

**VOLVO MOTOR GRADERS**

# **G700B SERIES**



**VOLVO**

# Rely on Volvo Motor Graders for every job



Since we put the first motor graders on the road in 1875, Volvo has been building and backing the toughest machines on the job site. We have combined our extensive experience in motor graders with today's advanced design technology to build the most productive and reliable graders in the industry.



## Built on experience

For over 125 years, we have been building and maintaining roads around the world and building our reputation as the grader experts in the process.

We've always listened to our customers and looked for new ways to make our graders the toughest, most powerful, most comfortable and most productive. We pre-engineered our graders to accept and support the complete range of attachments you need to achieve maximum utilization of your equipment. We've also worked to make our support organization the best in the world.

Volvo graders are a combination of the most advanced design and

manufacturing technologies and our many years of grader experience. With innovations in virtually every component, Volvo graders are an industry leader in reliability and performance.

Whether you're building a road, cutting a ditch, fine grading, or cleaning up after a snowstorm, there's a Volvo motor grader for every job. Choose tandem or All Wheel Drive, depending upon your requirements.

## Worldwide network

The Volvo team stands behind every grader we build with a worldwide parts and service support network – qualified grader professionals who have earned the reputation of being "The Grader Experts".

## A proud family

The Volvo name means many things. The best remembered of these is quality; quality of design, quality of manufacture, quality of support. The Volvo name means quality.

At Volvo Construction Equipment, we share the core values of quality, safety and care for the environment in everything we do.

## Ready for the future

Volvo is committed to advancing graders and grader technology, to set new benchmarks for power, performance and reliability that allow you to do your job more efficiently and cost effectively than ever before.

For superior graders, attachments and product support, rely on Volvo.



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# Motor grader productivity defined

Motor graders are often discussed in terms of weight and horsepower specifications. These specifications indicate the size of the machine, but say nothing about grader productivity. At Volvo, we know that grader productivity is measured by the work graders do - cutting and pushing. Grader productivity is not simply a function of weight and horsepower, but more importantly, where the weight is placed and how it is applied to the ground.

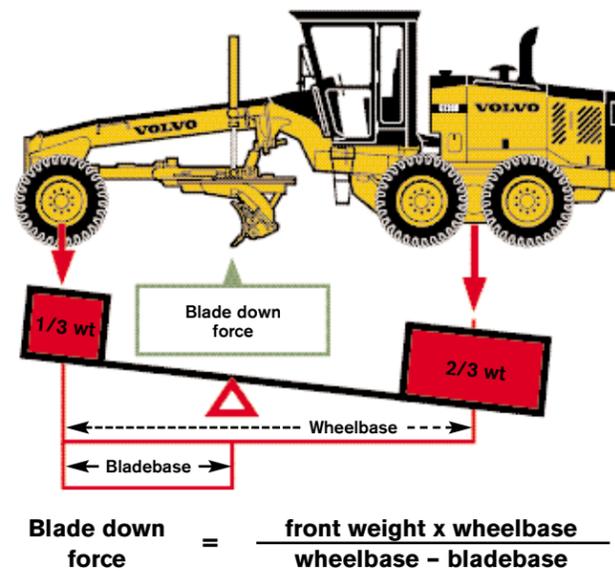
## Grader capability

Unlike other construction equipment, the business end of a grader is in the middle. At Volvo, we build graders to distribute the weight where it translates into more cutting capability at the blade edge. Since the weight of all motor graders is concentrated at the back of the machine, Volvo engineers have moved the blade as far back toward the rear of the machine as possible. This takes advantage of the rear weight, but is still well within the operator's line of sight. Volvo recognized the importance of a long bladebase many years ago and as a result, our graders offer the highest cutting capability.

The other secret to proper weight distribution is at the rear of the machine. By strategically positioning the powertrain components, we get even distribution of weight to each rear driven wheel. This optimizes the machine's pushing capability.

## Blade down force

The calculation of "Blade Down Force" or cutting capability, identifies two things as important in determining cutting capability - front weight and a long bladebase. Volvo graders combine lots of weight up front with a long bladebase to optimize the amount of machine weight that can be applied to the ground at the blade edge.



## Pushing capability

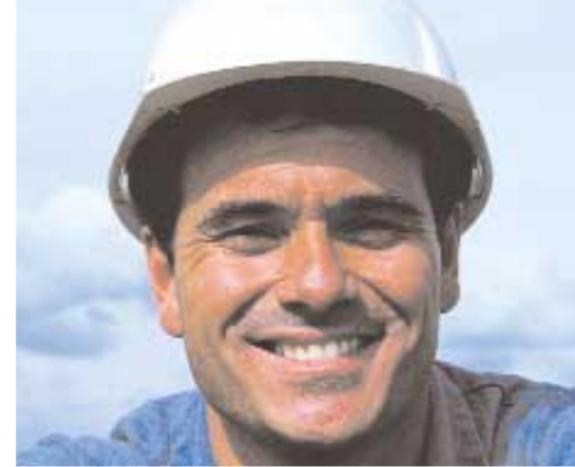
Pushing capability, too, is a function of weight and where it is placed. Seventy percent of the grader's weight is at the rear. Distribution of that weight to best apply it to the drive wheels is critical. By positioning the powertrain components strategically, Volvo graders apply more power to the ground.

