

# VANGUARD®



**2025 Vanguard®  
Power Guide —  
Australia, New Zealand  
and Southeast Asia**





Valued Customer,

Briggs & Stratton is pleased to introduce our robust 2025 line up of best-in-class Vanguard power solutions. We are committed to providing end-to-end power solutions that will exceed your expectations and effortlessly power your toughest equipment, whether with our engines, batteries, or both.

Our 116 years of expertise in providing high quality innovative power solutions has set the foundation for what we are offering today.

We continue to invest heavily in the growth of our Vanguard Commercial Engine business and remain committed to providing you with new engine innovations and cutting-edge technologies for internal combustion engines for many years to come. Our expanded 2025 line up offers the rugged reliability and exceptional performance you have come to expect from these powerhouse engines.

Our dynamic line up of fully customisable Vanguard™ Commercial Lithium-Ion batteries has allowed us to expand into new markets and provide power to various new applications. Our new line includes advanced battery chargers, motors, and motor controllers, ensuring you have all the components you need for a complete power solution.

Our Vanguard range backed by world-class training and unparalleled support allows us to offer our customers an extensive range of power solutions across multiple power sources.

Our customers are the motivation behind everything we do. The team at Briggs & Stratton takes great pride in being your trusted partner in power.

Thank you for your continued loyalty.

A stylized, handwritten signature in dark ink, appearing to read 'C. Smith'.

Managing Director -  
Australasia & Southeast Asia



# POWER EXPERTISE



**GLOBAL LEADER  
IN APPLYING POWER  
FOR OVER 110 YEARS.**

# Commercial Battery Pack Lineup.\*

## Fi Series Fixed Battery Packs Aluminum Diecast Enclosure



Fi7.0 (tall)  
7.0 kWh<sup>1</sup>



Fi7.0 (long)  
7.0 kWh<sup>1</sup>



Fi5.0  
5.0 kWh<sup>1</sup>



Fi3.5  
48V 3.5 kWh<sup>1</sup>



Fi3.5  
24V 3.5 kWh<sup>1</sup>



Fi1.5  
1.5 kWh<sup>1</sup>

## Si Series Swappable Battery Packs



Si1.5  
1.5 kWh<sup>1</sup>

\* Visualization of our Vanguard commercial battery packs only.  
independent of nominal voltage and features.

<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.



# Commercial Engine Lineup.\*

## Vertical Shaft V-Twin Engines



EFI 28.0 Gross HP



26.0 Gross HP



23.0 Gross HP



18.0 Gross HP



16.0 Gross HP

## Horizontal Shaft V-Twin Engines



EFI/ETC  
40.0 Gross HP



33.0 - 35.0 Gross HP



EFI/ETC  
23.0 Gross HP



23.0 Gross HP



18.0 Gross HP



16.0 Gross HP

## Horizontal Shaft Single-Cylinder Engines



Vanguard® 400 EFI/ETC  
14.0 Gross HP



Vanguard 400  
14.0 Gross HP



Vanguard 300  
10.0 Gross HP



Vanguard 200  
6.5 Gross HP



Vanguard 160  
5.0 Gross HP

\* Visualization of our Vanguard engines only, independent of gross power kW and features.  
The icons visualize the maximum possible features.

<sup>1</sup> Engines are stated in gross kilowatt at 3 600 rpm per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> Extra year limited warranty after engine registration. Applies only to Vanguard 160, 200, 300, 400 and 400 EFI/ETC after engine registration. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

<sup>3</sup> Available on select engines.

## Vanguard Commercial Battery Packs

Page		Model Number
13	Vanguard 48V 1.5kWh <sup>1</sup> Swappable Battery Pack - Si1.5	80105739
14	Vanguard 48V 1.5kWh <sup>1</sup> Fixed Battery Pack - Fi1.5	80113908
15	Vanguard 24V 3.5kWh <sup>1</sup> Fixed Battery Pack - Fi3.5	80127410
16	Vanguard 48V 3.5kWh <sup>1</sup> Fixed Battery Pack - Fi3.5	80110583
17	Vanguard 48V 5.0kWh <sup>1</sup> Fixed Battery Pack - Fi5.0	80112254
18	Vanguard 48V 7.0kWh <sup>1</sup> Fixed Battery Pack - Fi7.0 (long)	80104774
19	Vanguard 48V 7.0kWh <sup>1</sup> Fixed Battery Pack - Fi7.0 (tall)	80112214

## Vanguard Battery Chargers

21	<b>NEW</b> Si1.5 Charging Dock 1425W	80126934
22	1050W Charger	80086414
23	1425W Charger	80107247
24	<b>NEW</b> 3000W Charger	80114089

## Vanguard Motors

26	<b>NEW</b> MVG1500	TBC
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## Vanguard Motor Controllers

28	<b>NEW</b> MC2000	80094680
29	<b>NEW</b> MC4000	80135006
30	<b>NEW</b> MC8000	80135007

<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

## Vanguard Horizontal Shaft Single-Cylinder Engines

Page		Model Number
41	Vanguard 160 - 5.0 Gross HP Single-cylinder, 4-stroke, air-cooled, OHV	10V3
42	Vanguard 200 - 6.5 Gross HP Single-cylinder, 4-stroke, air-cooled, OHV	12V3
43	Vanguard 300 - 10.0 Gross HP Single-cylinder, 4-stroke, air-cooled, OHV	19V3
44	Vanguard 400 - 14.0 Gross HP Single-cylinder, 4-stroke, air-cooled, OHV	25V3
45	Vanguard 400 EFI / ETC - 14.0 Gross HP Single-cylinder, 4-stroke, air-cooled, OHV with EFI/ETC	25E3

