

# B25E Articulated Dump Truck



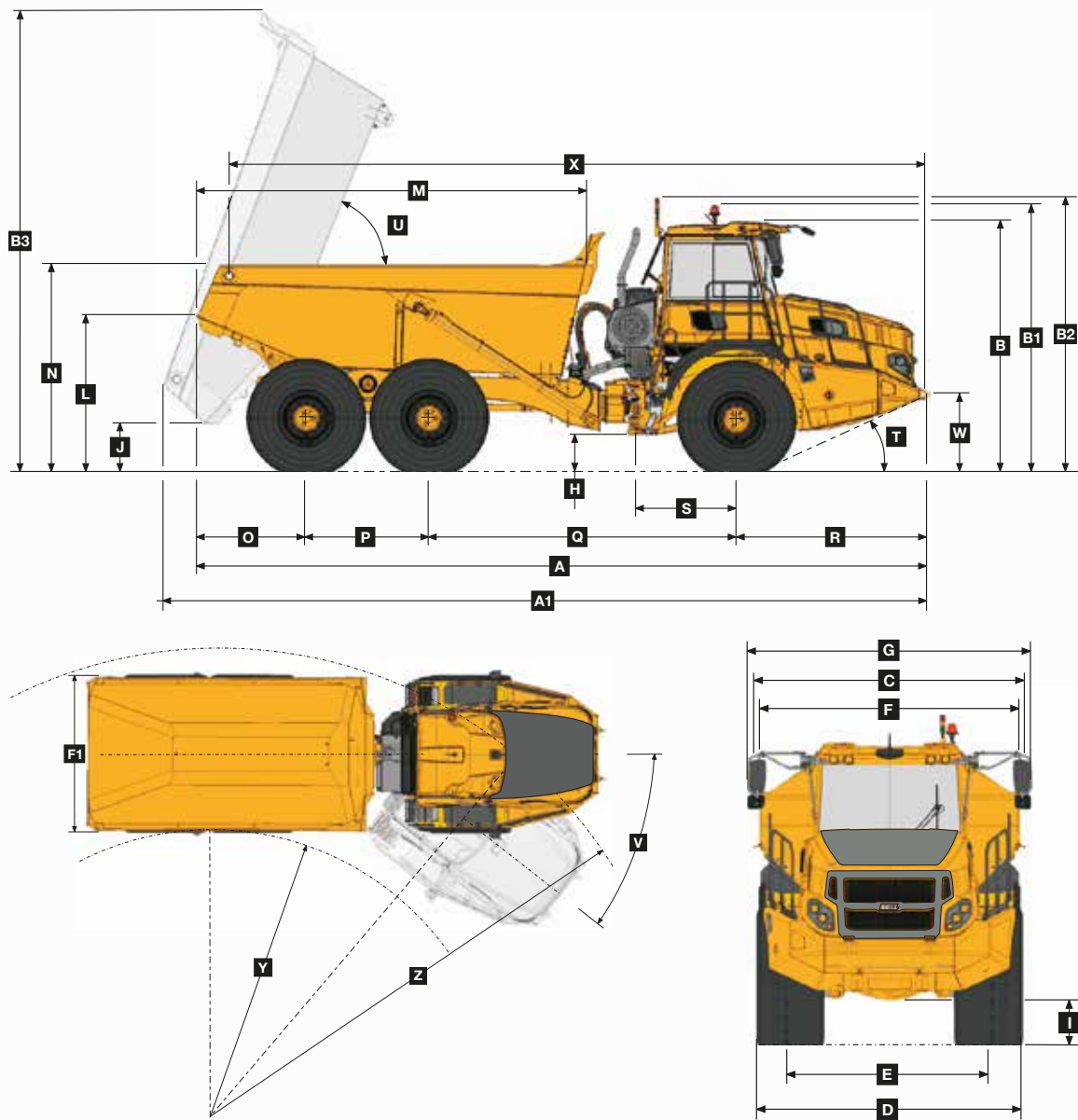
<b>ENGINE</b> Manufacturer Mercedes Benz  Model OM936LA  Configuration Inline 6, turbocharged and intercooled  Maximum net power 210 kW (281 hp) @ 1,800 rpm in accordance with UN ECE R120  Gross Torque 1,200 Nm (885 lbft) @ 1,200 -1,600 rpm  Displacement 7.7 liters (469 cu.in)  Auxiliary Brake Compression brake  Fuel Tank Capacity 302 liters (79.78 US gal)  AdBlue® Tank Capacity 31 L (8.2 US gal)  Certification OM936LA meets EPA Tier 4 Final/ EU Stage V emissions regulations	Torque Control Hydrodynamic with lock-up in all gears		Total Retardation Power Continuous: 318 kW (426 hp) Maximum: 588 kW (788 hp)		Lock to lock turns 4.1																					
	<b>TRANSFER CASE</b> 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.		<b>WHEELS</b> Type Radial Earthmover  Tire 23.5 R 25 (750/65 R 25 optional)			Steering Angle 45°																				
	<b>AXLES</b> Manufacturer Bell  Model 15T  Differential High input limited slip differential with spiral bevel gears  Final Drive Outboard heavy duty planetary on all axles		<b>FRONT SUSPENSION</b> Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts.  Optional active dual springrate Comfort Ride suspension available, including height control.			<b>DUMPING SYSTEM</b> Two double-acting, single stage, dump cylinders  Raise Time 12 s  Lowering Time 10 s  Tipping Angle 70° standard, or any lower angle programmable																				
	<b>BRAKING SYSTEM</b> Service Brake Dual circuit, full hydraulic actuation dry disc brakes with 8 calipers.  Maximum brake force: 160.5 kN (36,081 lbf)  Park & Emergency Spring applied, air released driveline mounted disc  Maximum brake force: 195 kN (43,900 lbf)  Auxiliary Brake Jacobs Engine Brake®. Automatic, adjustable, integral, hydrodynamic transmission retarder. Output shaft speed dependent.		<b>REAR SUSPENSION</b> Pivoting walking beams with laminated rubber suspension blocks.  Optional passive dual-springrate Comfort Ride walking beam available.			<b>PNEUMATIC SYSTEM</b> Air drier with heater and integral unloader valve, serving park brake and auxiliary functions  System Pressure 8.1 Bar (117 psi)																				
<b>TRANSMISSION</b> Manufacturer Allison  Model 3500PR ORS  Configuration Fully automatic planetary transmission with integral retarder  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	<b>HYDRAULIC SYSTEM</b> 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		<b>STEERING SYSTEM</b> Double acting cylinders, with ground-driven emergency steering pump		<b>ELECTRICAL SYSTEM</b> Voltage 24 V  Battery Type Two AGM (Absorption Glass Mat) type  Battery Capacity 2 X 75 Ah  Alternator Rating 28V 100A																					
	<b>VEHICLE SPEEDS</b> <table><tr><td>1st</td><td>7 km/h</td><td>4 mph</td></tr><tr><td>2nd</td><td>15 km/h</td><td>9 mph</td></tr><tr><td>3rd</td><td>23 km/h</td><td>14 mph</td></tr><tr><td>4th</td><td>35 km/h</td><td>22 mph</td></tr><tr><td>5th</td><td>47 km/h</td><td>29 mph</td></tr><tr><td>6th</td><td>50 km/h</td><td>31 mph</td></tr><tr><td>R</td><td>7 km/h</td><td>4 mph</td></tr></table>		1st	7 km/h	4 mph	2nd	15 km/h	9 mph	3rd	23 km/h	14 mph	4th	35 km/h	22 mph	5th	47 km/h	29 mph	6th	50 km/h	31 mph	R	7 km/h	4 mph	<b>CAB</b> ROPS/FOPS certified 74 dBA internal sound pressure measured according to ISO 6396		
	1st	7 km/h	4 mph																							
	2nd	15 km/h	9 mph																							
3rd	23 km/h	14 mph																								
4th	35 km/h	22 mph																								
5th	47 km/h	29 mph																								
6th	50 km/h	31 mph																								
R	7 km/h	4 mph																								

## Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE*				LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN				BODY	m³ (yd³)		kg (lb)
Front	9,632 (21,235)	No sinkage/Total Contact Area (as recommended by tyre manufacturer)	Calculation method used by competition			Struck Capacity	11.5 (15)	Bin liner	751 (1,656)
Middle	5,568 (12,275)					SAE 2:1 Capacity	15 (19.5)	Tailgate	735 (1,621)
Rear	5,528 (12,187)	23.5 R 25	kPa (Psi)	23.5 R 25	kPa (Psi)	SAE 1:1 Capacity	18 (23.5)	Wheelset 750/65 R25	
Total	20,728 (45,697)	Front	267 (38.7)	Front	131 (19)	SAE 2:1 Capacity	15 (19.6)	(per vehicle) Add	642 (1,415)
LADEN		Mid/Rear	357 (51.8)	Rear	155 (22.5)	with Tailgate		EXTRA WHEELSET	
Front	12,372 (27,276)							23.5 R25	
Middle	16,198 (35,710)	750/65 R25		750/65 R25		Rated Payload	24,000 kg	(per vehicle) Add	544 (1,199)
Rear	16,158 (35,622)	Front	229 (33.2)	Front	106 (15.4)		(52,911 lbs)	750/65 R25	
Total	44,728 (98,608)	Mid/Rear	270 (39.1)	Rear	128 (18.6)			(per vehicle) Add	656 (1,446)

