

## **B25E | B30E MK2**



**Tier 4f/Stage IV Certified** 



# E is for evolution

Your business is our business. Bell Articulated Dump Trucks haul more, for longer at the lowest cost-per-ton to deliver more on your profit margins.

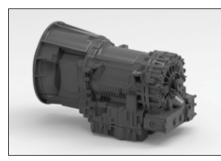
As a global leader in Articulated Dump Trucks, Bell Equipment brings you the world class E-series range. The evolutionary E-series is packed with class leading features that deliver production boosting payloads, lower daily operating costs, superior ride quality and uncompromised safety standards. Bell E-series ADTs will give your business the competitive edge you need.



Specifications	<b>B25E</b>	B30E
Gross power	210 kW (281 hp)	246 kW (329 hp)
Operating mass		
Empty	19,660 kg (43,343 lb)	20,140 kg (44,401 lb)
Loaded	43,660 kg (96,253 lb)	48,140 kg (106,131 lb)
Rated payload	24,000 kg (52,911 lb)	28,000 kg (61,729 lb)
2:1 heaped capacity	15 m³ (19.5 yd³)	17.5 m <sup>3</sup> (22.9 yd <sup>3</sup> )

# Building on pedi

Building on from the D-series platform, Bell Equipment's evolutionary approach to design delivers optimized power-toweight ratio and legendary fuel efficiency.



Planetary powershift transmission optimizes shift points to match conditions and vehicle weight while protecting the transmission from operator error and abuse.



The transfer case inter-axle differential delivers equal torque to each axle when traction is favorable. When conditions deteriorate, the diff-lock automatically engages to deliver torque to the tires that can best use it.



High-strength steel and widely spaced taper roller bearings in the articulation area enhance long-term durability.



A tailgate is available as an option for better material retention. The tailgate opens as the bin is raised for dumping. Spring steel straps maintain positive seal throughout the haul, ensuring minimal material is lost.

- Limited-slip differentials and electronically controlled automatic Inter-axle Differential Lock (IDL) provide Automatic Traction Control (ATC) in poor underfoot conditions.
- The best-in-class payload-to-weight ratio means that more of your fuel cost is spent moving the material, not running the machine, decreasing your cost per ton.
- An industry leading, fully automatic six-speed planetary transmission with torque converter lock-up maximizes fuel efficiency.
- Automatic retardation slows the truck when the operator backs off the accelerator pedal for more confidence on steep grades and enhanced brake life.



- Electronic common rail fuel system provides high injection pressures even at low engine speed for improved cold-starting ability, low-speed response and reduced emissions.
- The short front end provides the best approach angle that allows these ADTs to attack steep terrain.
- High-travel suspension keeps all tires in constant contact with the ground, for optimum traction.

# Uncompromised durability

Built smarter, to work harder. Bell ADTs offer optimized machine weights so you spend more time and money moving material and not running the machine.

With decades of ADT experience, the new Bell E-series articulated hauler is designed and manufactured using purpose built, reliable Bell components best suited for the toughest of conditions. The central oscillation joint, high suspension travel on all axles, and balanced weight distribution provide the agility and ability to navigate hostile terrain.



The high-strength steel chassis delivers strength and rigidity without excess weight.





For comfortable productivity, the A-frame suspension system coupled with hydropneumatic suspension struts reduce the lateral vibration often experienced with off-road conditions. A superior suspension seat provides additional isolation for the operator.



Rough terrain demands tough suspensions. Heavy-duty components absorb shocks and come back for more. You get best-in-class suspension travel and ground clearance, too.

# Run leaner cleaner

A combination of an optimally tuned engine and weight optimized complete machine package ensure that Bell ADTs have a minimal carbon footprint.

## SCR uses AdBlue®/DEF which

- is non-toxic, odorless, low cost and simple to refill.
- is injected into the flow of the exhaust gases and reacts with the NOx gases in the catalytic convertor to form harmless nitrogen and water.
- is consumed at approximately 3-5% of your fuel usage.

## EGR

- recirculates burnt exhaust gas back into the combustion chamber, lowering combustion temperatures and NOx production.
- on the Mercedes Benz engine, does not require a diesel particulate filter (DPF) and associated regeneration.







