

VOLVO MOTOR GRADERS

G930B, G940B, G946B, G960B

15.6-17.5 t 208-264 hp



A PASSION FOR PERFORMANCE.

At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for industry experts. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

Helping you to do more

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

Designed to fit your needs

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.



You learn a lot in 180 years

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

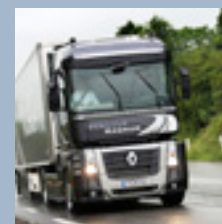
We're on your side

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

We have a passion for performance.



Volvo Trucks



Renault Trucks



Mack Trucks



UD Trucks



Volvo Buses



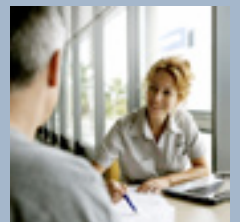
Volvo Construction Equipment



Volvo Penta



Volvo Aero



Volvo Financial Services

POWER DRIVES PERFORMANCE.



**3 power settings with 8F/4R transmission
or 8 power settings with optional 11F/6R
transmission**

Volvo's D8 engine features increased displacement, power and torque. Engine characteristics are perfectly matched to Volvo transmissions, maintaining legendary Volvo grader productivity in the most demanding applications. Three or eight power settings automatically deliver optimum power in each gear for reduced wheel slippage and fuel consumption.

The latest Volvo engines are good for the environment and even better for your productivity. That's because they combine the most advanced design with innovative new technology, meeting new Tier 4 emissions requirements – and your high performance standards.

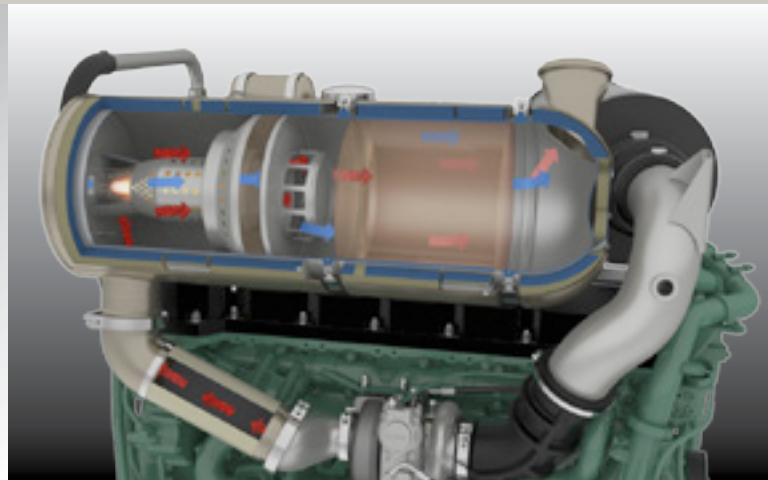


Powerful Tier 4i or EU Stage IIIB engine

Volvo Tier 4-certified engine with V-ACT (Volvo Advanced Combustion Technology) and automatic over-speed protection. Increased and enhanced power and torque for every model. Results in less lug-down, faster recovery, reduced emissions and greater fuel efficiency. Provides lower operating costs and increased performance.

Cooled EGR

Volvo's cooled Exhaust Gas Recirculation (EGR) technology helps meet new emission requirements by reducing the temperature in the combustion chamber. This reduces the formation of nitrogen oxides by up to 50 percent.



Separate radiators

Volvo's cooling module features a unique design with non-stacked coolers, resulting in minimized clogging and reduced service intervals. Access to radiators is easy through the hinged radiator door. Variable speed, hydraulically-driven fan draws power only when needed. The fan is optionally available in a reverseable version.

SMOOTH, STREAMLINED OPERATION.



The Volvo powershift HTE840S transmission or the industry-exclusive HTE1160S transmission are designed to provide the right gear for any application. Both transmissions have been further enhanced to ensure smooth gear change and shuttle shift operation. When equipped with **optional** joystick control, transmission shifter is incorporated in the left hand joystick.



Choice of 8 or 11 gears

Volvo's HTE840S and optional HTE1160S transmissions feature shuttle shift that enables effortless shifts between forward and reverse without use of brakes or the inching pedal.

HTE840S powershift, sequential transmission features 8 speeds forward and 4 speeds reverse.

HTE1160S transmission features 11 gears forward and 6 reverse gears. It provides more gears in a typical working range, plus slower gears for fine grading and faster gears for snow removal and travel. Shifting through the gears is smooth via an intuitive sequential shifter.



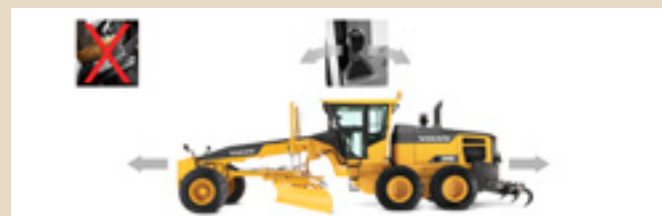
Two autoshift modes

Volvo transmissions provide a choice of work and travel autoshift modes and programmable target gears. This secures optimal productivity and reduced fuel consumption. Autoshift feature is standard with HTE1160S and optional with the HTE840S transmission.



Differential Lock

Volvo rear axle with planetary gears reduces load on the axle components for extended life. Operator-controlled hydraulic lockup differential ensures optimal traction when needed.



Smart Shift & Shuttle Shift

Smart Shift and Shuttle Shift are standard features of Volvo transmissions. Smart Shift recalls the last used forward or reverse gear. Combined with Shuttle Shift, it makes direction changes quick and effortless, reducing cycle time in typical grader applications.

WHERE SPEED MEETS TRACTION.

The Volvo AWD (All Wheel Drive) system is built around two variable displacement hydraulic pumps and direct drive wheel motors. The system provides additional blade pull of up to 3 855 kg (8 500 lb) and greater front-end stability under low traction conditions like snow and ice.



AWD speed

In AWD mode, the G946B features top speeds of 31.4 km/h (19.6 mph) with 8-speed transmission and up to 36.8 km/h (23.0 mph) with optional 11-speed transmission. This makes the G946B the top-of-the-line model for optimum snow removal or other high speed AWD applications.

