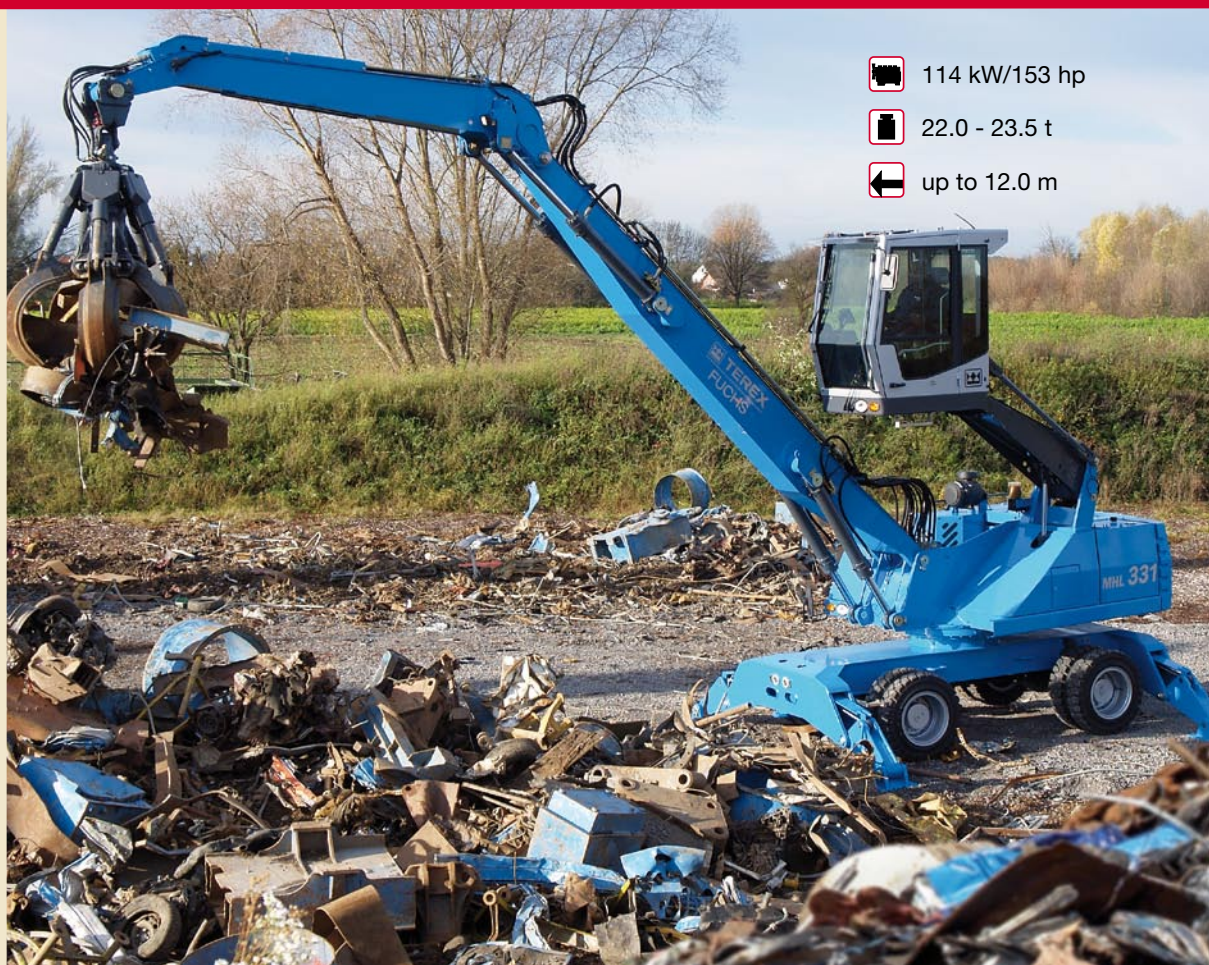





TECHNICAL DATA AND INFORMATION



 114 kW/153 hp

 22.0 - 23.5 t

 up to 12.0 m



MHL 331 D

RECYCLING MACHINE

TECHNICAL DATA MHL331 D



OPERATING WEIGHT

22.0 - 23.5 t



DIESEL ENGINE

MANUFACTURER AND MODEL	Deutz TCD 2012 L06 2V
DESIGN	6-cylinder inline
ENGINE CONTROL	EMR III
TYPE	4-stroke diesel, common rail direct injection, turbo-charger w. charge air cooling
ENGINE OUTPUT	114 kW/153 hp
NOMINAL SPEED	2000 min ⁻¹
DISPLACEMENT	6.0 liters
COOLING SYSTEM	Liquid intercooling with temperature-controlled fan speed
EMISSION STANDARDS	COM III and EPA Tier III
AIR FILTER DESIGN	Two-stage filter with safety valve
FUEL CAPACITY (USABLE)	300 l



