B30E 4x4 Articulated Dump Truck

ENGINE

Manufacturer
Mercedes Benz

Model
OM926LA

Configuration
Inline 6, turbocharged and intercooled

Maximum Net Power
240 kW (322 hp) @ 2 200 rpm in accordance with UN ECE R120

Gross Torque
1 300 Nm (959 lbft)
@ 1 200 -1 600 rpm

Displacement
7,2 litres (469 cu.in)

Auxiliary Brake
Engine valve brake

Fuel Tank Capacity
379 litres (100 US gal)

Certification
OM926LA meets EU Stage II emissions regulations

TRANSMISSION

Manufacturer
Allison

Model
3400 P ORS

Configuration
Fully automatic planetary transmission

Layout
Engine mounted

Gear Layout
Constant meshing planetary gears, clutch operated

Gears
6 Forward, 1 Reverse

Clutch Type
Hydraulically operated multi-disc

Control Type
Electronic

Torque Control
Hydrodynamic with lock-up in all gears

TRANSFER CASE

Manufacturer
Kessler

Series
W1400

Layout
Remote mounted

Gear Layout
Three in-line helical gears

Output Differential
Interaxle 33/67 proportional differential. Automatic inter-axle differential lock.

AXLES

Manufacturer
Bell

Model
Front: Bell 18T
Rear: Bell 36T

Front Differential
High input limited slip 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 rear axles. Wet brake oil is circulated through a filtration and cooling system.

Maximum brake force:
284 kN (63 859 lbf)

Park & Emergency
Spring applied, air released driveline mounted disc

Maximum brake force:
396 kN (89 000 lbf)

Auxiliary Brake
Automatic exhaust valve brake and engine valve brake. Automatic retardation through electronic activation of wet brake system.

Total Retardation Power
Continuous: 218 kW (292 hp)
Maximum: 609kW (816 hp)

WHEELS

Type
Radial Earthmover

Tyre
Front: 23.5 R25
Rear: 875/65 R29

FRONT SUSPENSION

Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts.

Optional active dual springrate Comfort Ride suspension available, including height control.

HYDRAULIC SYSTEM

Full load sensing system serving the prioritized 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
202 L/min (53 gal/min)

Pressure
310 Bar (4 500 psi)

Filter
5 microns

STEERING SYSTEM

Double acting cylinders, with ground-driven emergency steering pump.

Lock to lock turns
4,1

Steering Angle
45°

DUMPING SYSTEM

Two double-acting, single stage, dump cylinders

Raise Time
12 s

Lowering Time
6 s

Tipping Angle
70° standard, or any lower angle programmable

PNEUMATIC SYSTEM

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

System Pressure
8,1 Bar (117 psi)

ELECTRICAL SYSTEM

Voltage
24 V

Battery Type
Two AGM (Absorption Glass Mat) type.

Battery Capacity
2 X 75 Ah

Alternator Rating
28 V 80 A

VEHICLE SPEEDS

1st	9 km/h	5 mph
2nd	16 km/h	10 mph
3rd	21 km/h	13 mph
4th	32 km/h	20 mph
5th	46 km/h	28 mph
6th	50 km/h	31 mph
R	8 km/h	5 mph

