivered to all four wheels – providing the ability to turn on the spot, a high level of traction and quick maneuverability. All of these options, combined with the driving comfort provided by tires, are persuasive arguments.

- Highest traction on paved surfaces
- Sturdy, foamed tires for long service life
- Minimum surface wear especially at high temperatures
- Quick maneuverability with a 2nd gear up to 8 km/h

Tracked chassis

The tracked chassis is the ideal option for unpaved ground. Even on difficult terrain, the drive power is converted effectively into forward thrust. Free access enables simple cleaning.

- Best traction on difficult terrain
- Open tracked chassis for simple cleaning
- Low-wear, rubberized drive plates with self-cleaning built in



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Robust frame

- For heavy duty application
- Frame mounted roller provides stability
- Telescopic frame enables movement in all situations



Swivelling cabin

- Comfortable entry from the ground
- Perfect panorama view in working position
- Compact size with minimal transport height



Powerful drive

- Modern CAT®-Acert diesel engine
- Compliant to EURO TIER IIIa
- Electronic engine management

Designed to withstand anything

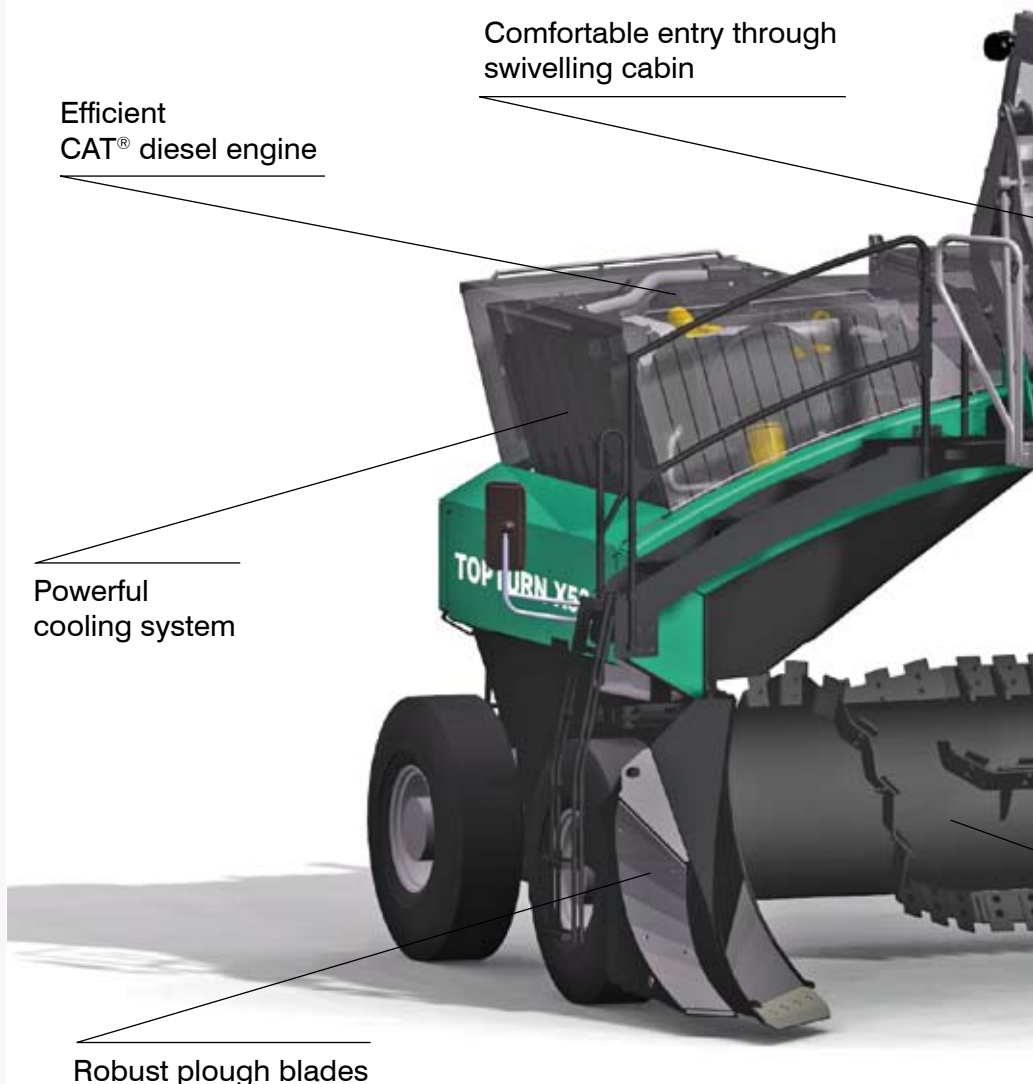
The frame has been designed for the most heavy duty of applications. The sturdy, buckle-resistant design enables maximum performance, even with the heaviest of material. The largely dimensioned turning roller is mounted on the frame and provides additional stability. If so required by the working environment, the frame, together with the roller, can be hoisted upward to a maximum of 380 mm on each side of the chassis with a central telescopic unit.