ELECTRICAL SYSTEM

OPERATING VOLTAGE	24 V
BATTERIES	2 x 12 V / 100 Ah / 760 A (in accordance with EN)
LIGHTING SET	1 x H3 spotlights on upper carriage, 1 x H3 spotlights on cabin floor, turn signal and rear side-marker lamps
OPTION	Magnet system 13 kW



TRAVEL DRIVE

	Hydrostatic drive through infinitely variable axial piston motor and directly mounted travel brake valves, two-speed power shift gear, 4-wheel drive
TRAVEL SPEED 1ST GEAR	max. 5 km/h (3.1 mph)
TRAVEL SPEED 2ND GEAR	max. 20 km/h (12.4 mph)
GRADEABILITY	max. 50%
TURNING RADIUS	7.0 m



SWING SYSTEM

RING GEAR	Internally toothed ball ring gear (double row)
DRIVE	Two-stage planetary gear with integrated multi-disc brake
UPPER CARRIAGE SWING SPEED	Infinitely variable from 0 - 8 min ⁻¹
PIVOT BRAKE	Electrically operated
MAX. PIVOT TORQUE	49 kNm



UNDERCARRIAGE

FRONT AXLE	Planetary drive axle with integrated drum brake, rigidly mounted, max. steering angle: 28°
REAR AXLE	Oscillating planetary drive rear axle with integrated drum brake and selectable oscillating axle lock
STABILIZERS	4-point-stabilizers
TIRES	Solid rubber, elastic tires 8-fold 9.00 - 20



BRAKE SYSTEM

SERVICE BRAKE	Hydraulic single-circuit braking system acting on all four wheel pairs
PARKING BRAKE	Electrically operated disc brake at transmission, acting on both front and rear axle



HYDRAULIC SYSTEM

	REXROTH mobile hydraulic system with load limit control, and fuel conserving power demand control. Separate oil cooler, temperature-controlled fan speed. Hydraulic oil filter: integrated in the oil tank; maintenance interval: 3000 operating hrs. Central lubrication system.
MAX. PUMP CAPACITY	380 l/min
MAX. OPERATING PRESSURE	320/360 bar
HYDRAULIC OIL TANK	340 l



OPERATOR'S CAB

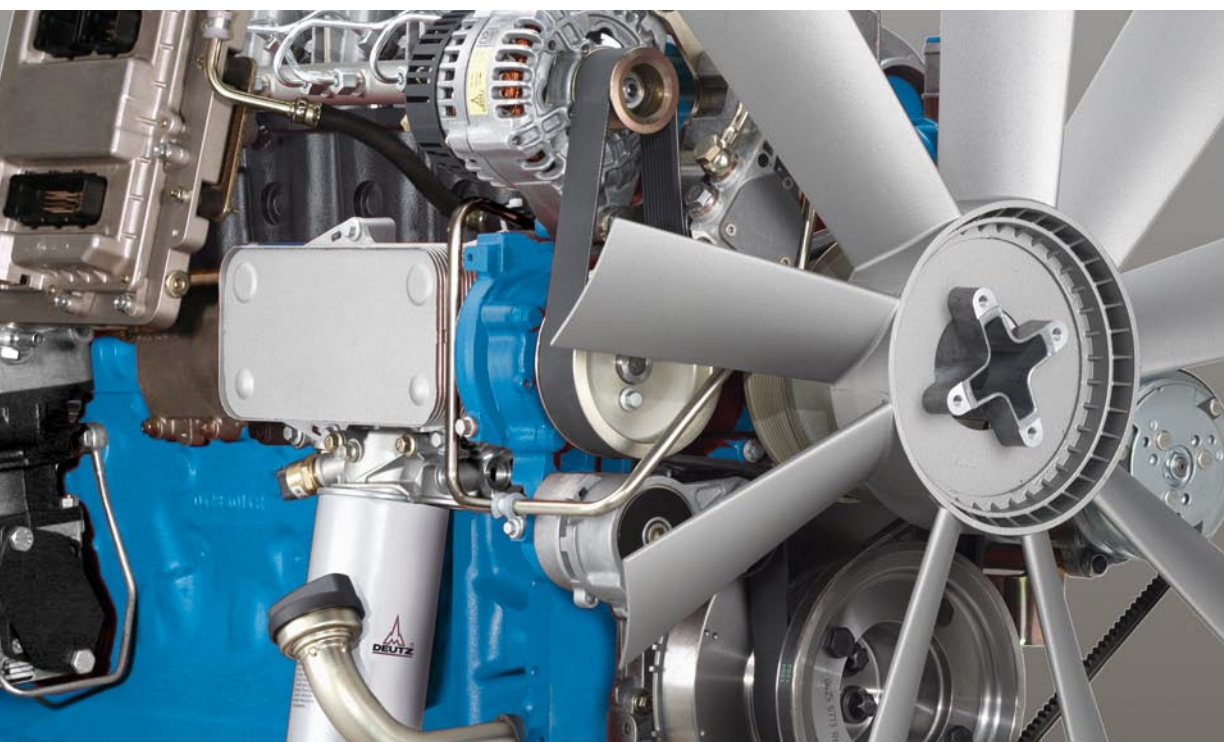
	Cab: elastically supported, infinitely variable hydraulically height-adjustable with max. eye level of 5.2 m. Sound-deadened, heat-insulated panoramic windows for optimum all-around view, windshield with pull-down sunblind that slides under cab roof, visibility panel in cab roof, sliding window in cab door, steering column height and tilt adjustable.
HEATING	Infinitely variable hot water heating with 3-speed fan, 4 adjustable defroster nozzles
OPERATOR'S SEAT	Air-cushioned comfort-seat with integrated headrest, safety-belt and lumbar support, seat-heating with integrated a/c function optional. Seat position, seat inclination and seat cushion multi-adjustable in line with position of armrests and pilot control units, allowing fatigue-free operation.
MONITORING	Ergonomic instrument layout, glare-free. Function monitoring; automatic warning and storage of deviating operating conditions, e.g. filter pressure w. warning indicator and shutdown of pilot controls, warning indicator or shutdown of pilot controls when exceeding hydraulic oil temperature limits.
AIR CONDITIONING	Automatic
ACOUSTIC POWER LEVEL	(guaranteed) in accordance with guideline 2000/14 EG $L_{W(A)} = 102 \text{ dB(A)}$

