Technical Data - B40E

ENGINE

Manufacturer
Mercedes Benz (MTU)

Model
OM471LA (MTU 6R 1300)

Configuration
Inline 6, turbocharged and intercooled.

Gross Power
380 kW (510 hp) @ 1,700 rpm

Net Power
359 kW (481 hp) @ 1,700 rpm

Gross Torque
2,380 Nm (1,755 lbft) @ 1,300 rpm

Displacement
12.8 liters (781 cu.in)

Auxiliary Brake
Exhaust Valve Brake

Fuel Tank Capacity
352 liters (93 US gal)

AdBlue® Tank Capacity
40 liters (11 US gal)

Certification
OM471LA (MTU 6R 1300) meets EU Stage IV / EPA Tier 4 Final emissions regulations.

TRANSMISSION

Manufacturer
Allison

Model
4700 ORS

Configuration
Fully automatic planetary transmission.

Layout
Engine mounted

Gear Layout
Constant meshing planetary gears, clutch operated.

Gears
7 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
W2400

Layout
Remote mounted

Gear Layout
Three in-line helical gears

Output Differential
Interaxle 29/71 proportional differential. Automatic inter-axle differential lock.

AXLES

Manufacturer
Bell

Model
30T

Differential
High input controlled traction 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:
327 kN (73,513 lbf)

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

Maximum brake force:
218 kN (49,008 lbf)

Auxiliary Brake
Automatic engine valve brake. Automatic retardation through electronic activation of wet brake system.

Total Retardation Power
Continuous: 442 kW (593 hp)
Maximum: 854 kW (1,145 hp)

WHEELS

Type
Radial Earthmover

Tire
29.5 R 25 (875/65 R 29 optional)

FRONT SUSPENSION

Semi-independent, leading A-frame supported by hydro-pneumatic suspension struts.

Option: Electronically controlled adaptive suspension with ride height adjustment.

REAR SUSPENSION

Pivoting walking beams with laminated rubber suspension blocks.

Option: Comfort Ride suspension walking beams, with two-stage sandwich block.

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
330 L/min (87 gal/min)

Pressure
315 bar (4,569 psi)

Filter
5 microns

STEERING SYSTEM

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

Lock to lock turns
5

Steering Angle
42°

DUMPING SYSTEM

Two double-acting, single stage, dump cylinders.

Raise Time
11 seconds

Lowering Time
6 seconds

Tipping Angle
70 deg 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

MAX. VEHICLE SPEED

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

CAB

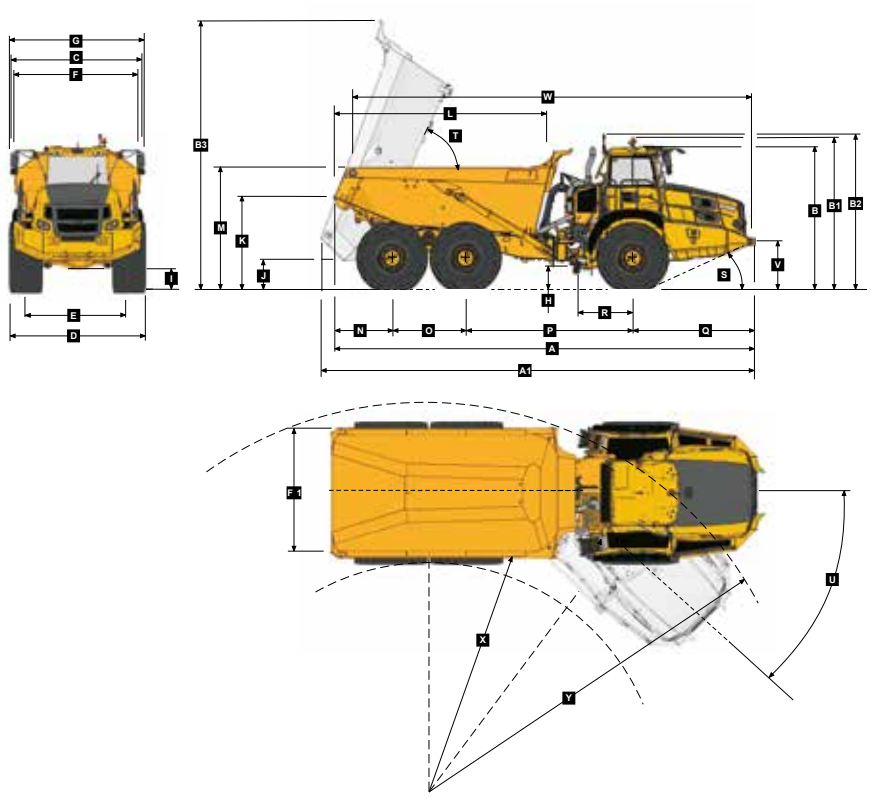
ROPS/FOPS certified 74 dBA internal sound level measured according to ISO 6396.

Load Capacity & Ground Pressure

OPERATING WEIGHTS		GROUND PRESSURE*		LOAD CAPACITY		OPTION WEIGHTS	
UNLADEN	**kg (lb)**	**LADEN**		**BODY**	**m^3 (yd^3)**		**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		(per vehicle) Add	1,182 (2,606)
LADEN				with Tailgate	24.5 (32)		
Front	21,847 (48,164)	**875/65 R29**	**kPa (Psi)**			**EXTRA WHEELSET**	
Middle	24,800 (54,675)	Front	293 (43)	Rated Payload	39,000 kg	29.5 R 25	800 (1,764)
Rear	24,586 (54,203)	Mid & Rear	329 (48)		(85,980 lb)	875/65 R29	1,024 (2,258)
Total	71,233 (157,042)						

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

Dimensions

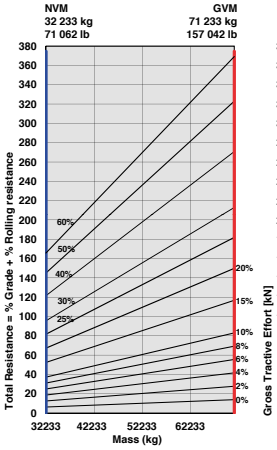


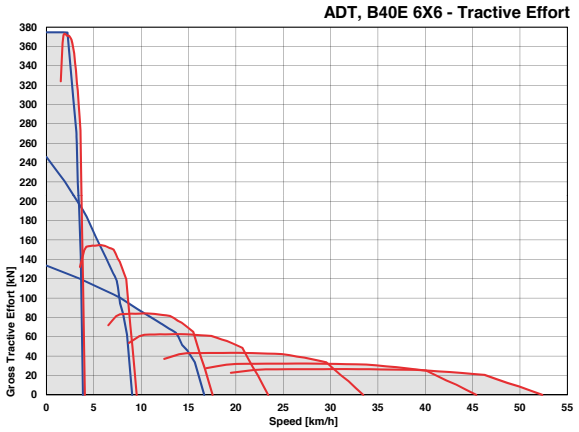
Machine Dimensions

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

Grade Ability/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.