

# HD 445



<b>Vehicle type</b>	<b>HD 445</b>
<b>Operating areas</b>	Seaports and Steel Mills
<b>System load</b>	up to 250 ton (551,155 lbs.) (GCW)
<b>Engine</b>	Diesel engine
<b>Tractor weight</b>	approx. 14.000 kg (30,865 lbs.)
<b>Type of engine</b>	VOLVO or Cummins with each 285kW (382 HP) (depending on exhaust emission stage IIIA, IV or V)
<b>Transmission</b>	ZF 6WG260 or ZF 6WG310
<b>5<sup>th</sup> wheel plate</b>	Holland Eurohitch FW0100 for 3.5" kingpin
<b>Lifting capacity</b>	up to 45.000 kg (99,200 lbs.)
<b>Wheel base</b>	3.000 mm (118")
<b>Speed</b>	up to 38 km/h (23.6 mph)
<b>Axles</b>	Front axle type Kessler Rear axle type Kessler
<b>Cabin</b>	ROPS and FOPS certified With rear sliding door and side door Windshield and rear window made of laminated glass



Please scroll down for technical data sheet

## MAFI HD 445

### Your Tractor For Heavy-Duty Industrial Applications

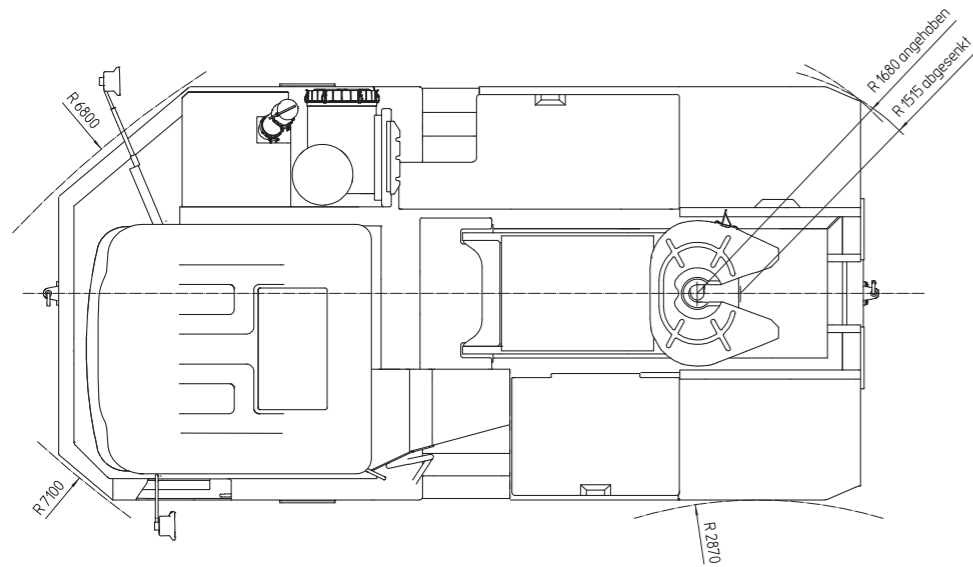
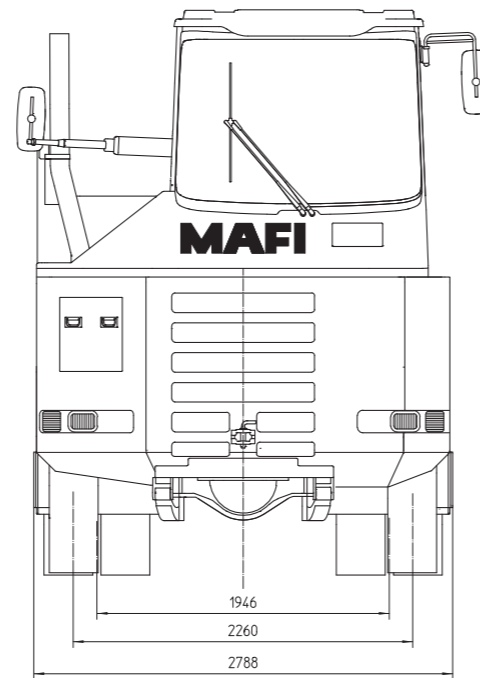
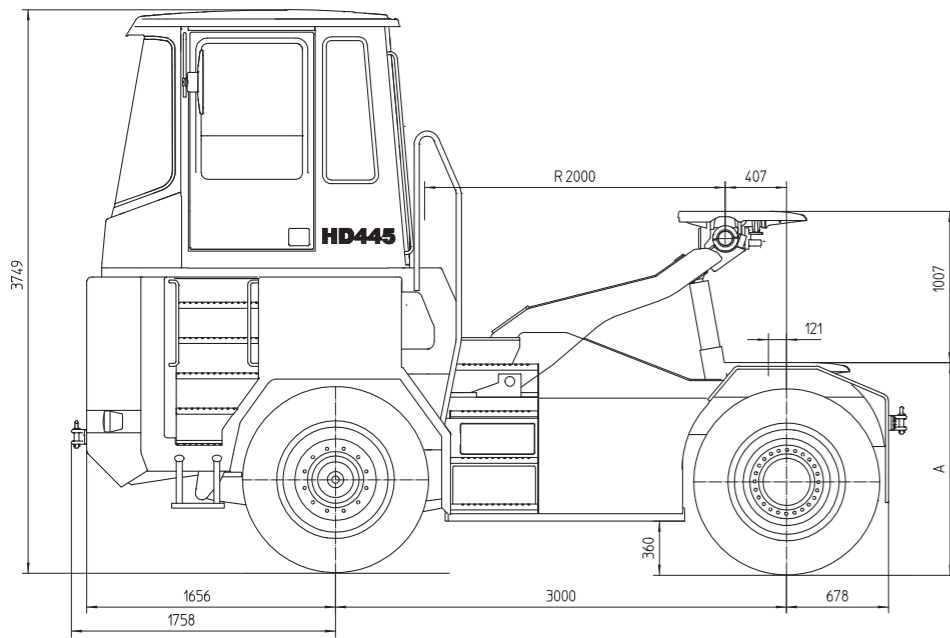
The HD 445 tractor is MAFI's largest and most powerful vehicle. With a liftable 5<sup>th</sup>-wheel capacity of 45 tons, it is mainly used in steel mills, foundries and other heavy industry. Eco-friendly engines with outputs of up to 285 kW ensure the smooth transport of payloads of up to 220 tons. When used in combination with a ballast weight, the HD 445 tractor can pull even greater loads on drawbar trailers.