SAFETY INSTALLATIONS

	For crane operations in accordance with EN 474-5.
	Cab protection by close proximity range limiter.


OFFICIAL HOMOLOGATION


	Certification according to CE-regulations.
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EQUIPMENT MHL331 D




 ENGINE	SERIES	OPTION
Turbocharger	•	
Intercooling	•	
Direct electronic fuel injection/ Common Rail	•	
Automatic idle	•	
Engine pre-heating		•
Interface for engine diagnosis	•	
Temperature-controlled fan drive	•	

 UNDERCARRIAGE	SERIES	OPTION
2-speed power-shift transmission	•	
4-point stabilizers	•	
4-pt. stabilizers, individually controllable		•
Outrigger cylinders with integrated two-way check valves	•	
All-wheel drive	•	
Piston rod protection on the outrigger cylinders	•	
Outrigger plates 500 x 350	•	
Rear axle oscillating lock	•	
Dozer blade in addition to 4-pt. stabilizers		•
Special paint		•
Drum brakes	•	
Tool box	•	
All-wheel steering		•

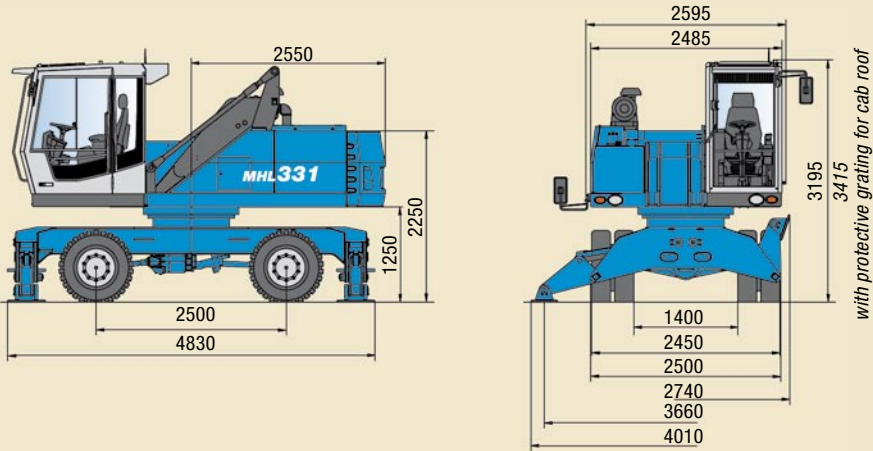
 UPPER CARRIAGE	SERIES	OPTION
Electrical refueling pump		•
Lighting protection		•
Maintenance hood, actuated by gas strut, with mechanical locking device	•	
Lockable cleaning access openings on radiator	•	
Separate radiator system for ambient temperatures up to 50° C	•	
Separate oil cooler w. temperature- controlled fan drive	•	
Automatic central lubrication system	•	
Reversing device		•
Special paint		•
Quick-drain valve for fuel tank (delivered in tool box)	•	
Quick-drain valve on hydraulic oil tank	•	
Quick-drain valve on radiator	•	
Quick-drain valve on engine oil-pan	•	
Reversible fan for radiator and hydraulic oil cooler		•

