

OUTSTANDING VISIBILITY AND PERFORMANCE – OUTSTANDING OPERATION



Compact, maneuverable, powerful: a snapshot of the mobile material handler TWH220. With a reach of 9.2 meters and an operating weight of 19 tonnes, this machine is the ideal solution for those who refuse to compromise on performance, efficiency and reliability – even in an entry-level model.

TWH220



Key Features

For high-performance sorting applications

The high-performance 85-kW turbo diesel engine moves even heavier loads swiftly yet precisely.

Thanks to its sensitive hydraulics and rock-solid mechanics, maneuvers can be carried out smoothly and effortlessly. The separate oil-cooler, with its large cooling surface, aids in moderating and maintaining the operating temperature even when the machine is in sustained use.

The cab affords optimal visibility: it is height-adjustable to an eye-level of 5.2 meters and equipped with large panoramic windows. The TWH220 also offers special features, such as air conditioning as standard, an optional reverse fan or even a protective ventilation system for operations in a setting that poses a health risk.



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



Ergonomic driver's seat

- Multi-position adjustment
- Flexible setting options, head and lower lumbar support ensure for comfortable working



Constant cooling

- The cooling system with two physically separated radiators keeps the operating temperature of the machine, especially at high ambient temperatures, at an ideal level
- The radiators are designed for easy maintenance and are quick and safe to clean



Fatigue-proof working

- Ergonomically designed, well planned interior
- Comfortable orthopedically supportive air cushioned seat
- Intuitive machine controls: simple-to-operate joystick, direct access to key functions



Deutz diesel engine with 85 kW power

- Increased performance with lower fuel consumption – this combination pays off
- Turbo diesel engine 85kW
- Low noise levels during operation
- Optimum performance utilization in every speed range
- Low emission, meeting standards

Technical Data

Service weight without attachments

| | |
|---------------|-------------|
| TWH220 | 17.8–19.0 t |
|---------------|-------------|

Diesel engine

| | |
|----------------------|--|
| Manufacturer / model | Deutz TCD 2012 L04 2V |
| Design | 4-cylinder inline |
| Engine control | EMR III |
| Type | 4-stroke diesel, common rail direct injection, turbo-charger, charge air cooling |
| Engine power | 85 kW |
| Nominal speed | 2000 rpm |
| Displacement | 4.1 l |
| Cooling System | Liquid intercooling with temperature-controlled fan speed |
| Exhaust gas standard | COM III and EPA Tier III |
| Usable tank capacity | 300 l |
| Air filter design | Two-stage filter with safety valve |

Electrical system

| | |
|-------------------|--|
| Operating voltage | 24 V |
| Battery | 2 × 12 V / 100 Ah / 850 A (in accordance with EN) |
| Lighting set | 1 × H3 floodlight on upper carriage, 1 × H3 floodlight on cab floor, turn signal and rear sidemarker lamps |

Transmission

| | |
|--|-----------|
| Hydrostatic drive through infinitely variable axial piston motor and directly mounted travel brake valves, two-speed shift gear, all-wheel drive | |
| Travel speed 1st gear | 5 km/h |
| Travel speed 2nd gear | 20 km/h |
| Gradeability | max. 55 % |
| Turning radius | 7.0 m |

Undercarriage

| | |
|------------|---|
| Front axle | Planetary drive axle with integrated drum brake, rigidly mounted, max. steering angle 30° |
| Rear axle | Oscillating planetary drive rear axle with integrated drum brake and selectable oscillating axle lock |
| Outrigger | 4-point stabilizers, 2-point stabilizers with stabilizing blade |
| Tires | Solid rubber tires, 8× 10.00-20 with intermediate rings |

Slewing gear

| | |
|---------------------------|---|
| Slew ring | Internally toothed ball ring gear (double row) |
| Drive | Two-stage planetary gear with integrated multi-disc brake |
| Uppercarriage swing speed | 0–8 rpm |
| Rotating interlock | Electrically operated |

Brakes

| | |
|---------------|--|
| Service brake | Hydraulic single-circuit braking system acting on all four wheel pairs (drum brakes) |
| Parking brake | Electrically operated spring-loaded disc brake at transmission, acting on both front and rear axle |

