

V O L V O



Volvo Articulated Haulers Imperial: 45.2 ton(us) / 90,389lb / 479HP
Metric: 41t / 41,000kg / 357kW

A45G

Volvo Construction Equipment

A45G



Hauling heavy profits



Service and maintenance

- 250-hour greasing interval
- Half the fluid volume compared to the competition
- 1,000hr engine service intervals
- Service reminders and fluid level monitoring
- Industry-leading service access and ground-accessible service points



Haul Assist

- On-Board Weighing: real-time payload monitoring
- Tire Pressure Monitoring System
- Map: real-time positioning of on-site traffic
- Productivity Reports, including the geo-tracking of moved material
- Over-the-air updates, easy upgrades, remote support



Only from Volvo

- Industry-leading Volvo engine and driveline: high performance, high fuel efficiency
- Terrain Memory function: optimized engagement of the traction control for excellent off-road mobility
- Volvo dynamic drive
- Automatic drive combinations including 100% differential locks, all-terrain bogie and hydromechanical steering
- OptiShift: fast and smooth directional changes



The operator's choice

- Ease of operation: ergonomic and easy-to-understand controls
- Centrally positioned operator for best-in-class visibility
- Cruise control, hill assist, dump support system, load and dump brake
- The downhill speed control function automatically maintains a constant speed when operating on downward gradients
- Built-in brake test: schedule and perform a stationary brake test, guided by the machine display



Solutions for you

- Easy machine monitoring: CareTrack, ActiveCare Direct
- Lifetime Frame and Structure Warranty
- 24hr parts delivery guarantee
- Genuine Volvo Parts
- Volvo Site Simulation: get recommendations on the best fleet configuration and site set-up
- Operator Training Program: unlock the full potential of your machine
- Uptime Services: control your maintenance costs

Volvo A45G in detail

Engine

V-ACT, 16 liter, 6-cylinder straight VGT (Variable Geometry Turbocharged) diesel engine with 4 valves per cylinder, overhead camshaft and electronically controlled unit injectors. It has wet replaceable cylinder liners and replaceable valve guides and valve seats.

The engine has cooled EGR (Exhaust Gas Recirculation) and exhaust after treatment with EAT-Muffler (Exhaust After treatment) including DOC (Diesel Oxidation Catalyst), DPF (Diesel Particulate Filter) and SCR (Selective Catalytic Reduction) with an electronically controlled UDS (Urea Dosing System).

After treatment system features passive DPF regeneration with an AHI (After treatment Hydro carbon Injection) device as back up.

Engine model	Volvo	D16J
Max power - SAE J1995 Gross	kW (hp)	357 (479)
at engine speed	r/min (r/s)	1,800 (30)
Flywheel power - ISO 9249, SAE J1349 Net	kW (hp)	354 (475)
at engine speed	r/min (r/s)	1,800 (30)
Max torque - SAE J1995 Gross	Nm (ft lbf)	2,576 (1,900)
Max torque - ISO 9249, SAE J1349 Net	Nm (ft lbf)	2,551 (1,882)
at engine speed	r/min (r/s)	1,050 (17.5)
Displacement	l (in ³)	16.1 (982)

Electrical System

All cables, sockets and pins are identified. Cables are enclosed in plastic conduits and secured to main frame. Halogen lights. Prewired for options. Connectors meet IP67 standard for water-proofing as necessary.

Voltage	V	24
Battery	V	2x12
Battery capacity	Ah	2x225
Alternator	kW/A	3.396/120
Starter motor	kW	9

Drivetrain

Torque converter with built-in lock-up function.

Transmission: Fully automatic Volvo PowerTronic planetary transmission with nine forward gears and three reverse gears. The transmission has the ability to skip gears for fast and accurate gear selection.

Dropbox: Volvo-developed, in-line design with high ground clearance and 100% longitudinal „dog clutch“ type differential lock.

Axles: Heavy duty, purpose built Volvo design with fully floating axle shafts, planetary type hub reductions and 100% dog clutch type diff-lock. Automatic traction control system (ATC).

Torque converter		2.1:1
Transmission	Volvo	PT 2529
Dropbox	Volvo	IL2 ATC
Axles	Volvo	ARB H40

Brake system

Fully hydraulic, wet multiple disc brakes with enclosed, forced oil-cooled multiple discs on all wheels. Two circuit brake system. Complies with ISO 3450 at total machine weight.

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

Parking brake: Spring-applied disc brake acting on the trailer unit propeller shaft. When the parking brake is applied, the longitudinal differential locked.

Retarder: Service brake retarder function and Volvo Engine Brake (VEB).