Lift-off to work

Start-up is safe and comfortable. Entry into the cab is through a front panel door. Two hydraulic lift arms then swivel the cab from the entry position on the ground into the working position directly above the tunnel. With compact dimensions in the transport position inter-company use becomes very easy.

The powerhouse engine

The turning performance of the TOPTURN X is governed by the operator and not by the machine. With up to 446 HP, the performance characteristics of the Caterpillar® powerhouse are perfectly suited to the machine. Modern engine management guarantees minimum emissions and provides excellent operating efficiency of the engine. A powerful cooling system for the engine and the hydraulic system keeps the machine in the "green" range, even at high outside temperatures.



Comfortable entry through swivelling cabin

Efficient CAT® diesel engine

Powerful cooling system

Robust plough blades

MACHINE WALKABOUT

High degree of working comfort

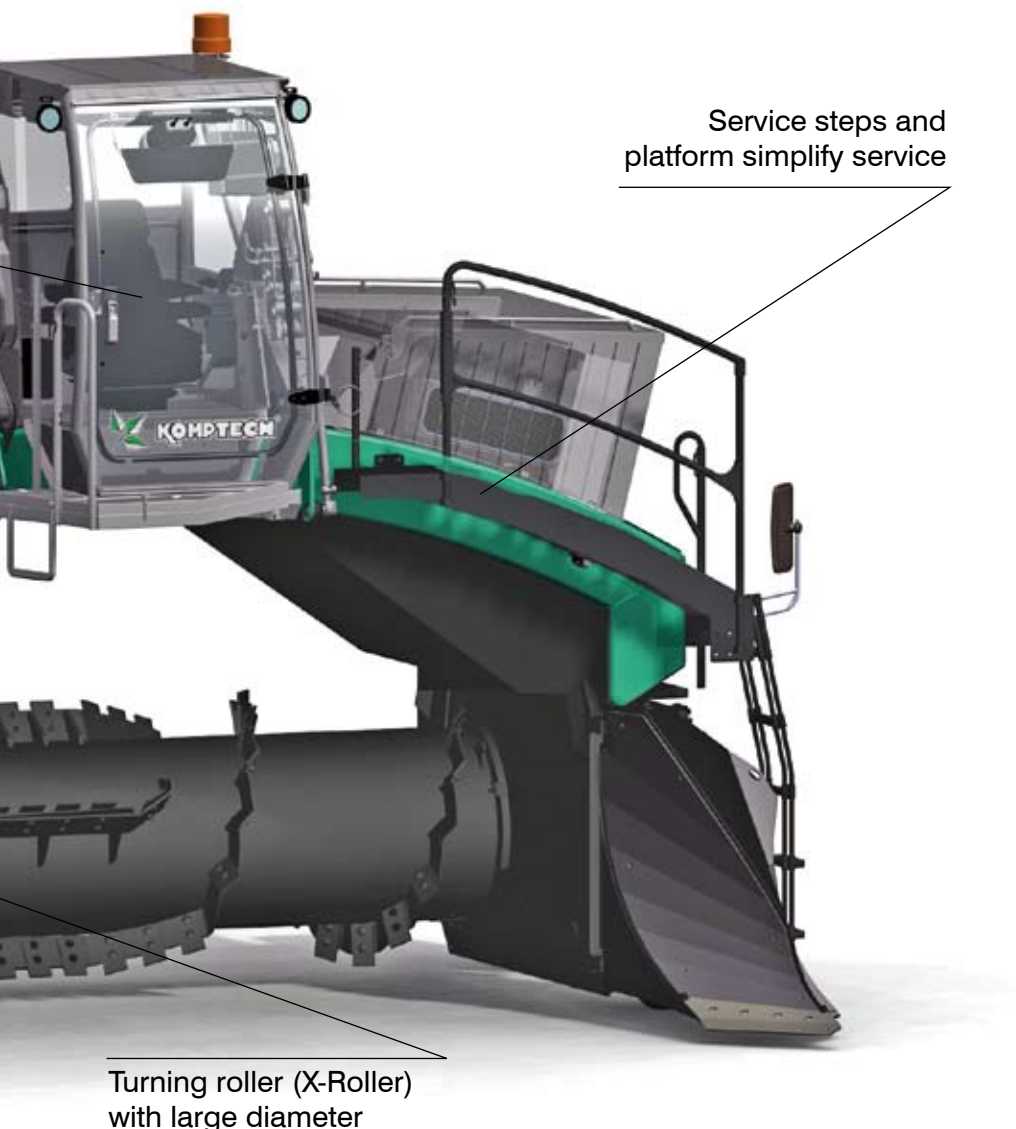
The comfortable cab of the TOPTURN X is a perfect place to work. The perfect overview, inside with a central computer and outwards with all-round 360° vision, provides the driver safety.