- Reduced emissions
- Improved engine efficiency
- Lower fuel consumption
- Improved power
- Improved torque
- Improved engine response

# Operate with ease

Using the latest in automotive technology and state-of-the-art tooling, the E-series takes operator experience to new heights.

Climb into the cab of a Bell ADT and you will feel right at home. Its quiet, spacious interior, ergonomically positioned operator station and climate-controlled cabin is loaded with productivity boosting comfort and convenience features that minimize operator fatigue and enhance the operator's experience. Modern flowing lines, in keeping with current styling trends on road vehicles, offer unsurpassed levels of visibility.

From the state-of-the-art 10" full color screen, automotive mouse interface and sealed switch module with centrally located sealed display unit to air suspension seat, tilt/telescoping steering wheel and optional CD player with high-output speakers, the E-series provides everything your operators need to perform at their best.





Easy-to-understand instruments and intuitive controls wrap around the operator so they're easier to view and operate.



A user friendly 10" color monitor offers vital operating information, safety warnings, detailed diagnostic readings and dump body function settings.



An automotive controller provides menu navigation on the color monitor to extract information on machine operation and adjustment of machine settings.

# Safety, our business too

By listening to users and delivering on expectations in an ever changing workplace, we provide a truck that leads in application safety with numerous groundbreaking innovations.

Independent features such as Keyless Start, Hill Assist, Bin Tip Prevention, Auto Park Application (APA), Standard Turbo Spin Protection and On-Board Weighing (OBW) are still standard on the E-series. For improved safety and productivity, the E-series has an electronically controlled automatic Inter-axle Differential Lock (IDL) giving the vehicle full Automatic Traction Control (ATC).





Our quiet operator cabins are ROPS/ FOPS certified with an air suspension operator seat. The trainer seat has a retractable lap belt while the operator seat has a standard 3 point seat belt. Both have automatically locking retractors.



An optional integrated reverse camera and high visibility mirrors ensure superior all round visibility.



Keyless start, driver identity and access codes ensure no unauthorized operation of your equipment.

# 

The E-series is loaded with features that make it as easy to maintain as it is to operate. Spend less time and expense getting ready for work and more time getting work done.

Easy-to-reach dipsticks, see-through reservoirs, sight gauges and grouped service points make quick work of the daily routine. Quickchange filters, extended engine and hydraulic oil-service intervals lower daily operating costs and provide superior machine uptime. An industry leading 10" color monitor offers on-board machine diagnostics as well as automated daily service functionality, this coupled with diagnostic test ports help you troubleshoot and make informed maintenance decisions on site. Automated daily service checks can be done with ease and comfort from inside the operator station using the 10" color LCD monitor and sealed display controller.

- The load-sensing hydraulic system was designed with simplicity in mind, while maintaining efficiency. Fewer components for improved reliability and serviceability.
- Extended engine transmission and hydraulic oil-change for increased uptime and lower operating cost.
- Available environmental drains allow quick, no-spill changes.
- Your Bell Service Center has the parts and backup you need to stay productive and offers a wide variety of preventative maintenance and support programs to help you control costs.

Secular Differencement	-	- DD-300
Definition	NUMBER OF STREET, STRE	
Project	- Avel Sandra Dear HC	- 91842 Hold CORE
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Enders & Rewriters	CHARGE MARKS	
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Hydrauline .	TANK P STREAM	
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If something goes wrong, the diagnostic monitor provides service codes and supporting info to help diagnose the problem.



