

THE ICE MASTER INNOVATION

Catalogue
Mammoth



INDEX

Company	5
Mammoth	11
Connect	53
Autopilot	61
Autopilot 3D	67
Strengths	79
Products	83

COMPANY

Young, vibrant, and cutting-edge:
At WM technics, innovation is our top
priority - for both us and our clients.

Established in 1986, WM technics crafts premium **ice resurfacing machines** suitable for every surface and requirement. Our state-of-the-art models stand out with their advanced technology, user-friendly operation, certified safety, and contemporary design.

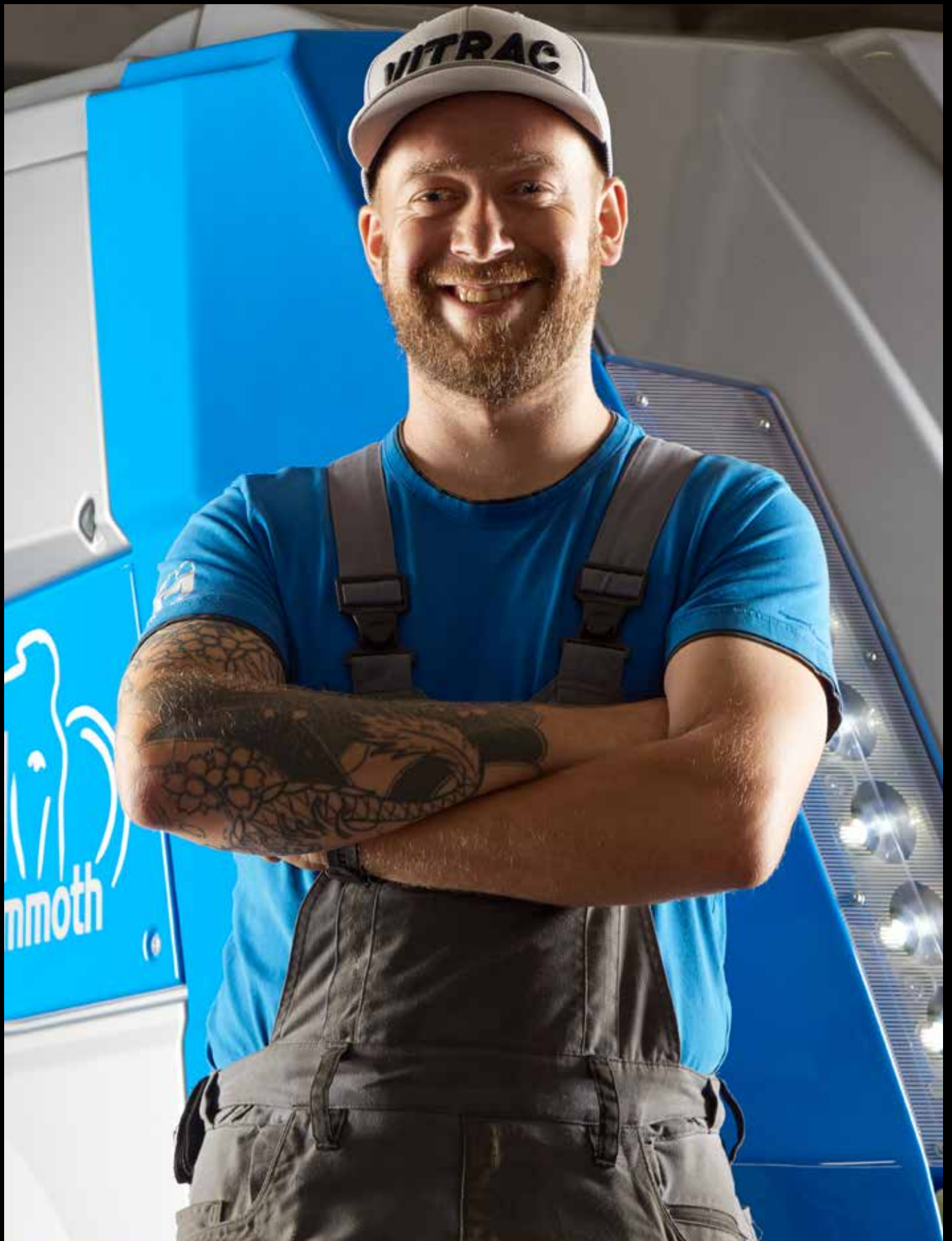


Ice resurfacing machine
WM 2300.
Year of construction 1986

Here's what we have to offer

Whether catering to professional ice needs within an arena or on a transportable rink, the distinction is minimal: WM technics consistently offers the optimal solution for any requirement. Owing to our relentless pursuit of product excellence, we pioneer cutting-edge standards and stand as a prominent leader in the worldwide market. Powered by our robust digital infrastructure, design, part production, and the assembly of ice resurfacing machines are conducted at our South Tyrol-based facility (Italy). In this

manner, WM technics guarantees unparalleled quality, attending to every intricate detail. Bespoke setups built on customer specifications, reduced maintenance commitment, and steadfast assistance affirm WM technics as a powerful ally.



Armin,
Assembly Team





Always Ahead of the Curve

With precision, we delve into research, trials, and connections. Our team's years of prowess in development, manufacturing, and setup culminate into a harmonious synergy.



Safety at its Finest

Our cardinal rule: Prioritizing safety and well-being. WM technics' ice machines are designed with intuitiveness and uncompromised safety, meeting European machinery guidelines.



Design with a Spark

WM technics brings to life trailblazing ice machines, always keeping the client and entire production lifecycle at heart.



Precision Production

WM technics manufactures all its turning and milling components with utmost precision in its production department, only sourcing standard parts from reputed manufacturers. Each component is then customized in detail based on its function and crafted with the greatest care.



Streamlined Assembly

WM technics champions the rapid production of ice machines, backed by rigorously organized processes. Every move is intricately mapped and transparent. Our commitment to precision minimizes the need for maintenance.



360-Degree Quality

WM technics designs and produces innovative ice resurfacing machines that meet all efficiency, reliability, longevity, and ease-of-use requirements. Series construction and in-house production also allow for the detailed tracking of all fabrication stages and utilized components.



Sustainability with Vision

WM technics machines are designed to stand the test of time. We advocate for enduring products while keeping an eye on operational expenses. Balancing energy conservation, reduced consumption, and profitability doesn't deter us from delivering peak performance.



Customer-Centric Assistance

Just as our machines care for the ice, we cherish our relationships with our customers: not only before the purchase but also during the commissioning and afterwards. We meet our clients' unique requirements even during the production process, tailoring our approach to their needs.



MAMMOTH

WM technics unveils the next era of ice resurfacing: robust, accurate, and automated. An elite machine for top-tier ice.

MAMMOTH

WM’s powerful ice resurfacers for stadiums is suitable for ice surfaces of **1,800 m² / 20,000 ft²**.

When it comes to flawless **resurfacing** of stadium rinks, the WM Mammoth has it all: High-performing, maintenance free AC motors, large snow and water tank capacity and a quick blade-change system. With its compact build, the machine has an extremely tight turn radius, which means that the ice can be resurfaced quickly, efficiently and without overlaps. Technically sophisticated, user-friendly and with numerous extras: WM Mammoth is the champion of professional ice resurfacing of rinks of 1,800 m² / 20,000 ft²).

	Snow tank volume	3 m³ / compacted 3.6 m³ 106 ft³ / compacted 130.7 ft³
	Water tank volume	1,000 l / 1,350 l / 1,750 l 264 gal / 356 gal / 462 gal + snow tank-water tank connection 2,000 l / 2,350 l / 2,750 l 528 gal / 620 gal / 726 gal
	Blade width	2,100 mm / 2,300 mm / 2,500 mm 82 5/8 in / 90 1/2 in / 98 7/16 in Blade change < 60 seconds
	Fields of operations	Pro / Heavy duty

“The WM Mammoth has met all of my expectations: It guarantees flawless ice quality, is 100% reliable and working with it is a joy!”

Sascha Koullen - Ice Master
LANXESS arena in Cologne
(Germany)





Award-winning Italian Industrial Design

A special accolade for WM technics: Our Mammoth has been featured in the [ADI Design Index 2016](#), an annual publication spotlighting distinguished products, projects, and services in industrial design. The ADI (Association for Industrial Design) strives to promote and showcase both Italian and international industrial design.

With a membership base spanning over 1,200 individuals from diverse sectors, the association views industrial design as a significant cultural and economic force.

Safety and Protective Features

WM technics prioritizes safety and health above all. An exhaustive and independent evaluation conducted by [Suva](#), an accredited and recognized Swiss certification agency, confirms compliance with the provisions of the European Directive 2006/42/EC, which governs the protection against machinery accidents.

**ADI DESIGN
INDEX 2016**

Award-winning Italian
Industry design

suva
CERTIFICATION

In compliance with Suva certification
No. E 7138/2.e

Highlight

Great Usability

The WM Mammoth ensures **the utmost comfort for the driver**. Whether without a cabin or with a fully glazed one, you'll always have a flawless panoramic view from the driver's seat.



Cabin

The see-through, roomy cabin, tailor-made for the Mammoth – equipped with a roof, door, and expansive windows – offers an unobstructed 360-degree perspective and shields you from all weather conditions.

Steps and Seat

Three steps provide easy access. The height-adjustable, cushioned Grammer driver's seat ensures a comfortable seating experience.

Joystick

The joystick allows for the control of all primary commands. Simply pressing a button activates the automatic mode, initiating all work functions in a preset sequence.

Two Screens

The color touchscreens ensure you always have a clear view of all crucial details.

Highlight

The Passenger Seat

No other ice resurfacing machine offers such an additional feature!

Anyone wishing to understand the work of an **ice master** can witness it firsthand from the passenger seat.

From the machine, during a break for instance, a fan can observe the playing field of their favorite team from an entirely new perspective. A magnificent gesture to offer fans as part of a contest or a raffle.

The passenger seat is always standard, not an optional extra.



suva
CERTIFICATION

New business opportunities

Presenting the job of an ice master

Highlight

Integrated Edger

Affixed directly to the WM Mammoth's frame, the edge milling provides unparalleled stability and superior performance.

The edger is controlled conveniently and risk-free directly from the joystick. The innovative horizontal suspension system with guide rollers ensures that the edger adapts optimally to the edge contours at a constant milling depth. In addition, excess ice is efficiently and cleanly removed.



With the combo of a swiveling brush and a rink edger, you can mill and clean the ice surface in a single go. The edger is located between the axles and in front of the brush, providing an optimal overview of the machine. When not in use, the edger remains tucked away between the wheels without affecting their operation.

The ice is polished with utmost precision at an exact 90° angle. This precision is assured by the direct mounting of the sprung edger onto the machine, ensuring the angle remains impeccably constant throughout the operation. When a puck is shot near the boards, one can observe it gliding seamlessly and stably over the ice, with no deviation.

In certain circumstances, due to condensation dropping from the ceiling, small ridges or mounds can form on the ice. These build-ups can pose a hindrance, but thanks to our edger, which is solidly attached to the machine, these mounds are effectively flattened. The milling tool, accurately oriented towards the ice elevation, consistently works to ensure the ice returns to a smooth and even state.