 CAB	SERIES	OPTION
Lift-up skylight in cabin roof	•	
Air cushioned operator's seat with headrest, safety belt and lumbar support	•	
FOPS protective grating		•
Front/roof protective grating		•
Hinged front windshield	•	
Front windows break-resistant (LEXAN)		•
Bullet-proof safety glass, front and top		•
Cab elevation system, height adjustable	•	
Air conditioning	•	
Steering column, height and tilt adjustable	•	
Multi-functional display	•	
Fire extinguisher, dry powder		•
Preparation for radio		•
Radio cassette		•
RadioCD		•
Rotating beacon		•
Sliding window in cab door	•	
Safety glass	•	
Seat heating with integrated a/c function		•
Engine-independent heating		•
Windscreen washer system	•	
Dust protection system		•
Pressurized cabin system		•

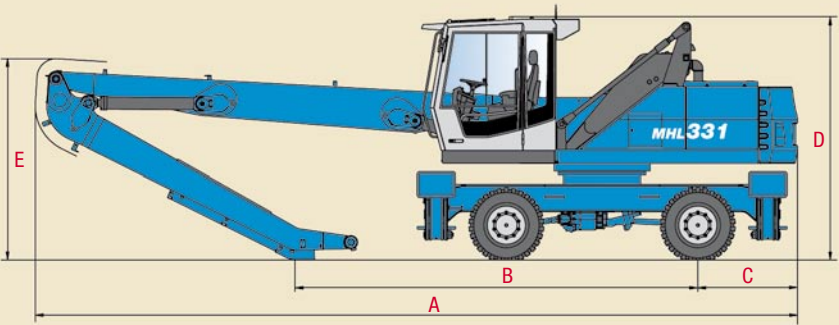
 EQUIPMENT	SERIES	OPTION
Floodlights attached to cab floor	•	
Floodlights, mounted to superstructure	•	
Floodlight, stick mounted		•
Hydraulic oil preheating		•
Close proximity range limiter for stick	•	
Coolant and hydraulic oil level monitoring system	•	
Hose rupture protection for lift cylinder		•
Hose rupture protection for stick cylinder		•
Dipper stick shock protection	•	
Lubrication of the grab suspension by central lubrication system	•	
Overload protection/ shutdown		•
XENON floodlight on stick		•
XENON-floodlight on superstructure		•
XENON floodlight on cab roof		•
Quick-connect coupling on stick	•	
Tool filter system		•

