

Volvo Construction Equipment
Building Tomorrow



A45G

Volvo Articulated Haulers • 45.2 ton capacity • 479 hp





1966: DR 631 GRAVEL CHARLIE WORLD'S FIRST SERIES-MANUFACTURED ARTICULATED HAULER

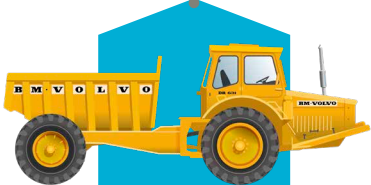
By today's standards Gravel Charlie was not a big machine – but its impact on transport operations in the construction sector was massive.

- The world's first series manufactured articulated hauler
- Pioneering solutions including articulated steering, all-wheel drive and differential locks
- Unrivalled manoeuvrability in off-road conditions

GRAVEL CHARLIE MARKED THE BEGINNING OF SOMETHING NEW AND SOMETHING WHICH WOULD CHANGE THE CONSTRUCTION SECTOR FOREVER.

10 000
ARTICULATED
HAULERS
PRODUCED
BY VOLVO
1981

25 000
ARTICULATED
HAULERS PRODUCED
BY VOLVO
1996



**DR 631
GRAVEL CHARLIE**

1966

World's first series-manufactured articulated hauler

10 t (20,000 lb)
25 kph (15 mph)



DR 860

1967

Master of rough terrain: 3-axle machine with unique bogie concept, still going strong

15 t (30,000 lb)
30 kph (18 mph)



5350

1979

"Terrain Express" expanded Volvo articulated hauler's global success

20 t (40,000 lb)
50 kph (31 mph)

- Constant 4-wheel drive
- Higher average speed in combination with higher load capacity = **improved profitability**
- Fully automatic transmission
- Unique suspension system allows high average speed
- Top class, roomy cab with low noise level



A25C

1993

First articulated hauler with low emission engine as standard



A40

1995

A class bigger

36 t (72,000 lb)

A complete product range 20 - 40 ton class



A60H

2016

Launching the world's largest articulated hauler.

55 t (110,000 lb)



G-SERIES

2014

Wet, cooled brakes on all models



F-SERIES

2011

Further improving ease of operation and environmental care



**E-SERIES
A40E FS**

2007

World's first full suspension articulated hauler, boosting operator comfort and productivity

39 t (78,000 lb)



D-SERIES

2000

Built with the operator in focus

37 t (74,000 lb)

- Increased productivity
- Improved operator comfort
- Improved serviceability

2001

BEST INDUSTRIAL DESIGN AWARD FOR D-SERIES DESIGN



2012

BEST INDUSTRIAL DESIGN AWARD FOR THE A40F DESIGN



2017

75 000
ARTICULATED HAULERS PRODUCED BY VOLVO

2016: VOLVO A60H THE BEST JUST GOT BIGGER



Built on the proven Volvo technology of articulated steering, all-wheel drive and differential locks, the Volvo A60H has evolved to be bigger and bolder!

- The largest true articulated hauler on the market
 - 55 t payload capacity
- Meeting a growing demand for larger, higher payload haulers

BY EVOLVING OUR PRODUCT LINE-UP TO RESPOND TO CUSTOMER DEMANDS, THE VOLVO A60H CONTINUES OUR PROUD HERITAGE OF INNOVATION AND MARKET LEADERSHIP IN HAULER SOLUTIONS.

Pure uptime

Get continuous production with this bigger, durable and superior machine – always available and ready to work. Count on superb reliability thanks to the machine's robust design, easy service access and outstanding Volvo dealer network. Guarantee pure uptime.

Guaranteed durability

Increase your uptime using heavy-duty front and rear frames, hitch and wet disk brakes. Volvo proven durability and the support of extensive warranty options means you never need to worry about getting the job done. Strength and durability are hallmarks of the Volvo articulated hauler.



Over fifty years strong

Fifty years and fifty tonnes later, Volvo is the world's leading manufacturer of articulated haulers. We invented the concept and have been developing and building these machines for over 50 years – it has come a long way from its original 10 tonne articulated hauler. With proven success over the years, the machines include innovative technology and the renowned Volvo engine.



