

B40E Articulated Dump Truck



<p>ENGINE Manufacturer Mercedes Benz (MTU)</p> <p>Model OM471LA (MTU 6R 1300)</p> <p>Configuration Inline 6, turbocharged and intercooled</p> <p>Gross Power 380 kW (510 hp) @ 1,700 rpm</p> <p>Net Power 359 kW (481 hp) @ 1,700 rpm</p> <p>Gross Torque 2,380 Nm (1,755 lbft) @ 1,300 rpm</p> <p>Displacement 12.8 liters (781 cu.in)</p> <p>Auxiliary Brake Jacobs Engine Brake®</p> <p>Fuel Tank Capacity 442 liters (117 US gal)</p> <p>AdBlue® Tank Capacity 40 liters (11 US gal)</p> <p>Certification OM471LA (MTU 6R 1300) meets EPA Tier 4 final/Stage V emissions regulations</p>	<p>Torque Control Hydrodynamic with lock-up in all gears</p> <p>TRANSFER CASE Manufacturer Kessler</p> <p>Series W2400</p> <p>Layout Remote mounted</p> <p>Gear Layout Three in-line helical gears</p> <p>Output Differential Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.</p> <p>AXLES Manufacturer Bell</p> <p>Model 30T</p> <p>Differential High input controlled traction differential with spiral bevel gears</p> <p>Final Drive Outboard heavy duty planetary on all axles</p> <p>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.</p> <p>Maximum brake force: 327 kN (73,513 lbf)</p> <p>Park & Emergency Spring applied, air released driveline mounted disc</p> <p>Maximum brake force: 218 kN (49,008 lbf)</p> <p>Auxiliary Brake Automatic Jacobs Engine Brake®. Automatic retardation through electronic activation of wet brake system.</p>	<p>Total Retardation Power Continuous: 442 kW (593 hp) Maximum: 854 kW (1,145 hp)</p> <p>WHEELS Type Radial Earthmover</p> <p>Tire 29.5 R 25 (875/65 R 29 optional)</p> <p>FRONT SUSPENSION Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts</p> <p>Option: Electronically controlled adaptive suspension with ride height adjustment</p> <p>REAR SUSPENSION Pivoting walking beams with laminated rubber suspension blocks</p> <p>Option: Comfort Ride suspension walking beams, with two-stage sandwich block</p> <p>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.