## **B50E 6x6 43 000 L** Articulated Water Truck



#### **ENGINE**

Manufacturer
Mercedes Benz (MTU)

Model OM473LA (MTU 6R 1500)

Configuration
Inline 6, turbocharged and intercooled

Net Power 430 kW (577 hp) @ 1 600 rpm

Gross Torque 2 850 Nm (2 102 lbft) @ 1 300 rpm

Displacement 15,6 litres (952 cu.in)

Auxiliary Brake
Jacobs Engine Brake®

Fuel Tank Capacity 630 litres (166 US gal)

Certification
OM473LA (MTU 6R 1500) is EU
Stage IIIA / EPA Tier 3 emission
level equivalent

#### TRANSMISSION

Manufacturer Allison

Model 4800 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: 458 kN (102 962 lbf)

Park & Emergency Spring applied, air released driveline mounted disc

Maximum brake force: 215.5 kN (48 446 lbf)

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

Total Retardation Power Continuous: 546 kW (732 hp) Maximum: 963 kW (1 291 hp)

#### **WHEELS**

Type Radial Earthmover

Tyre 875/65 R 29 (29.5 R 25 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 4,9

Steering Angle

#### **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

MAY VEHICLE CREEK

MAX	AFHICLE 251	EED
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

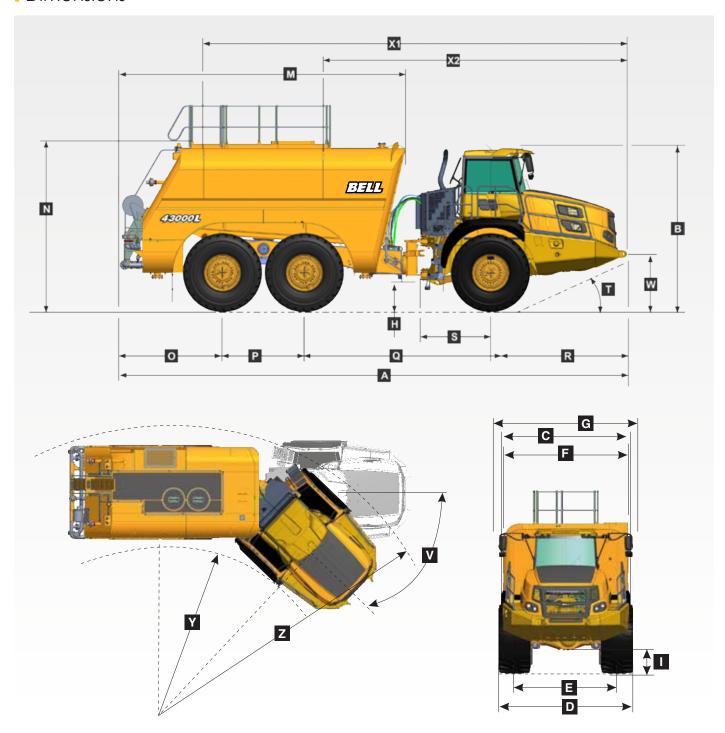
#### CAB

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

## Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND	PRESSURE	LOAD CAPACITY	
UNLA	ADEN	LADEN (No sinkage/Tota	al Contact Area Method)		
	kg (lb)	29.5 R 25	kPa (Psi)		
Front	16 442 (36 248)	Front	326 (47)	Rated Payload	43 000 litres
Middle	10 708 (23 607)	Middle	395 (57)		(11 350 gallons)
Rear	10 574 (23 312)	Rear	395 (57)		
Total	37 724 (83 167)				
LADEN					
Front	19 926 (43 929)	875/65 R29	kPa (Psi)		
Middle	30 066 (66 284)	Front	296 (43)		
Rear	30 732 (67 752)	Middle	366 (53)		
Total	80 724 (177 966)	Rear	366 (53)		

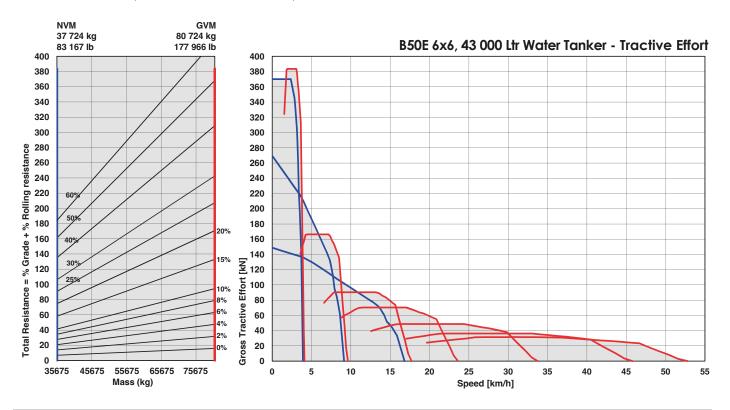
# Dimensions



Machine Dimensions								
Α	Length - Transport Position	12 279 mm	(40 ft. 3 in.)	0	Rear Axle Centre to Bowser / Tank Rear	2 543 mm (8 ft. 4 in.)		
В	Height - Transport Position	3 820 mm	(12 ft. 6 in.)	Р	Mid Axle Centre to Rear Axle Centre	1 950 mm (6 ft. 5 in.)		
C	Width over Mudguards	3 790 mm	(12 ft. 5 in.)	Q	Mid Axle Centre to Front Axle Centre	4 438 mm (14 ft. 7 in.)		
D	Width over Tyres - 875/65 R29	3 832 mm	(12 ft. 7 in.)	R	Front Axle Centre to Machine Front	3 351 mm (11 ft. 0 in.)		
D	Tyre Track Width - 29.5R25	3 714 mm	(12 ft. 2 in.)	S	Front Axle Centre to Artic Centre	1 558 mm (5 ft. 1 in.)		
Ε	Tyre Track Width - 875/65 R29	2 949 mm	(9 ft. 8 in.)	T	Approach Angle	23°		
Е	Tyre Track Width - 29.5R25	2 952 mm	(9 ft. 8 in.)	V	Maximum Articulation Angle	42°		
F	Width over Tank / Bowser	3 699 mm	(12 ft. 2 in.)	W	Front Tie Down Height	1 269 mm (4 ft. 2 in.)		
F	Width over Tank / Bowser (with hose)	3 849 mm	(12 ft. 8 in.)	X1	Tank Lifting Centres	10 218 mm (33 ft. 6 in.)		
G	Width over Mirrors - Operating Position	4 027 mm	(13 ft. 3 in.)	X2	Front Lifting Centres to Tank Lifting Centre	7 310 mm (24 ft. 0 in.)		
Н	Ground Clearance - Artic	558 mm	(1 ft. 9 in.)	Υ	Inner Turning Circle Radius - 875/65 R29	4 694 mm (15 ft. 5 in.)		
-	Ground Clearance - Front Axle	555 mm	(1 ft. 9 in.)	Υ	Inner Turning Circle Radius - 29.5R25	4 753 mm (15 ft. 7 in.)		
М	Tank / Bowser Length	6 877 mm	(22 ft. 7 in.)	Z	Outer Turning Circle Radius - 875/65 R29	9 408 mm (30 ft. 10 in.)		
N	Maximum Tank Height	4 137 mm	(13 ft. 7 in.)	Z	Outer Turning Circle Radius - 29.5R25	9 349 mm (30 ft. 8 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.