Service access

With industry-leading access, servicing your machine is quick and easy. The front grill swings down, opening a service platform with anti-slip steps. The electric hood opens to 90 degrees, allowing full and safe access to the engine compartment.



Volvo dealer network

The exclusive Volvo dealer network is there to support you whenever you need it. Volvo offers a number of services, local knowledge and global experience, including telematics machine monitoring – CareTrack™ and MATRIS™ – as well as superb parts availability.





UPTIME

Get ready to work with the all new A45G . Designed for heavy hauling in severe off-road operation, the machine's long service life, quality, reliability and durability is everything you expect from a Volvo. Hauling is easier and more efficient.



FUEL EFFICIENCY GUARANTEED

The A45G powered by the world-renowned Volvo engine delivers excellent fuel efficiency without compromising on power or performance. With guaranteed fuel efficiency, this machine will increase your profitability and improve your return on investment.

World-renowned efficiency

Improve your efficiency and move more for less. Excellent fuel efficiency, innovative technology and useful operational data tools help to control your maintenance costs and maximize your investment.

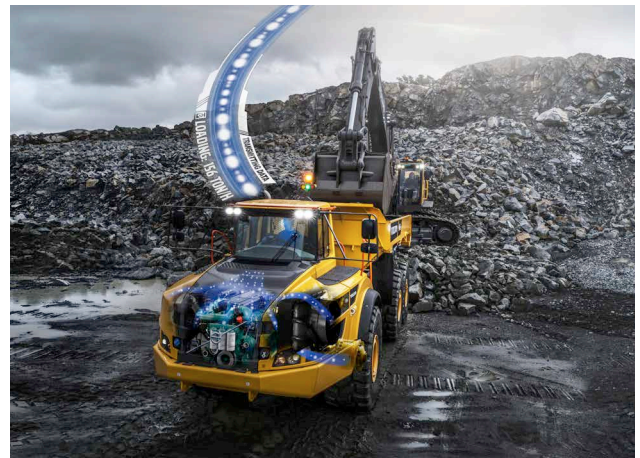
Move more for less

The machine is optimized for efficiency featuring higher payload capabilities. Its smart design allows for more capacity while reducing fuel consumption so you can move more for less.



Operational data

Receive valuable data to improve onsite efficiency and save costs. With intelligent systems from Volvo such as MATRIS™, CareTrack™ and the On Board Weighing system, you will optimize your production and minimise your operational costs.



Control your maintenance costs

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.



Volvo dynamic drive

Dynamic and predictive gear selection adapts to operating conditions, for improved comfort and fuel efficiency.



Hit the targets

Hit your targets with the A45G. This machine features 100% off-road performance, proven Volvo technology and increased payload – contributing to sustainable operations, year after year.

Articulated hauler concept

Go where others can't. The articulated hauler concept provides total versatility so you can access the entire jobsite and climb steeper gradients. Work in all seasons, terrains and applications. With body building solutions and different chassis options you can tailor the machine to your jobsite.



The best articulated hauler

The A45G machine delivers unbeatable off-road performance in its class with features including matched Volvo drivetrain, Automatic Traction Control including 100% differential locks, all-terrain bogie, hydro-mechanical steering.



The right speed for the job

Ensure the right speed for your job using the retarders, Volvo Engine Brake and new Downhill Cruise Control to adapt your speed for maximum productivity and safety.



Load optimization

The optional On Board Weighing System guarantees the optimal load every cycle. This maximizes production, boosts fuel efficiency and reduces machine wear in all site conditions and operations.





THE BEST JUST GOT BIGGER

Bigger means better when loading more tonnes per hour, with an extra two tonne payload you can carry more in one go. The A45G articulated hauler is built to improve your cycle times and productivity.

The ultimate hauler

OPERATOR'S CHOICE

Its comfortable cab and ease of operation, even in adverse conditions, makes operators choose this machine.

Guaranteed durability

Volvo proven durability and support mean you never need to worry about getting the job done.

Over fifty years strong

Over fifty years later, Volvo is still the world's leading manufacturer of articulated haulers.

