

**VOLVO BM**

**4400**

**SPECIFICATION VOLVO BM 4400 COMPACTOR**



**Efficient, reliable  
and economical**

The Volvo BM 4400 Compactor is a highly manoeuvrable articulated machine with a capacity for really tough jobs. With a 105 kW SAE (143 hp) fuel efficient diesel and an excellent match of engine, transmission and working hydraulics, this machine achieves high productivity with good operating economy. The 4400 Com-

pactor is also versatile. It will crush, spread and compact refuse and waste, then dig, carry and spread cover material. Rugged belly, and side plates provide good protection when working on hard, heavy material. The ROPS tested, ergonomically designed cab is safe and comfortable, with a filtered air supply to its efficient climate control system.

The Volvo BM 4400 compactor is a modern machine meeting the high demands for efficient and economical waste handling.

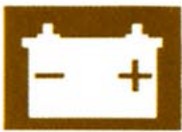




## ENGINE

Volvo TD 60 B: 6-cylinder, in-line, direct-injected, turbo-charged 4-stroke diesel engine with overhead valves and wet, replaceable cylinder linings.

Rated power at DIN 70020/6270 B	rps (rpm)	35 (2100)
SAE J 1349 June '83 Net	kW (hp)	94 (128)
SAE J 1349 June '83 Gross	kW (hp)	94 (128)
SAE J 1349 June '83 Gross	kW (hp)	105 (143)
Max. torque at DIN 70020/6270 B	rps (rpm)	26.7 (1600)
SAE J 1349 June '83 Net	Nm (lbf ft)	464 (342)
SAE J 1349 June '83 Gross	Nm (lbf ft)	464 (342)
SAE J 1349 June '83 Gross	Nm (lbf ft)	510 (376)
No. of cylinders		6
Bore		98.43 mm (3.875 in)
Stroke		120 mm (4.724 in)
Total displacement		5.48 litres (334 in <sup>3</sup> )
Compression ratio		16:1
Air cleaning in three stages		1. Cyclone precleaner with automatic dust ejection through the exhaust
		2. Paper filter with indicator in cab
		3. Replaceable catch-all filter



## ELECTRICAL SYSTEM

Batteries	2 x 12V (connected in series)
Voltage	24 V
Battery capacity	105 Ah
Alternator	1260 W (45 A)
Starter motor	5.4 kW (7.3 hp)

Central warning lamp for the following functions:

*(For certain markets only)*

Engine oil pressure. Brake pressure. Parking brake. Engine temperature. Transmission fluid temperature.



## TORQUE CONVERTER

Type	Single-stage
Torque multiplication ratio	3.01:1



## GEARBOX

Type: Power-shift
Designation: Volvo BM HT 100
No. of gears forward/reverse: 3/3



## AXLES

Fully floating axle shafts with planetary hub reductions.

Front axle:	Designation	Volvo BM AH 55
	Differential lock	100 % lock-up (dog clutch)
Rear axle:	Designation	Volvo BM AH 44 D
	Oscillation	± 15° (525 mm = 20 in)



## BRAKE SYSTEM

Service brakes: Air-over-hydraulic operated disc brakes, dual circuit system.

Brake area: Front	396 cm <sup>2</sup> (61 in <sup>2</sup> )/wheel
Rear	396 cm <sup>2</sup> (61 in <sup>2</sup> )/wheel
Air reservoir volume:	3 x 10 litres (3 x 2.2 UK gal) 3 x 2.6 US gal)
Parking brake area:	266 cm <sup>2</sup> (41 in <sup>2</sup> )



## WHEELS

Type:	Trapezoidal pads	Knife wheels
	mm (ft in)	mm (ft in)
Drum width	500 (1'8")	500 (1'8")
Drum diameter	1200 (3'11")	1200 (3'11")
Pad height	130 (5')	140 (5'5")



## STEERING SYSTEM

Articulated steering with hydrostatic operation of two double-acting hydraulic cylinders.

