



POWER GUIDE

POWERING A WORKING WORLD - COMMERCIAL GRADE ENGINES

GETTING THE JOB DONE

INTRODUCTION





OUR COMMERCIAL-GRADE VANGUARD™ ENGINES ARE UP TO THE CHALLENGE

Across the range our premium-grade commercial engines share the same pedigree.

Each and every Vanguard[™] engine is built to precise global manufacturing standards to ensure the highest levels of quality, performance and overall durability. Vanguard engines are engineered to power the most demanding commercial applications in the toughest environments.

This Power Guide is designed to give you an overview of all the engines included in our broad commercial line up. To help you determine which engine meets your specific needs our team of Briggs & Stratton Commercial Power representatives are on hand to advise you every step of the way, you can also see the full line up online at

www.vanguardengines.co.uk

MARKET-PROVEN AROUND THE GLOBE

People across the globe rely on Vanguard engines to get the job done. Powering a broad range of applications in multiple market categories, manufacturers, distributors, dealers and their customers depend on our Vanguard engines to take on any commercial challenge.



Vanguard provides one of the broadest power ranges of commercial grade engines for the following industries:

- CONSTRUCTION
- » AGRICULTURE
- MARINE

» RENTAL

- **TELECOMMUNICATIONS**
- » GOLF

- LANDSCAPE/FORESTRY
- » COMMERCIAL TURF
- RACING

» FIRE/RESCUE



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VANGUARD™ SINGLE CYLINDER ENGINES 5.5 - 13.0 GROSS HP*

FEATURES AND BENEFITS





These single cylinder engines are the result of listening to leading equipment manufacturers, contractors and owners of rental stores, who talked about operating power equipment under the most challenging conditions. Take a closer look. Every design innovation and integrated technology is customer-driven, because out there where the work gets done, proven engine performance means business.

Typical applications include:

Construction, concrete equipment, agriculture, generators, blowers, tillers, pumps, pressure washers.

An exclusive to the 5.5 - 10.0HP Vanguard[™] engines is the innovative TransportGuard[™] system, which requires a simple flip of a switch to turn off the ignition and fuel supply. This prevents fuel flowing into the engine crankcase and diluting the oil during transportation, reducing your customers equipment down time and operating costs, ensuring the equipment arrives on site... Ready to work, again and again!







FEATURES	BENEFITS											
Over Head Valve (OHV) Design	Runs cooler and cleaner, delivering more power, longer engine life and improved fuel economy											
TransportGuard™	System Simultaneous fuel/ignition shut-off protects the engine from oil/fuel dilution during transport. Available on 5.5 - 10.0HP											
Commercial-Style Carburetor	Additional fuel passages ensure reliable starting and smooth running operation at a wide range of loads											
Dura-Bore™ Cast Iron Cylinder Sleeve	Withstands wear and abuse, while providing improved oil control											
Large, Efficient Sediment Filter	Sediment is collected in a large, clear bowl and is drained using a convenient tool-free valve											
Full Skirt Metal Rewind	Optimized openings for maximum air flow											
Direct Mount Fuel Tank	Reduces emissions and is mounted directly to the engine block to enhance durability											
Acoustically Designed Muffler System	Improved tonal quality and lowered noise levels allow operator to work at safe levels for longer time											
Engine Warranty	3-year commercial engine warranty for all applications**											
LUBRICATION	BENEFITS											
Splash Lubrication System	Delivers superior lubrication to the engine to ensure long life and reliability											
Racing Designed Connecting Rod	Efficiently improves oil flow throughout the engine; assures maximum protection of internal components											
Oil Drain	Convenient drain locations for trouble-free maintenance											
MECHANICAL	BENEFITS											
High Capacity Commercial Air Cleaner	Ensures the engine is protected against air-born debris at all times in the most demanding conditions											
Magnetron® Electronic Ignition	Quick, dependable starts with no maintenance required											
Larger Ignition Coil	Assures fast, easy starts											
Racing Head Gasket	Increases stability and torque											
Forged Crankshaft	Incorporates heat-treated ball bearings to minimize friction and heat build-up											
Heavy-Duty Ball Bearing	Easily replaceable, extended service life											
Dual-Clean™ Air Cleaner	Pleated paper filter with foam pre-cleaner ensures maximum protection for extended engine life											

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 $^{^{\}star}$ $\,$ All power levels are stated gross HP at 3,600 RPM per SAE J1940 as rated by Briggs & Stratton.

