

# B22D

## ARTICULATED DUMP TRUCK MKVI



**D**SERIES

- Gross power: 170 kw (288 hp)
- Gross torque: 810 Nm (597 lbft)
- Load capacity: 14 m<sup>3</sup> SAE 2:1 Capacity

**BELL**

# B22D ARTICULATED DUMP TRUCK MkVI

**ENGINE** Mercedes Benz inline 6 cylinder, turbocharged, intercooled, low emission diesel engine

Gross power 170 kW (288 hp) @ 2 200 rpm SAE J1349

Net Power 165 kW (221 hp) @ 2 200 rpm

Gross torque 810 Nm (597 lbf) @ 1 050 -1 850 rpm SAE J1349

Net torque 780 Nm (575 lbf) @ 1 050 -1 850 rpm

Displacement 6,37 litres (389 cu.in)

Fuel tank capacity 200 l (85 US gal)

Auxiliary Brake Exhaust brake Engine Valve Brake (EVB)

Certification Regulated OM 906 LA.E3A/1 meets Europe (EU) step 3

**TRANSMISSION** Engine mounted, fully automatic ZF planetary transmission with six forward gears and one reverse gear.

Torque Converter Hydrodynamic with lock-up in all gears.

Model 6HP592C Ecomat 2 plus

Control Type Electronic

**TRANSFER BOX** Remote mounted

Manufacturer VGR

Model 13100

Layout Three in-line helical gears.

Output Differential 67/33 torque proportioning, Pneumatically lockable on the move.

**AXLES** High strength steel fabricated with spiral bevel type gears on the limited slip locking differential and heavy duty outboard planetary gears.

Model Bell 15T

**BRAKING SYSTEM**

SERVICE BRAKE Dual circuit, full hydraulic actuation caliper brakes on all wheels

Maximum brake force 164 kN (36,900 lbf)

PARK & EMERGENCY Spring applied, air released driveline mounted disc.

Maximum brake force 396 kN (89,000 lbf)

AUXILLIARY BRAKE Automatic exhaust brake and Engine Valve Brake (EVB)

Maximum retardation Variable Adjustable Hydraulic Retarder 442 kW (593 hp)

**WHEELS**

Tyre Earthmover 20.5R25

**FRONT SUSPENSION** Semi-independent, quad rubber mounted leading arm linkages supported by nitrogen and oil filled struts.

**REAR SUSPENSION** Pivoting walking beams, distributing equal load through laminated rubber suspension blocks. Each axle is coupled to the chassis by four rubber-bushed links for ideal vertical movement.

**HYDRAULIC SYSTEM** Full load sensing system incorporating a ground driven emergency steering pump.

Flow 184 l/min (48.6 gal/min)

Pressure 25 Mpa (3915 psi)