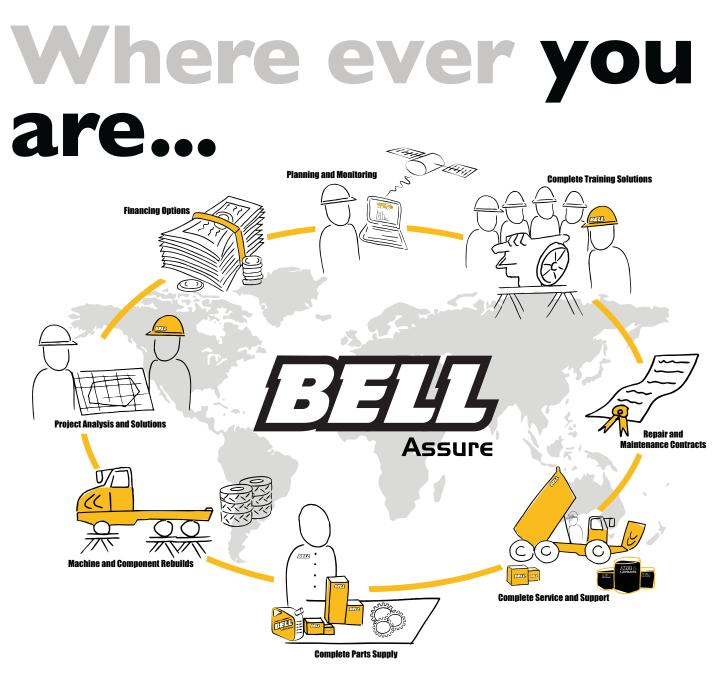
The cab can be tilted in minutes without special tools, for convenient service access to drivetrain components.



An in-cab load center simplifies fuse replacement. Fewer relays, connectors and harnesses mean higher reliability.



We offer a remote transmission filter option. They make transmission filter replacement a fast and clean task.



Through our own network as well as approved dealers and strategic alliances we ensure supply and support to the global market.

Develop a lasting and meaningful partnership with Bell Equipment through Bell Assure, your tailor-made support structure furnished with all the after-sales tools you need to give you best value, peace of mind and a unique after-sales experience.

# ...we have you covered

## Technical Data - B25E

ENGINE Manufacturer Mercedes Benz

Model OM936LA

Configuration Inline 6, turbocharged and intercooled.

Gross Power 210 kW (281 hp) @ 2,200 rpm

Net Power 201 kW (269 hp) @ 2,200 rpm

Gross Torque 1,150 Nm (848 lbft) @ 1,200 -1,600 rpm

Displacement 7.7 liters (469 cu.in)

Auxiliary Brake Engine Valve Brake

Fuel Tank Capacity 302 liters (79.78 US gal)

AdBlue® Tank Capacity 31 I (8.2 US gal)

Certification OM936LA meets EU Stage IV / EPA Tier 4 Final emissions regulations.

TRANSMISSION 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 Torque Control Hydrodynamic with lock-up in all gears.

TRANSFER CASE Manufacturer Bell VGR

**Model** 8100

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 15T

> 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 dry disc brakes with 8 calipers (4F, 2M, 2R).

Maximum brake force: 184 kN (41,400 lbf)

Park & Emergency Spring applied, air released driveline mounted disc.

Maximum brake force: 195 kN (43,900 lbf)

### **Auxiliary Brake**

Automatic engine valve brake. Automatic, adjustable, integral, hydrodynamic transmission retarder. Output shaft speed dependent.

Total Retardation Power Continuous: 318 kW (426 hp) Maximum: 588 kW (788 hp)

### WHEELS

Type Radial Earthmover

**Tire** 23.5 R 25

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

**REAR SUSPENSION** Pivoting walking beams with laminated rubber suspension blocks.

### 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

165 l/min (44 gal/min)

Pressure 28 MPa (4,061 psi)

Filter 5 microns

### STEERING SYSTEM

Double acting cylinders, with grounddriven emergency steering pump.

Lock to lock turns 4.1

Steering Angle 45°

### **DUMPING SYSTEM** Two double-acting, single stage, dump cylinders.

Raise Time 14.5 s

Lowering Time 7.5 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 810 kPa (117 psi)

### **ELECTRICAL SYSTEM** Voltage

24 V Battery Type

Two AGM (Absorption Glass Mat) type.

