B40E 6x6 35 000 L Articulated Water Truck



ENGINE

Manufacturer
Mercedes Benz (MTU)

Model OM471LA (MTU 6R 1300)

Configuration
Inline 6, turbocharged and intercooled

Net Power 380 kW (510 hp) @ 1 600 rpm

Gross Torque 2 600 Nm (1 918 lbft) @ 1 300 rpm

Displacement 12,8 litres (781 cu.in)

Auxiliary Brake
Jacobs Engine Brake®

Fuel Tank Capacity 533 litres (140.8 US gal)

Certification
OM471LA (MTU 6R 1300) is EU
Stage IIIA / EPA Tier 3 emission
level equivalent

TRANSMISSION

Manufacturer Allison

Model 4700 ORS

Configuration
Fully automatic planetary
transmission

Layout Engine mounted

Gear Layout
Constant meshing planetary
gears, clutch operated

Gears 7 Forward, 1 reverse

Clutch Type Hydraulically operated multi-

Control Type Electronic

Torque Control Hydrodynamic with lock-up in all gears

TRANSFER CASE

Manufacturer Kessler Model

W2400

Layout Remote mounted

Gear Layout

Three in-line helical gears

Output Differential Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.

AXLES

Manufacturer Bell

Model 30T

Differential

High input controlled traction differential with spiral bevel gears

Final Drive
Outboard heavy duty planetary
on all axles

BRAKING SYSTEM

Service Brake
Dual circuit, full hydraulic
actuation wet disc brakes on
front and middle axles. Wet
brake oil is circulated through a
filtration and cooling system.

Maximum brake force: 305 kN (68 567 lbf)

Park & Emergency Spring applied, air released driveline mounted disc

Maximum brake force: 218 kN (49 008 lbf)

Auxiliary Brake
Jacobs Engine Brake®.
Automatic retardation through electronic activation of wet brake system.

Total Retardation Power Continuous: 442 kW (593 hp) Maximum: 854 kW (1 145 hp)

WHEELS

Type Radial Earthmover

Tyre 29.5 R 25 (875/65 R 29 optional)

FRONT SUSPENSION

Semi-independent, leading A-frame supported by hydropneumatic suspension struts

Option: Electronically controlled adaptive suspension with ride height adjustment

REAR SUSPENSION

Pivoting walking beams with laminated rubber suspension blocks

Option: Comfort Ride suspension walking beams, with two-stage sandwich block

HYDRAULIC SYSTEM

Full load sensing system serving the prioritised steering, body tipping and brake functions. A ground-driven, load sensing emergency steering pump is integrated into the main system.

Pump Type Variable displacement load sensing piston

Flow 330 L/min (87 gal/min)

Pressure 315 Bar (4 569 psi)

Filter 5 microns

STEERING SYSTEM

Double acting cylinders, with ground-driven emergency steering pump

Lock to lock turns 5

Steering Angle 42°

PNEUMATIC SYSTEM

Air drier with heater and integral unloader valve, serving park brake and auxiliary functions

System Pressure 810 kPa (117 psi)

ELECTRIC SYSTEM

Voltage 24 V

Battery Type
Two AGM (Absorption Glass
Mat) type

Battery Capacity 2 X 75 Ah

Alternator Rating 28V 80A

MAX VEHICLE SPEED									
1st	4 km/h	2,5 mph							
2nd	9 km/h	6 mph							
3rd	17 km/h	11 mph							
4th	23 km/h	14 mph							
5th	33 km/h	21 mph							
6th	44 km/h	27,3 mph							
7th	51 km/h	32 mph							
R	7 km/h	4 mph							

