

# B30E Articulated Dump Truck

## ENGINE

**Manufacturer**  
Mercedes Benz

**Model**  
OM936LA

**Configuration**  
Inline 6, turbocharged and intercooled

**Gross Power**  
260 kW (348 hp) @ 2 200 rpm

**Net Power**  
250 kW (335 hp) @ 2 200 rpm

**Gross Torque**  
1 450 Nm (1 069 lbf ft)  
@ 1 150 - 1 800 rpm

**Displacement**  
7,7 litres (469 cu.in)

**Auxiliary Brake**  
Compression brake

**Fuel Tank Capacity**  
302 litres (79.78 US gal)

**AdBlue® Tank Capacity**  
31 l (8.2 US gal)

**Certification**  
OM936LA meets EU Stage V emissions regulations

## TRANSMISSION

**Manufacturer**  
Allison

**Model**  
3400P 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**  
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 and middle axles. Wet brake oil is circulated through a filtration and cooling system.

Maximum brake force:  
178 kN (40 000 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 retardation through electronic activation of wet brake system.

**Total Retardation Power**  
335kW (449 hp) Continuous  
494kW (662 hp) Maximum

## WHEELS

**Type**  
Radial Earthmover

**Tyre**  
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 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 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**  
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

## VEHICLE SPEEDS

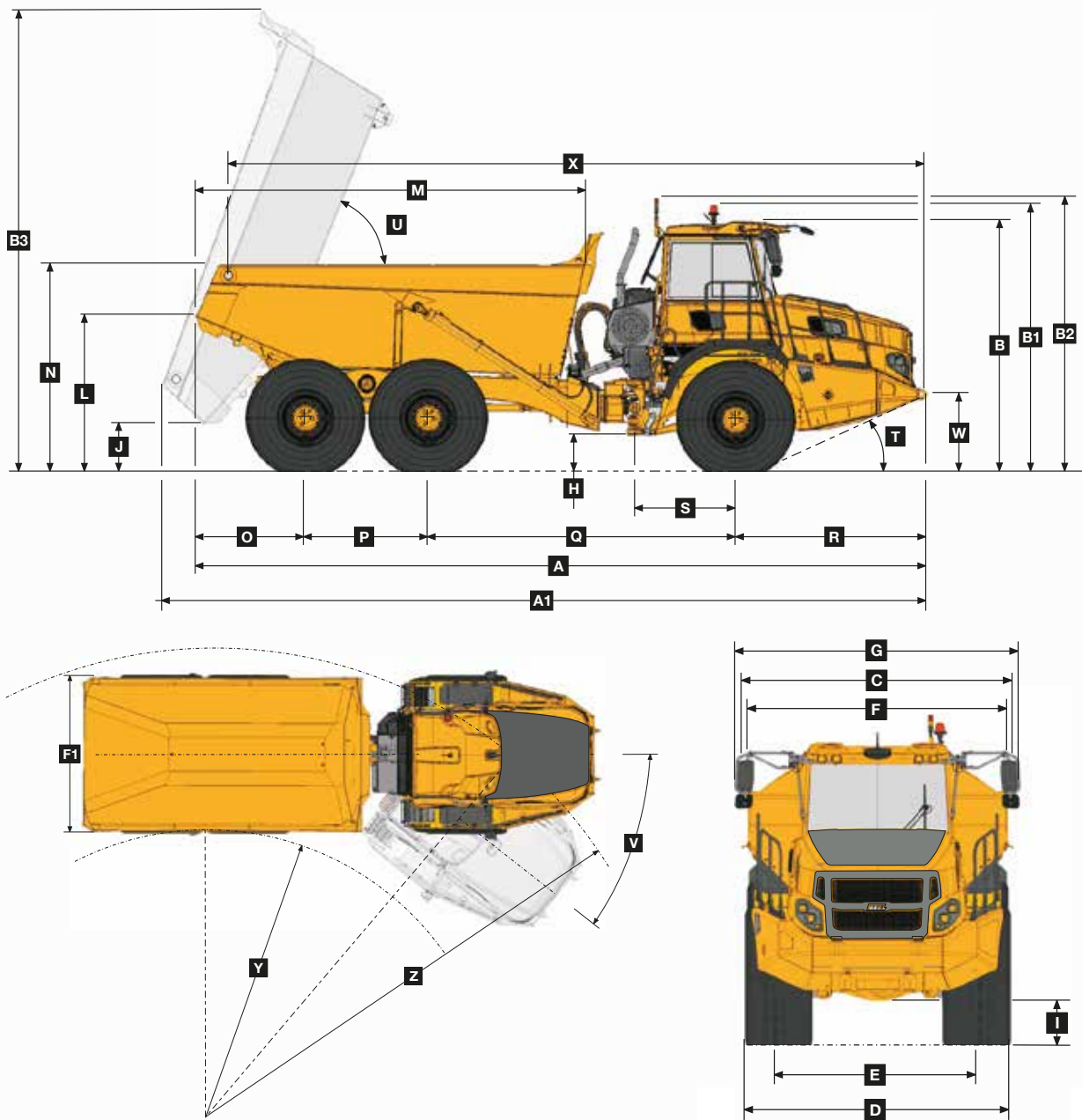
	7 km/h	4 mph
1st	7 km/h	4 mph
2nd	15 km/h	9 mph
3rd	23 km/h	14 mph
4th	35 km/h	22 mph
5th	47 km/h	29 mph
6th	50 km/h	31 mph
R	7 km/h	4 mph