DIMENSIONS

MHL331 D



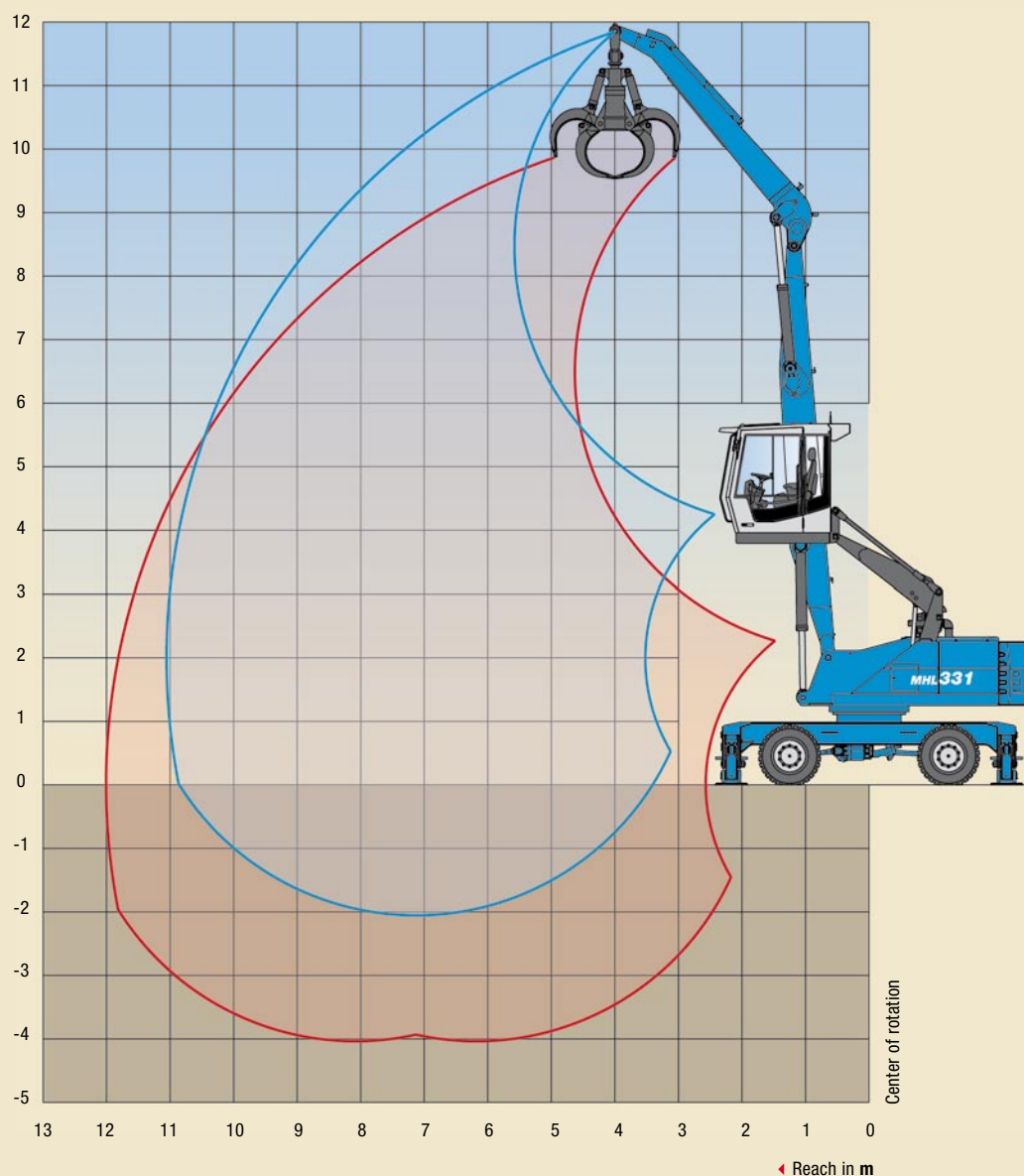
MHL331 D Transport dimensions



DIMENSIONS	REACH 10.7 m (MULTI-PURPOSE STICK)	REACH 11.0 m	REACH 12.0 m
A	10.000 mm	9.950 mm	9.900 mm
B	5.140 mm	5.250 mm	4.280 mm
C	1.300 mm	1.300 mm	1.300 mm
D	3.195 mm / *3.415 mm	3.195 mm / *3.415 mm	3.195 mm / *3.415 mm
E	2.700 mm	2.650 mm	3.100 mm

* with protective grating for cab roof

WORKING RANGES/LIFTING CAPACITIES MHL331 D



**Reach 11 m
with stick**

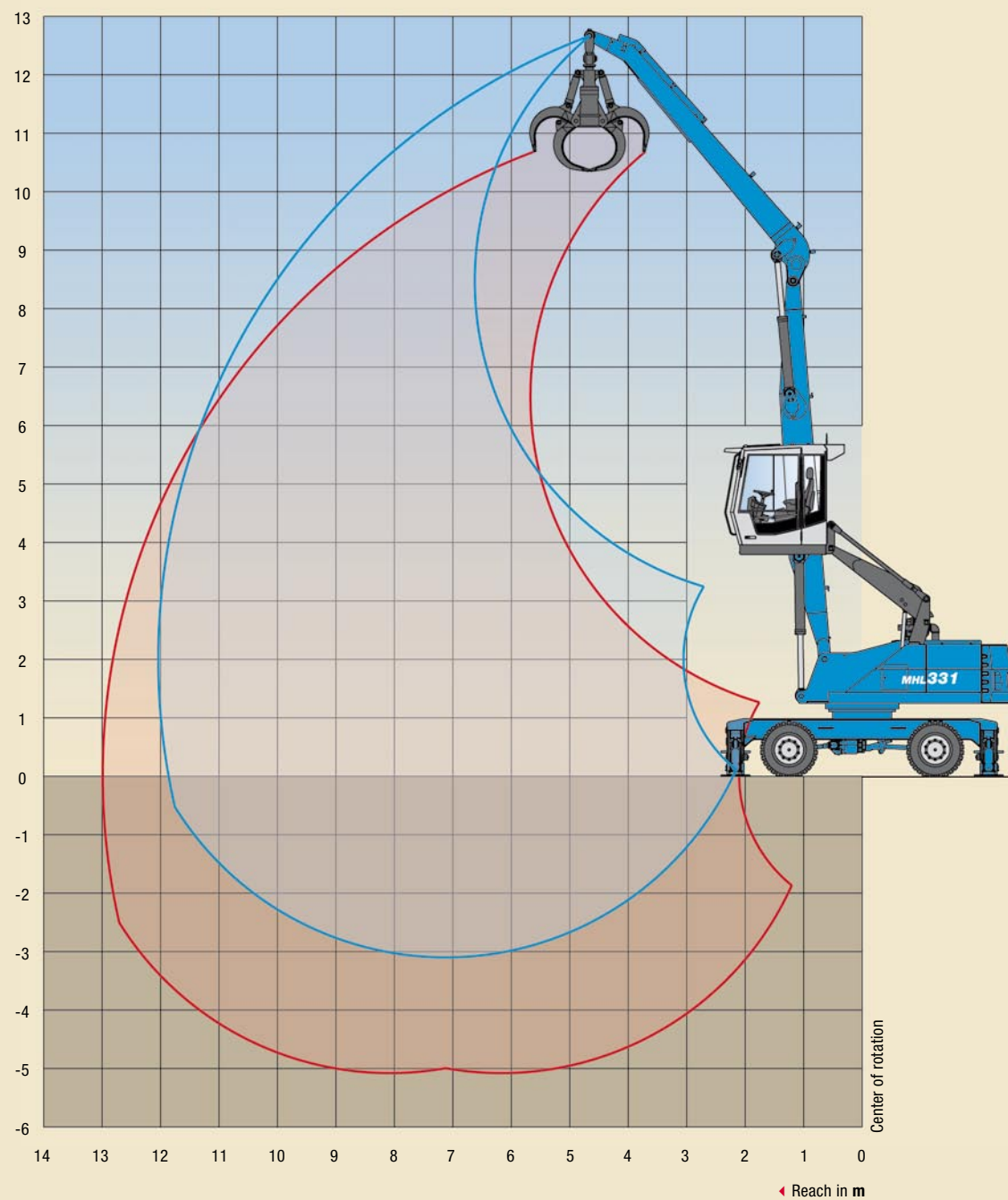
Work equipment:
Box-type boom 6.5 m;
Stick 4.4 m;
Cactus grab