Service access

With industry-leading access, servicing your machine is quick and easy.

Cruise Control

Set and adjust the cruise control to maintain a constant travel speed for smoother and more efficient hauling.

OptiShift

Directional changes are made smoother, easier and faster.

UPTIME

Designed for heavy hauling in severe off-road operation, its long service life, quality, reliability and durability is everything you expect from a Volvo.



FUEL EFFICIENCY GUARANTEED

Powered by the world-renowned Volvo engine delivers excellent fuel efficiency without compromising on power or performance.

Dump support system

The new dump support system increases stability and control in tough environments.

Downhill Speed Control

Easily maintain control and speed when operating downhill, for safer and more comfortable operation.

THE BEST JUST GOT BIGGER

Move more tonnes per hour and give a 100% in all conditions with an increase two tonne payload.

Brake test

Schedule and perform a safe and easy stationary test, guided by the operator's display.

Volvo dynamic drive

Gear shifting adapts dynamically to operating conditions, for improved comfort and fuel efficiency.





OPERATOR'S CHOICE

A happy operator is a more productive operator and when many other machines are onsite, most operators prefer the Volvo. Even in the most adverse conditions, its comfortable cab and ease of operation keep operators alert and performing their best.

Control in comfort

The industry-leading spacious cab and comfortable work environment make the A45G the number one choice for operators. Its superior comfort, control, ease of operation and safety appeals to operators, helping to maintain outstanding productivity all day, every day.

Total operator control

The A45G is packed with features to help operators get the most from the machine. Intelligent functions such as cruise control, downhill speed control and hill assist help the operator control the machine with ease and efficiency, for enhanced safety and productivity in all conditions.



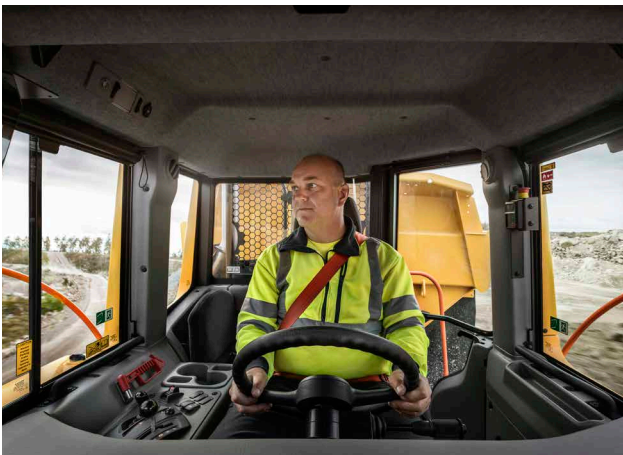
Ease of operation

The ergonomic and comfortable controls make Volvo articulated haulers easy to understand and suit all operators. Automatic functions such as OptiShift – which enables fast and smooth directional changes – offer even greater ease of operation for an unrivalled operator experience.



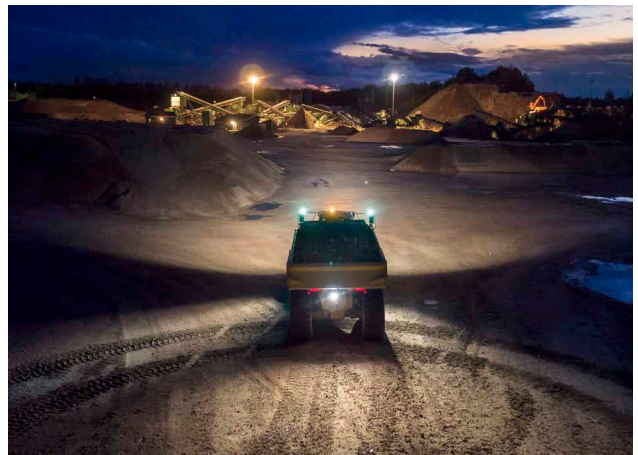
Operator comfort

Feel comfortable and spend more time in the A45G. The centrally positioned operator, superior steering, excellent suspension, low noise levels, climate control, space and visibility, reduce operator fatigue for more effective operations.



