

**SERIES V**



**Productivity  
through Power  
and Performance**

# A Champion for Every Job

Introducing the new Champion Series V motor graders, the next level in grading power and performance. There are eleven Series V model sizes to choose from – the largest selection in the industry – a grader to handle every job, from light grading and ditching to bulldozing and snowplowing.

## Performance Innovations

Champion Series V motor graders deliver more power, superior blade control and faster work cycles for maximum productivity even under the most demanding conditions. Every Series V grader features dozens of technical innovations.

Series V graders offer smoother, more responsive load-sensing hydraulics for a 30% improvement in implement control. Steering is also smoother and more uniform, requiring 18% less effort even under heavy load.

## Control Innovations

In the cab – more glass and less steel provide greater visibility of the moldboard and forward work areas. The convenient, easy-to-read control pedestal layout includes a digital gear selection indicator. And Champion's new "Smart Shifter" single-lever transmission controller improves work cycle times and reduces operator fatigue.

At the rear of the Series V, higher volume fans improve engine cooling and reduce noise. Easy radiator access makes clean-out fast and simple, while larger cabinet-type engine cowling doors offer wide-open access for servicing.



Five Series V models come with variable horsepower (VHP) engines that automatically increase horsepower up to 15% for high-speed, heavy-load applications like snow clearing and working in hilly terrain.

## 710A VHP



For fine grading, the Series V 710A offers the unmatched precision of Champion's Moveable Blade Control System and excellent gearing for low-speed applications.

## 740A VHP



This Series V grader boasts up to 235 hp in gears 3 through 8 with 45% net torque rise and one of the best power to weight ratios in the business to meet the demands of the municipal road maintenance operator.

## 780A VHP



Weighing in job-ready at 47,706 lbs, from push block to ripper the 780A VHP is engineered for the tough challenges of mining, timberland and heavy construction work.



**710A  
VHP**



Operating Weight 31,510 lbs  
(14,293 kg)  
Net Power 135 hp (101 kW)  
160 hp (119 kW)

**720A  
VHP**



Operating Weight 34,340 lbs  
(15,577 kg)  
Net Power 135 hp (101 kW)  
160 hp (119 kW)

**710A**



Operating Weight 31,510 lbs  
(14,293 kg)  
Net Power 140 hp (104 kW)

**720A**



Operating Weight 34,340 lbs  
(15,577 kg)  
Net Power 160 hp (120 kW)

**730A  
VHP**



Operating Weight 37,552 lbs  
(17,034 kg)  
Net Power 180 hp (134 kW)  
200 hp (149 kW)

**740A  
VHP**



Operating Weight 38,022 lbs  
(17,247 kg)  
Net Power 210 hp (157 kW)  
235 hp (175 kW)

**730A**



Operating Weight 37,552 lbs  
(17,034 kg)  
Net Power 195 hp (145 kW)

**740A**



Operating Weight 38,022 lbs  
(17,247 kg)  
Net Power 210 hp (157 kW)

**750A  
VHP**



Operating Weight 44,345 lbs  
(20,115 kg)  
Net Power 210 hp (157 kW)  
235 hp (175 kW)

**780A  
VHP**



Operating Weight 47,355 lbs  
(21,480 kg)  
Net Power 210 hp (157 kW)  
235 hp (175 kW)

**750A**



Operating Weight 44,345 lbs  
(20,115 kg)  
Net Power 210 hp (157 kW)

**780A**



Operating Weight 47,355 lbs  
(21,480 kg)  
Net Power 210 hp (157 kW)

**More Power Across the Board**

# More Power, When You Need It

From the powerful Cummins engine to the exclusive 8400 transmission and Gearco lock/unlock final drives, the new Series V's modular power train gives it the highest productivity of any grader on the market.

## Superior Lugging Power

Five Series V models come with variable horsepower (VHP) engines. VHP delivers standard power in the first two gears, and up to 15% more power in gears 3 through 8 for improved performance in high-speed, heavy-load applications.