HEIGHT m	UNDERCARRIAGE STABILIZERS	REACHES m				
		4.5	6	7.5	9	10.5
10.5	non supported		(5.2)			
	4-pt. supported		5.6* (5.6*)			
9	non supported		(5.3)	(3.6)		
	4-pt. supported		6.3* (6.3*)	5.6* (5.6*)		
7.5	non supported		(5.2)	(3.7)	(2.7)	
	4-pt. supported		6.4* (6.4*)	5.7 (5.8*)	4.2 (4.9*)	
6	non supported		(5.1)	(3.6)	(2.6)	
	4-pt. supported		6.8* (6.8*)	5.6 (6.0*)	4.2 (5.2)	
4.5	non supported	(7.5)	(4.8)	(3.4)	(2.6)	(2.0)
	4-pt. supported	9.6* (9.6*)	7.6* (7.6*)	5.5 (6.4*)	4.1 (5.1)	3.2 (4.0)
3	non supported	(6.8)	(4.5)	(3.3)	(2.5)	(2.0)
	4-pt. supported	11.6* (11.6*)	7.4 (8.5*)	5.3 (6.6)	4.0 (5.0)	3.2 (3.9)
1.5	non supported	(6.2)	(4.2)	(3.1)	(2.4)	(1.9)
	4-pt. supported	10.1* (10.1*)	7.1 (9.0)	5.1 (6.4)	3.9 (4.9)	3.1 (3.9)
0	non supported	(5.9)	(4.0)	(3.0)	(2.3)	(1.9)
	4-pt. supported	7.0* (7.0*)	6.8 (8.8)	5.0 (6.2)	3.8 (4.8)	3.1 (3.9)
-1.5	non supported		(3.9)	(2.9)	(2.3)	
	4-pt. supported		6.8 (8.7)	4.9 (6.2)	3.8 (4.7)	

RECOMMENDED ATTACHMENTS	
LIFT HOOKS	10 t
TEREX® FUCHS CACTUS GRAB 0.4 m³	Open or half-closed shells
TEREX® FUCHS CACTUS GRAB 0.6 m³	Open or half-closed shells
GRAB FOR LIGHTWEIGHT MATERIALS 0.8 m³	Loose goods density up to 1400 kg/m³
MAGNET SYSTEM	Terex® Fuchs magnetic plate

Capacity values are stated in metric tons (t). The pump pressure is 360 bar (5221 psi). The values, in accordance with ISO 10567, amount to 75% of the static tipping load or 87 % of the hydraulic lifting force (marked *). They apply to slewing operations through 360° on a firm and level surface. Values in brackets apply to the longitudinal direction of the undercarriage. "Non-supported" values only apply when the load is hoisted above the front or rear axle. The weight of the attached hoisting equipment (grab, magnet, load hook) must be deducted from the capacity values. In accordance with CE guidelines, hose-rupture safety valves on the lift cylinders and an overload warning device are required for crane operations.

