A45GFS
Volvo Articulated Haulers  41 t  476 hp
Bigger, stronger, faster
Get ready to work with the Volvo A45G Full Suspension articulated hauler. Designed for heavy-hauling in severe off-road operations, the machine offers continuous productivity, proven Volvo technology and impressive comfort, contributing to sustainable operations. Hauling is easier and more efficient.

**Comfort at speed**
The built-in system monitors the hauler’s wheel movements and stabilizes the machine based on ground conditions, delivering superior operator comfort.

**Build the best fleet**
With shorter cycle times and non-stop production, you can reduce your fleet size while maintaining the same productivity levels as other haulers.

**Know no limits**
The Full Suspension system provides ultimate operator comfort, which maximizes drivability in severe terrain and also reduces the level of maintenance required for haul roads on the jobsite.

**Maximize your investment**
Optimize load cycles with the On-Board Weighing on the A45GFS. The award-winning system – standard on FS models – ensures every hauler shifts the optimum safe payload.
MOVE MORE - FASTER

Increase productivity up to 25% with the A45G Full Suspension hauler from Volvo.
First launched in 2007, the A45GFS has been designed and built with Volvo Construction Equipment’s outstanding experience and expertise.
The future of technology

Built on the proven G-Series platform, the updated A45GFS features all the unique pioneering Volvo technology you’d expect from a Full Suspension hauler, plus a host of upgrades. Take your productivity to the next level thanks to technological advancements, including improved hydraulic cylinders, enhanced machine control software and upgrades throughout.

Unique suspension
The front suspension provides superior operator comfort meanwhile, the rear suspension delivers greater comfort, for a smooth and productive ride.

Comfortable front suspension
The unique front suspension is equipped with a set of accumulators and adapts to both payload and ground conditions, delivering unbeatable operator comfort.

Active leveling sensors
Six level sensors actively monitor the frame movement in relation to the axles and signal the hydraulic system to adjust the suspension, optimizing stability during travel.

Robust accumulators and intuitive cross flow
The A45GFS haulers rear suspension is equipped with two high pressure accumulators for loaded operations and two low pressure accumulators for unloaded operations. The cross flow between the hydraulic cylinders stabilize both trailer and tractor, this allows for higher average speeds over poor ground structures.
Move more for less

The Volvo A45GFS is purpose-built to deliver reliability and performance that is second to none. When working in tough terrain, the A45GFS delivers superior productivity, travel speed and cycle times when compared to other haulers for an improved Total Cost of Ownership (TCO).

Average cycle times
Due to the ability of the Full Suspension machine to drive faster over challenging terrain, cycle times are significantly reduced.

Hauler productivity
Faster cycle times result in a 25% increase of hauler production per operating hour.
Put to the test

Cost per tonne
Side-by-side study of an A45G compared to an A45GFS showed the A45GFS delivered a lower cost per tonne.

Total fleet size
By using Full Suspension haulers, you are able to reduce fleet size to move the same amount of material.

Cost of ownership
With fewer machines, delivering faster cycle times, the fleet total cost of ownership is reduced by 13%.
Volvo A45GFS 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).
- T4/Stage IV after treatment system features passive DPF regeneration with an AHI (After treatment Hydro carbon Injection) device as back up.

<table>
<thead>
<tr>
<th>Engine model</th>
<th>Engine</th>
<th>D16J</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max power - SAE J1995 Gross</strong></td>
<td>kW</td>
<td>350</td>
</tr>
<tr>
<td>at engine speed</td>
<td>r/min</td>
<td>1 800</td>
</tr>
<tr>
<td><strong>Flywheel power - ISO 9249, SAE J1349 Net</strong></td>
<td>kW</td>
<td>347</td>
</tr>
<tr>
<td>at engine speed</td>
<td>r/min</td>
<td>1 800</td>
</tr>
<tr>
<td><strong>Max torque - SAE J1995 Gross</strong></td>
<td>Nm</td>
<td>2 525</td>
</tr>
<tr>
<td>Max torque - ISO 9249, SAE J1349 Net</td>
<td>Nm</td>
<td>2 500</td>
</tr>
<tr>
<td>at engine speed</td>
<td>r/min</td>
<td>1 050</td>
</tr>
<tr>
<td>Displacement</td>
<td>l</td>
<td>9</td>
</tr>
</tbody>
</table>

**Drive system**

- 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 2519 |
| 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, ±45°.
- Steering system, including secondary steering fulfills ISO 5010.