The HD 445 tractor combines a comfortable workspace with state-of-the-art equipment. The use of well-known quality components ensures that the tractor is always ready for operation. The vibration insulated mounting of the ROPS / FOPS-certified cab contributes to better ride quality by reducing both vibration and noise.



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Featured vehicles in photos may include additional equipment.



Value A:  
 5th wheel Jost JSK38 – 1.415 mm  
 5th wheel Eurohitch FW0100 – 1.540 mm.

Value A may be reduced by 30 mm at lowered rear axles air suspension.

Subject to technical modifications without notice  
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## Technical Data HD 445



## Engines

Volvo Penta industrial diesel engine TAD 1170 VE, low emission rating acc. to exhaust stage IV (97/68/EG) 6 cylinders, straight configuration, turbocharged

### Option:

Volvo Penta industrial diesel engine TAD 1171/72 VE, low emission rating acc. to exhaust stage IV (97/68/EG) 6 cylinders, straight configuration, turbocharged

### Option:

Volvo Penta industrial diesel engine TAD 1150/51/52 VE, low emission rating acc. to exhaust stage III A (97/68/EG) 6 cylinders, straight configuration, turbocharged

Engine displacement: 10.8 l  
Maximum power: 235 kW/ 320 PS at 2,100 rpm  
Maximum torque: 1,580 Nm at 1,000 – 900 rpm  
Generator: rotary current 28 V/ 110 A  
Air compressor: 2 cylinders 636 cm<sup>3</sup>

Engine displacement: 10.8 l  
Maximum power: 265 kW/ 360 PS at 2,100 rpm  
285 kW/ 388 PS at 1,700 rpm  
Maximum torque: 1,785 Nm at 950 – 1,450 rpm  
1,938 Nm at 1.100 – 1,300 rpm  
Generator: rotary current 28 V/ 110 A  
Air compressor: 2 cylinders 636 cm<sup>3</sup>

Engine displacement: 10.8 l  
Maximum power: 235 kW/ 320 PS at 2,100 rpm  
265 kW/ 360 PS at 2,100 rpm  
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1,938 Nm at 1,100 – 1,300 rpm  
Generator: rotary current 28 V/ 110 A  
Air compressor: 2 cylinders 636 cm<sup>3</sup>

## Transmission

Powershift reversion transmission ZF 6 WG 260 with torque converter clutch for engines TAD 1150 VE, TAD 1151 VE, TAD 1170 VE, TAD 1171 VE; gear ratios: 5.350/ 3.455/ 2.206/ 1.421/ 0,969/ 0,624 with hydrodynamic torque converter, with engine-dependent pump drive; Gears: 6 forward, 3 reverse (warning signal during reverse), neutral, electro-hydraulic shifting, with automatic logic and the possibility for manual gear selection

**Option:** Powershift reversing transmission ZF 6WG 310 with torque converter clutch for engines TAD 1152 VE and TAD 1172 VE; gear ratios: 5,350/ 3,455/ 2,206/ 1,421/ 0,969/ 0,624 with hydrodynamic torque converter with engine-dependent pump drive; Gears: 6 forward, 3 reverse (warning signal during reverse), neutral, electro-hydraulic shifting with automatic logic and the possibility for manual gear selection

## Front axle (powered) 4 x 4

Kessler LT81 PL488, max. admissible axle load 35 t; axle drive ratio: i = 17,5. Suspension: parabolic steel springs; incl. hydr. shock absorbers; hydrostatic power steering supplied by a load-sensing priority valve.