## Grader Productivity

- Long bladebase for optimum blade down force.
- Strategic positioning of powertrain components provides optimal weight distribution.



# From the ground up



No matter how you use your motor grader, stresses constantly change, creating spike loads on the frame and front axle well in excess of the total machine weight. To keep these loads under control, the frame and axle have to take all these stresses without deflecting or deteriorating. These stresses can be further increased when the grader articulates for maximum reach or to cut ditches.



these ranges of movement and in any combination of them literally hundreds of times a day. The "B" Series front axle is built to handle these huge stresses - even when you attach a snow plow or dozer blade up front.

Our front axle design handles these stresses in three ways. First, we mount the axle to the machine securely through the use of an adjustable heavy duty pivot pin that is designed to handle any application imaginable. Next, the axle frame utilizes an integral box section weldment that holds the front and rear axle plates together, allowing strength and flexibility. Most importantly, we straddle mount all pivot areas, cutting the loading at these pivot points in half.

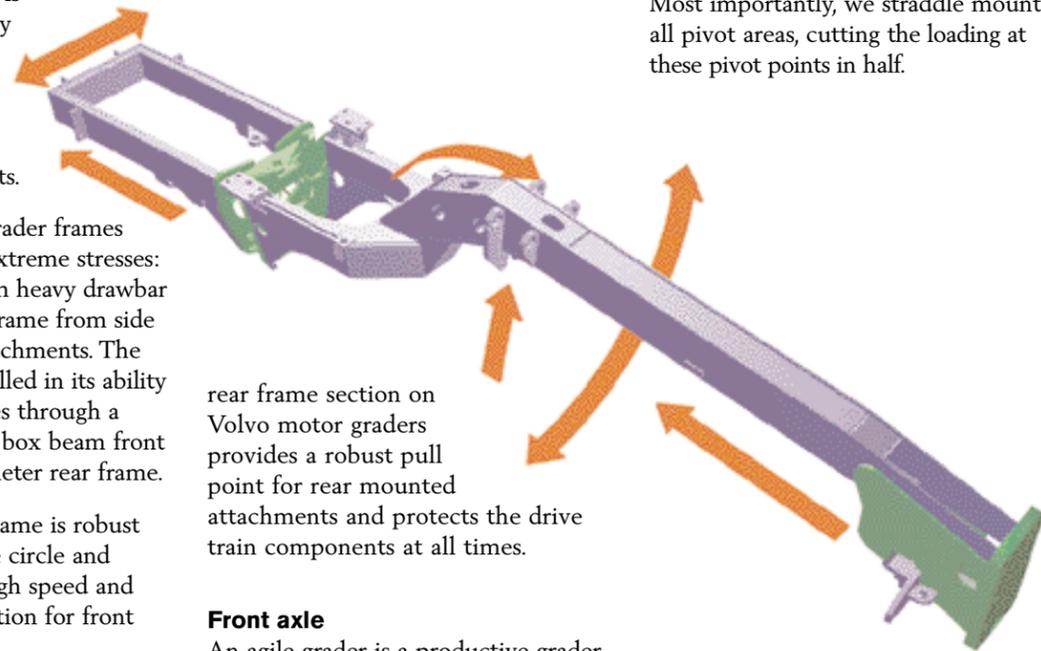


**Frame**  
Every inch of a grader is under stress from every imaginable direction. So, you need a frame that can carry the load while protecting the powertrain components.

Day in and day out, grader frames continuously absorb extreme stresses: in the front frame from heavy drawbar loads and in the rear frame from side and rear mounted attachments. The Volvo frame is unequalled in its ability to handle these stresses through a high section modulus, box beam front frame and a full perimeter rear frame.

The "B" Series front frame is robust enough to support the circle and moldboard, even at high speed and provide a firm foundation for front attachments.

Loads generated from rear mounted attachments and the rear drive wheels place tremendous loads on the rear frame. The full perimeter



rear frame section on Volvo motor graders provides a robust pull point for rear mounted attachments and protects the drive train components at all times.

**Front axle**  
An agile grader is a productive grader. Grader front axles have three ranges of mobility. These are steering, wheel lean and axle oscillation. The front axle must function through all of



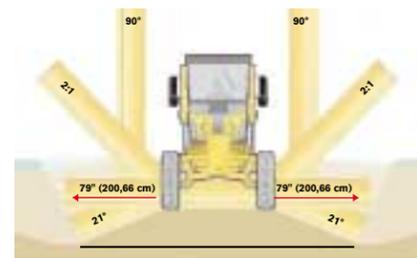
# Superior blade control

No other motor grader gives you the blade mobility, stability or reach of Volvo graders. Three systems – the MBCS (Moveable Blade Control System), Circle Turn System and Blade Lift System – work together to help you achieve the required profile and reduce the number of passes required to handle material accurately and efficiently.

## Mobility and stability

The blade mobility system of a motor grader is one of the most sophisticated tool mobility systems in construction equipment design. The Volvo Blade Control System is designed to offer superior stability whether cutting, bank sloping, back sloping or fine grading, as well as achieving 90/90 and 21° downward positioning on both sides of the machine. You can cut a 2:1 bank slope with the moldboard completely outside the tire profile.