Perfect edge fitting

Milling and cleansing procedure

Horizontal suspension system

Highlight

Flexible Brush

A robust brush for tackling tough snow residues; fuss-free upkeep with its removable brush head.

Mounted on a fully stainless-steel arm, the brush can be operated hydraulically. An additional joint, complemented by gas springs and a guiding roller, ensures it traces the edge with pinpoint accuracy and the right pressure, even during swift movements. Crafted for resilience, the brush arm can withstand passage at top speeds, even with an open dasher board. Maintenance is a breeze; the brush head can be quickly swapped out with the simple turn of a screw.

An open dasher board? That's no hurdle! The brush arm, equipped with a gas spring, dynamically meets every challenge. It's built to last, confidently taking on any task.



Precise with optimum pressure

Indestructible

Quick and easy

Highlight

Ultra-light Blade

The quick blade replacement system of the WM Mammoth makes the task notably easier: A **blade switch** is done in a mere **60 seconds!**

Crafted from premium tool steel, these knives boast exceptional longevity. Swapping them out can be done swiftly and safely by a single individual, with no extra tools required.



Ultra-light Blade

By default, two blades along with their accessories come in a wooden transportation box. Weighing in at just 3.5 kg / 6.6 lbs, it ensures effortless and safe handling.

⚖️ 3.5 kg / 6.6 lbs



Simple, quick and precise

Low risk of injury

Superior ice quality

Highlight

High- performance sledge

Discover the high-performance sledge from WM technics! With our 2nd generation planer unit and stainless steel, we combine **innovation with efficiency**.

Our intuitive design allows for quick blade changes and guarantees seamless ice processing. For the ultimate ice experience – precision meets quality.



Stainless Steel

With our stainless steel construction, we prioritize longevity and sturdiness. WM technics combines strength with elegance for the highest quality.

Beam Adjustment

A precisely aligned blade is the key to a flawless ice surface. Thanks to our re-designed viewing windows, the blade beam's position can be easily and accurately adjusted.

Ice Cleaning System

Our perfectly positioned nozzles ensure that the recently planed surface is cleaned right after the blade. With the suction bar spanning the full length of the planing the contaminated water is consistently collected along the entire planing unit and safely transported to the snow tank.

Replaceable Runners

Our sleds come with 2 plastic runners that ensure minimal resistance. Wear and tear? Simple replacement in just a few steps for continued performance.

Highlight

System ICEplus

Opt for spraying over pouring - forget the towel:
ICEplus's **low-pressure nozzles** deliver a denser
ice that's game-ready in no time.



Ditch the Towel

Gone are the days of using a towel for distribution; with ICEplus, water is directly sprayed on, enhancing efficiency and doing away with towel wear.

Compact ice Quality

With the introduction of fine water particles, minimal air gets trapped within the ice, leading to a tighter, rapidly solidifying ice surface ready for use sooner.



Control with a Joystick

Experience the simplicity of ICEplus firsthand: The joystick allows for smooth water adjustment and system toggling on and off.

ICEplus Flexi

Combine the benefits of the modern water spray system with the tried-and-true towel method. Switch between the two techniques at the touch of a button and experience ultimate flexibility.

Highlight

Snow tank- water tank

When it comes to making ice or using a water sprayer, you're going to need a lot of water. Thankfully, WM Mammoth has thought of that! They've designed it so that the water and snow tanks can merge into one, giving you a whopping total of over **2,000 liters (528 gal) of water.**



Water tank volume

1,000 l / 1,350 l / 1,750 l

264 gal / 356 gal / 462 gal



Snow tank volume

3 m³ / compressed 3.6 m³

106 ft³ / compacted 130.7 ft³



Snow tank-water tank
connection

2,000 l / 2,350 l / 2,750 l

528 gal / 620 gal / 726 gal

Snow tank-water tank connection

No more standing in cold water and tiresome tugging on hoses: All operations can be carried out from the comfort of the driver's cab.

Example 1: 1,750-litre water tank & 1,000-litre snow tank = 2,750 litres of water

Example 2: 356 gal water tank & 264 gal snow tank = 620 gal of water



In just a minute, you can connect the snow and water tanks, providing a water capacity of 2,000 liters (528 gal). A digital display lets you see the fill level of the tanks.



Closed lock



Open lock: connected

Tilting function and system for snow removal



Quick emptying

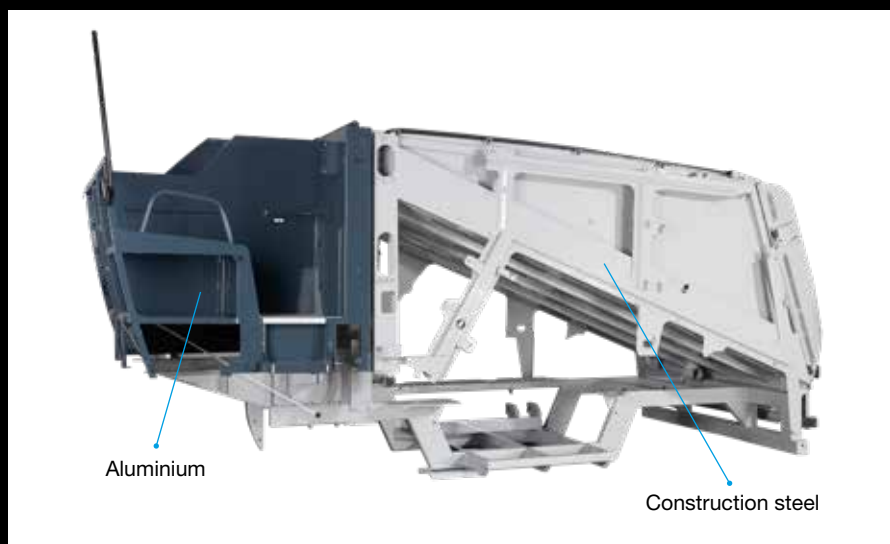
Even in adverse weather conditions

Teflon-finished surface

Safety

Stable and durable frame.

The snow tank is made of sturdy construction steel, forming a solid structure in tandem with the frame. After its creation, both the frame and the entire body undergo a painting process, originally designed for marine applications. This employs state-of-the-art technology adhering to the highest quality standards, ensuring a resistance of at least 1,200 hours against salt spray corrosion.



Snow tank lid:

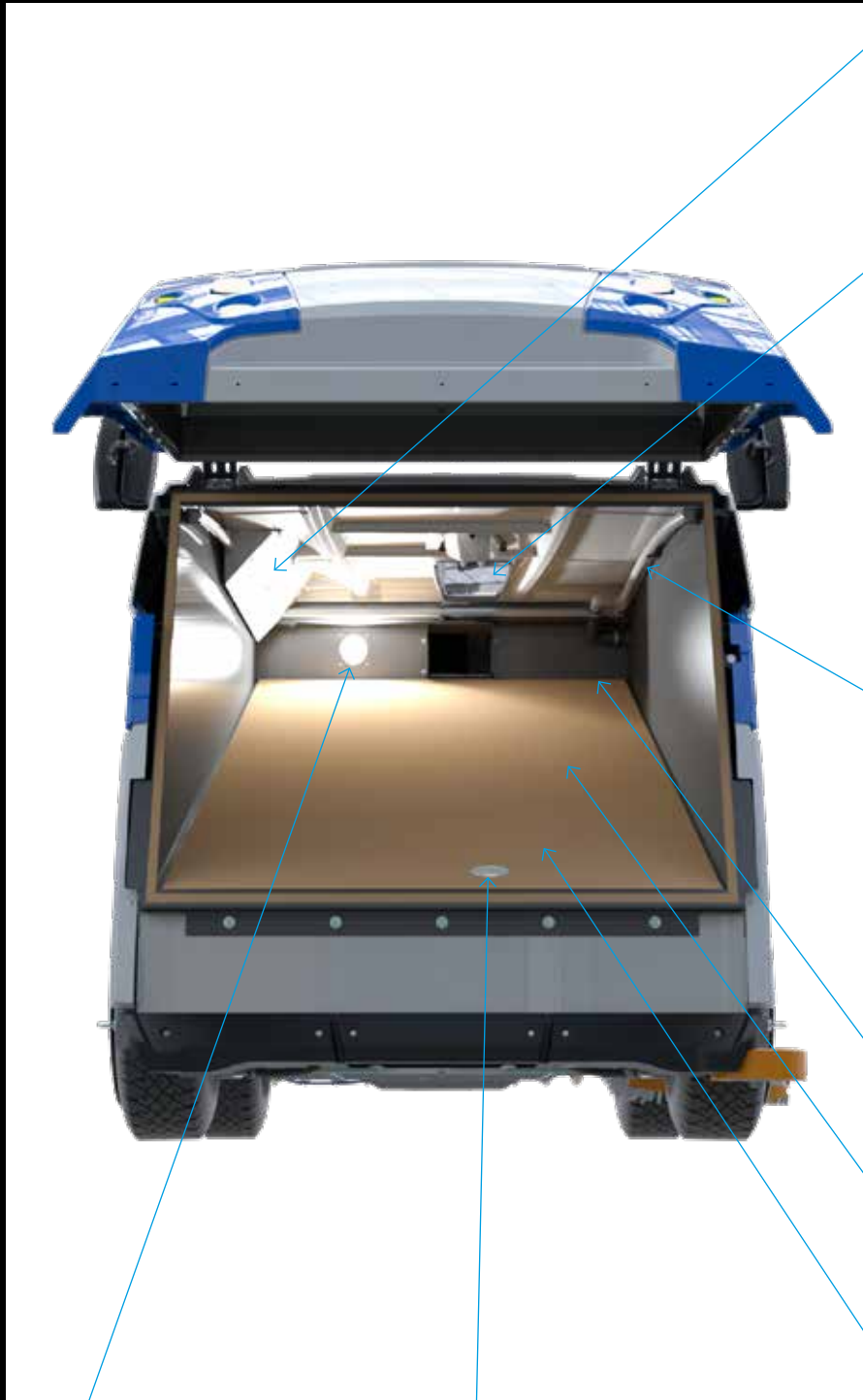
Sealed



Snow tank lid can be flipped open.



Snow tank



The ventilation of the snow tank, combined with the snow dust retention system, ensures a uniform and compact filling.



Large transparent inspection door with electric opening for perfect visibility inside the snow tank.



Snow tank cleaning system: removes dirt and snow residues in just a few seconds.

The dual-cone snow tank allows for quick emptying, even under adverse weather conditions.

The steep inclination of the snow tank utilizes the effect of gravity, and along with its conical shape, ensures optimal snow compression.

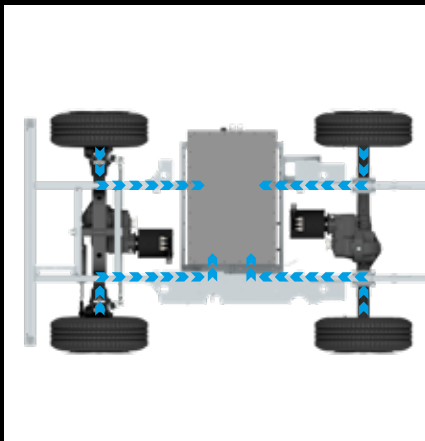
Teflon-coated base for clean emptying.