Factors for grader productivity

Grader productivity is determined through blade down pressure and blade pull force. Thanks to the optimal overall machine balance achieved through the frame design and the distribution of the main grader components, G900B graders have the highest blade down pressure in each class. High blade down pressure, combined with precision controls and the traction of tandem drive or AWD drive, result in the best productivity in every application.



Creep mode

Volvo Creep Mode allows the operator to grade using the hydrostatic front wheel drive only. The rear tandem wheels roll freely behind to minimize scuffing. This provides the ultimate in grading precision.

A CAB BUILT FOR COMFORT.

Volvo is committed to making operators' jobs easier and more productive. Cabs include plenty of glass for unobstructed views; easy-to-use ergonomic controls; a familiar steering wheel; comfortable seating and a Contronics system to keep operators informed of all functions in real time.

Cab visibility

The Volvo cab provides an unobstructed line of view to the moldboard, over the front frame and through the side and rear windows. Provides safer operation and easier maneuverability.

Industry standard controls

Controls with a familiar, industry-standard pattern include low effort, short-stroke levers and an adjustable pedestal centered in front of the operator.



Ergonomic comfort

The ergonomic cab is designed to make operators more comfortable. It features a high performance heating and ventilation as well as optional air conditioning system and an adjustable seat that reduces operator fatigue.



Contronics monitoring

Volvo's Contronics monitoring system has been expanded to provide real-time information on more grader functions. Integrated with MATRIS, Volvo's monitoring and tracking system, Contronics comes standard to enhance operation and protect your investment.



Familiar steering



When equipped with optional joystick controls, the steering wheel is still there for familiar, intuitive steering.



Optional joystick controls

Volvo joystick controls offer predictable and proportional response for hydraulic functions, articulation, steering and the transmission. Volvo joysticks have available buttons/triggers for the control of all main attachments. Design offers a choice of steering via joysticks up to the speed of 30 km/h (18 mph) or with the steering wheel.



EASY TO SERVICE, BUILT TO LAST.

Service Access

Easy lift rear hood and side panels open wide for unmatched access to the engine and cooling module service points. Combined with extended oil change intervals and a need for only weekly greasing, Volvo graders provide less down time and more time working on the jobsite.

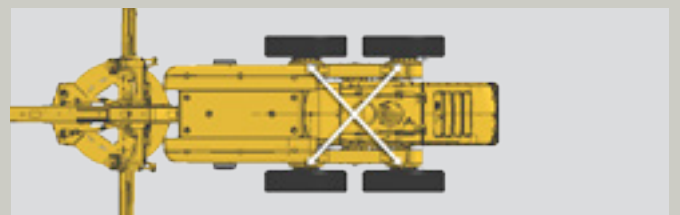
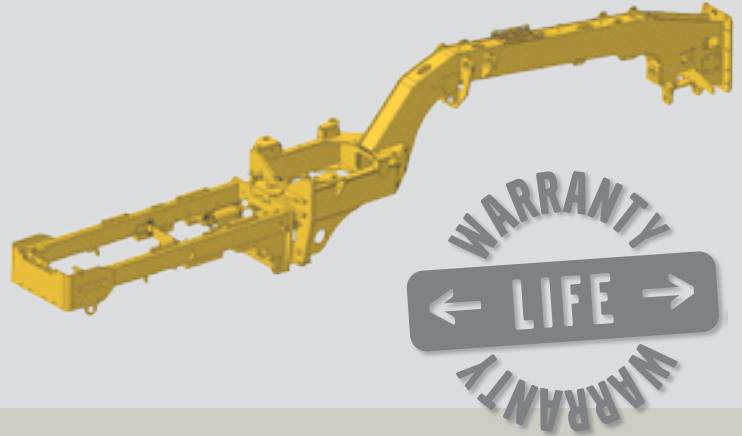
Volvo Motor Graders enhance profitable ownership by providing a quality machine inside and out, advanced safety features and easy service access that leads to more productivity.

Twin gear circle turn system

Volvo's exclusive circle turn system uses twin gear, direct-acting hydraulic cylinders that provide instant, high output torque, enabling moldboard rotation under any load. This means there is no need to stop, reverse and change moldboard angle. This design has proven its superior power and durability through several generations of Volvo graders.

Lifetime frame warranty

Volvo exclusively offers an optional first user Lifetime Warranty on the front and rear frame, as well as on the articulation hinge and bearings. Provides even more peace of mind for owners.



Transmission location

The transmission is mounted beneath the cab and ahead of the articulation hinge, enhancing service access and contributing to the blade down pressure for greater productivity.

Level drawbar

Feature an asymmetrical drawbar ball stud that can be rotated 180 degrees in order to keep the drawbar in a horizontal, level position. Keeping the drawbar parallel to the ground is important when performing fine grading.

Dual crossover brake system

Individual, wet-type brakes are used on each wheel. A dual crossover brake system provides two circuits that work separately. If one circuit fails, balanced braking is still maintained.

TAKE A WALKAROUND.



Choice of controls

Choose standard, industry pattern hydraulic controls or contemporary Volvo joystick controls.

Contronics

Stay informed about all machine systems with warnings alert and messages.



Volvo Tier 4i and EU Stage IIIB engine

Increased power and torque with three or eight power settings for less lug-down, faster recovery and greater fuel efficiency.

Differential lock

Operator controlled lock/unlock differential.



3 or 8 power settings

Delivers optimum power in each gear for reduced wheel slippage and fuel consumption.



Choice of transmissions

8 or 11 speed transmissions feature dual autoshift mode (optional with 8 speed transmission), Shuttle Shift, Smart Shift, programmable target gears and ground speed matching.



CareTrack*

CareTrack is the Volvo telematics system. It is equipped as standard on this machine and is designed to provide information to help improve productivity and efficiency.



Alternative steering system

When equipped with optional joystick control, the operator can choose to steer via joystick or the traditional steering wheel.



Shuttle Shift control

Saves cycle time by allowing change of forward-reverse direction without use of brakes and inching pedal.

Circle turn system

Unique Volvo circle turn system develops the highest turning power in the industry, along with long-lasting components for precise grading.

AWD System

Provides up to 3 855 kg (8 500 lb) of additional drawbar pull. Creep mode enables front wheel drive only for precise grading.

