Preliminary

MHL 450

180 kW

34.7 – 38.4 t
(without attachments)

max. 16 m

FUCHS®
A TEREX BRAND

DESIGNED FOR TRAILER PULLING

The MHL450 is specially designed for trailer pulling, has all-wheel drive, huge towing capacity and is used for a wide range of applications in timber handling.

Logs are loaded, unloaded and transported with a trailer over the entire area.

The MHL450 is equipped with a powerful 180 kW diesel engine and a robust undercarriage with single tires and dual-circuit braking system.

TECHNICAL DATA

OPERATING WEIGHT WITHOUT ATTACHMENT

MHL450	34.7 – 38.4 t

Diesel engine

Manufacturer and type	**EU Stage V / U.S. Tier 4**	**EU Stage IIIA / U.S. Tier 3** *)
	Deutz TCD 6.1 L6	Deutz TCD2013 L6
Design	6-cylinder in-line	6-cylinder in-line engine
Functionality	4-stroke engine, direct common-rail fuel injection, turbocharger with charge air intercooling, controlled exhaust as recirculation, diesel particle filter with a continuously regenerating system and SCR catalytic converter	4-stroke engine, direct common-rail fuel injection, turbocharger with charge air intercooling
Engine power	180 kW	182 kW
Nominal speed	2000 min^{-1}	2000 min^{-1}
Displacement	6.1 l	7.2 l
Cooling system	Water and charge air cooling with temperature controlled fan speed	
Exhaust emission standard	EU Stage V / US EPA Tier 4	EU Stage IIIA / U.S. Tier 3 *)
Fuel tank	315 l Diesel	315 l Diesel
Urea tank	32 l AdBlue	-

Electrical system

Alternator	28 V / 100 A
Operating voltage	24 V
Battery	2 × 12 V / 110 Ah / 750 A (in accoordance with EN)
Lighting	2 x LED floodlights at the front of the machine, rear parking lights and indicator lights

Travel Drive

Travel drive all wheel, hydrostatic drive with infinitely variable axial piston motor and directly mounted travel brake valves, 2-stage power shift system

Travel speed	0-19 km/h
Turning radius	9.5 m

SLEWING GEAR

Slewing ring	Internally geared double row slewing ring bearing, greasing via automatic lubrication system
Drive	2-stage planetary gear with integrated multi-disc brake
Uppercarriage swing speed	0 – 7 min^{-1} infinitely variable
Slewing lock	Electrically activated

* for markets with little regulation

TECHNICAL DATA

Undercarriage

Front axle	Steering axle with planetary drive, integrated wet multidisc brake and oscillating lock
Rear axle	Planetary drive axle with integrated wet multi-disc brake, rigidly mounted
Stabilization	with 4-point stabilizers
Tires	Pneumatic tires Hauler 16.00-25/32 PR, 4-fold. Further tires available on request.

Brakes

Service brake	Hydraulically activated dual-circuit brake system acting on all four wheel pairs, lockable
Parking brake	Electro-hydraulically actuated brake, works on both axles

Hydraulic system

Load limit control for energy-efficient operation	
Max. pump flow	2 × 330 l/min
Max. pressure	320 / 360 bar
Hydraulic oil tank	366 l
Temperature-dependent fan drive	

Operator's cab

Cab	Infinitely variable hydraulic height-adjustable cabin with sliding door. Reinforced steel structure, soundproofed, heat-insulated panoramic windows for best all-round isibility, front window with roller blind, glass panel in the cabin roof with sliding blind. Heating and air conditioning, separate heat exchangers, fresh and recirculated air filters. Multifunction touch display, bottle holder, paper clip and multiple storage and mounting options. Digital radio (DAB+, USB, Bluetooth and hands-free), USB charging station 5V. Vertically adjustable cabin: viewing height of 5.96 m.
Air-conditioning	Automatic air-conditioning. Infinitely variable heating with 8-speed fan, 10 adjustable air nozzles, 3 defroster nozzles.
Operator's seat	Air-cushioned comfort seat with swinging armrests / joysticks, safety belt, lumbar support and headrest. Enables fatigue-free work due to universal adjustment options for the seat position, seat inclination and the arrangement of the seat cushion in relation to the armrests and joysticks.
Monitoring	Ergonomically arranged, glare-free Multifunction display. Automatic monitoring and storage of deviating operating states (e.g. all hydraulic oil filters, hydraulic oil temperature – coolant and charge air temperature – diesel particulate filter loading, steering), visual and audible warning. Diagnostic option for the individual sensors via the multifunction display. Rear view and side view camera on the right with separate monitor.