Powerful LED lighting for the snow tank ensures perfect visibility.

Partition lid (connection between snow and water tank).

Three Braking Systems

Crafted uniquely for the Mammoth, our braking technology blends the mechanical braking approach with **energy recuperation** - the hallmark of a true electric vehicle. Explore our groundbreaking system.



1

Electromagnetic recuperation

By harnessing the energy recovery function of the electric drive system during movement, electric power is regenerated for the battery. This technology significantly boosts the ice resurfacer's operational range and reduces the reliance on secondary braking systems. The system affects all four wheels.

2

Service Drum Brake System

For added braking capability, especially on sloped terrains like ramps, the machine comes with drum brakes on two of its wheels, with the option for all four. Each wheel's braking force stands at 3,800 Nm. A hydraulic brake booster enhances the braking strength.

3

Automatic Holding Brake

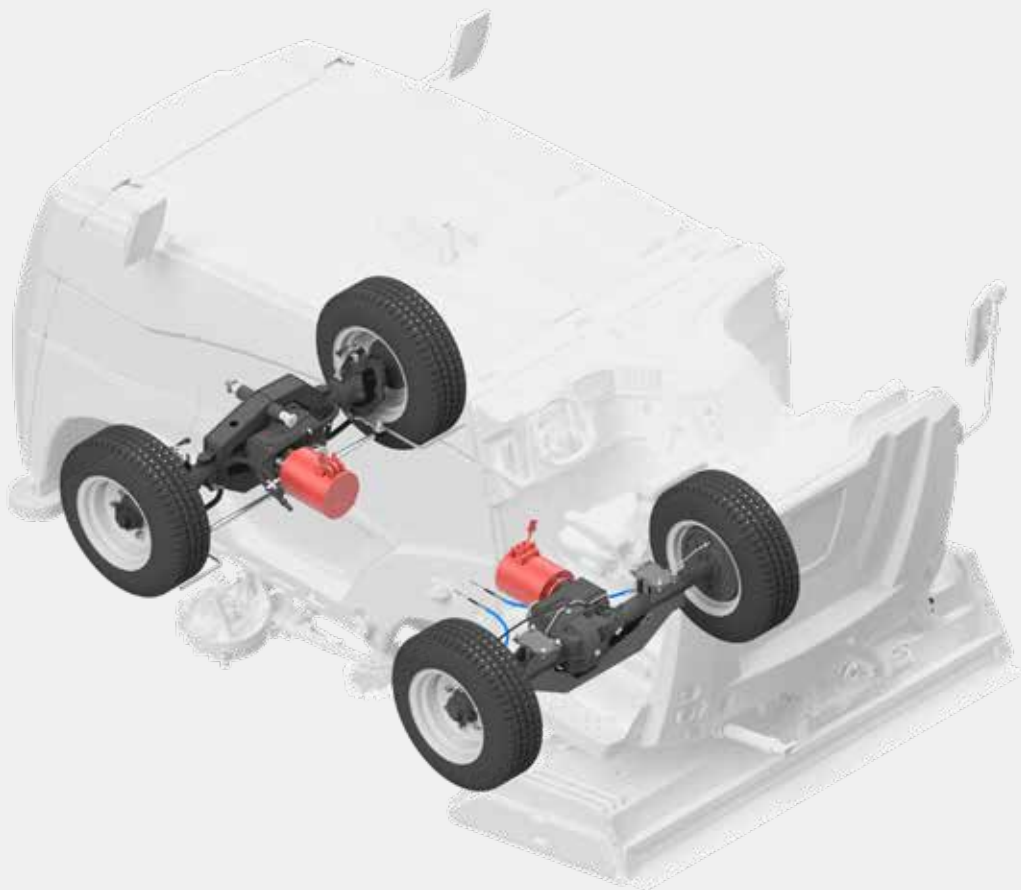
Targeting both rear wheels, it operates via a spring mechanism. It automatically activates once the machine is shut down, ensuring no unintended rolling. It exerts a braking force of 4,000 Nm on each wheel.

Highlight

System Dual Drive

Dual Drive is an intelligent control system that guarantees **optimal traction** on the ice by ideal power distribution between the front and rear axles.

With intelligent speed and torque control, even tight turns are handled without drivetrain stress, offering perfect driving dynamics and excellent energy efficiency.



Highlight

LiFePO₄ lithium battery

LiFePO4 batteries deliver **robust performance while being eco-friendly**, lacking harmful heavy metals and being largely recyclable. Installed in WM Mammoth, they stand as an eco-optimized solution meeting top-tier demands.

Performance

The lithium iron phosphate battery not only ensures extended longevity but also provides a consistent and reliable power supply.

Sustainability

LiFePO4 batteries are free from toxic heavy metals and are almost 100% recyclable, with a lifespan of 3-4 times as many charging cycles as lead batteries.

Center of gravity

Our centrally and deeply positioned battery not only ensures maximum stability but also optimizes the overall balance of the machine.

In-house Assembly

Battery packs are specifically tailored to machine requirements and are assembled in-house, ensuring quality and adaptability.



TECHNOLOGY

The Mammoth **redefines benchmarks** in ice resurfacing: State-of-the-art design converges with precision-engineered tech, optimized for unmatched performance on ice. Autonomously or manually driven, wholly electric, and eco-friendly. Dive deep into our electrifying revolution.



The Mammoth impresses with its blend of elegance and resilience: Its tail end, exquisitely shaped from a rust-resistant, lightweight alloy, guarantees a harmonious weight balance and energetic, cost-effective movement. Perfect weight allocation between the anterior and posterior axles, coupled with a lowered center of mass, promises superb turns on icy terrain.

When raising the hydraulic canopy, an organized motor bay unveils itself. Centrally located, the vibration-dampening hydraulic oil reservoir equipped with a built-in electric motor that varies its rotation speed based on requirements, ensuring a quiet performance. All electric valves are neatly assembled on the left in a custom-built hydraulic unit.

On the right side, the motor bay shelters water-resistant electronics adhering to contemporary off-highway norms.

Technical Specifications

Mammoth

Motor	5 asynchronous motors Optional 6 asynchronous motors
Power rating	29 kW (31 kW)
Water tank	1,000 l 264 gal / Optional: 1,350 l 356 gal / 1,750 l 462 gal
Snow tank	3 m ³ 106 ft ³ - compacted 3.6 m ³ 130.7 ft ³
Transmission	Continuously adjustable electric all-wheel drive
Speed	0 - 13 km/h 0 - 8 mph
Tyres	225 / 75 / R16C with 6 rows of spikes
Wheel rims	9" x 16" with hubcaps



Standard model

Machine

PLC control
Easily accessible engine compartment (tiltable) with cap support
Hydraulic oil tank: 50 l / 13 gal
Maintenance-free asynchronous motors
Service brake with hydraulic brake force booster
Hydraulic negative parking brake
Snow bin & water tank connection (> 2,000 litres / > 528 gal)
Electrical snowbin inspection hatch
Coated snow bin
Snow bin headlight, side headlight
Water tank made of PE
Function for automatic water filling system with immobilizer (Acquastop valve as optional)
Hydraulically driven and swivelling side brush made of stainless steel
Board guide pulley
Side mirror, rear
Led daytime running light
Flashing warning light
Acoustic signal for reverse drive, snow bin cover operation, reverse of the screw conveyors and blade exchange

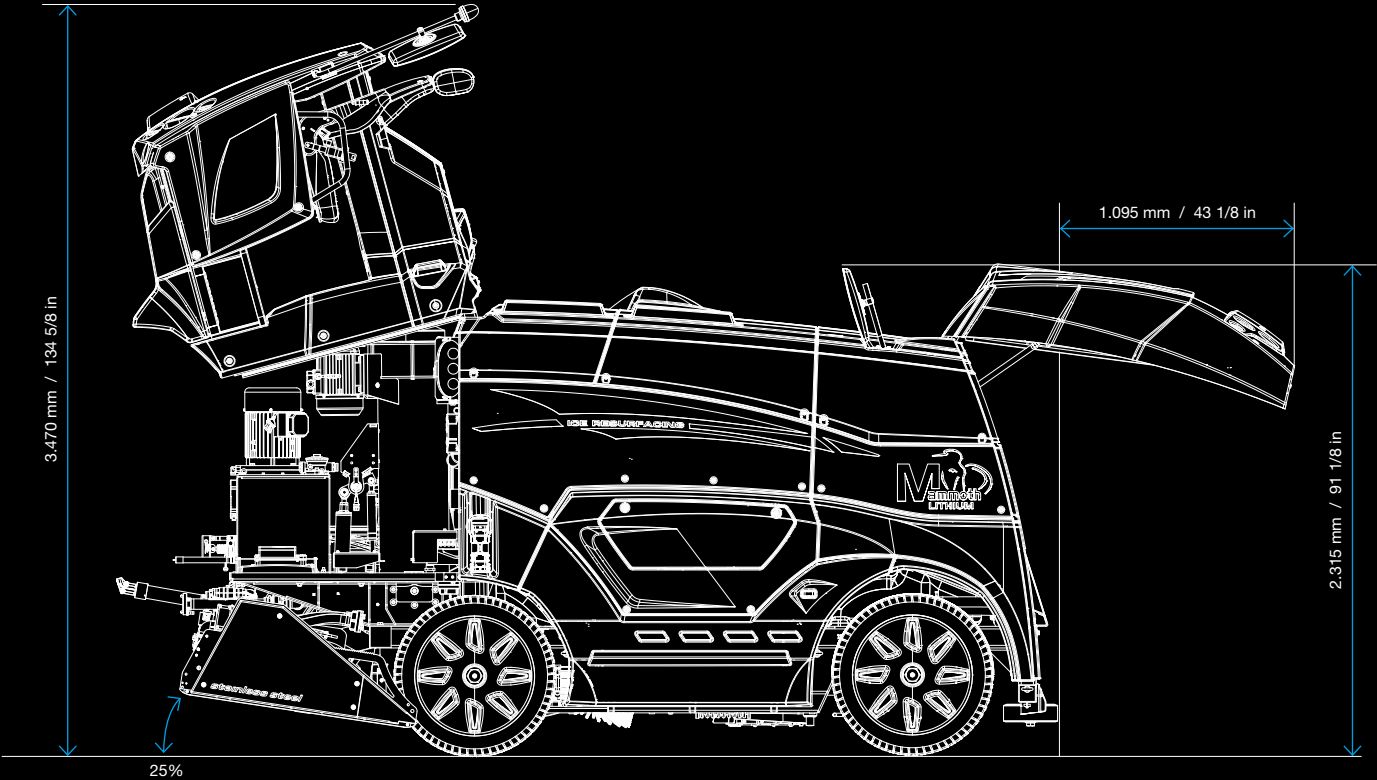
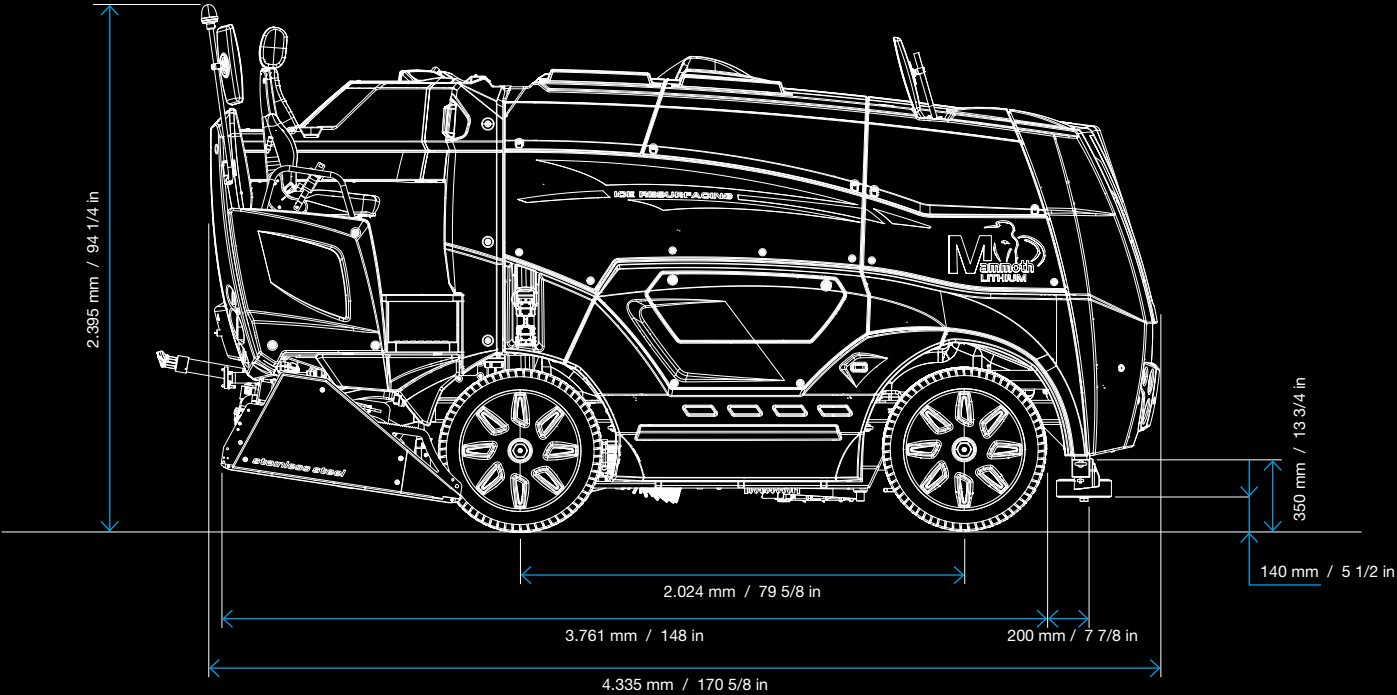
Cockpit

