B20E

LOW GROUND PRESSURE

6x6

Tier 4f/Stage IV Certified

- Gross Power: 170 kW (228 hp)
- Heaped Capacity: 11 m^3 (14.5 yd^3)
- Rated Payload: 18,000 kg (39,683 lbs)
- Operating Weight: 34,493 kg (76,044 lbs)

BELL

Technical Data - B20E Low Ground Pressure

ENGINE

Manufacturer
Mercedes Benz (MTU)

Model
OM934LA / 4R 1000

Configuration
Inline 4, turbocharged and intercooled.

Gross Power
170 kW (228 hp) @ 2,200 rpm

Net Power
161 kW (216 hp) @ 2,200 rpm

Gross Torque
900 Nm (664 lbft) @ 1,200 - 1,600 rpm

Displacement
5.1 liters (311 cu.in)

Auxiliary Brake
Jacobs engine brake

Fuel Tank Capacity
195 liters (52 US gal)

AdBlue® Tank Capacity
31 liters (8.2 US gal)

Certification
OM934LA meets EU Stage IV / EPA Tier 4 Final emissions regulations.

TRANSMISSION

Manufacturer
Allison

Model
3200PR 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
8000

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 wet disc brakes on front and middle axles.

Maximum brake force:
173 kN (38,892 lbf)

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

Maximum brake force:
193 kN (43,388 lbf)

Auxiliary Brake
Automatic Jacobs engine brake.

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

Total Retardation Power
Continuous: 178 kW (239 hp)
Maximum: 584 kW (783 hp)

WHEELS

STANDARD: Type
Radial Earthmover

Tire
20.5 R 25

OPTION: Type
Flotation

Tire
800/45 R 30.5

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
155 l/min (41 gal/min)

Pressure
27 MPa (3,916 psi)

Filter
5 microns

STEERING SYSTEM

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

Lock to lock turns
4.32

Steering Angle
45°

DUMPING SYSTEM

Two double-acting, single stage, dump cylinders.

Raise Time
10 s

Lowering Time
5.5 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

VEHICLE SPEEDS

1st	6 km/h	4 mph
2nd	15 km/h	9 mph
3rd	19 km/h	12 mph
4th	27 km/h	17 mph
5th	36 km/h	22 mph
6th	47 km/h	29 mph
R	6 km/h	4 mph

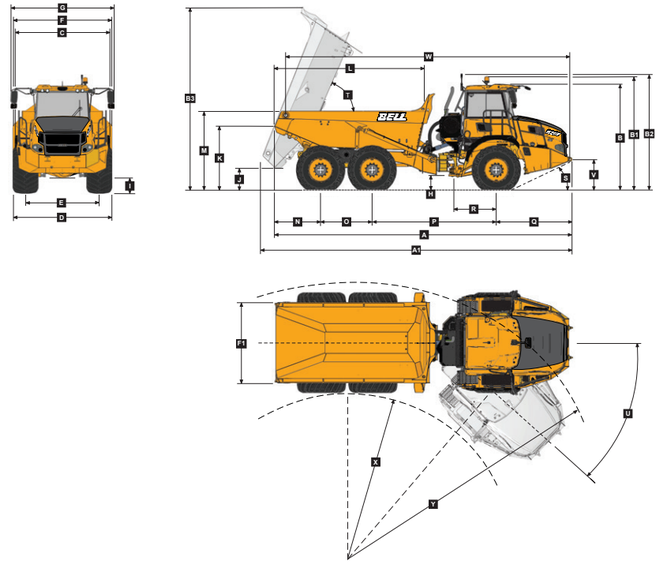
CAB

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

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	**kg (lb)**	**LADEN (No sinkage)**		**BODY**	**m³ (yd³)**		**kg (lb)**
Front	8,740 (19,268)	**20.5 R 25**	**kPa (Psi)**	Struck Capacity	9 (11)	Bin liner	778 (1,715)
Middle	4,016 (8,854)	Front	215 (31)	SAE 2:1 Capacity	11 (14.5)	Tailgate	633 (1,396)
Rear	3,737 (8,239)	Middle	309 (45)	SAE 1:1 Capacity	13.5 (17.5)	Extra wheelset	
Total	16,493 (36,361)	Rear	309 (45)	SAE 2:1 Capacity		20.5 R 25	355 (783)
LADEN		**LADEN (3" sinkage)**		with Tailgate	11.5 (15)	Extra wheelset	
Front	10,540 (23,237)	**800/45 R 30.5**	**kPa (Psi)**			800/45 R 30.5	338 (745)
Middle	12,006 (26,469)	Front	72 (10)	Rated Payload	18,000 kg		
Rear	11,947 (26,338)	Middle	95 (14)		(39,683 lbs)		
Total	34,493 (76,044)	Rear	95 (14)				

