

THE ALL-ROUNDER, INCORPORATING TURBO EFFICIENCY

With its diverse applications and near legendary maneuvering speed, the TWH224 really does rev up the recycling business. The solid undercarriage ensures stability when loads weighing several tonnes are to be moved utilizing a reach of up to 10.7 meters.



TWH224



Key Features

Powerful luxury class of recycling machines

TWH224 waste handler showcases the optimum balance of power and agility.

This waste handler quickly and efficiently completes any job at recycling centers and waste transfer stations – from loading and unloading to stacking and sorting. The available 10.7m multi-purpose stick gives operators control of the attachment’s up-and-down movement to efficiently sort material without the need to continually reposition the machine.

Scoffing at sustained operation in the blazing temperatures, this flexible handler boasts separate cooling systems with a thermostatically controlled, hydrostatically driven oil cooling fan to quietly and efficiently work in searing ambient temperatures reaching 50°C. Additional box filters for the engine and hydraulic oil coolers and an optional

cyclone dust separator at the filter increase machine uptime in extremely dusty applications. Optional reversible fans periodically clean filters at pre-set intervals.

Compact in size, the MHL224 is perfect for both indoor and outdoor applications. It shares the same features of the others waste handlers such as a durable double-row slew ring, large swing drive for quick and precise upper carriage slewing, and beefy hydraulic support cylinders on the four outriggers that enable the handler to move tons of material. The 115kW turbocharged diesel engine features an integrated hydraulic load limit sensing for efficient use of power. A hydraulically height-adjustable cab offers up to a 5.3m eye-level elevation for simple loading of high-wall trailers and railcars.



Deutz diesel engine with 85 kW power

- Increased performance with lower fuel consumption – this combination pays off
- Turbo diesel engine 115kW
- Low noise levels during operation
- Optimum performance utilization in every speed range
- Low emission, meeting latest standards



Workhorse, requiring little maintenance

- Important components are easily accessible from the service platform
- Comfortable access to the upper carriage platform makes maintenance work easy



Reversing camera and travel alarm

- Standard camera (with night vision function) offers significant advantages for safety and comfort
- The travel alarm warns people close to the vehicle with an acoustic signal; it is activated automatically once the machine starts to drive



Everything at a glance

- The multi-function display sets new standards. Simple menu navigation is provided directly through the display, which can be read without glare. The screen displays images of the integrated reversing camera and all important operating conditions, such as hydraulic oil temperature, coolant temperature, and much more. The display can be operated comfortably from the driver's seat.



Running smoothly

- The automatic central lubrication system on the uppercarriage ensures that the loading equipment and slewing ring are evenly supplied with a predefined quantity of lubricant at precisely determined intervals
- This improves the productivity of the machines, reduces repair and replacement part costs as a result of lubrication related bearing failure, and most of all reduces costly service downtimes



Air conditioning

- Climate control condenser is separated from the main cooling system and dust-protected
- With its own fan, the cooling system is independent of engine speed and thus highly efficient

Technical Data

Service weight without attachments

TWH224	23–25.7 t
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Diesel engine

Manufacturer / model	Deutz TCD 4.1 L4
Design	4-cylinder in-line engine
Control	EEC IV
Method of operation	4-cycle diesel, common rail open-combustion-chamber injection, turbocharger with charge cooler
Engine output	115 kW
Rated speed	2000 rpm
Displacement	4.1 l
Cooling system	Water and charge air cooling with temperature controlled fan speed
Emission standard	EPA Tier 4 interim / EU Stage IIIB
Air filter type	Two-stage filter with safety valve
Useable tank capacity	300 l

Electrical system

Operating voltage	24 V
Battery	2 × 12 V / 110 Ah / 750 A (according to EN)
Lighting system	1 × H3 headlamp on uppercarriage, 1 × H3 headlamp on cab floor, rear marker lights and flashers

Transmission

Travel speed 1st gear	max. 5 km/h
Travel speed 2nd gear	max. 20 km/h
Gradeability	max. 45 %
Turning radius	7.0 m

Slewing gear

Slew ring	Internally geared, double-row ball turning ring
Drive	2-stage planetary gear with integrated multi-disc brake
Uppercarriage swing speed	0–8 rpm variable
Rotating interlock	electrically activated
Max. torque	49 kNm

Undercarriage

Front axle	Planetary drive axle with integrated drum brake, rigidly mounted, max. steering angle: 28°, width ca. 2.500 mm
Rear axle	Oscillating planetary drive rear axle with integrated drum brake and selectable oscillating lock, width ca. 2.500 mm
Outrigger	4-point outrigger
Tires	Solid rubber, elastic tires 8x 10.00-20

Brakes

Service brake	A hydraulically activated single-circuit brake system that works on all four pairs of wheels
Parking brake	Electrically activated disc brake on the travel drive that works on both axes

Hydraulic system

Pump capacity	max. 380 l/min
Operating pressure	max. 320 bar
Hydraulic fluid tank	305 l

Operator's cab

Elastic bearings, variable hydraulic height adjustment up to a viewing height of 5.30 m, sound suppressed, large thermal glass windows provide excellent visibility, front windshield with pull-down sunblind that can be slid under the cab roof, inspection window in the cab roof, sliding glass panel in the cab door, steering column tilts and height adjusts.

