

Menzi Muck **M4x**

**M425x**  
**M435x**  
**M445x**



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**muck**



**SWISSPOWER** 

## **M4x**

Latest technology & innovation



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### **Triple Power Boom**

With the M4x series, the unique, patented and proven Menzi Muck boom kinematics have been taken yet another step further. The result is a kinematic arm that makes this walking excavator a mountain specialist. The clever arm continuously yields sufficient power to the machine so that it can move dynamically in the terrain without additional options. Thanks to 114% higher force at the boom cylinder, going off-road becomes child's play.



### **Chassis**

Innovative, patented undercarriage concept with optimal kinematics at ideal power ratios P-Vation for horizontal and vertical parallel wheel adjustment. Powerful H-Drive travel drive for uncompromising working and driving. Perfected mountain stabilizers and an ideal articulation point matched to the angle of the slope.



### **New Design by Alberto Bicego**

The Menzi Muck M4x walking excavator series is not only excels regarding technology and performance, but also focuses on a modern, innovative design that is both functional and practical. The strategic design means the components of the upper carriage and cab have been optimally adapted to meet the demands on our machine.



### **I-Control**

The intelligent machine control architecture permits the full exploitation of the walking excavator's potential. The software-controlled electronics open up a wide range of possibilities for the hydraulic system. An intuitive operating concept, new functions such as I-Steering and intelligent interfaces for attachment devices complete the system. The result: increased efficiency, reduced fuel consumption, more direct control and exceptional sensitivity paired with maximum precision and power.



### **Spacious panoramic cab**

Best all-round visibility, state-of-the-art cab design and optimised ergonomics for healthy, concentrated and fatigue-free work. Redesigned thermal management with increased heating and cooling capacity for maximum comfort. A clear and intuitively designed 12" colour touch screen gives you full control of the machine at all times. Intelligent details such as inductive smartphone charging, a drink cooler and numerous storage compartments make everyday work all that much easier.



# Triple Power Boom

The boom kinematics of the Menzi Muck walking excavator are the result of many years of mature innovations. The result is a kinematic arm that makes this walking excavator a slope specialist. The standard, sophisticated kinematics system continuously yields sufficient power to the machine so that it can move dynamically in the terrain. Stepping becomes child's play thanks to 114% extra force on the boom cylinder combined with 22% extra force on the dipper cylinder.

## Boom cylinder

The overhead cylinder gives this boom cylinder excellent lifting power and at the same time unrivalled support forces.

## Clever line of force

The direct positioning of boom & dipper cylinder provides perfect force guidance.

## Wide-angle kinematics and power amplification

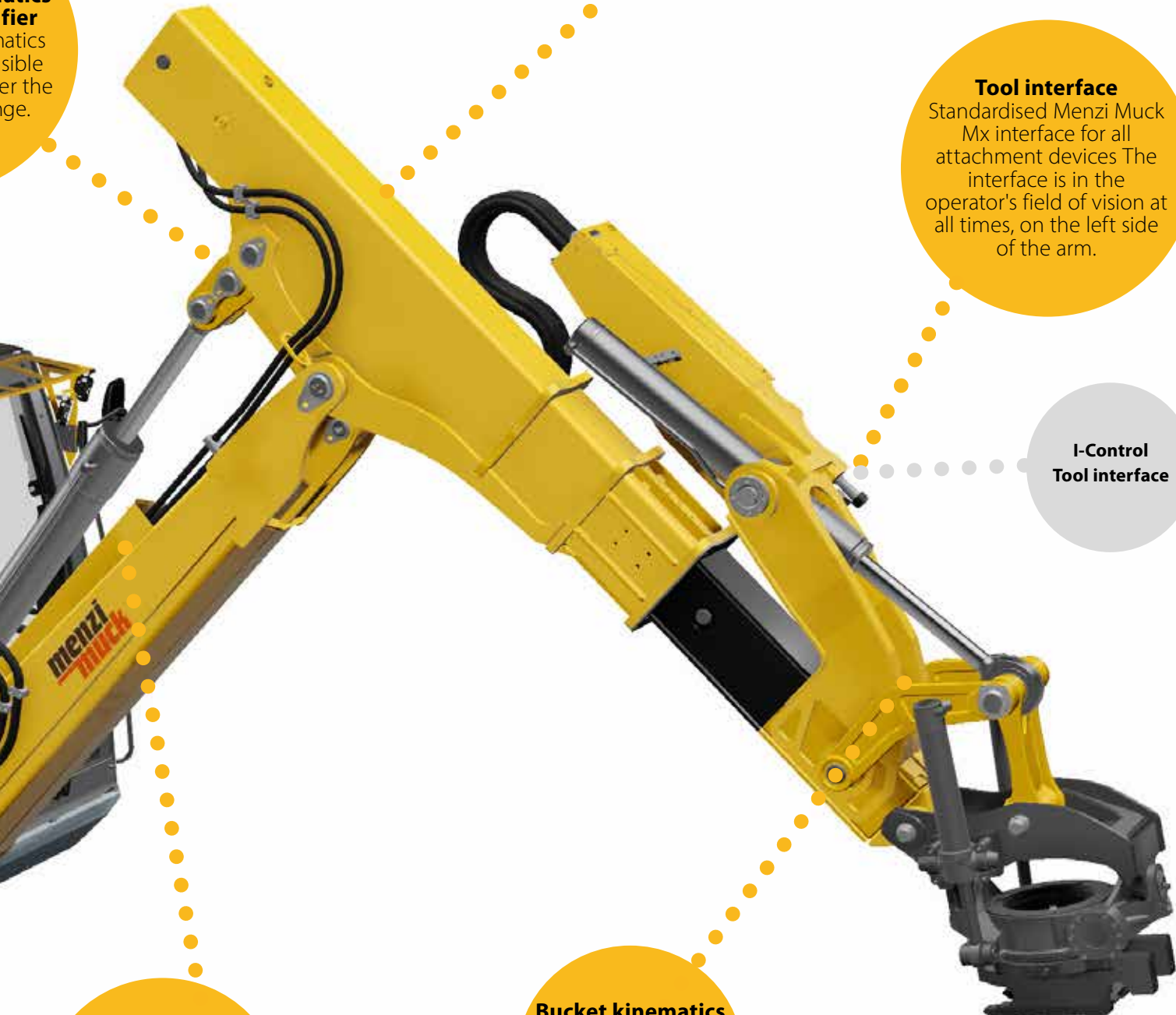
Patented arm kinematics for the greatest possible force progression over the entire working range.