Hydraulic system

REXROTH mobile hydraulic system with optional load limit control and fuel-saving power demand control. Separate oil cooler, temperature-controlled fan speed. Hydraulic oil filter: filter elements integrated in the oil tank; maintenance interval 3000 operating hours. Central lubrication system.

| | |
|----------------------|--------------------|
| Pump capacity | max. 290 l/min |
| Operating pressure | max. 320 / 360 bar |
| Hydraulic fluid tank | 300 l |

Operator's 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 |
| Driver's seat | Mechanically 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 relation to 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 with warning indicator and shutdown of pilot controls, warning indicator or shutdown of pilot controls if hydraulic oil temperature limits are exceeded. |
| Air conditioning system | Automatic |

Official homologation

Certification in accordance with CE guidelines.

Equipment

| Diesel engine | Standard | Option |
|---|----------|--------|
| Exhaust gas turbocharger | ● | |
| Intercooling | ● | |
| Direct electronic fuel injection / common rail | ● | |
| Automatic idle | ● | |
| Interface for engine diagnosis | ● | |
| Temperature-controlled fan drive | ● | |
| Undercarriage | | |
| 2-speed shift transmission | ● | |
| 4-point stabilizers* | | ● |
| 2-point stabilizers and support blade* | | ● |
| Stabilizer cylinders with integrated two-way check valves | ● | |
| Cyclone prefilter | | ● |
| All-wheel drive | ● | |
| Piston rod protection on stabilizer cylinders | ● | |
| Rear axle oscillating lock | ● | |
| Drum brakes | ● | |
| Solid rubber tires 10.00-20 with intermediate rings | ● | |
| Tires mudguard | | ● |
| Tool box on undercarriage | | ● |
| Uppercarriage | | |
| 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 with temperature-controlled fan drive | ● | |
| Automatic central lubrication system | ● | |
| Travel alarm | | ● |
| Rearview backup camera | ● | |
| Quick-drain valve for fuel tank (supplied 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 | | ● |
| Tool box (small) in upper carriage | ● | |

| Cab | Standard | Option |
|--|----------|--------|
| Dust protection device for cabin | | ● |
| Lift-up skylight in cab roof | ● | |
| Operator's seat mechanically cushioned | ● | |
| Hinged front windshield | ● | |
| Cab elevation system | ● | |
| Air conditioning | ● | |
| Steering column, height and tilt adjustable | ● | |
| Multi-function display | ● | |
| Fire extinguisher | | ● |
| Preparation for radio installation | ● | |
| Radio / CD player | | ● |
| Sliding window in cab door | ● | |
| Safety glass | ● | |
| Windscreen washer system | ● | |
| Other equipment | | |
| Floodlights attached to cab floor | ● | |
| Floodlights, mounted to upper carriage | ● | |
| LED light packages | | ● |
| Close proximity range limiter for stick | ● | |
| Coolant and hydraulic oil level monitoring system | ● | |
| Rapture valves for lifting cylinders | | ● |
| Rapture valves for stick cylinders | | ● |
| Stick shock protection | ● | |
| Lubrication of the grab suspension by central lubrication system | ● | |
| Overload warning device | | ● |
| Quick-connect coupling on stick | ● | |

