

# Volvo A25G, A30G in detail

## Engine

V-ACT, 11 liter, 6-cylinder straight VGT (Variable Geometry Turbocharged) diesel engine with 4 valves per cylinder, overhead camshaft. The Fuel system have a common rail with electronically controlled of 3 Pce of pumping injectors and 3 Pce of non-pumping 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 AHl (After treatment Hydro carbon Injection) device as back up.

		A25G	A30G
Engine model	Volvo	D11M	D11M
Max power - SAE J1995 Gross	kW (hp)	235 (315)	265 (355)
at engine speed	r/min (r/s)	2,100 (35)	2,000 (33.3)
Flywheel power - ISO 9249, SAE J1349 Net	kW (hp)	234 (314)	264 (354)
at engine speed	r/min (r/s)	2,100 (35)	2,000 (33.3)
Max torque - SAE J1995 Gross	Nm (ft lbf)	2,040 (1,505)	2,040 (1,505)
Max torque - ISO 9249, SAE J1349 Net	Nm (ft lbf)	2,030 (1,497)	2,030 (1,497)
at engine speed	r/min (r/s)	1,100 (18.3)	1,200 (20)
Displacement	l (in <sup>3</sup> )	10.8 (659)	10.8 (659)

## 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.

		A25G	A30G
Voltage	V	24	24
Battery	V	2x12	2x12
Battery capacity	Ah	2x170	2x170
Alternator	kW/A	3.396/120	3.396/120
Starter motor	kW	9	9

## Drivetrain

Torque converter with built-in lock-up function.

**Transmission:** Fully automatic Volvo PowerTronic planetary transmission with six forward gears and two 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).

		A25G	A30G
Torque converter		2.37:1	2.37:1
Transmission	Volvo	PT 2116	PT 2116
Dropbox	Volvo	IL1 ATC	IL1 ATC
Axles	Volvo	AHW56	AHW64

## 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.

## 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. 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.

		A25G	A30G
Sound level in cab (ISO 6396) - L <sub>PA</sub>	dB	72	72
External sound level (ISO 6395) - L <sub>WA</sub>	dB	110	111
Internal sound level with sound kit: 70 dB(A)			
External sound level with sound kit: 108 dB(A)			



<b>Hydraulic system</b>			
<b>Pumps:</b> 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.			
		<b>A25G</b>	<b>A30G</b>
System max working pressure	MPa (psi)	25 (3,626)	25 (3,626)
<b>Dumping System</b>			
Patented Load and Dump Brake. <b>Dumping Cylinders:</b> two single stage double acting cylinders.			
		<b>A25G</b>	<b>A30G</b>
Tipping angle	°	74	70
Tipping time with load	s	12	12
Lowering time	s	10	10
<b>Body</b>			
		<b>A25G</b>	<b>A30G</b>
<b>Plate thickness</b>			
Front	mm (in)	6 (0.24)	6 (0.24)
Sides	mm (in)	10 (0.39)	10 (0.39)
Bottom	mm (in)	14 (0.55)	14 (0.55)
Chute	mm (in)	14 (0.55)	14 (0.55)
<b>Material</b>			
Yield strength	N/mm <sup>2</sup> (psi)	1,150 (166,793)	1,150 (166,793)
Tensile strength	N/mm <sup>2</sup> (psi)	1,350 (195,801)	1,350 (195,801)

<b>Load Capacity</b>			
		<b>A25G</b>	<b>A30G</b>
<b>Standard Body</b>			
Load capacity	kg (sh tn)	25,000 (27.56)	29,000 (32)
Body, struck	m <sup>3</sup> (yd <sup>3</sup> )	12.1 (15.8)	13.9 (18.2)
Body, heaped 2:1	m <sup>3</sup> (yd <sup>3</sup> )	15.3 (20)	17.8 (23.3)
<b>With overhung tailgate</b>			
Body, struck	m <sup>3</sup> (yd <sup>3</sup> )	12.4 (16.2)	14.2 (18.6)
Body, heaped 2:1	m <sup>3</sup> (yd <sup>3</sup> )	15.9 (20.8)	18.4 (24.1)
<b>Suspension</b>			
<b>Front suspension:</b> Gas-hydraulic struts. Soft and progressive. Independent wheel movement via a 3-point mounting system.			