Filter 5 micron

**STEERING SYSTEM** Hydrostatically actuated, low effort, fast acting.

Lock to lock turns Two double-acting steering cylinders

Steering Angle 4.1 +-45°

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

Raise Time 12 s

Lowering Time 6 s

Tipping Angle 70°

**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 maintenance free permanently sealed

Battery Capacity 2 X 105 Ah

Alternator Rating 28 V 80 A

**VEHICLE SPEEDS**

	km/h	mph
1st	8	5
2nd	14	9
3rd	25	16
4th	35	22
5th	50	31
6th	60	37
R	9	6



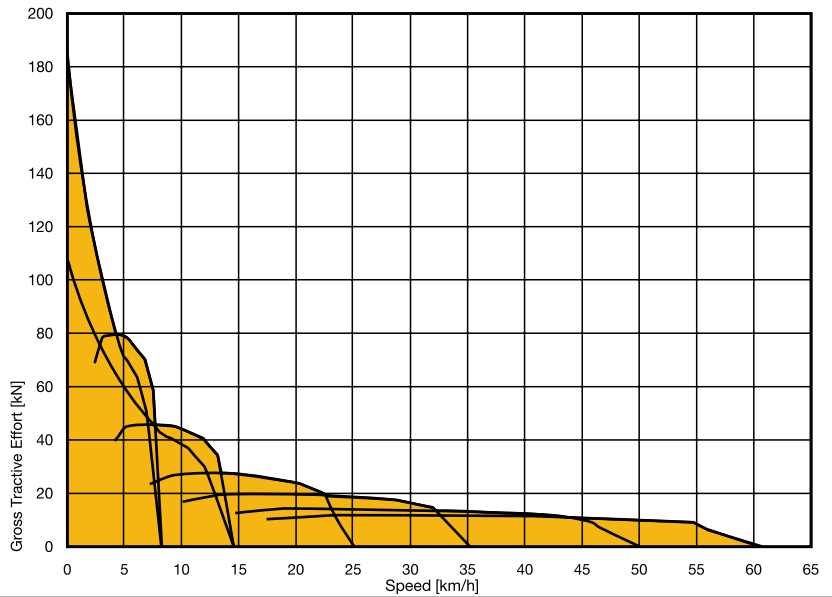
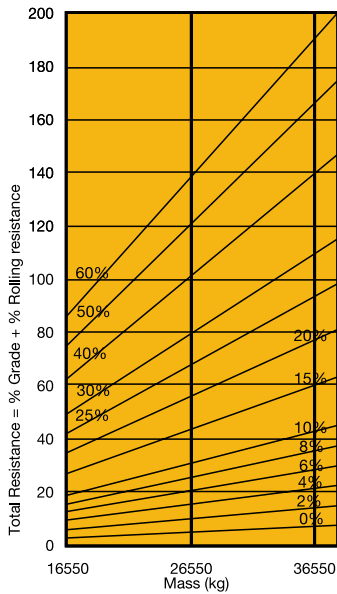
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## LOAD CAPACITY & GROUND PRESSURE

WEIGHTS			GROUND PRESSURE			LOAD CAPACITY		
<b>UNLADEN</b>	<b>kg</b>	<b>lbs</b>	<b>UNLADEN</b>	<b>kPa</b>	<b>psi</b>	<b>BODY</b>	<b>m<sup>3</sup></b>	<b>cu.yd</b>
Front	8 100	17,857	Front	232	33.6	Struck Capacity	11	14.4
Middle	4 250	9,370	Middle	221	32	SAE 2:1 Capacity	14	18.3
Rear	4 200	9,260	Rear	221	32	SAE 1:1 Capacity	18	23.5
Total	16 550	36,487				SAE 2:1 Capacity with Autogate	14,5	19
<b>LADEN</b>			<b>LADEN</b>					
Front	11 100	24,471	Front	259	37.6			
Middle	13 750	30,314	Middle	341	49.4	<b>Rated Payload</b>	22 000 kg	48,502 lbs
Rear	13 700	30,203	Rear	341	49.4			
Total	38 550	84,988						

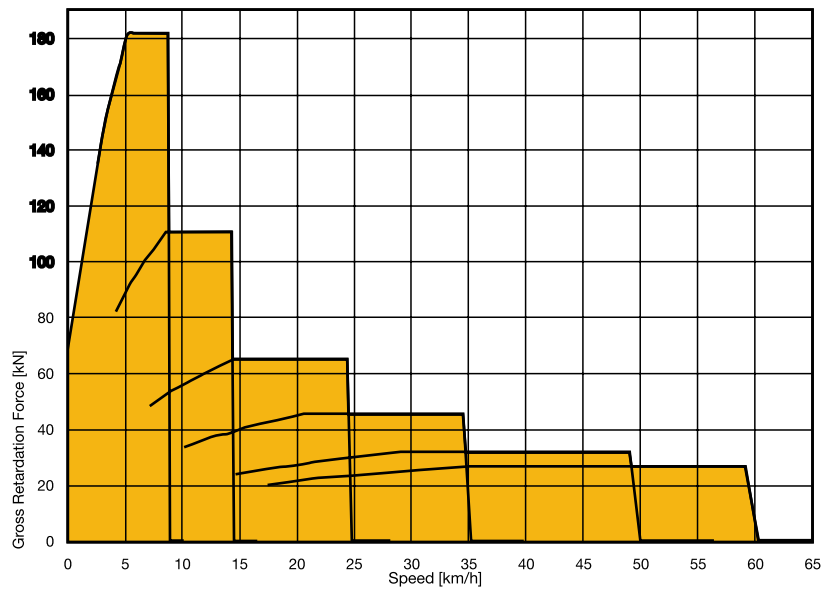
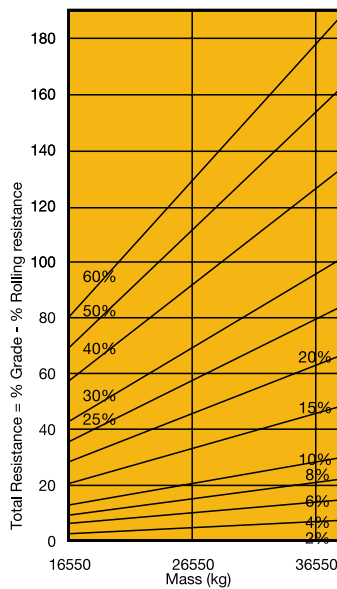
## GRADEABILITY/RIMPULL