Heating	Hot water heating with variable temperature adjustment and 3-level blower, 6 adjustable defroster nozzles
Driver's seat	Air-cushioned comfort seat with integrated headrest, safety belt and lower lumbar support, with integrated air conditioning. Multi adjustable seat provides comfortable operation and access to controls.
Monitoring	Ergonomically positioned, glare resistant instrument cluster, multifunction display, automatic monitoring and saving functions for deviating operating conditions (e.g. all hydraulic oil filters, oil temperature indicator, coolant temperature and charge air cooler, coolant level, loading diesel particle filter), optic and audible warning until the pilot control is shut down or the engine power is reduced. Diagnostics for the individual sensors via the multifunction display Rear view camera
Air conditioning system	With automatic temperature control and cooled storage rack.
Sound Power Level	$L_{W(A)} = 101$ dB(A) (guaranteed) in accordance with guideline 2000/14/EC, required in accordance with 2000/14/EC = 104 dB(A)

Official homologation

Certification in accordance with CE guidelines.

Specification subject to change without notice.

Equipment

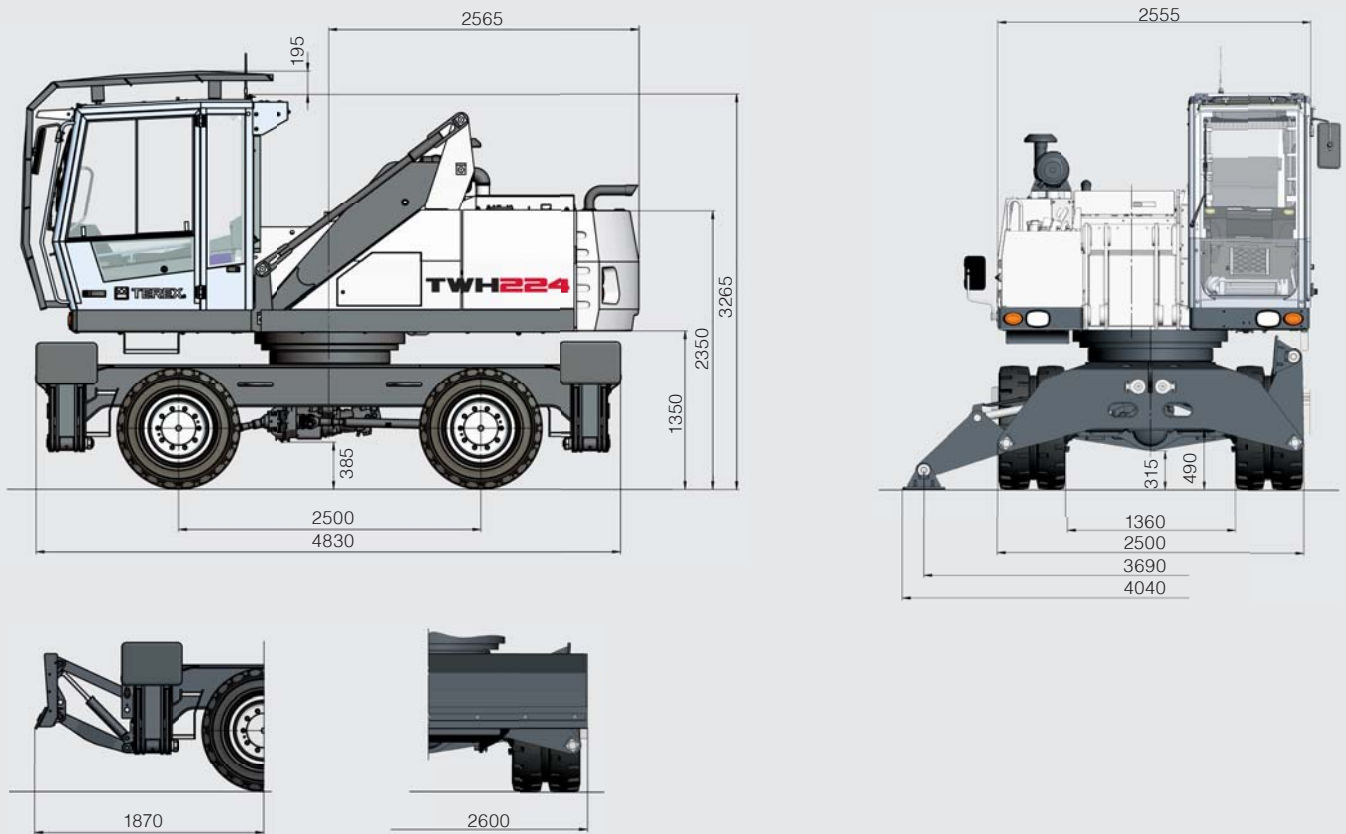
Diesel engine	Standard	Option
Turbocharger	●	
Charge Air Cooler	●	
Electronic direct fuel injection / Common Rail	●	
Auto-idling system	●	
Engine diagnostics interface	●	
Temperature controlled fan drive	●	
Mode switchover (Eco-, Eco+ -, Power-Mode)	●	
Undercarriage		
2 speed power shift gear	●	
4-point outrigger	●	
Outrigger cylinder with integrated shut-off valves on both sides	●	
Cyclone prefilter		●
4-wheel drive	●	
Piston rod protection for the outrigger cylinders	●	
Stabilizer plates 500 × 350 mm	●	
Pendulum axle locking rear axles	●	
Drum brakes	●	
Tires mudguard		●
Tool box	●	
Uppercarriage		
Maintenance bonnet, activated by gas with mechanical fuse	●	
Lockable cleaning access openings on radiators	●	
Divided cooling system for an ambient temperature of up to 50°C	●	
Separate oil cooler with temperature controlled fan drive	●	
Central lubrication system, automatic	●	
Rearview backup camera	●	
Travel alarm		●
Quick-drain valve on the diesel tank	●	
Quick-drain valve on the hydraulic oil tank	●	
Quick-drain valve on the water cooler	●	
Quick-drain valve on the engine sump	●	
Reversing fan for engine and hydraulic oil cooler		●