## Champion's Modular Power Train

The Series V's power train components are individually "isolation mounted" to the frame. This modular design distributes the weight to optimize pushing and cutting capability and simplifies servicing.

The Champion 8400 transmission is geared to the power curve of our engines to match the speed requirements of any application. The 8400's electronic controller lets operators customize shift patterns for cyclical work, automatically returning to the gear last selected when changing direction.

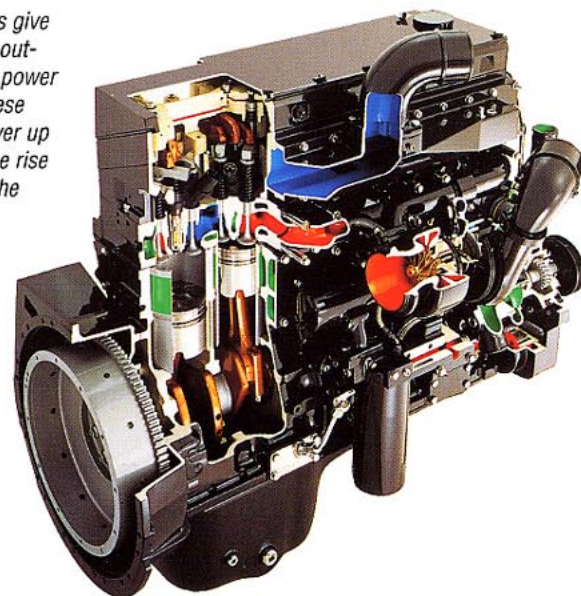
The Champion direct-drive power train uses an oil-cooled master clutch for smooth starts even with a fully loaded moldboard. And Champion's Gearco final drives can be locked or unlocked on the fly.

## Model Comparison Chart

Model	Engine	Net Power hp (kW)	Gross Torque ft·lb (N·m)	Torque Rise
710A	6BT5.9	140 (104)	440 (596)	30%
710A VHP	6BT5.9	135 (101) 160 (120)	422 (572) 590 (800)	35% 50%
720A	C8.3	160 (120)	560 (758)	44%
720A VHP	C8.3	170 (127) 195 (145)	500 (678) 636 (862)	20% 36%
730A	C8.3	195 (145)	636 (862)	35%
730A VHP	C8.3	180 (134) 200 (149)	542 (735) 711 (963)	24% 53%
740A	M11	210 (157)	760 (1031)	43%
740A VHP	M11	210 (157) 235 (175)	760 (1031) 845 (1145)	43% 45%
750A	M11	210 (157)	760 (1031)	43%
750A VHP	M11	210 (157) 235 (175)	760 (1031) 845 (1145)	43% 45%
780A	M11	210 (157)	760 (1031)	43%
780A VHP	M11	210 (157) 235 (175)	760 (1031) 845 (1145)	43% 45%

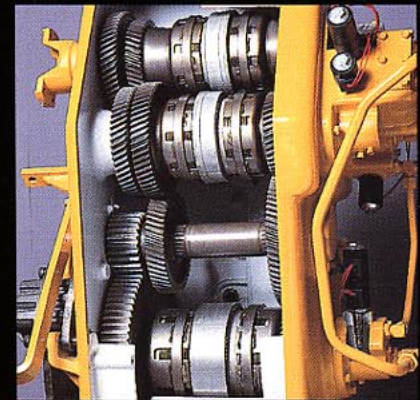


*Cummins engines give Series V graders outstanding lugging power in every gear. These powerplants deliver up to 53% net torque rise – the highest in the grader business.*





The Series V's exclusive "Smart Shifter" single-lever transmission controller gives the operator quick and easy access to all forward and reverse gears for faster work cycles with less fatigue.