	EU Stage V	**U.S. Tier 4**
Sound levels	Sound power level (outdoor area) L_{WA} 98.8 dB(A) (measured) as per directive 2000/14/ EC L_{WA} 101 dB(A) (guaranteed) as per directive 2000/14/ EC Sound pressure level (inside the cab) as per the standard ISO 6396 L_{pA} 67 dB(A)	Sound power level (outdoor area) L_{WA} 101.3 dB(A) (measured) as per directive 2000/14/EC L_{WA} 102 dB(A) (guaranteed) as per directive 2000/14/ EC Sound pressure level (inside the cab) as per the standard ISO 6396 L_{pA} 67 dB(A)

Vibration	Weighted r.m.s. value of acceleration of upper limbs under 2.5 m/s² (98 in/s²) Weighted effective value of acceleration for the seat and feet under 0.5 m/s² (20 in/s²)
Certification according to CE Directives	

EQUIPMENT

Diesel engine	Standard	Option
Water and charge air cooler	●	
Temperature-dependent fan drive	●	
Reversible fan		●
Direct electronic fuel injection / common rail	●	
DEF injection, passive regeneration	●	
Advanced automatic idle incl. engine shut-off function	●	
ECO and POWER mode	●	
Engine preheating		●
Engine diagnostics interface	●	
Undercarriage		
All-wheel drive	●	
Wet multi-disc brake for all 4 wheels	●	
Front axle oscillating lock	●	
2-speed powershift transmission	●	
4-point stabilizers	●	
Stabilizer cylinder with integrated, double-sided shut-off valve	●	
Tool box	●	
Special paint (customer paint work)		●
Uppercarriage		
Separated cooling system for hydraulic, engine and air-conditioning system	●	
Temperature-dependent fan drive	●	
Reversible fan		●
Automatic central lubrication system	●	
Rear view camera	●	
Side view camera	●	
Travel alarm		●
Electric refuelling pump		●
Lighting protection		●
Special paint (customer paint work)		●

EQUIPMENT

Cab	Standard	Option
Vertically adjustable cabin	●	
Safety glass, tinted windows (side, rear), sliding window clear glass	●	
Cabin with all clear glass windows		●
Cabin with penetration resistant glass front (classification P5A)		●
Cabin with bullet-proof glass (classification P8B)		●
Sliding window in cab door	●	
Glass ceiling	●	
Windshield washer system	●	
Washing device for roof window		●
Air-cushioned operator seat with headrest, seatbelt, and lumbar support, consoles that move with the seat	●	
Seat heating		●
Joystick steering	●	
Steering column, height and tilt adjustable		●
Automatic air conditioning system	●	
Auxiliary heating incl. Timer		●
Multi-function display	●	
Document net	●	
FOPS Guard		●
Voltage converter 12 V		●
Digital Radio (DAB+, USB, Bluetooth and handsfree system)	●	
12V socket/cigarette lighter		●
Catwalk for cabin, access ladder included		●
Fire extinguisher, dry powder with holder		●
Other equipment		
Close proximity range limiter for dipperstick	●	
Coolant and hydraulic oil level monitoring system	●	
Filter system for attachments		●
Hose rupture valve for boom cylinder		●
Hose rupture valve for stick cylinder		●
Overload and working area control		●
Quick coupling on dipperstick	●	
Stick protection		●
Active cyclone prefilter (TOP AIR)		●
Boom cylinder damping system (piston accumulator)		●
Hydraulic oil preheating		●
Lubrication of the grab suspension by central lubrication system	●	
Float switch		●
Light packages LED		●
LED head lights at the front of the machine	●	
Trailer hitch		●
Fuchs Telematics System, incl. 5 years contract	●	

LOADING EQUIPMENT

- Reach up to 16 m
- Purpose built loading equipment
- Kinematics designed for maximum stockpiling height
- Stockpiles in 2nd row can also be reached
- Grab rotation speed and pressure regulation
- Optimally arranged hydraulic pipes and hoses

UPPERCARRIAGE

- Separated cooling system for engine, hydraulic oil cooler and AC condenser
- Temperature-controlled fan drives, highly energy-efficient
- Cover plates, robust steel design
- Rear and side view camera