CAB

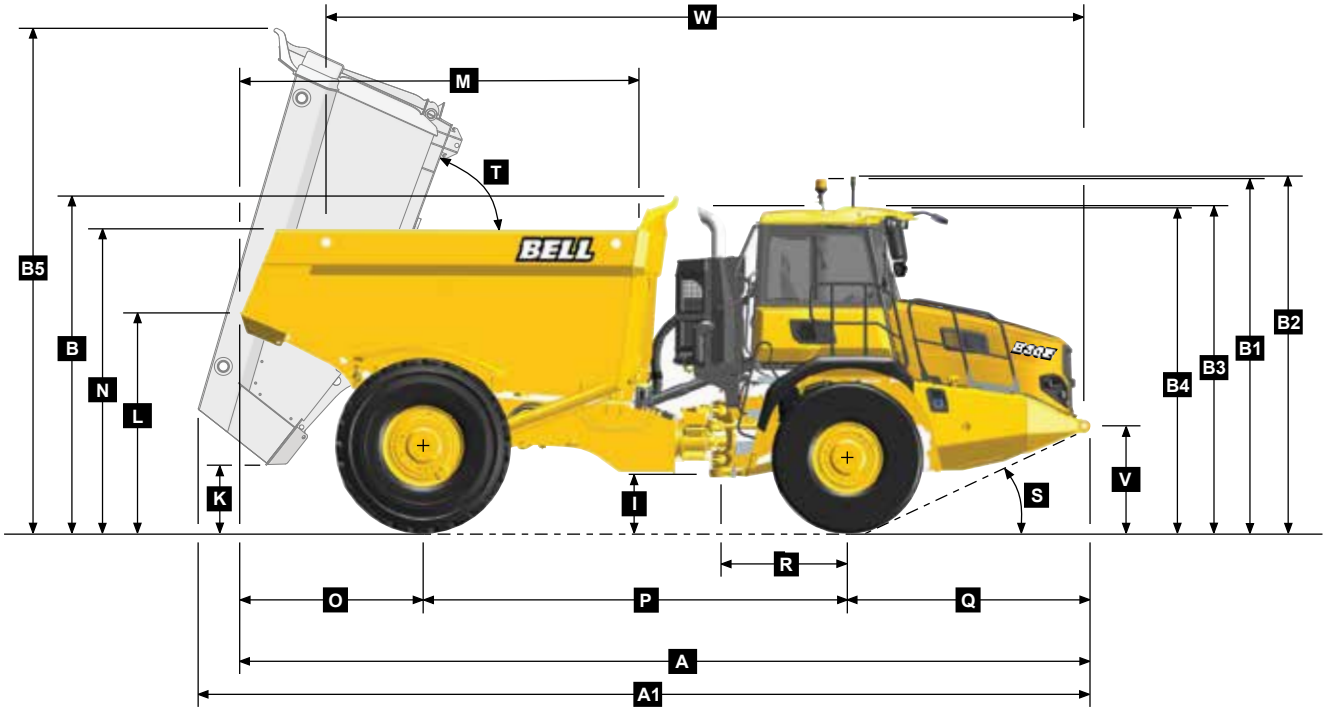
ROPS/FOPS certified 74 dBA internal sound pressure measured according to ISO 6396.