## Swivelling

It's a Menzi Muck innovation that delivers controlled sensitivity even on the steepest terrain.



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**Telescope**

The 1.6 m extendable telescopic handle gives the arm the reach it needs and completes the Power boom.

**Tool interface**

Standardised Menzi Muck Mx interface for all attachment devices The interface is in the operator's field of vision at all times, on the left side of the arm.

**I-Control  
Tool interface**

**Dipper cylinder**

The shortened telescope and optimal wide-angle kinematics enable enormous tearing forces.

**Bucket kinematics**

Remarkable breakaway torque complements this powerful arm.

# Modern & functional cab design.

## Joystick

The proven and extremely functional Menzi Muck Joystick has been enhanced with IX-Steering.

## IX-Steering

Turning the Joystick creates a new operating level which allows direct steering of the X-chassis.

## 12" touch screen

All information and functions are clearly arranged in the operator's field of vision.

## I-CONTROL Central electrics

Fuses with LED monitoring, clear arrangement, optimum accessibility

## I-CONTROL Multifunctional operating concept

Simple and intuitive design Touch screen combined with switches

## Inductive smartphone charging

Place the smartphone on the anti-slip mat and it charges automatically.

## Air distribution

A large air duct evenly supplies all air outlet nozzles and increases efficiency.

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**Thermal management**

Increased heating and cooling capacity for maximum well-being incl. direct interface to the engine-independent heating

**I-Control Engine-independent heating**  
direct interface to the engine-independent heating



**Air distribution**

A repositioned air nozzle increases the air flow along the door, optimises defrosting and creates harmonious air distribution in the cabin.

**Driver comfort**  
Storage and cooled drink compartment.



# 12-inch touchscreen

The 12-inch touchscreen was developed and designed by the Menzi Muck software specialists specifically for walking excavator use. The clear design provides a precise display and means easy operation for the user. Simply swipe to the next page or arrange the switches on the display in the way that best suits your application.

## Cockpit

Rotational speeds, temperatures and fill quantities clearly at a glance

## Camera

Easily change the image and connect up to 4 cameras.

## Operator menu

Simply save individualisations.