With its simple seven position linkage, the "B" Series Moveable Blade Control System provides the full 90° left or right blade mobility from the operator's seat. This is used when cutting slopes and cleaning ditches. The Blade Lift System raises the moldboard to a full 17.5" (445 mm) height for travelling.



The MBCS gives you the flexibility to position the blade at any angle you need for shouldering, slope work and ditch cleaning – up to 90° upward and 21° downward.

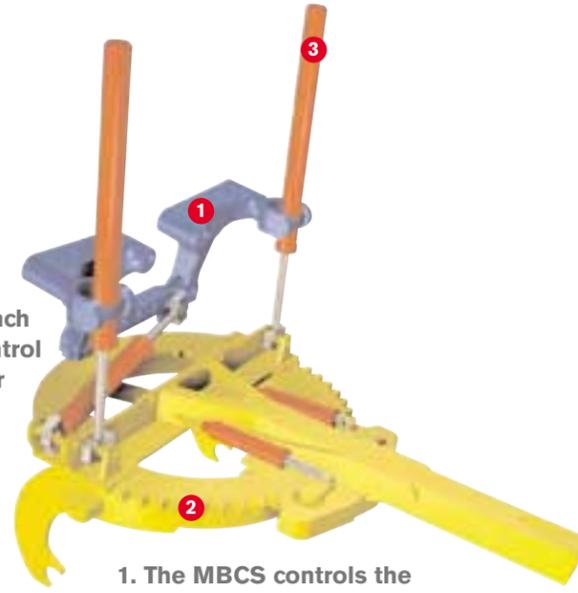
## Circle turn

This Circle Turn System is another high performance innovation from Volvo.

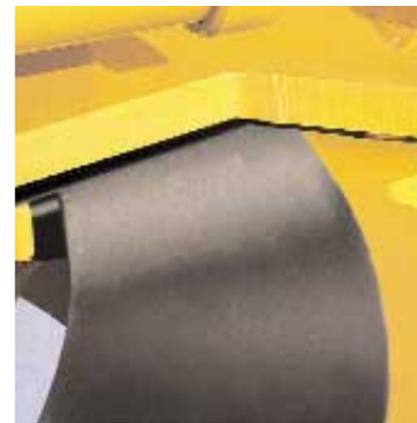
This unique system is operated by two direct-acting hydraulic cylinders, 90° out of phase, acting on teeth cut on the outside of the circle. The drive cylinders are controlled through a distribution valve and protected by a cushion valve. The Volvo Circle Turn System design achieves far greater load handling strength, with fewer moving parts than worm gear reduction systems.



Volvo graders have the industry's longest blade reach outside the tire profile, reducing the number of passes you need to make, increasing your productivity.



1. The MBCS controls the moldboard angle relative to the ground.
2. The twin cylinder Circle Turn System controls the rotation of the moldboard.
3. The Blade Lift System raises the moldboard to a height of 17.5" (445 mm) and lowers it to a maximum cutting depth of 33" (838 mm).



Duramide™ bearing material eliminates metal-to-metal contact and reduces the need for circle turn lubrication and adjustment. As well as being simple and cost-effective to replace, it has a minimum service life of more than 5,000 hours.



# A great place to work

A motor grader is only as productive as the operator. For that reason, Volvo takes pride in providing an operator environment that is recognized for its comfort and functionality.

In designing the operator environment, we listened to customers around the world to determine what they need in order to reduce operator fatigue and increase productivity. The result is a cab that is quieter and more comfortable, with excellent climate control, convenient operating controls and 360° visibility.



## Superior visibility

Because you operate your grader on or near public roads, in tight areas and around other equipment, the sloped front frame and rear cowling are designed to open up your line of sight. The Volvo cab offers a 360° view around the grader to watch the road and attachments and a clear view down to the blade area. This means an unobstructed view around the front wheels for accuracy, safety and high productivity.

## Built for productivity

All of the controls are conveniently located within a 90° arc, either directly in front of the operator or in the right hand console. Added touches, like side and lower front opening windows and an operator convenience package, put the operator's comfort first.

Located forward of the operator are all hydraulic control levers, as well as engine oil pressure, coolant temperature and fuel level gauges, transmission gear indicator, differential lock/unlock, hazard lights and others.

In the right hand console you'll find the electrical switches, circuit breakers, climate controls, engine start and the "Smart Shifter" transmission controller. All of the controls you need, available immediately at your right hand.

## Contronics - A Volvo exclusive



The nerve centre of the "B" Series operator environment is the Contronic Monitoring System. This multi-function system tells the operator the status of all machine functions, including engine RPM, engine temperature, fuel level, ground speed, filter restriction, differential lock/unlock and many others. Contronics tells the operator what is happening with the machine as he operates it.

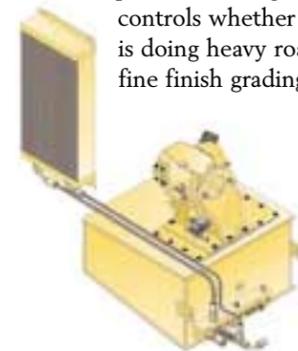
Using VCADSPRO, the service technician has easy access to the operating data recorded within Contronics and can use the information to diagnose machine problems and analyze the machine's past performance characteristics. This enables the technician to take corrective action before a failure or to diagnose the cause of a failure, should one occur.