\* including additional equipment (tailgate)

## Dimensions

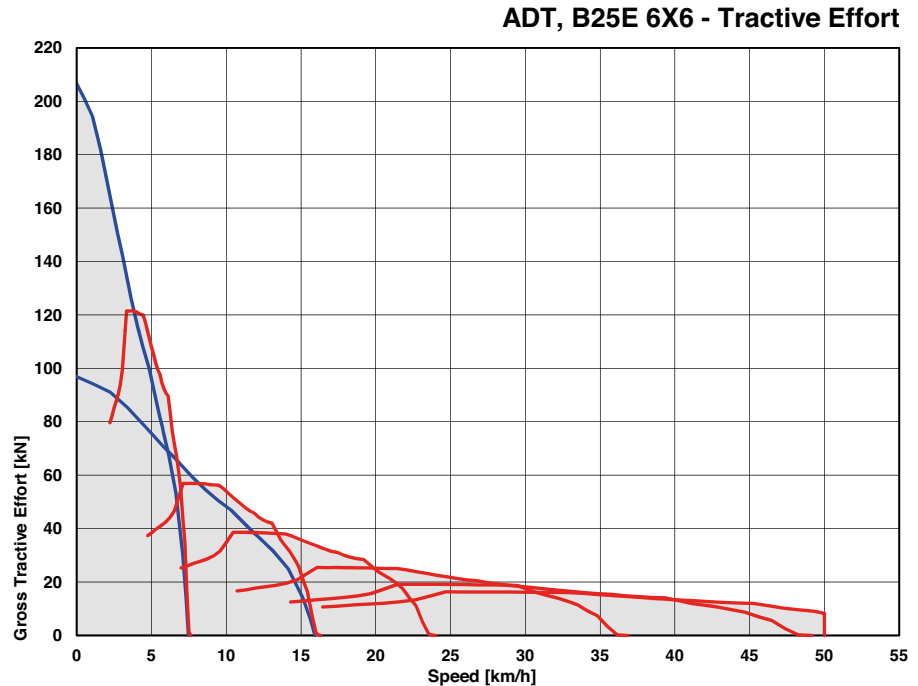
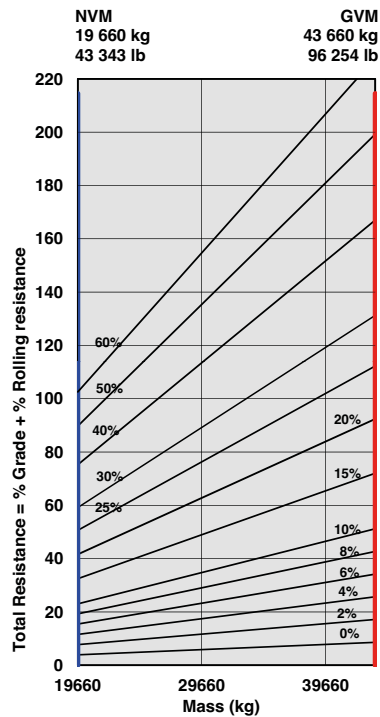