**Customised**  
arrangement  
of the buttons

**Active  
functions**  
Easy to see  
which options  
are activated

**Additional  
winch menu**  
simple  
adjustment of  
the flow rate

**menzi  
muck**



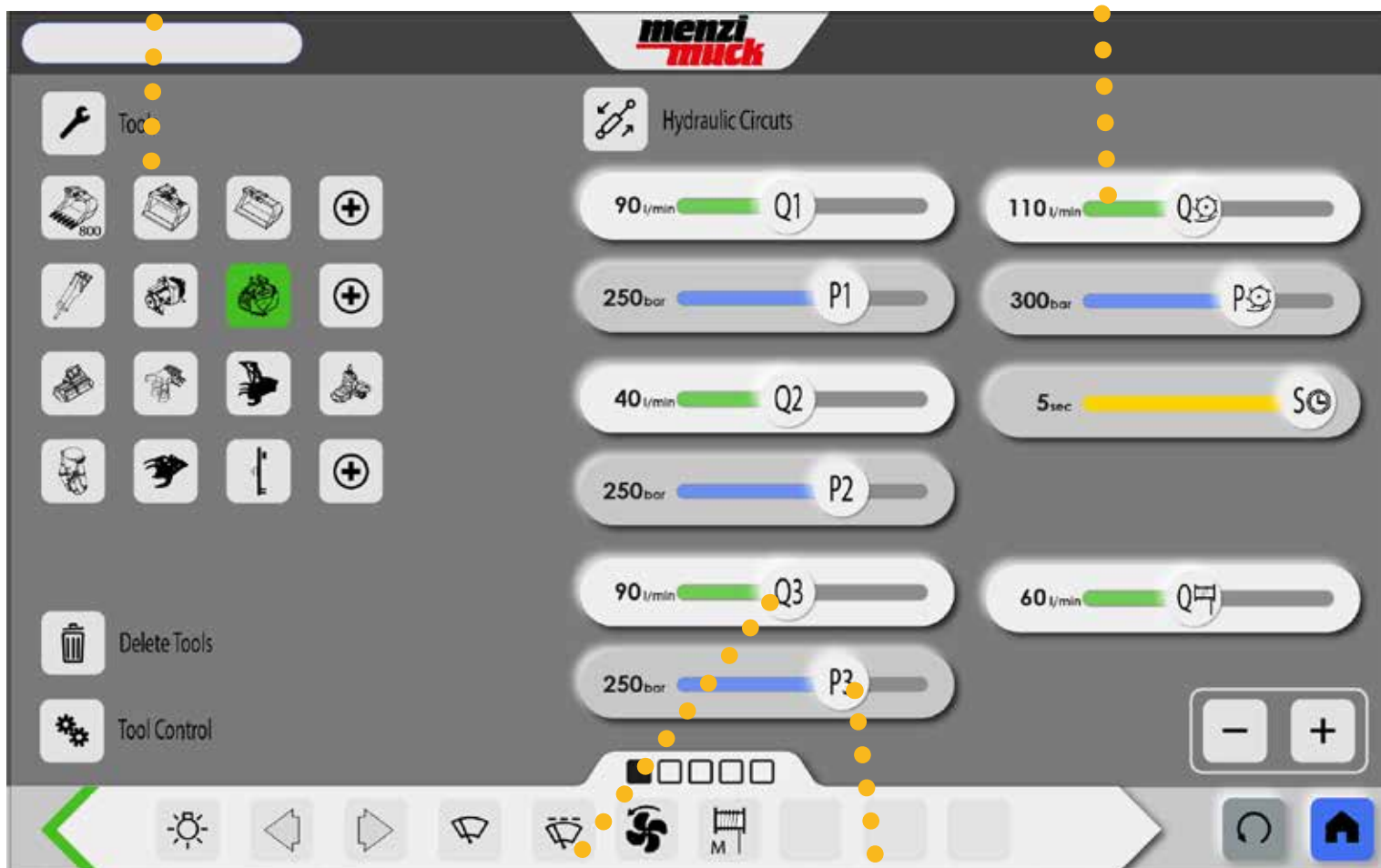
# Tool management

## Tools

Choose your attachment devices, add new ones or simply delete old ones.

## Litres & pressure

Depending on the attachment device, you have the option of conveniently adjusting pressure & litres using the sliders.



## Joystick configuration

Consistent naming (e.g. Q1/P1), facilitates assignment and individualisation of the Joystick settings.

## Hydraulic circuit

Select for yourself the hydraulic circuit to which the tool is connected and save the settings.

# Maintenance & Support

## Refuelling

Convenient refuelling of diesel and SCR on the operator's side. The diesel filling pump enables easy handling.



## Chassis tank

Tank connections and tank cap are well protected. Filling couplings optionally available

## Fleet management

I-Telematik provides efficient management of the Menzi Muck fleet. It covers machine data collection, data analysis, fleet management and service. All important machine data can be accessed at any time via the web browser.





## I-Telematik

A data transmission and location system facilitates service & diagnosis and facilitates fleet management.

## Resources

Resource-saving hydraulic oil management. An oil analysis (every 1,000 operating hours or after one year) determines the ideal moment for the oil change.



## Web service interface

Access your machine's information via the web. Use the data directly in your system.

## Engine compartment

Air cleaner in optimum maintenance position, easily accessible: measuring point for hydraulic pressures, oil dipstick with supply connection for engine oil.

## Side cover, right

Access to windscreen wiper water reservoir, hydraulic oil filler and hydraulic tank level indicator

# I-Control

## I-Control

The intelligent machine control architecture facilitates the full exploitation of our walking excavator's potential. The electronics with the software expand the possibilities of the hydraulic system. The result: Increased efficiency, reduced fuel consumption, more direct control and exceptional sensitivity paired with maximum precision and power.

## Intelligent performance management

The power of the 3.6 L Deutz engine is distributed to the hydraulic pumps as required. The three modes, Power, Eco and Fine are perfectly matched to the M4x. The electronics recognise when the operator demands power, meaning that the Deutz diesel engine can be used in a resource-saving manner.

## Pump technology

Proven pump technology with modern control technology, combined with innovative pump management increases efficiency and reduces fuel consumption.

