




**TECHNICAL DATA AND INFORMATION**



-  153 hp
-  48,502 - 51,809 lbs
-  up to 39.4 ft



**MHL 331 D**

**RECYCLING MACHINE**

# TECHNICAL DATA MHL331 D



## OPERATING WEIGHT

48,502 - 51,809 lbs



## DIESEL ENGINE

<b>MANUFACTURER AND MODEL</b>	Deutz TCD 2012 L06 2V
<b>DESIGN</b>	6-cylinder inline
<b>ENGINE CONTROL</b>	EMR III
<b>TYPE</b>	4-stroke diesel, direct common fuel injection, turbocharged with charge air cooling
<b>ENGINE OUTPUT</b>	153 hp
<b>NOMINAL SPEED</b>	2,000 rpm
<b>DISPLACEMENT</b>	366 in <sup>3</sup>
<b>COOLING SYSTEM</b>	Liquid intercooling with temperature-controlled fan speed
<b>EMISSION STANDARDS</b>	EPA Tier III and COM III
<b>AIR FILTER DESIGN</b>	Two-stage filter
<b>FUEL TANK CAPACITY</b>	79 US gal



## ELECTRICAL SYSTEM

<b>OPERATING VOLTAGE</b>	24 V
<b>BATTERIES</b>	2 x 12 V / 100 Ah / 760 A (in accordance with EN)
<b>LIGHTING SET</b>	1 x H3 spotlights on upper carriage, 1 x H3 spotlights on cabin floor, turn signal and rear side-marker lamps
<b>GENERATOR</b>	13 kW DC generator with control, driven by V-belt direct from diesel engine



## TRAVEL DRIVE

	Hydrostatic drive through infinitely variable axial piston motor and directly mounted travel brake valves, two-speed power shift gear, 4-wheel drive
<b>TRAVEL SPEED, 1ST GEAR</b>	max. 3.1 mph
<b>TRAVEL SPEED, 2ND GEAR</b>	max. 12.4 mph
<b>GRADEABILITY</b>	max. 50%
<b>TURNING RADIUS</b>	23.0 ft



## SWING SYSTEM

<b>RING GEAR</b>	Internally toothed ball ring gear (double row)
<b>DRIVE</b>	Two-stage planetary gear with integrated multi-disc brake
<b>UPPER CARRIAGE SWING SPEED</b>	Infinitely variable from 0 - 8 rpm
<b>PIVOT BRAKE</b>	Electrically operated



## UNDERCARRIAGE

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



## BRAKE SYSTEM

<b>SERVICE BRAKE</b>	Hydraulic single-circuit braking system acting on all four wheel pairs
<b>PARKING BRAKE</b>	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: up to 3,000 operating hours. Central lubrication system.

<b>MAX. PUMP CAPACITY</b>	100 US gal/min
<b>MAX. OPERATING PRESSURE</b>	4,641 / 5,221 psi
<b>HYDRAULIC OIL TANK</b>	90 US gal

**OPERATOR'S CAB**

Cab: elastically supported, infinitely variable hydraulically height-adjustable with max. eye level of 17 ft. Large windows for excellent 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.

<b>HEATING</b>	Infinitely variable hot water heating with 3-speed fan, 4 adjustable defroster nozzles
<b>OPERATOR'S SEAT</b>	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 low fatigue operation.
<b>MONITORING</b>	Ergonomic instrument layout, glare resistant. Function monitoring; automatic warning and storage of deviating operating conditions, e.g. filter pressure with warning indicator and shutdown of pilot controls, warning indicator or shutdown of pilot controls when exceeding hydraulic oil temperature limits.
<b>AIR CONDITIONING</b>	Automatic
<b>SOUND POWER LEVEL</b>	(guaranteed) in accordance with guideline 2000/14 EC $L_{W(A)} = 102 \text{ dB(A)}$

**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.




# EQUIPMENT MHL331 D




 ENGINE	SERIES	OPTION
Exhaust gas turbocharger	●	
Intercooling	●	
Direct electronic fuel injection/ Common Rail	●	
Automatic idle	●	
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 19.7 x 13.8 in	●	
Rear axle oscillating lock	●	
Blade in addition to 4-pt. stabilizers		●
Special paint		●
Drum brakes	●	
Tool box	●	
All-wheel steering		●

