TGA 33.480 6x4 BBS

6 x 4 Truck Tractor
Single Sleeper Cab
D26 Common Rail Engine
Steel Suspension Hub Reduction Rear Axles
High Ground Clearance for On/Off Road Applications

100% Trucknology®

MAN

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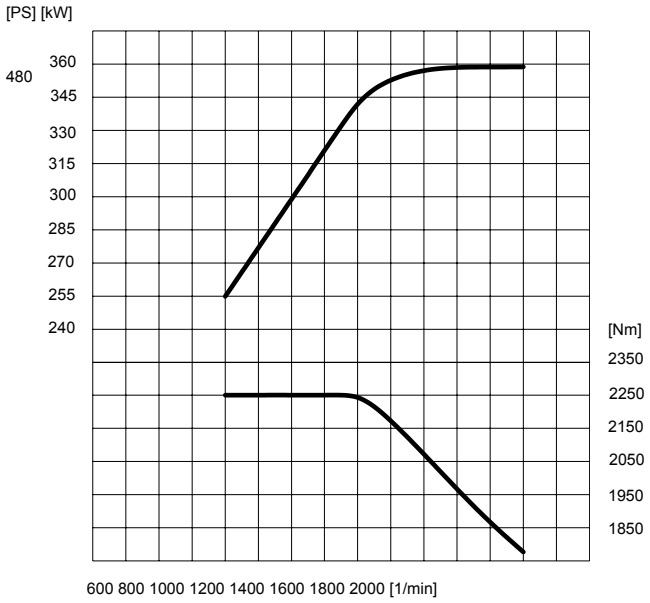
Engine



Engine Model	D2676LF03 (Euro 2)
Configuration	6-cylinder in-line
Displacement	12.419 litre
Output	480 hp/353 kW at 1900 rpm
Torque Nm	2300 Nm, at 1050 – 1400 rpm
Green Band	1200 – 1500 r/min
Fuel System	Common Rail EDC (Electronic Diesel Control) Twin fuel filter with Separ water separator
Cooling System	Radiator & intercooler for over 35ºC ambient temperature Visco fan with high cooling output Stone protection grille in front of radiator
Engine Air Supply System	Mann Ø 268 mm, 470 mm long filter Safety filter element Pre-cleaner integrated in air intake duct Turbo charger with intercooler
Engine Brake	EVB exhaust valve brake
Air Compressor	Single cylinder 360cc

Intake System

Raised air intake in cab rear wall. Dry air filter with safety element and pre-cleaner for heavy-duty operation. The intake duct contains a pre-silencer (Helmholz resonator) for the intake air

Clutch

Model:
- F&S MFZ 430

Description:
- Single-plate controlled electro-pneumatically
- Friction Area 2 000 cm²

Steering

Model:
- ZF power steering type 8098

Operation:
- Lock to Lock = 4.8 turns
- Pneumatic steering wheel adjustment for height and inclination
- Steering wheel lock with immobilizer

Automated Gearbox Without Clutch Pedal

Model:
- ZF ASTRONIC 12 AS 2301 OD TipMatic gearbox with intarder
- 12 forward speeds, 2 reverse, ratios 12.33 – 0.78
- Suitable for gross combination mass up to 65 tons

Description:
- Automated constant-mesh gearbox with twin layshaft & one planetary gearset

Operation:
- MAN TipMatic: shifting and clutching are controlled electro-pneumatic (no clutch pedal)
- Automatic or manual shifting with fingertip lever, simple operation, no operator error possible
- Outstanding shifting quality with reduced wear on driveline and relief for driver
- Driving with engaged PTO only in gears 2, 4, 6
- For off-road driving, shifting in manual (TipMatic) mode

Propeller Shafts

Operation:
- Maintenance free

Speed Table – with 315/80R22.5 tyres at 1800 r/min

Forward gears	1	2	3	4	5	6	7	8	9	10	11	12
Transmission ratio	12.33	9.59	7.44	5.78	4.57	3.55	2.70	2.10	1.63	1.27	1.00	0.78
Speed (km/h) with 4.33 axle ratio	7	9	11	14	18	23	31	39	50	65	82	105

Top gear grade-ability on paved road at 80 km/h

Axle Ratio	Tyre Size	5th Wheel Height Laden / Unladen	Engine r/min	Tri-axle Trailer 49 000 kg	Interlink 56 000 kg
4.33	315/80R22.5	1401/1445	1370	1.40 %	1.09 %

Moving off behaviour 25 % (Skid point on dry tar with 18 000 kg on driving axles, 56 000 kg GCM)

PTO

Model:
- ZF NH/4C PTO, clutch dependant

Operation:
- Output speed = 1.22 x engine speed
- Anti-clockwise rotation (same as engine)
- Maximum output torque 430 Nm
- Suitable for prolonged operation up to 60 minutes
- Situated on right hand side of gearbox
- Direct pump connection