## Hydraulic oil system

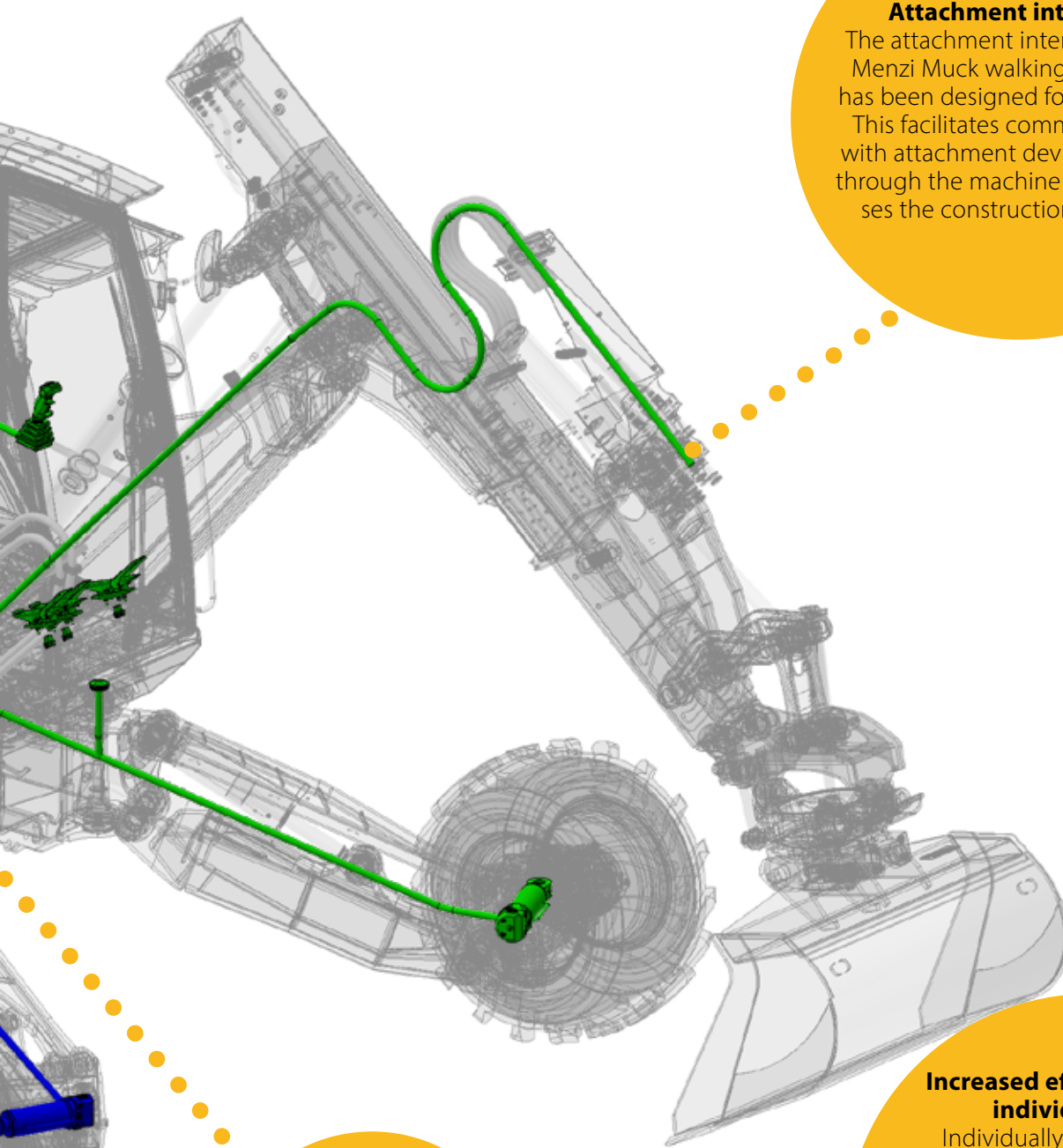
The latest filter technology, a flow-optimised hydraulic tank and monitoring of the return filter with I-Control, extend the service life of the hydraulic oil, reduce maintenance costs.

## The latest generation of valve technology

The latest generation hydraulic block provides more direct actuation and exceptional sensitivity plus maximum precision and power.

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#### **Attachment interface**

The attachment interface of the Menzi Muck walking excavator has been designed for the future. This facilitates communication with attachment devices directly through the machine and optimises the construction process.

#### **Mooring winch**

The well-known mooring winch from Menzi Muck can also be used on the M4x, increasing the range of applications.

#### **Increased efficiency through individualisation**

Individually designed operator profiles give operators the opportunity to add a personal touch to the walking excavator.

The joystick settings can be adjusted individually to suit the implements. The customised profiles can be easily transferred to other machines whenever required.

# Chassis Generation X

## Exceptional kinematics

P-Vation stabiliser front and rear  
Sophisticated arrangement of pivot points on the chassis for horizontal and vertical parallel adjustment of all wheels. Maximum adjustment range and steering angle to increase safety and application possibilities.

## Tyres up to 710 mm

For special applications and situations, wide tyres up to 710 mm increase safety and usability and reduce ground pressure.

## Unrivalled gradient

P-Vation stabilizers for slopes others have to go around. Unsurpassed slope proximity and maximum wheel width adjustment of over 5,500 mm for true stability.

## IX-Steering

Turning the joystick creates a new operating level which allows direct steering of the X-chassis.

## Steering mode

Choose between front steering, rear steering, 4-wheel steering or crab steering. You can use IX Steering on the joysticks to correct the stabiliser steering directly, or steer as required, among other things.

## Off-road mode

Self-locking differential in slippery or soft conditions for maximum traction and powerful drive.

## Deep wading

Maximum ground clearance guarantees a fording depth of 2,105 mm for municipal and water applications.

## Winch mode

Collision protection of special wire rope winches by electrical disconnection of the stabilizers, individually adjustable.

## Chain mode

Collision protection through electrical activation of forestry or snow chain mode, individually adjustable.

