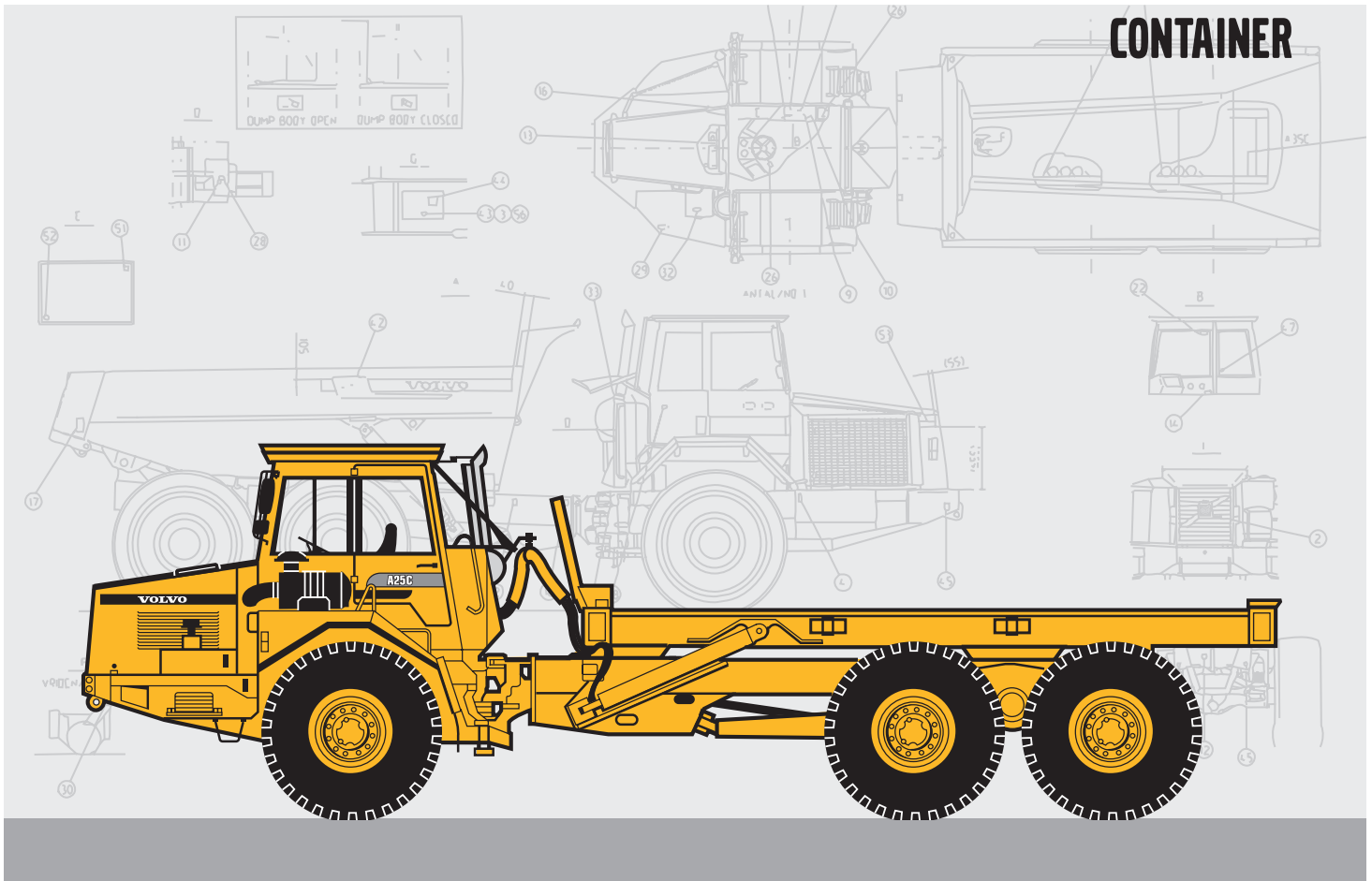


## VOLVO ARTICULATED HAULER

# A25C



- **Engine output SAE J1349:**  
Net 187 kW (251 hp)  
Gross 190 kW (255 hp)
- **Load capacity:**  
22,5 t (25 sh tn)
- **Designed to handle 20 ft ISO containers.**
- **60° dumping angle.**
- **Cab operated container lock.**
- **Volvo low emission** direct-injected, turbocharged, inter-cooled high performance diesel engine.
- **Fully automatic powershift transmission**, electronically controlled.
- **Drop box with longitudinal differential lock** and high and low gear ranges.
- **Hydraulic retarder** as standard.
- **100% lock-up differential locks.** One longitudinal and three transverse diff-locks.
- **Front axle with three-point suspension** and effective shock absorption.
- **Volvo terrain bogie**, individually oscillating axles and high ground clearance.
- **Load and dump brake.**
- **Low interior noise level.**
- **Adjustable steering wheel.**

# VOLVO



## ENGINE

Volvo 6-cylinder, in-line, turbocharged, direct-injected, inter-cooled, 4-cycle low emission diesel engine with overhead valves and wet replaceable cylinder linings. Meets 88/77/EEC and California off-road regulation 1996.

**Fan:** Hydrostatic driven, thermostatically controlled radiator fan consuming power only when needed.

Make . . . . .	Volvo
Model . . . . .	TD73 KCE
Max power at . . . . .	40 r/s (2400 r/min)
SAE J1349 Gross	190 kW (255 hp)
Flywheel power at . . . . .	40 r/s (2400 r/min)
SAE J1349 Net	187 kW (251 hp)
DIN 6271*	187 kW (251 hp)
Max torque at . . . . .	20 r/s (1200 r/min)
SAE J1349 Gross	1090 Nm (804 lbf ft)
SAE J1349 Net	1080 Nm (796 lbf ft)