UNDERCARRIAGE

- FEM-based, robust, torsion-resistant steel construction,
- Symmetrical arrangement of the axles
- Protection guard for drivetrain
- Different trailer hitches on demand

CABIN

- Hydraulically adjustable cab
- 5.9 m eye level for perfect overview
- Large skylight
- Sliding window in cab door
- Tinted safety glass
- Automatic air conditioning system
- Speedometer standard


450


450


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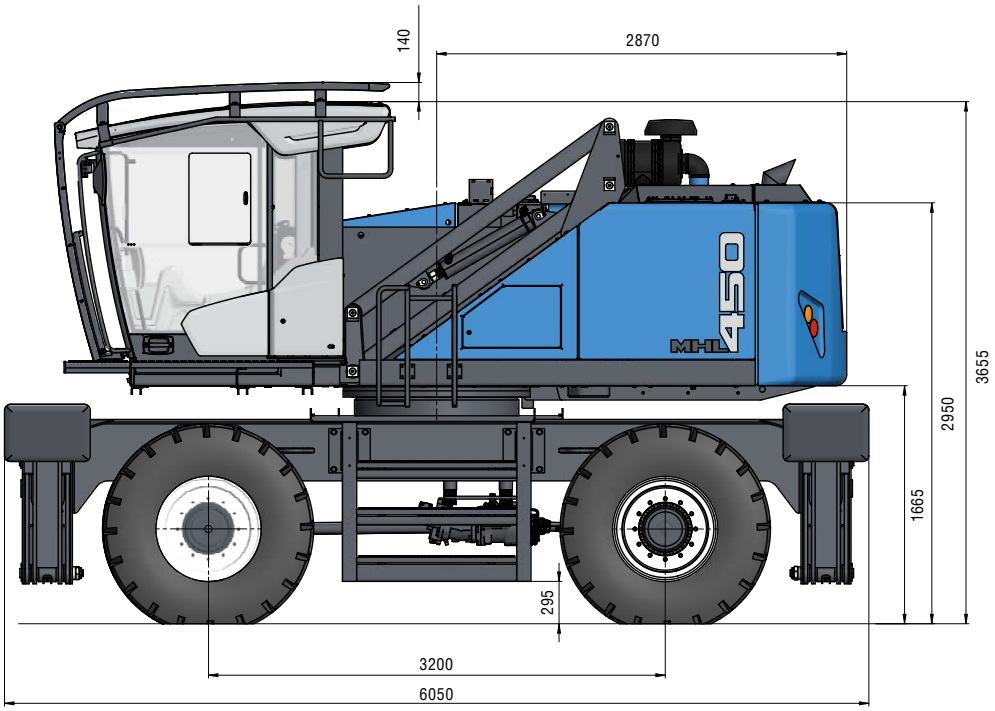
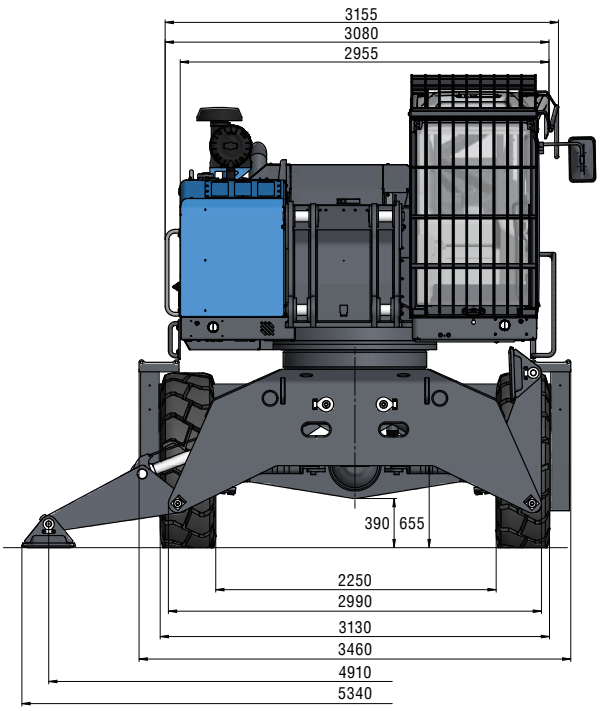
DIMENSIONS