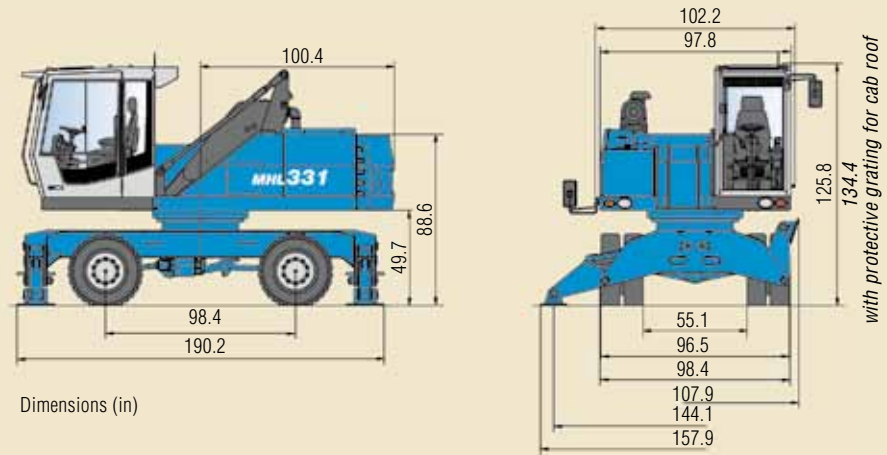
 UPPERCARRIAGE	SERIES	OPTION
Electrical refueling pump		●
Lighting protection		●
Maintenance hood, actuated by gas strut, with mechanical locking device	●	
Lockable cleaning access openings on radiator	●	
Separate radiator system for ambient temperatures up to 122° F (50° C)	●	
Separate oil cooler with temperature- controlled fan drive	●	
Automatic central lubrication system	●	
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 (roof)		●
Front/roof protective grating		●
Hinged front windshield	●	
LEXAN front window glass		●
High strength glass, front and top		●
Cab elevation system, height adjustable	●	
Air conditioning	●	
Steering column, height and tilt adjustable	●	
Multi-function color display	●	
Fire extinguisher, dry powder		●
Radio / CD player	●	
Rotating beacon	●	
Sliding window in cab door	●	
Safety glass	●	
Seat heating with integrated a/c function		●
Windscreen washer system	●	
Dust protection system		●
Pressurized cabin system		●

 EQUIPMENT	SERIES	OPTION
Floodlights attached to cab floor	●	
Floodlights, mounted to superstructure	●	
Floodlight, stick mounted		●
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	●	
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		●
Filter system for attachments		●

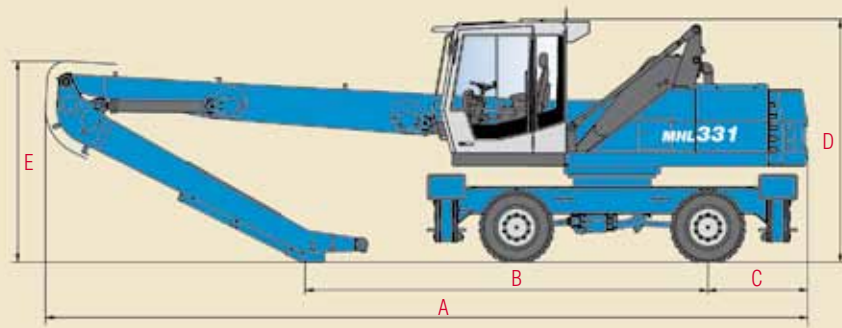
# DIMENSIONS

## MHL331 D



Dimensions (in)