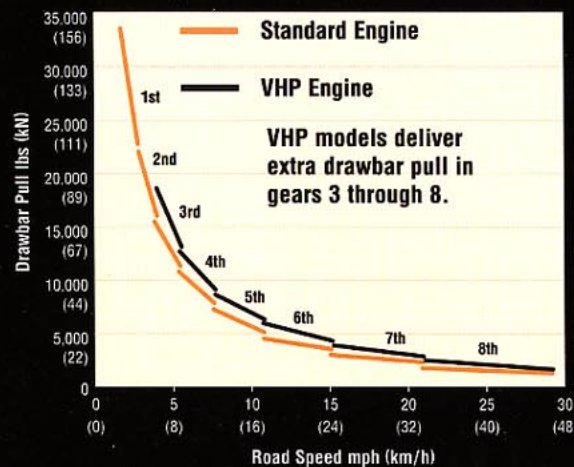


Performance-proven in over 4 million hours of operation worldwide, the Champion 8400 transmission features gear ratios proportioned to provide precise, job-matched speeds for all applications.

### The Most Advanced Engine of Any Grader

- High-efficiency turbocharger delivers strong low-end torque and excellent response on demand.
- Engines are job-matched to provide the optimum horsepower to weight ratio in each machine size.
- Meets all the latest mobile off-highway emissions standards worldwide.
- Field-proven Cummins power and performance with excellent durability, reliability and fuel efficiency.

### Series V 740 Drawbar Pull



Drawbar pull – the measure of a grader's ability to provide constant pull through heavy loads – is smooth throughout the entire gear range on all Series V motor graders.

Drawbar pull varies with tractive conditions.

# Superior Blade Control

Blade Down Pressure		
Model	lbs	kg
710A	16,572	7 517
710A VHP	16,572	7 517
720A	16,730	7 589
720A VHP	16,730	7 589
730A	18,113	8 216
730A VHP	18,113	8 216
740A	18,547	8 413
740A VHP	18,547	8 413
750A	21,698	9 842
750A VHP	21,698	9 842
780A	23,512	10 665
780A VHP	23,512	10 665

Champion Series V motor graders combine optimum weight distribution with an advanced blade control and circle drive system to deliver unbeatable earth moving capability.

### Mobility and Stability

Champion's Moveable Blade Control System (MBCS) offers the best blade mobility and blade reach of any grader. It can accurately place the moldboard in any position up to 90° on either side of the machine. And it can cut a 2:1 bank slope while keeping the blade entirely outside the tire profile.

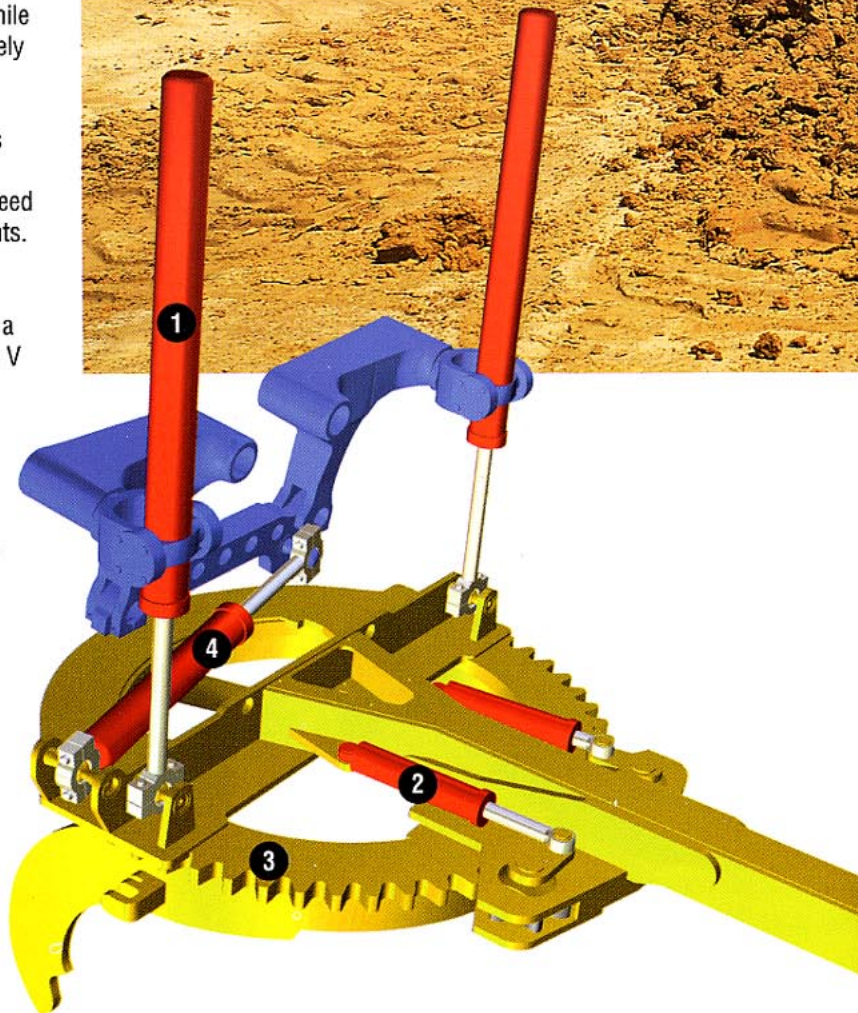
The widest blade lift-cylinder stance in the industry gives Series V graders superior blade stability. The result is improved control in fine grading applications, and less need for opposite-side corrections when making fine adjustments.