Steering System

Hydro-mechanical articulated steering, self compensating design. Two double-acting steering cylinders.

Steering angle: 3,4 steering wheel turns lock-to-lock, $\pm 45^\circ$.

Steering system, including secondary steering fulfils ISO 5010.

Chassis

Frames: box type, heavy duty. High strength steel, robot welded.

Rotating hitch: 100% maintenance free, fully sealed, with permanently greased tapered roller bearings.

Cab

Mounted on rubber pads. Ergonomically designed. Easy entry and exit. Wide angle forward view.

Operator centrally positioned above the front axle. Adjustable operators seat with retractable seat belt.

Tilt/telescopic steering wheel. Ergonomically positioned controls. Filtered air. Optional climate control system.

Operator communication system: Contronics.

Large color display, user-friendly and easy-to-understand information, all vital machine functions are constantly monitored.

Instructor seat with seat belt.

Safety: ROPS/FOPS standards approved according to ISO3471, SAE J1040 / ISO3449, SAE J231.

Sound level in cab (ISO 6396) - L _{pA}	dB	72
External sound level (ISO 6395) - L _{WA}	dB	112

Internal sound level with sound kit: 70 dB(A)

External sound level with sound kit: 110 dB(A)



Hydraulic system

Pumps: Four variable displacement piston pumps driven by the flywheel PTO.

Two load-sensing used for steering and tipping and two electrical controlled used for fan, brake cooling and brake power supply. One ground-dependent piston pump for secondary steering mounted on the dropbox.

Two return oil filters with magnetic cores provide effective oil filtration.

System max working pressure	MPa (psi)	26 (3,771)
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Dumping System

Patented Load and Dump Brake.

Dumping Cylinders: two single stage double acting cylinders.

Tipping angle	°	70
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Tipping time with load	s	12
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Lowering time	s	10
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Body

Plate thickness

Front	mm (in)	8 (0.31)
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Sides	mm (in)	11 (0.43)
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Bottom	mm (in)	14 (0.55)
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Chute	mm (in)	16 (0.63)
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Material

Yield strength	N/mm ² (psi)	1,150 (166,793)
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Tensile strength	N/mm ² (psi)	1,350 (195,801)
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Load Capacity

Standard Body		
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Load capacity	kg (sh tn)	41,000 (45.2)
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Body, struck	m ³ (yd ³)	19.7 (25.8)
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Body, heaped 2:1	m ³ (yd ³)	25.1 (32.8)
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With overhung tailgate		
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Body, struck	m ³ (yd ³)	20.2 (26.4)
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Body, heaped 2:1	m ³ (yd ³)	26.2 (34.3)
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Suspension

Front suspension: Three point suspension consisting of a stay fitted to the frame structure by a spherical rubber bushing, shock absorbers with accumulators and cross stays.



Specifications

REFILL CAPACITIES

Crankcase	l	gal	55	14.5
Fuel tank	l	gal	480	126.8
Cooling system	l	gal	49	12.9
Brake cooling system	l	gal	188	49.7
Transmission	l	gal	43	11.4
Dropbox	l	gal	9	2.4
Axles, front/bogie	l	gal	26/52	6.9/13.7
Hydraulic tank	l	gal	174	46
DEF	l	gal	39	10.3

SPEED

Forward				
1	km/h	mph	5.8	3.6
2	km/h	mph	8.5	5.3
3	km/h	mph	10.4	6.5
4	km/h	mph	15	9.3
5	km/h	mph	21.6	13.4
6	km/h	mph	27.3	17
7	km/h	mph	36.1	22.4
8	km/h	mph	47.8	29.7
9	km/h	mph	57	35.4
Reverse				
1	km/h	mph	6.5	4
2	km/h	mph	9.4	5.8
3	km/h	mph	18	11.2

OPERATING WEIGHT UNLOADED

Tires		29.5R25*		
Front	kg	lb	16,500	36,376
Rear	kg	lb	14,600	32,187
Total	kg	lb	31,100	68,564
Payload	kg	lb	41,000	90,389