## Vanguard Horizontal Shaft V-Twin Engines

47	Vanguard 16.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	3054
48	Vanguard 18.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	3564
49	Vanguard 23.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	3864
50	Vanguard 33.0 - 35.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	6114, 6134
52	Vanguard EFI / ETC 23.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV with EFI/ETC	38E3
53	Vanguard EFI / ETC 33.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV with EFI/ETC	61A1
54	Vanguard EFI / ETC 37.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV with EFI/ETC	61A2
55	Vanguard EFI / ETC 40.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV with EFI/ETC	61G2

## Vanguard Vertical Shaft V-Twin Engines

57	Vanguard 16.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	3057
58	Vanguard 18.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	3567
59	Vanguard 23.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	3867
60	Vanguard 26.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV	49R9
61	Vanguard EFI 28.0 Gross HP V-Twin, 4-stroke, air-cooled, OHV with EFI	49E8

<sup>1</sup> All Vanguard engines are stated in gross kilowatt at 3 600 rpm per SAE J1940 as rated by Briggs & Stratton.



# Vanguard Battery Systems.

**Reliable Power. Easy Integration.**

Industry-leading commercial battery solutions for a new generation of commercial equipment.

# Electrification. Integration. Standardisation.

Vanguard Battery Systems offer a fully integrated solution. This includes Lithium-Ion battery packs with a built-in BMS, motors, motor controllers, and chargers.

Vanguard Battery Systems act as a comprehensive one-stop shop, significantly reducing the workload for OEMs.



**BATTERY**



**BATTERY  
MANAGEMENT  
SYSTEM (BMS)**



**MOTOR**



**MOTOR  
CONTROLLER**



**CHARGER**

# Si Series

## Taking lithium-ion battery technology to a whole new level

### Swappable Battery Packs

Ability to swap out between applications on the job site to reduce downtime. Multiple mounting configurations.

### Efficient

Multiple batteries can be combined in parallel for additional capacity.

### Increased Uptime

Up to 1000-cycle life to 80% initial capacity.

### Operational Confidence

Integrated Battery Management System.

### Secure Hold On Battery

Straightforward to integrate. Minimal movement, if any, to prevent wear on electrical connections.

### Flexibility

Single CANbus J1939 communication protocol allows OEMs to communicate with the battery's J1939 (automotive standard) CANbus.

### Easy Troubleshooting

CANbus diagnostics opportunities.





# Fi Series

## Leader of the pack in power, performance and safety

### **Fixed Battery Packs**

Designed to integrate seamlessly into any equipment.

### **Expandable**

Packs can be combined in parallel for additional capacity.

### **Increased Uptime**

Up to 2000-cycle life.<sup>1</sup>

### **Durable**

Multiple protective features tested to withstand harsh conditions, including extreme temperatures, impact, vibration, moisture and dirt.

### **Unique CMA Design**

Cell Module Assembly design for efficient power and safety.

### **Battery Management System**

Monitors, controls temperatures and voltages of each cell bank to ensure safe operations and protects the battery to prevent misuse and abuse, safeguarding your investment.



<sup>1</sup> Based on cell life cycle testing using a 1A discharge and 0.5C charge.

POWER NEEDS ARE MET.

**EVERYWHERE  
AND ANYTIME.**

- > **Increase uptime** by swapping out between applications on the job site.
- > **Enhance efficiency** by combining batteries in parallel.
- > Operating **when and where** others can't.
- > Leading the way to a **greener future.**

**The Swappable  
Battery Solution.**





<b>Battery Type</b>	Swappable battery pack - Si1.5 Lithium-ion integrated Battery Management System
<b>Model Number</b>	80105739
<b>Nominal Voltage (V)</b>	51.4
<b>Top Voltage (V)</b>	58.8
<b>Cut-Off Voltage (V)</b>	35.0
<b>Nominal Capacity / Energy (Ah / kWh)</b>	28.4 / 1.5
<b>Weight (kg)</b>	11.8
<b>Durability (Cycles) at 80% Capacity Retention<sup>5</sup></b>	Up to 1000
<b>Charge Time (Hours)<sup>6</sup> Charger</b>	1.25 1425W
<b>Dimensions L x W x H (mm)</b>	258 x 136 x 425
<b>Features</b>	Battery Management System, single CANbus J1939 communication, plug-in ready charging system, user-swappable between applications, aluminum diecast enclosure



**1.5kWh BATTERY**



**BATTERY MANAGEMENT SYSTEM (BMS)**



**CHARGER**

<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details, 3-year limited warranty applies to battery and charger.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.

<sup>5</sup> Based on cell life cycle testing using a 10A discharge and 1C charge.

<sup>6</sup> Based on preliminary testing, may vary based on conditions.