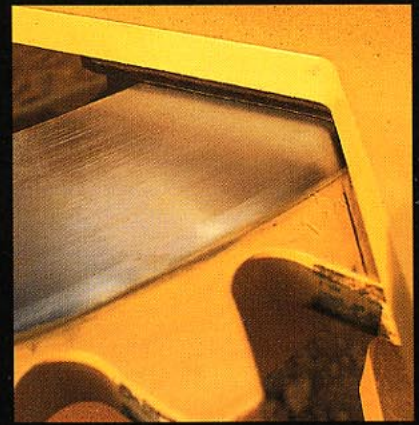
### More Power at the Moldboard

Blade down pressure is the measure of the cutting force a grader can exert at the moldboard edge. Champion Series V graders are designed to optimize weight distribution by means of a longer blade base than competing graders. As a result, the Series V delivers superior blade down pressure in every weight class.

The key to earth moving capability is not only horsepower, but the amount of weight directly over the grader's drive wheels. The Series V's higher rear weight helps increase traction at the drive wheels, reducing slip and giving Champion graders the best drawbar pull in the industry.

*The Series V's circle drive pinions are driven by dual hydraulic cylinders, so maximum turning power is available instantly, allowing operators to turn and hold the moldboard even under full load.*





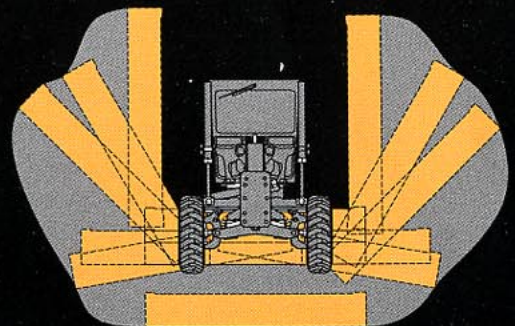
*DURAMIDE™ bearing material reduces the need for frequent circle lubrication and adjustment with a service life of more than 5000 hours, and offers easy installation at low replacement cost.*



*Supported on long-life DURAMIDE™ slide rail bearings, the Series V's triple-curvature moldboard is designed to eliminate "bull dozing" and move material quickly.*

### The Moveable Blade Control System

- 1 Parallel lift cylinders with the widest stance in the industry for superior blade control and stability.
- 2 Twin drive cylinders operating at 90° out of phase to position and hold the moldboard even under full load.
- 3 Hardened teeth on the outside of the Series V's circle – greater leverage delivers more turning and holding power.
- 4 Closed-center load-sensing hydraulics maintain system pressure at 250 psi (17,25 Bar) above load pressure. At minimum load, standby pressure is maintained at 90 psi (6,2 Bar) to improve fuel efficiency and reduce heat.