DIN 6271**	1080 Nm (796 lbf ft)
Displacement total . . . . .	6,73 l (411 in <sup>3</sup> )
Bore . . . . .	104,77 mm (4.125 in)
Stroke . . . . .	130 mm (5.12 in)
Compression ratio . . . . .	17,7:1

\*) with fan at normal speed. With fan operating at full speed the flywheel power is 174 kW (233 hp) which corresponds to DIN 70020.

\*\*) with fan at normal speed. With fan operating at full speed the maximum torque is 970 Nm, which corresponds to DIN 70020.



## ELECTRICAL SYSTEM

Voltage . . . . .	24 V
Battery capacity . . . . .	2x135 Ah
Alternator . . . . .	1,65 kW (60 A)
Starter motor . . . . .	5 kW (6.7 hp)



## SERVICE CAPACITIES

Crankcase . . . . .	24 l (6.3 US gal)
Fuel tank . . . . .	280 l (74.0 US gal)
Cooling system . . . . .	37 l (9.8 US gal)
Transmission total . . . . .	16 l (4.2 US gal)
Drop box . . . . .	6 l (1.6 US gal)
Front axle . . . . .	27 l (7.1 US gal)
First bogie axle . . . . .	28 l (7.4 US gal)
Second bogie axle . . . . .	27 l (7.1 US gal)
Brake hydraulics . . . . .	2 l (0.5 US gal)
Hydraulic system . . . . .	210 l (55.5 US gal)
Hydraulic tank . . . . .	185 l (48.9 US gal)



## DRIVETRAIN

**Torque converter:** Single stage with free wheeling stator and automatic lock-up in all gears.

**Transmission:** Electronically controlled, fully automatic planetary transmission with 5 gears forward and 1 in reverse.

**Drop box:** Volvo with 2-stage design, power take-off and differential with lock-up function.

**Axles:** Volvo. 6-wheel drive. All axles have transversal diff-locks with 100% lock-up and fully floating axle shafts with planetary type hub reductions.