LITHIUM-ION BATTERY PACKS  
**VANGUARD 48V 1.5kWh<sup>1</sup>**

LITHIUM-ION BATTERY PACKS



Battery Type	Fixed battery pack - Fi1,5 Lithium-ion integrated Battery Management System
Model Number	80113908
Nominal Voltage (V)	51.4
Top Voltage (V)	58.8
Cut-Off Voltage (V)	35.0
Nominal Capacity / Energy (Ah / kWh)	28.4 / 1.5
Weight (kg)	11.6
Durability (Cycles) at 80% Capacity Retention <sup>5</sup>	Up to 1000
Charge Time (Hours) <sup>6</sup> Charger	1.25 1425W
Dimensions L x W x H (mm)	256 x 131 x 371
Features	Battery Management System, single CANbus J1939 communication, plug-in ready charging system, user-swappable between applications, aluminum diecast enclosure



**1.5kWh BATTERY**



**BATTERY MANAGEMENT SYSTEM (BMS)**



**CHARGER**

<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details, 3-year limited warranty applies to battery and charger.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.

<sup>5</sup> Based on cell life cycle testing using a 10A discharge and 1C charge.

<sup>6</sup> Based on preliminary testing, may vary based on conditions.



<b>Battery Type</b>	Fixed battery pack - Fi3,5 Lithium-ion integrated Battery Management System		
<b>Model Number</b>	80127410		
<b>Nominal Voltage (V)</b>	51.6		
<b>Top Voltage (V)</b>	58.8		
<b>Cut-Off Voltage (V)</b>	17.5		
<b>Nominal Capacity / Energy (Ah / kWh)</b>	135.9 / 3.5		
<b>Weight (kg)</b>	26.3		
<b>Durability (Cycles) at 80% Capacity Retention<sup>5</sup></b>	Up to 2000		
<b>Charge Time (Hours)<sup>6</sup></b>	6	5	4
<b>Charger</b>	1050W	1425W	3000W
<b>Dimensions L x W x H (mm)</b>	482 x 272 x 266		
<b>Features</b>	<p>Battery Management System, dual CANbus communication, plug-in ready charging system, aluminum diecast enclosure, ingress protection rating IP56 and pressure washer</p> <p>Up to 10 batteries can be combined in parallel for additional capacity.</p>		



**3.5kWh BATTERY**



**BATTERY MANAGEMENT SYSTEM (BMS)**



**CHARGER**

<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details, 3-year limited warranty applies to battery and charger.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.

<sup>5</sup> Based on cell life cycle testing using a 1A discharge and 0.5C charge.

<sup>6</sup> Based on preliminary testing, may vary based on conditions.

LITHIUM-ION BATTERY PACKS  
**VANGUARD 48V 3.5kWh<sup>1</sup>**

LITHIUM-ION BATTERY PACKS



Battery Type	Fixed battery pack - Fi3,5 Lithium-ion integrated Battery Management System		
Model Number	80110583		
Nominal Voltage (V)	51.6		
Top Voltage (V)	58.8		
Cut-Off Voltage (V)	35.0		
Nominal Capacity / Energy (Ah / kWh)	67.5 / 3.5		
Weight (kg)	26.3		
Durability (Cycles) at 80% Capacity Retention <sup>5</sup>	Up to 2000		
Charge Time (Hours) <sup>6</sup> Charger	4 1050W	3 1425W	2 3000W
Dimensions L x W x H (mm)	482 x 272 x 266		
Features	<p>Battery Management System, dual CANbus communication, plug-in ready charging system, aluminum diecast enclosure, ingress protection rating IP56 and pressure washer</p> <p>Up to 10 batteries can be combined in parallel for additional capacity.</p>		



**3.5kWh BATTERY**



**BATTERY MANAGEMENT  
SYSTEM (BMS)**



**CHARGER**

<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details, 3-year limited warranty applies to battery and charger.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.

<sup>5</sup> Based on cell life cycle testing using a 1A discharge and 0.5C charge.

<sup>6</sup> Based on preliminary testing, may vary based on conditions.





<b>Battery Type</b>	Fixed battery pack - Fi5.0 Lithium-ion integrated Battery Management System	
<b>Model Number</b>	80112254	
<b>Nominal Voltage (V)</b>	51.6	
<b>Top Voltage (V)</b>	58.8	
<b>Cut-Off Voltage (V)</b>	35.0	
<b>Nominal Capacity / Energy (Ah / kWh)</b>	98.7 / 5.1	
<b>Weight (kg)</b>	42.6	
<b>Durability (Cycles) at 80% Capacity Retention<sup>5</sup></b>	Up to 2000	
<b>Charge Time (Hours)<sup>6</sup></b>	5.5	3
<b>Charger</b>	1050W	3000W
<b>Dimensions L x W x H (mm)</b>	597 x 266 x 362	
<b>Features</b>	<p>Battery Management System, dual CANbus communication, plug-in ready charging system, aluminum diecast enclosure, ingress protection rating IP56 and pressure washer</p> <p>Up to 10 batteries can be combined in parallel for additional capacity.</p>	



<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details, 3-year limited warranty applies to battery and charger.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.

<sup>5</sup> Based on cell life cycle testing using a 1A discharge and 0.5C charge.

<sup>6</sup> Based on preliminary testing, may vary based on conditions.