## Travel drive

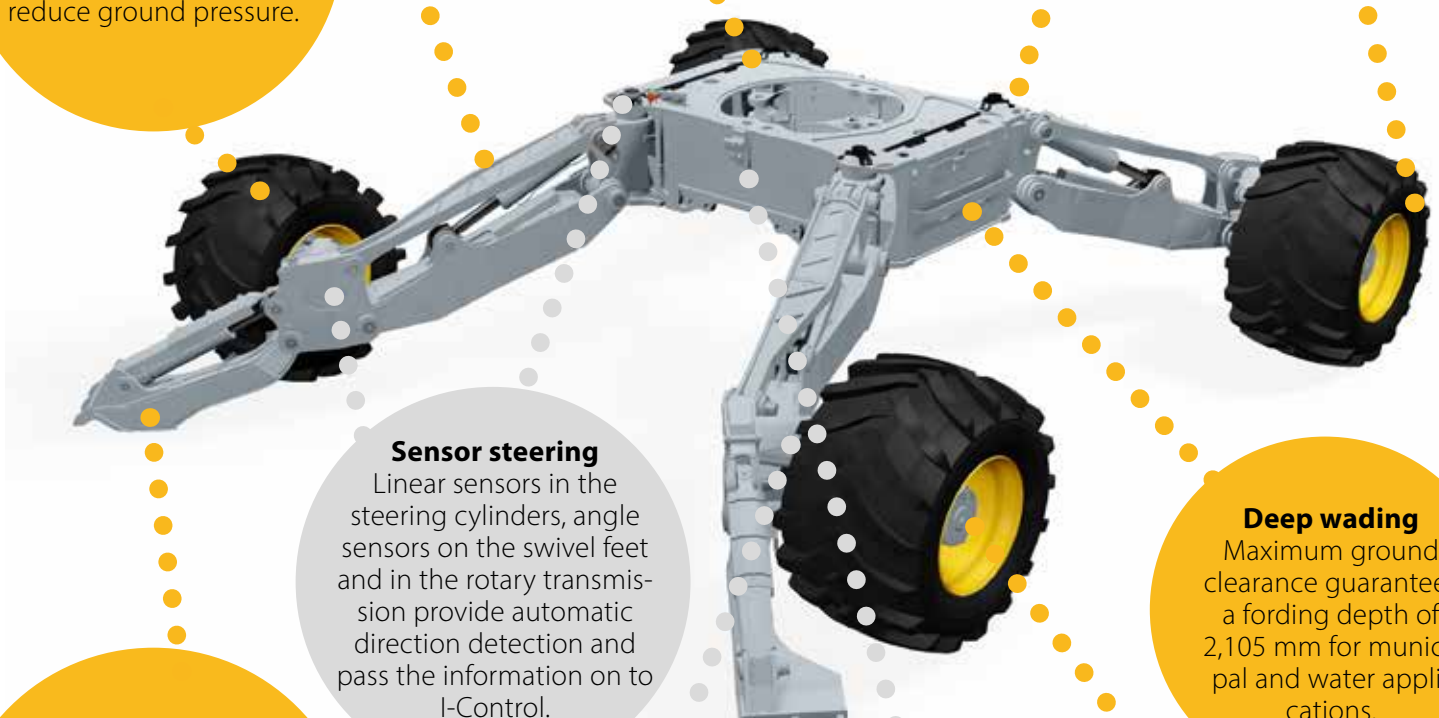
More traction  
optimal balance between power and speed in two gears.

## Sensor steering

Linear sensors in the steering cylinders, angle sensors on the swivel feet and in the rotary transmission provide automatic direction detection and pass the information on to I-Control.

## Mountain stabilizers

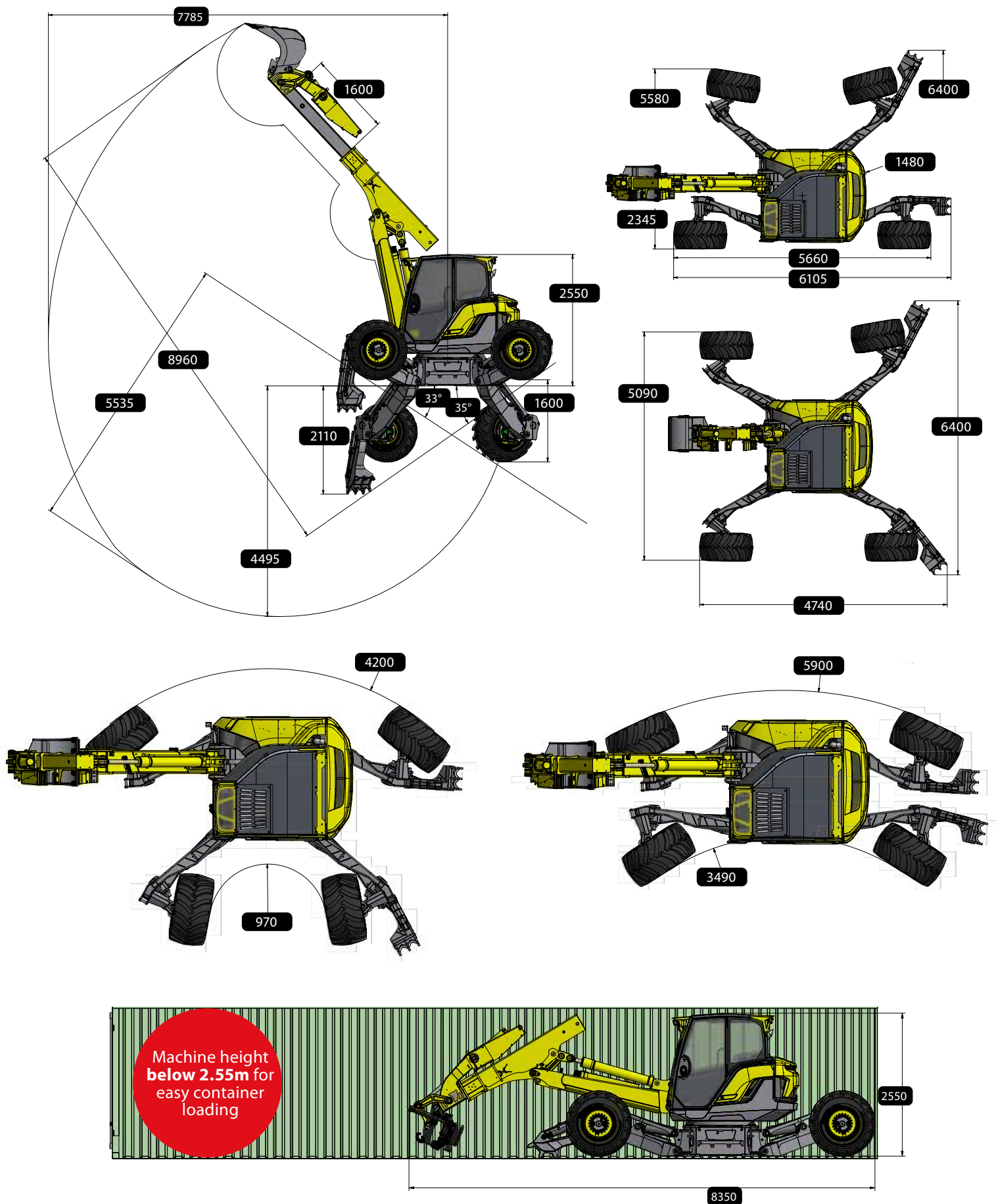
Perfect for working on very steep terrain, installation of sturdy front and rear mountain stabilizers possible. Optimal design guarantees ideal articulation point matching the angle of the slope.