## CAB

ROPS/FOPS certified 72 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		LADEN-15% sinkage		BODY	m <sup>3</sup> (yd <sup>3</sup> )		kg (lb)
Front	10 790 (23 788)	23.5 R 25	kPa (Psi)	23.5 R 25	kPa (Psi)	Struck Capacity	14 (18,3)	Bin liner	1 182 (2 606)
Middle	4 990 (11 001)	Front	282 (41)	Front	246 (36)	SAE 2:1 Capacity	17,5 (22,9)	Tailgate	825 (1 818)
Rear	4 530 (9 987)	Middle	380 (55)	Middle	317 (46)	SAE 1:1 Capacity	21 (27,5)	Extra wheelset	
Total	20 310 (44 779)	Rear	380 (55)	Rear	317 (46)	SAE 2:1 Capacity		(23.5 R 25)	565 (1 246)
<b>LADEN</b>						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	17 405 (38 371)	Front	235 (34)	Front	213 (31)	Rated Payload	28 000 kg		
Rear	17 365 (38 283)	Middle	310 (45)	Middle	274 (40)		(61 729 lbs)		
Total	48 310 (106 505)	Rear	310 (45)	Rear	274 (40)				

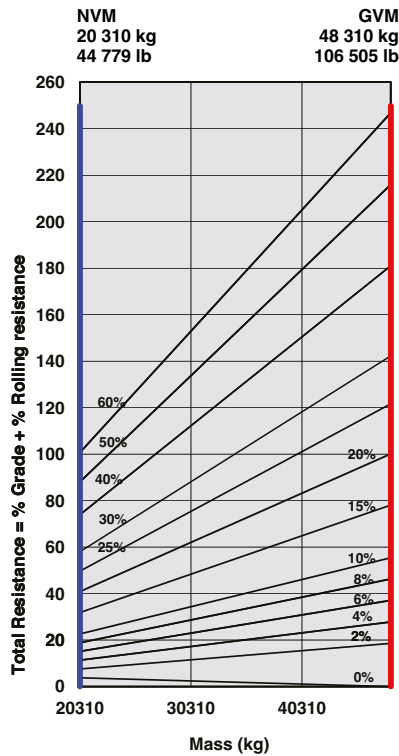


**Machine Dimensions**

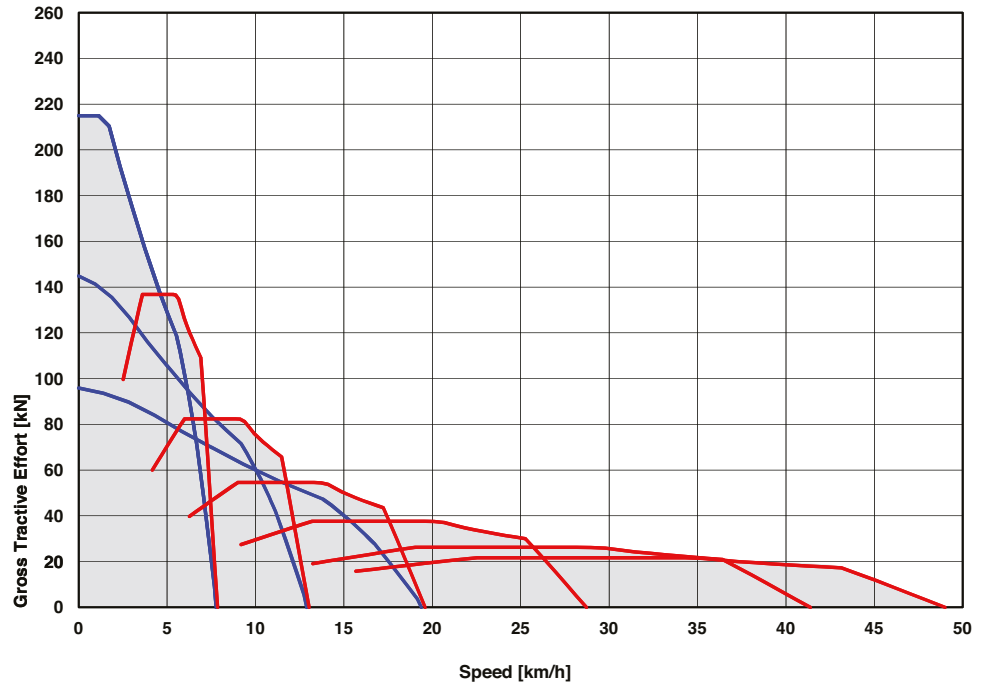
A	Length - Transport Position	9 953 mm (32 ft. 7 in.)	L	Bin Lip Height - Transport Position	2 176 mm (7 ft. 1 in.)