* In markets where CareTrack is available

ATTACHMENTS.

ATTACHMENTS

G930B, G940B, G946B, G960B

Dozer Blade

Weight	kg	1080	lb	2380
Width	m	2.44	ft	8
Weight	kg	1140	lb	2515
Width	m	2.7	ft	9

Front Mounted Scarifier

Weight	kg	715	lb	1575
Width of cut	mm	1248	ft in	49"
Number of teeth	up to	11		
Penetration	mm	260	ft in	10.2"

Mid Mounted Scarifier

Weight	kg	905	lb	1995
Width of cut	mm	1298	ft in	51"
Number of teeth	up to	11		
Penetration	mm	292	ft in	11.5"

Push Block

Weight	kg	515	lb	1138
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Ripper/Scarifier

Weight	kg	1495	lb	3295
Width of cut	mm	2148	ft in	84.5"
Number of scarifier teeth	up to		5	
Number of ripper teeth	up to		5	
Max. ripping depth	mm	280	ft in	11"



Attachment mounting

The rugged frame is factory equipped with the attachment brackets making future field installation easy and reliable.

Front Mounted Scarifier

The Front Mounted Scarifier is mounted to the nose plate of the grader and is designed to break up compacted material, asphalt and rocky subgrade.



Dozer Blade

The Dozer Blade is useful for displacing gravel piles, clearing fallen rocks from the road and other blading applications when access with the grader moldboard may be difficult.



Ripper/Scarifier

The Ripper/Scarifier is a rear frame mounted tool used for breaking up asphalt or other hard-pack aggregates prior to blading. Uniform mixing of coarse and fines can also be achieved for improved compaction of road surfaces.

Mid Mounted Scarifier

The Mid Mount Scarifier is mounted behind the front axle and it ensures optimum cutting ability, combined with excellent visibility. Not available on AWD models.

Push Block (shown installed)

The Push Block performs as a counterweight when a rear ripper is installed and as a push point when the grader may be called to be used as a push vehicle.

TOP PERFORMANCE DESERVES SUPPORT.

The day you receive your new Volvo Grader is just the start of your working relationship with Volvo. From service and maintenance to our CareTrack telematics system – Volvo has a comprehensive and sophisticated aftermarket portfolio to continuously add value to your business.

Volvo designed and built your machines, so no-one knows how to keep them working in top condition more than us. When it comes to your machine, our Volvo trained technicians are the experts.

Our technicians work with industry leading diagnostic tools and techniques, using only Genuine Volvo Parts to deliver the highest levels of quality and service. Talk to your Volvo dealer about how genuine Volvo services can best provide the service and maintenance plan that is the right fit for you and your business.



State-of-the-art machines require state-of-the-art support and your Volvo dealer can provide a catalogue of services designed to get the most out of your machine, helping you maximise uptime, productivity and residual value. Your Volvo dealer can provide a number of sophisticated support offers, including:

Service plans ranging from routine wear inspections, through to comprehensive maintenance and repair agreements.

Analysis and diagnostics to help you understand how your machine is running, highlight potential maintenance issues and identify where performance can be improved.

Eco Operator training courses can help your operators work towards a safer, more productive and fuel efficient performance.



CareTrack*



Each Volvo Grader comes standard equipped with CareTrack, the telematics system from Volvo Construction Equipment. CareTrack can give you the machine information needed for better planning and smarter working; such as fuel consumption reports, location reports and service maintenance reminders. You can save fuel. You can reduce costs. You can maximise profitability. **You can with CareTrack.**

* In markets where CareTrack is available

VOLVO G930B, G940B, G946B, G960B IN DETAIL.

		G930B	G940B	G946B	G960B
Base operating weight - approximate Weights shown include enclosed low profile cab with ROPS, all operating fluids, operator and standard equipment.					
Base - Total	kg (lb)	16 070 (35,420)	16 980 (37,430)	17 470 (38,510)	18 070 (39,830)
On front wheels	kg (lb)	4 500 (9,920)	4 750 (10,480)	4 890 (10,780)	5 060 (11,150)
On rear wheels	kg (lb)	11 570 (25,500)	12 230 (26,950)	12 580 (27,730)	13 010 (28,680)
Maximum combined capacity	kg (lb)	21 300 (46,958)	21 319 (47,000)	21 172 (47,999)	21 863 (48,200)
Maximum weight - front	kg (lb)	7 575 (16,700)	7 575 (16,700)	7 575 (16,700)	7 575 (16,700)
Maximum weight - rear	kg (lb)	14 243 (31,400)	14 243 (31,400)	14 243 (31,400)	14 288 (31,500)

Note that adding weight and attachments to the base grader may necessitate a tire upgrade as maximum weight capacity of tire may be exceeded.

Productivity (Standard equipment)

Blade pull at base weight (0.9 traction co-efficient)	kg (lb)	10 413 (22,950)	11 007 (24,255)	15 177 (24,957)	11 709 (25,812)
Blade pull at max. base weight (0.9 traction co-efficient)	kg (lb)	12 819 (28,260)	12 819 (28,260)	16 674 (36,760)	12 859 (28,350)
Blade down force capability	kg (lb)	7 839 (17,255)	8 218 (18,102)	8 460 (18,620)	8 754 (19,259)

Blade down force is the maximum downward force which may be applied at the cutting edge.