Steering angle	± 40°
Lock-to-lock turns of wheel	4.25
Steering possible when engine idle	Yes
Steering cylinder, bore/stroke	80/410 mm (3/16 in)
Piston rod diameter	50 mm (2.0 in)
Oil pump, type	Piston pump
Output at 10 MPa (1450 psi) and 2100 rpm (35 rps)	92 l/min (20.2 UK gal/min, 24.3 US gal/min)
Working pressure	15 MPa (2175 psi)



## HYDRAULIC SYSTEM

Pump, type (working hydraulics): Vane pump

Output at 10 MPa (1450 psi) and 2100 rpm (35 rps)	185 l/min (40.7 UK gal/min, 48.7 US gal/min)
---	--

Working pressure	15 MPa (2175 psi)
Oil filter: Full-flow filtration through 10 µm filter cartridge with magnetic core.	

### Hydraulic cylinders:

Type	Double-acting
Lift cylinder, bore/stroke	125/830 mm (4.9/32.7 in)
Piston rod diameter	60 mm (2.4 in)
Tilt cylinder, bore/stroke	110/830 mm (4.3/32.7 in)
Piston rod diameter	60 mm (2.4 in)

### Loader unit:

Control valve: Double-acting 3-section valve, lifting function has hold for lift and float positions. Bucket positioner and boom kick-out as standard (disconnectable).

Raise with SAE workload	6.0 s
Lower, without load	3.8 s
Lower, without load, float position	3.2 s
Forward tilt, high/low	2.0 s/4.0 s



## SERVICE REFILL CAPACITIES

	Litres	UK gal	US gal
Crankcase	15	3.3	4.0
Fuel tank	195	42.8	51.5
Cooling system	29	6.4	7.7
Hydraulic system, total	150	33.0	39.6
Hydraulic system at change	105	23.1	27.7
Hydraulic tank	105	23.1	27.7
Transmission and torque converter, total	27	5.9	7.1
Front axle differential and hub reduction	32.6	7.2	8.6
Rear axle differential and hub reduction	26.4	5.8	7.0
Dropbox	4.3	0.9	1.1



## CAB

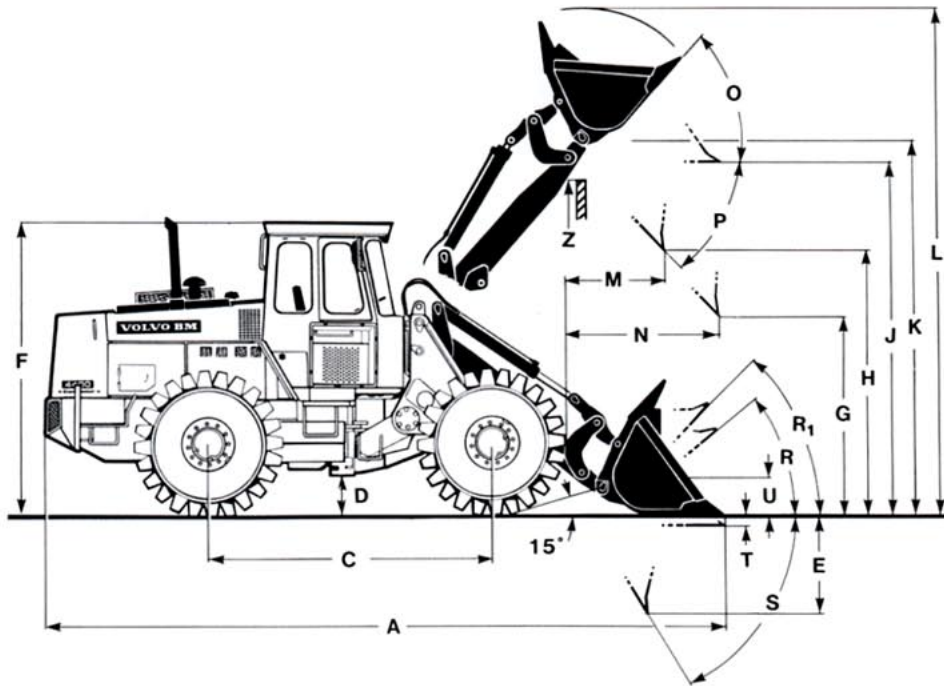
Tested and approved as a safety cab in accordance with Article 3 Section 8 of the Swedish Working Environment Act and meets ISO 3471-1980, ROPS (SS783) and ISO 3449-

