

VOLVO MOTOR GRADERS  
**SITE PREPARATION**



**MORE CARE. BUILT IN.**



# MOVE THE EARTH!

Time is money, so when you're up against heavy cutting and site clearing operations, it's time to turn to Volvo.

## Work hard, work fast, earn more

It's no secret: this job is about working hard, working fast and keeping down the cost. When you need to get more work out of your motor grader, that's when Volvo power and efficiency come into play.

## From the ground up

Every inch of every Volvo G900 Motor Grader is built to deliver more earthmoving power to the ground along with more earning power to your bottom line. The G900 line-up offers a complete range of motor graders designed to give you the right choice to match the size of your projects plus maximum versatility for cost effective utilization of your equipment.

## Don't hesitate!

Dig into the job and Volvo digs in with you. Machines powered by Volvo are renowned for high torque at low RPMs, producing responsive, fuel efficient performance under all operating conditions. When you call for power to muscle through heavy overburden or to hold and turn loads smoothly under power, your Volvo G900 Motor Grader comes through without hesitation.

Volvo V-ACT Tier 3 engines for G900 Motor Graders provide the operator with a choice of three power ranges, including a 'Power' mode that not only saves on fuel but also achieves a 10% increase in torque to help the grader handle heavy loads efficiently.

## A turn for the better!

When you need to keep moving, you need a grader that's ready to grab a full load on the moldboard, push through and turn the load without skipping a beat. The Volvo twin-gear direct-drive Circle Turn System provides instant torque to get it done. Two pinions hold and turn the circle, dividing the load over more teeth for maximum load-handling strength. The hardened outer-cut teeth maximize leverage for greater turning power and control, through 360° of rotation.

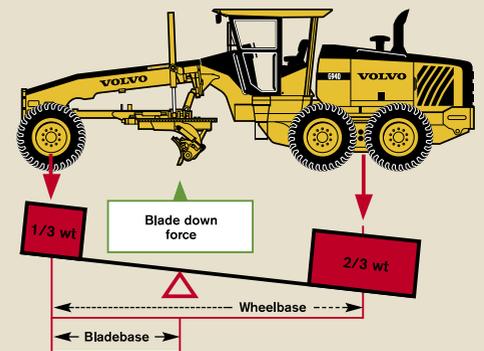
Ask your Volvo dealer to help you match the right grader to your applications with **Grader ProCal Site Simulation.**

## The all-terrain grader

To negotiate rough project sites, G900 Graders are equipped with the most advanced power-to-the-ground systems in the industry. By operating the direct drive powershift transmission in Autoshift mode, operators can focus on blade positioning with no concern for changing loads. Autoshift mode automatically looks after transmission shifting as blade loads change. But when the operator needs to take control and lock into a gear, it's there at the flip of a switch!

## CHECK LIST

- ✓ High torque at low engine speeds
- ✓ Fuel-efficient operation
- ✓ Long bladebase
- ✓ Long wheelbase
- ✓ Rapid duty cycles
- ✓ Blade down force
- ✓ Drawbar pull



$$\text{Blade down force} = \frac{\text{front weight} \times \text{wheelbase}}{\text{wheelbase} - \text{bladebase}}$$

## Balance of power

The complete structure of G900 Motor Graders is designed to optimize the blade down force and drawbar pull values you need to put power to the ground. A long bladebase and wheelbase provide the weight distribution and stability to high cutting capability at the moldboard edge. This "balance of power" lets operators cut, move and turn heavy loads efficiently through the most difficult soils.



### **Making the shift**

The innovative shuttle shift feature, provided as standard on all Volvo transmissions, ensures the industry's quickest, simplest duty cycles ever. Shuttle between selected forward and reverse gears in a single smooth motion without clutching, without pausing, for easy effortless control and best of all, less fatigue at the end of a long day.

# POWER SHIFT

All eyes are turning to Volvo G900 Motor Graders for today's best range of cost-effective solutions to heavy-duty grading applications.

## **A perfect match**

Volvo G900 Motor Graders give you the flexibility to spec your machine for a perfect match to tackle your jobs and working conditions. "Right-size" your G900 machine then fit it with the power features you need for optimum performance and utilization.

## **The power to choose**

Your choice of Volvo transmissions and drive options are your first step to achieving total productivity in heavy grading applications.