Battery Capacity 2 X 75 Ah

Alternator Rating 28V 80A

VEHI	CLE SPEEDS	
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

### CAB

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

## Load Capacity & Ground Pressure

OPERATIN			GROUND PRESSURE LOAD CAPACITY OPTION WEIGHTS		/EIGHTS				
UNLADEN	kg (lb)	LADEN (N	lo sinkage)	LADEN (15	% sinkage)	BODY	m <sup>3</sup> (yd <sup>3</sup> )		kg (lb)
Front	10,085 (22,230)	23.5 R 25	kPa (Psi)	23.5 R 25	kPa (Psi)	Struck Capacity	12 (15.7)	Bin liner	1,050 (2,314)
Middle	4,805 (10,600)	Front	246 (36)	Front	230 (33)	SAE 2:1 Capacity	15 (19.5)	Tailgate	769 (1,695)
Rear	4,770 (10,520)	Middle	337 (49)	Middle	283 (41)	SAE 1:1 Capacity	18 (23.5)	Extra wheelset	565 (1,246)
Total	19,660 (43,350)	Rear	337 (49)	Rear	283 (41)	SAE 2:1 Capacity			
LADEN						with Tailgate	15.5 (20.3)		
Front	12,825 (28,274)								
Middle	15,435 (34,028)					Rated Payload	24,000 kg		
Rear	15,400 (33,951)						(52,911 lbs)		
Total	43,660 (96,253)								

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## **Technical Data - B30E**

ENGINE Manufacturer Mercedes Benz

Model OM936LA

**Configuration** Inline 6, turbocharged and intercooled.

Gross Power 246 kW (329 hp) @ 2,200 rpm

Net Power 236 kW (316 hp) @ 2,200 rpm

Gross Torque 1,300 Nm (958 lbft) @ 1,150 -1,800 rpm

Displacement 7.7 liters (469 cu.in)

Auxiliary Brake Engine Valve Brake

Fuel Tank Capacity 302 liters (79.78 US gal)

AdBlue® Tank Capacity 31 I (8.2 US gal)

Certification OM936LA meets EU Stage IV / EPA Tier 4 Final emissions regulations.

TRANSMISSION 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 Torque Control Hydrodynamic with lock-up in all gears.

TRANSFER CASE Manufacturer Bell VGR

**Model** 10000

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 18T

> 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, middle and rear axles.

Maximum brake force: 233 kN (52,380 lbf)

Park & Emergency Spring applied, air released driveline mounted disc.

Maximum brake force: 214 kN (48,200 lbf)

### **Auxiliary Brake**

Automatic engine valve brake. Automatic, adjustable, integral, hydrodynamic transmission retarder. Output shaft speed dependent.

Total Retardation Power Continuous: 318 kW (426 hp) Maximum: 588 kW (788 hp)

### WHEELS Type

Radial Earthmover Tire 23.5 R 25 (750/65 R 25 optional)

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

**REAR SUSPENSION** Pivoting walking beams with laminated rubber suspension blocks.

**HYDRAULIC SYSTEM** Full load sensing system serving the prioritized steering, body tipping and

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

165 l/min (44 gal/min)

Pressure 28 MPa (4,061 psi)

Filter 5 microns

### STEERING SYSTEM

Double acting cylinders, with grounddriven emergency steering pump.

Lock to lock turns 4.1 Steering Angle

45°

**DUMPING SYSTEM** Two double-acting, single stage, dump cylinders.

Raise Time 14.5 s

Lowering Time 7.5 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 810 kPa (117 psi)

ELECTRICAL SYSTEM Voltage 24 V

Battery Type Two AGM (Absorption Glass Mat) type.