## MHL331 D Transport dimensions

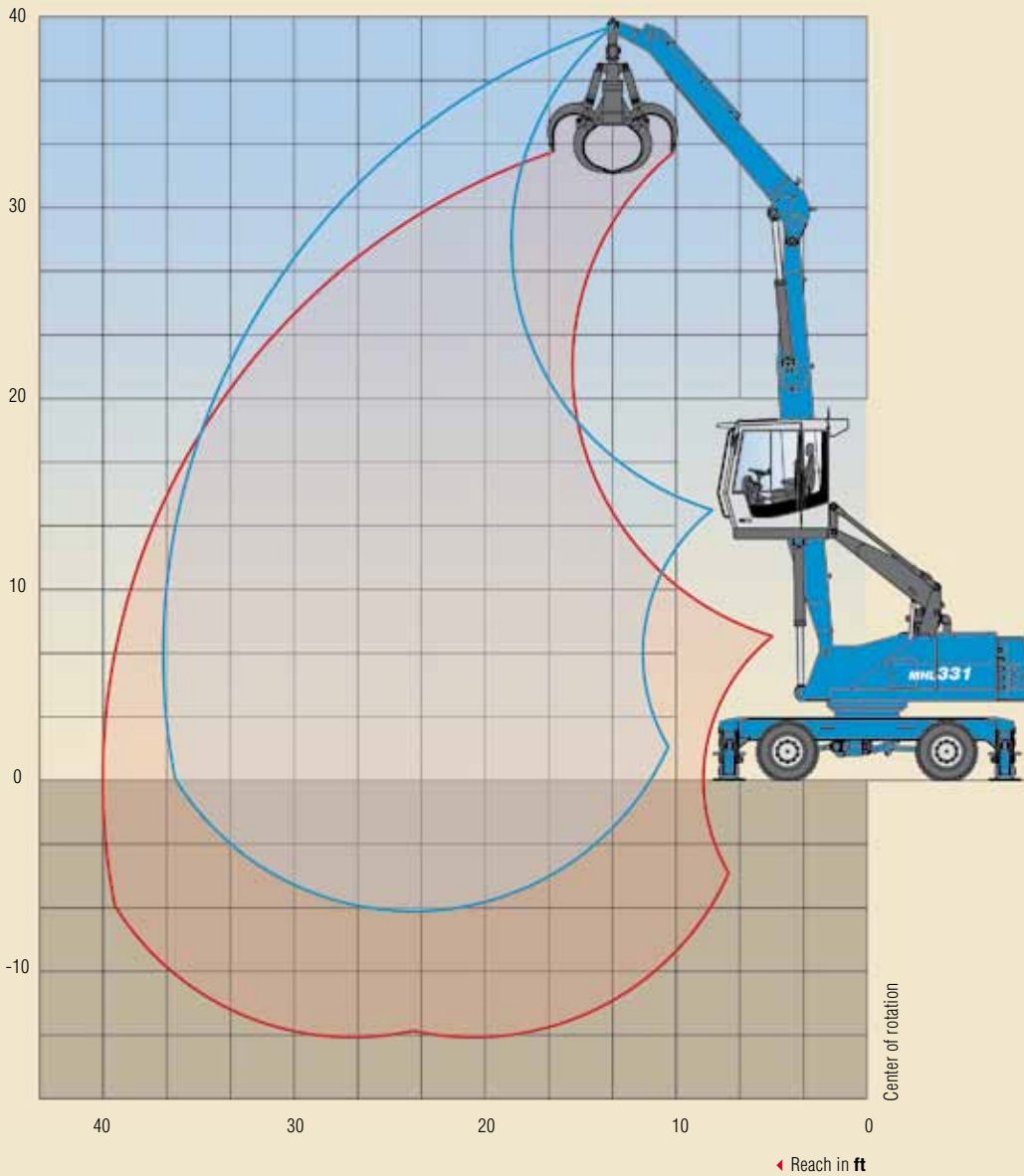


DIMENSIONS	REACH 35.1 ft (MULTI-PURPOSE STICK)	REACH 36.1 ft	REACH 39.4 ft
<b>A</b>	393.7 in	391.7 in	389.8 in
<b>B</b>	202.4 in	206.7 in	168.5 in
<b>C</b>	51.2 in	51.2 in	51.2 in
<b>D</b>	125.8 in / *134.4 in	125.8 in / *134.4 in	125.8 in / *134.4 in
<b>E</b>	106.3 in	104.3 in	122.0 in