By adding optional Autoshift to the standard Volvo HTE840 transmission, operators simply select a target gear and go. The transmission automatically shifts through turns and variable loads as needed. Autoshift is also able to "learn" shift patterns on the job for faster duty cycles and to make the best shifting decisions for productivity and efficiency.

Move up to the industry's first 11-speed grader transmission for the ultimate in precise gear matching for the application. The optional HTE1160 with Autoshift standard gives you more choices in the working ranges and a higher travel speed range to achieve continuous fuel savings whether you're in the dirt or roading to the next jobsite.

## **Get tough – get going!**

All Wheel Drive models from Volvo, the G946 and the G976, deliver up to 8,500 lb (3 855 kg) of additional rimpull at the front wheels for increased blade loads. With 16 selectable levels of aggression, operators can match traction to any operating conditions, from compacted granular to wet clay soils. Volvo AWD performance raises the bar industry-wide for starting with high blade loads from a full stop.

Hydraulic hoses for the front wheel drive are positioned safely out of harm's way, so operators can attack rough site conditions with safety and confidence.

An operator-controlled hydraulic clutch-type differential lock ensures maximum tractive effort at the flick of a switch to reduce wheel slippage in adverse conditions.

## **A bigger push**

For your biggest projects, the G990 Motor Grader is the largest in the Volvo family. Longer, wider and taller than any other G900 model, the G990 combines extra muscle with a wide range of special features to make light work of heavy-duty jobs. Many features such as a taller, specially reinforced moldboard, a heavy-duty circle support system and larger tires are all included as standard in the G990 model.





**HTE1160: the first 11-speed grader transmission**

With 11 forward speeds and 6 reverse, the optional HTE1160 from Volvo expands the gear range of the grader to offer more control in the low-speed range, more efficient travel speed in the high range, more precision in the working range and exceptional fuel efficiency for every task.



The HTE1160 allows the industry's most precise gear selection matched to loads and ground speed – the key to productive, profitable earthmoving operation.



# “EXTRA” VERSATILITY

Fit your G900 Grader with your choice of “extras” that help you do more, produce more, to maximize the performance and utilization of your machine.

## No compromise

With attachments built and approved by Volvo, G900 Motor Graders adapt to year-round duties without compromising design integrity.

Volvo’s Proportional Demand Flow (PDF) hydraulic system balances flow between all grading functions for consistent implement and attachment control.

## Real world flexibility

G900 Motor Graders are purpose-built with a true tool-carrier frame designed to withstand the rigors of all-season service. The Volvo full perimeter rear frame is designed not only to provide effective support for attachments, but also permits modular mounting of all major powertrain components. The powertrain is well protected from the severe stresses of ripping, scarifying, pushing and benching.

Maximize the return on your grader investment by equipping your grader to do more and work longer with Volvo attachments and options:

Ripper attachment: clear roots, rocks and loosened soils before grading

Dozer blade: push heavy obstacles out of the grader’s path, knock down piles or collect stripped materials for clean-up

Push block: balances the machine when equipped with a ripper and adds extra weight up front to maximize blade down force

Radial tires: increase rimpull up to 10% and push heavier loads without spinning

Work lights: improve visibility for faster duty cycles and enhanced safety

## What’s the right tool for your job?

Model	G930	G940	G946	G960	G970	G976	G990
Fenders front or rear	0	0	0	0	0	0	
Dozer Blade: 8' (2.5 m)	0	0	0	0			
9' (2.7 m)	0	0	0	0	0	0	0
10' (3.0 m)					0	0	0
Front Mounted Scarifier with 5 scarifier teeth	0	0	0	0	0	0	
Mid Mount Scarifier with 5 scarifier teeth	0	0		0	0		
Push Block	0	0	0	0	0	0	0
Ripper/Scarifier, rear with 3 ripper shanks	0	0	0	0	0	0	0