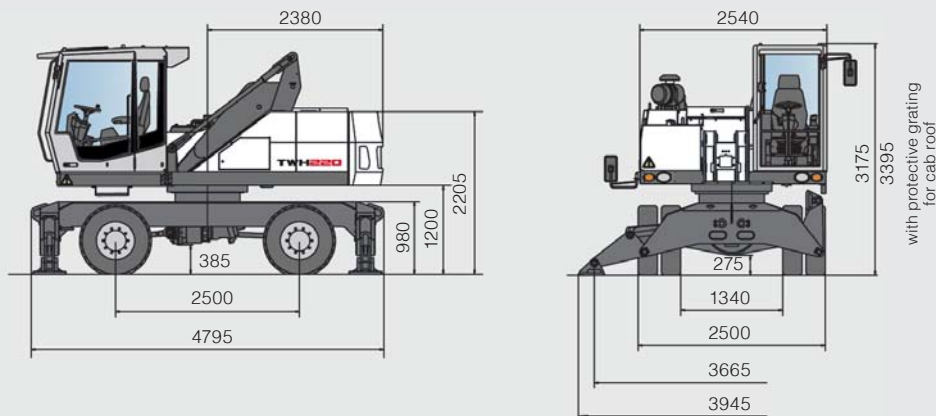
* no-additional-cost option

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

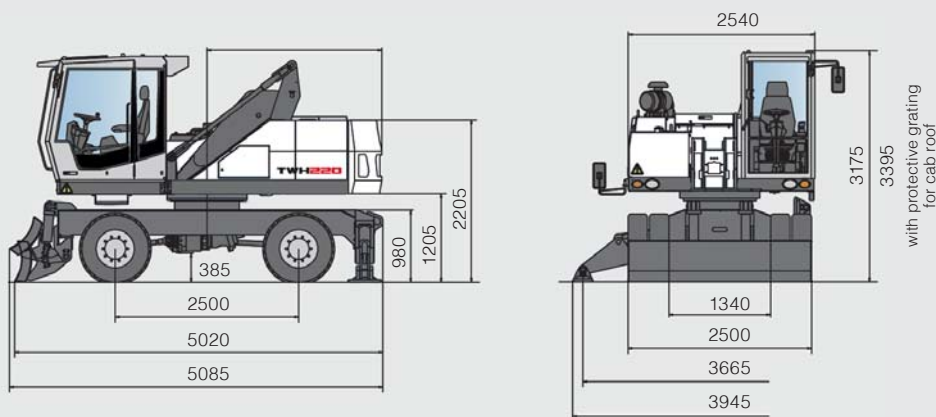
Dimensions

(all dimensions in mm)

Undercarriage equipped with 4-point stabilizers

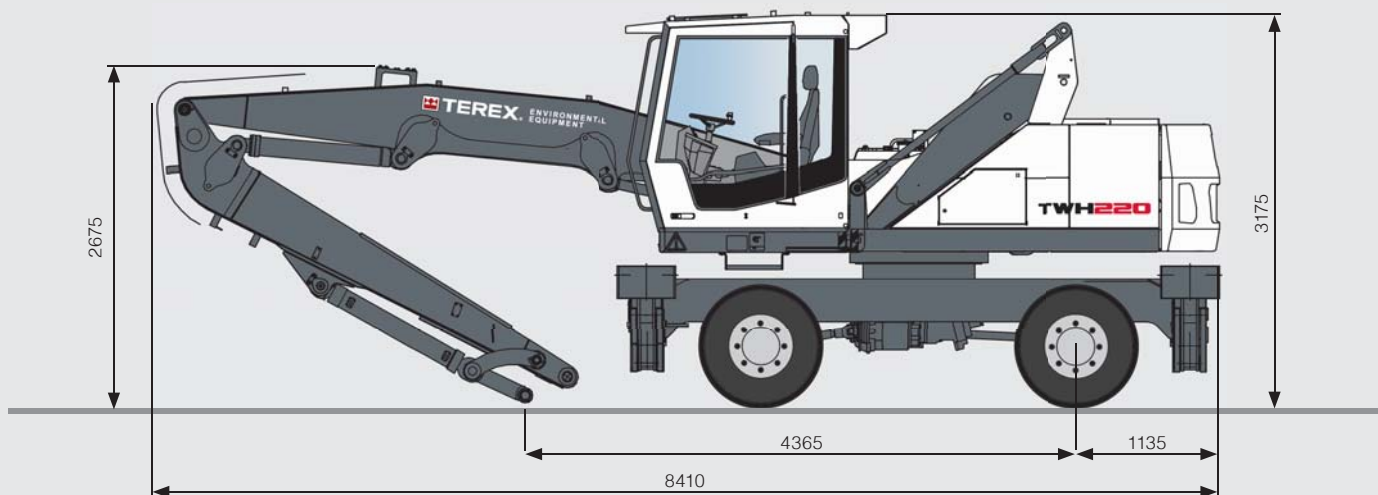


Undercarriage equipped with 2-point stabilizers and support blade



Transport Dimensions

(all dimensions in mm)