\* with protective grating for cab roof



# WORKING RANGES/LIFTING CAPACITIES MHL331 D



**Reach 36.1 ft  
with stick**

**Work equipment:**  
Box-type boom 21.3 ft;  
Stick 14.4 ft;  
Cactus grab

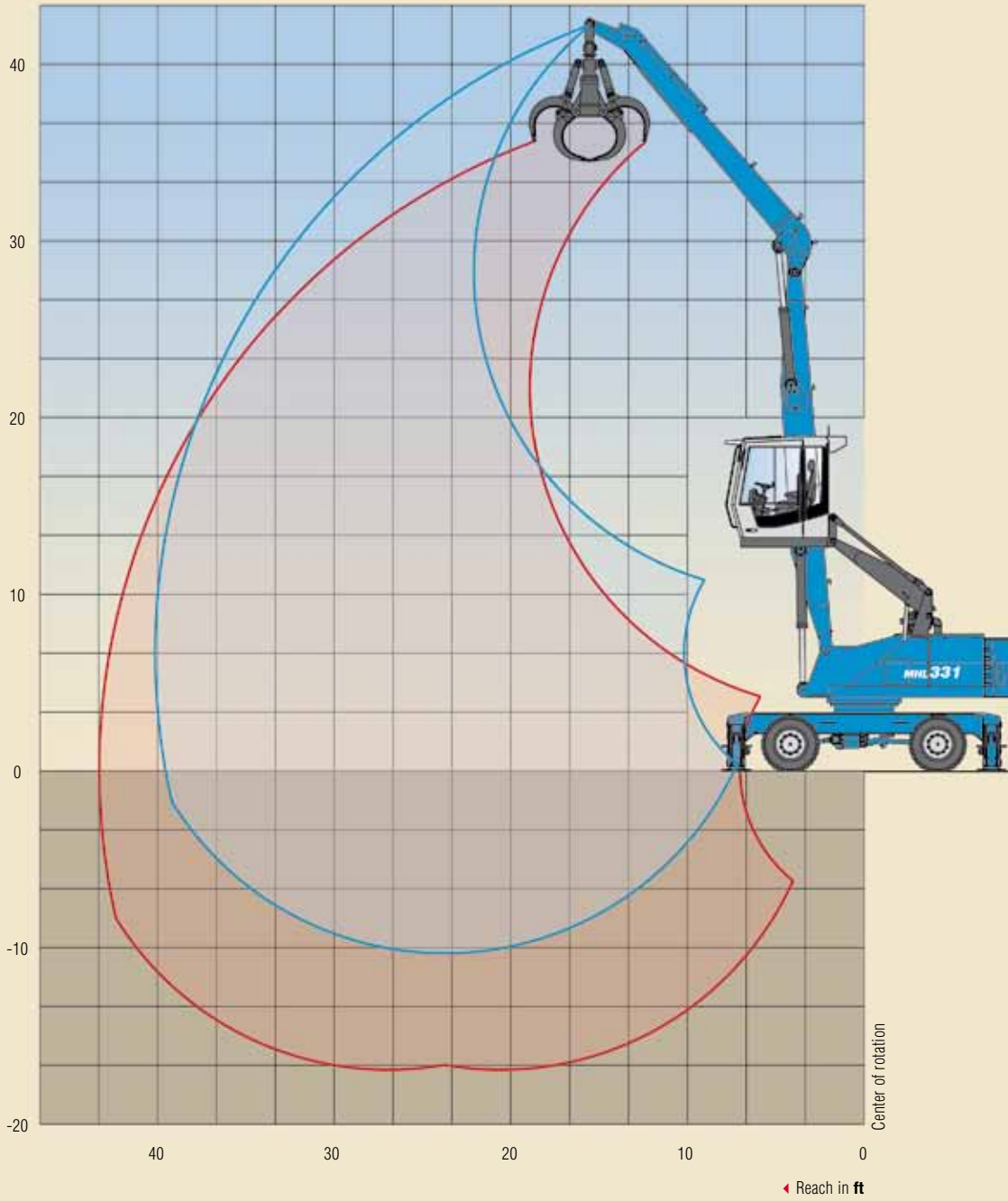
HEIGHT ft	UNDERCARRIAGE STABILIZERS	REACH ft				
		15	20	25	30	35
35	non supported		(11,460)			
	4-pt. supported		12,390* (12,390*)			
30	non supported		(11,720)	(8,140)		
	4-pt. supported		14,050* (14,050*)	12,380* (12,380*)		
25	non supported		(11,660)	(8,160)	(6,000)	
	4-pt. supported		14,120* (14,120*)	12,720 (12,840*)	9,430 (10,910*)	
20	non supported		(11,330)	(7,980)	(5,950)	
	4-pt. supported		15,060* (15,060*)	12,530 (13,290*)	9,370 (11,570)	
15	non supported	(16,710)	(10,750)	(7,670)	(5,790)	(4,500)
	4-pt. supported	21,180* (21,180*)	16,770* (16,770*)	12,180 (14,170*)	9,200 (11,390)	7,240 (8,960)
10	non supported	(15,110)	(10,020)	(7,280)	(5,580)	(4,410)
	4-pt. supported	25,750* (25,750*)	16,490 (18,860*)	11,760 (14,710)	8,980 (11,150)	7,140 (8,850)
5	non supported	(13,740)	(9,340)	(6,910)	(5,370)	(4,320)
	4-pt. supported	22,310* (22,310*)	15,720 (20,170)	11,350 (14,280)	8,750 (10,920)	7,040 (8,750)
0	non supported	(13,170)	(8,960)	(6,690)	(5,240)	(4,260)
	4-pt. supported	15,440* (15,440*)	15,210 (19,620)	11,050 (13,960)	8,590 (10,740)	6,970 (8,670)
-5	non supported		(8,710)	(6,500)	(5,150)	
	4-pt. supported		14,990 (19,380)	10,900 (13,800)	8,510 (10,660)	