**Differential locks:** One longitudinal and three transverse. All with 100% lock-up.

Torque converter . . . . .	2,4:1
Transmission . . . . .	Volvo PT 1051 (5HP 500)
Drop box . . . . .	Volvo FL 652
Axles . . . . .	Volvo AH 54

### Speeds with tires 23.5R25

#### Low gear, forward

1	6 km/h (3.7 mile/h)
2	10 km/h (5.6 mile/h)
3	17 km/h (10.6 mile/h)
4	24 km/h (14.9 mile/h)
5	34 km/h (21.1 mile/h)

#### High gear, forward

1	9 km/h (5.6 mile/h)
2	15 km/h (9.3 mile/h)
3	26 km/h (16.2 mile/h)
4	37 km/h (23.0 mile/h)
5	52 km/h (32.3 mile/h)

#### Low gear, reverse

1	7 km/h (4.3 mile/h)
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#### High gear, reverse

1	11 km/h (6.8 mile/h)
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## SUSPENSION

Volvo suspension system

**Front axle:** Two rubber springs with bottoming absorption on each side. Stabilizer. Two shock absorbers on each side. The front axle is suspended at three points, which results in oscillating needed in rough terrain.

**Bogie:** Volvo's unique terrain bogie, which permits individual oscillation between the axles.



## BRAKE SYSTEM

Dual circuit system with air-hydraulic disc brakes. Comply with ISO 3450 and SAE J1473 at total machine weight.

**Circuit Division:** One circuit for front axle and one for bogie axles.

**Parking brake:** Spring-applied, air-released disc brake on the propeller shaft, designed to hold a loaded machine on a grade up to 18%. When the parking brake is applied, the longitudinal differential is locked.

**Load and dump brake:** With the engine running, the service brake on the rear axles is applied together with the parking brake.

**Compressor:** Gear-driven by engine transmission.

**Exhaust brake:** Standard.

**Retarder:** Hydraulic, infinitely variable, integrated in transmission.

**For retarding capability incl. retarder, exhaust brake and engine, see graph on page 4 in spec. sheet for A25C 6x6.**



## HYDRAULIC SYSTEM

**Pumps:** Three engine-dependent, variable piston pumps mounted on flywheel power take-offs. One unused power take-off available.

Ground-dependent hydraulic pump for supplementary steering mounted on the drop box.

**Filtration:** Through two paper filters with magnetic cores.

Pump capacity per pump	
at shaft speed . . . . .	34 r/s (2040 r/min)
engine dependent	100 l/min (26.4 US gpm)
ground dependent	118 l/min (31.2 US gpm)
Working pressure . . . . .	19,5 MPa (2830 psi)



## CAB

Volvo cab, tested and approved according to ROPS standard ISO/3471 and SAE J1040/APR88.

Mounted on rubber pads which effectively reduce vibrations.

Adjustable steering wheel.

Radio/ Contronic console in ceiling.

**Heater and defroster:** Filtered air and pressurized cab. Three speed fan.

**Operator's seat:** Ergonomically designed and adjustable operator's seat with flameproof upholstery.

**Trainer seat:** Option.

Number of exits . . . . .	2
Internal sound level,	
according to ISO 6394 and	
at max speed . . . . .	78 dB (A)



## STEERING SYSTEM

Hydromechanical articulated steering. 3,4 lock-to-lock turns.

**Cylinders:** Two double-acting steering cylinders.

**Supplementary steering:** Complies with ISO 5010 standard at total machine weight.

**Steering angle:** ± 45°



## CONTAINER FRAME

**Frame:** Made of 10 mm steel.

**Cylinders:** Two three stage hoist cylinders. Last stage double-acting

Tipping angle . . . . .	60°
Tipping time with load . . . . .	25 s
Lowering time . . . . .	34 s

Each corner of the container frame is equipped with air-operated container locks that are maneuvered from the cab.



## WEIGHTS

Operating weight includes all fluids and operator. Standard machine.

### Operating weight:

Front	9040 kg
Rear	8730 kg
Total	17770 kg
Payload . . . . .	22500 kg
Total weight	
Front	11500 kg
Rear	28770 kg
Total	40270 kg