# Specifications

## REFILL CAPACITIES

			A25G		A30G	
Crankcase	l	gal	35	9.2	35	9.2
Fuel tank	l	gal	380	100.4	380	100.4
Cooling system	l	gal	48	12.7	48	12.7
Brake cooling system	l	gal	35	9.2	35	9.2
Transmission	l	gal	41	10.8	41	10.8
Dropbox	l	gal	9	2.4	9	2.4
Axles, front/bogie	l	gal	30/61	7.9/16.1	31/63	8.2/16.6
Hydraulic tank	l	gal	137	36.2	137	36.2
DEF	l	gal	39	10.3	39	10.3

## SPEED

			A25G		A30G	
<b>Forward</b>						
1	km/h	mph	8.3	5.2	8.3	5.2
2	km/h	mph	11.9	7.4	11.9	7.4
3	km/h	mph	21.1	13.1	21.1	13.1
4	km/h	mph	30.3	18.8	30.3	18.8
5	km/h	mph	38.4	23.9	38.4	23.9
6	km/h	mph	52.7	32.7	52.7	32.7
<b>Reverse</b>						
1	km/h	mph	7.7	4.8	7.7	4.8
2	km/h	mph	13.7	8.5	13.7	8.5

## OPERATING WEIGHT UNLOADED

			A25G		A30G	
Tires			23.5R25*		750/65R25**	
Front	kg	lb	12,800	28,219	12,900	28,440
Rear	kg	lb	9,900	21,219	10,700	23,589
Total	kg	lb	22,700	50,045	23,600	52,029
Payload	kg	lb	25,000	55,116	29,000	63,934