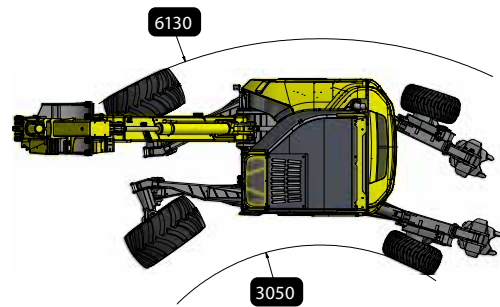
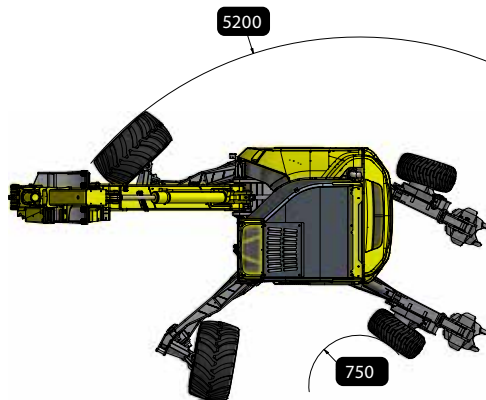
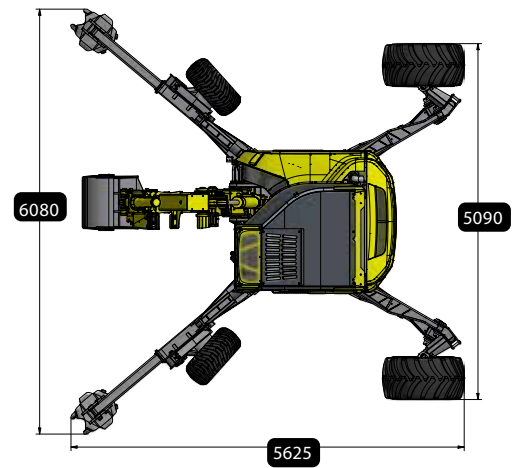
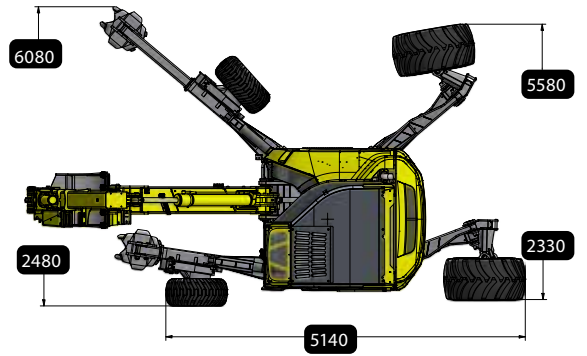
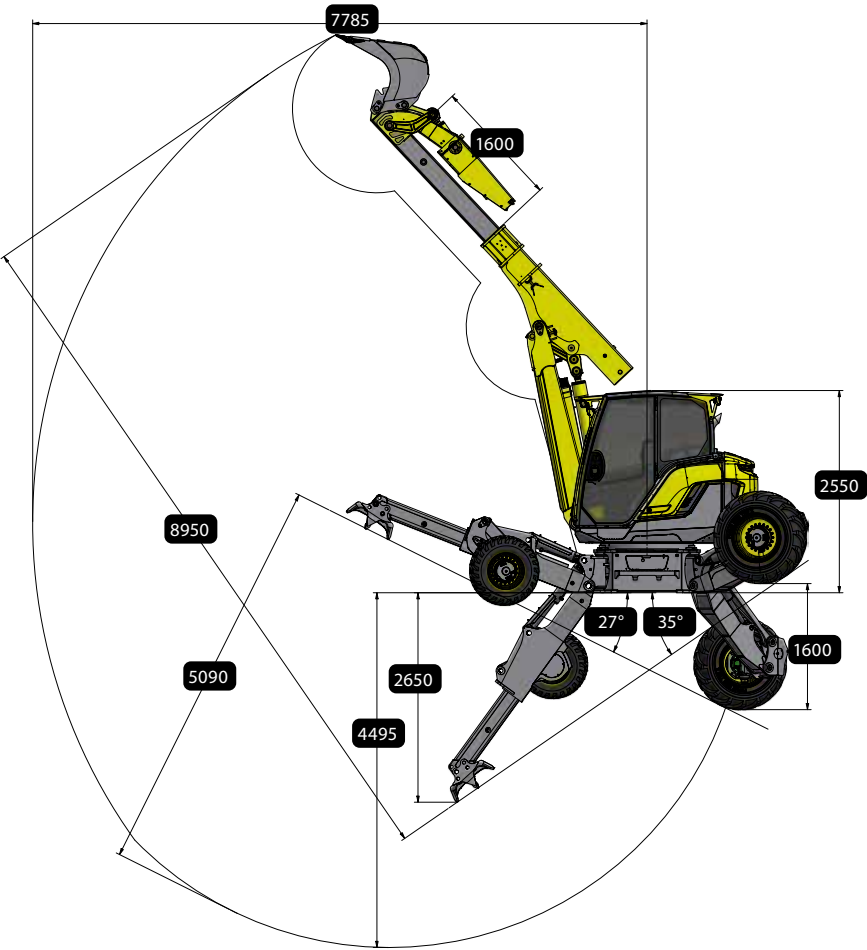
# Menzi Muck M445x