</p> <p>Pump Type Variable displacement load sensing piston</p> <p>Flow 330 L/min (87 gal/min)</p> <p>Pressure 315 bar (4,569 psi)</p> <p>Filter 5 microns</p> <p>STEERING SYSTEM Double acting cylinders, with ground-driven emergency steering pump</p> <p>Lock to lock turns 5</p>	<p>Steering Angle 42°</p> <p>DUMPING SYSTEM Two double-acting, single stage, dump cylinders</p> <p>Raise Time 11 seconds</p> <p>Lowering Time 6 seconds</p> <p>Tipping Angle 70 deg standard, or any lower angle programmable</p> <p>PNEUMATIC SYSTEM Air drier with heater and integral unloader valve, serving park brake and auxiliary functions</p> <p>System Pressure 810 kPa (117 psi)</p> <p>ELECTRICAL SYSTEM Voltage 24 V</p> <p>Battery Type Two AGM (Absorption Glass Mat) type</p> <p>Battery Capacity 2 X 75 Ah</p> <p>Alternator Rating 28V 80A</p> <p>MAX. VEHICLE SPEED</p> <table border="0"> <tr> <td>1st</td> <td>4 km/h</td> <td>2.5 mph</td> </tr> <tr> <td>2nd</td> <td>9 km/h</td> <td>6 mph</td> </tr> <tr> <td>3rd</td> <td>17 km/h</td> <td>11 mph</td> </tr> <tr> <td>4th</td> <td>23 km/h</td> <td>14 mph</td> </tr> <tr> <td>5th</td> <td>33 km/h</td> <td>21 mph</td> </tr> <tr> <td>6th</td> <td>44 km/h</td> <td>27.3 mph</td> </tr> <tr> <td>7th</td> <td>51 km/h</td> <td>32 mph</td> </tr> <tr> <td>R</td> <td>7 km/h</td> <td>4 mph</td> </tr> </table> <p>CAB ROPS/FOPS certified 76 dBA internal sound level measured according to ISO 6396</p>	1st	4 km/h	2.5 mph	2nd	9 km/h	6 mph	3rd	17 km/h	11 mph	4th	23 km/h	14 mph	5th	33 km/h	21 mph	6th	44 km/h	27.3 mph	7th	51 km/h	32 mph	R	7 km/h	4 mph
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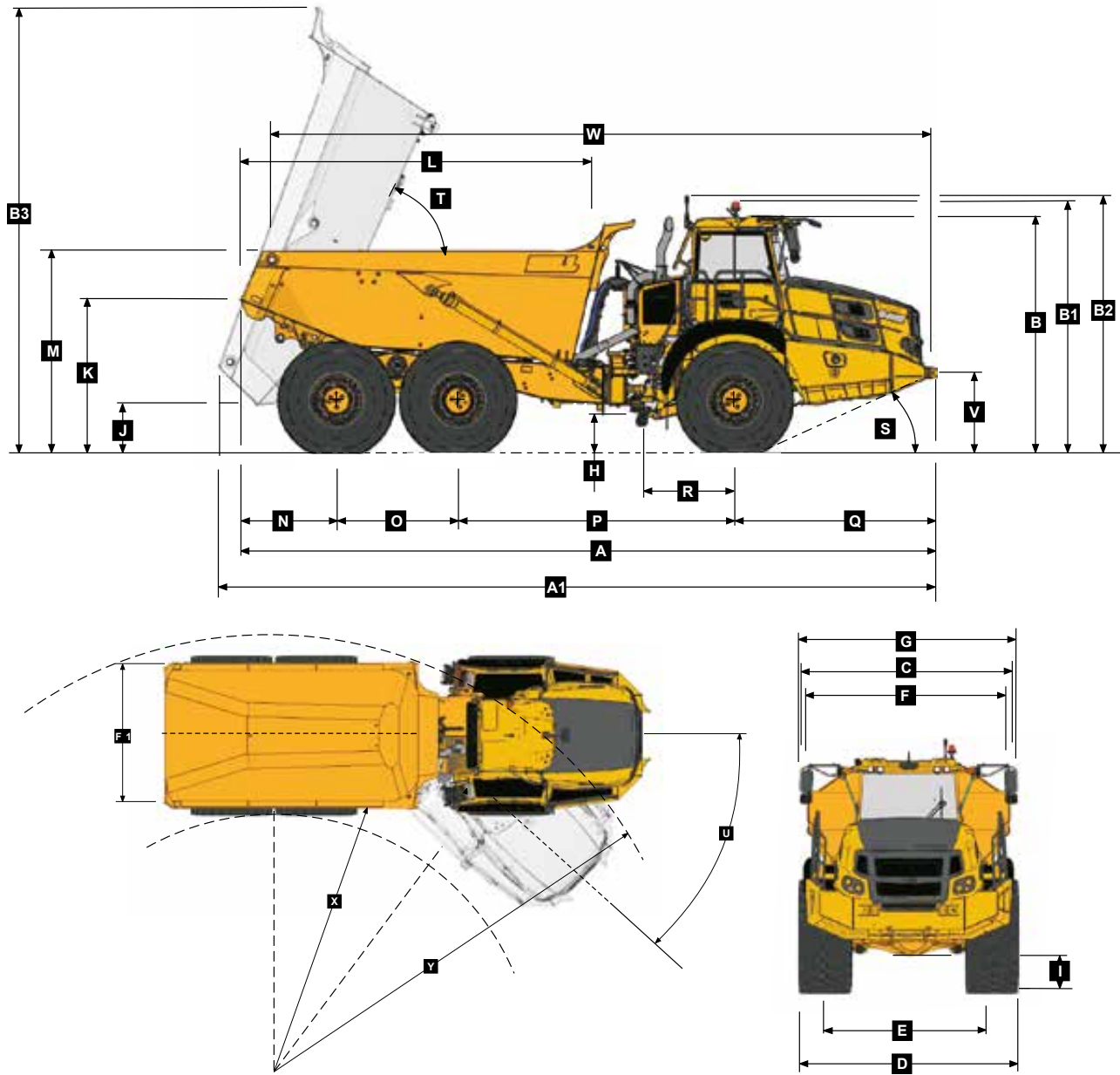
Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE*		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	kg (lb)	LADEN		BODY	m³ (yd³)	kg (lb)	
Front	16,972 (37,417)	(No sinkage/Total Contact Area Method)		Struck Capacity	19 (25)	Bin liner	1,369 (3,018)
Middle	7,737 (17,057)	29.5 R 25	kPa (Psi)	SAE 2:1 Capacity	24 (31)	Tailgate	984 (2,169)
Rear	7,524 (16,588)	Front	310 (45)	SAE 1:1 Capacity	28.5 (37)	875/65 R29	
Total	32,233 (71,062)	Mid & Rear	341 (50)	SAE 2:1 Capacity with Tailgate	24.5 (32)	(per vehicle) Add	1,182 (2,606)
LADEN						EXTRA WHEELSET	
Front	21,847 (48,164)	875/65 R29	kPa (Psi)			29.5 R 25	800 (1,764)
Middle	24,800 (54,675)	Front	293 (43)	Rated Payload	39,000 kg	875/65 R29	1,024 (2,258)
Rear	24,586 (54,203)	Mid & Rear	329 (48)		(85,980 lb)		
Total	71,233 (157,042)						