NVM 16550 kg / 36487 lb  
 GVM 38550 kg / 84988 lb



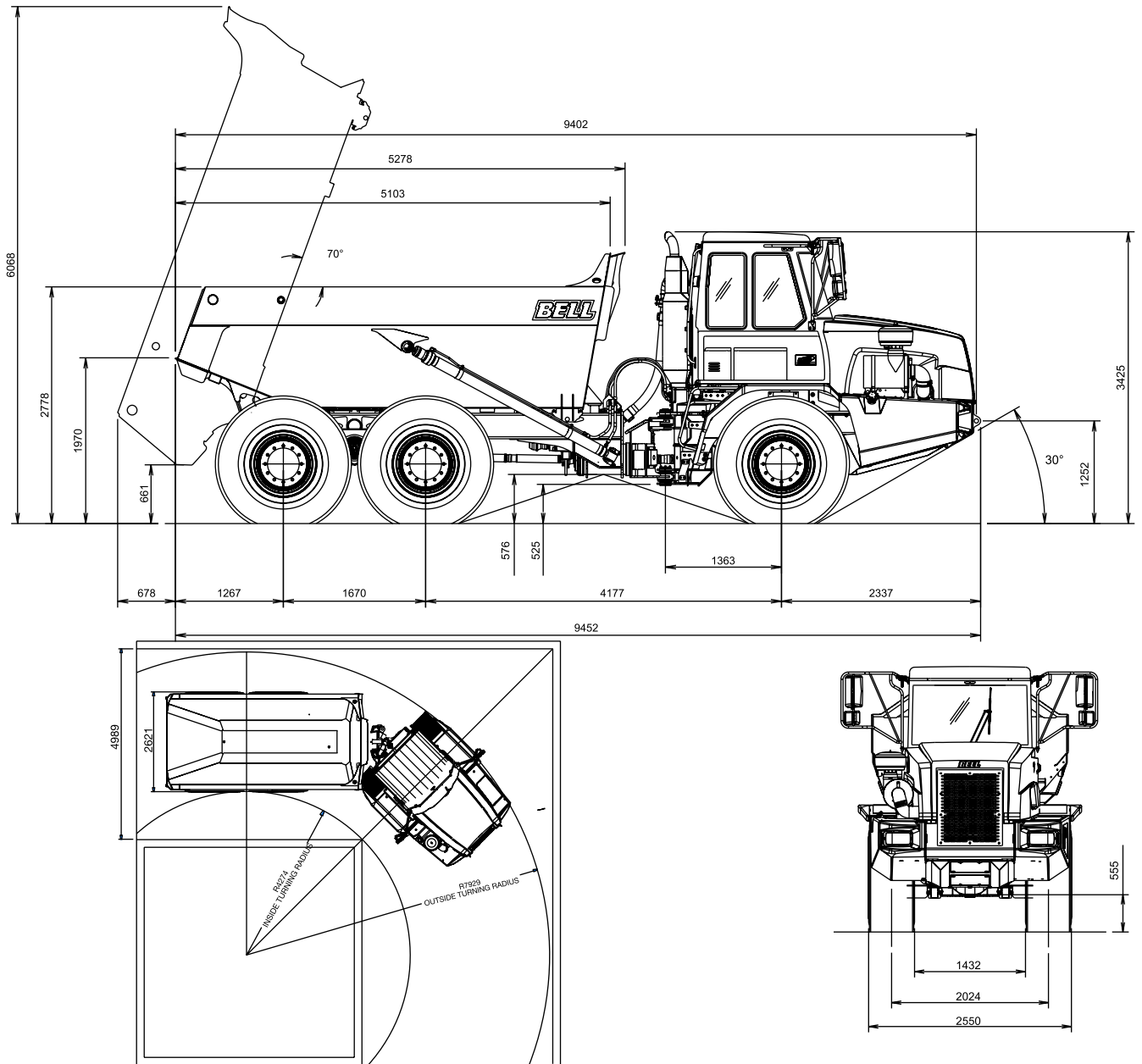
## RETARDATION

NVM 16550 kg / 36487 lb  
 GVM 38550 kg / 84988 lb



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## DIMENSIONS



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## AVAILABLE EQUIPMENT\*

### Cab

- ROPS/FOPS certification
- Protective rear window guard
- Tilt cab for service access
- Gas strut supported door
- Tinted safety glass
- Sliding windows
- Rear view mirrors - regular and wide angle
- Sun visor
- Wiper/washer with intermittent control
- Tilt and telescoping steering wheel
- Adjustable, air suspension seat with retractable seat belt
- Fold-away trainer seat with retractable seat belt
- HVAC climate control system with filtered and ducted air
- Rotating beacon
- 12 V power outlet/12 V cigarette lighter
- Ash tray
- Drinks holder
- Cooled/heated lunch box
- I-Tip programmable bin tip
- Sound insulated to 76 dB(A) to ISO 6394
- Radio/CD/Tape
- Memory Module
- Air horn

### MDU Features

- Operator / Site selected speed control
- Tipping counter
- Trip timer
- Trip distance
- Transmission gear selection
- Fuel Consumption
- Diagnostics
- Intermittent wiper timing control
- Speedo calibration for alternative tyre sizes
- Metric /Imperial unit selection
- Warning lights with audible buzzer

### Gauges

- Engine coolant temperature
- Engine oil pressure
- Transmission oil temperature
- Fuel
- Tachometer
- Battery voltage
- Hourmeter
- Odometer
- System air pressure

### Vehicle

- Ground driven emergency steering
- Bin safety prop
- Articulation lock
- Integral transmission output retarder with 6 settings

### Other

- (Factory or field installed)
- On Board Weigh System (OBW)
  - Electrically adjustable rearview mirrors - one per side