Engine data

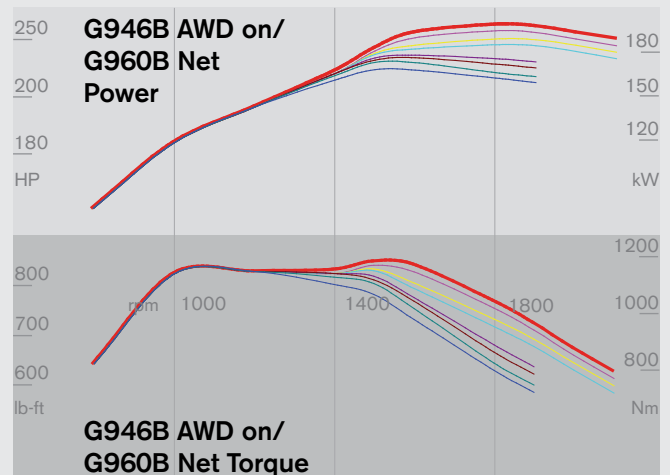
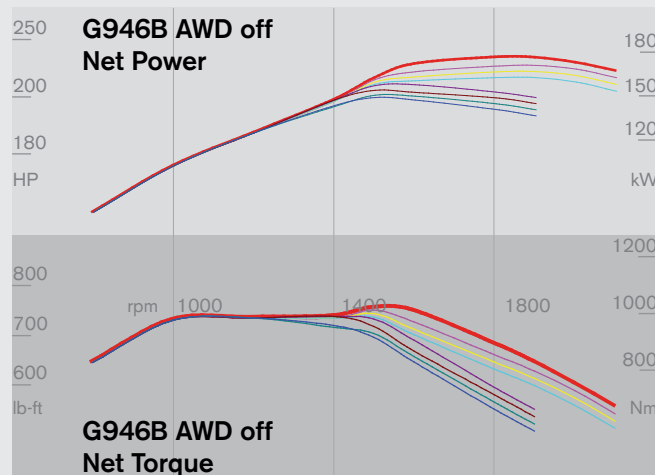
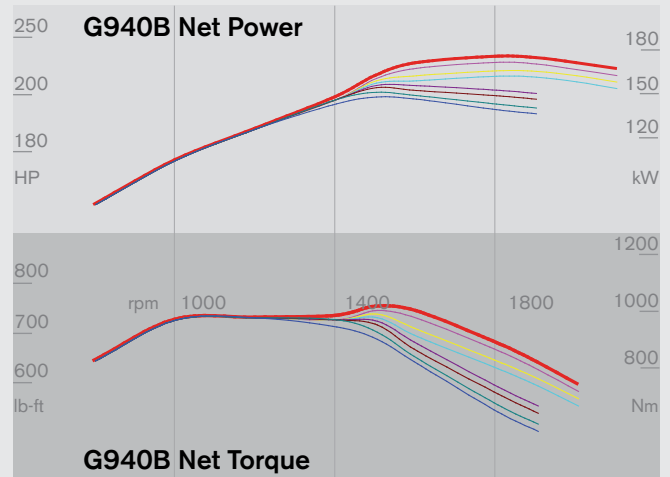
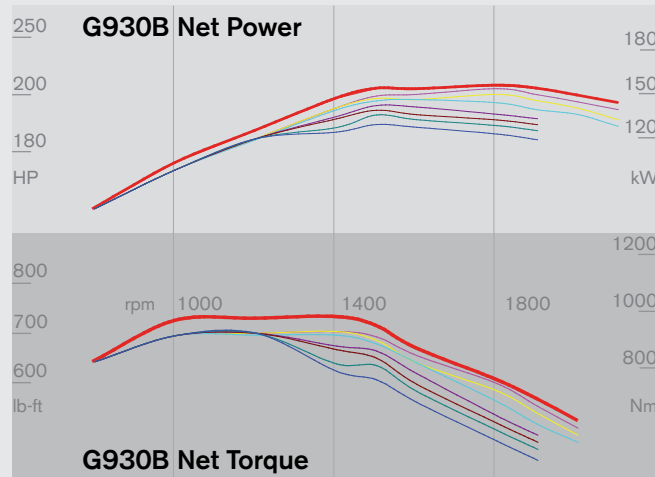
Model	Volvo	D8HGBE4	D8HGBE4	D8HGAE4	D8HGAE4
Turbocharged, aftercooled with replaceable wet-type cylinder liners.					
No. of cylinders	In Line	6	6	6	6
Bore & stroke	mm (in)	110 x 136 (4.331 x 5.354)	110 x 136 (4.331 x 5.354)	110 x 136 (4.331 x 5.354)	110 x 136 (4.331 x 5.354)
Displacement	l (cu in)	7,8 (476)	7,8 (476)	7,8 (476)	7,8 (476)

Engine certified to US EPA Tier 4/EU Stage IIIB exhaust emission standards.

Electrical system

		24 volt - 2 640 watt (120 amp) alternator	24 volt - 2 640 watt (120 amp) alternator	24 volt - 2 640 watt (120 amp) alternator	24 volt - 2 640 watt (120 amp) alternator
Batteries (two 12 volt) maintenance free, heavy duty CCA (RC)		760 (420)	760 (420)	1125 (420)	760 (420)

1 125 CCA (195 RC) or 1 570 CCA (240 RC) batteries available optionally.



	G930B	G940B	G946B AWD off	G960B/G946B AWD on
3 Range engine power control (8 speed transmission)				
Base range power - (F1-F2)				
Net engine power kW (hp)	119 (160)	146 (196)	146 (196)	167 (223)
Net peak torque N.m (lb.ft)	597 (440)	990 (730)	990 (730)	1 123 (828)
Mid range power - (F3 - F5)				
Net engine power kW (hp)	141 (190)	154 (207)	154 (207)	176 (236)
Net peak torque N.m (lb.ft)	950 (701)	990 (730)	990 (730)	1 123 (828)
High range power - (F6 - F8)				
Net engine power kW (hp)	155 (208)	173 (232)	173 (232)	197 (264)
Net peak torque N.m (lb.ft)	995 (734)	1 021 (753)	1 021 (753)	1 151 (849)
8 Range engine power control (11 speed transmission)				
Power Range for F1-F4				
Net engine power kW (hp)	119 (160)	146 (196)	146 (196)	167 (224)
Net peak torque N.m (lb.ft)	597 (440)	990 (730)	990 (730)	1 123 (828)
Power Range for F5				
Net engine power kW (hp)	135 (182)	149 (201)	149 (201)	171 (231)
Net peak torque N.m (lb.ft)	950 (701)	990 (730)	990 (730)	1 123 (828)
Power Range for F6				
Net engine power kW (hp)	138 (186)	152 (205)	152 (205)	175 (235)
Net peak torque N.m (lb.ft)	950 (701)	990 (730)	990 (730)	1 136 (838)
Power Range for F7				
Net engine power kW (hp)	141 (191)	154 (207)	154 (207)	176 (237)
Net peak torque N.m (lb.ft)	950 (701)	990 (730)	990 (730)	1 136 (838)
Power Range for F8				
Net engine power kW (hp)	145 (196)	160 (216)	160 (216)	183 (247)
Net peak torque N.m (lb.ft)	945 (697)	991 (731)	991 (731)	1 126 (830)
Power Range for F9				
Net engine power kW (hp)	149 (200)	164 (221)	164 (221)	187 (252)
Net peak torque N.m (lb.ft)	955 (704)	1 001 (738)	1 001 (738)	1 131 (834)
Power Range for F10				
Net engine power kW (hp)	153 (206)	170 (228)	170 (228)	193 (259)
Net peak torque N.m (lb.ft)	955 (704)	1 011 (745)	1 011 (745)	1 141 (841)
Power Range for F11				
Net engine power kW (hp)	155 (208)	173 (232)	173 (232)	197 (264)
Net peak torque N.m (lb.ft)	995 (734)	1 021 (753)	1 021 (753)	1 151 (849)
Engine de-rating at 3 000 m (9,800 ft) altitude	None	None	4%	4%
Rated net horsepower SAE J1349/ISO 9249				