Safety

Whether its operators, trainers, technicians or site workers – safety on site is of fundamental importance. In the A45G superior visibility and efficient lighting combine with a number of safety features, such as the brake test and dump support, helping to keep the operator and people working around the machine safe, even in the most demanding working environments.



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 fulfills 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) - LpA	dB(A)	72
External sound level (ISO 6395) - LwA	dB(A)	112

Internal sound level with sound kit: 70 dB(A)
External sound level with sound kit: 110 dB(A)

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.

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
Tipping time with load	s	12
Lowering time	s	10

Body

Plate thickness

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

Material

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

Load Capacity

Standard Body

Load capacity	kg (sh tn)	41,000 (45.2)
Body, struck	m ³ (yd ³)	19.7 (25.8)
Body, heaped 2:1	m ³ (yd ³)	25.1 (32.8)

With overhung tailgate

Body, struck	m ³ (yd ³)	20.2 (26.4)
Body, heaped 2:1	m ³ (yd ³)	26.2 (34.3)

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

29.5R25*				
Tires				
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

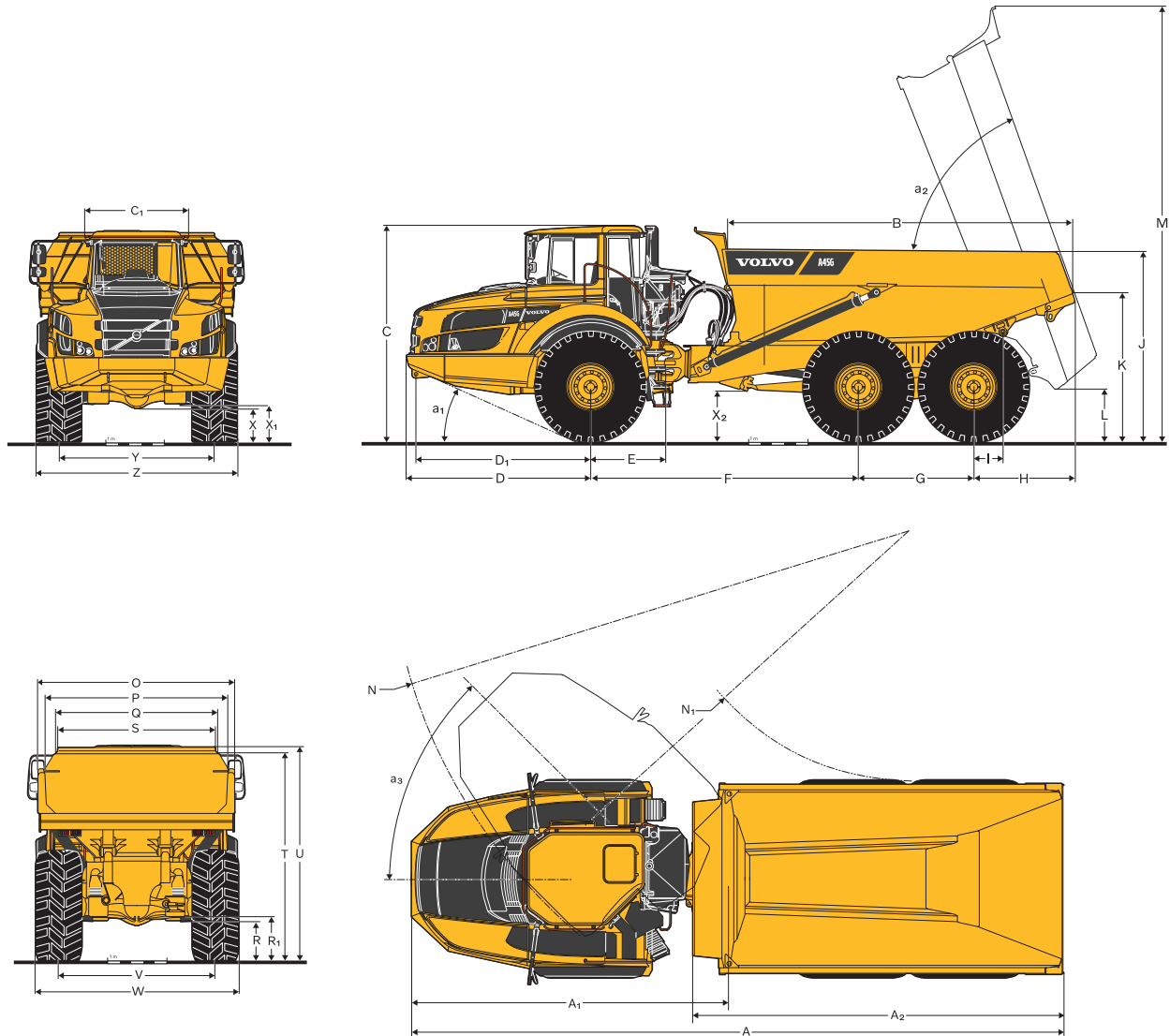
TOTAL WEIGHT

29.5R25*				
Tires				
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

		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	151 219



DIMENSIONS				
Pos	Unit		A45G	
A	mm	ft in	11 263	36'11"
A1	mm	ft in	5 476	18'
A2	mm	ft in	6 404	21'0"
B	mm	ft in	5 844	19'2"
C	mm	ft in	3 599	11'10"
C1	mm	ft in	1 772	5'10"
D	mm	ft in	3 100	10'2"
D1	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"
N1	mm	ft in	4 327	14'2"

DIMENSIONS				
Pos	Unit		A45G	
O	mm	ft in	3 430	11'3"
P	mm	ft in	3 118	10'3"
Q	mm	ft in	2 820	9'3"