#### RECOMMENDED ATTACHMENTS

<b>LIFT HOOK</b>	22,046 lbs
<b>TEREX® FUCHS CACTUS GRAB 0.52 yd³</b>	Open or half-closed tines
<b>TEREX® FUCHS CACTUS GRAB 0.78 yd³</b>	Open or half-closed tines
<b>GRAB FOR LIGHTWEIGHT MATERIALS 1.0 yd³</b>	Loose goods density up to 2,360 lb/yd³
<b>MAGNET SYSTEM</b>	Terex® Fuchs magnetic plate

Capacity values are stated in (lbs). The pump pressure is 5,221 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, coupler, magnet, lift hook, etc.) must be deducted from the capacity values. In accordance with CE guidelines, hose-rupture protection valves on the lift cylinders and an overload warning device are required for crane operations.

# WORKING RANGES/LIFTING CAPACITIES MHL331 D



**Reach 39.4 ft  
with stick**

**Work equipment:**  
Box-type boom 21.3 ft;  
Stick 17.9 ft;  
Cactus grab



HEIGHT ft	UNDERCARRIAGE STABILIZERS	REACH ft					
		15	20	25	30	35	40
35	non supported			(8,330)			
	4-pt. supported			9,590* (9,590*)			
30	non supported			(8,500)	(6,200)		
	4-pt. supported			11,320* (11,320*)	8,960* (8,960*)		
25	non supported			(8,470)	(6,230)	(4,690)	
	4-pt. supported			11,330* (11,330*)	9,690 (10,720*)	6,930* (6,930*)	
20	non supported			(8,270)	(6,120)	(4,680)	
	4-pt. supported			11,850* (11,850*)	9,580 (10,960*)	7,440 (9,090)	
15	non supported		(11,260)	(7,930)	(5,930)	(4,580)	
	4-pt. supported		14,660* (14,660*)	12,500 (12,820*)	9,370 (11,470*)	7,340 (8,990)	
10	non supported	(16,190)	(10,470)	(7,500)	(5,680)	(4,440)	(3,500)
	4-pt. supported	22,080* (22,080*)	16,950* (16,950*)	12,010 (14,040*)	9,100 (11,190)	7,190 (8,830)	5,780 (6,880*)
5	non supported	(14,450)	(9,650)	(7,050)	(5,410)	(4,300)	(3,500)
	4-pt. supported	25,570 (26,780*)	16,090 (19,210*)	15,510 (14,330)	8,810 (10,890)	7,030 (8,670)	5,780 (6,880*)
0	non supported	(13,460)	(9,110)	(6,730)	(5,230)	(4,190)	
	4-pt. supported	20,400* (20,400*)	15,350 (19,580)	11,090 (13,890)	8,570 (10,630)	6,900 (8,530)	
-5	non supported	(12,790)	(8,630)	(6,420)	(5,040)	(4,100)	
	4-pt. supported	16,480* (16,480*)	14,920 (19,120)	10,820 (13,600)	8,410 (10,460)	6,820 (8,450)	
-10	non supported			(6,320)			
	4-pt. supported			10,710 (13,490)			