## Hydraulics

The "B" Series hydraulic system is designed to work with you, providing

the responsiveness that every experienced operator relies on to work efficiently. At its heart is a closed center, load sensing axial piston pump that provides consistent response regardless of engine RPM.

This provides the right feel at the controls whether the grader is doing heavy road work or fine finish grading.



## Safety first

The single most important safety feature in a motor grader is the operator's ability to see over the noseplate, down to the front wheels, to the blade/circle system, over the rear of the machine and to the rear attachments. Large windows and a narrow steering pedestal provide a clear view of the moldboard and areas forward of the machine. This improved visibility gives you confidence to maneuver in congested areas with greater safety.

A sloped rear cowling provides excellent visibility to attachments or when reversing.



# Volvo Motor Grader Specification Chart

CATEGORY	 G710B	 G720B	 G726B (AWD)	 G730B	 G740B	 G746B (AWD)	 G780B	CATEGORY
<b>Base operating weight</b>								<b>Base operating weight</b>
W/full cab, ROPS, fluids and operator								W/full cab, ROPS, fluids and operator
Total	33,400 lb (15 150 kg)	34,000 lb (15 422 kg)	35,400 lb (16 057 kg)	35,500 lb (16 103 kg)	37,125 lb (16 840 kg)	38,250 lb (17 350 kg)	43,250 lb (19 618 kg)	Total
On front wheels	9,686 lb (4 394 kg)	9,860 lb (4 472 kg)	10,266 lb (4 657 kg)	10,295 lb (4 670 kg)	11,138 lb (5 052 kg)	11,475 lb (5 205 kg)	12,975 lb (5 885 kg)	On front wheels
On rear wheels	23,714 lb (10 757 kg)	24,140 lb (10 950 kg)	25,134 lb (11 401 kg)	25,205 lb (11 433 kg)	25,988 lb (11 788 kg)	26,775 lb (12 145 kg)	30,275 lb (13 733 kg)	On rear wheels
<b>Productivity</b>								<b>Productivity</b>
Maximum blade pull	21,343 lb (9 681 kg)	21,726 lb (9 855 kg)	31,121 lb (14 116 kg)	22,685 lb (10 290 kg)	23,389 lb (10 609 kg)	32,598 lb (14 786 kg)	27,248 lb (12 360 kg)	Maximum blade pull
Blade down force	16,968 lb (7 697 kg)	17,148 lb (7 778 kg)	17,854 lb (8 099 kg)	17,904 lb (8 121 kg)	19,711 lb (8 941 kg)	20,308 lb (9 212 kg)	22,963 lb (10 416 kg)	Blade down force
<b>Engine data</b>								<b>Engine data</b>
Make/Model	Volvo D7DGAE2	Volvo D7DGBE2	Volvo D7DGDE2	Volvo D7DGCE2	Volvo D10BGAE2	Volvo D10BGAE2	Volvo D10BGAE2	Make/Model
Type	4 Cycle, Turbocharged, Aftercooled	Type						
No. of cylinders	In Line 6	No. of cylinders						
Bore & stroke	4.25" x 5.11" (108 x 130 mm)	4.76" x 5.51" (121 x 140 mm)	4.76" x 5.51" (121 x 140 mm)	4.76" x 5.51" (121 x 140 mm)	Bore & stroke			
Displacement	436 cu in (7,1 l)	586 cu in (9,6 l)	586 cu in (9,6 l)	586 cu in (9,6 l)	Displacement			
Maximum net engine output @	1900 RPM (per SAE J1349)	1900 RPM (per SAE J1349)	2200 RPM (per SAE J1349)	2200 RPM (per SAE J1349)	2100 RPM (per SAE J1349)	2100 RPM (per SAE J1349)	2100 RPM (per SAE J1349)	Maximum net engine output @
	148 - 179 hp (110 - 133 kW)	169 - 210 hp (126 - 157 kW)	198 - 235 hp (148 - 175 kW)	198 - 221 hp (148 - 165 kW)	219 - 243 hp (163 - 181 kW)	219 - 243 hp (163 - 181 kW)	219 - 243 hp (163 - 181 kW)	
Rated gross power @ 2200 RPM								Rated gross power @ 2200 RPM
Gears forward 1 & 2 and R 1	148 hp (110 kW)	170 hp (127 kW)	206 hp (153 kW)	206 hp (153 kW)	225 hp (168 kW)	225 hp (168 kW)	225 hp (168 kW)	Gears forward 1 & 2 and R 1
Gears forward 3 - 8 and R 2 - 4	173 hp (129 kW)	205 hp (153 kW)	241 hp (180 kW)	228 hp (170 kW)	250 hp (186 kW)	250 hp (186 kW)	250 hp (186 kW)	Gears forward 3 - 8 and R 2 - 4
Rated net power @ 2200 RPM								Rated net power @ 2200 RPM
Gears forward 1 & 2 and R 1	141 hp (105 kW)	164 hp (122 kW)	198 hp (148 kW)	198 hp (148 kW)	219 hp (163 kW)	219 hp (163 kW)	219 hp (163 kW)	Gears forward 1 & 2 and R 1
Gears forward 3 - 8 and R 2 - 4	166 hp (124 kW)	198 hp (148 kW)	235 hp (175 kW)	221 hp (165 kW)	243 hp (181 kW)	243 hp (181 kW)	243 hp (181 kW)	Gears forward 3 - 8 and R 2 - 4