Cab	Standard	Option
Dust protection device for cabin		●
Height adjustable for cab system	●	
3-layer glass with protection film	●	
Front windshield, slidable	●	
Sliding window in the cab door	●	
Hinged roof opening	●	
Washer and wiper system	●	
Air-cushioned driver's seat with headrest, safety belt, and lower lumbar support	●	
Tilting and adjustable steering column	●	
Air conditioning system	●	
Multifunction display	●	
Document clip	●	
Radio 24 V (CD & USB)		●
Powder fire extinguisher in cab		●
Other equipment		
Close-range expansion for dipper stick	●	
Level controller for coolant and hydraulic oil level	●	
Rupture valves for lift cylinders		●
Rupture valves for dipperstick cylinders		●
Overload warning device		●
Quick coupling on the dipperstick	●	
Lubrication of the grab suspension by the central lubrication system	●	
LED light packages		●

Further optional equipment available on request!
Specification subject to change without notice.

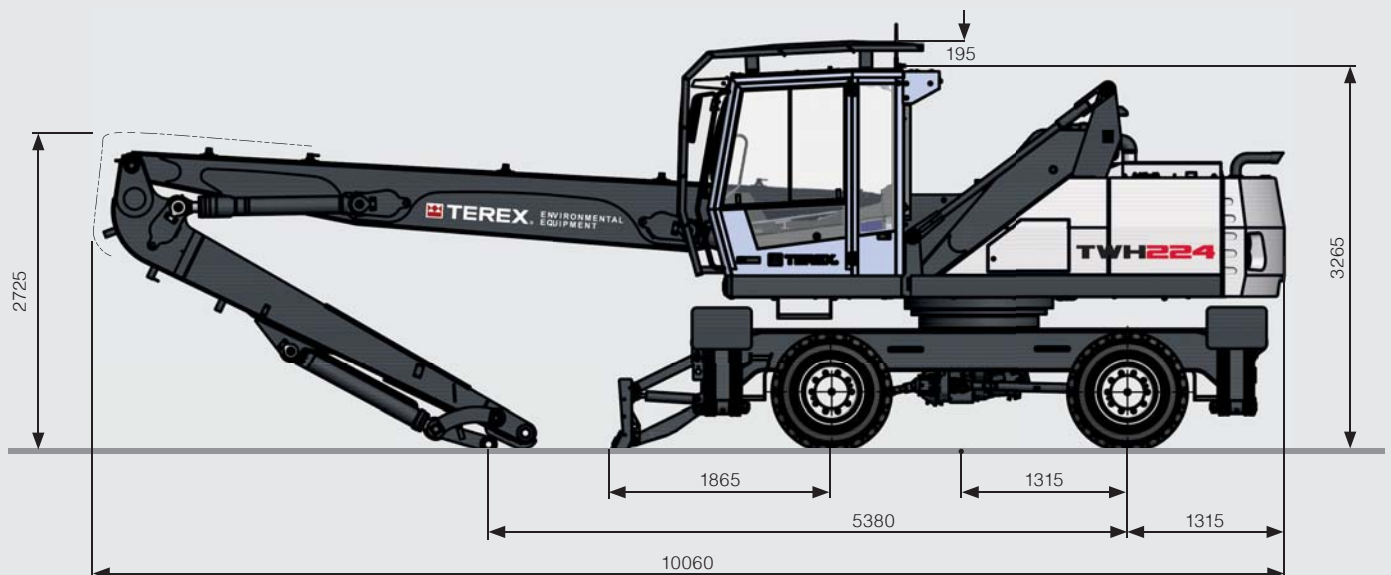
Dimensions

(all dimensions in mm)



Transport Dimensions

(all dimensions in mm)



Working Ranges and Load Capacities

10.7 m reach with multi-purpose stick

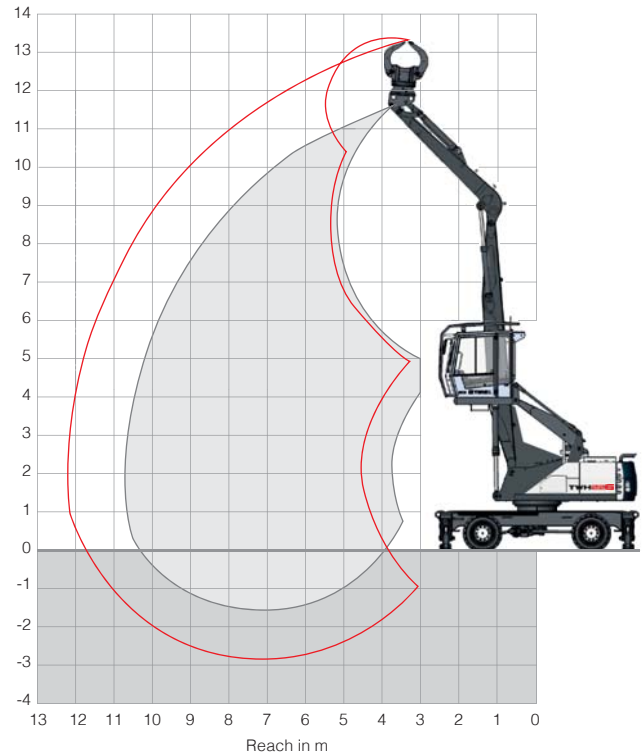
Loading equipment

Boom: 6.5 m

Multi-purpose stick: 4.0 m

Sorting grab