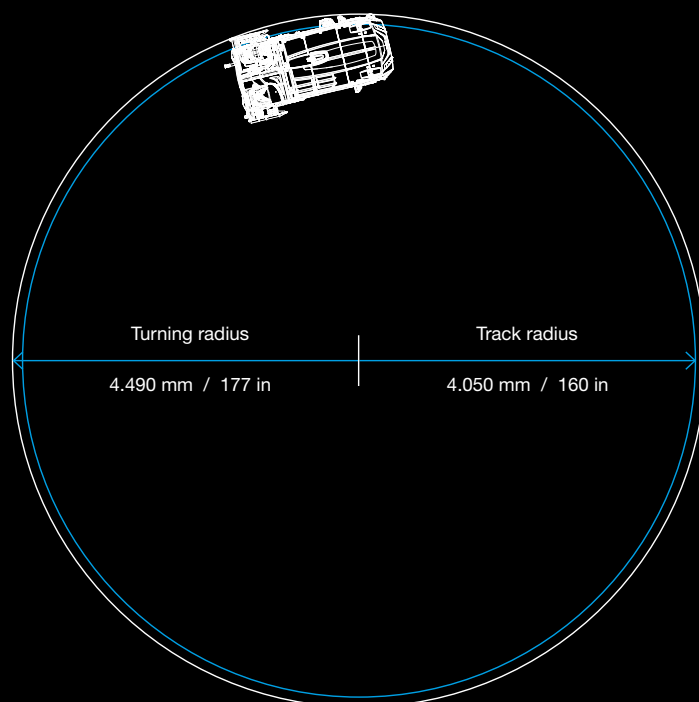
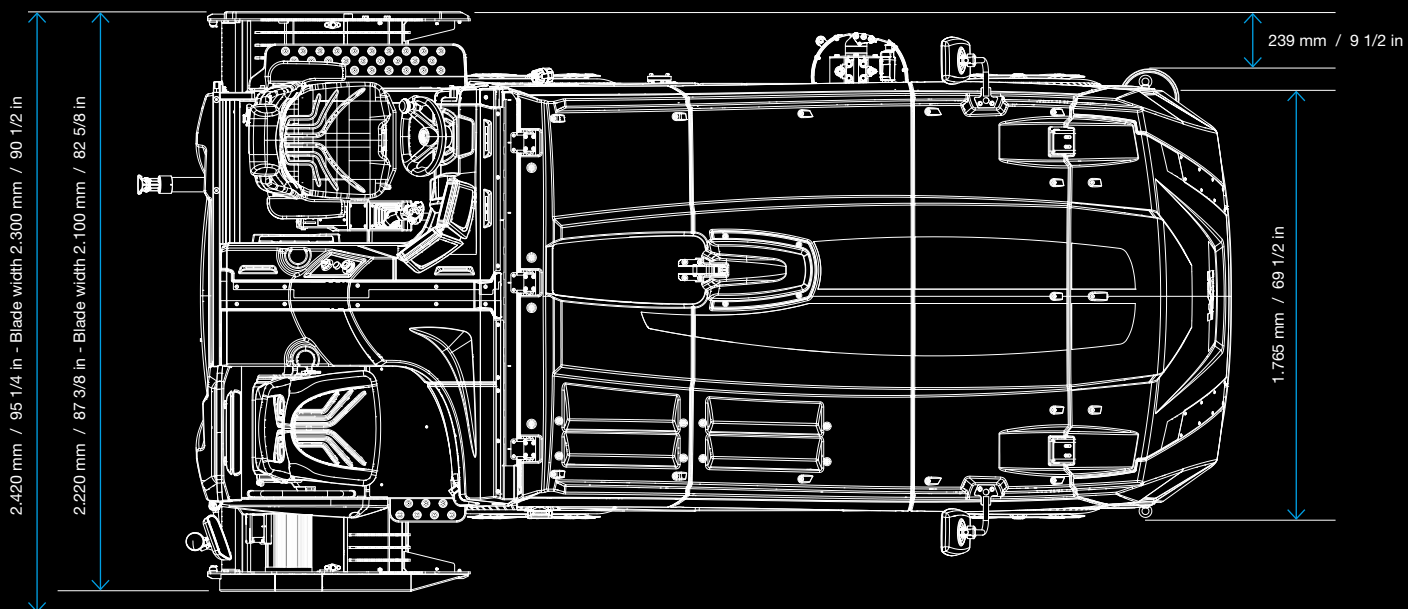
Spring-suspended and height-adjustable driver's seat (fabric) with armrests
Spring suspended passenger seat
Dual Screen - 2 high-resolution 7" touchscreens
Ergonomic multi-function joystick with 9 control buttons, three rotary controllers and travel direction switch
Freely assignable button on joystick can be programmed by the operator to facilitate access to a frequently used function
Button for automatic modus: operations start automatically in a fixed order

Planing system

Planing system made of stainless steel
Constant grinding pressure planing system
System for water dosing in curves
Quick-Change-System for a fast blade replacement (< 60 seconds)
2 blades in wooden transport box (super-light blade - 3.5 kg / 6.6 lbs)
2 towels

Dimensions





Optional

Cabin with panoramic windows



Water dosing and wash system



Water pump



Ice wash system
Multijet
with suction ledge



Screw conveyor
wash system
vertical
*can be activated during ice
resurfacing*



Screw conveyor
wash system
horizontal
*can be activated during ice
resurfacing*



Snow bin wash
system



Wheel wash
system with
steering

Water application



Towel lifter
automatic



ICEplus
Water spraying system



ICEplus Flexi
*Water spraying system
with automatic towel lifter*



Water sprayer

Overview & security



Side mirror
front left



Side mirror
front right



Heated mirrors



Acoustic distance
warning system
front



Front camera



Rear-view camera

Dasher board processing



Edger

*Stainless steel, spring-mounted
and electric height adjustment*

Comfort



Windshield made
of real glass
with wiper system



Cabin with
panoramic
windows



Cabin heating



Driver's seat
heating
Seat pad and backrest



Radio
with 2x 10 cm speakers



Acquastop valve

Remote Maintenance & Machine Control



Connect



Autopilot



Autopilot 3D

Lighting



Low-beam
headlights



High-beam
headlights with
parking lights



Tail lights
Parking light & brake light



Reversing lights



Turn signal
front, rear and side



Complete lighting
system
*for compliance with
road traffic regulations*



RGB underbody
illumination

Personalization



Color change
body cladding
1 color



Color change
body cladding
2 color



Wrapping

Service



Battery trolley



Spare wheel 16"



Lifting jack
with bar 10t



Assembly tool for
nozzles ICEplus

Accessories for Bavarian Curling



Groove harrow

MAINTENANCE AND WARRANTY

Simply tilt the cabin to access all the technical components in the engine compartment. This allows the technician to work quickly and cleanly, saving on service time and costs. Thanks to remote maintenance, our team can also monitor the machine's condition and address any potential issues.



Free and easy access

Skilled remote maintenance

Low service costs



High quality has a significant advantage: Service costs in the coming years will be very low, and we can prove it. When considering the total costs, including purchase and maintenance, Mammoth is clearly the leader in its class and sets new standards.