## Dimensions



# Menzi Muck M435x

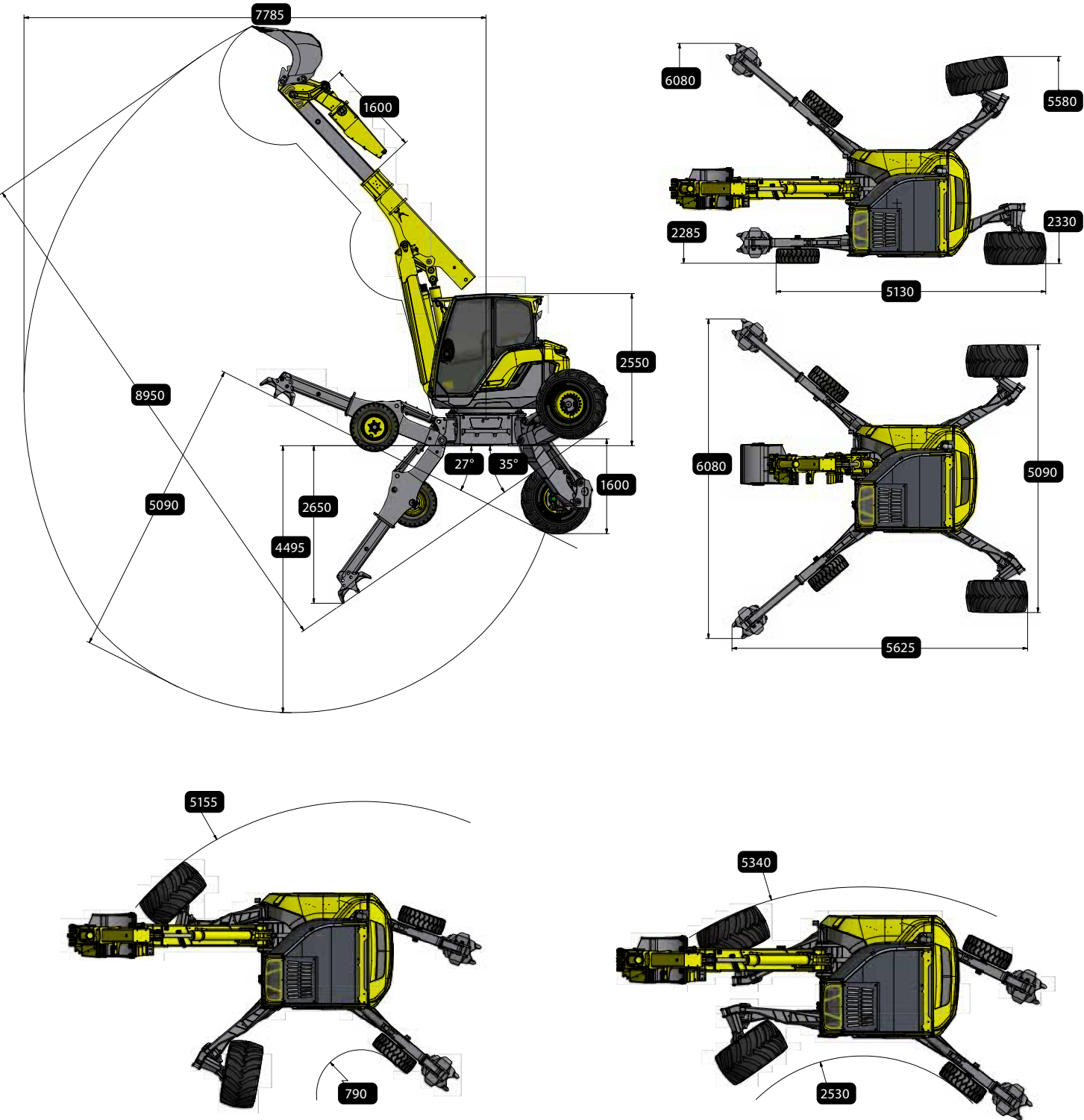
## Dimensions





# Menzi Muck M425x

## Dimensions



Dimensions in mm. Dimensions vary depending on tyres/tools.