Operating weight includes all fluids and operator

\*) A25G with tires 750/65R25, add 200 kg (440 lb)/axle

\*\*) A30G with tires 23.5R25, decrease 200 kg (440 lb)/axle

## TOTAL WEIGHT

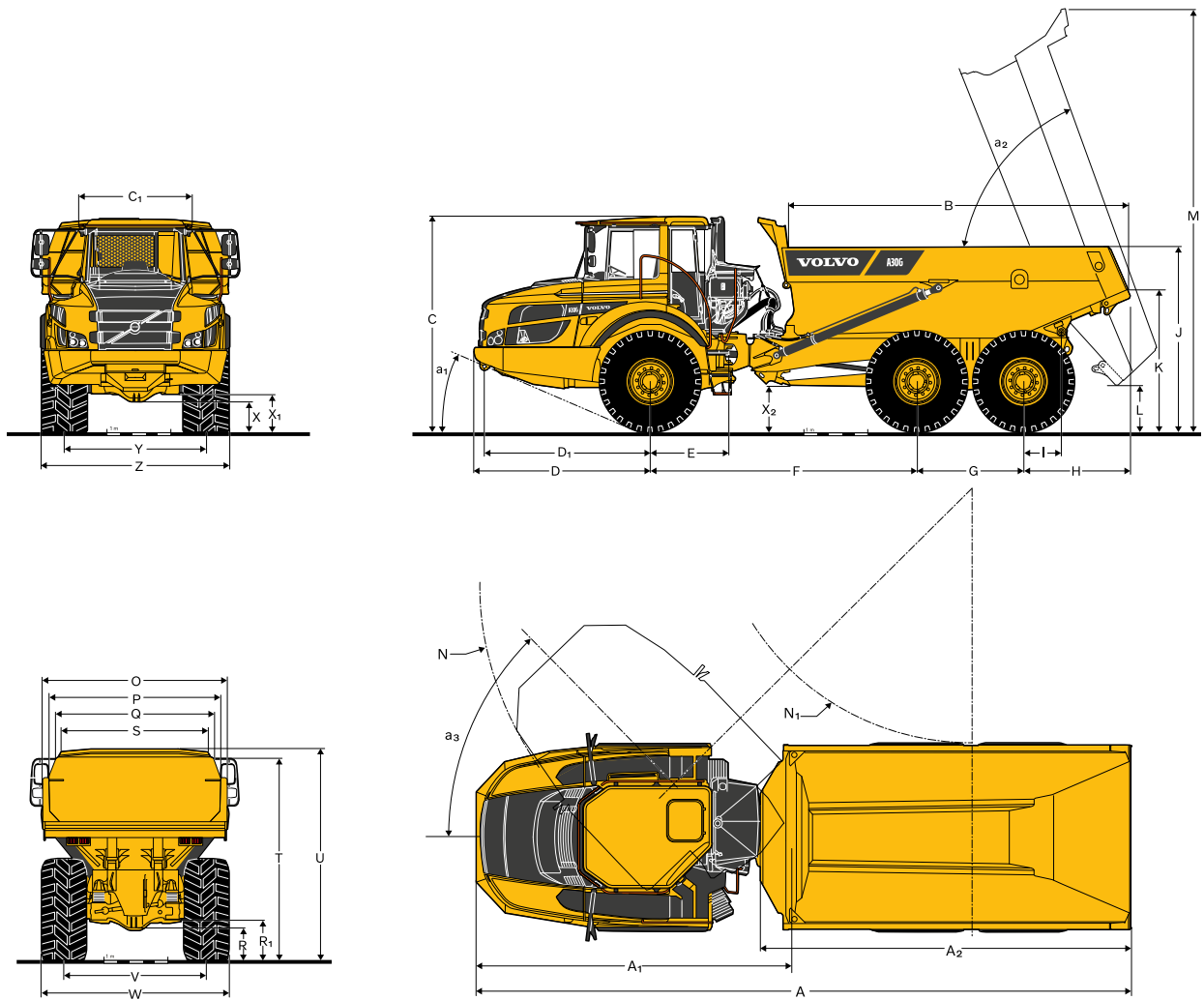
			A25G		A30G	
Tires			23.5R25*		750/65R25**	
Front	kg	lb	14,950	32,959	15,600	35,613
Rear	kg	lb	32,750	72,201	36,900	81,351
Total	kg	lb	47,700	105,160	52,600	115,963

\*) A25G with tires 750/65R25, add 200 kg (440 lb)/axle

\*\*) A30G with tires 23.5R25, decrease 200 kg (440 lb)/axle

## GROUND PRESSURE

			A25G		A30G		A25G		A30G	
Tires			23.5R25		750/65R25		750/65R25		23.5R25	
<b>Unloaded</b>										
Front	kPa	psi	130	18.9	108	15.7	108	15.7	131	19
Rear	kPa	psi	49	7.1	43	6.2	42	6.1	50	7.3
<b>Loaded</b>										
Front	kPa	psi	157	22.8	130	18.9	125	18.1	157	22.8
Rear	kPa	psi	166	24.1	152	22	137	19.9	184	26.7



**DIMENSIONS**

Pos	Unit	A25G		A30G	
A	mm ft in	10,218	33'6"	10,296	33'9"
A <sub>1</sub>	mm ft in	4,954	16'3"	4,954	16'3"
A <sub>2</sub>	mm ft in	5,736	18'10"	5,811	19'1"
B	mm ft in	5,162	16'11"	5,384	17'8"
C	mm ft in	3,356	11'0"	3,366	11'1"
C <sub>1</sub>	mm ft in	1,772	5'10"	1,772	5'10"
D	mm ft in	2,762	9'1"	2,762	9'1"
D <sub>1</sub>	mm ft in	2,607	8'7"	2,607	8'7"
E	mm ft in	1,209	4'	1,209	4'
F	mm ft in	4,175	13'8"	4,175	13'8"
G	mm ft in	1,670	5'6"	1,670	5'6"
H	mm ft in	1,610	5'3"	1,688	5'6"
I	mm ft in	609	2'	609	2'
J	mm ft in	2,791	9'2"	2,866	9'5"
K	mm ft in	2,103	6'11"	2,183	7'2"
L	mm ft in	678	2'3"	688	2'3"
M	mm ft in	6,529	21'5"	6,562	21'6"
N	mm ft in	8,109	26'7"	8,109	26'7"
N <sub>1</sub>	mm ft in	4,092	13'5"	4,048	13'3"
O	mm ft in	2,776	9'1"	2,976	9'9"