*Champion's Moveable Blade Control System delivers excellent right and left reaches for shouldering or bank work. This exclusive system is available on every Series V model, including a heavy-duty version on the 750A and 780A.*

# A More Productive Place to Work

The Champion Series V offers the best operator environment of any motor grader – excellent visibility, convenient controls, superior hydraulic response and easy serviceability – a more productive place to work.

## Superior Visibility

The Series V's exclusive sloped front frame and rear engine cowling provide excellent 360° visibility. Its lower, narrower noseplate, lower blade lift arms and superior blade control geometry provide a clear view to grade stakes, curbs and grader attachments.

## Operator Environment

The Series V's short-throw, low-effort hydraulic controls offer industry-standard function with almost no learning curve for operators. All controls and gauges are either directly ahead in the control pedestal, or easily accessible in the right-hand console.

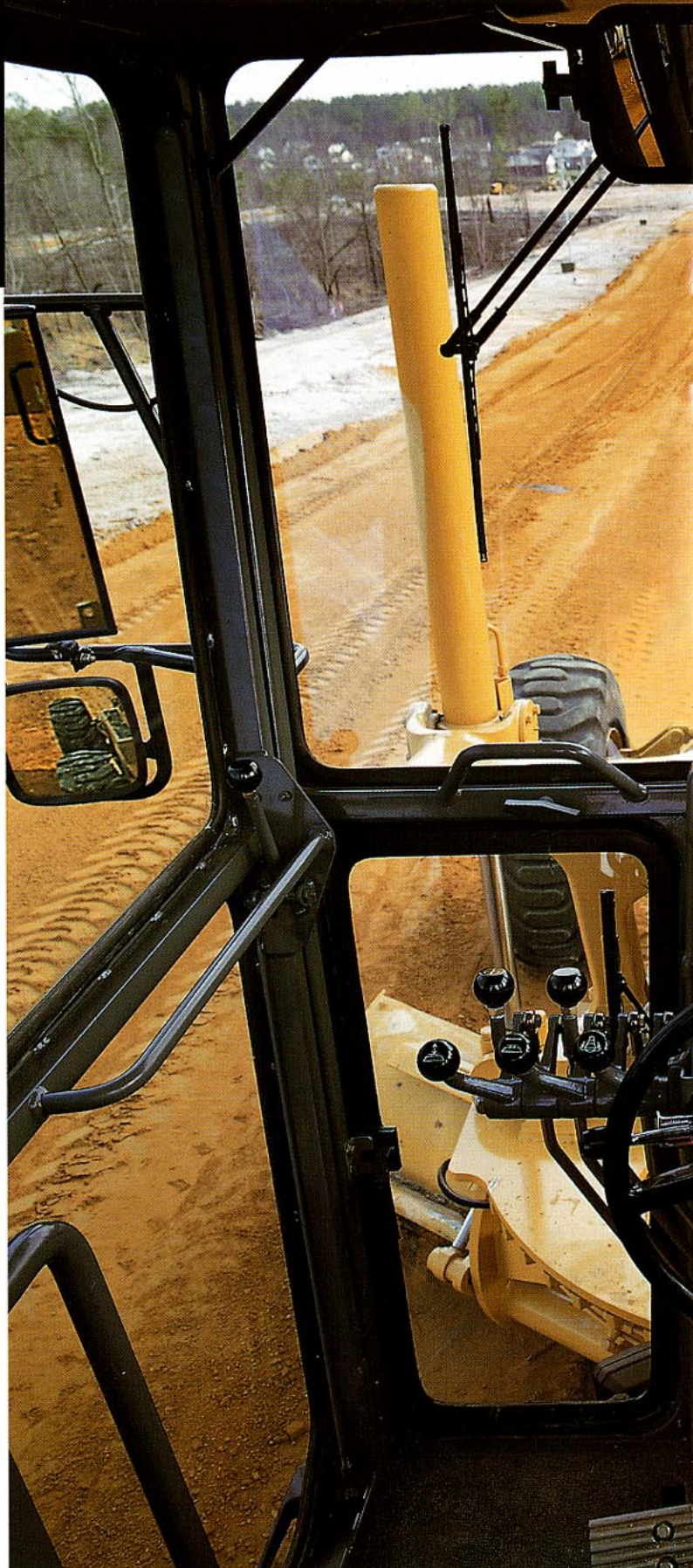
Small touches such as door holdbacks with both interior and exterior releases, sliding upper side windows for added ventilation, opening lower front windows for added visibility, a coat hook with tieback, and a convenient cup and lunch box holder all make the Series V cab a great place to work.