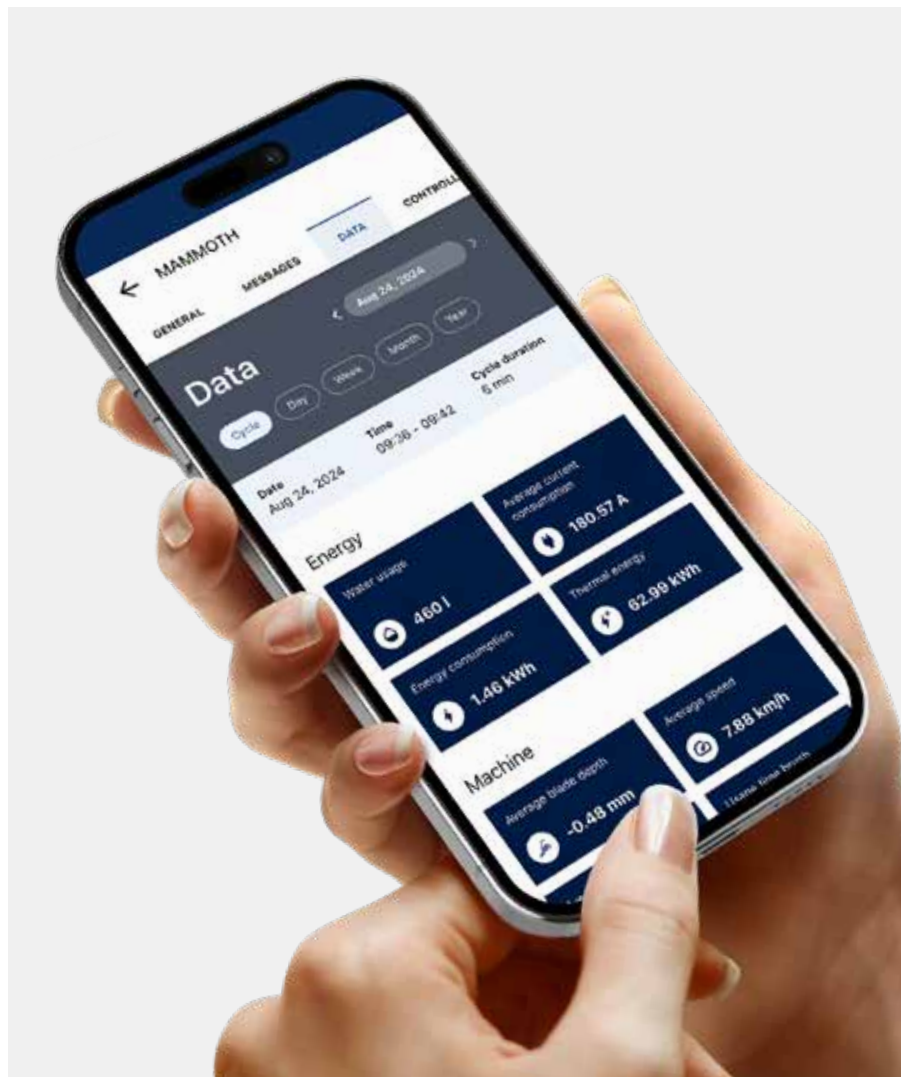
CONNECT

Connect:

A data tool, communication assistant,
and e-shop all in one system - and your
guarantee for sustainable ice!

Connect is an all-in-one data tool, communication assistant and e-shop. **Analyse and optimise** your machine's resource consumption to optimise your budget planning. Maintain a consistently high level of ice quality through data analysis and controlled application of ice resurfacing implements.

Automatic status messages enable you to monitor the status of your machine at all times. Provide your service staff with over-the-air direct access to resolve problems or carry out software updates. Access the interactive workspace and order spare parts quickly and easily.





Questions about budgeting? Sustainability? Connect gives you answers. Energy costs are rising. And so is environmental awareness. With Connect, we help you to groom your ice sustainably in every way.

Sustainable budget planning through detailed analysis

Real-time data preparation

This data shows you precisely how much energy and water is used during each usage.

Long-term data analysis

Experiment, analyse and discover how much money and resources you use to create the perfect ice surface.

Sustainable budget planning

Detailed data information enables you to plan your energy consumption and water budget with pinpoint precision.

Let's Break the Ice

Connect guarantees immediate support.

Multimedia

Connect prepares real-time consumption data and displays it on all platforms (App, tablet, desktop).



Sustainable support through reduced service trips

Automatic notifications

Connect automatically provides you with errors, pending system updates and your next service.

Over-the-Air

Service staff have direct access (over-the-air) to your machine and can thus diagnose errors or initiate pending updates immediately.

Immediate support

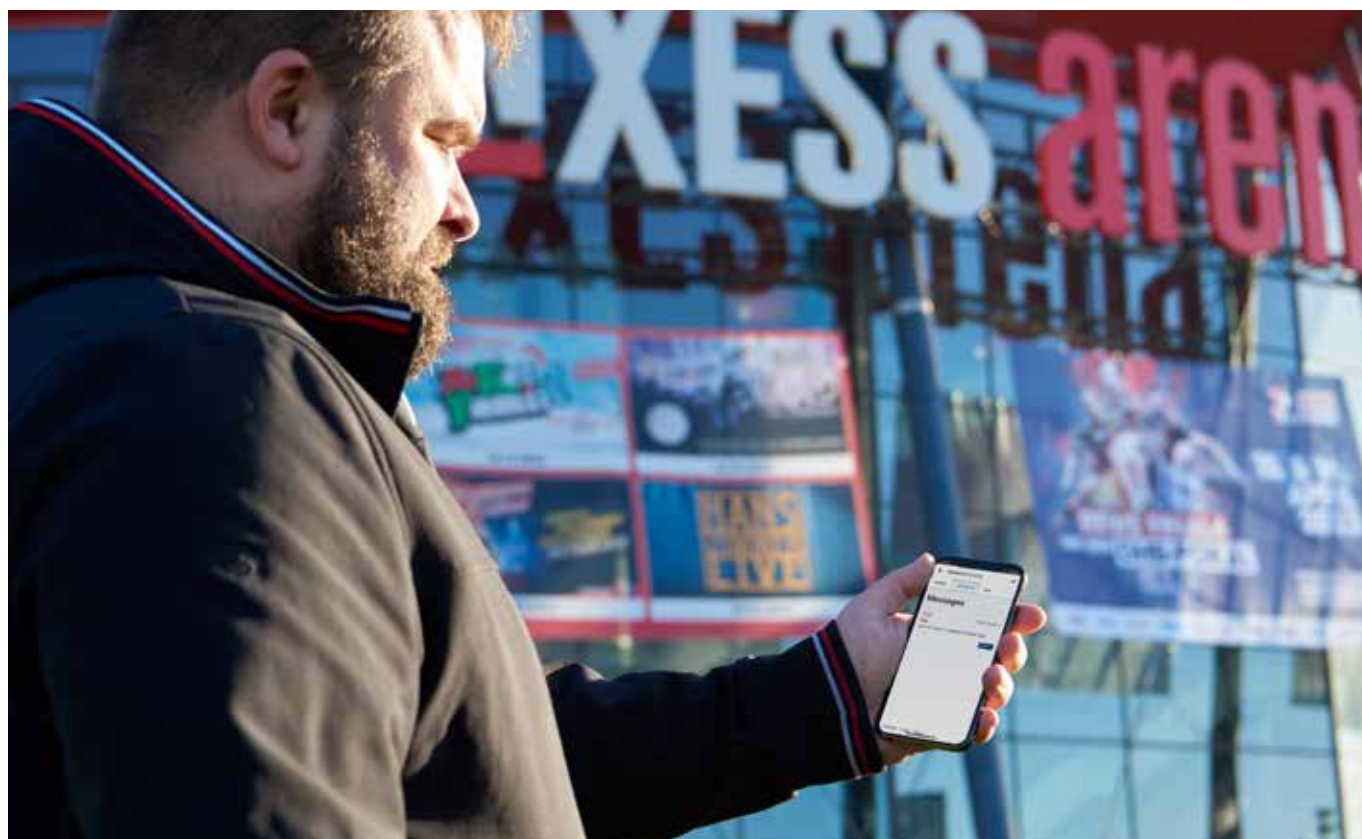
This allows our service technicians to carry out troubleshooting services immediately and directly, without having to be on site. The same applies to system updates.

Sustainable support

Connect over-the-air support enables you to make savings on countless costly, resource-intensive service trips. Service staff only have to attend your premises in emergencies and during on-site servicing.

Let's Break the Ice

Connect helps you to avoid lengthy downtimes that impact on efficiency.



Sustainable efficiency through rapid delivery of spare parts

Direct access

Connect enables you to access our interactive WORKspace directly if you need a spare part. You'll find the button on your screen.

Rapid search

The interactive layout of the WORKspace enables you to find exactly the part you need quickly and easily, and order it immediately.

24-hour spare parts service

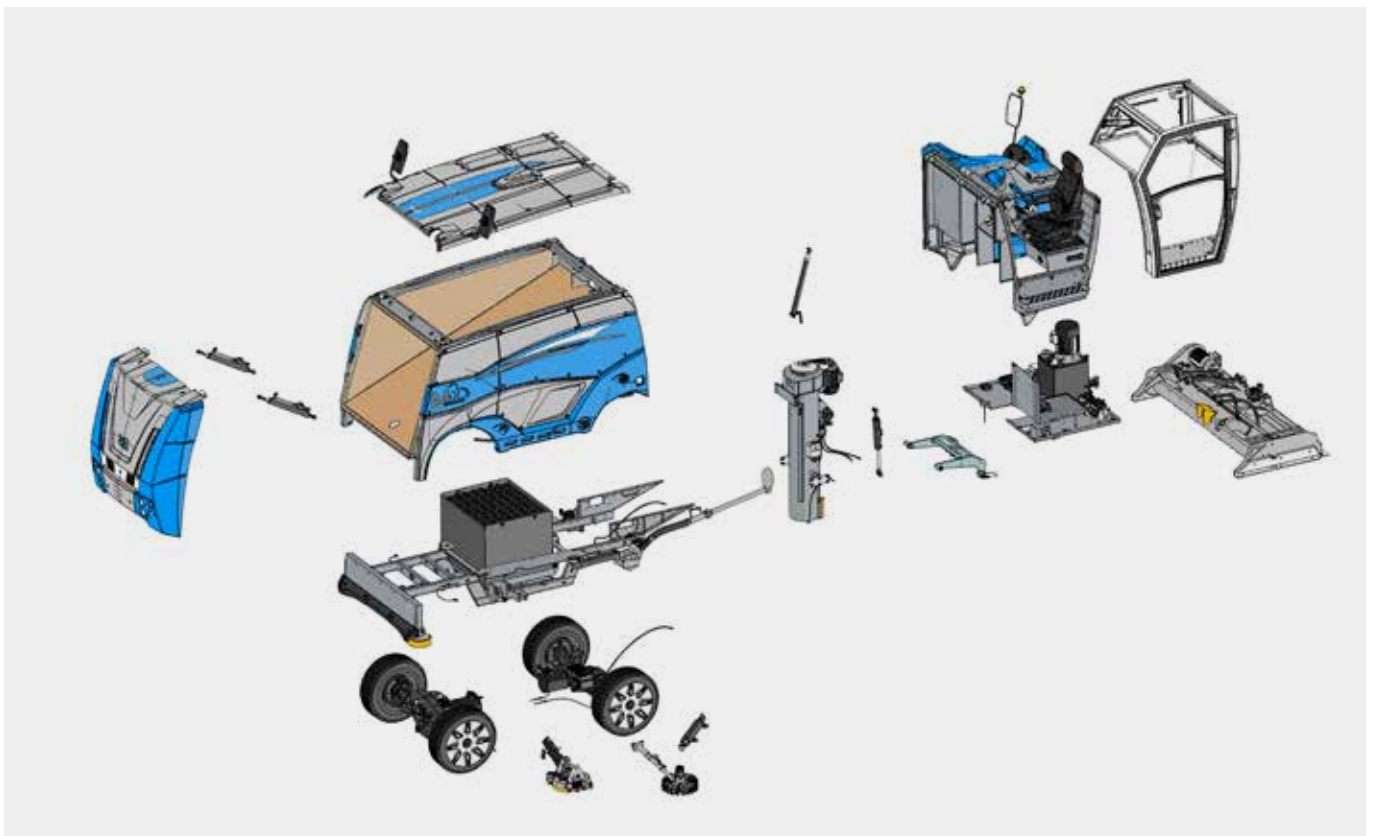
After you have placed your order, we get to work immediately. Your spare part will be shipped within 24 hours.