Battery Capacity 2 X 75 Ah

Alternator Rating 28V 80A

VEHI	CLE SPEEDS	
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

CAB

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

## Load Capacity & Ground Pressure

OPERATI	NG WEIGHTS	GROUND PRESSURE			LOAD CAPACITY		<b>OPTION WEIGHTS</b>		
UNLADEN	kg (lb)	LADEN-N	o sinkage	LADEN-159	% sinkage	BODY	m <sup>3</sup> (yd <sup>3</sup> )		kg (lb)
Front	10,130 (22,330)	23.5 R 25	kPa (Psi)	23.5 R 25	kPa (Psi)	Struck Capacity	14 (18.3)	Bin liner	1,182 (2,606)
Middle	5,025 (11,080)	Front	282 (41)	Front	246 (36)	SAE 2:1 Capacity	17.5 (22.9)	Tailgate	825 (1,818)
Rear	4,985 (10,990)	Middle	380 (55)	Middle	317 (46)	SAE 1:1 Capacity	21 (27.5)	Extra wheelset	
Total	20,140 (44,400)	Rear	380 (55)	Rear	317 (46)	SAE 2:1 Capacity		(23.5 R 25)	565 (1,246)
LADEN						with Tailgate	18 (23.5)	Extra wheelset	
Front	13,500 (29,760)	750/65 R 25	kPa (Psi)	750/65 R 25	kPa (Psi)			(750/65 R 25)	738 (1,627)
Middle	17,340 (38,230)	Front	235 (34)	Front	213 (31)	Rated Payload	28,000 kg		
Rear	17,300 (38,140)	Middle	310 (45)	Middle	274 (40)		(61,729 lbs)		
Total	48,140 (106,130)	Rear	310 (45)	Rear	274 (40)				

ENGINE	CAB (continued)
Engine valve brake and exhaust brake	Cup holder
Dual element air cleaner with dust ejector valve	<ul> <li>Cooled/heated lunch box</li> </ul>
Precleaner with automatic dust scavenging	<ul> <li>Electric adjustable and heated mirror</li> </ul>
Water separator	Deluxe 10" color LCD:
Serpentine drive belt with automatic tensioner	Speedometer / Fuel gauge /
Provision for fast fill	Transmission oil temperature gauge
	Engine coolant temperature gauge
COOLING	LED function/warning indicators and
Crankshaft mounted electronically controlled	alarm / Transmission gear selection
viscous fan drive	Tachometer / Battery voltage / Hou
Fan guard	Odometer / Fuel consumption / Tip
	Trip timer / Trip distance / Metric/En
PNEUMATIC SYSTEM	Service codes/diagnostics
Engine-mounted compressor	<ul> <li>Backlit sealed switch module function</li> </ul>
Air drier with heater	Wiper control / Lights / Heated mirro
Integral unloader valve	Retarding aggressiveness / Transfer
	differential lock / Transmission gear
	Dump-body tip limit / Automatic du
Battery disconnect	tip settings / Air conditioner/ Heater
Drive lights	Preselected Speed Control
Air Horn	
Reverse alarm	DUMP BODY
Rotating Beacon	Dump body mechanical locks (x2).
Pitch Roll Sensor	and fully up
Artic reverse light	A Body liner
	A Tailgate
STEERING SYSTEM	▲ ▲ Body heater
Bi-directional ground-driven secondary steering	▲ ▲ Less dump body and cylinders
pump	
САВ	OTHER     Automatic Traction Control (ATC)
ROPS/FOPS certification	<ul> <li>Wet disc brakes B30E</li> </ul>
Tilt cab	
	<ul> <li>Dry disc brakes B25E</li> <li>22 5P25 Padial Earthmover tires</li> </ul>
Gas strut-supported door	<ul> <li>23.5R25 Radial Earthmover tires</li> <li>750/65 Doc Dadial Earthmover tires</li> </ul>
-Tip programmable dump-body tip settings	▲ 750/65R25 Radial Earthmover tires
HVAC Climate control system	● ● Remote grease banks
AM/FM radio/CD player	Automatic greasing
Rear window guard	Onboard Weighing
Wiper/washer with intermittent control	▲ ▲ Load lights: stack
Tilt and telescoping steering wheel	Comfort ride suspension (Front)
Center-mount air-suspension seat	▲ ▲ Comfort ride suspension (Rear)
Forward work lights	Reverse camera
LED work lights	A A Hand rails
Rotating beacon: seat belt installation	• • Cab peak
Remote engine and machine isolation	▲ ▲ High pressure hydraulic filter
Remote battery jump start	▲ ▲ Fuel heater
Retractable 3 point seat belt	● ● Belly cover
Heated seat	<ul> <li>Cross member cover</li> </ul>
Foldaway trainer seat with retractable seat belt	Remote transmission filters
ordaway trainer sour with rou delable sear beir	
12-volt power outlet	Fleetm@tic® Classic Package for 5

• • Cab utility bin (removable)



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@dvantage™ is a trademark of Bell Equipment Co. (PTY) Ltd AdBlue® is a registered trademark of VDA

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0815. E-series ADT