A1	Length - Bin Fully Tipped	10 395 mm (34 ft. 1 in.)	M	Bin Length	5 294 mm (17 ft. 4 in.)
B	Height - Transport Position	3 426 mm (11 ft. 2 in.)	N	Load over Height	2 864 mm (9 ft. 4 in.)
B1	Height - Rotating Beacon	3 661 mm (12 ft.)	O	Rear Axle Centre to Bin Rear	1 500 mm (4 ft. 11 in.)
B2	Height - Load Light	3 747 mm (12 ft. 3 in.)	P	Mid Axle Centre to Rear Axle Centre	1 670 mm (5 ft. 5 in.)
B3	Bin Height - Fully Tipped	6 307 mm (20 ft. 8 in.)	Q	Mid Axle Centre to Front Axle Centre	4 181 mm (13 ft. 8 in.)
C	Width over Mudguards	2 985 mm (9 ft. 9 in.)	R	Front Axle Centre to Machine Front	2 602 mm (8 ft. 6 in.)
D	Width over Tyres - 23.5R25	2 940 mm (9 ft. 7 in.)	S	Front Axle Centre to Artic Centre	1 362 mm (4 ft. 5 in.)
D1	Width over Tyres - 750/65 R25	2 998 mm (9 ft. 10 in.)	T	Approach Angle	25°
E	Tyre Track Width - 23.5R25	2 356 mm (7 ft. 8 in.)	U	Maximum Bin Tip Angle	70°
E1	Tyre 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	3 268 mm (10 ft. 8 in.)	X	Machine Lifting Centres	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.