LITHIUM-ION BATTERY PACKS  
**VANGUARD 48V 7.0kWh<sup>1</sup>**

LITHIUM-ION BATTERY PACKS



Battery Type	Fixed battery pack - Fi7.0 long Lithium-ion integrated Battery Management System	
Model Number	80104774	
Nominal Voltage (V)	51.6	
Top Voltage (V)	58.8	
Cut-Off Voltage (V)	35.0	
Nominal Capacity / Energy (Ah / kWh)	135.9 / 7.0	
Weight (kg)	52.6	
Durability (Cycles) at 80% Capacity Retention <sup>5</sup>	Up to 2000	
Charge Time (Hours) <sup>6</sup> Charger	8 1050W	4 3000W
Dimensions L x W x H (mm)	876 x 264 x 284	
Features	Battery Management System, dual CANbus communication, plug-in ready charging system, aluminum diecast enclosure ingress protection rating IP66 and pressure washer  Up to 10 batteries can be combined in parallel for additional capacity.	



<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.  
<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details. 3-year limited warranty applies to battery and charger.  
<sup>3</sup> Zero emissions apply only to the battery pack during operation.  
<sup>4</sup> The battery pack is silent, however the application itself may make noise.  
<sup>5</sup> Based on cell life cycle testing using a 1A discharge and 0.5C charge.  
<sup>6</sup> Based on preliminary testing, may vary based on conditions.



<b>Battery Type</b>	Fixed battery pack - Fi7.0 tall Lithium-ion integrated Battery Management System	
<b>Model Number</b>	80112214	
<b>Nominal Voltage (V)</b>	51.6	
<b>Top Voltage (V)</b>	58.8	
<b>Cut-Off Voltage (V)</b>	35.0	
<b>Nominal Capacity / Energy (Ah / kWh)</b>	135.9 / 7.0	
<b>Weight (kg)</b>	49.9	
<b>Durability (Cycles) at 80% Capacity Retention<sup>5</sup></b>	Up to 2000	
<b>Charge Time (Hours)<sup>6</sup> Charger</b>	8 1050W	4 3000W
<b>Dimensions L x W x H (mm)</b>	597 x 266 x 362	
<b>Features</b>	<p>Battery Management System, dual CANbus communication, plug-in ready charging system, aluminum diecast enclosure ingress protection rating IP56 and pressure washer</p> <p>Up to 10 batteries can be combined in parallel for additional capacity.</p>	



<sup>1</sup> Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details, 3-year limited warranty applies to battery and charger.

<sup>3</sup> Zero emissions apply only to the battery pack during operation.

<sup>4</sup> The battery pack is silent, however the application itself may make noise.

<sup>5</sup> Based on cell life cycle testing using a 1A discharge and 0.5C charge.

<sup>6</sup> Based on preliminary testing, may vary based on conditions.

# Lithium-Ion Battery Chargers

Vanguard offers a variety of chargers that pair with Vanguard Battery Packs.

Plug into standard wall outlets.

Can be combined in parallel for reduced charging times.





<b>Charger Type</b>	Si Series 1425W single-bay-mounted charger with Bluetooth® monitoring
<b>Model Number</b>	80126934
<b>Charging Rate (A / kW)</b>	30/ 1,425
<b>Rated Voltage (V)</b>	100 - 240 (AC)
<b>Operating Voltage (V)</b>	85 - 265 (AC)
<b>Dimensions L x W x H (mm)</b>	21 x 353.7 x 263.4
<b>Features</b>	Works seamlessly with battery pack, Bluetooth capabilities for monitoring AC input and DC output, enclosure rating IP44 / NEMA4



## VANGUARD LITHIUM APPLICATION



- > The Vanguard Lithium application interfaces wirelessly with Vanguard battery chargers over Bluetooth.
- > Display diagnostic information related to battery charges.
- > Allows users to configure battery charger.
- > Cloud connectivity.

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

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Charger Type	Fi Series 1050W single-phase charging system with Bluetooth® monitoring
Model Number	80086414
Charging Rate (A / kW)	25 / 1.05
Rated Voltage (V)	100 - 240 (AC)
Operating Voltage (V)	85 - 265 (AC)
Dimensions L x W x H (mm)	336 x 182 x 113
Features	<p>Works seamlessly with battery pack, Bluetooth capabilities for monitoring AC input and DC output, enclosure rating IP66 / NEMA4</p> <p>Can be connected in parallel (2) to reduce the charging time.</p>



**VANGUARD  
LITHIUM APPLICATION**



- > The Vanguard Lithium application interfaces wirelessly with Vanguard battery chargers over Bluetooth.
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- > Allows users to configure battery charger.
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<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.  
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Charger Type	Fi / Si Series 1425W single-phase charging system with Bluetooth monitoring
Model Number	80126739 Charger
Charging Rate (A / kW)	30 / 1.425
Rated Voltage (V)	100 - 240 (AC)
Operating Voltage (V)	85 - 265 (AC)
Dimensions L x W x H (mm)	341 x 208 x 115 Charger
Features	<p>Works seamlessly with battery pack, Bluetooth capabilities for monitoring AC input and DC output, enclosure rating IP66 / NEMA4</p> <p>Can be connected in parallel (2) to reduce the charging time.</p>



## VANGUARD LITHIUM APPLICATION



- > The Vanguard Lithium application interfaces wirelessly with Vanguard battery chargers over Bluetooth.
- > Display diagnostic information related to battery charges.
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- > Cloud connectivity.