Torque	548 lb.ft (743 N.m) @ 1100 RPM	613 lb.ft (831 N.m) @ 1100 RPM	664 lb.ft (900 N.m) @ 1100 RPM	664 lb.ft (900 N.m) @ 1100 RPM	837 lb.ft (1 135 N.m) @ 1000 RPM	837 lb.ft (1 135 N.m) @ 1000 RPM	837 lb.ft (1 135 N.m) @ 1000 RPM	Torque
<b>All Wheel Drive engaged</b>								<b>All Wheel Drive engaged</b>
Rated gross power @ 2200 RPM								Rated gross power @ 2200 RPM
All gears			241 hp (180 kW)			249 hp (186 kW)		All gears
Rated net power @ 2200 RPM								Rated net power @ 2200 RPM
All gears			235 hp (175 kW)			243 hp (181 kW)		All gears
<b>All Wheel Drive</b>								<b>All Wheel Drive</b>
Typical operating pressure			3,000 psi (206 Bar)			3,000 psi (206 Bar)		Typical operating pressure
Maximum operating pressure			5,000 psi (344 Bar)			5,000 psi (344 Bar)		Maximum operating pressure
Minimum operating pressure			500 psi (34 Bar)			500 psi (34 Bar)		Minimum operating pressure
Top speed			20.2 mph (32,5 km/h)			20.2 mph (32,5 km/h)		Top speed
Creep Mode speed			0-2 mph (0-3,2 km/h)			0-2 mph (0-3,2 km/h)		Creep Mode speed
<b>Transmission</b>								<b>Transmission</b>
Make/Model	Volvo 8400	Make/Model						
Ground speeds	mph km/h	Ground speeds						
Forward	1 2.4 3.8	2.8 4.4	2.8 4.4	2.8 4.4	2.6 4.2	2.6 4.2	2.3 3.7	Forward
	2 3.4 5.4	3.9 6.2	3.9 6.2	3.9 6.2	3.7 5.9	3.7 5.9	3.2 5.1	
	3 4.6 7.4	5.3 8.5	5.3 8.5	5.3 8.5	5.1 8.2	5.1 8.2	4.5 7.1	
	4 6.5 10.4	7.5 11.9	7.5 11.9	7.5 11.9	7.1 11.4	7.1 11.4	6.2 10.0	
	5 9.2 14.7	10.5 16.9	10.5 16.9	10.5 16.9	10.1 16.1	10.1 16.1	8.8 14.1	
	6 12.7 20.5	14.7 23.6	14.7 23.6	14.7 23.6	14.1 22.7	14.1 22.5	12.3 19.7	
	7 17.8 28.5	20.4 32.7	20.4 32.7	20.4 32.7	19.5 31.4	19.5 31.2	17.0 27.3	
	8 24.9 39.8	28.5 45.7	28.5 45.7	28.5 45.7	27.2 43.8	27.2 43.6	23.8 38.3	
Reverse	1 2.4 3.8	2.8 4.4	2.8 4.4	2.8 4.4	2.6 4.2	2.6 4.2	2.3 3.7	Reverse
	2 4.6 7.4	5.3 8.5	5.3 8.5	5.3 8.5	5.1 8.2	5.1 8.2	4.5 7.1	
	3 9.2 14.7	10.5 16.9	10.5 16.9	10.5 16.9	10.1 16.1	10.1 16.1	8.8 14.1	
	4 17.8 28.5	20.4 32.7	20.4 32.7	20.4 32.7	19.5 31.4	19.5 31.2	17.0 27.3	
<b>Differential / Final drive</b>								<b>Differential / Final drive</b>
Make/Model	Volvo SR30 - Operator lock/unlock.	Volvo SR30 - Operator lock/unlock.	Volvo SR30 - Operator lock/unlock.	Volvo SR40 - Operator lock/unlock.	Volvo SR40 - Operator lock/unlock.	Volvo SR40 - Operator lock/unlock.	Volvo Twin Bull Gear - Double reduction.	Make/Model
<b>Brakes</b>								<b>Brakes</b>
Service brakes	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Foot operated: Fade resistant, hydraulically actuated, oil disc service brakes.	Service brakes
Parking brake	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Independent, disc type parking brake on transmission output shaft and effective on all 4 tandem drive wheels.	Parking brake
<b>Steering</b>								<b>Steering</b>
Minimum turning radius	25'5" (7 747 mm)	25'6" (7 772 mm)	25'6" (7 772 mm)	25'6" (7 772 mm)	25'7" (7 798 mm)	25'7" (7 798 mm)	25'5" (7 747 mm)	Minimum turning radius
<b>Frame</b>								<b>Frame</b>
Articulation	Full front and rear frame sections.	Articulation						
<b>Circle</b>								<b>Circle</b>
Type	Hardened teeth on outside of circle.	Type						
Duramide™ faced adjustable guide shoes / clamp plates	3 / 3	3 / 3	3 / 3	3 / 3	3 / 3	3 / 3	5 / 5	Duramide™ faced adjustable guide shoes / clamp plates
<b>Circle drive</b>								<b>Circle drive</b>
Hydraulic drive cylinders	2	2	2	2	2	2	2	Hydraulic drive cylinders
Rotation	360°	360°	360°	360°	360°	360°	360°	Rotation
<b>Cab and controls</b>								<b>Cab and controls</b>
Controls and gauges housed in fully adjustable pedestal and right hand console	Yes	Controls and gauges housed in fully adjustable pedestal and right hand console						
<b>Load sensing hydraulics</b>								<b>Load sensing hydraulics</b>
Axial piston pump	Yes	Axial piston pump						
Maximum pressure	2,700 psi (186 Bar)	Maximum pressure						
Output @ 2200 RPM	0-75 U.S. gpm (0-284 lpm)	Output @ 2200 RPM						