## Rear axle (powered)

Kessler D81 PL488, admissible load 50 t; axle drive ratio: i = 17,5; differential lock; air suspended rear axle level regulation up to 20 t

## Fuel

Fuel tank 320 l, protected in right side compartment, filter with water separator

## AdBlue Tank

only for stage IV engine, content: 40 l, protected in left side compartment

## Combustion air supply

Dry air filter with replaceable cartridge and cyclone dust pre-separator

## Exhaust system

Volvo SCR converter with vertical outlet pipe, exhaust pipes in stainless steel (exhaust stage IV) Special muffler with vertical outlet pipe (exhaust stage III A)

## Cooling system

Finned water/ air radiator for engine coolant, finned oil/ air radiator for transmission oil, finned air/ air charge air cooler, fan with Visco coupling

## Wheels and tyres

Steel disc wheel with tapered rim radial tyre Michelin 12.00 R 24 XZM with wheel protection ring at front axle

## Brake system

Compressed air brake system with air dryer based on EC specifications in form of a dual-circuit brake system with dual-line trailer brake connection, spring-loaded parking brake

## Vehicle frame

Welded steel frame; colour RAL 7024 (graphite grey); dry film thickness (dft): 120 µm; all accessible surfaces made of non-slip aluminium button plate; tow bar coupling, front with socket pin for tow bar ring diameter 40 mm; tow bar coupling, rear with socket pin for all common tow bar ring diameter 40 – 90/190 mm

## Tractor dead weight

14,000 kg

## Fifth wheel

Fifth wheel coupling Eurohitch FW0100 3,5", universally mounted, admissible load 45,000 kg; single acting lifting cylinders, pneumatic safety remote release

**Option:** Fifth wheel coupling Jost JSK 38 3,5", universally mounted, admissible load 36,000 kg;

## Hydraulic System

hydraulic oil tank 160 l, with integrated 10 µm return filter, protected in right side, compartment; high-power cast iron gear pump, working pressure 300 bar

## Electrical system

- >> DC electrical system, operating voltage 24 V
- >> Two maintenance-free, high-performance starter batteries 12 V/150 Ah connected in series; with battery main switch
- >> Central electric in the cabin; protected; easily accessible
- >> 7-pin trailer power socket

## Lighting

- >> Two H4 main headlights at front (high and low beam)
- >> Two turn indicators at front
- >> Two combined LED brake/turn indicators and tail lights at rear with integrated LED reversing light
- >> Yellow warning beacon
- >> Working light at rear side of cabin

## Driver's cab

- >> Cabin made of sheet steel with tubular safety frame; ROPS tested and certified (acc. ISO 3471/SAE J1040)
- >> Wide tilt angle (55°) using double-acting hydraulic cylinder and manually operated safety pump

- >> Vibration isolated bearing with integrated hydraulic suspension and buffer
- >> Rear sliding door with safety glass panel
- >> Side door, mounted at the front
- >> Electrically operated vertical sliding window in the side door
- >> Horizontal sliding window on the right side
- >> Roof window
- >> All windows tinted and made of safety glass
- >> Front and rear windscreen made of laminated safety glass
- >> Parallelogram windscreen wipers with washer system for front and rear windscreen
- >> Hand rails at cabin rear side
- >> Manually adjustable wing mirrors left and right
- >> Paint finish: Colours RAL 9010 (pure white); dry film thickness (dft) 120 µm

**Option:** High-roof cabin without roof window; rear sliding door pneumatical opening; outside mirror electrically adjustable, heatable; A/C unit; auxillary heating

## Interior features

- >> 2 sun visors at front and rear windscreen
- >> Reading lamp, ashtray, coat hanger, storage compartment
- >> High-performance cab heating via engine coolant water
- >> Powerful 3-speed fan with fresh air circulation and built-in filter
- >> Panorama rear view mirror
- >> Anti-slip, easily cleaning rubber floor mat
- >> Comfortable, air-suspended driver's seat; adjustable in height, inclination, cross and lengthwise

**Option:** Swivel seat with automatic change of steering logic.

## Controls

- >> Ignition lock
- >> Combination lever for turn signal, parking lights and low beam, windscreen wiper/washer front, horn
- >> Joystick for raising and lowering the fifth wheel coupling
- >> Selector lever for shifting gears
- >> Flip switch or button: main lights, warning beacon, rear working spotlight, parking brake, safety release for 5th wheel coupling, bypass engine-stop, hazard lights
- >> Multi-function display indicating: rpm gauge, speed, water coolant temperature, transmission oil temperature, transmission oil pressure, engine oil pressure, brake reserve pressure, fuel supply, battery voltage, operating hours
- >> Control lights: 5th wheel coupling lock, differential lock, low beam, high beam, turn signal for tractor, turn signal for trailer, battery charge, contamination indicator of air filter, engine coolant level, brake reserve pressure, parking brake, transmission warning, engine malfunction

**Further options on request**