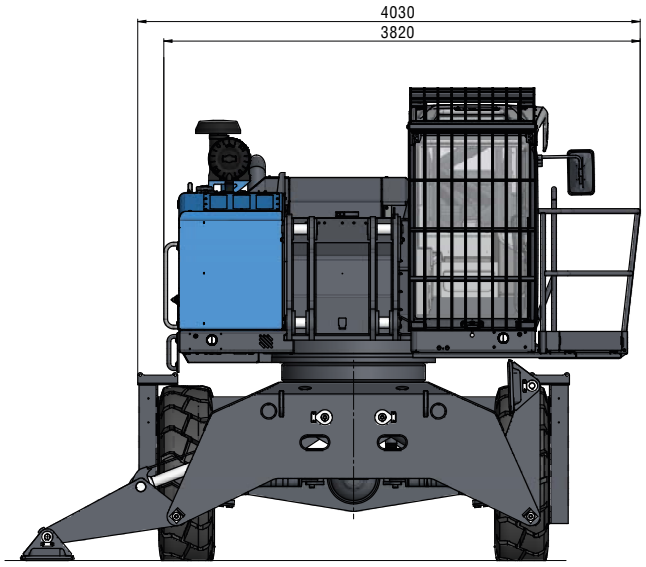
4-point stabilizers

Side view

all dimensions in mm



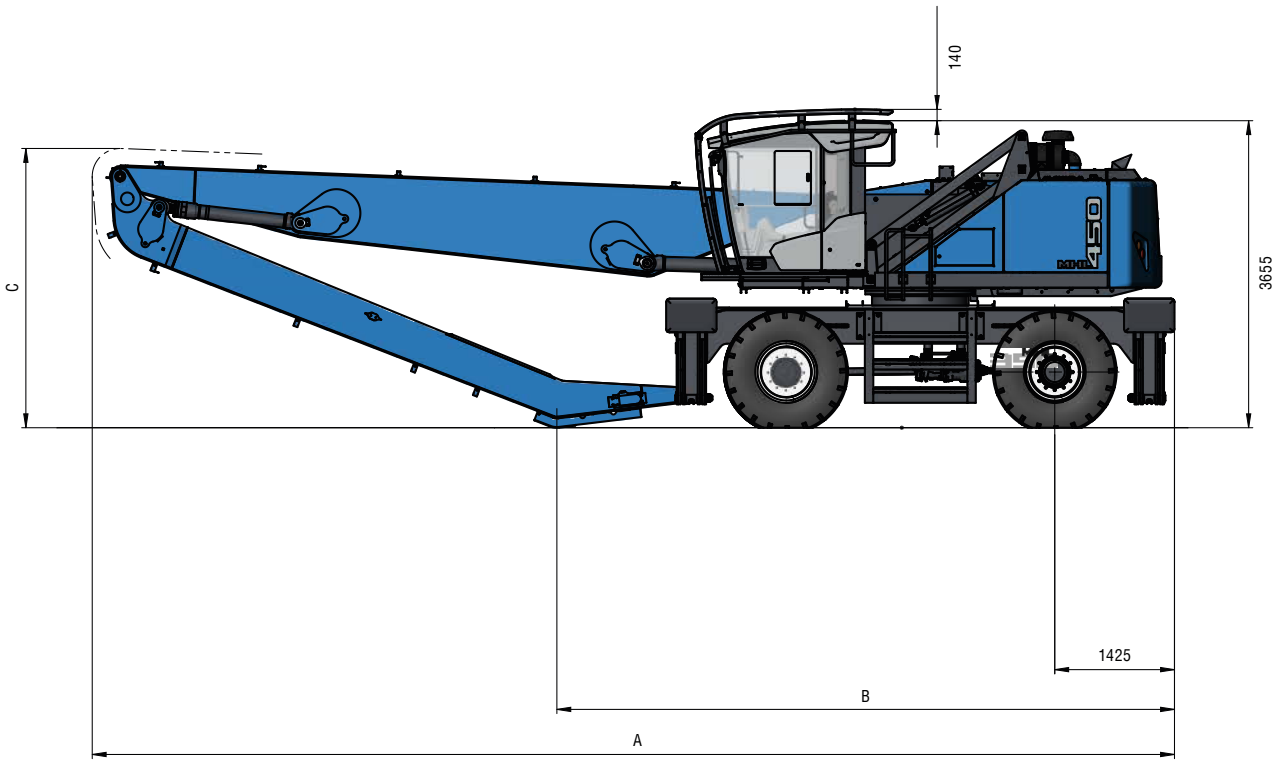




with catwalk

TRANSPORT DIMENSIONS