Front Axle & Suspension

Model:
- MAN VOK-09 Straight front axle

Description:
- Axle rating 9 200 kg
- Parabolic front springs rating 9 000 kg
- Progressive spring characteristics
- Shock absorbers and stabiliser fitted as standard

Rear Axle & Suspension

Model:
- MAN AP HPD-1382/HP-1352 hub reduction axles

Description:
- Axle Rating: 13,000 kg per axle
- Parabolic Suspension: 13,000 kg x 2
- Axle Ratios: standard: 4.33
- Inter-axle and inter-wheel differential lock
- Stabilizers and shock absorbers on both rear axles

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Brake System

Description:
- The MAN BrakeMatic electronic brake system regulates the pressure in the brake cylinders of the individual wheels. The electronic modules are permanently linked to the central control unit via the CAN data bus. In the control unit a host of actual inputs are evaluated and the optimum brake pressures calculated. Systems such as trailer control, brake pad wear regulation, ABS and constant braking function (triggering of continuous brake functions) are integrated in the control unit. Automated engagement of the engine brake by continuous brake management system
- ABS & anti-jacknife (trailer) brake
- Air Dryer included as standard

Configuration:
- Front axle: Drum brakes Ø 410 mm
- Rear axle: Drum brakes Ø 410 mm (extra wide 220mm)

Aux. brakes:
- EVB (Engine Valve Brake), maximum output 270 kW at 2500 r/min
- Intarder with 500 kW brake power

Wheels

Tyres:
- Standard Size: 315/80R22.5 Tubeless Radial
- Front: Bridgestone M 840, tyre capacity 7 500 kg
- Rear: Bridgestone M 840, tyre capacity 13 000 kg

Rims:
- Steel disc wheels 10-hole 9.00-22.5

Electrical System
- 24 Volt

Batteries:
- 2 x 12V 175Ah

Alternator:
- 28V 80A 2240 W

Battery Isolation:
- Mechanical battery main switch

MAN Tronic
- CAN (Controller Area data Network) serial bus system, connecting computer systems, sensors & actuator units, without the need for complex wiring harness. High operational reliability with double contact security, fewer sensors, less wire length (10 % shorter than on F2000), and fewer plug connections (170 less than in F2000)
- Computers optimize driveline & brake efficiency, fuel economy, vehicle reliability, ease of use, and safety
- Comprehensive diagnostic functions resulting in reduced maintenance & repair times.

Fuel Tank

Size:
- 400 litre fuel tank

Position:
- Right hand side of chassis

Additional:
- Guard plate mounted under tank
- Fuel strainer & lockable cap included

Customer-specific control module for external data exchange (KSM)
- Provision for information on operational status of vehicle
- Setting and saving variable intermediate speeds from outside the vehicle
- Communication with a CAN-capable control unit in the body

Chassis Frame

Material:
- U section main members of high strength TM500 tempered steel with riveted & bolted cross members

Dimensions:
- 270 x 85 x 8 mm

Chassis Design:
- Medium height design with straight front axle and high bogie

5th Wheel:
- Jost JSK 36C cast steel fifth wheel on maintenance free rubber cushions 185 mm height, D-value 152kN

Features:
- Imposed load 20 000 kg, Weight 157 kg
- Hub reduction drive axles with extra ground clearance

L – Cab (single sleeper cab)

Width:
- 2 240 mm

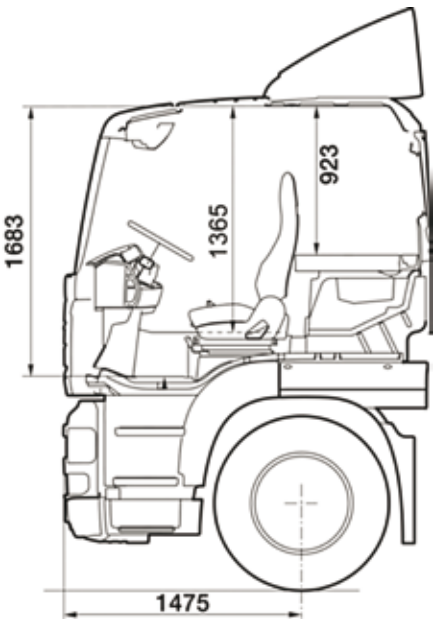
Length:
- 2 280 mm

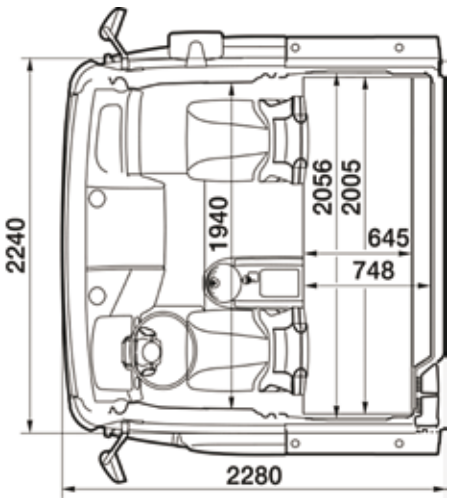
Suspension:
- Coil front cab mounts

Features:
- Mechanical sliding roof
- Electric door window winders
- Electric mirror adjustment
- Air conditioning system
- 24V MAN radio/CD player
- Air sprung high-comfort driver;s seat
- Tinted windscreens all-round
- Sun shade in front of windscreen
- Roll-up sun visor for windscreen and driver;s door