# Technically speaking

- 1 Hydraulic Fan**  
The variable-speed hydraulic fan manages air flow according to actual demand optimizing fuel economy while maximum available horsepower is maintained for other machine functions.
- 2 Hydraulics**  
The load-sensing closed-centre axial piston pump provides the industry's highest flow capacity to enable multi-function operations with precision and responsiveness regardless of RPMs.
- 3 Engine**  
Tough, fuel efficient, reliable Volvo 9,6 and 7,1 litre engines deliver high torque at low engine RPM. These engines also deliver an exceptional power profile for every grading application. All Volvo engines meet Tier II/Stage II environmental standards.
- 4 Accessibility**  
All access doors open wide to enable a clear, unobstructed view of powertrain components for service. Left side servicing makes all routine service checks convenient.
- 5 Operator Station**  
A quiet, comfortable and productive operator environment. Available in full height or low profile enclosed cab or full height canopy cab configuration.
- 6 Blade Mobility**  
The blade mobility system provides full 90°/90° positioning of the moldboard to both sides of the machine for superior bank-sloping and ditching.
- 7 Circle Drive**  
The Volvo dual cylinder Circle Drive System provides optimum circle turn and holding power with few moving parts.
- 8 Front Axle**  
The Volvo front axle, whether it is in a tandem or All Wheel Drive configuration is built on a welded box section frame with straddle-mounts at every critical pivot area and a heavy duty pivot pin, all designed to withstand the extreme stresses of cutting and pushing heavy loads.
- 9 Machine Monitoring**  
Contronics, a Volvo exclusive, is a 3-level warning system providing excellent machine protection by constantly monitoring and reporting vital grader functions.
- 10 Transmission**  
The Volvo 8400 transmission with 8 forward and 4 reverse gears, provides the right speeds and rapid gear selection for any application.
- 11 Final Drive/Brakes**  
Operator controlled lock/unlock differential, and 4 wheel "crossover" oil multi-disc brakes are standard equipment.
- 12 Full Perimeter Frame**  
The full perimeter frame provides a solid mount for attachments and prevents shock-loads to powertrain components.



# A true All Wheel Drive Motor Grader

Volvo All Wheel Drive Motor Graders are like three drive systems in one – 2, 4 or 6 wheel drive. In 2 wheel drive, only the front wheels are powered from 0 - 2.0 mph (0 - 3,2 km/h), ideal for slow speed fine grading. In 4 wheel drive, you have a highly efficient tandem grader. In 6 wheel drive, you get an extra 8,500 lb (3 855 kg) more blade pull and up to 20.4 mph (32,7 km/h) for operation in poor footing or snow plowing.



Whatever your application, the Volvo All Wheel Drive System is tuned to the task. The system provides an even distribution of power through independent variable displacement pumps and high torque motors at each front wheel. If the traction differs on either side, this system ensures that optimum pulling power is still achieved.

## Leading All Wheel Drive innovation

Only Volvo AWD graders offer you the ability to switch to Creep Mode for low speed, fine grading application. Creep Mode disengages the rear drive and pulls the grader in hydrostatic front wheel drive only. This puts the power where it needs to be for fine grading and allows the moldboard

Speed sensors on each front wheel control the relative front to rear speeds. The main AWD control features 16 levels of aggression. This allows precise matching of front wheel aggression to tractive conditions. This means that not only do the G700B Series Motor Graders deliver up to 8,500 lb (3 855 kg) more blade pull to your heavy application, the slow speed adds extreme precision to your fine grading applications.



to be navigated around the tightest corners without the rear wheels “scuffing” the finished grade. The controls for the AWD System, consisting of the AWD On/Off switch, 16 position aggression setting dial, Creep Mode activation switch and audible/visual AWD System Monitoring System, are conveniently located at the operator’s right hand.

## Unbeatable high speed operation

Only G700B All Wheel Drive models work up to 20.4 mph (32,7 km/h) for optimum snow clearing performance. This innovative AWD System is available in the G726B and G746B graders.



# Power and performance

Because motor graders do work at all speeds, in all seasons and dozens of different applications, the Volvo 700B Series Graders utilize a matched set of powertrain components delivering the right kind of power and speed when and where it's needed.

Fuel efficient Volvo 9,6 litre and 7,1 litre engines are designed to deliver superior performance and reliability, especially matched to the proven Volvo 8400 transmission. 4 wheel oil disc brakes and lock/unlock final drives complete a powertrain package second to none in the industry.

## Environmental commitment

Care for the environment has always been one of the Volvo core values. We see our commitment as an integral part of our operation. Not only our plants, but also our manufacturing processes are certified in accordance to ISO 14001. Ninety percent of all the material in Volvo motor graders is recyclable. These are a few of the reasons that tell our customers that they are getting one of the most environmentally responsible motor graders on the market.

