# Technical Data - B45E

#### **ENGINE**

Manufacturer Mercedes Benz (MTU)

Model

OM471LA (MTU 6R 1300)

Configuration
Inline 6, turbocharged and intercooled.

**Gross Power** 390 kW (523 hp) @ 1,700 rpm

Net Power 369 kW (495 hp) @ 1,700 rpm

Gross Torque 2,460 Nm (1,814 lbft) @ 1,300 rpm

Displacement 12.8 liters (781 cu.in)

Auxiliary Brake Engine 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 aears.

# **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 SPI	EED
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

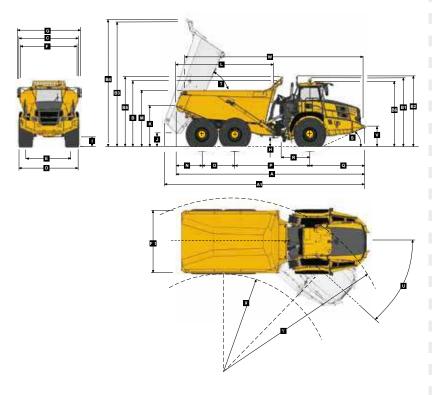
#### CAB

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)	LAD	EN	BODY	m³ (yd³)		kg (lb)
Front	16,984 (37,443)	(No sinkage/Total Co	ntact Area Method)	Struck Capacity	19.5 (25.5)	Bin liner	1,404 (3,095)
Middle	7,778 (17,148)	29.5 R 25	kPa (Psi)	SAE 2:1 Capacity	25 (33)	Tailgate	1,013 (2,233)
Rear	7,564 (16,676)	Front	321 (47)	SAE 1:1 Capacity	29.5 (38)	875/65 R29	
Total	32,326 (71,267)	Mid & Rear	370 (54)	SAE 2:1 Capacity		(per vehicle) Add	1,182 (2,606)
LADEN				with Tailgate	26 (34)		
Front	22,109 (48,742)	875/65 R29	kPa (Psi)			EXTRA WHEELSET	
Middle	25,715 (56,692)	Front	294 (43)	Rated Payload	41,000 kg	29.5 R 25	800 (1,764)
Rear	25,502 (56,222)	Mid & Rear	331 (48)		(90,390 lb)	875/65 R29	1,024 (2,258)
Total	73,326 (161,656)						

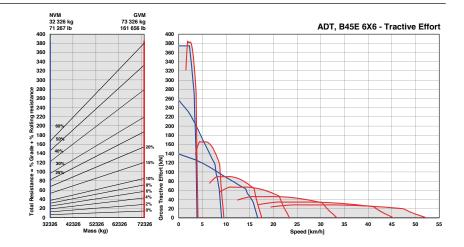
# **Dimensions**



Ma	chine Dimensions		
Α	Length - Transport Position with Tailgate	11 184 mm	(36 ft. 8 in.)
A	Length - Transport Position w/o Tailgate	, .	(36 ft. 8 in.)
A1	Length - Bin Fully Tipped		(38 ft. 8 in.)
В	Height - Transport Position w/o Rock Guard	•	(12 ft. 6 in.)
В	Height - Transport Position with Rock Guard		(12 ft. 7 in.)
B1	Height - Rotating Beacon		(13 ft. 3 in.)
B2	Height - Load Light		(13 ft. 6 in.)
В3	Bin Height - Fully Tipped w/o Rock Guard		(24 ft. 1 in.)
В4	Bin Height - Fully Tipped with Rock Guard		(24 ft. 5 in.)
В5	Height - Rock Guard Operating Position		(13 ft. 6 in.)
В6	Height - Cab		(12 ft. 6 in.)
С	Width over Mudguards		(11 ft. 6 in.)
D	Width over Tires - 875/65 R29	3,656 mm	, ,
D	Width over Tires - 29.5R25		(11 ft. 5 in.)
Е	Tire Track Width - 875/65 R29	2,773 mm	(9 ft. 1 in.)
Е	Tire Track Width - 29.5R25	2,725 mm	(8 ft. 11 in.)
F	Width over Bin	3,448 mm	(11 ft. 4 in.)
F1	Width over Tailgate	3,738 mm	(12 ft. 3 in.)
G	Width over Mirrors - Operating Position	3,614 mm	(11 ft. 10 in.)
н	Ground Clearance - Artic	545 mm	(21.5 in.)
1	Ground Clearance - Front Axle	543 mm	(21.3 in.)
J	Ground Clearance - Bin Fully Tipped	880 mm	(34.7 in.)
K	Bin Lip Height - Transport Position	2,521 mm	(8 ft. 3 in.)
L	Bin Length	5,753 mm	(18 ft. 10in.)
M	Load over Height	3,316 mm	(10 ft. 11 in.)
N	Rear Axle Center to Bin Rear	1,540 mm	(5 ft.)
0	Mid Axle Center to Rear Axle Center	1,950 mm	(6 ft. 5 in.)
Р	Mid Axle Center to Front Axle Center	4,438 mm	(14 ft. 7 in.)
Q	Front Axle Center to Machine Front	3,256 mm	(10 ft. 8 in.)
R	Front Axle Center to Artic Center	1,558 mm	( ft. 1 in.)
S	Approach Angle	24 °	
Т	Maximum Bin Tip Angle	70°	
U	Maximum Articulation Angle	42 °	
٧	Front Tie Down Height	1,262 mm	(4 ft. 2 in.)
W	Machine Lifting Centers	10,569 mm	(34 ft. 8 in.)
Х	Inner Turning Circle Radius - 875/65R29	4,782 mm	(15 ft. 8 in.)
Χ	Inner Turning Circle Radius - 29.5R25	4,866 mm	(16 ft.)
Υ	Outer Turning Circle Radius - 875/65R29	9,320 mm	(30 ft. 7 in.)
Υ	Outer Turning Circle Radius - 29.5R25	9,235 mm	(30 ft. 4 in.)

# | Grade Ability/Rimpull

- 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.
- 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.
- 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.