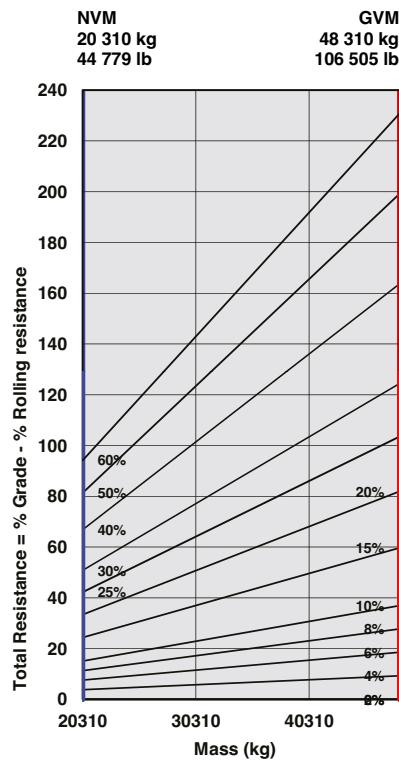


**ADT, B30E 6X6 - Tractive Effort**

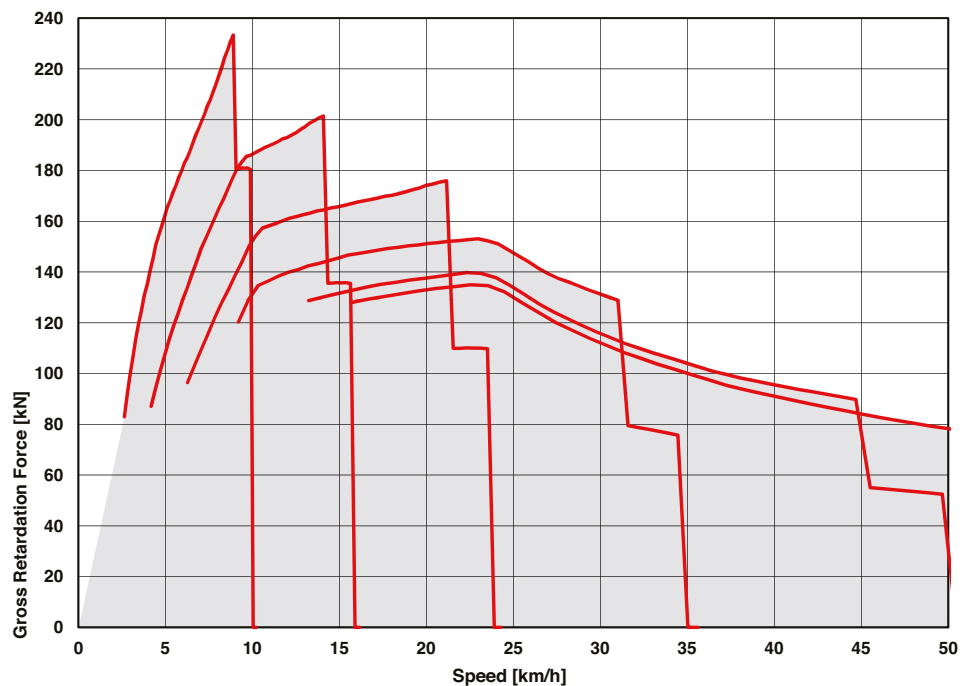


## Retardation

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.



**ADT, B30E 6X6 - Retardation**



B25E	B30E	
<b>ENGINE</b>		
●	●	Engine valve 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
●	●	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

B25E	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" colour 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 B25E
●	●	23.5R25 Radial Earthmover tyres
▲	▲	750/65R25 Radial Earthmover tyres
●	●	Remote grease banks
▲	▲	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
●	●	Electronic Bonnet opening

All dimensions are shown in millimetres, 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.

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

**E-mail: [marketing@bellequipment.com](mailto:marketing@bellequipment.com)**

**Web: [www.bellequipment.com](http://www.bellequipment.com)**



Tel: +44 (0)1283-712862



Tel: +27 (0)11-928-9700



Tel: +49 (0)6631 / 91-13-0



Tel: +7-495-287-80-02



Tel: (704) 655 2802



Tel: +61 (0)8-9355-2442



Tel: +33 (0)5-55-89-23-56

**Strong Reliable Machines  
Strong Reliable Support**

# BELL