WORKING RANGES/LIFTING CAPACITIES MHL331 D



**Reach 12 m
with stick**

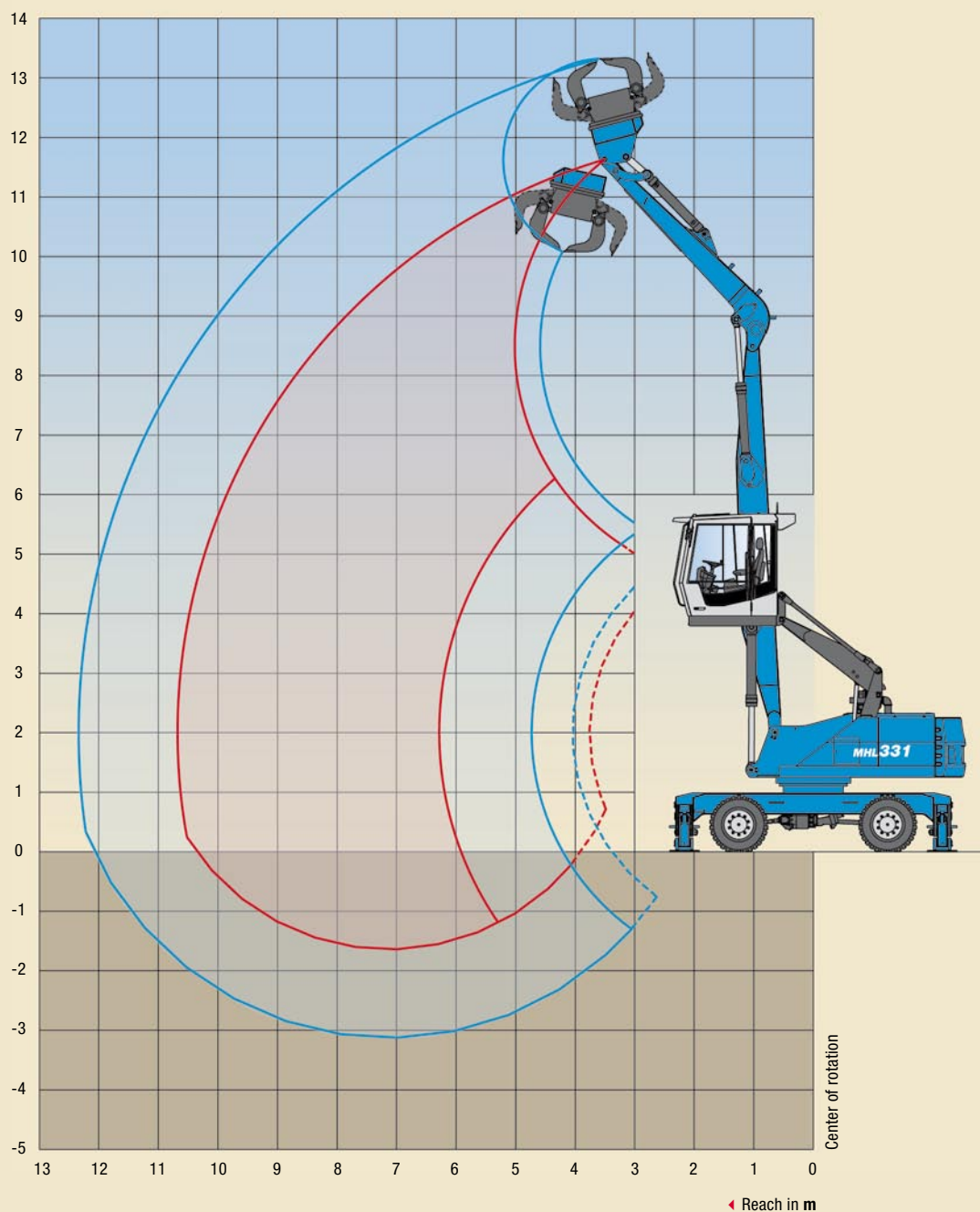
Work equipment:
Box-type boom 6.5 m;
Stick 5.45 m;
Cactus grab

HEIGHT m	UNDERCARRIAGE STABILIZERS	REACHES m					
		4.5	6	7.5	9	10.5	12
10.5	non supported			(3.7)			
	4-pt. supported			4.3* (4.3*)			
9	non supported			(3.8)	(2.8)		
	4-pt. supported			5.1* (5.1*)	4.0* (4.0*)		
7.5	non supported			(3.8)	(2.8)	(2.1)	
	4-pt. supported			5.1* (5.1*)	4.3 (4.8*)	3.1* (3.1*)	
6	non supported			(3.7)	(2.7)	(2.1)	
	4-pt. supported			5.3* (5.3*)	4.3 (4.9*)	3.3 (4.1)	
4.5	non supported		(5.1)	(3.6)	(2.6)	(2.0)	
	4-pt. supported		6.6* (6.6*)	5.6 (5.8*)	4.2 (5.2*)	3.3 (4.0)	
3	non supported	(7.3)	(4.7)	(3.4)	(2.5)	(2.0)	(1.5)
	4-pt. supported	10.0* (10.0*)	7.6* (7.6*)	5.4 (6.3*)	4.1 (5.0)	3.2 (4.0)	2.6 (3.1*)
1.5	non supported	(6.5)	(4.3)	(3.1)	(2.4)	(1.9)	(1.5)
	4-pt. supported	11.5 (12.1*)	7.2 (8.7*)	5.2 (6.5)	3.9 (4.9)	3.1 (3.9)	2.6 (3.1*)
0	non supported	(6.1)	(4.1)	(3.0)	(2.3)	(1.9)	
	4-pt. supported	9.2* (9.2*)	6.9 (8.8)	5.0 (6.3)	3.8 (4.8)	3.1 (3.8)	
-1.5	non supported	(5.8)	(3.9)	(2.9)	(2.2)	(1.8)	
	4-pt. supported	7.4* (7.4*)	6.7 (8.6)	4.9 (6.1)	3.8 (4.7)	3.0 (3.8)	
-3	non supported			(2.8)			
	4-pt. supported			4.8 (6.1)			