1980 FOPS (SS782) as well as SS/ISO 6055 "Overhead guards for forklift trucks". The cab is mounted on 4 rubber pads and is well insulated and weathertight. All windows have bronze-tinted glass. The windshield is laminated and other windows have tempered safety glass.

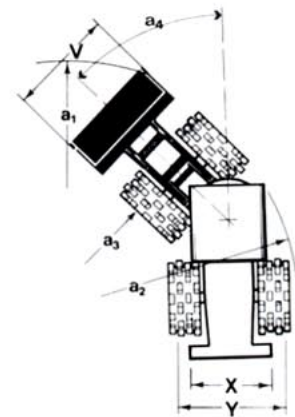
Heater and defroster: Heating element with filtered fresh air and three-speed fan plus defroster for front, rear and side windows.

Ventilation	Max. 5 air changes/min
Operator's seat	ISRI GI 6000/575
Seat belt	Standard

# DIMENSIONS 4400 COMPACTOR



A = 6670 mm (263 in)	K = 3285 mm (129 in)	S = 59°
C = 2860 mm (113 in)	L = 4410 mm (174 in)	T = 25 mm (1.0 in)
D = 455 mm (17.9 in)	M = 1445 mm (56.8 in)	U = 395 mm (15.6 in)
E = 340 mm (13.3 in)	N = 1580 mm (62.2 in)	V = 2500 mm (98.4 in)
F = 3040 mm (120 in)	O = 53°	X = 1960 mm (77.2 in)
G = 2000 mm (78.7 in)	P = 45°	Y = 2420 mm (95.3 in)
H = 2350 mm (92.5 in)	R = 40°	Z = 3040 mm (120 in)
J = 3060 mm (120 in)	R <sub>1</sub> = 46° Carry position	

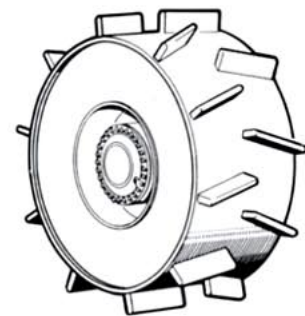


Swept radius	a <sub>1</sub> = 5620 mm (221 in)
Turning radius	a <sub>2</sub> = 5200 mm (205 in)
Inner radius	a <sub>3</sub> = 2645 mm (104 in)
Steering angle	a <sub>4</sub> = ±40°

## MACHINE CAPACITY

Tipping load, straight	kg (lb)	9250 (20400)
Tipping load, articulated 35°	kg (lb)	8400 (18250)
Tipping load, fully articulated	kg (lb)	8200 (18100)
Working load, fully articulated	kg (lb)	4100 ( 9040)
Breakout force	kgf (lbf)	9000 (20000)
Machine weight	kg (lb)	12925 (28495)
Weight distribution: Front	kg (lb)	5740 (12655)
Weight distribution: Rear	kg (lb)	7185 (15840)

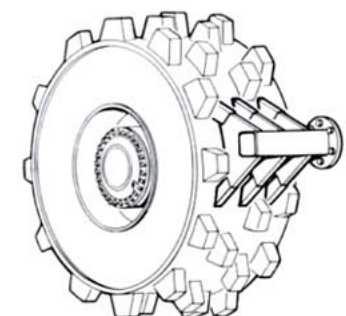
## WHEELS



Knife-shaped pads (99283)



Trapezoidal pads (98440)



Cleaners for trapezoidal pads (99445)

Wherever applicable, specifications and dimensions conform to SAE Standard J 732 c and J 818 a. The data refer to a machine equipped with a 1.9 m<sup>3</sup> (2.5 yd<sup>3</sup>) direct-mounted (bolt-on) straight-lip bucket without teeth and compactor wheels with trapezoidal pads.