  - Groeneveld auto greasing system
  - Retractable sun visor
  - Exhaust body heating
  - Autogate
  - Body liners
  - Fleetmatic Satellite Monitoring System
  - Driver ID and immobiliser
  - Forward working lights
  - Artic reverse light
  - Fuel heater
  - External windshield visor
  - Headlight protection grills
  - Rear window wiper
  - Antenna mounting bracket
  - Provision for reverse camera
  - Wiggins quick fuelling system

\*standard specification for machines may vary according to region



## What makes the B22D a great performer...

- **With a highly efficient power and drive-train combined with low rolling resistance, the Bell B22D delivers superior fuel efficiency and lowest cost per tonne solution.**
- **High performance engine with increased power and torque.**
- **Powerful hydraulic transmission retarder drastically cuts brake use extending pad life by up to five times.**
- **Extended service intervals and centralised lubrication**
- **Supreme driver comfort from a nitrogen over oil strut suspension system.**
- **Deluxe cab - setting new standards in comfort, sound levels and simplicity in operation.**
- **Tight turning circle increases manoeuvrability.**
- **Electronic component protection to ensure maximum machine availability.**
- **Easy service access reduces maintenance times and ensures maximum machine availability.**
- **Fast and safer tip cycles ensured with the use of i-Tip and chassis inclinometer.**
- **Automated safety features ensure maximum uptime.**

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All dimensions are shown in millimetres, unless otherwise stated between brackets.  
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**Strong Reliable Machines**  
**Strong Reliable Support**

**BELL**