## Electronic engine control

Volvo engines are excellent for the type of work graders do; excellent low end torque to "power through" as load levels change, superior quietness for night operation and working in urban areas, superior fuel efficiency at all load levels and of course, low emissions. With variable horsepower, you have the right power matched to either low speed or high speed operation - automatically.

Volvo graders are equipped with turbocharged, high performance, low emission diesel engines, featuring electronically controlled injection and intercooler. To ensure that all Volvo graders lead the industry's most

progressive environmental standards worldwide, Volvo diesel engine emissions are fully compliant with both the U.S. E.P.A. Tier II requirements and with the equivalent Stage II standards outlined by European authorities. Cooling is thermostatically controlled, with a variable speed fan that is governed by cooling demand. This means optimal use of power and lower fuel consumption.

## Power when you need it

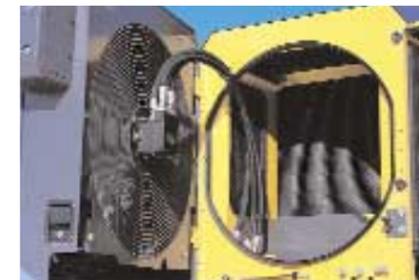
High torque at low engine RPM is the secret behind the Volvo engine's high productivity in grading applications. The Volvo engine has the ability to sustain power under load and as loads change.

## The proven 8400 transmission

The Volvo 8400 transmission has been a proven performer in tens of thousands of our graders and millions of operating hours. With 8 forward and 4 reverse speeds, this fully sequential direct drive transmission has the right speed for every operation; with 5 speeds below 11 miles per hour for all grading operations, a high speed road maintenance gear, a snow plowing speed and a gear for high speed roading. The 8400 "Smart Shifter" provides rapid gear access through pulse



shifting, while ensuring that the operator always has an appropriately matched forward or reverse gear - automatically, just by changing direction. And finally, all Volvo "B" Series Graders have lock/unlock final drives, 4 wheel "crossover" oil multi-disc service brakes, fail-safe braking and spring applied/hydraulic release park/emergency brakes as standard equipment.



Since the grader's need for cooling depends on ambient conditions as well as the engine's power output, the variable-speed hydraulically driven fan on Volvo graders is designed to respond to actual demand. Combined with non-stacked coolers, the system continuously delivers just the right amount of cooling effort, consuming less fuel, producing less noise and maximizing available power for other grader functions.



# Support you can depend on

No matter where you are located, your Volvo Dealer will keep your motor graders operating at maximum productivity day after day. Our parts availability and service expertise are second to none in the industry.



To make sure you never have to settle for less than the best, your local dealer carries a complete inventory of parts for your Volvo Grader.

### Service and support

When you're backed by Volvo, your Volvo grader is backed by thousands of skilled parts and service people in over 100 countries. Together, we cover the globe. We also offer a full range of customer service agreements individually tailored to ensure that your equipment and fleet continuously deliver the high productivity and availability you expect from Volvo.

Your local Volvo Dealer is fully equipped and trained to support every aspect of our products and your business with parts support, service assistance and training that you expect from the name Volvo.

The foundation of the success of all Volvo Construction Equipment products is your Volvo Dealer. We recognize that our relationship with our customers only begins with the sale of an articulated hauler, wheel loader, excavator, compact equipment and, of course, motor grader.

### Parts support

Genuine Volvo parts are manufactured to the most stringent specifications, guaranteeing compatibility, superior performance and a long service life.