The pressurised cab with tinted glass, built in noise-protection, air-conditioning and a CD/MP3 radio provides the driver comfort. The cab air is cleaned using a suction and recirculated air system with EU4 filters. Two joysticks provide simple and logical control - the right is used for machine movement while the left is for all important machine functions.

The machine itself has a comprehensive monitoring system. The engine and hydraulic systems are monitored continually, while the status messages from different sensors converge in a central computer and are shown graphically on an LCD display.

Simple servicing

Both side covers are opened hydraulically, making the engine and cooling systems freely accessible. Service access steps and the access platform simplify access to all servicing points. Always good supply with grease comes from an automatic central lubrication.



Comfortable operation

- Ergonomic working place
- All control elements in view
- Multi-stage air cleaning system



User friendly

- Simple and logical controls
- Easy monitoring of operational status
- Load dependent automatic drive (X67)



Service friendly

- Wide opening side covers
- Service steps and platform for safe access
- Automatic central lubrication

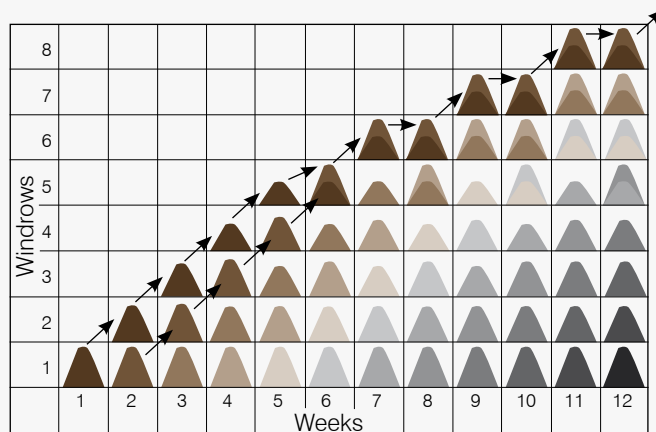
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LATERAL DISPLACEMENT DEVICE

When turning, the material mixture can be piled onto the neighbouring windrow areas by a lateral displacement device coupled to the TOPTURN. This way the raw material can always be placed at the same windrow position and processed material can be removed from the last windrow position. Transportation distances are minimised and excellent visibility facilitates supervision and monitoring. By collapsing two windrows the rot shrinkage is smoothed out, making full use of the space.

For assembly of the lateral displacement device, the TOPTURN needs to be set up with hydraulic adapters and an extended chassis. The TOPTURN is „saddled“ with the lateral displacement device and connected hydraulically via a quick coupling device. To discharge material on the opposite side, simply change “saddling“.



Combination of displacement and collapsing with 8 windrow positions gives rotting time of 10 to 12 weeks



OPTIONS

Watering correctly

A powerful hose system which is used for watering is unwound off a drum by the turner and wound up on the drum with a remote control device. During the turning process, water is poured into the material across a wide area via an impact nozzle. A throughput of up to 1000 litres of water per minute is possible depending on connection pressure.



Watering

Take up everything with the scraper device

A patented scraper device ensures the lowermost ground layer, a potential source of odours, is not left behind. A quick-coupling system allows the scraper to be mounted/removed in just a few quick steps.



Scraper device

Quick maneuvering

The fast version has a second gear, meaning maneuvering around saves far more time because of the (up to) 100% increase in speed in relation to the turning speed.

Active feed device

Guides with hydraulically driven feed screws ensure reliable feed of the edge areas into the windrow body and also increase the feed width.



Feed device

Carbide tools for prolonged usage

If the material contains a high percentage of abrasive substances (mineral fractions such as soil, sand and glass), service life can be significantly extended by using carbide tipped tools.