Transmission

Fully sequential, direct drive, Volvo powershift transmission. Engine cannot be started if transmission is in gear. Single lever electronic transmission controller provides self-diagnostics and overspeed protection. Optional HTE1160S has automatic shifting and travel mode as standard equipment.

Approximate values - ground speeds may vary based upon tire brand

Transmission Tire Size	HTE840S 8-Speed		HTE1160S 11-Speed		
	14:00	17.5	14:00	17.5	
Gear @ RPM	km/h (mph)	km/h (mph)	Gear @ RPM	km/h (mph)	km/h (mph)
F1 @ 2 100	4.1 (2.6)	4.1 (2.5)	F1 @ 2 100	3.2 (2.0)	3.2 (2.0)
F2 @ 2 100	5.8 (3.6)	5.7 (3.6)	F2 @ 2 100	4.2 (2.6)	4.1 (2.6)
F3 @ 2 100	8.1 (5.0)	8.0 (5.0)	F3 @ 2 100	5.6 (3.5)	5.5 (3.4)
F4 @ 2 100	11.3 (7.0)	11.1 (7.0)	F4 @ 2 100	7.2 (4.5)	7.1 (4.5)
F5 @ 2 100	16.0 (10.0)	15.8 (9.9)	F5 @ 2 100	9.4 (5.9)	9.3 (5.8)
F6 @ 2 100	22.4 (14.0)	22.1 (13.8)	F6 @ 2 100	12.2 (7.7)	12.2 (7.6)
F7 @ 2 100	31.4 (19.6)	31.0 (19.4)	F7 @ 2 100	16.2 (10.1)	16.0 (10.0)
F8 @ 2 100	43.8 (27.4)	43.3 (27.1)	F8 @ 2 100	21.6 (13.5)	21.4 (13.3)
			F9 @ 2 100	28.1 (17.5)	27.7 (17.3)
			F10 @ 2 100	36.8 (23.0)	36.5 (22.7)
			F11 @ 2 100	47.6 (29.8)	47.0 (29.4)
R1 @ 2 100	4.1 (2.5)	4.0 (2.5)	R1 @ 2 100	3.2 (2.0)	3.1 (2.0)
R2 @ 2 100	7.9 (5.0)	7.8 (4.9)	R2 @ 2 100	5.5 (3.4)	5.4 (3.4)
R3 @ 2 100	15.8 (9.9)	15.6 (9.7)	R3 @ 2 100	9.3 (5.8)	9.2 (5.7)
R4 @ 2 100	30.9 (19.3)	30.5 (19.0)	R4 @ 2 100	12.3 (7.7)	12.2 (7.6)
			R5 @ 2 100	21.3 (13.3)	21.0 (13.1)
			R6 @ 2 100	36.2 (22.6)	35.7 (22.3)

Transmission Gear					
Engine Power Range	Volvo HTE840S		Volvo HTE1160S		
Base Range	F1, F2	R1	1st Range	F1-F4	R1
Mid Range	F3- F5	R2, R3	2nd Range	F5	R2
High Range	F6 - F8	R4	3rd Range	F6	R3
			4th Range	F7	R4
			5th Range	F8	R5
			6th Range	F9	R6
			7th Range	F10	
			8th Range	F11	

Note: For additional fuel savings, the RPM's can be capped at 1 900 rpm in gears F1-F5 (11 spd) and F1-F2 (8 spd) through VCADS

SPECIFICATIONS.

		G930B	G940B	G946B	G960B
Tandems					
Depth	mm (in)	226,5 (8.9)	226,5 (8.9)	226,5 (8.9)	226,5 (8.9)
Height	mm (in)	616 (24.25)	616 (24.25)	616 (24.25)	616 (24.25)
Thickness					
inner wall	mm (in)	25 (1)	25 (1)	25 (1)	25 (1)
outer wall	mm (in)	20 (.78)	20 (.78)	20 (.78)	20 (.78)
Center distance	mm (in)	1 550 (61)	1 550 (61)	1 550 (61)	1 550 (61)
Drive chain pitch	mm (in)	51 (2)	51 (2)	51 (2)	51 (2)
Oscillation	degrees ±	15°	15°	15°	15°
Differential / Final drive					
Model	Volvo	APR70	APR70	APR70	APR70
Planetary final reduction with an operator controlled wet multiple disc lock/unlock differential.					
Wheels & tires (Standard equipment)					
Tire size		14:00 x 24, G-2	14:00 x 24, G-2	14:00 x 24, G-2	14:00 x 24, G-2
Ply rating (PR)		12	12	12	12
Rim size	mm (in)	223 (9) One piece rim	223 (9) One piece rim	254 (10) Three piece rim	254 (10) One piece rim
Bolt-on rims interchangeable between front and rear		Yes	Yes	No	Yes
Front axle and articulation					
Wheel lean	degrees R & L	18°	18°	18°	18°
Oscillation	degrees up & down	16°	16°	16°	16°
Ground clearance	mm (in)	610 (24)	610 (24)	610 (24)	610 (24)
Minimum turning radius using front axle steering, articulation, wheel lean and unlocked differential	mm (ft)	7 265 (23'10")	7 265 (23'10")	7 265 (23'10")	7 265 (23'10")
Steering arc	degrees	50°	50°	50°	50°
Frame articulation angle	degrees	23°	23°	23°	23°
Anti-drift lock valve ensures stable operation. Articulation lock standard.					
Hydrostatic power steering of front wheels incorporating two steering cylinders. Meets SAE J1511 FEB. 94, ISO 5010:1992, EN12643:1997 with optional secondary steering.					
Brakes					
Service Brakes: Foot operated					
Fade resistant, hydraulically actuated, wet multiple disc service brakes located at the 4 tandem drive wheels are fully sealed and maintenance free. System features crossover dual braking circuits for uniform braking on both sides of the grader. Includes reserve power assist and operator warning system (visual and audible).					
Parking Brake					
Spring applied hydraulically released enclosed wet multiple disc type parking brake in final drive. Effective on all 4 tandem drive wheels. Transmission cannot be engaged with park brake on.					
Braking systems comply to SAE J/EN ISO 3450:1996.					
Volvo uses asbestos free brake components.					