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

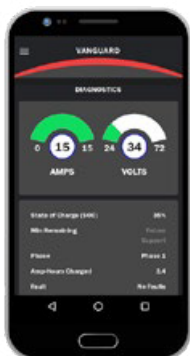
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Charger Type	Fi Series 3000W single-phase charging system
Model Number	80114089
Charging Rate (A / kW)	60 / 3
Rated Voltage (V)	100 - 240 (AC)
Operating Voltage (V)	90 - 264 (AC)
Dimensions L x W x H (mm)	323,2 x 220 x 140
Features	Works seamlessly with battery pack, enclosure rating IP55 / NEMA4



## VANGUARD LITHIUM APPLICATION



- > The Vanguard Lithium application interfaces wirelessly with Vanguard battery chargers over Bluetooth.
- > Display diagnostic information related to battery charges.
- > Allows users to configure battery charger.
- > Cloud connectivity.

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

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# MVG Motors

**Brushless Permanent Magnet**

Ensures high efficiency.

**Automotive-Grade Durability**

Built to automotive standards for unmatched reliability.  
Delivers outstanding resilience and reliability.

**Maintenance-Free Operation**

Designed to operate without the need for regular maintenance.

**Easy Integration Features**

Reduces development costs and enhances flexibility  
for legacy applications. Standard mounting to support  
ICE replacement.

**Serviceable Products**

Helps avoid costly  
replacements.





Motor Type	MVG1500
Model Number	TBC
Motor Type	Brushless PM
Nominal Input Voltage	48 VDC
Maximum Input Voltage	72 VDC
Output Power (Continuous)	1500 W
Output Power (Peak)	3500 W
Nominal Torque	5 Nm
Maximum Torque	20 Nm
Nominal Speed	3600 RPM
Maximum Speed	4000 RPM (at 48V)
Efficiency (Peak)	92%
Operating Temperature Range	Up to 40°C
Enclosure Rating	IP65
D x L Body/PTO (mm)	225 x 155/160
Features	Internal motor controller, simplified system integration, brushless PM, automotive grade design, high torque outer rotor design

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

# MC Motor Controllers

## **J1939 Communication**

Simplified integration with Vanguard battery packs.

## **Automotive Grade Design**

Outstanding resilience and reliability.

## **Auto-Tuning**

Less work to optimize your system.

## **Fault Protection**

Keep the equipment working as well as possible, as long as possible.

## **Multiple Control Modes**

Control speed, torque, or a combination.





Controller Type	MC2000
Model Number	80094680
Nominal Input Voltage	48 VDC
Maximum Input Voltage	72 VDC
Minimum Input Voltage	30 VDC
Phase Current (Peak)	200 A
Efficiency (Peak)	95% or greater
Supported Motor Types	Three-phase SPM
Fault Protection	Over/under voltage, over temperature, over current
Operating Temperature Range	-20 to 50°C
Storage Temperature Range	-35 to 85°C
Enclosure Rating	IPx5
L x W x H (mm)	125 x 145 x 52
Features	Supports Hall effect or sensorless motors; speed, torque, and hybrid control modes; thermal cutback; Bluetooth communication; 100% end-of-line test at power

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.





<b>Controller Type</b>	MC4000
<b>Model Number</b>	80135006
<b>Nominal Input Voltage</b>	48 VDC
<b>Maximum Input Voltage</b>	72 VDC
<b>Minimum Input Voltage</b>	30 VDC
<b>Phase Current (Peak)</b>	430 A
<b>Efficiency (Peak)</b>	95% or greater
<b>Supported Motor Types</b>	Three-phase SPM
<b>Fault Protection</b>	Over/under voltage, over temperature, over current
<b>Operating Temperature Range</b>	-20 to 50°C
<b>Storage Temperature Range</b>	-35 to 85°C
<b>Enclosure Rating</b>	IPx5
<b>L x W x H (mm)</b>	174 x 145 x 52
<b>Features</b>	Supports Hall effect or sensorless motors; speed, torque, and hybrid control modes; thermal cutback; Bluetooth communication; 100% end-of-line test at power

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



Controller Type	MC8000
Model Number	80135007
Nominal Input Voltage	48 VDC
Maximum Input Voltage	72 VDC
Minimum Input Voltage	30 VDC
Phase Current (Peak)	840 A
Efficiency (Peak)	95% or greater
Supported Motor Types	Three-phase SPM
Fault Protection	Over/under voltage, over temperature, over current
Operating Temperature Range	-20 to 50°C
Storage Temperature Range	-35 to 85°C
Enclosure Rating	IPx5
L x W x H (mm)	247 x 145 x 52
Features	Supports Hall effect or sensorless motors; speed, torque, and hybrid control modes; thermal cutback; Bluetooth communication; 100% end-of-line test at power

<sup>1</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



# Commercial Engines.

## Unrelenting. Robust Power.

Vanguard provides innovative solutions that are designed, engineered and proven to deliver the highest level of reliable power and improved productivity.

# VANGUARD 400 EFI/ETC



- > Consistent power.
- > Maximised productivity.
- > Better fuel efficiency.
- > In-house designed EFI System exclusively available for the Vanguard 400 EFI / ETC in our Single-Cylinder engine lineup.

# The Single-Cylinder Advantage.

Game-changing improvements of user experience and total cost of ownership.



Ready to transport with our fuel shut off system<sup>1</sup>.



Our quality assurance to safeguard your investment.