Sustainable efficiency

Lengthy downtimes due to missing spare parts are a problem of the past. With Connect, you are always ready to go, and to work with full, uncompromising efficiency.

Let's Break the Ice

Connect helps you to make savings on every level. This is also good for our environment.



Sustainable environment through controlled resource consumption

Controlled water consumption

Precision data processing provides you with a constant overview of water consumption and the option of reducing consumption if necessary.

Optimised energy consumption

The same applies here: Monitor the energy consumption of your ice resurfacing so that you know exactly the adjustments you need to make in order to reduce consumption.

Remote support

Over-the-Air access enables service staff to access your machine directly and provide you with skilled support, and helps you to cut down on costly, resource-intensive procedures.

Environmental sustainability

Save water, reduce water consumption to a minimum, avoid unnecessary service trips – and in doing so, help to protect the environment as well as your finances...

Let's Connect to the Ice

Resurface your ice more sustainably than ever before.



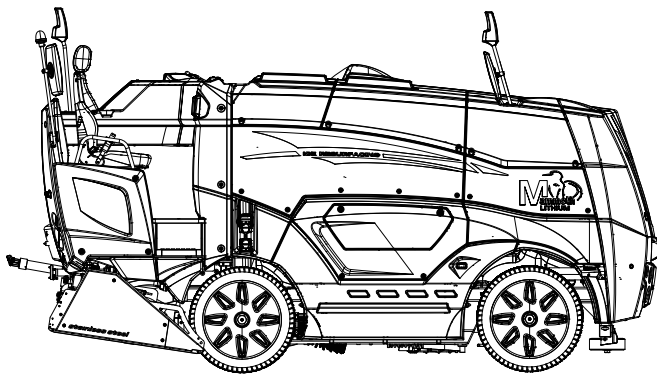
AUTOPILOT

Self-driving machine. Fully automated ice preparation. Smartphone control. Precise scheduling. Maximum efficiency at the push of a button.

With the innovative automatic operating system, WM technics has already taken the first step into the **future**: by pressing a button, the automatic mode activates all the machine's operational functions for ice preparation based on the set sequence.

Now, WM technics takes another step forward: with Autopilot, the automation of the operational process reaches a new dimension.

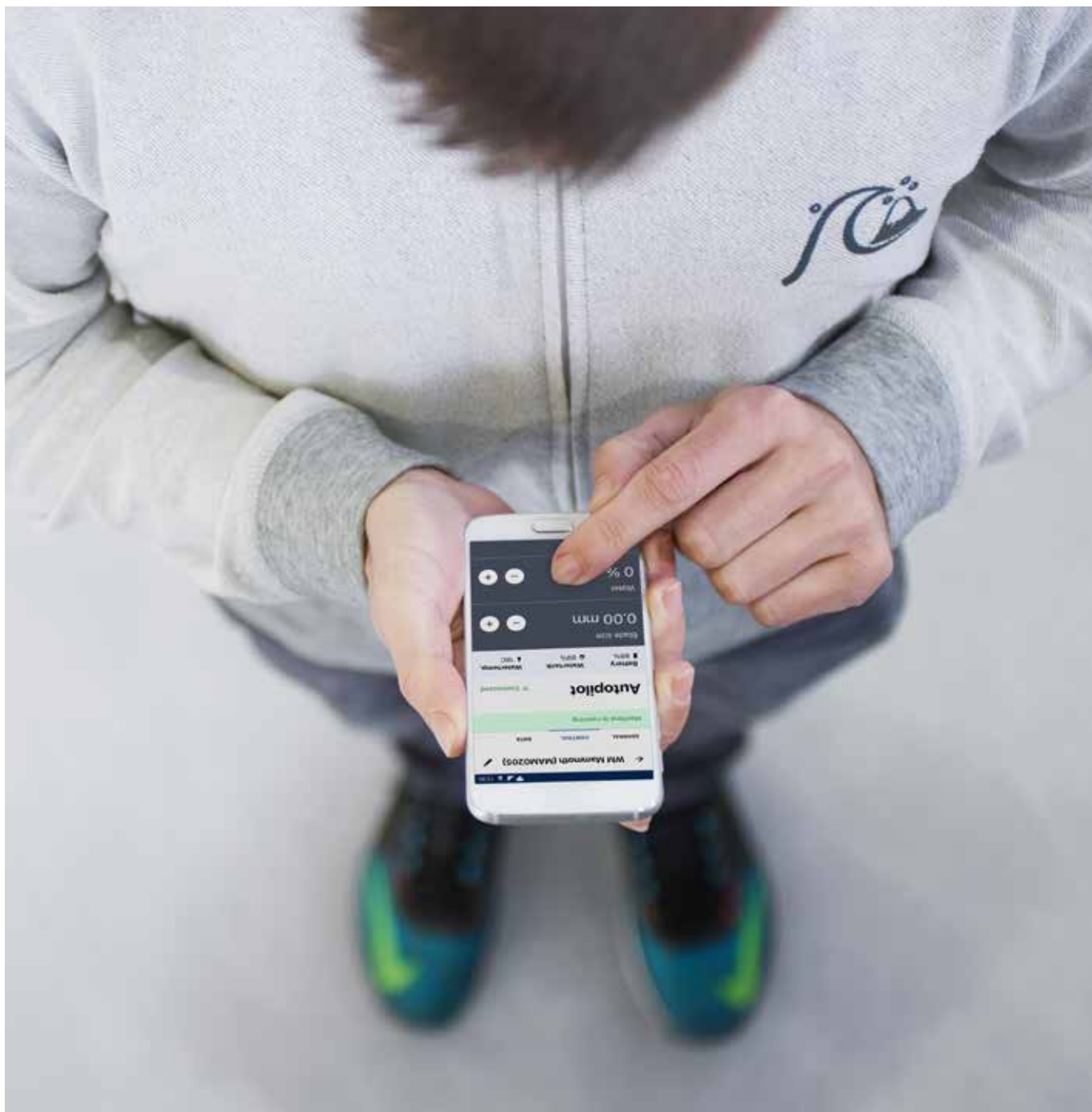
The automated machine carries out all operations independently, supporting facility managers and rink preparation staff in their duties: while the machine is operating, they can focus on other tasks. Using the autopilot is ideal for conducting the final cleaning of the day or for intermediate passes.



Perfectly autonomous

Controlled via Smartphone

Within the time limits

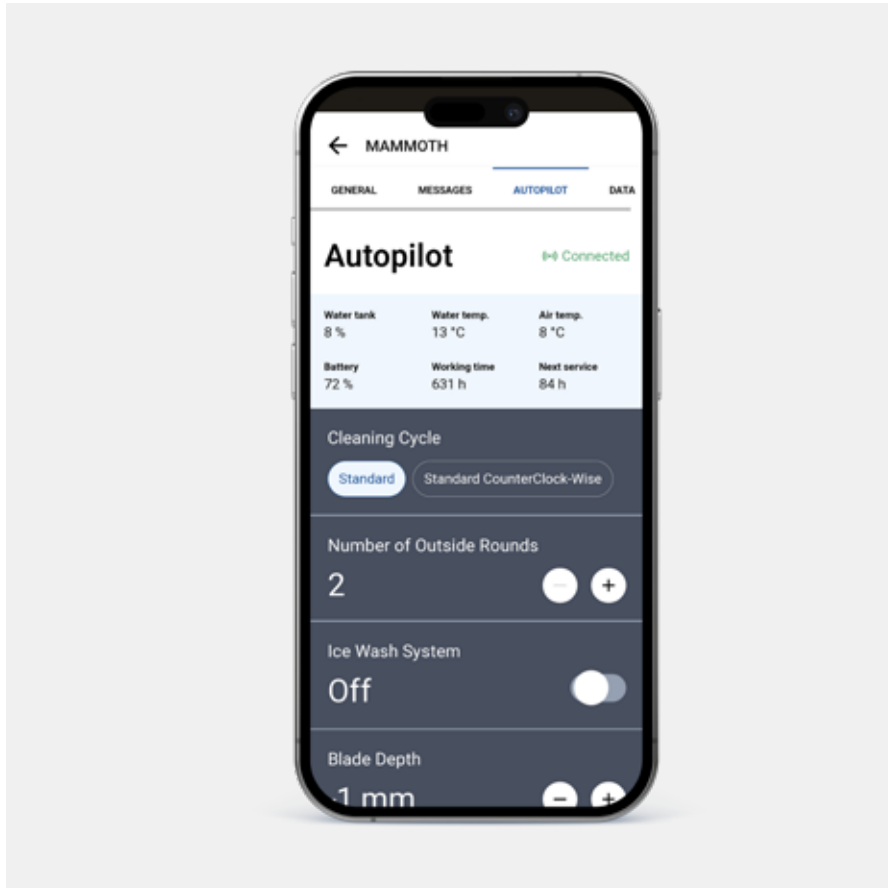


How it works

Equipped with Autopilot, our ice re-surfacing machines redefine precision and efficiency. Sensors strategically placed on the machine and within the arena collaborate with an advanced computing unit, ensuring seamless autonomous operations. Experience punctual and precise ice maintenance every time and manage and customize operations effortlessly through your

smartphone using Connect, with a variety of surface preparation patterns at your fingertips.

APP-controlled



The automated ice resurfacers from WM with autopilot can be comfortably controlled via a smartphone app.

Once the desired machine has been linked to the mobile device, the display indicates the battery status as well as the water level, allowing users to set the most important parameters, such as blade depth, water dosage, and forward speed. These parameters can be modified and adapted at any time, even while the machine is running. The app also displays different cleaning patterns, from a quick clean to classic resurfacing. After selecting the desired setting and initiating the autopilot, the machine begins its operations, with the required duration viewable on the screen.

Safety first!

That's an autonomous machine - but what if it gets out of control?

That's a good and natural question albeit the risks on an ice rink are limited compared to those on the streets. At WM technics, safety is paramount. That's why we've integrated multiple sensor systems that halt the machine instantly during potential risky situations. For emergencies, designated stop buttons are placed on the machine and in the vicinity of the ice surface.



AUTOPILOT 3D

The self-driving ice resurfacing machine with system for regulating the ice thickness.