RECOMMENDED ATTACHMENTS	
LIFT HOOKS	10 t
TEREX® FUCHS CACTUS GRAB 0.4 m³	Open or half-closed shells
GRAB FOR LIGHTWEIGHT MATERIALS 0.6 m³	Loose goods density up to 1400 kg/m³
MAGNET SYSTEM	Terex® Fuchs magnetic plate

Capacity values are stated in metric tons (t). The pump pressure is 360 bar (5221 psi). The values, in accordance with ISO 10567, amount to 75% of the static tipping load or 87 % of the hydraulic lifting force (marked *). They apply to slewing operations through 360° on a firm and level surface. Values in brackets apply to the longitudinal direction of the undercarriage. "Non-supported" values only apply when the load is hoisted above the front or rear axle. The weight of the attached hoisting equipment (grab, magnet, load hook) must be deducted from the capacity values. In accordance with CE guidelines, hose-rupture safety valves on the lift cylinders and an overload warning device are required for crane operations.

WORKING RANGES/LIFTING CAPACITIES MHL331 D



**Reach 10.7 m
with multi-purpose
stick**

Work equipment:
Box-type boom 6.5 m;
Stick 4.0 m;
Sorting grab

HEIGHT m	UNDERCARRIAGE STABILIZERS	REACHES m				
		4.5	6	7.5	9	10.5
9	non supported		(5.0)	(3.4)		
	4-pt. supported		6.4* (6.4*)	5.0* (5.0*)		
7.5	non supported		(4.9)	(3.4)	(2.4)	
	4-pt. supported		6.4* (6.4*)	5.4 (5.7*)	4.0 (4.0*)	
6	non supported	(7.7)	(4.8)	(3.3)	(2.4)	
	4-pt. supported	8.3* (8.3*)	6.8* (6.8*)	5.4 (5.9*)	3.9 (4.9)	
4.5	non supported	(7.1)	(4.5)	(3.2)	(2.3)	
	4-pt. supported	9.8* (9.8*)	7.5 (7.6*)	5.2 (6.3*)	3.9 (4.8)	
3	non supported	(6.4)	(4.2)	(3.0)	(2.2)	(1.7)
	4-pt. supported	11.4 (11.8*)	7.1 (8.4*)	5.0 (6.3)	3.8 (4.7)	2.9 (3.7)
1.5	non supported	(5.8)	(3.9)	(2.8)	(2.1)	(1.7)
	4-pt. supported	7.6* (7.6*)	6.8 (8.7)	4.8 (6.1)	3.7 (4.6)	2.9 (3.6)
0	non supported	(5.6)	(3.7)	(2.7)	(2.1)	
	4-pt. supported	6.3* (6.3*)	6.6 (8.5)	4.7 (6.0)	3.6 (4.5)	
-1.5	non supported			(2.7)		
	4-pt. supported			4.6 (5.9)		

Capacity values are stated in metric tons (t). The pump pressure is 360 bar (5221 psi). The values, in accordance with ISO 10567, amount to 75% of the static tipping load or 87% of the hydraulic lifting force (marked *). They apply to slewing operations through 360° on a firm and level surface. Values in brackets apply to the longitudinal direction of the undercarriage. "Non-supported" values only apply when the load is hoisted above the front or rear axle. The weight of the attached hoisting equipment (grab, magnet, load hook) must be deducted from the capacity values. In accordance with CE guidelines, hose-rupture safety valves on the lift cylinders and an overload warning device are required for crane operations.



SIMPLE TO OPERATE. VERSATILE IN USE.

MHL331 D. The talented all-rounder with turbo efficiency

With its versatility and almost legendary manoeuvring speed, the MHL331 D really gets the recycling business moving. The robust undercarriage provides a stable space when loads of several tons need to be moved with a reach of up to 12 metres. In such situations it is essential that neither speed nor precision is compromised; the slewing motor and slewing gear are designed with this in mind and the lift and stick cylinders are fitted with special end-cushioning.

The MHL331 D incorporates the most up-to-date drive and cooling technology. The separate cooling systems, consisting of a hydrostatically driven fan for the oil cooler and a visco-clutch driven fan for liquid intercooling, combine excellent cooling power with quiet performance, enabling the machine to be used at ambient temperatures of up to 50°C. Optional features are available for use in sorting sheds; these include smoke particle filters and a sealed cab with pressurized cabin system.

The clean and quiet 114 kW/153 hp turbo diesel engine with EMR-3 control meets Tier III emissions standards (Com III/ EPA III); noise and emissions when used indoors are minimal. Ergonomics and safety are also high on the Terex® Fuchs list of priorities. The operator has perfect visibility and control, aided by the height-adjustable cab with panoramic windows and the modern function monitor which makes comprehensive operating information available at a glance. Ergonomically arranged controls and a back-friendly comfort seat are among the standard fittings.