^{**} See www.vanguardengines.com/service-support/warranty for warranty details

VANGUARD™ HORIZONTAL'V-TWIN ENGINES 14.0 - 23.0 GROSS HP*

FEATURES AND BENEFITS





The compact Vanguard™ V-Twin engine range is application engineered to power the most demanding commercial applications in the most challenging environments. Featuring a number of advanced technologies and integrated components to deliver more usable power in a smaller space.

Typical applications include:

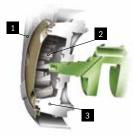
Concrete Saws, Trowels, Power Packs, Telecommunications and Generators.

Cooler / Cleaner Technology

Featuring the advanced cooler cleaner engine technology. The commercial grade V-Twin engines operate with lower temperatures and improved air flow management.

Combines improved debris management together with better airflow for increased engine cooling, ensuring less maintenance and equipment down time.

The laminated poly-core blower housing further reduces engine noise by absorbing internal mechanical noise.



- 1. Perforated steel rotating screen
- 2. Large phase modulated fan
- 3. Deeper laminated poly-core blower housing



FEATURES	BENEFITS											
V-Twin OHV Technology	Offers lower vibration, reduced emissions, longer valve life, better fuel economy and more power per cc											
Cooler Cleaner Technology	Efficiently reduces engine and oil temperatures, while effectively managing airflow											
Dura-Bore™ Cast Iron Cylinder Sleeve	Assures long engine life and improved oil control											
Compact Envelope	Small engine size offers use in a variety of applications											
Engine Warranty	3-year commercial engine warranty**											
LUBRICATION	BENEFITS											
Full Pressure Lubrication with Spin-On Oil Filter	Cleans oil and protects engine components to ensure max. lubrication and long life											
Centrally Located Oil Pump and Pickup	Faster priming and allows for a higher angle of operation											
Oil Cooler	Reduces oil temperature for improved lubrication and engine life											
MECHANICAL	BENEFITS											
High Efficiency Head Design	Angled ports optimize tumble and mixture preparation for improved efficiency, smoother idle, lower emissions and more power											
Lightweight Piston and Ring Package	Lowers noise, vibration, oil consumption, emissions and wear											
Dynamically Balanced Crankshaft	Minimizes engine noise and vibration											
Low Profile Dual-Clean [™] Air Cleaner	Industrial pleated paper with foam pre-cleaner for extended engine life											
Mechanical Compression Release	Smooth, easy starting											
Magnetron® Electronic Ignition	Quick, dependable starts with no maintenance required											
SOUND	BENEFITS											
Poly-Core Blower Housing, Phase Modulated Flywheel Fan and Lo-Tone™ Muffler	Lowers noise level and improves sound quality											



 ^{*} All power levels are stated gross HP at 3,600 RPM per SAE J1940 as rated by Briggs & Strattor

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^{**} See www.vanguardengines.com/service-support/warranty for warranty details

VANGUARD™ HORIZONTAL SHAFT V-TWIN ENGINES 25.0 - 37.0 GROSS HP

FEATURES AND BENEFITS





Vanguard™ is the innovator and proven leader for large block V-Twin engine power, performance and reliability. For the most challenging applications - where downtime is not an option - this large block V-Twin engine line up has been expertly engineered to deliver the dependability hardworking people need to get a lot more done throughout the day.

Typical applications include:

Concrete Trowels, Generators, Chippers and Shredders

EFI is available on 33.0, 35.0 & 37.0 HP engines.







SPEED SENSING

Directs the right amount of fuel precisely when it's needed.

EXHAUST SENSING

For more accurate fuel delivery and maximum efficiency.

FUEL DELIVERY

Pressurises the fuel before it reaches the injectors.