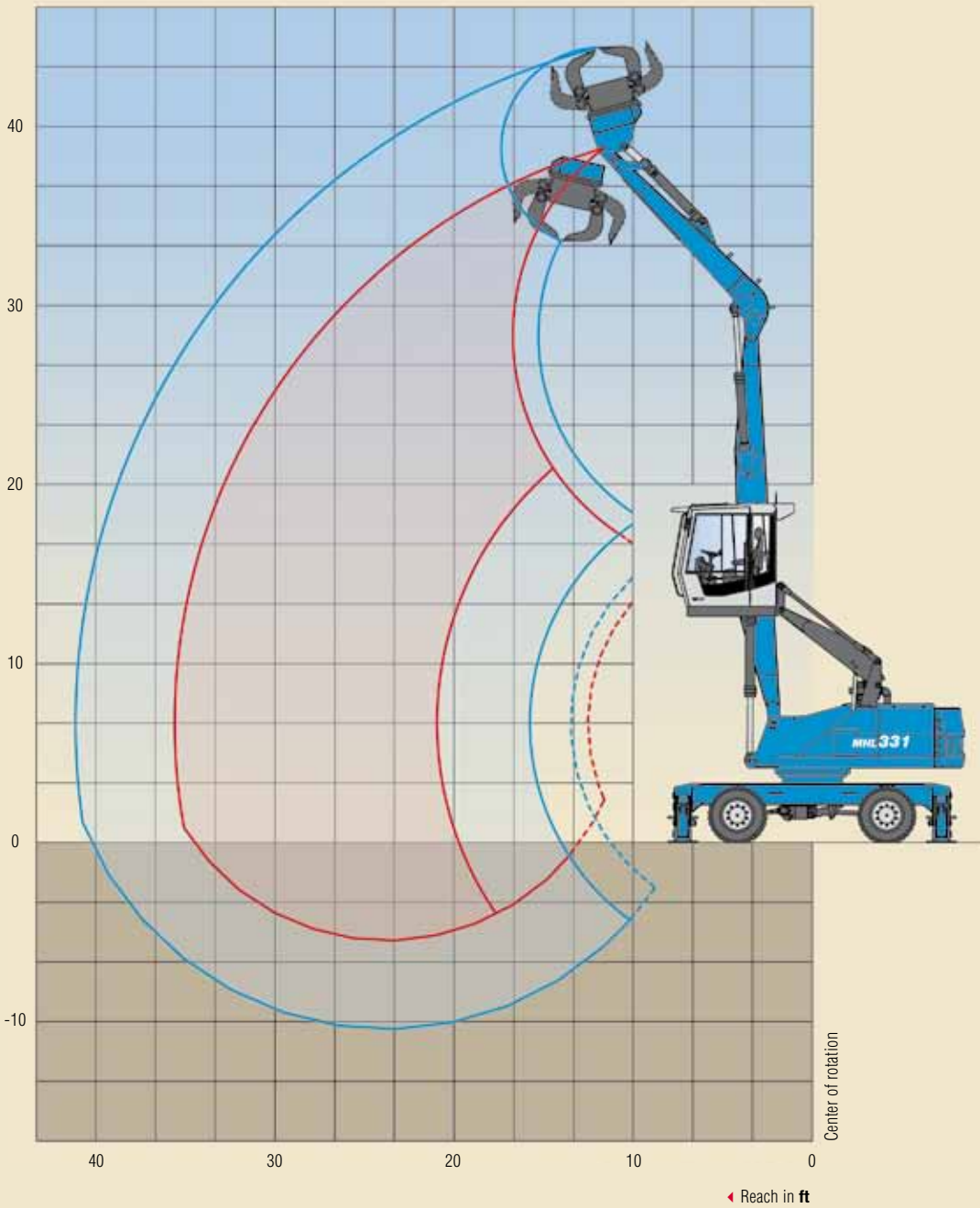
RECOMMENDED ATTACHMENTS	
<b>LIFT HOOK</b>	22,046 lbs
<b>TEREX® FUCHS CACTUS GRAB 0.52 yd³</b>	Open or half-closed tines
<b>GRAB FOR LIGHTWEIGHT MATERIALS 0.78 yd³</b>	Loose goods density up to 2,360 lb/yd³
<b>MAGNET SYSTEM</b>	Terex® Fuchs magnetic plate

Capacity values are stated in (lbs). The pump pressure is 5,221 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, coupler, magnet, lift hook, etc.) must be deducted from the capacity values. In accordance with CE guidelines, hose-rupture protection valves on the lift cylinders and an overload warning device are required for crane operations.