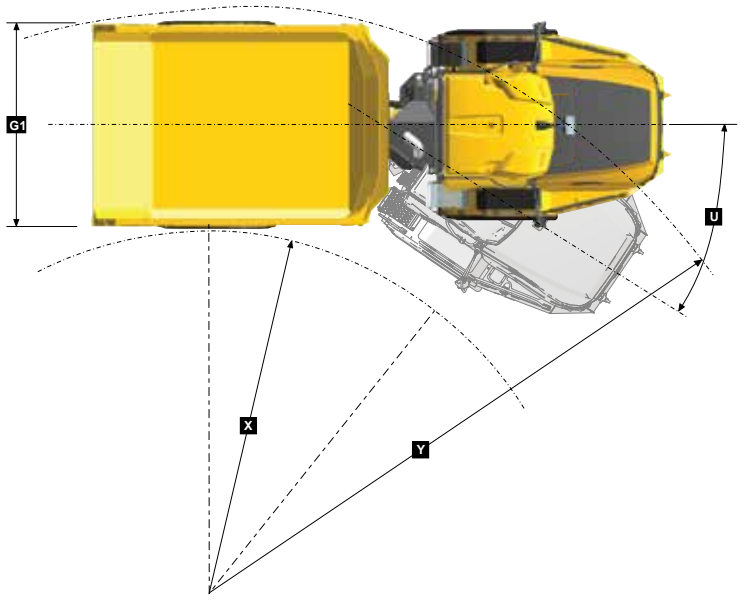
Load Capacity & Ground Pressure

OPERATING WEIGHTS*		GROUND PRESSURE*		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN		BODY	m^3 (yd^3)		kg (lb)
Front	11 488 (25 327)	(No sinkage or Total Contact Area)		Struck Capacity	15 (19,5)	Bin liner	1 380 (3 042)
Rear	9 655 (21 286)	23.5 R 25	kPa (Psi)	SAE 2:1 Capacity	18,5 (24)	Tailgate	1 051 (2 317)
Total	21 143 (46 612)	Front	295 (42,8)	SAE 1:1 Capacity	21,5 (28)		
				SAE 1:1 Capacity		EXTRA WHEELSET	
LADEN		875/65 R 29	kPa (Psi)	with Tailgate	19,5 (25,5)	23.5 R25	544 (1 199)
Front	13 940 (30 732)	Rear	442 (64)			875/65 R29	1 338 (2 950)
Rear	35 203 (77 610)			Rated Payload	28 000 kg		
Total	49 143 (108 342)				(61 729 lbs)		

