

# B35L

Low Profile 4X4 | Side Mount Cab

# SMC

Articulated  
Underground Dump Truck

Stage IIIA



- Gross Power: 360 kW (483 hp)
- Gross Torque: 2 400 Nm (1 770 ft/lb)
- Rated Payload: 35 000 kg (77 162 lbs)

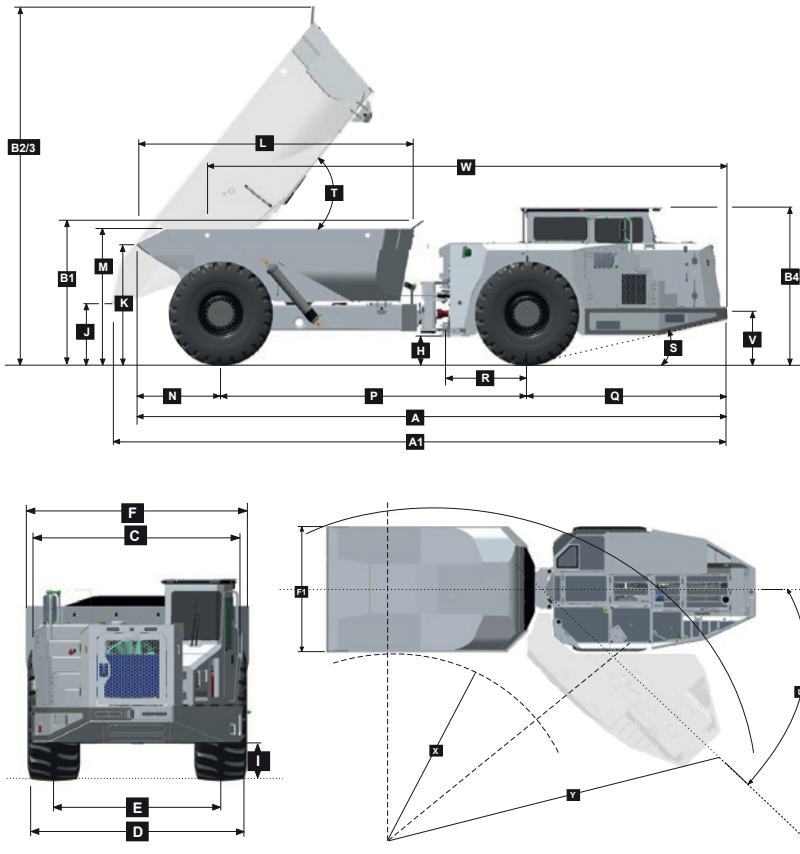
# **BELL**

<p><b>ENGINE</b></p> <p><b>Manufacturer</b> Mercedes Benz (MTU)</p> <p><b>Model</b> OM471LA (MTU 6R 1300)</p> <p><b>Configuration</b> Inline 6, turbocharged and intercooled</p> <p><b>Aspiration</b> Turbocharged</p> <p><b>Cooling System</b> Single pass radiator</p> <p><b>Gross power</b> 360 kW (483 hp) @ 1 700 rpm SAE J1349</p> <p><b>Net Power</b> 340 kW (456 hp) @ 1 700 rpm</p> <p><b>Gross Torque</b> 2400 Nm (1 770 ft/lb) @ 1 300 rpm SAE J1349</p> <p><b>Auxiliary Brake</b> Jacobs Brake®</p> <p><b>Displacement</b> 12,8 litres (781 cu.in)</p> <p><b>Fuel tank capacity</b> 435 litres (115 US gal)</p> <p><b>TRANSMISSION</b></p> <p>Allison 4500 ORS</p> <p><b>Layout</b> Planetary transmission, fully automatic</p> <p><b>Gear layout</b> Constant mesh, clutch operated</p> <p><b>Clutch type</b> Hydraulically operated, multiple disc</p> <p><b>Torque converter layout</b> Integral with transmission, with lock-up in all gears</p>	<p><b>TRANSFER BOX</b></p> <p>Bell - remote mounted</p> <p><b>Manufacturer</b> Kessler</p> <p><b>Model</b> W2400</p> <p><b>Layout</b> Three in-line helical gears</p> <p><b>Inter axle diff lock</b> Yes (optional locked in permanent)</p> <p><b>AXLES</b></p> <p>Kessler - 40 ton</p> <p><b>Differential type</b> Spiral bevel gear</p> <p><b>Final drive type</b> Outboard heavy duty planetary reduction hubs</p> <p><b>Housing type</b> Steel fabricated</p> <p><b>BRAKING SYSTEM</b></p> <p>SAHR Brakes</p> <p><b>Brake Type</b> Kessler SAHR brakes on all wheels ends</p> <p><b>Brake Application</b> Spring applied, pressure released forced cooling with 180 l tank.</p> <p><b>Emergency Brake</b> Manual</p> <p><b>Hydraulic Emergency Brake Automatic Application</b> Neutral Engine switch off</p> <p><b>Brake Test</b> ISO 3450 &amp; SANS 1589</p>	<p><b>WHEELS</b></p> <p><b>Front</b> 26.5R25 Radial</p> <p><b>Rear</b> 26.5R25 Radial</p> <p><b>HYDRAULIC SYSTEM</b></p> <p>Load-sensing with priority for brakes and steering. Central manifold block for easy trouble shooting.</p> <p><b>Pump Type</b> Axial piston variable displacement load sensing</p> <p><b>Application</b> Steering, bin tipping and hydraulic brake charging</p> <p><b>STEERING SYSTEM</b></p> <p>Electrical / hydraulic articulated with two double acting hydraulic cylinders.