		G930B	G940B	G946B	G960B
Front Frame					
Minimum dimensions of box section	mm (in)	265 x 340 (10.5 x 13.5)	265 x 340 (10.5 x 13.5)	265 x 340 (10.5 x 13.5)	265 x 340 (10.5 x 13.5)
Plate thickness sides, top & bottom	mm (in)	20 (.79)	20 (.79)	20 (.79)	25 & 30 (1 & 1.2)
Vertical section modulus at arch	cm ³ (cu in)	1 950 (119)	1 950 (119)	2 671 (163)	2 671 (163)
minimum	cm ³ (cu in)	1 663 (101)	1 663 (101)	2 256 (138)	2 256 (138)
maximum	cm ³ (cu in)	3 474 (212)	3 474 (212)	4 652 (284)	4 652 (284)
Rear Frame – Full perimeter type					
Minimum dimensions of side rail	mm (in)	254 x 100 (10 x 4)	254 x 100 (10 x 4)	254 x 100 (10 x 4)	305 x 100 (12 x 4)
Side plate thickness	mm (in)	9,6 (.38)	12,7 (.5)	12,7 (.5)	25,4 (1)
Moldboard					
Standard moldboard with replaceable end bits	mm (in)	22 x 635 x 3 658 (.87 x 25 x 12')	22 x 635 x 3 658 (.87 x 25 x 12')	22 x 635 x 3 658 (.87 x 25 x 12')	22 x 635 x 3 658 (.87 x 25 x 12')
Moldboard material		SAE 1050 high carbon steel	SAE 1050 high carbon steel	SAE 1050 high carbon steel	SAE 1050 high carbon steel
Edge: through hardened	mm (in)	152 x 16 (6 x 5/8) boron steel	152 x 16 (6 x 5/8) boron steel	152 x 16 (6 x 5/8) boron steel	152 x 16 (6 x 5/8) boron steel
Bolt spacing	mm (in)	152 (6)	152 (6)	152 (6)	152 (6)
Bolt size	mm (in)	16 (5/8)	16 (5/8)	16 (5/8)	16 (5/8)
Slide rails supported by Duramide™ bearings		YES	YES	YES	YES
Moldboard range: Moveable Blade Control System (Dimensions shown with standard 14:00 tires and moldboard)					
		Left/Right	Left/Right	Left/Right	Left/Right
Reach outside tires - articulated frame	mm (in)	3 048/3 035 (120/119.5)	3 048/3 035 (120/119.5)	3 048/3 035 (120/119.5)	3 048/3 035 (120/119.5)
Reach outside tires - straight frame	mm (in)	2 020/2 010 (80/79)	2 020/2 010 (80/79)	2 020/2 010 (80/79)	2 020/2 010 (80/79)
Moldboard slide	mm (in)	673/673 (26.5/26.5)	673/673 (26.5/26.5)	673/673 (26.5/26.5)	673/673 (26.5/26.5)
Circle side shift	mm (in)	775/749 (30.5/29.5)	775/749 (30.5/29.5)	775/749 (30.5/29.5)	775/749 (30.5/29.5)
Maximum bank sloping angle, left - right	degrees	90°/90°	90°/90°	90°/90°	90°/90°
7 Position Blade Control system linkage		YES	YES	YES	YES
Moldboard ground clearance	mm (in)	445 (17.5)	445 (17.5)	445 (17.5)	445 (17.5)
Moldboard cutting depth	mm (in)	790 (31)	790 (31)	790 (31)	790 (31)
Moldboard tilt range	degrees forward degrees back	47° 5°	45° 6°	45° 6°	45° 6°
Superior moldboard mobility permits steep ditch cutting angles and back sloping outside overall machine width.					

SPECIFICATIONS.

		G930B	G940B	G946B	G960B
Circle					
Pitch diameter	mm (in)	1 626 (64)	1 626 (64)	1 626 (64)	1 626 (64)
Thickness	mm (in)	32 (1.25)	32 (1.25)	32 (1.25)	32 (1.25)
Adjustable circle wear plates - standard / optional		3 / 5	3 / 5	3 / 5	3 / 5
Duramide™ wear plates prevents metal-to-metal contact and provides maximum service life.					
Circle drive					
The Volvo dual gear Circle Drive System uses direct acting hydraulic power for exceptional turning and holding capability under full load. Circle Drive System uses two hardened drive pinions and is protected against impact damage by an overload relief valve as standard equipment.					
Rotation	degrees	360°	360°	360°	360°
Drawbar					
Dimensions of box section	mm (in)	165 x 165 (6.5 x 6.5)	165 x 165 (6.5 x 6.5)	165 x 165 (6.5 x 6.5)	165 x 165 (6.5 x 6.5)
Plate thickness	mm (in)	25 & 19 (1 & .75)	25 & 19 (1 & .75)	25 & 19 (1 & .75)	25 & 19 (1 & .75)
Cab & controls					
High profile cab with ROPS/FOPS Interior height	mm (in)	1 855 (73)	1 855 (73)	1 855 (73)	1 855 (73)
Low profile cab with ROPS/FOPS Interior height	mm (in)	1 620 (64)	1 620 (64)	1 620 (64)	1 620 (64)
All Volvo Grader cabs and canopies are designed to meet or exceed EN/ISO 3471:2008 and EN/ISO 3449:2008 Level 2 FOPS requirements. The retractable seatbelt is 76 mm (3") wide and meets SAE J386 NOV. 97 and EN ISO 6683:1999. Industry standardized control lever arrangement. Interior operator noise levels average 72 dB(A) per ISO 6394:1998 (enclosed cab).					
Hydraulics					
Circuit type: Closed center, load sense Proportional Demand Flow (PDF) Hydraulic System, with O-ring face seal hose connections.					
Main hydraulic pump type		Axial piston type	Axial piston type	Axial piston type	Axial piston type
Maximum pressure	Bar (psi)	207 (3,000)	207 (3,000)	207 (3,000)	207 (3,000)
Output at 2100 rpm	lpm (gpm)	208 (55)	208 (55)	208 (55)	208 (55)
Stand by pressure	Bar (psi)	24 (350)	24 (350)	24 (350)	24 (350)
Hydraulic fan drive pump					
Separate axial piston pump dedicated to the variable speed cooling fan.					