**DIMENSIONS**

Pos	Unit	A25G		A30G	
P	mm ft in	2,490	8'2"	2,690	8'10"
Q	mm ft in	2,298	7'6"	2,472	8'1"
R	mm ft in	519	1'8"	524	1'9"
R <sub>1</sub>	mm ft in	633	2'1"	639	2'1"
S	mm ft in	2,110	6'11"	2,288	7'6"
T	mm ft in	3,094	10'2"	3,196	10'6"
U	mm ft in	3,265	10'9"	3,325	10'11"
V	mm ft in	2,258	7'5"	2,216	7'3"
W	mm ft in	2,915	9'7"	2,954	9'8"
X	mm ft in	455	1'6"	466	1'6"
X <sub>1</sub>	mm ft in	581	1'11"	592	1'11"
X <sub>2</sub>	mm ft in	660	2'2"	680	2'3"
Y	mm ft in	2,258	7'5"	2,216	7'3"
Z	mm ft in	2,915	9'7"	2,954	9'8"
a <sub>1</sub>	°	23.5		23.2	
a <sub>2</sub>	°	74		70	
a <sub>3</sub>	°	45		45	

A25G: Unloaded machine with 23.5 R25

A30G: Unloaded machine with 750/65R25

# Equipment

## STANDARD EQUIPMENT

	A25G	A30G
<b>Engine</b>		
Direct injected, electronically controlled, turbocharged, intercooled	•	•
Grouped oil filters	•	•
Preheater for easier cold starts	•	•
VEB (exhaust retarder EPG + compression brake)	•	•
<b>Tires</b>		
23.5R25	•	–
750/65R25	–	•
<b>Drivetrain</b>		
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	•	•
<b>Electrical System</b>		
120 A alternator	•	•
Battery disconnect switch	•	•
Extra 24 V socket for lunch cooler	•	•
<b>Lights:</b>		
Back-up light	•	•
Brake lights	•	•
Cab lighting	•	•
Direction indicators	•	•
Headlights	•	•
Instrument lighting	•	•
Parking lights	•	•
Rear lights	•	•
<b>Brake system</b>		
Hill assist	•	•
Load & Dump Brake	•	•
Retarder pedal	•	•
Parking brake on propeller shaft	•	•
Two circuit, fully hydraulic, wet discs on all axles	•	•
<b>Body</b>		
Body prepared for exhaust heating and optional equipment	•	•
<b>Safety</b>		
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

	A25G	A30G
<b>Comfort</b>		
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	•	•
<b>Operator information interface</b>		
<b>Gauges:</b>		
Brake pressure	•	•
Fuel	•	•
Speedometer	•	•
Tachometer	•	•
Wet disc brakes cooling oil temperature	•	•
<b>Warning lights grouped and easy to read</b>		
Central warning (3 levels) for all vital functions	•	•
<b>Central positioned information display</b>		
Automatic pre-start checks	•	•
Clock	•	•
Hour meter	•	•
Operational information, easy-to-navigate menu	•	•
Troubleshooting diagnostics	•	•
<b>Exterior</b>		
Front mudguard wideners and rear mudflaps	•	•
<b>Service and maintenance</b>		
Electrical engine hood	•	•
Machine Tracking Information System MATRIS	•	•
Service platform integrated in the front grill	•	•
Tool box	•	•

## OPTIONAL EQUIPMENT

	A25G	A30G
<b>Engine</b>		
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	•	•
<b>Tires</b>		
23.5R25	–	•
750/65R25	•	–