R	mm	ft in	613	2'0"
R1	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"
X1	mm	ft in	645	2'1"
X2	mm	ft in	788	2'7"
Y	mm	ft in	2 636	8'8"
Z	mm	ft in	3 403	12'
a1		°		24.3
a2		°		70
a3		°		45

A45G: Unloaded machine with 29.5R25 tires.

Equipment

STANDARD EQUIPMENT

Engine

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

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
 Co-pilot system
 Extra 24 V socket for lunch cooler
 Haul assist on board weighing

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

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 protected Care Cab
 Secondary steering
 Steering joint lock
 Windshield washers
 Windshield wipers with interval function
 Dump support system

Comfort

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

STANDARD EQUIPMENT

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

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

OPTIONAL EQUIPMENT

Cab

Noise reduction kit (fulfills 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, wire-operated
Tailgate, underhung
Wear plates, 450 HB
Underground body

OPTIONAL EQUIPMENT

Safety

Fire suppression system
Warning triangle
First aid kit and fire extinguisher
Fire extinguisher
Wheel chocks

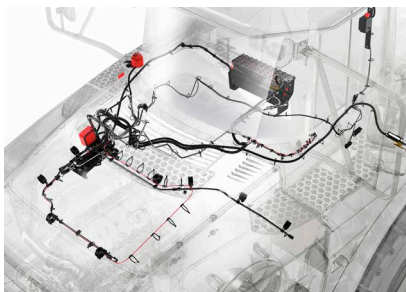
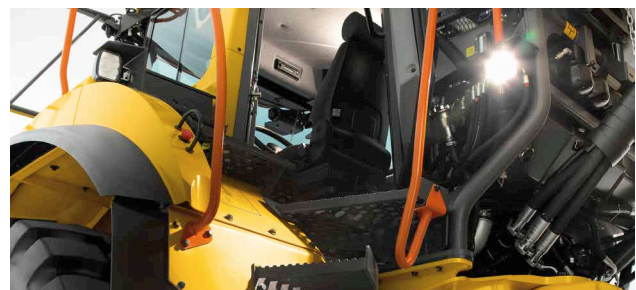
Service and maintenance

Lube system, standard machine
Lube system, tailgate
Lubrication hose, ground level greasing
Tool kit

Other

Siberian kit -40°C
On board weighing (OBW)
Arctic oil kit
CareTrack
Fast fuelling system
Jump start connector, NATO -type
Frame extension

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Volvo fire suppression system**Fast fuelling****Heavy duty air filter****LED lighting****Entrance light**

Not all products are available in all markets. Under our policy of continuous 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

volvoce.com