### Machine Dimensions

A	Length - Transport Position	9,953 mm (32 ft. 7 in.)	L	Bin Lip Height - Transport Position	2,176 mm (7 ft. 1 in.)
A1	Length - Bin Fully Tipped	10,395 mm (34 ft. 1 in.)	M	Bin Length	5,294 mm (17 ft. 4 in.)
B	Height - Transport Position	3,426 mm (11 ft. 2 in.)	N	Load over Height	2,864 mm (9 ft. 4 in.)
B1	Height - Rotating Beacon	3,661 mm (12 ft.)	O	Rear Axle Center to Bin Rear	1,500 mm (4 ft. 11 in.)
B2	Height - Load Light	3,747 mm (12 ft. 3 in.)	P	Mid Axle Center to Rear Axle Center	1,670 mm (5 ft. 5 in.)
B3	Bin Height - Fully Tipped	6,307 mm (20 ft. 8 in.)	Q	Mid Axle Center to Front Axle Center	4,181 mm (13 ft. 8 in.)
C	Width over Mudguards	2,985 mm (9 ft. 9 in.)	R	Front Axle Center to Machine Front	2,602 mm (8 ft. 6 in.)
D	Width over Tires - 23.5R25	2,940 mm (9 ft. 7 in.)	S	Front Axle Center to Artic Center	1,362 mm (4 ft. 5 in.)
D1	Width over Tires - 750/65 R25	2,998 mm (9 ft. 10 in.)	T	Approach Angle	25°
E	Tire Track Width - 23.5R25	2,356 mm (7 ft. 8 in.)	U	Maximum Bin Tip Angle	70°
E1	Tire Track Width - 750/65 R25	2,260 mm (7 ft. 4 in.)	V	Maximum Articulation Angle	45°
F	Width over Bin	2,968 mm (9 ft. 8 in.)	W	Front Tie Down Height	1,075 mm (3 ft. 6 in.)
F1	Width over Tailgate	2,998 mm (9 ft. 10 in.)	X	Machine Lifting Centers	9,443 mm (30 ft. 11 in.)
G	Width over Mirrors - Operating Position	3,260 mm (10 ft. 8 in.)	Y	Inner Turning Circle Radius - 23.5R25	4,110 mm (13 ft. 5 in.)
H	Ground Clearance - Artic	537 mm (21.14 in.)	Y1	Inner Turning Circle Radius - 750/65 R25	4,081 mm (13 ft. 4 in.)
I	Ground Clearance - Front Axle	488 mm (19.21 in.)	Z	Outer Turning Circle Radius - 23.5R25	8,000 mm (26 ft. 2 in.)
J	Ground Clearance - Bin Fully Tipped	670 mm (26.38 in.)	Z1	Outer Turning Circle Radius - 750/65 R25	8,029 mm (26 ft. 4 in.)
K	Ground Clearance - Under Run Bar	N/A			

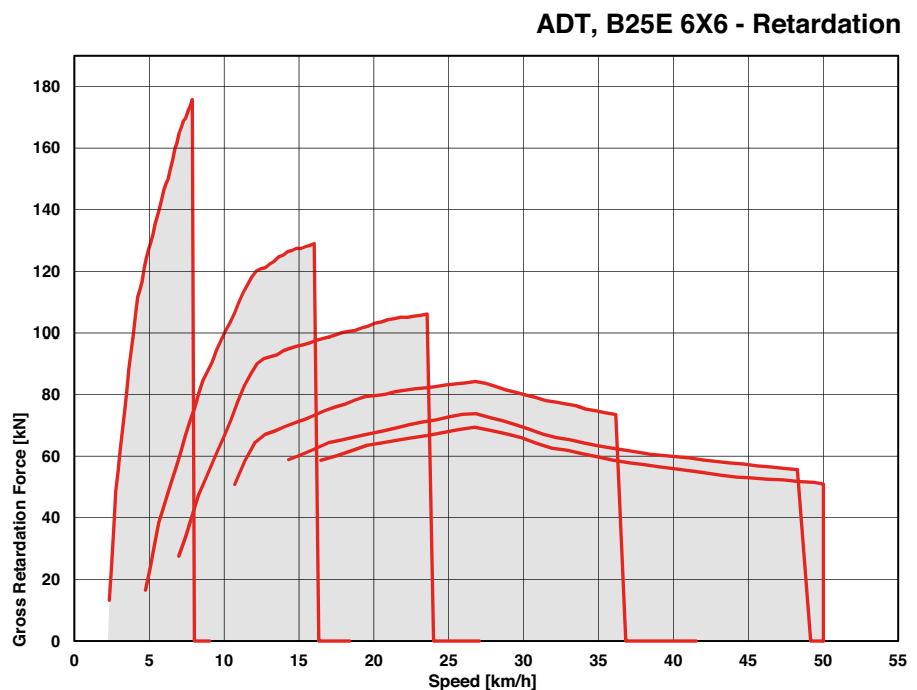
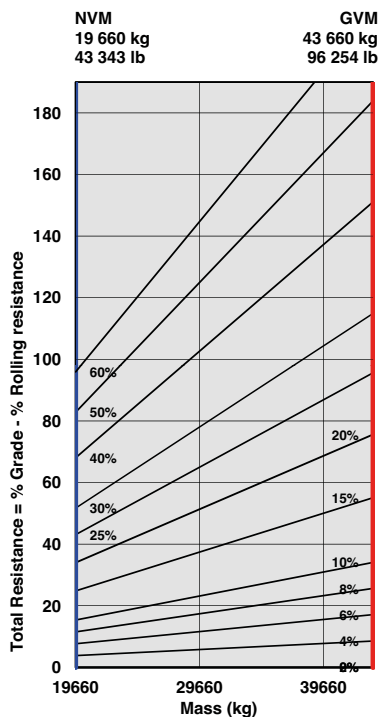
## Gradeability/Rimpull