Optimized sound and tone quality.



Lower vibration improving operator's comfort.



High inclination package allows up to 45° angle of operation<sup>3</sup>.



200 hour oil replacement intervals, double the industry standard.



600 hour air cleaner life, double the industry standard.



Reduced environmental impact by 50% less oil waste<sup>2</sup>.

## EXCLUSIVE TO THE VANGUARD 400 EFI/ETC



Maximized productivity and improved fuel savings.



Consistent power in any conditions.



Reduced equipment downtime with CAN J1939 and EFI Diagnostic Tool.

<sup>1</sup> Not applicable to Vanguard 400.

<sup>4</sup> Extra year limited warranty after engine registration applies to Vanguard 160, 200, 300, 400 and 400 EFI/ETC. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

<sup>3</sup> High Inclination Package optional. Refer to equipment operators manual for usage instructions.

<sup>2</sup> Based on manufacturer's service recommendations per operator's manuals.



# THE NEXT GENERATION OF **V-TWIN EFI ENGINES.**

**NEW Boosts overall performance and productivity in commercial applications.**

- > Better fuel efficiency.
- > Quick load acceptance.
- > Improved user experience.
- > Enhanced total cost of ownership.



**NEW Easier to service.**

- > The CAN J1939 communication protocol simplifies application integration, diagnostics and troubleshooting.
- > EFI Diagnostic Tool ensures reduced equipment downtime.

**NEW Selectable speed\*.**

- > One engine for multiple applications when the only difference is engine operating speed.
- > Control speed setting via CANbus.



\* OEM Selectable Speed System  
available on models  
61A1, 61A2 and 61G2.

# Less maintenance. Maximised up-time.



With the exclusive Oil Guard System, the equipment can run harder on the job and longer between oil maintenance. It is a revolutionary technology with an external oil reservoir that ensures longer engine life and lower total cost of ownership.

## **EXTENDED OIL MAINTENANCE INTERVALS**

- > A 500-hour oil change interval reduces downtime.
- > Saves up to 60% on oil maintenance costs<sup>1</sup>.

## **OPTIMIZED OIL FILTRATION**

- > 82% larger filter decreases oil aeration.
- > 80% improved filtration efficiency.
- > Thermal breakdown protection.

## **FASTER AND EASIER OIL CHANGES**

- > Operator focused design.

## **CONSISTENT ENGINE LUBRICATION**

- > Operates continuously at angles up to 45°<sup>2</sup>

<sup>1</sup> Cost savings are based on standard oil maintenance per unit per season with 100-hour interval versus the new Oil Guard System 500-hour service interval.

<sup>2</sup> Refer to specific usage/operating conditions as approved by the equipment manufacturer in the operator's manual.

Here is how the Oil Guard System provides enhanced oil protection and increased productivity.



1. Easy-fill cap and integrated oil filter make oil changes easier, cleaner and faster.

2. Unique dry sump system ensures off-angle lubrication and minimizes thermal breakdown of oil.

3. High-capacity external oil reservoir keeps oil and engine cooler.

**CUSTOM CAP**

Tether  
Locking tab  
¼ turn



**CUSTOM OIL FILTER**

2x capacity  
Finer filtration  
Mess-free changes



**CENTRIFUGAL OIL FLOW TO REDUCE AERATION**



**QUICK-CONNECT HOSE ATTACHMENTS**





# Maximised productivity. Fuel savings.



The engine control module constantly monitors and fine-tunes every single engine operating point thousands of times per minute. The module takes in all of the signals from the engine sensors to make cycle-by-cycle decisions on how much fuel and spark to provide the EFI engine and when to do it.

Electronic Fuel Injection technology provides:

## **IMPROVED STARTING**

- > Easy all-weather electric starting enables remote operation.
- > Improved tolerance for stale fuel.

## **INCREASED POWER**

- > Speed sensing directs the right amount of fuel precisely when it is needed.

## **BETTER FUEL EFFICIENCY**

- > Saves money and needs less fuel resulting in longer run time.

## **AUTOMATIC ALTITUDE COMPENSATION**

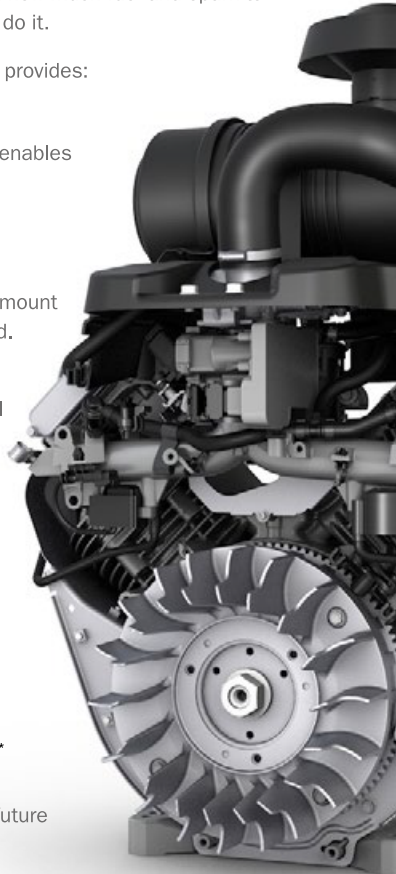
- > Smooth performance as environmental conditions change at different altitudes.