FEATURES	BENEFITS											
V-Twin OHV Technology	Offers lower vibration, reduced emissions, longer valve life, better fuel economy and more power per cc											
Advanced Debris Management	Keeps engine clean and cool for enhanced durability and performance											
Electronic Fuel Injection (EFI) on selected models	Optimized fuel injection and spark timing for added power and fuel economy											
Dura-Bore™ Cast Iron Cylinder Sleeve	Withstands wear and abuse 3-year commercial engine warranty**											
Engine Warranty												
LUBRICATION	BENEFITS											
Full Pressure Lubrication with Spin-On Oil Filter	Cleans oil and protects engine components to ensure max. lubrication and long life											
Centrally Located Oil Pump and Pickup	Faster priming and allows for a higher angle of operation											
Oil Cooler	Reduces oil temperature for improved lubrication and engine life											
MECHANICAL	BENEFITS											
Heavy-Duty Cylinder and Sump	Engine block designed to provide superior durability											
High Efficiency Head Design	Angled ports for optimal combustion efficiency, smoother idle, lower emissions and increased power											
Lightweight Piston and Ring Package	Lowers noise, vibration, oil consumption, emissions and wear											
Dynamically Balanced Crankshaft	Minimizes engine noise and vibration											
5" Cyclonic Air Cleaner	Provides maximum engine protection, especially under dirty and dusty conditions											
Magnetron® Electronic Ignition	Quick, dependable starts with no maintenance required											
SOUND	BENEFITS											
Engineered Resin Blower Housing, Phase Modulated Flywheel Fan and Large Volume Super Lo-Tone™ Muffler	Lowers noise level and improves sound quality											
EFI MODELS ONLY	BENEFITS											
Oxygen Sensor - Closed-Loop System	Enables up to 25% fuel savings†											
High Pressure Fuel Pump Module	Alcohol & stale fuel resistance											
Electronic Control Module (ECU)	Allows for altitude compensation, optimized starting and increased power											
Service Solution	Suite of support and diagnostic tools allow for minimizing potential downtime											

- * All power levels are stated gross HP at 3,600 RPM per SAE J1940 as rated by Briggs & Stratton.
- ** See www.vanguardengines.com/service-support/warranty for warranty details.
- † Fuel savings may vary based on operating conditions

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VANGUARD™ VERTICAL SHAFT V-TWIN ENGINES 16.0 - 23.0 GROSS HP

FEATURES AND BENEFITS





The compact Vanguard™ V-Twin engine range is application engineered to power the most demanding commercial applications in the most challenging environments. Featuring a number of advanced technologies and integrated components to deliver more usable power in a smaller space.

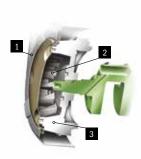
Typical applications include: Commercial Turf Mowers, Zero-Turn, Golf Equipment

Cooler / Cleaner Technology

Featuring the advanced cooler cleaner engine technology. The commercial grade V-Twin engines operate with lower temperatures and improved air flow management.

Combines improved debris management together with better airflow for increased engine cooling, ensuring less maintenance and equipment down time.

The laminated poly-core blower housing further reduces engine noise by absorbing internal mechanical noise.



- 1. Perforated steel rotating screen
- 2. Large phase modulated fan
- 3. Deeper laminated poly-core blower housing



FEATURES	BENEFITS											
V-Twin OHV Technology	Offers lower vibration, reduced emissions, longer valve life, better fuel economy and more power per cc											
Cooler Cleaner Technology	Efficiently reduces engine and oil temperatures, while effectively managing airflow											
Dura-Bore™ Cast Iron Cylinder Sleeve	Assures long engine life and improved oil control											
Compact Envelope	Small engine size offers use in a variety of applications											
Engine Warranty	3-year commercial engine warranty**											
LUBRICATION	BENEFITS											
Full Pressure Lubrication with Spin-On Oil Filter	Cleans oil and protects engine components to ensure max. lubrication and long life											
Centrally Located Oil Pump and Pickup	Faster priming and allows for a higher angle of operation											
Oil Cooler	Reduces oil temperature for improved lubrication and engine life											
MECHANICAL	BENEFITS											
High Efficiency Head Design	Angled ports optimize tumble and mixture preparation for improved efficiency, smoother idle, lower emissions and more power											
Lightweight Piston and Ring Package	Lowers noise, vibration, oil consumption, emissions and wear											
Dynamically Balanced Crankshaft	Minimizes engine noise and vibration											
Low Profile Dual-Clean [™] Air Cleaner	Industrial pleated paper with foam pre-cleaner for extended engine life											
Mechanical Compression Release	Smooth, easy starting											
Magnetron® Electronic Ignition	Quick, dependable starts with no maintenance required											
SOUND	BENEFITS											
Poly-Core Blower Housing, Phase Modulated Flywheel Fan and Lo-Tone™ Muffler	Lowers noise level and improves sound quality											