**Suspension**

- Unique, full hydraulic, on all wheels with automatic leveling and stabilizer. Part of the machine’s hydraulic system, uses the same hydraulic oil.
- Hydraulic cylinders (strut), front/rear | 2/4 |
- Accumulators, oil-nitrogen, high pressure, front | 2 |
- Accumulators, oil-nitrogen, high/low pressure, rear | 2/2 |
- Levelling sensors | 2+2+2 |

**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 centered 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.

**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 | 3,396/120 |
- Alternator kW/A | 2x2 |
- Starter motor kW | 9 |

**Hydraulic system**

- 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 pump for secondary steering mounted on the dropbox.
- Two return oil filters with magnetic cores provide effective oil filtration.
- System max working pressure MPa | 26 |

**Load Capacity**

<table>
<thead>
<tr>
<th>Load Capacity</th>
<th>Standard Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Load capacity</td>
<td>kg</td>
</tr>
<tr>
<td>Body, strut</td>
<td>m³</td>
</tr>
<tr>
<td>Body, heaped 2:1</td>
<td>m³</td>
</tr>
<tr>
<td>With overhang tailgate</td>
<td></td>
</tr>
<tr>
<td>Body, strut</td>
<td>m³</td>
</tr>
<tr>
<td>Body, heaped 2:1</td>
<td>m³</td>
</tr>
</tbody>
</table>

**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) |

**Material**

- HB450 steel

<table>
<thead>
<tr>
<th>Plate thickness</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>8</td>
</tr>
<tr>
<td>Sides</td>
<td>11</td>
</tr>
<tr>
<td>Bottom</td>
<td>14</td>
</tr>
<tr>
<td>Chute</td>
<td>16</td>
</tr>
</tbody>
</table>

**Material**

- EcontentType at engine speed r/min | kW | 1 800 | 2 525 | 1 800 | 1 050 | 16.1 |

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**Suspension**

- Unique, full hydraulic, on all wheels with automatic leveling and stabilizer. Part of the machine’s hydraulic system, uses the same hydraulic oil.
- Hydraulic cylinders (strut), front/rear | 2/4 |
- Accumulators, oil-nitrogen, high pressure, front | 2 |
- Accumulators, oil-nitrogen, high/low pressure, rear | 2/2 |
- Levelling sensors | 2+2+2 |
## Specifications

### REFILL CAPACITIES

<table>
<thead>
<tr>
<th>Component</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crankcase</td>
<td>55</td>
</tr>
<tr>
<td>Fuel tank</td>
<td>480</td>
</tr>
<tr>
<td>Cooling system</td>
<td>49</td>
</tr>
<tr>
<td>Brake cooling system</td>
<td>188</td>
</tr>
<tr>
<td>Transmission</td>
<td>43</td>
</tr>
<tr>
<td>Dropbox</td>
<td>9</td>
</tr>
<tr>
<td>Axles, front/bogie</td>
<td>26/52</td>
</tr>
<tr>
<td>Hydraulic tank</td>
<td>210</td>
</tr>
<tr>
<td>AdBlue®</td>
<td>35</td>
</tr>
</tbody>
</table>

Registered trademark of the Verband der Automobilindustrie e.V. (VDA)

### OPERATING WEIGHT UNLOADED

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Tires</td>
<td>16 500</td>
</tr>
<tr>
<td>Rear Tires</td>
<td>14 000</td>
</tr>
<tr>
<td>Total Unloaded</td>
<td>30 500</td>
</tr>
<tr>
<td>Payload</td>
<td>41 000</td>
</tr>
</tbody>
</table>

Operating weight includes all fluids and operator.