THE ICE MASTER INNOVATION

Shake things up with Mammoth – our cutting-edge self-driving machine that **crafts the ice just right.**



With Autopilot 3D, WM technics is redefining ice maintenance: A system that cares for the ice fully autonomously and keeps the ice thickness automatically within the ideal range - a dream come true for ice professionals. This groundbreaking system not only finely tunes the ice surface but also plays a significant role in energy efficiency. Indeed, the thickness of the ice impacts energy consumption: every additional inch of ice leads to up

to 15% more cooling needs. Autopilot 3D seamlessly blends technology with sustainability, merging top-tier performance with an eco-friendly approach. This revolutionary feature is exclusively found in the Mammoth machine.



Desired ice thickness guaranteed

Max. energy efficiency

Flexible work management

Optimized service expenses

A machine for ice resurfacing that **autonomously performs** the entire sequence of tasks has the considerable benefit of allowing the **Ice Master** to merely observe the process from a safe distance.

In this way, the operator can focus on other more critical tasks. However, the real advantages lie in the consistent quality of the ice surface and the optimal use of the machine itself. Both factors directly impact costs.

When purchasing a machine for preparing sporting ice surfaces, it's not only about the technical details but also the ease of use and operational complexity. In every industry, finding and retaining skilled workers is becoming increasingly challenging. In recent years, the ice sports sector has seen a rise in staff turnover. This emphasizes the importance of a user-friendly machine, which can autonomously prepare the ice without human intervention after a start command, like via an app. This means that even those with less experience can consistently achieve high-quality ice. Therefore, ease of use is becoming increasingly critical in machine selection. By utilizing the latest technologies, such as an

autopilot with an ice-thickness regulation system (laser leveling system), ease of use has significantly improved up to fully autonomous operation. This principle is already successfully applied in floor cleaning or lawn maintenance by so-called lawn robots.

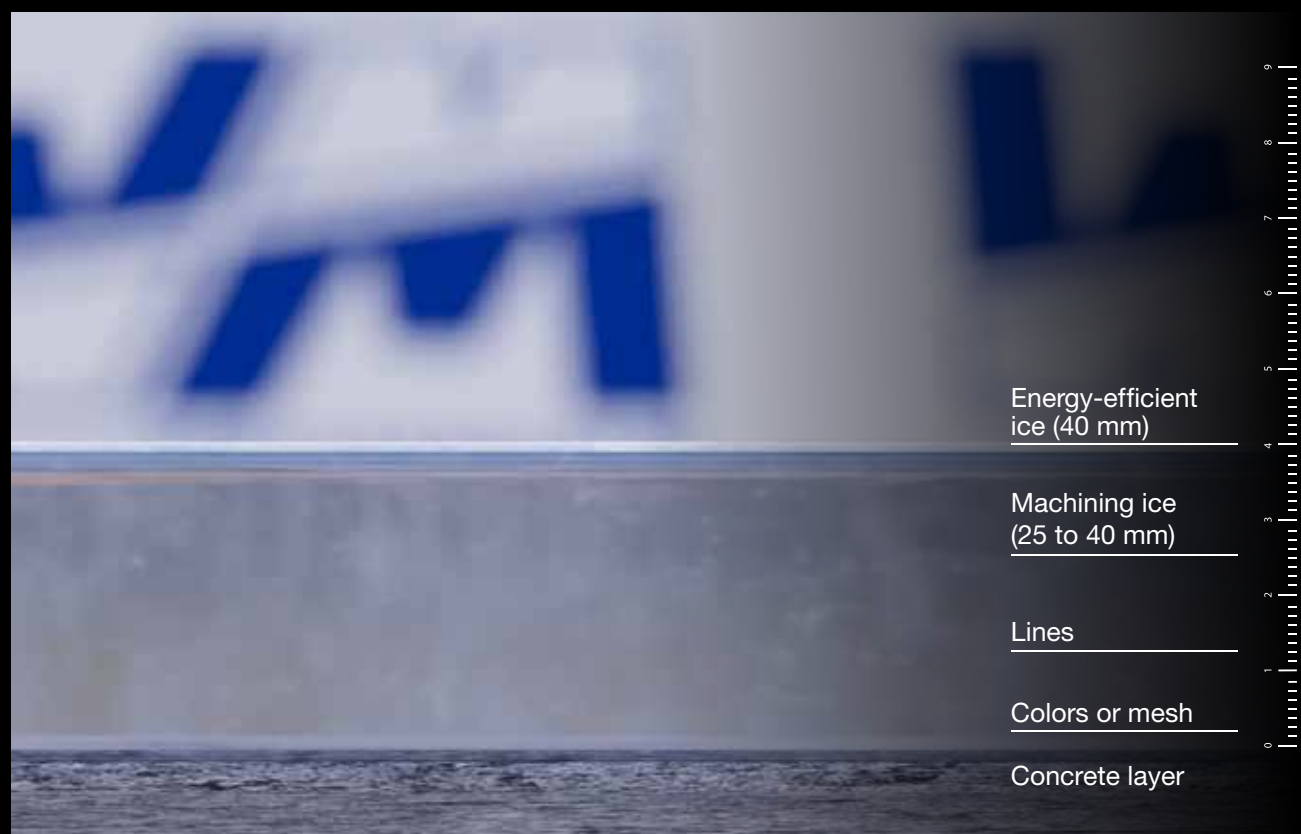


Thanks to the precise processing of the ice surface on accurately calculated tracks, the **ice thickness** can be optimally adjusted in all areas.

The ice layer acts as an insulator because ice has low thermal conductivity.

The thinner the ice layer, the more energy can be saved, thus reducing both costs and environmental pollution.

Optimal ice thickness

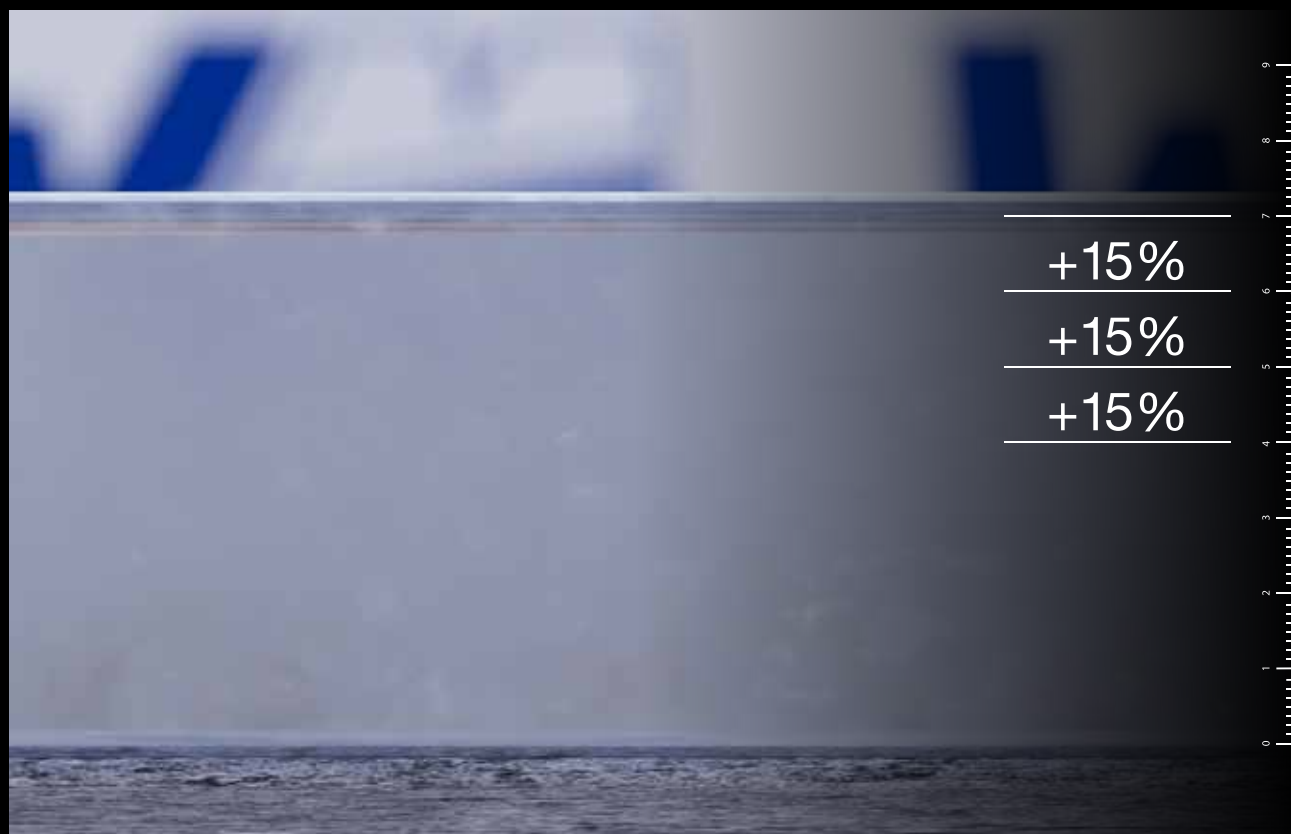


According to available studies, overly thick ice consumes up to +15% more energy for every extra centimeter in thickness. Additionally, operating the machine within its optimal power range and adjusting driving speeds to the ice surface optimizes efficiency, energy consumption, and servicing costs. To achieve such results, a fully autonomous driving control system is essential, paired with precise and continuous monitoring of the ice surface. The combination of these two systems ensures maintaining the ice surface within the optimal range throughout the entire season with the highest quality, even without extensive operator training. This enhances the quality and availability of the ice surface, reduces costs, and minimizes the risk of losing knowledge and expertise due to staff turnover. A machine that operates autonomously can also be managed by less skilled personnel, primarily overseeing the machine's working area.

-15%

-15% energy savings for every centimeter less of ice.