## Improved Hydraulic Response

With Champion's closed-center load-sensing hydraulics, Series V graders achieve a new level of precision and responsiveness – a 30% improvement in implement response.



*The side console contains the "Smart Shifter" single-lever transmission controller and the hand throttle, and provides convenient right-hand access to switches for wipers, lights, climate control and other accessories.*

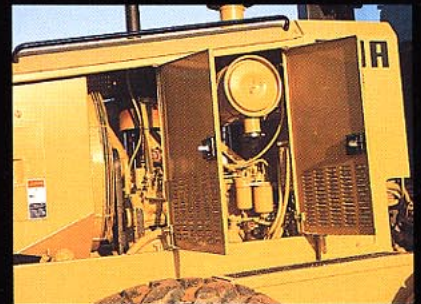


*Maintaining clear sight lines to all work areas is essential to productivity. That's why we've given the Series V cab more glass and less steel, and lowered the front glass dividing bar for maximum visibility to the work area.*





*The Series V pedestal with digital gear indicator contains all hydraulic controls, priority gauges and the 3-level electronic monitoring system. Pedestal lean and control head tilt are fully adjustable to suit each operator's personal reach and comfort requirements.*



*With steps on the grader tandems, grab rails and large cabinet-type doors on the engine cowling, the Series V offers easy access to maintenance points and radiator clean-out.*



*The Series V's radiator is at the rear of the engine compartment – not directly behind the operator. The result is less noise and heat in the cab.*

# A Grader for Every Application

Today's municipal operators and private contractors need a machine that can handle a wide variety of jobs from grading and ditching to bulldozing and snow plowing. The Series V's selection of attachments and choice of frame configurations make it truly a multi-purpose roadbuilding and maintenance machine.

## Versatility and Productivity

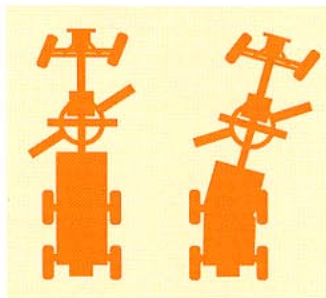
Champion manufactures attachments to take on a complete range of roadbuilding and maintenance applications – from fine grading to plowing snow, from ripping to pushing other heavy equipment.

The Series V's optional All-Wheel Drive system provides maximum aggression based on tractive conditions and ground speed. The result is additional steering

control for work on bank slopes and in wet ditches, as well as extra pulling power in low-traction applications like snow removal.

Champion's frame is the strongest in the industry. The Series V is available with a rigid frame, or an articulating frame that can articulate up to 22° left or right, for improved productivity in wet ditching and increased maneuverability in cul-de-sacs or on city streets.