Operating weight includes all fluids and operator

*) A45G with tires 875/65R25, add 300 kg (660 lb)/axle

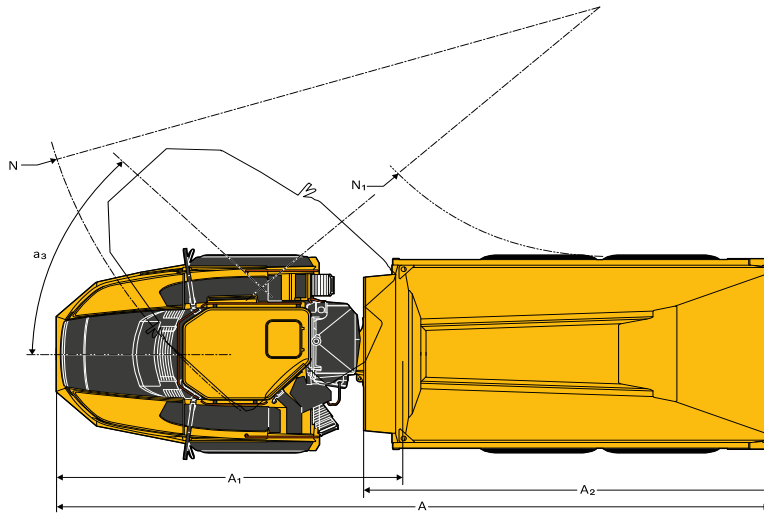
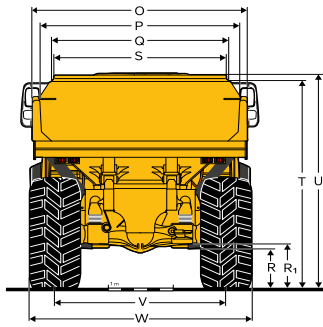
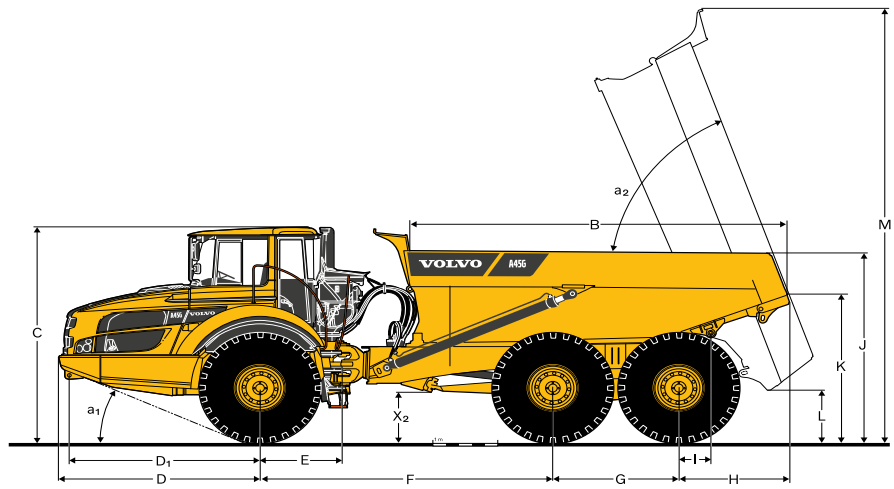
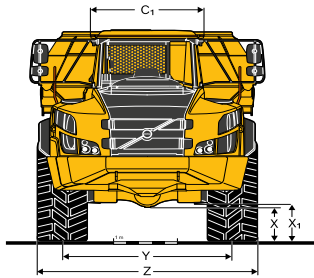
TOTAL WEIGHT

Tires		29.5R25*		
Front	kg	lb	20,900	46,077
Rear	kg	lb	51,200	112,877
Total	kg	lb	72,100	158,953

*) A45G with tires 875/65R25, add 300 kg (660 lb)/axle

GROUND PRESSURE

Tires			29.5R25		875/65R25	
Unloaded						
Front	kPa	psi	113	16.4	99	14.4
Rear	kPa	psi	47	6.8	42	6.1
Loaded						
Front	kPa	psi	142	20.6	124	18
Rear	kPa	psi	174	25.2	151	21.9



DIMENSIONS

Pos	Unit	A45G	
A	mm ft in	11 263	36'11"
A ₁	mm ft in	5 476	18'
A ₂	mm ft in	6 404	21'0"
B	mm ft in	5 844	19'2"
C	mm ft in	3 599	11'10"
C ₁	mm ft in	1 772	5'10"
D	mm ft in	3 100	10'2"
D ₁	mm ft in	2 942	9'8"
E	mm ft in	1 277	4'2"
F	mm ft in	4 518	14'10"
G	mm ft in	1 940	6'4"
H	mm ft in	1 706	5'7"
I	mm ft in	495	1'7"
J	mm ft in	3 200	10'6"
K	mm ft in	2 435	8'
L	mm ft in	822	2'8"
M	mm ft in	7 265	23'10"
N	mm ft in	8 957	29'5"
N ₁	mm ft in	4 327	14'2"
O	mm ft in	3 430	11'3"

DIMENSIONS

Pos	Unit	A45G	
P	mm ft in	3 118	10'3"
Q	mm ft in	2 820	9'3"
R	mm ft in	613	2'0"
R ₁	mm ft in	701	2'4"
S	mm ft in	2 651	8'8"
T	mm ft in	3 427	11'3"
U	mm ft in	3 546	11'8"
V	mm ft in	2 636	8'8"
W	mm ft in	3 403	11'2"
X	mm ft in	553	1'10"
X ₁	mm ft in	645	2'1"
X ₂	mm ft in	788	2'7"
Y	mm ft in	2 636	8'8"
Z	mm ft in	3 403	12'
a ₁	°	24.3	
a ₂	°	70	
a ₃	°	45	

A45G: Unloaded machine with 29.5R25 tires.