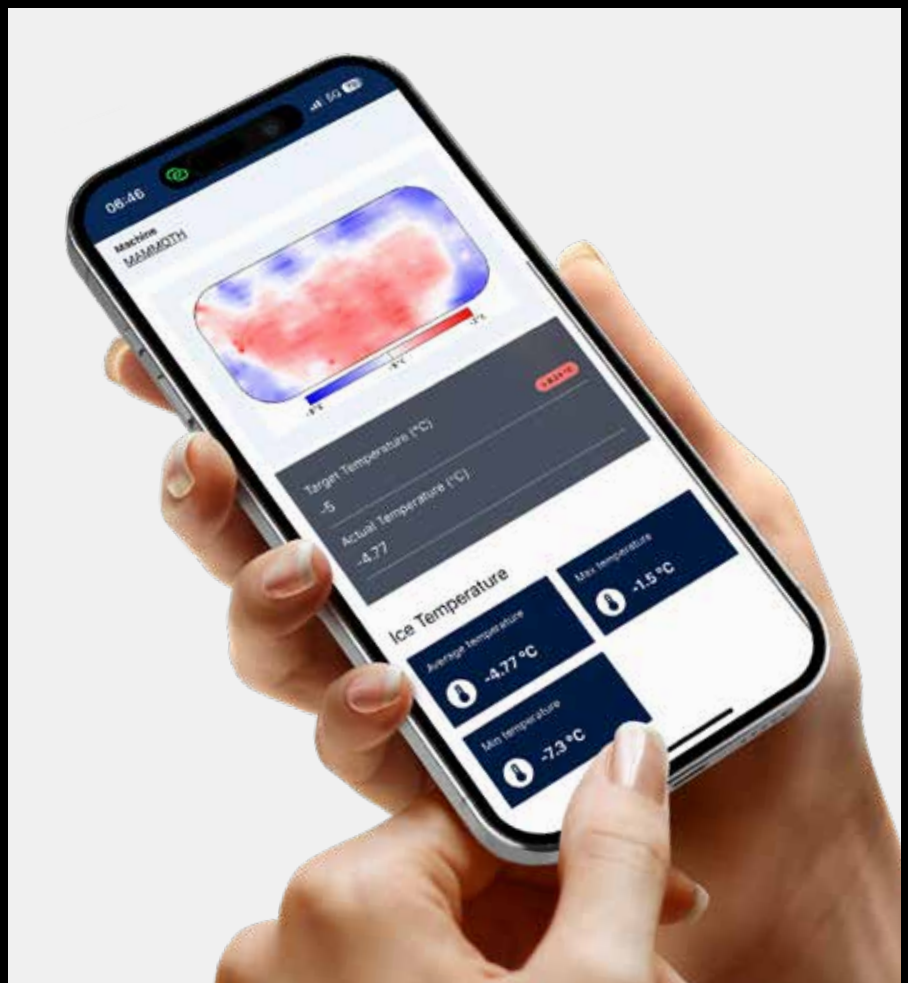
Overly thick ice



ACHIEVING IDEAL THERMAL EQUILIBRIUM WITH **ICESENSE**

At WM technics, we proudly present our innovative system designed to revolutionize ice resurfacing: IceSense.

The combination of a high-precision integrated temperature sensor and instant generation of a clear thermal map equips Ice Masters with everything needed to ensure optimal thermal equilibrium—and thus, outstanding surface quality.



What makes IceSense innovative?

1

It creates a **thermal map** of the ice surface, which is visualizable on the Connect app.

2

It **measures the temperature** in real time throughout every ice maintenance operation.

3

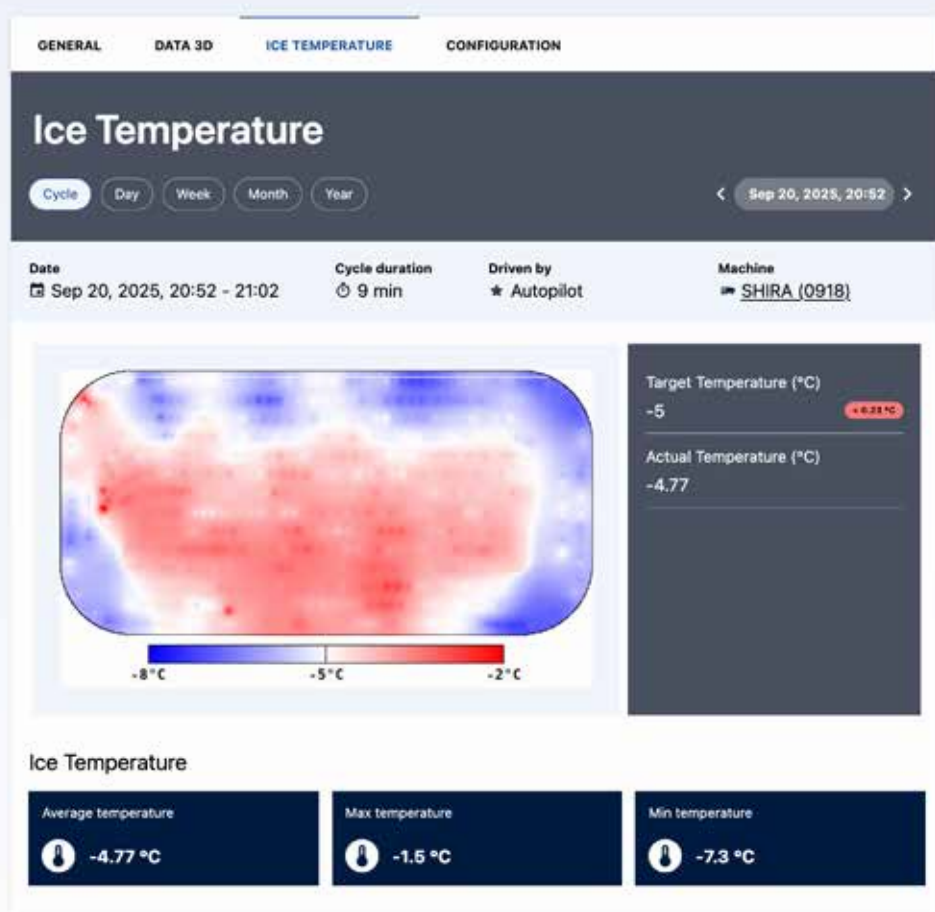
It automatically assigns **temperature data** to exact IPS coordinates.

4

It enables early detection of **critical areas**.

5

It supports long-term **thermal trend** analysis to ensure sustainable energy management.



With IceSense, daily ice maintenance becomes a precise, data-driven process, giving the Ice Master more time to focus on other tasks. At the same time, accurate temperature control leads to significantly lower energy consumption and reduced operating costs.

Ice temperatures always under control

Maximum energy and water efficiency

Consistent ice surfaces and happy athletes



STRENGTHS

WM technics - Excellence in design and quality. In-house manufactured machines. Easy maintenance. Quick access to spare parts. Your guarantee for the highest standards.

At WM technics, we strive for excellence at every stage of our work. Our machines, especially the WM Mammoth, are the result of high-quality components and meticulous design that minimizes maintenance effort. Designed, manufactured, and assembled in our own facilities, we guarantee top quality and timely deliveries. From component to the finished product - every step is closely monitored to deliver to you **the ice resurfacing machines of the future.**

User friendliness



Through the use of top-quality components together with a well-planned design, maintenance work is extremely simple and is reduced to a minimum.

Quality guarantee



The WM Mammoth is a product which has been developed, built and assembled in house, from start to finish. Only by doing so can we guarantee top quality and punctual delivery times.

The right replacement part, every time



Order your spare parts easily and conveniently from our online portal: Our series number and digital image system enable you to find the part you need with just one click.

Series production



All WM technics vehicles are series-manufactured. We know exactly which parts have been used in each series run, and can deliver the correct spare parts to you at all times. At the same time, a number of optionals can be retrofitted with minimum effort and maximum precision, even years later.

Service and support



Our well-networked, international team of technicians undergo constant training and will be delighted to help you whenever you require assistance.

Quality consciousness



From the manufacture of individual parts right through to the final quality-control inspection: Every step of the process is carried out and monitored with the utmost of precision. Each and every member of our staff is well-trained in his specialist field, and carries out all tasks conscientiously. This is a great advantage for our customers, who can be sure of receiving a technologically sophisticated product which has been manufactured to the very highest of quality standards.

PRODUCTS

Dive into the world of WM technics:
Where cutting-edge design meets
top-notch quality. Here begins the
journey to top-tier ice resurfacing
machines and #perfectIce.

Pinguino

The Pinguino makes maintaining mobile ice rinks a cinch. Pairing efficiency with unmatched quality, it's a game-changer in the realm of ice care. You'll consistently get predictable cleaning durations and just the right ice thickness, saving you time and workforce. What's the payoff? Glistening ice that'll charm every visitor, young and old.

A standout feature? The front seat placement for the driver. Whether seasoned in the ice world or just getting started, this seat offers an unparalleled view and top-tier comfort. Dive into a new era of ice maintenance with the Pinguino!



Discover a new dimension in ice maintenance with the Pinguino!

	Snow tank volume	1 m³ / compacted 1.25 m³ 35.3 ft³ / compacted 44.2 ft³
	Water tank volume	340 l 90 gal
	Blade width	1,400 mm 55 1/8 in
	Fields of operation	Mobile / Event

Compact

The name “Compact” says it all - and it’s the prime choice for larger mobile ice rinks. Thanks to its optimal dimensions and the volume of its water and snow tanks, it’s not just efficient but also intuitive and user-friendly. Whether you’re old hands in the ice game or just getting started, its easy operation and superior driving comfort will win you over.

The cherry on top? The Compact delivers ice quality that’ll captivate not just you but your clients, too. For ice masters, what’s better than delighted guests enjoying flawless ice? With the Compact, you’ve got the perfect ally for dazzling ice rink experiences.



Compact

The **Compact** is your ideal ally for outstanding results on the ice rink.

	Snow tank volume	1.8 m³ / compacted 2.25 m³ 63.6 ft³ / compacted 79.5 ft³
	Water tank volume	600 l 158 gal
	Blade width	1,700 mm 66 7/8 in
	Fields of operation	Mobile / Event

Shira

Prepare to be dazzled by the Shira! Not only does she operate electrically and whisper-quiet, but she also impresses with her incredibly user-friendly controls. Ice maintenance becomes a breeze with keyboard commands, a clear info display, and an automatic mode. Need to get hands-on? No worries! Quick access to the mechanics means maintenance and service

are done in a flash, saving you a pretty penny.

The icing on the cake: The ice quality is simply top-notch, right down to the last detail. And, even with its traditional blade exchange system, she boasts unbeatable value for money. Discover the Shira – your new star on ice!



Introducing **Shira**, your new shining ice star.

	Snow tank volume	3 m³ / compacted 3.6 m³ 106 ft³ / compacted 130.7 ft³
	Water tank volume	1,000 l / 1,350 l / 1,750 l 264 gal / 356 gal / 475 gal
	Blade width	2,100 mm / 2,300 mm 82 5/8 in / 90 1/2 in
	Fields of operation	Pro / Heavy duty

evo²

Whether it's vast ice rinks or grand stadium ice surfaces – with our evo², you'll glide effortlessly over any expanse. The swift blade changes, ultra-light blades, and the harmony between the board mill and brush ensure perfect ice. Every ride feels like a leisurely spin inside the spacious cabin (included as standard!). And when the

going gets tough? Just lift the cabin and experience a swift, cost-effective service. With the powerhouse evo², ice maintenance becomes a piece of cake!



Harnessing the strength of evo² makes ice maintenance effortless!

	Snow tank volume	4.1 m ³ / compacted 5.1 m ³ 145 ft ³ / compacted 180 ft ³
	Water tank volume	1,200 l / 1,400 l / 2,000 l 317 gal / 370 gal / 528 gal
	Blade width	2,300 mm / 2,500 mm Blade change < 60 seconds 90 1/2 in / 98 1/2 in
	Fields of operation	Pro / Heavy duty

WM technics GmbH

Breiener Straße 15
I-39053 Blumau
T. +39 0471 353 332
info@wm-technics.com
wm-technics.com

Follow us on

YouTube: *WM ice*
Facebook: *WM ice*
Instagram: *WM ice*
LinkedIn: *WM technics*