* 29.5R25 Groundpressures calculated with Michelin XADN+ Tire. 875/65R29 Groundpressures calculated with Michelin XAD65-1 Tire.

I Dimensions

B40E

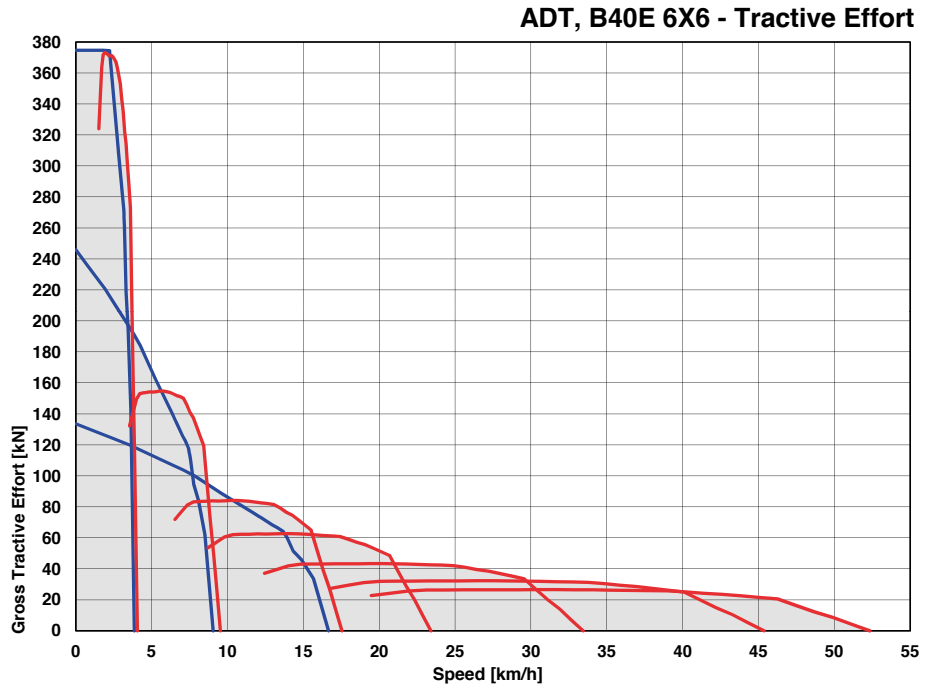
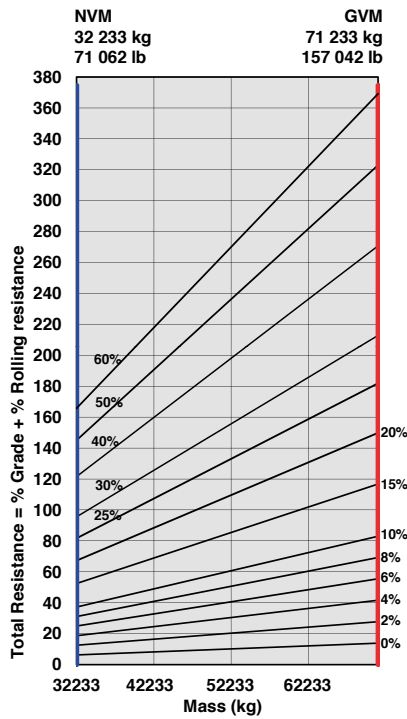