# WORKING RANGES/LIFTING CAPACITIES MHL331 D

**Reach 35.1 ft  
with multi-purpose  
stick**

**Work equipment:**  
Box-type boom 21.3 ft;  
Stick 13.1 ft;  
Sorting grab



HEIGHT ft	UNDERCARRIAGE STABILIZERS	REACH ft				
		15	20	25	30	35
30	non supported		(11,070)	(7,500)		
	4-pt. supported		14,210* (14,210*)	11,120* (11,120*)		
25	non supported		(11,010)	(7,550)	(5,390)	
	4-pt. supported		14,220* (14,220*)	12,100 (12,720*)	8,820 (8,860*)	
20	non supported	(17,060)	(10,650)	(7,370)	(5,360)	
	4-pt. supported	18,330* (18,330*)	15,140* (15,140*)	11,910 (13,120*)	8,790 (10,880)	
15	non supported	(15,780)	(10,040)	(7,050)	(5,210)	
	4-pt. supported	21,810* (21,810*)	16,590 (16,780*)	11,560 (13,920*)	8,620 (10,710)	
10	non supported	(14,120)	(9,300)	(6,670)	(5,010)	(3,380)
	4-pt. supported	25,240 (26,150*)	15,740 (18,720*)	11,130 (13,950)	8,410 (10,480)	6,610 (8,240)
5	non supported	(12,850)	(8,650)	(6,310)	(4,820)	(3,800)
	4-pt. supported	16,910* (16,910*)	15,000 (19,230)	10,740 (13,530)	8,200 (10,260)	6,520 (8,150)
0	non supported	(12,410)	(8,310)	(6,100)	(4,700)	
	4-pt. supported	13,930* (13,930*)	14,550 (18,750)	10,460 (13,240)	8,050 (10,110)	
-5	non supported			(5,960)		
	4-pt. supported			10,350 (13,120)		

Capacity values are stated in (lbs). The pump pressure is 5,221 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, coupler, magnet, lift hook, etc.) must be deducted from the capacity values. In accordance with CE guidelines, hose-rupture protection valves on the lift cylinders and an overload warning device are required for crane operations.



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**PURPOSE  
BUILT**



## **SIMPLE TO OPERATE. VERSATILE IN USE.**

### **MHL331 D. An efficient all-around performer.**

With its versatility and quick maneuvering speed, the MHL331 D really gets the recycling business moving. The robust undercarriage provides a stable base when loads need to be moved with maximum reach of up to 39.4 ft. In such situations it is essential that neither speed nor precision is compromised; the slewing motor and gear are designed with productivity in mind and the lift and stick cylinders are fitted with special end-cushioning for enhanced performance.

The MHL331 D incorporates efficient cooling technology. The separate cooling systems, consisting of a hydrostatically driven fan for the oil cooler and an engine-driven fan for liquid intercooling, combine excellent cooling power with quiet performance, enabling the machine to be used at ambient temperatures of up to 122° F (50°C). Optional features are available for use indoors or in harsh operating environments, including particulate filters and a pressurized cabin system if required.

The clean and quiet 153 hp turbo diesel engine meets Tier III emissions standards; noise and emissions are minimal. The operator has excellent visibility and control, aided by the height-adjustable cab with large windows and a modern multi-function color monitor which makes comprehensive operating information available at a glance. Ergonomically arranged controls, air-conditioning, and a comfortable easily adjustable seat are among the standard in-cab features.

Effective date: April 2009. Product specifications and prices are subject to change without notice or obligation. The photographs and/or drawings in this document are for illustrative purposes only. Refer to the appropriate Operator's Manual for instructions on the proper use of this equipment. Failure to follow the appropriate Operator's Manual when using our equipment or to otherwise act irresponsibly may result in serious injury or death. The only warranty applicable to our equipment is the standard written warranty applicable to the particular product and sale and Terex makes no other warranty, express or implied. Products and services listed may be trademarks, service marks or trade-names of Terex Corporation and/or its subsidiaries in the USA and other countries. All rights are reserved. Terex is a registered trademark of Terex Corporation in the USA and many other countries. Copyright © 2009 Terex Corporation.