# M4 technical data, dimensions and figures

## Engine

Deutz 4-cylinder diesel	TCD 3.6 L4 HP
Emissions level	EU level V/US Tier 4
Displacement	3621 cm <sup>3</sup>
Performance according to ISO 14396	105 kW (143 HP) at 2,000 rpm
SCR catalytic converter	with AdBlue supply
Integrated diesel particulate filter	with automatic regeneration
Max. torque	550 Nm at 1,600 rpm

## Travel drive

Driving speed max.	10 km/h*
Separate hydraulic pump	180 l/min, max. 420 bar
Service brake	hydrostatic
holding brake	Spring loaded accumulator

## Weight in kg

M425x without tools from	10,600 kg**
M435x without tools from	11 400 kg**
M445x without tools from	11 500 kg**

## Unrivalled power

Lifting force @ 3.0 m boom length	9,100 kg
Lifting force @ 4.5 m boom length	4750 kg
Lifting force @ 6.0 m boom length	3100 kg
Breakaway force	109 kN
Ripping force	77 kN
Telescope thrust	191 kN

## Swivelling

Radial piston engine with automatic multi-disc holding brake acts directly on the internal teeth of the large-dimensioned double-row ball slewing ring.	
Swivel range	360° endless
Swivel torque	48,000 Nm
Swivel speed	up to 10 rpm
Slewing ring module 10	Ø 1,200 mm

\* depending on type and tyre dimension

\*\* depending on equipment

## Hydraulic system

Working hydraulics	<b>Rexroth LUDV</b>
Pumps	Swash plate axial piston pumps
Workpump	260/min, 320 bar
Fan pump	50 l/min, 180 bar
Additional connections	6

## Hydraulic control circuits

Adjusting the auxiliary hydraulic connections via the touch screen	
Control circuit Q1 on the arm: proportional, litres and pressure adjustable	max. 150 l/min 50 - 320 bar
Control circuit Q2 on the arm: proportional, litres and pressure adjustable (opt.)	max. 100 l/min 50 - 320 bar
Control circuit Q3 on the arm: proportional, litres and pressure adjustable (opt.)	max. 50 l/min 50 - 320 bar
Control circuit Q4 on arm (quick coupler) (opt.)	30 - 300 bar
Powerline, litres and pressure adjustable (opt.)	max. 150 l/min 50 - 350 bar
Winch connection on the chassis proportional, litres adjustable (opt.)	max. 120 l/min
Return pipe	
Leakage line (opt.)	

## Filling quantities

Fuel tank	130l
Fuel tank, chassis	215l
AdBlue tank	20l
Hydraulic oil system content	200l

## Tyres

Road traffic license CH and EU without special permit up to 710 mm tyre width	
<b>Standard</b>	W/Ø in mm
300-15 (M425x)	300 / 820
400/55-17.5 (M435x)	390 / 890
600/50-22.5 (M445x)	600 / 1170
<b>Option</b>	
710/40-22.5	710 / 1170

# Innovative standard equipment and useful options

standard + optional o

## Upper carriage

Diesel filling pump with limit switch	+
Gas spring-assisted opening of the side and tail gate	+
Integrated tool compartment	+
Additional toolbox	o
Direction recognition with automatic changeover	+
Cylinder on arm with end position damping	+
Powerline	o
Leakage line	o
Control circuit Q1 + Q2	+
Control circuit Q3 + Q4	o
Control circuit pressure adjustment Q2 + Q3	o
Return filter with optimised air separation (In to OUT)	+
Reversing fan	o
Lifting equipment (CH and EU)	o
Lift and swivel limitation (boom & swivel)	o
Lift and swivel limitation (all arm functions)	o

## Cab

"Roll-Over Protection System" – DIN ISO 3471	+
FOPS protective grid roof Level II according to DIN ISO 3449 Compact	+
FOPS protective grid roof Level II according to DIN ISO 3449 Forest	o
Removable windshield OPS-tested according to ISO 8084	o
Front safety screen for forest according to ISO 21876	o
Low-vibration and low-noise cabin	+
Grammer operator's comfort seat	+
Grammer operator's comfort seat Evolution with seat climate control	o
Ergonomic joystick with lx-Steering	+
Cab tiltable with hydr. hand pump	+
Headlight ring on the roof with up to 6 LED headlights	o
5 LED work lights	+
LED auxiliary lights on arm or cab (various versions)	o
LED swivel light	o
Protective grid on windshield (different variants)	o
Safety glass (different variants)	o
Door with sash window	o
Spacious, ergonomic cockpit	+
Reversing camera	+
Powerful heater with 8 adjustable air nozzles	+
Air conditioning	o
Engine-independent heating	o
Pollen filter	+
DAB+ radio with USB/MP3 player	+
Three-point safety belt	o

Wiping and windscreen washer	+
Telematik tracking system	+
LCD Display 12.1" touchscreen	+
USB charging station	+
Inductive charging station	+
Central electrics with LED monitoring of the fuses	+

## Generation X chassis

Optimally protected components	+
Mountain stabilizers, front	o
Mountain stabilisers, rear (M445x)	o
Hydraulic wheel height adjustment (M435x)	+
Winch attachment possible at front or rear	+
Mooring winch preparation	o
Remote control for winch	o
Electric winch collision protection	+
Automatic parking brake	+
Differential lock	+
Linear displacement sensors in the steering cylinder	+
Active angle sensors	+
Electric chain collision protection	+
Hydraulic freewheel (M425x)	o
Chassis cylinder with check valves	+

## Other special features

Vacuum pump for hydraulic system	o
Automatic idling	o
Road traffic license (CH and DE)	o
Automatic central lubrication (whole machine or upper carriage only)	o
Central lubrication cartridge filling	o
Biodegradable hydraulic oil	o
Hydraulic affluent filter	o
Forest version	o
Drilling equipment	o
Municipal maintenance equipment	o
Special paintwork	o
Low temperature package	o
Start & Stop on the joystick	+
Automatic idling	o



## Find us!

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Technical data subject to change / 0523

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