The lift capacity values are stated in metric tons (t). The pump pressure is 360 bar. 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 values for "not supported" only apply via the steering axle or the locked oscillating axle. The weights of the attached load hoisting equipment (grab, load hook, etc.) must be deducted from the lift capacity values. The working load of the lifting device 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. For object handling application the machine has to be supported on a level ground.



Height [m]	Undercarriage outrigger	Reach [m]				
		4.5	6	7.5	9	10.5
9	not supported		(5.0°)	(3.4)		
	4-point supported		6.4° (6.4°)	5.0° (5.0°)		
7.5	not supported		(4.9)	(3.4)	(2.4)	
	4-point supported		6.4° (6.4°)	5.4 (5.7°)	4.0° (4.0°)	
6	not supported	(7.7)	(4.8)	(3.3)	(2.4)	
	4-point supported	8.3° (8.3°)	6.8° (6.8°)	5.4 (5.9°)	3.9 (4.9)	
4.5	not supported	(7.1)	(4.5)	(3.2)	(2.3)	
	4-point supported	9.8° (9.8°)	7.5 (7.6°)	5.2 (6.3°)	3.9 (4.8)	
3	not supported	(6.4)	(4.2)	(3.0)	(2.2)	(1.7)
	4-point supported	11.4 (11.8°)	7.1 (8.4°)	5.0 (6.3)	3.8 (4.7)	2.9 (3.7)
1.5	not supported	(5.8)	(3.9)	(2.8)	(2.1)	(1.7)
	4-point supported	7.6° (7.6°)	6.8 (8.7)	4.8 (6.1)	3.7 (4.6)	2.9 (3.6)
0	not supported	(5.6)	(3.7)	(2.7)	(2.1)	
	4-point supported	6.3° (6.3°)	6.6 (8.5)	4.7 (6.0)	3.6 (4.5)	
-1.5	not supported			(2.7)		
	4-point supported			4.6 (5.9)		
					Max. reach 10.7 m	
-2	not supported					(1.6)
	4-point supported					2.8 (3.6)