Side view
all dimensions in mm

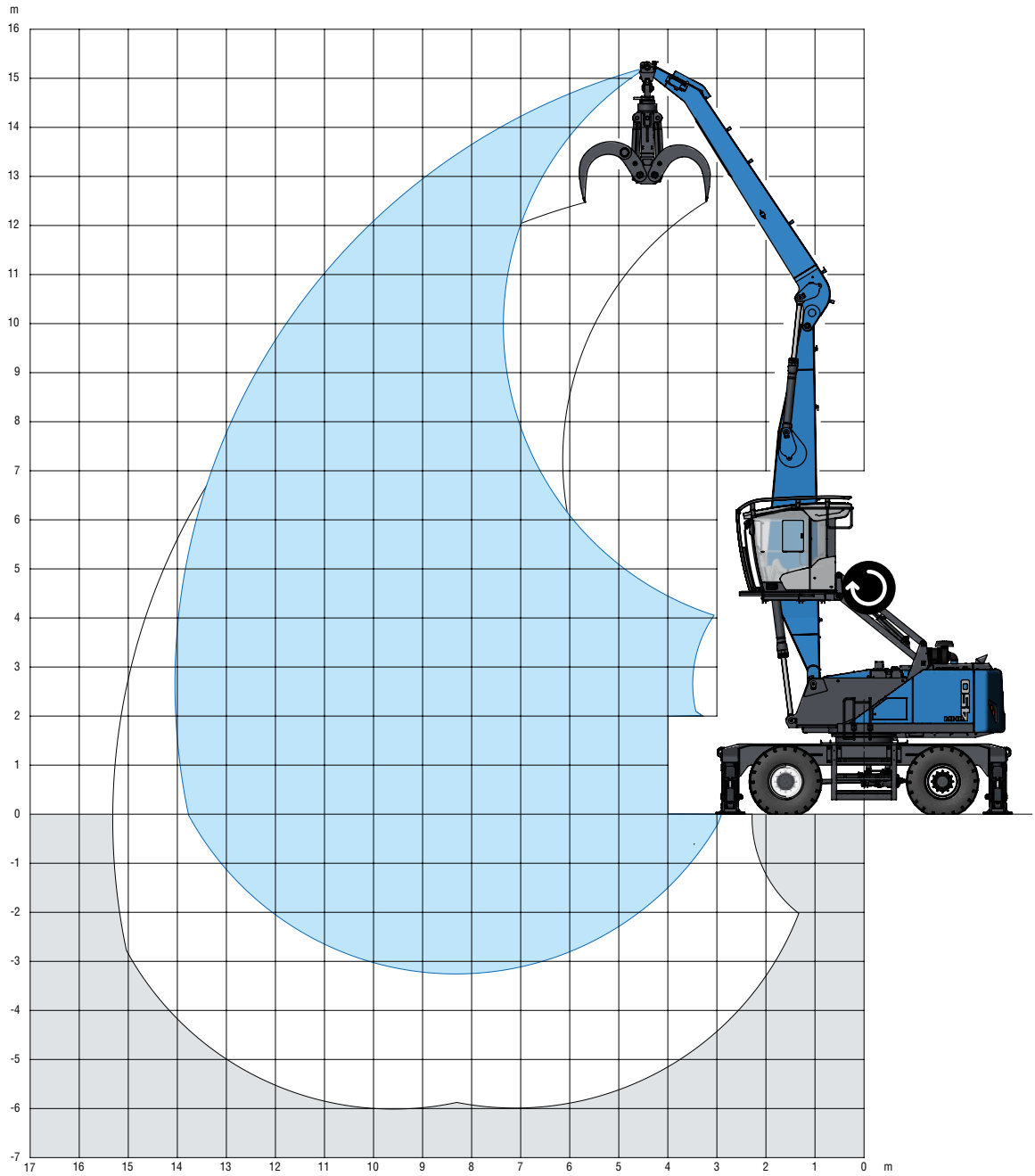


	14.0 m	15.0 m	16.0 m
A	11685 mm	12885 mm	12885 mm
B	6865 mm	8095 mm	7350 mm
C	3275 mm	3325 mm	3325 mm