</p> <p><b>Angle</b> ± 44,5 degrees</p> <p><b>DUMPING SYSTEM</b></p> <p><b>Power down time</b> 10 seconds</p> <p><b>Raise time</b> 15 seconds</p> <p><b>Tipping Angle</b> 70 degrees</p>	<p><b>PNEUMATIC SYSTEM</b></p> <p>Electric compressor</p> <p><b>System pressure</b> 810 kPa (123 psi)</p> <p><b>ELECTRICAL SYSTEM</b></p> <p><b>Voltage</b> 24 V</p> <p><b>Battery type</b> Two maintenance free permanently sealed</p> <p><b>Battery Capacity</b> 2 X 105 Ah</p> <p><b>Alternator Rating</b> 28 V 150 A</p> <p><b>VEHICLE SPEEDS</b></p> <table border="1"> <tr> <td>1st</td> <td>5 km/h</td> <td>3,1 mph</td> </tr> <tr> <td>2nd</td> <td>11 km/h</td> <td>6,8 mph</td> </tr> <tr> <td>3rd</td> <td>16 km/h</td> <td>9,9 mph</td> </tr> <tr> <td>4th</td> <td>24 km/h</td> <td>15 mph</td> </tr> <tr> <td>R</td> <td>4 km/h</td> <td>2,5 mph</td> </tr> </table> <p><b>Max speed</b> 24 km/h (15 mph)</p>	1st	5 km/h	3,1 mph	2nd	11 km/h	6,8 mph	3rd	16 km/h	9,9 mph	4th	24 km/h	15 mph	R	4 km/h	2,5 mph
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## Operating Weights

OPERATING WEIGHTS		LOAD CAPACITY	
UNLADEN	kg (lb)	BODY	m <sup>3</sup> (yd <sup>3</sup> )
Front	20 298 (44 749)	Struck Capacity	14,5 (19)
Rear	9 117 (20 099)	Heaped Capacity (SAE 2:1)	16,8 (22)
Total	29 415 (64 849)		
		Rated Payload	35 000 kg (77 162 lbs)
LADEN	kg (lb)		
Front	29 048 (64 040)		
Rear	35 367 (77 971)		
Total	64 415 (142 011)		

# Dimensions



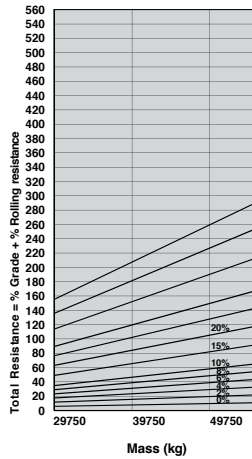
## Machine Dimensions

A	Length-Transport Position	10 409 mm	(34 ft 15 in)
A1	Length-Bin Fully Tipped	10 463 mm	(34 ft 32 in)
B1	Height-with Rock Guard	2 548 mm	(8 ft 35 in)
B2	Bin Height-Fully Tipped w/o Rock Guard	5 318 mm	(17 ft 44 in)
B3	Bin Height-Fully Tipped with Rock Guard	5 545 mm	(18 ft 19 in)
B4	Height - Cab	2 600 mm	(8 ft 5 in)
C	Width over front	2 850 mm	(9 ft 3 in)
D	Width over Tyres	2 955 mm	(9 ft 6 in)
E	Tyre Track Width	2 268 mm	(7 ft 44 in)
F	Width over Bin	3 030 mm	(9 ft 9 in)
H	Ground Clearance-Artic	378 mm	(1 ft 24 in)
I	Ground Clearance-Front Axle	446 mm	(1 ft 4 in)
J	Ground Clearance-Bin Fully Tipped	627 mm	(2 ft 5 in)
K	Bin Lip Height-Transport Position	2 076 mm	(6 ft 8 in)
L	Bin Length	4 910 mm	(16 ft 10 in)
M	Load over Height	2 388 mm	(7 ft 83 in)
N	Rear Axle Centre to Bin Rear	1 569 mm	(5 ft 14 in)
P	Rear Axle Centre to Front Axle Centre	5 338 mm	(17 ft 51 in)
Q	Front Axle Centre to Machine Front	3 500 mm	(11ft 48 in)
R	Front Axle Centre to Artic Centre	1 410 mm	(4 ft 62 in)
S	Approach Angle	13°	
T	Maximum Bin Tip Angle	70°	
U	Maximum Articulation Angle	45°	
V	Front Tie Down Height	725 mm	(2 ft 37 in)
W	Machine Lifting Centres	9 366 mm	(30 ft 72 in)
X	Inner Turning Circle Radius	4 500 mm	(14 ft 76 in)
Y	Outer Turning Circle Radius	8 600 mm	(28 ft 21 in)