## **EFI DIAGNOSTICS TOOL**

- > Easier diagnostics and faster troubleshooting.

## **IN-HOUSE DESIGNED EFI SYSTEM\***

- > Enables us to quickly respond to customer needs and to address future emissions regulations.



\* Available for Vanguard 400 EFI/ETC engine.

# Consistent power. No matter the terrain.



The ETC technology reacts instantly to any applied load from its environment to deliver power in any condition. The flywheel speed sensor detects any change in RPM and sends a signal to the throttle body, ensuring consistent engine speed.

Electronic Throttle Control technology ensures:

## **CONSISTENT SPEED**

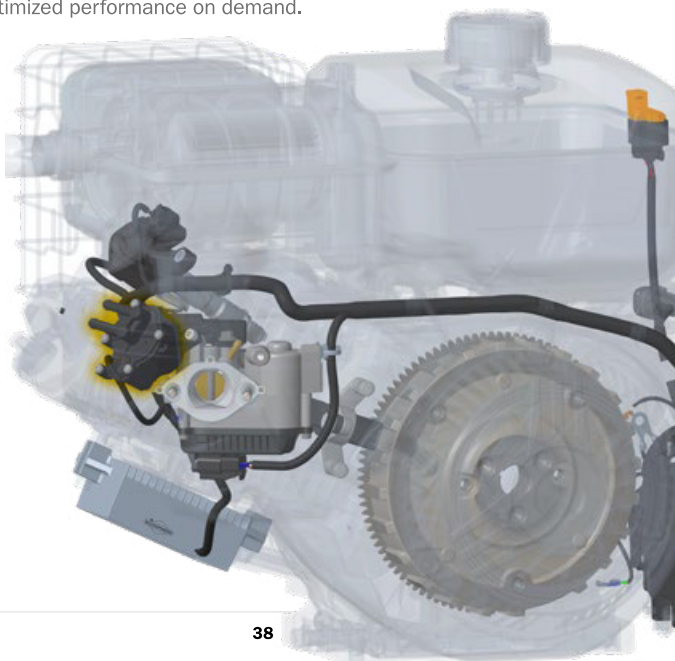
- > Reacts instantaneously to any applied load from its environment.

## **SMOOTH PERFORMANCE**

- > Significantly enhances the experience of the end-user.

## **BETTER LOAD PICKUP**

- > Optimized performance on demand.



# Ready to Transport. No More Engine Damage.



The patented TransportGuard integrates a single action fuel and ignition shut-off switch. This fuel shut-off system **eliminates operator error** and ensures **trouble free equipment transportation**.

- > No more oil/fuel dilution.
- > No more unnecessary oil changes/wastage.
- > No more damage.
- > No more costly downtime due to maintenance.
- > Not available on competitive engines.



A detailed technical line drawing of a Vanguard horizontal shaft commercial engine. The drawing is rendered in white lines on a dark, textured background. It shows the engine's internal components, including the cylinder, piston, crankshaft, and various belts and pulleys. The engine is oriented horizontally. At the top, there are three vertical lines representing a belt or pulley system. The overall design is clean and professional, typical of a technical manual or promotional material for a commercial engine.

**Horizontal Shaft  
Commercial Engines.**

**Single-Cylinder.**

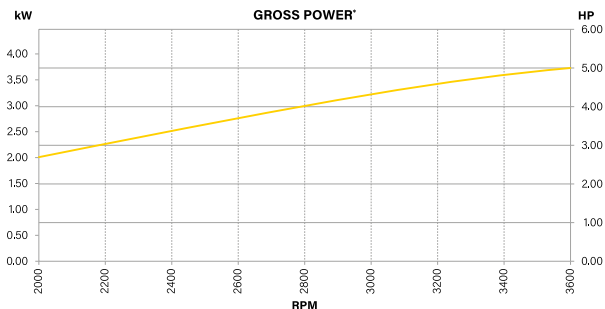
Redesigned to maximize the performance of your equipment. Vanguard delivers power you can trust.

HORIZONTAL • SINGLE-CYLINDER  
**VANGUARD 160 – 5.0 GROSS HP**

HORIZONTAL • SINGLE-CYLINDER



<b>Engine Type</b>	Single-cylinder, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	10V3
<b>Gross Power HP (kW) @ 3 600 rpm</b>	5.0 (3.7 <sup>1</sup> )
<b>Displacement (cc)</b>	169
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	62.0 x 56.0
<b>Fuel Tank Capacity (l)</b>	3.1
<b>Oil Capacity (l)</b>	0.6
<b>Dry Weight (kg)</b>	17.9
<b>Dimensions L x W x H (mm)</b>	274 x 366 x 361
<b>Features</b>	TransportGuard, dual ball bearing, integrated cyclonic air cleaner, Super Lo-Tone™ muffler
<b>Optional</b>	Electric start, low oil sensor, 45° inclination package, clear flange muffler, 2:1 and 6:1 gear reduction package



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> Extra year warranty after engine registration. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