- * All power levels are stated gross HP at 3,600 RPM per SAE J1940 as rated by Briggs & Stratton
- ** See www.vanguardengines.com/service-support/warranty for warranty details

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VANGUARD™ VERTICAL SHAFT V-TWIN ENGINES 24.0 - 28.0 GROSS HP

FEATURES AND BENEFITS





At 810cc, these commercial-grade engines establish a new standard for commercial turf applications. For turf professionals, that means higher performing, more efficient, more powerful and, ultimately, more profitable commercial cutting.

With the addition of optional closed-loop EFI, these engines are redefining commercial mower efficiency even further. Combined with 810cc performance, this automotive-based system can elevate your fuel savings by up to 25% versus carbureted engines.

Typical applications include:

Commercial Mowers.







SPEED SENSING

Directs the right amount of fuel precisely when it's needed.

EXHAUST SENSING

For more accurate fuel delivery and maximum efficiency.

FUEL DELIVERY

Pressurises the fuel before it reaches the injectors.



FEATURES	BENEFITS												
V-Twin OHV Technology	Offers lower vibration, reduced emissions, longer valve life, better fuel economy and more power per cc												
Advanced Debris Management	Keeps engine clean and cool for enhanced durability and performance												
Electronic Fuel Injection (EFI) on selected models	Optimized fuel injection and spark timing for added power and fuel economy												
Dura-Bore™ Cast Iron Cylinder Sleeve	Vithstands wear and abuse												
Engine Warranty	3-year commercial engine warranty**												
LUBRICATION	BENEFITS												
Full Pressure Lubrication with Spin-On Oil Filter	Cleans oil and protects engine components to ensure max. lubrication and long life												
MECHANICAL	BENEFITS												
Heavy-Duty Cylinder and Sump	Engine block designed to provide superior durability												
Durable Head and Valve Train Design	Valve and seat materials uniquely matched to run under the most severe conditions												
Automotive Grade Pistons with Forged Connection Rods	Lowers noise, vibration, oil consumption, emissions and wear												
Forged crankshaft	Maximized strength, while minimizing vibration through dynamic balancing												
Fire Ring Head Gaskets	Motorsports design maintains seal of higher combustion pressures												
5" Cyclonic Air Cleaner	Provides maximum engine protection, especially under dirty and dusty conditions												
Innovative Debris Chopper Fan	Excellent debris management and up to 30-degree cooler engine temperatures												
Industrial Grade Solenoid Starter	Quick, reliable starting at all operating temperatures												
Mechanical Compression Release	Smooth, easy starting												
Cooling Fin Inspection Panels	Enables quick debris inspection and cleaning												
EFI MODELS ONLY	BENEFITS												
Oxygen Sensor - Closed-Loop System	Enables up to 25% fuel savings [†]												
High Pressure Fuel Pump Module	Alcohol & stale fuel resistance												
Electronic Control Module (ECU)	Allows for altitude compensation, optimized starting and increased power												
Service Solution	Suite of support and diagnostic tools allow for minimizing potential downtime												

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 ^{*} All power levels are stated gross HP at 3,600 RPM per SAE J1940 as rated by Briggs & Stratton

^{**} See www.vanguardengines.com/service-support/warranty for warranty details.

[†] Fuel savings may vary based on operating conditions

GETTING THE JOB DONE

COMMERCIAL GRADE ENGINE RANGE





ENGINES ENGINES & ENGINES

Vanguard[™] engines are sold all over the world, used on a variety of commercial applications in different demanding environments.

Many applications require different feature sets to deliver optimal power and performance. Vanguard engines can be specified in multiple configurations to deliver the best power solution for the job at hand.