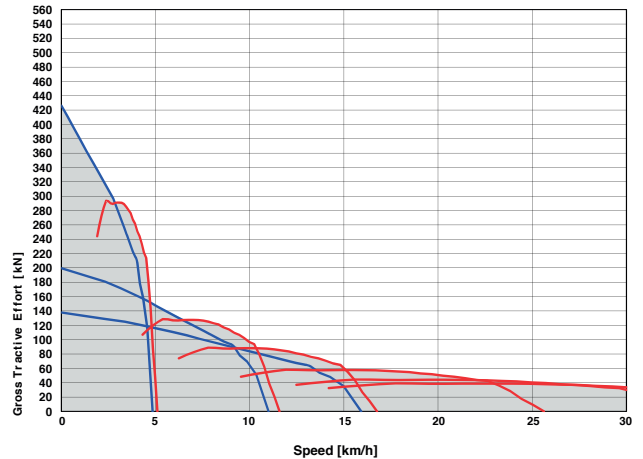
# Gradeability / Rimpull

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 left across charts until line intersects rimpull curve.
3. Read down from this point to determine maximum speed attained at that tractive resistance.

NVM 28 000 kg / 61 729 lb  
 GVM 63 000 kg / 138 891 lb



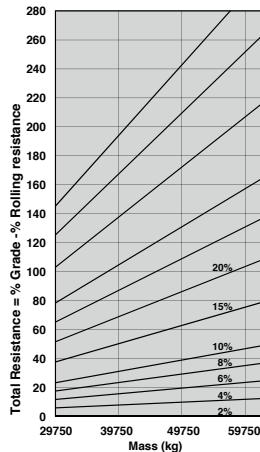
## ADT, B35L SMC 4x4 - Tractive Effort



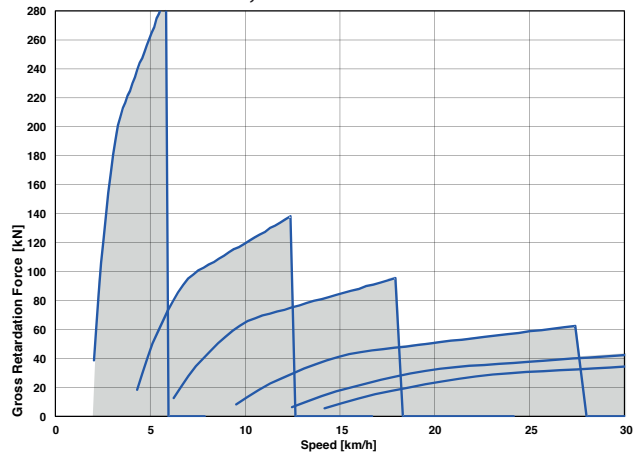
# Retardation

1. Determine retardation force required by finding intersection of vehicle mass line.
2. From this intersection, move straight left 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.

NVM 28 000 kg / 61 729 lb  
 GVM 63 000 kg / 138 891 lb



## ADT, B35L SMC 4x4 - Retardation



## CONTROL/DISPLAY

- 25 Button SSM with digital display

## LIGHTING

- 6 Forward facing worklights
- 4 Rear facing work lights
- 2 Rear facing LED brake lights

## CAB

- Enclosed with airconditioning system 28 500 btu @ 45 °C ambient
- Trainer seat available
- ROPS – ISO 3471 / FOPS – ISO 3449

## OPTIONS

- ▲ Central greasing system
- ▲ Fire suppression system
- ▲ Fire extinguishers

## GENERAL

- SAHR Brakes
- 2 Electrical hooters
- Voltmeter
- Flashing beacon
- Jacobs® brake
- Belly plate
- Non slip surfaces on all walk ways
- Engine protection
- Engine over-rev protection
- Suspension seat
- Speedometer
- Incline assist
- Base line risk assessment



## Features of the Low Profile Articulated Dump Trucks...


- With a highly efficient power and drive-train combined with low rolling resistance the Bell B35L delivers superior fuel efficiency.
- High performance engine with increased power and torque and long service intervals.
- Fewer scheduled service requirements.

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.


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**Strong Reliable Machines  
Strong Reliable Support**

# BELL