		G930B	G940B	G946B	G960B
Capacities					
Fuel tank	l (U.S. Gal.)	340 (90)	400 (105)	400 (105)	400 (105)
Transmission	l (U.S. Gal.)	61 (16)	61 (16)	61 (16)	61 (16)
Final drive	l (U.S. Gal.)	22,7 (6)	22,7 (6)	22,7 (6)	22,7 (6)
Tandems (each)	l (U.S. Gal.)	134 (35.4)	134 (35.4)	134 (35.4)	134 (35.4)
Hydraulic oil tank	l (U.S. Gal.)	91 (24)	91 (24)	144 (38)	91 (24)
Coolant antifreeze protection to -50° C (-58° F) approx	l (U.S. Gal.)	31 (8.2)	31 (8.2)	34 (9.0)	34 (9.0)
Engine oil	l (U.S. Gal.)	21,5 (5.7)	21,5 (5.7)	21,5 (5.7)	21,5 (5.7)

Attachments

(Optional unless otherwise stated as standard equipment)

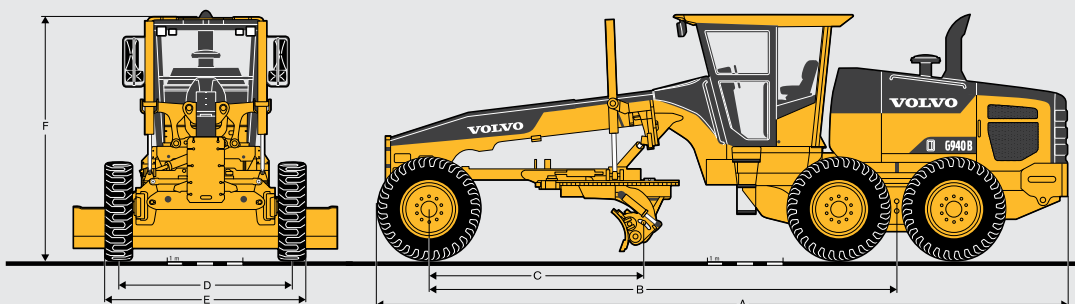
Push Block	kg (lb)	515 (1,138)	515 (1,138)	515 (1,138)	515 (1,138)
Ripper includes rear frame arch support and links	kg (lb)	1 495 (3,295)	1 495 (3,295)	1 495 (3,295)	1 495 (3,295)
Mid Mount Scarifier	kg (lb)	905 (1,995)	905 (1,995)		905 (1,995)
Front Mount Scarifier	kg (lb)	715 (1,575)	715 (1,575)	715 (1,575)	715 (1,575)
Dozer: 2,4 m (8')	kg (lb)	1 080 (2,380)	1 080 (2,380)	1 080 (2,380)	1 080 (2,380)
2,7 m (9')	kg (lb)	1 140 (2,515)	1 140 (2,515)	1 140 (2,515)	1 140 (2,515)

All Wheel Drive

Maximum operating pressure	Bar (psi)			345 (5,000)	
Minimum operating pressure	Bar (psi)			34 (500)	
Top speed with AWD engaged	km/h (mph)			Approx. 30 (18)	
Maximum rim pull	kg (lb)			3 855 (8,500)	

When equipped with the HTE840S transmission, the Volvo high torque All Wheel Drive System operates in forward gears 1-7 and reverse gears 1-4. When equipped with the HTE1160S transmission, the Volvo high torque All Wheel Drive System operates in forward gears 1-10 and reverse gears 1-6. System provides the operator with the ability to fine grade in Creep Mode using only hydrostatic front wheel drive, between 0 - 4 km/h (0 - 2.5 mph).

		G930B	G940B	G946B	G960B
Dimensions					
All dimensions are approximate.					
A	mm (in)	8 930 (352)	9 150 (360)	9 150 (360)	9 150 (360)
B	mm (in)	6 280 (247)	6 280 (247)	6 280 (247)	6 280 (247)
C	mm (in)	2 675 (105)	2 650 (104)	2 650 (104)	2 650 (104)
D	mm (in)	2 076 (82)	2 076 (82)	2 076 (82)	2 076 (82)
E	14:00 mm (in) 17.5 mm (in)	2 537 (100) STD 2 717 (107)	2 537 (100) STD 2 717 (107)	2 537 (100) STD 2 717 (107)	2 537 (100) STD 2 717 (107)
F	mm (in)	3 225 (127)	3 225 (127)	3 225 (127)	3 225 (127)



Legend

A	Overall length
B	Wheelbase
C	Bladebase per ISO 7134
D	Width - Front tire center lines
E	Width - Outside tires
F	Overall height with Low Profile Cab add 217 mm (8.5") for full height cab

EQUIPMENT.