** including additional equipment*

Dimensions







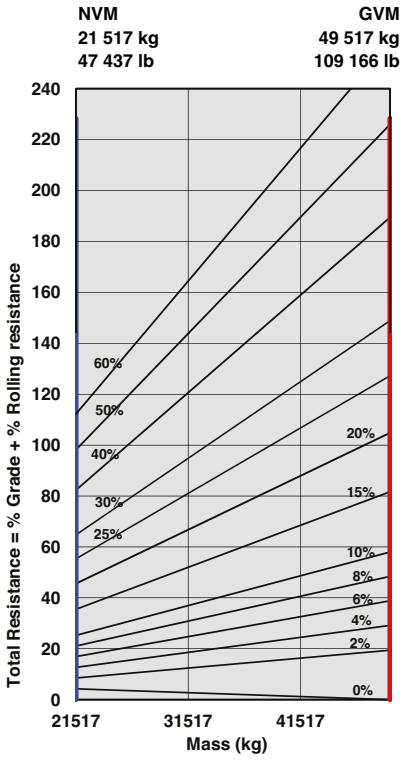
Machine Dimensions

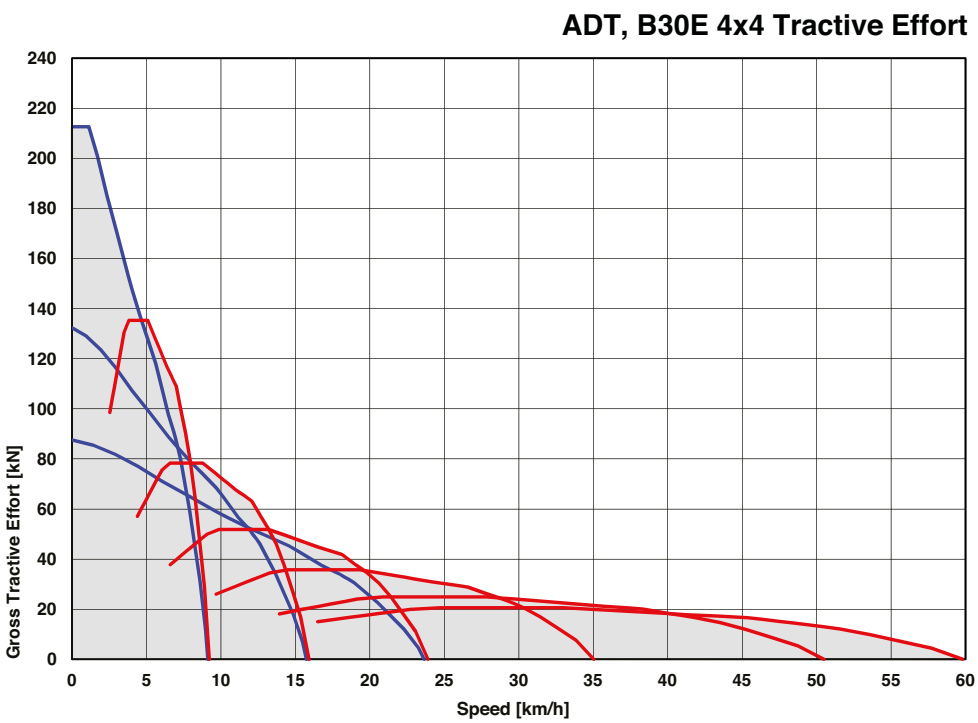
A	Length - Transport Position	9 122 mm	(29 ft. 11 in.)
A1	Length - Bin Fully Tipped	9 709 mm	(31 ft. 10 in.)
B	Height - Transport Position	3 548 mm	(11 ft. 8 in.)
B1	Height - Rotating Beacon	3 718 mm	(12 ft. 2 in.)
B2	Height - Load Light	3 740 mm	(12 ft. 3 in.)
B3	Height - Exhaust Stack S5	3 430 mm	(11 ft. 3 in.)
B3	Height - Exhaust Stack S2	3 504 mm	(11 ft. 3 in.)
B4	Height - Cab	3 418 mm	(11 ft. 6 in.)
B5	Bin Height - Fully Tipped	5 310 mm	(17 ft. 5 in.)
C	Width Over Mudguards	2 985 mm	(9 ft. 10 in.)
D	Width Over Tyres - Front - 23.5R25	2 998 mm	(9 ft. 10 in.)
E	Width Over Tyres - Rear - 875/65 R29	3 270 mm	(10 ft. 9 in.)
F	Tyre Track Width - Front	2 390 mm	(7 ft. 10 in.)
F	Tyre Track Width - Rear	2 386 mm	(7 ft. 10 in.)
G	Width over Bin	3 383 mm	(11 ft. 2 in.)
G1	Width over Tailgate	3 480 mm	(11 ft. 5 in.)
H	Width over Mirrors - Operating Position	3 260 mm	(10 ft. 9 in.)

I	Ground Clearance - Artic	539 mm	(21.22 in.)
J	Ground Clearance - Front Axle	480 mm	(18.90 in.)
K	Ground Clearance - Bin Fully Tipped	444 mm	(17.50 in.)
L	Bin Lip Height - Transport Position	2 331 mm	(7 ft. 8 in.)
M	Bin Length	4 271 mm	(14 ft.)
N	Load over Height	3 207 mm	(10 ft. 6 in.)
O	Rear Axle Centre to Bin Rear	1 957 mm	(6 ft. 5 in.)
P	Rear Axle Centre to Front Axle Centre	4 560 mm	(14 ft. 12 in.)
Q	Front Axle Centre to Machine Front	2 605 mm	(8 ft. 7 in.)
R	Front Axle Centre to Artic Centre	1 360 mm	(4 ft. 6 in.)
S	Approach Angle	25 °	
T	Maximum Bin Tip Angle	70 °	
U	Maximum Articulation Angle	45 °	
V	Front Tie Down Height	1 040 mm	(3 ft. 5 in.)
W	Machine Lifting Centres	8 126 mm	(26 ft. 8 in.)
X	Inner Turning Circle Radius	3 488 mm	(11 ft. 5 in.)
Y	Outer Turning Circle Radius	7 385 mm	(24 ft. 3 in.)