Ground pressure. At a slump of 100 mm (4.0 in), the contact area between the wheels and the ground is 3315 cm<sup>2</sup>, (514 in<sup>2</sup>), which gives a ground pressure of:

- Front wheel 0.86 kg/cm<sup>2</sup> (12.2 psi)
- Rear wheel 1.08 kg/cm<sup>2</sup> (15.4 psi)

# STANDARD EQUIPMENT



## Safety & comfort

- ROPS cab
- Cab heating with filtered fresh air intake and defroster
- Seat belt
- Safety glass, windshield
- Tinted glass
- Ergonomically designed and adjustable operator's seat
- Rear-view mirror, internal, 1
- Lights:
  - Headlights high/low/asym. halogen
  - Parking lights
  - Working lights forward (2) halogen
  - Working lights rear (2) halogen
- Protective grilles for rear head-lights
- Protective grilles for rear head-lights in grille
- Attachment light (1) halogen
- Brake lights
- Tail lights
- Cab lighting
- Instrument lighting
- Direction indicators
- Utility box in cab
- Pressure gauge for airbrake system
- Instrument panel with symbols
- Sun visor
- Safety start
- Hazard flashers
- Wipers, front and rear windows
- Horn
- Ashtray
- Cigarette lighter
- Lifting lugs
- Lockable tool box
- Outlet for tyre inflation equipment



## Engine & Electrical system

- Fuel gauge
  - Temperature gauge, engine
  - Temperature gauge, hydraulic transmission
  - Hour counter
  - Electrical outlet 24 V
  - Spark-arresting silencer
  - Battery disconnect switch
  - Alternator
  - Air cleaner with ejector discharge
  - Pilot lamps for: working lights front and rear, battery charging, high beam, direction indicators, engine oil pressure, transmission fluid pressure, differential lock, parking brake, air brakes, hazard flashers, cold start (preheating coil), air cleaner, high-speed tilt
- (For certain markets only)*
- Central warning: Brake pressure, engine oil pressure, engine temperature, transmission temperature, parking brake

## Compactor equipment

- Underbody and side protection plates
- Compactor wheels



## Power transmission

- Full Power Shift transmission
- Differential lock (front axle only)
- Switch for transmission cut-out during braking
- Single-lever gear control



## Hydraulic system

- High and low tilt speed
- Control valve (three sections) and tubing for 3rd hydraulic control up to mid-joint bearing
- Vane pump

# OPTIONAL EQUIPMENT

*(Standard equipment on certain markets)*

- Air conditioning
- Heated operator's seat
- Rotating beacon with collapsible mount
- Tool kit, wheel nut wrench set
- Intermittent wipers
- Washers, front and rear windows
- Dual brake pedals
- Industrial hitch
- SMV symbol
- Electric engine heater, 1500W
- Rain guard for exhaust pipe
- Extra fuel filters
- Electrical equipment, Norway
- Hand lamp 24V
- Speedometer and odometer
- 3rd and 4th hydraulic controls
- 3rd hydraulic control
- 4th hydraulic control
- 5th hydraulic control
- Hydraulic attachment bracket
- Hydraulic oil cooler
- Reversing alarm
- Vent window, bronze-tinted
- Lever lock
- Radio console without radio
- Working lights, rear (2) halogen
- Air horn
- Tyre inflation equipment
- Road-dependent safety steering
- Hand brake alarm ASS 94
- Air-operated parking brake
- High-altitude version
- Low-emission version
- Extraction fan
- Screen for extraction fan
- Screen for blower-type fan
- Tropical version
- Rider's seat

# VOLVO BM

VOLVO BM AB ESKILSTUNA

*Under our policy of continuous product improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.*

Ref.No. 21 1 669 1735  
ENGELSKA

Production group for basic printed matter Volvo BM  
Photo: Foto Consult