Corrosion Protect:
- Extensive protection against corsion. Panels fully galvanized, GFRP elements, plastic cladding fo areas subject to stone impact

Bumper:
- Synthetic bumper, mounted on tubular steel frame, with integrated air dam reducing aerodynamic drag. Easily replaceable bumper corners are fitted





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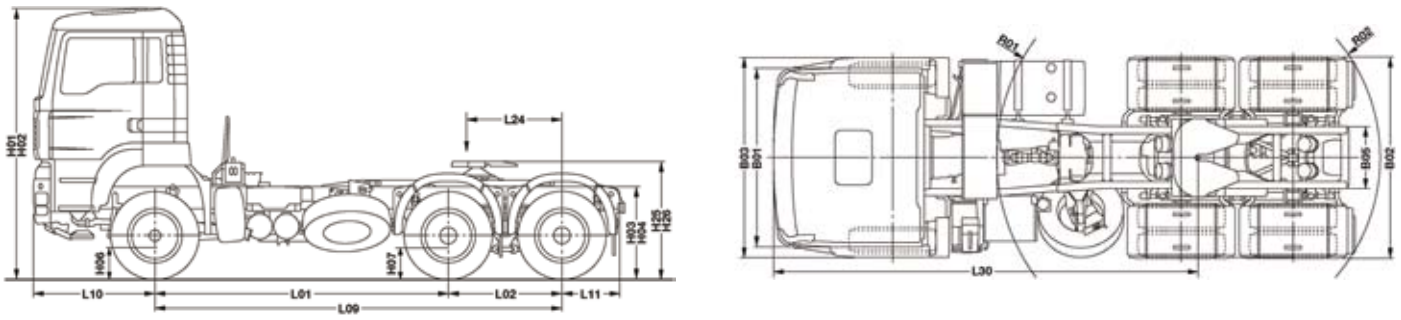

Vehicle	MAN Chassis Type	TGA 6x4	33.480 BBS
	Cab Type	**L-Cab**	**1 bunk**
Mass Data Combination Mass	GCM	G60	65 000 kg
	D/T		65 000 kg
C.C.C.	Permissible 5th Wheel Load	G53	15 985 kg
Tare Mass	Tare Mass excluding Driver & Fuel		9 104 kg
	– Front Axle		4 928 kg
	– Rear Axle		4 176 kg
	Tare Mass including Driver & Fuel	G50	9 515 kg
	– Front Axle	G51	5 175 kg
	– Rear Axle	G52	4 344 kg
Manufacturer's Gross Vehicle Mass	GA Front	G01	8 000 kg
	GAU Rear	G02	26 000 kg
	GVM	G09	33 000 kg
Legal Gross Vehicle Mass	A Front		7 500 kg
	AU Rear		18 000 kg
	V – Rating		25 500 kg
Lengths	Wheelbase From 1st to 2nd Axle	L01	3 200 mm
	Rear Axle Spacing	L02	1 400 mm
	Front Overhang	L10	1 475 mm
	Rear Overhang	L11	700 mm
	Chassis Length Behind Cab	L14	4 495 mm
	Kingpin Position Forward of Rear Axle Centreline	L23	525 mm
	Overall Length	L42	6 775 mm
	Cab to Rear Axle Centreline	C/A	3 070 mm
Heights	Overall Height Unladen	H01	3 260 mm
	Overall Height Laden	H02	3 190 mm
	Chassis Frame Height Unladen	H03	1 140 mm
	Chassis Frame Height Laden to GVM (33 000 kg)	H04	1 070 mm
	Chassis Frame Height Laden to V rating (25 500 kg)	H04	1 096 mm
	Ground Clearance Front	H06	364 mm
	Ground Clearance Rear	H07	305 mm
	5th Wheel Height – Laden (33 000 kg)	H25	1 375 mm
	5th Wheel Height – Laden (25 500 kg)	H25	1401 mm
	Kingpin Height – Unladen	H26	1 445 mm
Width	Chassis Cab Width	B01	2 240 mm
	Width Across Rear Tyres	B02	2 466 mm
Turning Circle	Kerb to Kerb (m)	K01	14.4 m
	Swept Circle (m)	K02	16 m

No spare wheel carrier holder bracket on chassis & weight of spare wheel thus not included