Gradeability/Rimpull

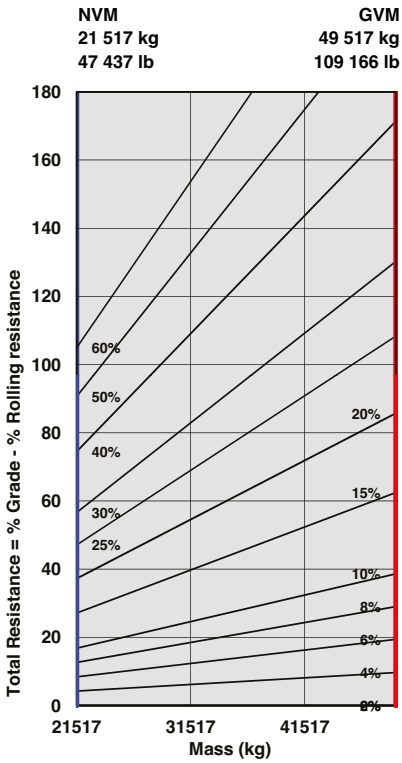
1. Determine tractive resistance by finding intersection of vehicle mass line and grade line. NOTE: 2% typical rolling resistance is already assumed in chart and grade line.
2. From this intersection, move straight right across charts until line intersects rimpull curve.
3. Read down from this point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

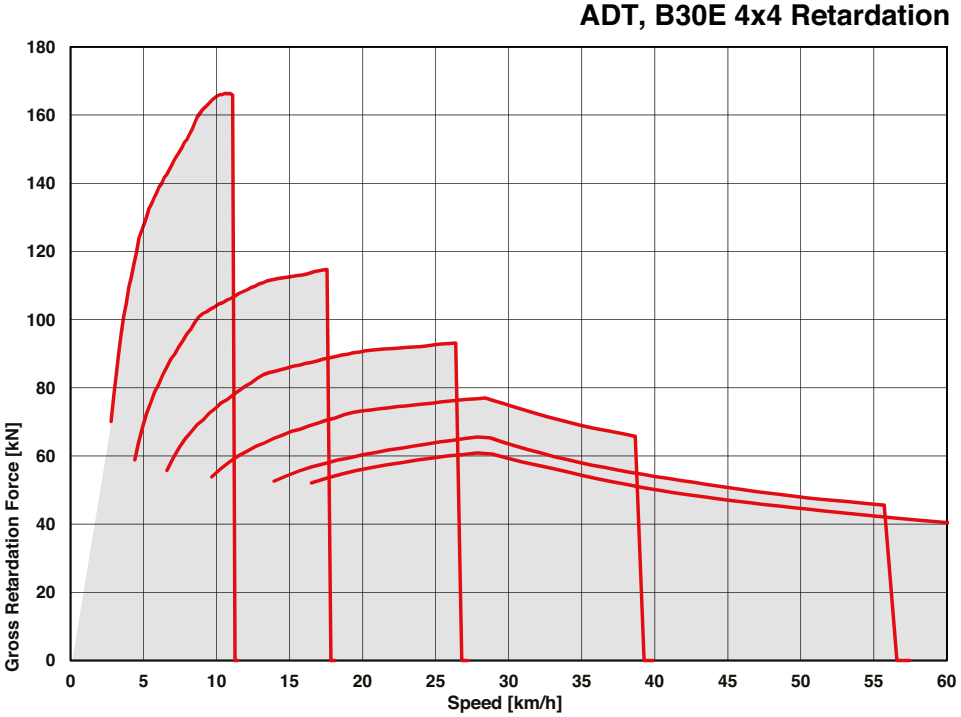




Retardation

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.