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




B23E	B30E	
		<b>ENGINE</b>
●	●	Jacobs Engine Brake®
●	●	Dual element air cleaner with dust ejector valve
●	●	Precleaner with automatic dust scavenging
●	●	Water separator
●	●	Serpentine drive belt with automatic tensioner
●	●	Provision for fast fill
		<b>COOLING</b>
●	●	Crankshaft mounted electronically controlled viscous fan drive
●	●	Fan guard
		<b>PNEUMATIC SYSTEM</b>
●	●	Engine-mounted compressor
●	●	Air drier with heater
●	●	Integral unloader valve
		<b>ELECTRICAL SYSTEM</b>
●	●	Battery disconnect
●	●	Drive lights
●	●	Air horn
●	●	Reverse alarm
▲	▲	White noise reverse alarm
●	●	Rotating beacon
●	●	Rear flashing lights
●	●	Pitch roll sensor
●	●	LED reverse lights
▲	▲	LED artic reverse light
▲	▲	Halogen artic reverse light
		<b>STEERING SYSTEM</b>
●	●	Bi-directional ground-driven secondary steering pump
		<b>CAB</b>
●	●	ROPS/FOPS certification
●	●	Tilt cab
●	●	Gas strut-supported door
●	●	I-Tip programmable dump-body tip settings
●	●	HVAC climate control system
●	●	AM/FM radio/CD player
●	●	Rear window guard
●	●	Wiper/washer with intermittent control
●	●	Tilt and telescoping steering wheel
●	●	Centre-mount air-suspension seat
▲	▲	LED work lights
●	●	Halogen 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




B23E	B30E	
		<b>CAB (continued)</b>
●	●	12-volt power outlet
●	●	Cab utility bin (removable)
●	●	Cup holder
●	●	Cooled/heated lunch box
●	●	Electric adjustable and heated mirrors
●	●	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 / Airconditioner/Heater controls / Preselected Speed Control
		<b>DUMP BODY</b>
●	●	Dump body mechanical locks (x2). Partially up and fully up
▲	▲	Body liner
▲	▲	Tailgate
▲	▲	Body heater
▲	▲	Less dump body and cylinders
		<b>OTHER</b>
●	●	Automatic Traction Control (ATC)
●	●	Wet disc brakes B30E
●	●	Dry disc brakes B23E
●	●	23.5R25 Radial Earthmover tires
▲	▲	750/65R25 Radial Earthmover tires
●	●	Automatic greasing
●	●	Onboard weighing
▲	▲	Load lights: stack
▲	▲	Comfort ride suspension (Front)
▲	▲	Comfort ride suspension (Rear)
▲	▲	Reverse camera
▲	▲	Hand rails
●	●	Cab peak
▲	▲	High pressure hydraulic filter
▲	▲	Fuel heater
●	●	Belly cover
●	●	Cross member cover
▲	▲	Remote transmission filters
●	●	Fleetm@tic® Classic Package for 5 years
●	●	Electronic hood opening

All dimensions are shown in millimeters, unless otherwise stated between brackets. Under our policy of continuous improvement, we reserve the right to change technical data and design without prior notice. Photographs featured in this brochure may include optional equipment. Blu@vantage™ is a trademark of Bell Equipment Co. (PTY) Ltd AdBlue® is a registered trademark of VDA

**BELL INTERNATIONAL: Tel: +27 (0)35-907 9431**

**E-mail: [marketing@bellequipment.com](mailto:marketing@bellequipment.com) • [www.bellequipment.com](http://www.bellequipment.com)**

 Tel: +61 (0)8-9355-2442  
 Tel: +49 (0)6631 / 91-13-0  
 Tel: +33 (0)5-55-89-23-56

 Tel: +27 (0)11-928-9700  
 Tel: +44 (0)1283-712862  
 Tel: +1 (854) 855 7507

**Strong Reliable Machines  
Strong Reliable Support**

**BELL**