WATER TANKER PLUMBING

Centrifugal water pump

Rate of Flow 5 400 L/min

Head 70 m

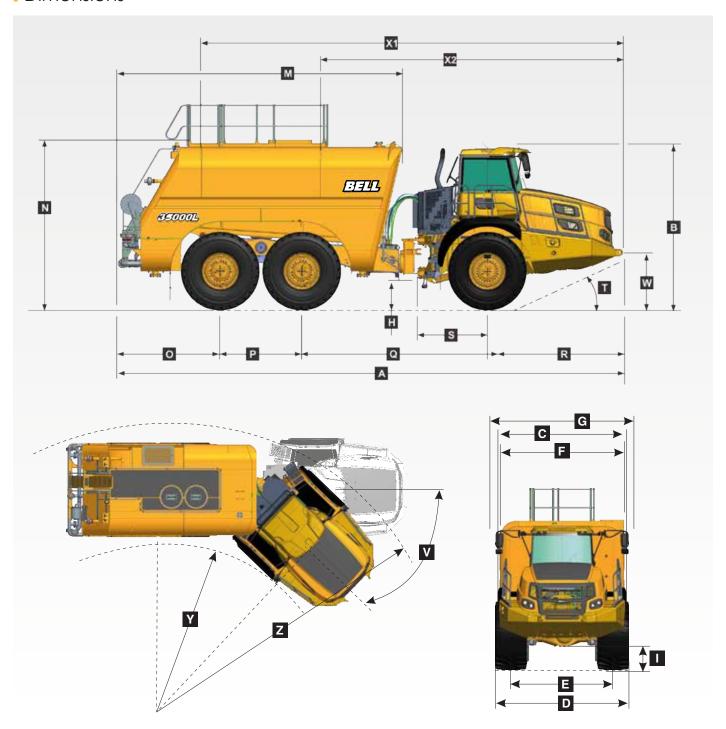
CAB

ROPS/FOPS certified 76 dBA internal sound level measured according to ISO 6396

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND	PRESSURE	LOAD CAPACITY	
UNLADEN		LADEN (No sinkage/Tota	al Contact Area Method)		
	kg (lb)	29.5 R 25	kPa (Psi)		
Front	15 743 (34 707)	Front	310 (45)	Rated Payload	35 000 litres
Middle	10 046 (22 147)	Middle	341 (50)		(9 250 gallons)
Rear	9 528 (21 005)	Rear	341 (50)		
Total	35 317 (77 859)				
LADEN					
Front	18 342 (40 438)	875/65 R29	kPa (Psi)		
Middle	27 391 (60 386)	Front	293 (43)		
Rear	27 584 (60 811)	Middle	329 (48)		
Total	73 317 (161 636)	Rear	329 (48)		

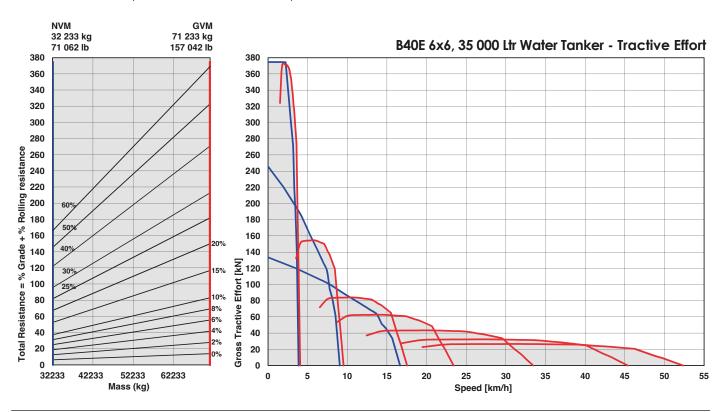
Dimensions



Machine Dimensions									
Α	Length - Transport Position	12 084 mm	(39 ft. 8 in.)	0	Rear Axle Centre to Bowser / Tank Rear	2 443 mm (8 ft. 0 in.)			
В	Height - Transport Position	3 802 mm	(12 ft. 6 in.)	Р	Mid Axle Centre to Rear Axle Centre	1 950 mm (6 ft. 5 in.)			
C	Width over Mudguards	3 495 mm	(11 ft. 6 in.)	Q	Mid Axle Centre to Front Axle Centre	4 438 mm (14 ft. 7 in.)			
D	Width over Tyres - 875/65 R29	3 656 mm	(11 ft. 12 in.)	R	Front Axle Centre to Machine Front	3 255 mm (10 ft. 8 in.)			
D	Tyre Track Width - 29.5R25	3 487 mm	(11 ft. 5 in.)	S	Front Axle Centre to Artic Centre	1 558 mm (5 ft. 1 in.)			
Ε	Tyre Track Width - 875/65 R29	2 773 mm	(9 ft. 1 in.)	T	Approach Angle	24°			
Е	Tyre Track Width - 29.5R25	2 725 mm	(8 ft. 11 in.)	V	Maximum Articulation Angle	42°			
F	Width over Tank / Bowser	3 379 mm	(11 ft. 1 in.)	W	Front Tie Down Height	1 265 mm (4 ft. 2 in.)			
F	Width over Tank / Bowser (with hose)	3 529 mm	(11 ft. 5 in.)	X1	Tank Lifting Centres	10 023 mm (32 ft. 10 in.)			
G	Width over Mirrors - Operating Position	3 614 mm	(11 ft. 10 in.)	X2	Front Lifting Centres to Tank Lifting Centre	7 173 mm (23 ft. 6 in.)			
Н	Ground Clearance - Artic	545 mm	(1 ft. 9 in.)	Υ	Inner Turning Circle Radius - 875/65 R29	4 782 mm (15 ft. 8 in.)			
- 1	Ground Clearance - Front Axle	545 mm	(1 ft. 9 in.)	Υ	Inner Turning Circle Radius - 29.5R25	4 866 mm (15 ft. 12 in.)			
М	Tank / Bowser Length	6 797 mm	(22 ft. 4 in.)	Z	Outer Turning Circle Radius - 875/65 R29	9 320 mm (30 ft. 7 in.)			
N	Maximum Tank Height	4 002 mm	(13 ft. 2 in.)	Z	Outer Turning Circle Radius - 29.5R25	9 235 mm (30 ft. 4 in.)			

| Gradeability/Rimpull

- 1. Determine tractive resistance by finding intersection of vehicle mass line and grade line. NOTE: 2% typical rolling resistance is already assumed in chart and grade line.
- 2. From this intersection, move straight right across charts until line intersects rimpull curve.
- 3. Read down from this point to determine maximum speed attained at that tractive resistance.



Retardation

- 1. Determine retardation force required by finding intersection of vehicle mass line.
- 2. From this intersection, move straight right across charts until line intersects the curve. NOTE: 2% typical rolling resistance is already assumed in chart.
- 3. Read down from this point to determine maximum speed.