Features and Options

● STANDARD ▲ OPTION

B30E 4x4	B45E 4x4	B60E 4x4	
			ENGINE
●	●	●	Jacobs Engine Brake®
●	●	●	Dual element air cleaner with dust ejector valve
●	●	●	Pre-cleaner with automatic dust scavenging
●	●	●	Water separator
●	●	●	Serpentine drive belt with automatic tensioner
●	●	●	Provision for fast fill
	●	●	Wet-sleeve cylinder liners
			COOLING
●	●	●	Crankshaft mounted electronically controlled viscous fan drive
●	●	●	Fan guard
			PNEUMATIC SYSTEM
●	●	●	Engine-mounted compressor
●	●	●	Air drier with heater
●	●	●	Integral unloader valve
			ELECTRICAL SYSTEM
●	●	●	Battery disconnect
●	●		Halogen drive lights
	▲	●	LED drive lights
●	●	●	Air horn
●	●	●	Reverse alarm
▲	▲	▲	White noise reverse alarm
●	●	●	Rotating beacon
●	●	●	Pitch roll sensor
▲	▲	●	LED Artic reverse light
●	●		Halogen artic reverse lights
●	●	●	LED reverse lights
			STEERING SYSTEM
●	●	●	Bi-directional ground-driven secondary steering pump
			CAB
●	●	●	ROPS/FOPS certification
●	●	●	Tilt cab
●	●	●	Gas strut-supported door
●	●	●	I-Tip programmable dump-body tip settings
●	●	●	HVAC Climate control system
●	●	●	AM/FM radio with Aux + USB
●	●	●	Rear window guard
●	●	●	Wiper/washer with intermittent control
●	●	●	Tilt and telescoping steering wheel
●	●	●	Center-mount air-suspension seat
●	●		Halogen work lights
▲	▲	●	LED work lights
▲	▲	▲	Rotating beacon: seat belt installation
▲	▲	▲	Remote engine and machine isolation
●	●	●	Remote battery jump start
●	●	●	Retractable 3 point seat belt
●	●	●	Heated seat
●	●	●	Foldaway trainer seat with retractable seat belt
●	●	●	12-volt power outlet
●	●	●	Cab utility bin (removable)
●	●	●	Cup holder
●	●	●	Cooled/heated lunch box
●	●	●	Manually adjusted mirrors
▲	▲	▲	Electric adjustable and heated mirrors

B30E 4x4	B45E 4x4	B60E 4x4	
			CAB (continued)
●	●	●	Deluxe 10" color LCD: Speedometer / Fuel gauge / Transmission oil temperature gauge / Engine coolant temperature gauge / LED function/warning indicators and audible alarm / Transmission gear selection / Tachometer / Battery voltage / Hour meter / Odometer / Fuel consumption / Tip counter / Trip timer / Trip distance / Metric/English units / Service codes/diagnostics
●	●	●	Backlit sealed switch module functions with: Wiper control / Lights / Heated mirrors / Retarding aggressiveness / Transfer case differential lock / Transmission gear hold / Dump-body tip limit / Automatic dump-body tip settings / Air conditioner/ Heater controls / Preselected Speed Control
			DUMP BODY
●	●	●	Dump body mechanical lock
▲	▲	▲	Partial body liner
▲	▲	▲	Tailgate
▲	▲	▲	Body heater
	▲	▲	Bin pole lockout
	▲		Narrow bin body
	●	●	Rear wheel mudguards
	▲	▲	Rear wheel bin rock guards
			OTHER
●	●	●	Automatic Traction Control (ATC)
●	●	●	Wet disc brakes
●			23.5 R25 Radial Earthmover tyres (Front)
	●		775/65 R29 Radial Earthmover tyres (Front)
		●	875/65 R29 Radial Earthmover tyres (Front)
	▲		26.5 R25 Radial Earthmover tyres (Front-optional)
●			875/65 R29 Radial Earthmover tyres (Rear)
	●		21.00 R35 Dual (Rear)
		●	24.00 R35 Dual (Rear)
●	●		Remote grease banks
▲	●	●	Automatic greasing
●	●	●	Onboard Weighing
▲	▲	●	Load lights: stack
▲	▲	●	Comfort Ride suspension (Front)
	●	●	Hydro-pneumatic suspension (Rear)
▲	●	●	Reverse camera
●	●	●	Hand rails
●	●	●	Cab peak
●	●	●	High pressure hydraulic filter
▲	▲	▲	Fuel heater
●	●	●	Belly cover
●	●	●	Cross member cover
▲	▲	●	Remote transmission filters
●	●	●	Engine and transmission remote drain-gravity
		▲	Engine and transmission remote drain-scavenge
▲	▲	▲	Window smash button
●	●	●	High visibility mirrors
●	●	●	Fleetm@tic® Classic Package for 2 years
●	●	●	Electronic bonnet opening
▲	▲	▲	Engine oil quick drain connector