Clean air with protective ventilation

If so required by the external conditions, the ventilation system can be fitted in addition with particle filters and an active carbon filter for organic gasses and vapours. Ammonia separation is also available if required. (For further options see Technical specifications)



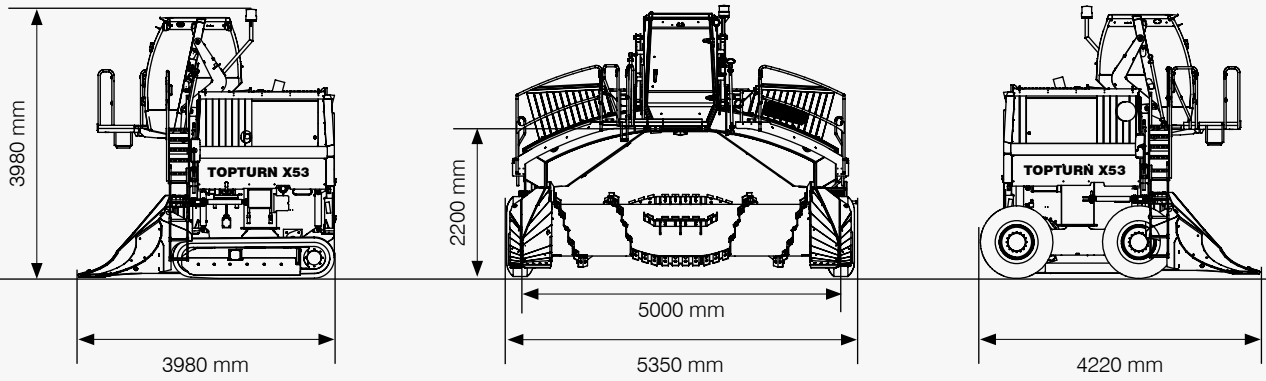
Carbide tool (Mixing roller)

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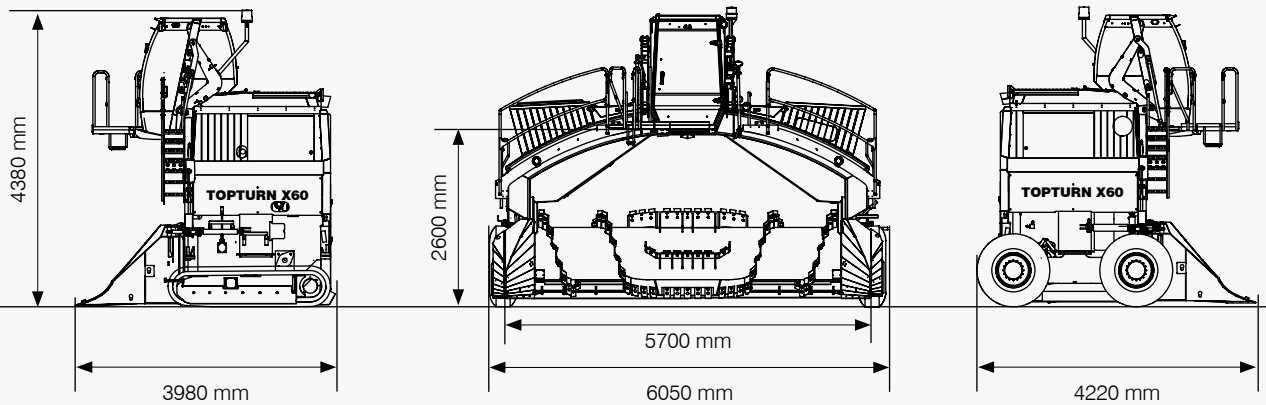
	TOPTURN X53	TOPTURN X60	TOPTURN X67
Motor diesel engine			
Type:	C9	C9	C13
Power:	242 kW / 330 HP	242 kW / 330 HP	328 kW / 446 HP
Capacity:	8800 ccm	8800 ccm	13000 ccm
Number of cylinders:	6	6	6
Cooling system:	Liquid cooling and intercooling	Liquid cooling and intercooling	Liquid cooling and intercooling
Rated speed:	2100 U/min	2100 U/min	2100 U/min
Tank capacity:	400 l	400 l	870 l
Machine dimensions			
Transport position L x W x H			
<i>track:</i>	5350 x 2540* x 2900 mm	6050 x 2540* x 3300 mm	6750 x 3000** x 3400 mm
<i>wheel:</i>	5350 x 3000* x 2900 mm	6050 x 3000* x 3300 mm	6750 x 3000** x 3400 mm
	*outer part of blades demounted	*outer part of blades demounted	**drive, outer part of blades and service steps demounted
Working position L x W x H			
<i>track:</i>	3980 x 5350 x 3980 mm	3980 x 6050 x 4380 mm	4720 x 6750 x 5300 mm
<i>wheel:</i>	4220 x 5350 x 3980 mm	4220 x 6050 x 4380 mm	4970 x 6750 x 5300 mm
Weight			
<i>track:</i>	approx. 13200 kg	approx. 14700 kg	approx. 22000 kg
<i>wheel:</i>	approx. 12500 kg	approx. 14000 kg	approx. 21000 kg
Max. intake width	5000 mm	5700 mm	6400 mm
Max. windrow height	2400 mm	2800 mm	3100 mm
Max. windrow cross-section	approx. 6,5 m ²	approx. 8,5 m ²	approx. 10,5 m ²
Roller diameter	1200 mm	1400 mm	1750 mm
Travelling gear	Hydraulic traction drive, continuous (I standard, II optional)	Hydraulic traction drive, continuous (I standard, II optional)	Hydraulic traction drive, continuous (I standard, II optional)
<i>track:</i>	I: 0-4 km/h	I: 0-4 km/h	I: 0-3 km/h II: 0-6 km/h
<i>wheel:</i>	I: 0-4 km/h II: 0-7 km/h	I: 0-4 km/h II: 0-6 km/h	I: 0-4 km/h II: 0-8 km/h
Throughput (dependent on material)	to 3500 m ³ /h	to 3500 m ³ /h	to 4500 m ³ /h
Additional equipment	II. speed level, Preparation lateral displacement device, Lateral displacement device, Central lubrication displacement device, Scraper, Active feed device ^{X53, X60} , Protective ventilation, Protective ventilation with ammoniac separation, Service steps ^{X53, X60} , Access platform ^{X53} , Central lubrication, Preparation for watering ^{X53, X60} , Watering device ^{X53, X60}		