Machine Dimensions

A	Length - Transport Position with Tailgate	11,197 mm (36 ft. 9 in.)	K	Bin Lip Height - Transport Position	2,519 mm (8 ft. 3 in.)
A	Length - Transport position w/o Tailgate	11,186 mm (36 ft. 8 in.)	L	Bin Length	5,742 mm (18 ft. 10 in.)
A1	Length - Bin Fully Tipped	11,742 mm (38 ft. 6 in.)	M	Load over Height	3,271 mm (10 ft. 9 in.)
B	Height - Transport Position	3,804 mm (12 ft. 6 in.)	N	Rear Axle Center to Bin Rear	1,543 mm (5 ft.)
B1	Height - Rotating Beacon	4,040 mm (13 ft. 3 in.)	O	Mid Axle Center to Rear Axle Center	1,950 mm (6 ft. 5 in.)
B2	Height - Load Light	4,129 mm (13 ft. 7 in.)	P	Mid Axle Center to Front Axle Center	4,438 mm (14 ft. 7 in.)
B3	Bin Height - Fully Tipped	7,316 mm (24 ft.)	Q	Front Axle Center to Machine Front	3,255 mm (10 ft. 8 in.)
C	Width over Mudguards	3,495 mm (11 ft. 6 in.)	R	Front Axle Center to Artic Center	1,558 mm (5 ft. 1 in.)
D	Width over Tires - 875/65 R29	3,656 mm (12 ft.)	S	Approach Angle	24°
D	Width over Tires - 29.5R25	3,487 mm (11 ft. 5 in.)	T	Maximum Bin Tip Angle	70°
E	Tire Track Width - 875/65 R29	2,773 mm (9 ft. 1 in.)	U	Maximum Articulation Angle	42°
E	Tire Track Width - 29.5R25	2,725 mm (8 ft. 11 in.)	V	Front Tie Down Height	1,265 mm (4 ft. 2 in.)
F	Width over Bin	3,372 mm (11 ft.)	W	Machine Lifting Centers	10,594 mm (34 ft. 9 in.)
F1	Width over Tailgate	3,662 mm (12 ft.)	X	Inner Turning Circle Radius - 875/65R29	4,782 mm (15 ft. 8 in.)
G	Width over Mirrors - Operating Position	3,614 mm (11 ft. 10 in.)	X	Inner Turning Circle Radius - 29.5R25	4,866 mm (16 ft.)
H	Ground Clearance - Artic	545 mm (21.5 in.)	Y	Outer Turning Circle Radius - 875/65R29	9,320 mm (30 ft. 7 in.)
I	Ground Clearance - Front Axle	545 mm (21.5 in.)	Y	Outer Turning Circle Radius - 29.5R25	9,235 mm (30 ft. 4 in.)
J	Ground Clearance - Bin Fully Tipped	876 mm (34.5 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 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 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.