Dimensions

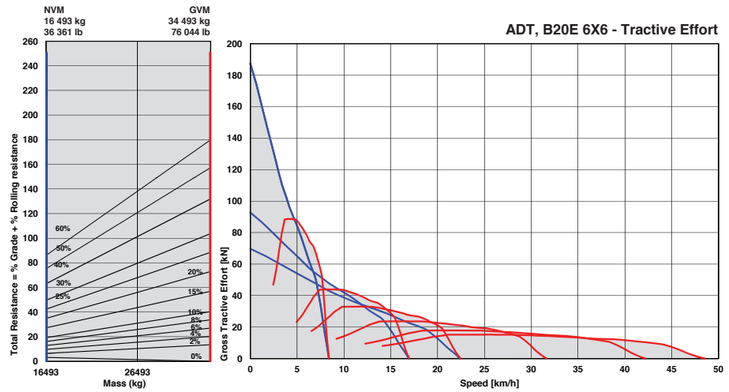


Machine Dimensions

A	Length - Transport Position	9271 mm	(30ft.5in)
A1	Length - Bin Fully Tipped	9560 mm	(31ft.4in)
B	Height - Transport Position	3385 mm	(11ft.1in)
B1	Height - Rotating Beacon	3619 mm	(11ft.10in)
B2	Height - Load Light	3702 mm	(12 ft. 2 in)
B	Bin Height - Fully Tipped	5742mm	(18ft.10in)
C	Width over Mudguards	2984mm	(9ft.9in)
D	Width over Tires - 800/45-30.5	3102mm	(10ft.2in)
D1	Width over Tires - 20.5R25	2931mm	(9ft.7in)
E	Tire Track Width - 800/45-30.5	2312mm	(7ft.7in)
E1	Tire Track Width - 20.5R25	2399mm	(7ft.10in)
F	Width over Bin	2540 mm	(8ft. 4 in)
F1	Width over Tailgate	2838 mm	(9 ft. 4 in)
G	Width over Mirrors - Operating Position	3260mm	(10ft.8in.)
H	Ground Clearance - Artic	498mm	(18.86in.)
I	Ground Clearance - Front Axle	458mm	(17.48in.)
J	Ground Clearance - Bin Fully Tipped	678mm	(26.38in.)
K	Bin Lip Height - Transport Position	2067mm	(6ft.9in.)
L	Bin Length	4709 mm	(15 ft. 5 in.)
M	Load over Height	2537 mm	(8 ft. 4 in.)
N	Rear Axle Centre to Bin Rear	1449mm	(4ft.9in.)
O	Mid Axle Centre to Rear Axle Centre	1600mm	(5ft.2in.)
P	Mid Axle Centre to Front Axle Centre	3865mm	(12ft.8in.)
Q	Front Axle Centre to Machine Front	2357mm	(7ft.8in.)
R	Front Axle Centre to Artic Centre	1361mm	(4ft.5in)
S	Approach Angle	27°	
T	Maximum Bin Tip Angle	70°	
U	Maximum Articulation Angle	45°	
V	Front Tie Down Height	1041mm	(3ft.5in)
W	Machine Lifting Centres	8845mm	(29ft.)
X	Inner Turning Circle Radius-800/45-30.	3678mm	(12ft.1in)
X1	Inner Turning Circle Radius-20.5R2	3763mm	(12ft.4in.)
Y	Outer Turning Circle Radius-800/45-30.	7585mm	(24ft.11 in.)
Y1	Outer Turning Circle Radius-20.5R2	7499mm	(24ft.7in.)

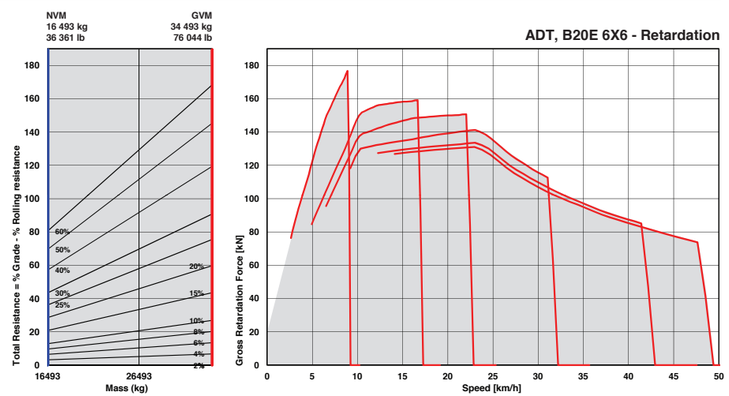
Grade Ability / Rimpull

1. Determine tractive force 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 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 the curve.
3. Read down from this point to determine maximum speed.



Features and Options

● STANDARD ▲ OPTION

ENGINE

- ● Jacobs engine braking
- ● 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

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
- ● Drive Lights
- ● Air Horn
- ● Reverse alarm
- ● Rotating Beacon
- ● Pitch Roll Sensor
- ▲ Artic 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/CD player
- ● Rear window guard
- ● Wiper/washer with intermittent control
- ● Tilt and telescoping steering wheel
- ● Centre-mount air-suspension seat
- ● Forward 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)

CAB

- ● 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.

DUMP BODY

- ▲ Dump-body mechanical lock
- ● Dump-body mechanical lock - partially up
- ▲ Body liner
- ▲ Tailgate
- ▲ Body heater
- ▲ Less dump body and cylinders

OTHER

- ● Automation Traction Control (ATC)
- ● Wet disc brakes
- ● 20.5 R 25 Radial Earthmover tires
- ▲ 800/45 R 30.5 Low Ground Pressure tires
- ● Remote grease banks
- ● Automatic greasing
- ● Onboard Weighing
- ▲ Load lights: stacks
- ● 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
- ▲ Window smash button

The compilation of standard and optional equipment may vary by market region. Please check with your local distributor.

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.

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Strong Reliable Support

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