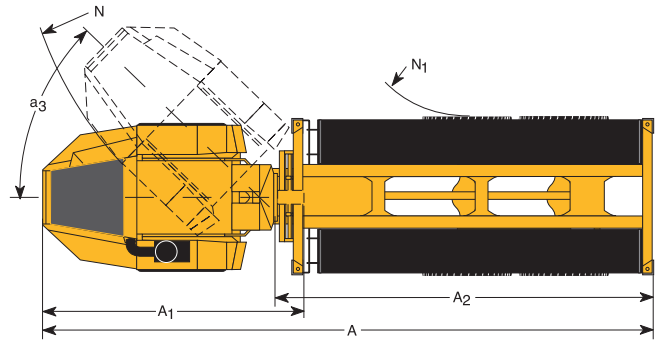
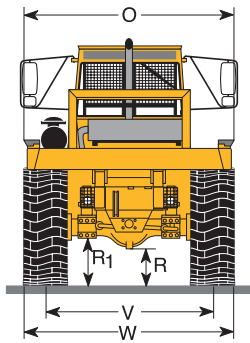
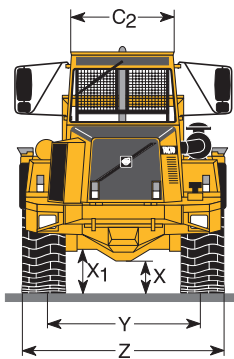
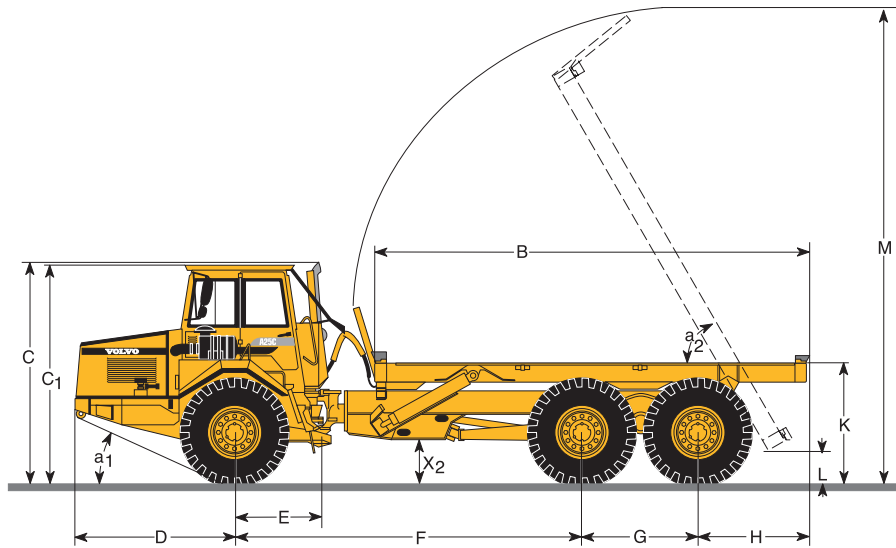


## GROUND PRESSURE

At 15% sinkage of unloaded radius and specified weights.

### With tires 23.5R25

Unloaded	
Front	91 kPa (13.2 psi)
Rear	44 kPa (6.4 psi)
Loaded	
Front	116 kPa (16.8 psi)
Rear	145 kPa (21.0 psi)



## DIMENSIONS VOLVO A25C CONTAINER (unloaded with 23.5R25 tires)

A	10570 mm	34' 8"	G	1670 mm	5' 6"	V	2150 mm	7' 6"
A <sub>1</sub>	4495 mm	14' 9"	H	1518 mm	12'	W	2795 mm	9' 2"
A <sub>2</sub>	6600 mm	21' 8"	K	1796 mm	5' 11"	X	480 mm	1' 7"
B	6058 mm	20'	L	475 mm	1' 7"	X <sub>1</sub>	610 mm	2'
C	3285 mm	10' 9"	M *	6482 mm	21' 3"	X <sub>2</sub>	660 mm	2' 2"
C <sub>1</sub>	3210 mm	10' 6"	N	7850 mm	25' 9"	a <sub>1</sub>	26°	
C <sub>2</sub>	1320 mm	4' 4"	N <sub>1</sub>	4250 mm	13' 11"	a <sub>2</sub>	60°	
D	2415 mm	7' 11"	O	2566 mm	8' 4"	a <sub>3</sub>	45°	
E	1200 mm	3' 11"	R	520 mm	1' "			
F	4967 mm	16' 4"	R <sub>1</sub>	620 mm	2'			

\*) Vary depending on container

## LOAD CAPACITY

### Including container

Load capacity. . . . . 22 500 kg 25 sh tn

Under our policy of continual 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.

# VOLVO

Volvo Construction  
Equipment Group

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