TECHNICAL SPECIFICATIONS

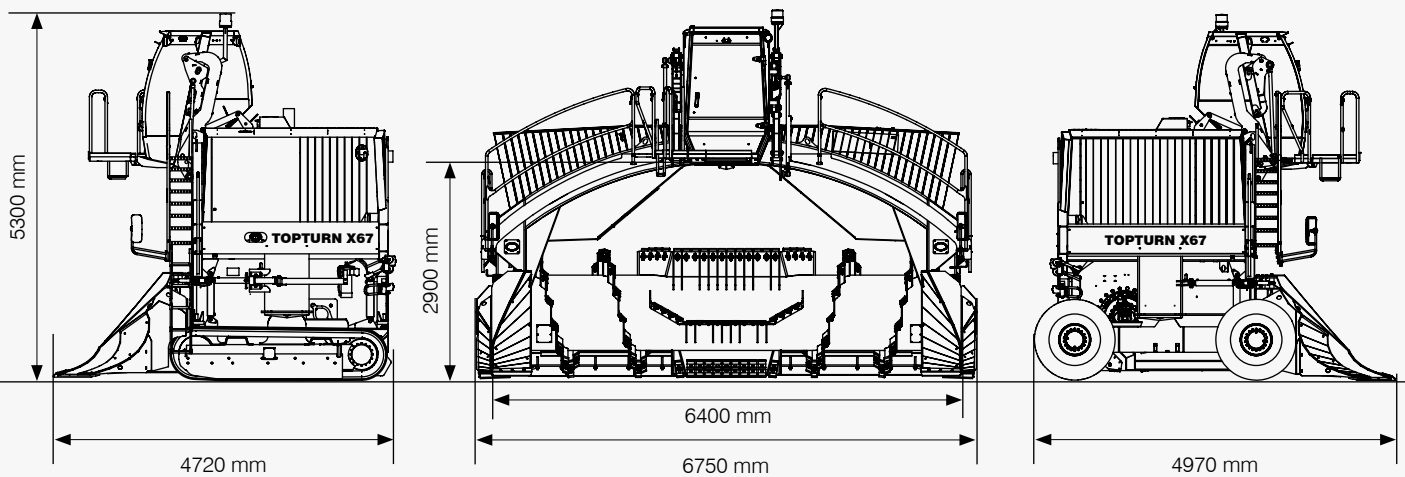
TOPTURN X53



TOPTURN X60



TOPTURN X67



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