Below factory options can be specified upon request:

SINGLE-CYLINDER OPTIONS: 5.5 - 13.0 GROSS HP*

- » CARB Compliant
- » High/Low-Mount Mufflers (QGS)
- » Alternators (2 20 Amp)
- » Tapered Crankshaft
- » Threaded Crankshaft
- ½" Fuel Line & Fuel Filter
- » Rocker Stop Switch
- » Tankless/Mufflerless
- » Oil Sensor

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SMALL BLOCK V-TWIN OPTIONS: 14.0 - 23.0 GROSS HP*

- » Solenoid Shift, Heavy Duty Inertia Drive & Rewind Rope Starters
- » Key Switch (H/S Only)
- » Alternators (9, 16, 7-16, 20 & 20-50 Amp)
- » Oil Cooler
- » Oil Pressure Switch
- Straight Keyed Cranks (1" & 1-1/8" Diameters)
- » Flywheel Stub Shaft
- » Integrated Fuel Tank
- » Cyclonic Air Cleaners
- » High, Low & Side Mount Mufflers
- » CARB Compliant EVAP Purge Ports
- CARB Compliant 6.95 gt. Fuel Tank (H/S Only)



FUEL SAVINGS' ELECTRONIC FUEL INJECTION

Our Vanguard V-Twin EFI engines feature an automotive-based, closed-loop EFI system that delivers easier starting and improved performance, with fuel savings of up to 25%.

810cc V-TWIN OPTIONS: 24.0 - 28.0 GROSS HP*

- » Alternator (16 & 20 Amp)
- » Flexible Oil Drain Extension
- » Oil Pressure Switch
- Straight Keyed Cranks (1" & 1-1/8" Diameters)
- Exhaust Mounting Studs
- CARB Compliant EVAP Purge Ports
- » Low Mount Muffler (EFI only)

LARGE BLOCK V-TWIN OPTIONS: 25.0 - 37.0 GROSS HP*

- » Alternators (20 & 20-50 Amp)
- » Oil Pressure Switch
- Straight Keyed & Tapered Cranks (1-1/8" & 1-7/16" Diameters)
- » Straight Key Crankshaft (1.125" /1.437")
- » Direct Throttle Control (EFI only)
- » Flywheel Stub Shaft
- » Low Profile & Cyclonic Air Cleaners
- EPA Compliant EVAP Purge Ports
- » High Speed 4750 RPM Package
- » Low Idle Speed Control (EFI only)
- Engine Mounted Choke and Throttle Control
- » Tach/Hour Meter with Check Engine Light (EFI only)



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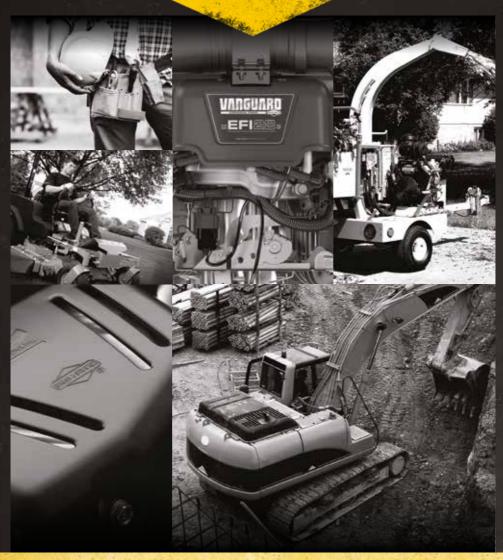
VARGUARD



				The state of the s							JEL		AIR CL	SIARTING IGNITION			LUBRICATION						
		POWER LEVEL Gross HP*	MODEL NUMBER	DISPLACEMENT (cc)	BORE & STROKE (mm)	FUEL TANK (I)	OIL CAPACITY (I)	DRY WEIGHT (Kg)	VALVE OHV	CYLINDER Cast Iron Sleeve	GOVERNOR Mechanical Governor	Carburettor	Electronic Fuel Injection	Paper Air Cleaner (Flat) With Foam Pre-Cleaner (Dual Element)	Paper Air Cleaner (Oval) With Foam Pre-Cleaner (Dual Element)	Automotive Style Air Cleaner With Foam Pre-Cleaner (Dual Element)	Centrifugal Multi Stage Cyclonic Air Cleaner	Manual Choke	Magnetron Ignition	ECM Fired Transistor	Splash Lubrication	Full Pressure Lubrication With Oil Filter	
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AIR CLEANER

LUBRICATION







COMMERCIAL POWER

BRIGGS & STRATTON AG

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