Working Ranges and Load Capacities

9.2 m reach with multi-purpose stick

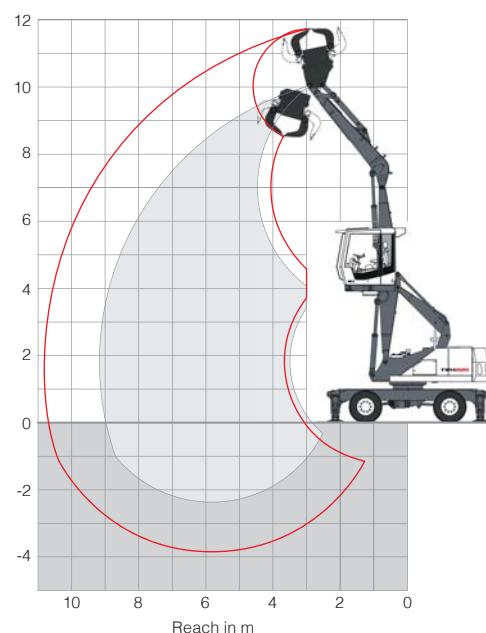
Loading equipment

Boom: 5.2 m

Multi-purpose stick: 3.7 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 stabilisation | Reach [m] | | | |
|------------|-----------------------------|-------------|-------------|-------------|------------|
| | | 4.5 | 6 | 7.5 | 9 |
| 9 | Without stabilizers | (5.8) | | | |
| | With 4-pt stabilizers | 6.2° (6.2°) | | | |
| | With 2-pt / support blade | 6.2° (6.2°) | | | |
| 7.5 | Without stabilizers | (5.9°) | (3.6) | | |
| | With 4-pt stabilizers | 5.9° (5.9°) | 5.0° (5.0°) | | |
| | With 2-pt / support blade | 5.9° (5.9°) | 4.8 (5.0°) | | |
| 6 | Without stabilizers | (5.9) | (3.6) | (2.4) | |
| | With 4-pt stabilizers | 6.0° (6.0°) | 5.0° (5.0°) | 4.1 (4.2°) | |
| | With 2-pt / support blade | 6.0° (6.0°) | 4.7 (5.0°) | 3.2 (4.2°) | |
| 4.5 | Without stabilizers | (5.7) | (3.5) | (2.3) | |
| | With 4-pt stabilizers | 6.6° (6.6°) | 5.2° (5.2°) | 4.1 (4.2°) | |
| | With 2-pt / support blade | 6.6° (6.6°) | 4.7 (5.2°) | 3.2 (4.2°) | |
| 3 | Without stabilizers | (5.3) | (3.3) | (2.3) | (1.7) |
| | With 4-pt stabilizers | 7.6° (7.6°) | 5.5° (5.5°) | 4.0 (4.3°) | 2.9 (3.3°) |
| | With 2-pt / support blade | 7.3 (7.6°) | 4.5 (5.5°) | 2.9 (4.3°) | 2.3 (3.3°) |
| 1.5 | Without stabilizers | (4.9) | (3.2) | (2.2) | (1.6) |
| | With 4-pt stabilizers | 8.2° (8.2°) | 5.5° (5.7°) | 3.6 (4.2°) | 2.9 (3.0°) |
| | With 2-pt / support blade | 6.8 (8.2°) | 4.3 (5.7°) | 3.0 (4.2°) | 2.3 (3.0°) |
| 0 | Without stabilizers | (4.7) | (3.0) | (2.2) | |
| | With 4-pt stabilizers | 7.6° (7.6°) | 5.4° (5.4°) | 3.8 (3.9°) | |
| | With 2-pt / support blade | 6.6 (7.6°) | 4.2 (5.4°) | 3.0 (3.9°) | |
| -1.5 | Without stabilizers | (4.6) | (3.0) | (2.1) | |
| | With 4-pt stabilizers | 6.0° (6.0°) | 4.4° (4.4°) | 3.0° (3.0°) | |
| | With 2-pt / support blade | 6.0° (6.0°) | 4.1 (4.4°) | 2.9 (3.0°) | |