REACH

14.0 m with dipper stick

Boom: 7.3 m · Dipper stick: 6.2 m



LIFTING CAPACITY

		4.5 m	6 m	7.5 m	9 m	10.5 m	12 m	13.5 m
13.5				4.5°				
12				6.0°	4.6°			
10.5				6.8°	5.9°	4.3°		
9				7.4°	6.8°	5.6°	3.4°	
7.5				7.9°	7.0°	6.3°	4.7°	
6			9.5°	8.4°	7.3°	6.5°	5.8°	2.7°
4.5		12.6°	11.3°	9.1°	7.7°	6.6°	5.8°	3.6°
3		18.1°	12.6°	9.8°	8.0°	6.8°	5.8°	4.1°
1.5		8.0°	13.4°	10.2°	8.2°	6.8°	5.7°	4.2°
0		5.7°	13.4°	10.2°	8.1°	6.7°	5.5°	3.7°
-1.5		5.8°	11.4°	9.6°	7.7°	6.2°	4.9°	
-3				8.4°	6.7°			
								max. reach 14 m
2.7								2.4°

Recommended attachments upon request

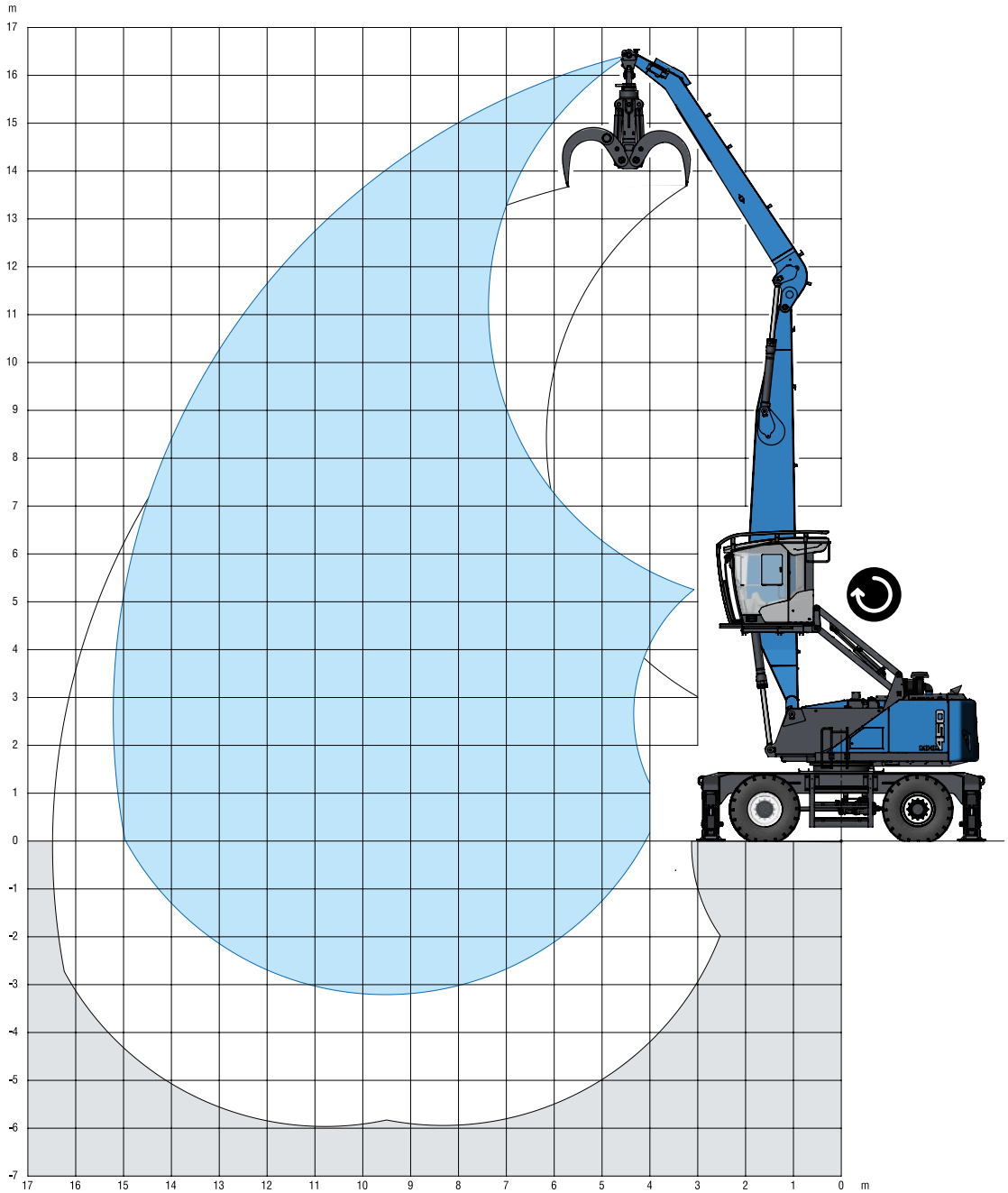
Height Reach Center of rotation 4-point supported