## Articulating Frame

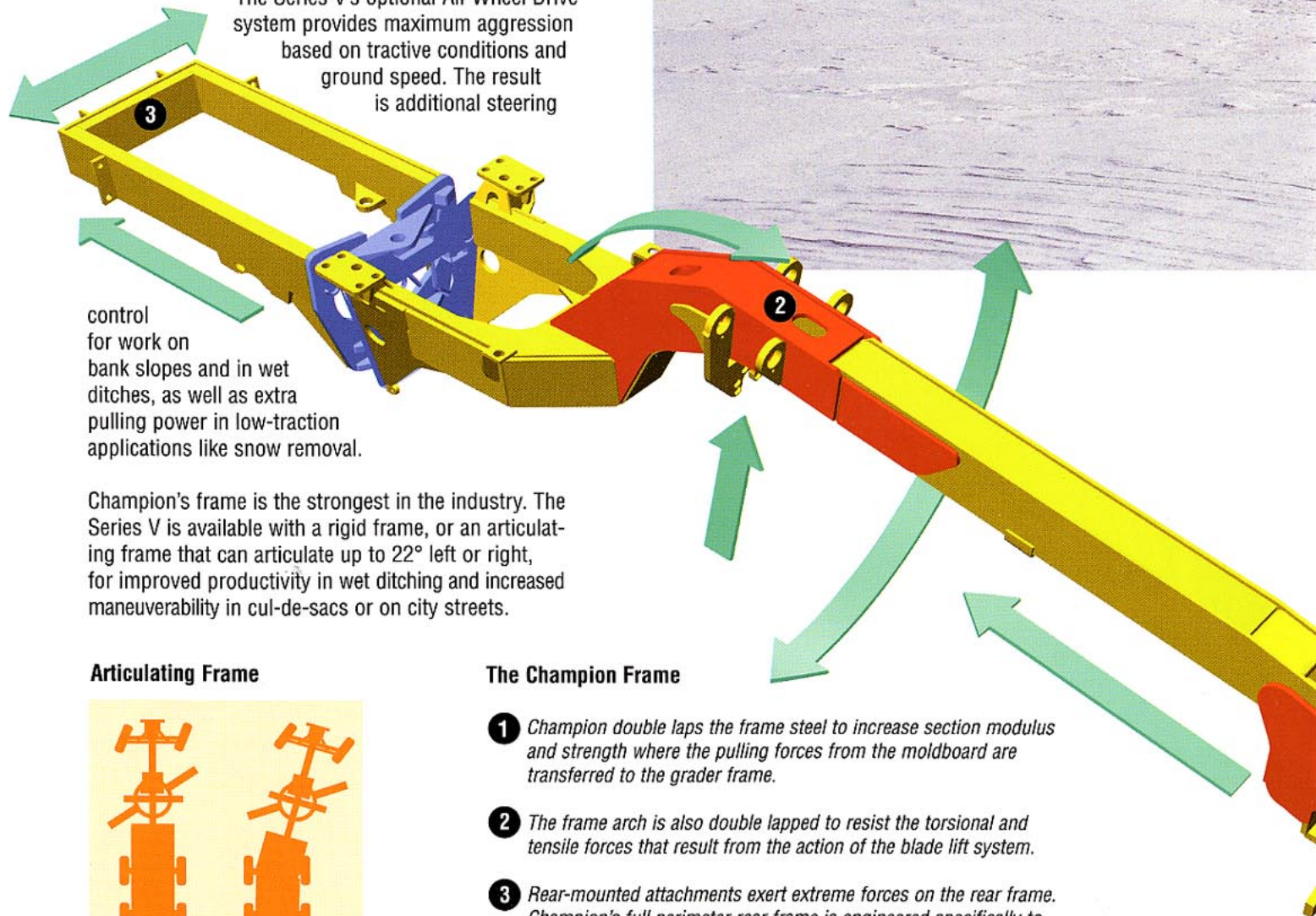


Rigid Frame

Articulating Frame

## The Champion Frame

- 1 Champion double laps the frame steel to increase section modulus and strength where the pulling forces from the moldboard are transferred to the grader frame.
- 2 The frame arch is also double lapped to resist the torsional and tensile forces that result from the action of the blade lift system.
- 3 Rear-mounted attachments exert extreme forces on the rear frame. Champion's full perimeter rear frame is engineered specifically to accommodate these forces.