*) A45GFS with tires 875/65R29, add 300 kg/axle

### TOTAL WEIGHT

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Tires</td>
<td>20 750</td>
</tr>
<tr>
<td>Rear Tires</td>
<td>50 750</td>
</tr>
<tr>
<td>Total</td>
<td>71 500</td>
</tr>
</tbody>
</table>

*) A45GFS with tires 875/65R29, add 300 kg/axle

### GROUND PRESSURE

<table>
<thead>
<tr>
<th>Component</th>
<th>Pressure (kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unloaded Front Tires</td>
<td>114</td>
</tr>
<tr>
<td>Unloaded Rear Tires</td>
<td>48</td>
</tr>
<tr>
<td>Loaded Front Tires</td>
<td>143</td>
</tr>
<tr>
<td>Loaded Rear Tires</td>
<td>174</td>
</tr>
</tbody>
</table>

### SPEED

<table>
<thead>
<tr>
<th>Component</th>
<th>Speed (km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5.8</td>
</tr>
<tr>
<td>2</td>
<td>8.8</td>
</tr>
<tr>
<td>3</td>
<td>10.4</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>21.6</td>
</tr>
<tr>
<td>6</td>
<td>27.3</td>
</tr>
<tr>
<td>7</td>
<td>36.1</td>
</tr>
<tr>
<td>8</td>
<td>47.8</td>
</tr>
<tr>
<td>9</td>
<td>57</td>
</tr>
<tr>
<td>Reverse</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6.5</td>
</tr>
<tr>
<td>2</td>
<td>9.4</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
</tbody>
</table>

### Wheel loader PASS MATCHING

<table>
<thead>
<tr>
<th>Component</th>
<th>Number of passes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A45GFS</td>
<td>4</td>
</tr>
<tr>
<td>EC480</td>
<td>4</td>
</tr>
<tr>
<td>EC750</td>
<td>3</td>
</tr>
</tbody>
</table>

Well matched, 2-3 buckets. Loader under capacity, 4 buckets or more. Loader undersized for optimum match, reach might be an issue.

### Excavator PASS MATCHING

<table>
<thead>
<tr>
<th>Component</th>
<th>Number of passes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A45GFS</td>
<td>8</td>
</tr>
<tr>
<td>L220</td>
<td>4</td>
</tr>
<tr>
<td>L250</td>
<td>5</td>
</tr>
<tr>
<td>L350</td>
<td>3</td>
</tr>
<tr>
<td>EC480</td>
<td>4</td>
</tr>
<tr>
<td>EC750</td>
<td>3</td>
</tr>
</tbody>
</table>

Well matched, 4-6 buckets. Excavator under capacity, 7 buckets or more. Excavator undersized for optimum match.

### DIMENSIONS

**L220**

- A: 11 263
- A1: 5 476
- A2: 6 404
- B: 5 844
- C: 3 599
- C1: 1 772
- D: 3 100
- D1: 2 942
- E: 1 277
- F: 4 518
- G: 1 940
- H: 1 706
- I: 495
- J: 3 200
- K: 2 435
- L: 822
- M: 7 269
- N: 8 987
- N1: 4 927
- O: 3 430
- P: 3 118
- Q: 2 820

**L250**

- A: 11 263
- A1: 5 476
- A2: 6 404
- B: 5 844
- C: 3 599
- C1: 1 772
- D: 3 100
- D1: 2 942
- E: 1 277
- F: 4 518
- G: 1 940
- H: 1 706
- I: 495
- J: 3 200
- K: 2 435
- L: 822
- M: 7 269
- N: 8 987
- N1: 4 927
- O: 3 430
- P: 3 118
- Q: 2 820

**L350**

- A: 11 263
- A1: 5 476
- A2: 6 404
- B: 5 844
- C: 3 599
- C1: 1 772
- D: 3 100
- D1: 2 942
- E: 1 277
- F: 4 518
- G: 1 940
- H: 1 706
- I: 495
- J: 3 200
- K: 2 435
- L: 822
- M: 7 269
- N: 8 987
- N1: 4 927
- O: 3 430
- P: 3 118
- Q: 2 820

**A45GFS: Unloaded machine with 29.5R29 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

#### Electrical system
- 80 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

#### 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

#### 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

### STANDARD EQUIPMENT

#### Comfort
- Full hydraulic suspension
- 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
- 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 and belly plate
- Machine Tracking Information System MATRIS
- Service platform integrated in the front grill
- Tool box

### OPTIONAL EQUIPMENT

#### Engine
- Air filter, heavy duty, EON
- Engine heater, 120 V, USA
- 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
- 875/65R29
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.