The lift capacity values are stated in metric tons (t). In accordance with ISO 10567, the lift capacity values represents 75 % of the static tipping loads or 87% of the hydraulic lifting force (marked °). On solid and level ground the values apply to a swing range of 360°. The (…) values apply in the longitudinal direction of the undercarriage. The weights of the attached load hoisting equipment (grab, load hock, etc.) must be deducted from the lift capacity values. The working load of the lifting devise must be observed. In accordance with the EN 474-5 for object handling application hose rupture valves on the boom and stick cylinders, an overload warning device and the lift capacity table in the cab are required. The machine has to be supported on a level ground for object handling application.

REACH

15.0 m with dipper stick

Boom: 8.5 m · Dipper stick: 6.2 m



[m]

LIFTING CAPACITY

		4.5 m	6 m	7.5 m	9 m	10.5 m	12 m	13.5m	15 m
15				4.3°					
13.5				5.9°	4.6°				
12				6.7°	5.9°	4.6°			
10.5				7.3°	6.6°	5.8°	4.1°		
9				7.7°	6.7°	5.9°	5.3°	3.0°	
7.5				8.0°	6.9°	6.0°	5.3°	4.3°	
6			10.6°	8.6°	7.2°	6.2°	5.4°	4.8°	
4.5		16.8°	11.7°	9.1°	7.5°	6.3°	5.5°	4.7°	2.7°
3		5.0°	12.6°	9.5°	7.7°	6.4°	5.5°	4.7°	3.1°
1.5		3.0°	9.2°	9.7°	7.7°	6.4°	5.4°	4.5°	3.1°
0		3.3°	6.8°	9.4°	7.5°	6.2°	5.1°	4.2°	
-1.5			6.5°	8.6°	7.0°	5.7°	4.7°	3.7°	
-3					6.1°	5.0°			
									max. reach 15.2 m
2.7									2.4°