STANDARD EQUIPMENT

	G930B	G940B	G946B	G960B
Safety				
Dual brake crossover circuit and reserve power assist	•	•	•	•
ROPS/ FOPS protected cab	•	•	•	•
Hazard lights	•	•	•	•
Horn	•	•	•	•
Left and right outside dual rear view mirrors	•	•	•	•
Retractable 3-inch safety belt	•	•	•	•
Front windshield wiper and washer	•	•	•	•
Handrails on steps and platforms	•	•	•	•
Comfort				
Independently adjustable pedestal and steering wheel with controls	•	•	•	•
Cab heater - 50,000 BTU with cab pressurizer and replaceable filters, 10 outlets	•	•	•	•
Overhead console for radio	•	•	•	•
Tinted glass	•	•	•	•
Cup holder / Tray for small items or lunch box	•	•	•	•
Ashtray	•	•	•	•
Space for lunch cooler	•	•	•	•
Overhead storage compartment	•	•	•	•
Engine				
Direct injected, electronically controlled	•	•	•	•
Turbocharged, intercooled	•	•	•	•
Remote oil drain	•	•	•	•
Cold start preheater	•	•	•	•
Electrical system				
Cab mounted headlights with dimmer switch (N/A on CE units)	•	•	•	•
Backup alarm 112 dB(A)	•	•	•	•
2 640 watt (120 amp) alternator	•	•	•	•
Battery disconnect switch	•	•	•	•
Extra 24 V socket	•	•	•	•
Lights				
Headlights	•	•	•	•
Parking lights	•	•	•	•
Direction indicators	•	•	•	•
Rear lights	•	•	•	•
Back-up lights	•	•	•	•
Brake lights	•	•	•	•

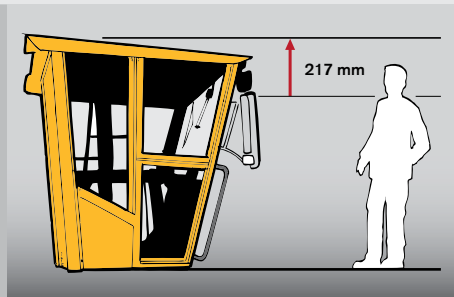
	G930B	G940B	G946B	G960B
Operator information interface				
Gauges for coolant temperature, oil pressure and fuel level	•	•	•	•
Speedometer	•	•	•	•
Tachometer	•	•	•	•
Warning lights grouped and easy to read				
Central warning (3 levels) for all vital functions	•	•	•	•
Central positioned information display				
Automatic pre-start checks	•	•	•	•
Troubleshooting diagnostics	•	•	•	•
Hour meter	•	•	•	•
Clock	•	•	•	•
Drivetrain				
Rear axle, operator controlled, lock/unlock differential with planetary final reduction	•	•	•	•
Electronic hand throttle with RPM hold and resume functions	•	•	•	•
Direct drive, power shift Volvo HTE840S transmission with 8 forward and 4 reverse gears	•	•	•	•
Single transmission control lever, with electronic over speed protection, advanced memory shift and park position lockout with hinged transmission guard	•	•	•	•
Direct Forward to Reverse shuttle shift capability without using the Inching pedal	•	•	•	•
Brakes				
4 wheel wet disc braking system with crossover dual circuits and reserve power assist	•	•	•	•
Spring applied wet multiple disc park brake with operator warning alarm and indicator	•	•	•	•
Other				
Tool box	•	•	•	•

OPTIONAL EQUIPMENT

	G930B	G940B	G946B	G960B
Comfort				
Rear view camera (standard with CE specs)	•	•	•	•
Sliding side windows	•	•	•	•
Opening front lower windows	•	•	•	•
Sun visor	•	•	•	•
Adjustable air suspended seat	•	•	•	•
Air conditioner - 35,000 BTU • HFC-134a (non-CFC refrigerant) with cab heater	•	•	•	•
Drivetrain				
Autoshift transmission	•	•	•	•
Volvo HTE1160S Transmission - 11 speeds forward 6 speeds reverse includes Autoshift	•	•	•	•
Reversible cooling fan - manual or automatic modes	•	•	•	•
Electrical System				
Moldboards work lights - 2 or 4	•	•	•	•
Rear work lights - 2 or 4	•	•	•	•
LED tail lights	•	•	•	•
Corner cab work lights - left or right - 2	•	•	•	•
Rear and front lower windows wipers/washers	•	•	•	•
Intermittent function for all specified wipers	•	•	•	•
24 volt to 12 volt converter - 600 or 1440 watt (30 or 60 amp) with power	•	•	•	•
Productivity				
Heavy duty circle support system	•	•	•	•
Metallic lower moldboard slide bearing	•	•	•	•
Belly protection plate	•	•	•	•
Front fenders/lean and steer with front wheels - plastic	•	•	•	•
Rear fenders - oscillate with tandem	•	•	•	•
Tires 17.5 x 25	•	•	•	•
Moldboard 3962 x 635 x 22 mm (13' x 25" x 7/8")	•	•	•	•
Moldboard 4267 x 635 x 22 mm (14' x 25" x 7/8")	•	•	•	•
Hydraulics and controls				
Joystick controls with steering wheel	•	•	•	•
Blade Lift Float Control	•	•	•	•
Front attachment float control	•	•	•	•
Up to 5 additional hydraulic circuits for attachments	•	•	•	•
Secondary steering (power assisted) - standard with CE specs	•	•	•	•
Radio with CD player	•	•	•	•
Other				
First user lifetime frame warranty - includes articulation pins and bearings	•	•	•	•
Low ambient fluids for extreme cold conditions below -10° C (-14° F)	•	•	•	•
Sound reduction packages (Standard with CE kit)	•	•	•	•
Rear licence plate bracket	•	•	•	•
Air compressor - engine driven with tank capable of operating hand tools	•	•	•	•
Volvo CareTrack - remote monitoring system	•	•	•	•

SELECTION OF VOLVO OPTIONAL EQUIPMENT

High Cab



Mudguards



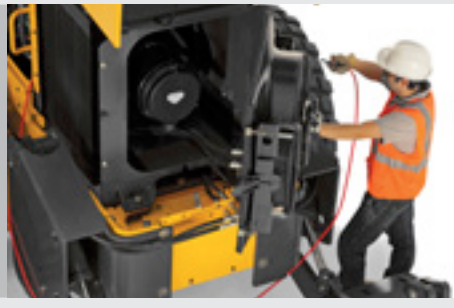
Radio with CD player



Reversible cooling fan



Air compressor



Blade lift accumulator



VOLVO CONSTRUCTION EQUIPMENT

Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 180 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo.

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.

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