Equipment

STANDARD EQUIPMENT

Engine

Direct injected, electronically controlled, turbocharged, intercooled
Grouped oil filters
Preheater for easier cold starts
VEB (exhaust retarder EPG + compression brake)

Wheels and tires

29.5R25

Drivetrain

6x4 and 6x6 automatically engaged drive modes
Dog clutch type 100% diff-locks in all axles
Full automatic transmission
Dropbox with longitudinal diff-lock
Torque converter with automatic lock-up

Electrical System

120 A alternator
Battery disconnect switch
Extra 24 V socket for lunch cooler
Lights:
Back-up light
Brake lights
Cab lighting
Direction indicators
Headlights
Instrument lighting
Parking lights
Rear lights

Brake system

Hill assist
Load & Dump Brake
Retarder pedal
Parking brake on propeller shaft
Two circuit, fully hydraulic, wet discs on all axles

Body

Body prepared for exhaust heating and optional equipment

Safety and security

Anti-slip steps and platforms
Dump body lock
Handrails on steps and platforms
Hazard lights
Horn
Protective grill for cab rear window
Rear-view mirrors
Retractable 3-inch safety belt
ROPS/ FOPS - certified cab
Secondary steering
Steering joint lock
Windshield washers
Windshield wipers with interval function
Dump support system

STANDARD EQUIPMENT

Comfort

ACC control panel
Ashtray
Cab heater with filtered fresh air and defroster
Can holder /storage tray
Instructor seat with seat belt
Overhead console for radio
Sliding window
Space for lunch cooler
Storage box
Sun visor
Tilt/telescopic steering wheel
Tinted glass

Operator information interface

Gauges:
Brake pressure
Fuel
Speedometer
Tachometer
Wet disc brakes cooling oil temperature

Warning lights grouped and easy to read

Central warning (3 levels) for all vital functions

Central positioned information display

Automatic pre-start checks
Clock
Hour meter
Operational information, easy-to-navigate menu
Troubleshooting diagnostics

Exterior

Front mudguard wideners and rear mudflaps

Service and maintenance

Electrical engine hood
Drainage hose
Machine Tracking Information System MATRIS
Service platform integrated in the front grill
Tool box

OPTIONAL EQUIPMENT
Engine
Air filter, heavy duty, EON
Engine heater, 240 V
Engine heater, diesel (Eberspächer)
Engine auto shutdown
Engine shutdown timer
External emergency engine stop
Fuel filter, extra
High engine idle speed
Wheels and tires
875/65R25
Electrical System
Headlights, LED
Warning beacon, LED
Working lights, halogen
Working lights, LED
Entrance light
Anti-theft system (pin code)
Rear view camera
Reverse alarm
CAN-BUS interface, extra
Cab
Noise reduction kit (fulfils 2000/14/EC)
Anchorage, operator's manual
Cab heating/ventilation timer
Cable kit, for cab heater 240 V
HEPA cab air filter
Bluetooth radio kit
Rear view mirrors, adjustable, el.heated
Seat belt XXL, non-retractable
Sun blinds, side windows
Universal key
Air suspended, heated, fully adjustable seat
Armrest for operator seat
Headrest for operator seat
Low profile cab
Body
Body exhaust heating
Front spillguard, extra
Side extension, 200 mm / 7.9 in
Side extension, light material
Tailgate, overhung, linkage-operated
Tailgate, overhung, wire-operated
Tailgate, underhung
Wear plates, 450 HB
Underground body

OPTIONAL EQUIPMENT
Safety and security
Fire suppression system
Warning triangle
First aid kit and fire extinguisher
Fire extinguisher
Wheel chocks
Service and maintenance
Lube system, standard machine
Lube system, tailgate
Lubrication hose, ground level greasing
Tool kit
Other
Siberian kit -40°C
Arctic oil kit
CareTrack
Fast fuelling system
Jump start connector, NATO -type
Frame extension
Haul Assist - On-Board Weighing
Haul Assist - Tire Pressure Monitoring System





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