Recommended attachments upon request

Height Reach Center of rotation 4-point supported

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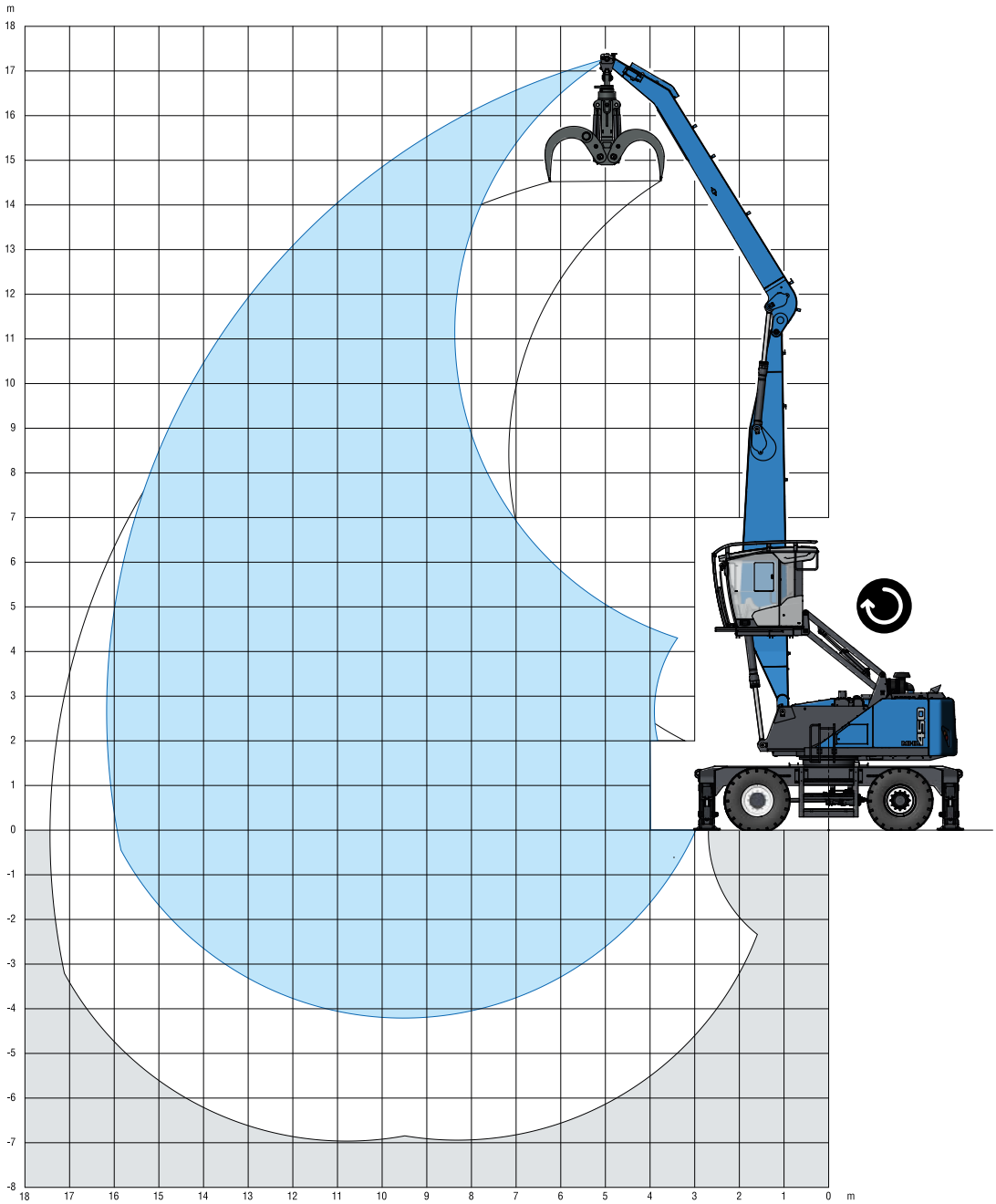
REACH

16.0 m with dipper stick

Boom: 8.5 m · Dipper stick: 7.2 m



[m]

LIFTING CAPACITY

		4.5 m	6 m	7.5 m	9 m	10.5 m	12 m	13.5 m	15 m
15				4.8°	3.7°				
13.5					4.8°	3.7°			
12					5.5°	4.7°	3.5°		
10.5					6.0°	5.4°	4.5°	2.8°	
9					6.2°	5.6°	5.1°	3.9°	
7.5				7.4°	6.5°	5.7°	5.1°	4.6°	2.7°
6				7.9°	6.8°	5.9°	5.2°	4.6°	3.4°
4.5		11.9°	10.8°	8.6°	7.1°	6.1°	5.3°	4.7°	4.0°
3		17.3°	11.9°	9.1°	7.4°	6.3°	5.4°	4.7°	4.0°
1.5		4.7°	12.6°	9.5°	7.6°	6.3°	5.4°	4.6°	3.9°
0		3.7°	8.5°	9.5°	7.6°	6.2°	5.2°	4.4°	3.6°
-1.5		3.9°	7.0°	9.0°	7.2°	6.0°	5.0°	4.1°	3.1°
-3			6.8°	8.1°	6.6°	5.4°	4.4°		
									max. reach 16.1 m
2.7									1.9

Recommended attachments upon request

Height Reach Center of rotation 4-point supported

The lift capacity values are stated in metric tons (t). In accordance with ISO 10567, the lift capacity values represents 75 % of the static tipping loads or 87% of the hydraulic lifting force (marked °). On solid and level ground the values apply to a swing range of 360°. The (…) values apply in the longitudinal direction of the undercarriage. The weights of the attached load hoisting equipment (grab, load hock, etc.) must be deducted from the lift capacity values. The working load of the lifting devise must be observed. In accordance with the EN 474-5 for object handling application hose rupture valves on the boom and stick cylinders, an overload warning device and the lift capacity table in the cab are required. The machine has to be supported on a level ground for object handling application.

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