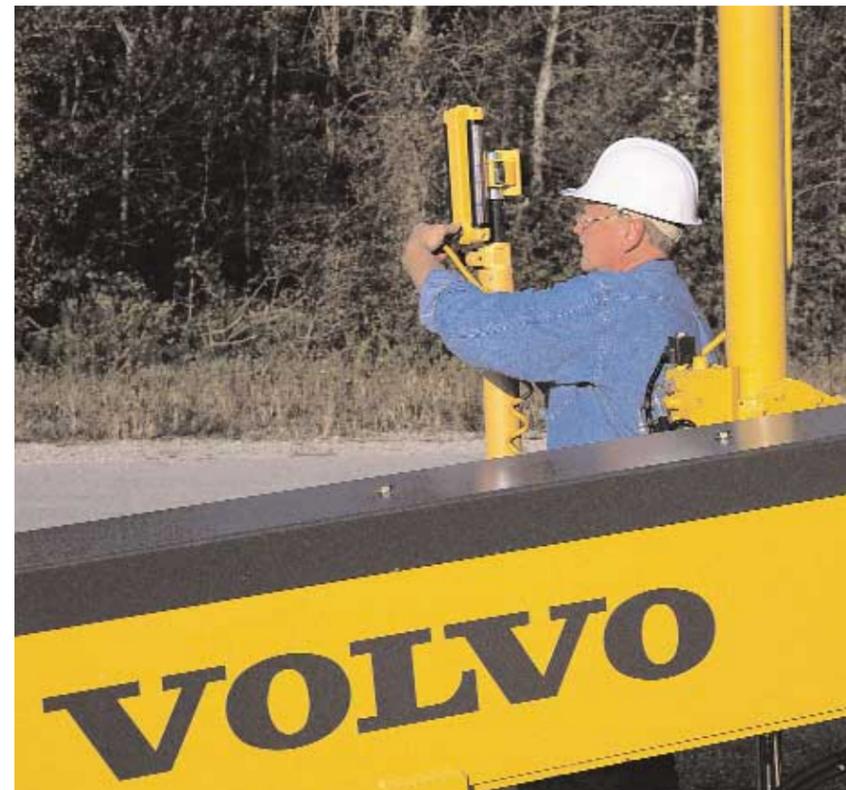
### The right connections

Choose Volvo people to do your on-site or off-site maintenance. This decision means that you want and expect the very best. You want people who know your machine. Our service technicians have the parts, the equipment and the know how to get you up and running quickly and keep you running day after day. After all, isn't that what you expect?



# Life-long utilization

Volvo brings more than a century of field experience to the design of motor graders that are equal to every job a motor grader will ever have to do. By properly understanding the work that your graders do, we build in the capacities and capabilities to meet the demands of tomorrow's worksite as well as today's.



## Strength and precision

Many graders that are originally spec'd out for heavy cutting and pushing are often assigned to fine-grading applications, too. So every Volvo motor grader is built to combine the essential power and responsive controls that allow precise operation in any application. For slow fine work, the high torque engine delivers consistent power at low RPM

while the large-displacement pump ensures that flow capacity is available for multi-function operation. Together, these provide the precise response ensuring effective, consistent moldboard and grade control. Mounting brackets and a pre-engineered interface simplify installation of automated blade control systems as original equipment or as retrofits.

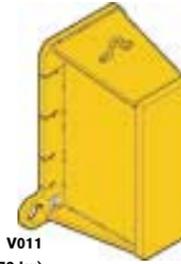
## Engineered for versatility

Adapting a grader to new tasks begins long before the attachments are chosen. Volvo graders are engineered to simplify installation and to ensure strength to handle the varied stresses generated by all kinds of attachments, front, rear and mid-mounted. The full-perimeter frame gives attachments an ideal base for solid support while isolating drivetrain components from the excessive loads of clearing snow, benching, ripping and scarifying. The proven box-section front axle design stands up to the challenges of heavy pushing and plowing while it supports complete wheel mobility. Volvo offers a complete range of optional hydraulic packages and each is designed to integrate attachment controls for your grader application.



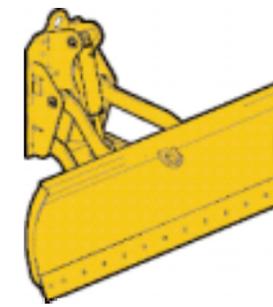
Engineered for versatility, your grader is fully equipped to accept a wide range of Volvo-built or Volvo-compliant attachments to maximize utilization of your equipment on every job site.

## Push Block



**Model** V011  
**Weight** 1,050 lb (476 kg)  
**Push area** 402 in<sup>2</sup> (2 594 cm<sup>2</sup>)

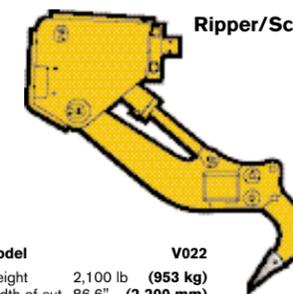
## Dozer Blade



Model	V016	V017	V018
Width Class	8' (2,5 m)	9' (2,7 m)	10' (3,0 m)
Weight	2,300 lb (1 045 kg)	2,360 lb (1 070 kg)	2,415 lb (1 095 kg)
Width of cut	98" (2,5 m)	108" (2,75 m)	118" (3,0 m)
Blade height	37.5" (953 mm)	37.5" (953 mm)	37.5" (953 mm)



## Ripper/Scarifier



**Model** V022  
**Weight** 2,100 lb (953 kg)  
**Width of cut** 86.6" (2 200 mm)

## Mid Mount Scarifier



**Model** V001  
**Weight** 1,725 lb (782 kg)  
**Width of cut** 48.6" (1 235 mm)

## Front Mounted Scarifier



**Model** V005  
**Weight** 1,552 lb (704 kg)  
**Width of cut** 49" (1 248 mm)



## Technology on Human Terms

Volvo Construction Equipment is one of the world's leading manufacturers of construction machines, with a product range encompassing wheel loaders, excavators, articulated haulers, motor graders and more.

The tasks they face vary considerably, but they all share one vital feature: technology which helps man to perform better: safely, efficiently and with care of the environment. We refer to it as Technology on Human Terms.

The sheer width of the product range means it is always possible to choose exactly the right machine and attachment for the job. Each machine also comes with the quality, continuity and security which is represented by the

Volvo name. The strength of the service and parts organizations; the security of always having immediate access to leading-edge research and technical development are part of the Volvo name. A machine from Volvo meets the very highest demands in all kinds of jobs, under all conditions, the world over.

*Volvo Construction Equipment develops, manufactures and markets construction equipment. We are a Volvo company with production facilities on four continents and a market presence in over 100 countries.*

For more information please visit our website:  
[www.volvo.com](http://www.volvo.com)

*All products are not available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and designs without prior notice. The illustrations do not necessarily show the standard version of the machine.*

# VOLVO

Construction Equipment

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