# Specifications

‡ With All Wheel Drive engaged

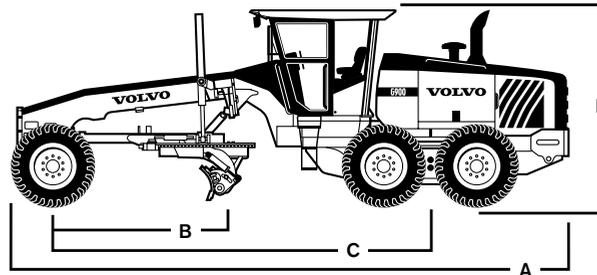
Model		G930	G940	G946	G960	G970	G976	G990
Base operating weight - approximate	lb (kg)	34,830 (15 800)	36,150 (16 400)	38,140 (17 300)	38,690 (17 550)	41,660 (18 900)	43,650 (19 800)	48,720 (22 100)
Engine model/displacement		D7E/7.2 L	D7E/7.2 L	D7E/7.2 L	D7E/7.2 L	D9B/9.4 L	D9B/9.4 L	D9B/9.4 L
Low range net power	hp (kW)	155 (115)	175 (130)	195 <sup>‡</sup> (145 <sup>‡</sup> )	195 (145)	210 (156)	225 <sup>‡</sup> (168 <sup>‡</sup> )	225 (168)
Mid range net power	hp (kW)	175 (130)	195 (145)	215 <sup>‡</sup> (160 <sup>‡</sup> )	215 (160)	230 (171)	245 <sup>‡</sup> (183 <sup>‡</sup> )	245 (183)
High range net power	hp (kW)	195 (145)	215 (160)	235 <sup>‡</sup> (175 <sup>‡</sup> )	235 (175)	250 (186)	265 <sup>‡</sup> (198 <sup>‡</sup> )	265 (198)
Blade pull at base weight (0.9 traction co-efficient)	lb (kg)	22,023 (9 990)	23,211 (10 530)	32,908 (14 925)	24,705 (11 205)	26,982 (12 240)	36,679 (16 635)	31,545 (14 310)
Blade down force capability	lb (kg)	18,021 (8 188)	17,895 (8 131)	19,035 (8 650)	19,421 (8 823)	20,420 (9 253)	21,574 (9 776)	24,457 (11 058)
Ground clearance	in (mm)	24 (610)	24 (610)	24 (610)	24 (610)	23.2 (590)	23.2 (590)	24.2 (615)
Minimum turning radius	ft (mm)	23'10" (7 265)	23'10" (7 265)	23'10" (7 265)	23'10" (7 265)	25'3" (7 700)	25'1" (7 640)	26'9" (8 150)

## Dimensions

Model		G930	G940	G946	G960	G970	G976	G990
All dimensions are approximate	A in (mm)	352 (8 930)	360 (9 150)	360 (9 150)	360 (9 150)	374 (9 500)	374 (9 500)	383 (9 730)
	B in (mm)	105 (2 675)	104 (2 650)	104 (2 650)	104 (2 650)	110 (2 790)	110 (2 790)	116 (2 935)
	C in (mm)	247 (6 280)	247 (6 280)	247 (6 280)	247 (6 280)	257 (6 531)	257 (6 531)	263 (6 681)
	D in (mm)	127 (3 225)	127 (3 225)	127 (3 225)	127 (3 225)	127 (3 225)	127 (3 225)	129 (3 280)

### Legend

A = Overall length
B = Bladebase per ISO 7134
C = Wheelbase
D = Overall height
with Low Profile Cab
Add 8.5" (217 mm)
for full height cab



## Optional Equipment

Model (O - Optional)	G930	G940	G946	G960	G970	G976	G990
HTE1160 11 speed transmission, 11 speeds forward 6 speeds reverse includes Autoshift and Travel functions	O	O	O	O	O	O	O
Rear worklights cab mounted - 2 lamps	O	O	O	O	O	O	O
Moldboard work lights - 4 lamps	O	O	O	O	O	O	O
Upper corner cab worklights - right side	O	O	O	O	O	O	O
High capacity alternator - 100 amp - 2400 watt	O	O	O	O	O	O	O
Opening lower front windows	O	O	O	O	O	O	O
Sliding side windows (left and right)	O	O	O	O	O	O	O
Blade Lift Accumulators	O	O	O	O	O	O	O
Circle Side Shift Accumulators	O	O	O	O	O	O	O
Deluxe air suspension, cloth covered fully adjustable suspension seat with 3" (75 mm) seat belt	O	O	O	O	O	O	O
Air conditioner - 35,000 BTU with 50,000 BTU cab heater	O	O	O	O	O	O	O
Radio/CD player with 4 speakers	O	O	O	O	O	O	O
Foldaway left and right outside dual rear view mirrors	O	O	O	O	O	O	O

Visit the "Dealer Locator" section of our website to find the Volvo Grader experts in your area.



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 175 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. And we're proud of what makes Volvo different – **More care. Built in.**



*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**

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Ref. No. VOE22A1004316  
Printed in pdf 2007.12  
Volvo, Goderich

US/English  
GRD