*Champion attachments are an important component of any grader purchase. In fact, most Champions leave the factory with one of many attachments already mounted – not to mention those that can be added later.*

### Attachments Fit for a Champion



*A-frame with integral hydraulics for front-mounted attachments.*



*Dozer Blade for bulk leveling, back filling and clean up.*



*Push Block bolts to noseplate for pushing other equipment and counterbalances the rear ripper.*



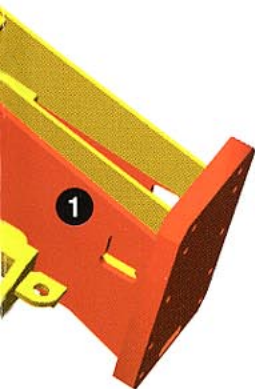
*"V" Plow – especially effective at breaking open snow-clogged roads.*



*Scarifier mounts behind front axle for improved scarifier down pressure.*



*Rear Snow Wings mount directly to the grader frame for full-season snow control.*



*Front Snow Wings mount directly to the grader frame for full-season snow control.*



*Ripper/Scarifier attaches to rear frame, for soil reclamation and preparation.*



*One-way Plow – specifically designed for high-speed snow dispersal.*

## Machine Specifications

Model	Operating Weight lbs (kg)**	Net Power hp (kW) @ rpm	Torque Rise (Net)	Gross Torque ft-lb (N-m)	Configuration / Options
<b>710A</b>	31,510 (14 293)	140 (104) @ 2200	30%	440 (596)	Rigid/Articulated Frame, All Wheel Drive, MBCS
<b>710A VHP</b>	31,510 (14 293)	135 (101) @ 2200 160 (120) @ 2200	35% 50%	422 (572) 590 (800)	Rigid/Articulated Frame, All Wheel Drive, MBCS
<b>720A</b>	34,340 (15 577)	160 (120) @ 2200	44%	560 (758)	Rigid/Articulated Frame, All Wheel Drive, MBCS
<b>720A VHP</b>	34,340 (15 577)	170 (127) @ 2200 195 (145) @ 2200	20% 36%	500 (678) 636 (862)	Rigid/Articulated Frame, All Wheel Drive, MBCS
<b>730A</b>	37,552 (17 034)	195 (145) @ 2200	35%	636 (862)	Rigid/Articulated Frame, All Wheel Drive, MBCS
<b>730A VHP*</b>	37,552 (17 034)	180 (134) @ 2200 200 (149) @ 2200	24% 53%	542 (735) 711 (963)	Rigid/Articulated Frame, All Wheel Drive, MBCS
<b>740A</b>	38,022 (17 247)	210 (157) @ 2100	43%	760 (1031)	Rigid/Articulated Frame, MBCS
<b>740A VHP*</b>	38,022 (17 247)	210 (157) @ 2100 235 (175) @ 2100	43% 45%	760 (1031) 845 (1145)	Rigid/Articulated Frame, MBCS
<b>750A</b>	44,345 (20 115)	210 (157) @ 2100	43%	760 (1031)	Articulated Frame, Heavy Duty MBCS
<b>750A VHP*</b>	44,345 (20 115)	210 (157) @ 2100 235 (175) @ 2100	43% 45%	760 (1031) 845 (1145)	Articulated Frame, Heavy Duty MBCS
<b>780A</b>	47,355 (21 480)	210 (157) @ 2100	43%	760 (1031)	Articulated Frame, Heavy Duty MBCS
<b>780A VHP*</b>	47,355 (21 480)	210 (157) @ 2100 235 (175) @ 2100	43% 45%	760 (1031) 845 (1145)	Articulated Frame, Heavy Duty MBCS

\*New models for Series V

\*\*Typically equipped articulating grader

With every Champion Series V comes your dealer's commitment to provide the best possible customer support.

Complete parts inventories, with 24-hour delivery from Champion to your dealer. Flexible financing options. Factory trained technicians. And technical support from the most knowledgeable people in the grader industry.

Around the world, roadbuilders who demand unbeatable performance are making their mark on the toughest job sites with Champion motor graders.



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Goderich, Ontario  
CANADA

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Specifications subject to change without notice. Some items included in this brochure are optional.