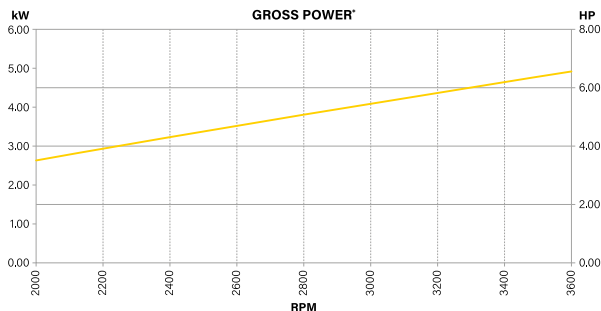
HORIZONTAL • SINGLE-CYLINDER  
**VANGUARD 200 – 6.5 GROSS HP**

HORIZONTAL • SINGLE-CYLINDER



<sup>2</sup>

<b>Engine Type</b>	Single-cylinder, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	12V3
<b>Gross Power HP (kW) @ 3 600 rpm</b>	6.5 (4.8 <sup>1</sup> )
<b>Displacement (cc)</b>	203
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	68.0 x 56.0
<b>Fuel Tank Capacity (l)</b>	3.1
<b>Oil Capacity (l)</b>	0.6
<b>Dry Weight (kg)</b>	17.9
<b>Dimensions L x W x H (mm)</b>	289 x 375 x 361
<b>Features</b>	TransportGuard, dual ball bearing, integrated cyclonic air cleaner, Super Lo-Tone muffler
<b>Optional</b>	Electric start, low oil sensor, 45° inclination package, clear flange muffler, low profile air cleaner, 2:1 and 6:1 gear reduction package



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> Extra year warranty after engine registration. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

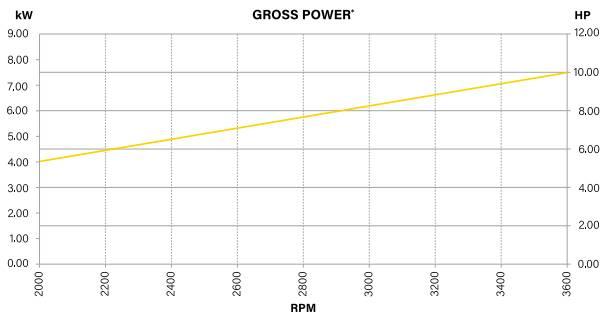
HORIZONTAL • SINGLE-CYLINDER  
**VANGUARD 300 – 10.0 GROSS HP**

HORIZONTAL • SINGLE-CYLINDER



<sup>2</sup>

<b>Engine Type</b>	Single-cylinder, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	19V3
<b>Gross Power HP (kW) @ 3 600 rpm</b>	10.0 (7.5 <sup>1</sup> )
<b>Displacement (cc)</b>	307
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	80.0 x 61.0
<b>Fuel Tank Capacity (l)</b>	4.8
<b>Oil Capacity (l)</b>	0.89
<b>Dry Weight (kg)</b>	32.21
<b>Dimensions L x W x H (mm)</b>	330 x 439 x 447
<b>Features</b>	TransportGuard, dual ball bearing, Super Lo-Tone muffler, integrated cyclonic air cleaner
<b>Optional</b>	Electric start, low oil sensor, 45° inclination package, clear flange muffler, low profile air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> Extra year warranty after engine registration. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



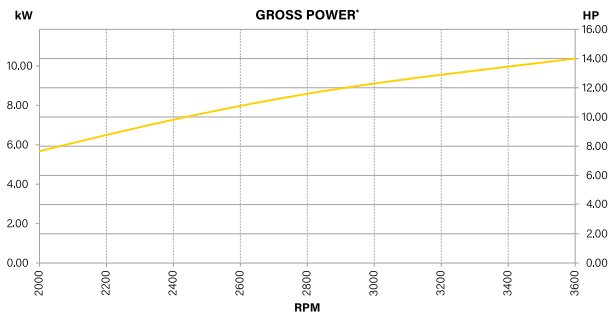
HORIZONTAL • SINGLE-CYLINDER  
**VANGUARD 400 – 14.0 GROSS HP**

HORIZONTAL • SINGLE-CYLINDER



<sup>2</sup>

<b>Engine Type</b>	Single-cylinder, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	25V3
<b>Gross Power HP (kW) @ 3 600 rpm</b>	14.0 (10.4 <sup>1</sup> )
<b>Displacement (cc)</b>	408
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	88.0 x 67.0
<b>Fuel Tank Capacity (l)</b>	5.74
<b>Oil Capacity (l)</b>	0.94
<b>Dry Weight (kg)</b>	35.5
<b>Dimensions L x W x H (mm)</b>	363 x 455 x 460
<b>Features</b>	TransportGuard, dual ball bearing, Super Lo-Tone muffler, integrated cyclonic air cleaner
<b>Optional</b>	Electric start, low oil sensor, 45° inclination package, clear flange muffler, low profile air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> Extra year warranty after engine registration. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

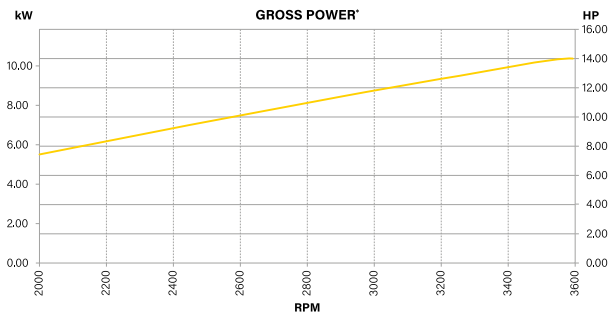


HORIZONTAL • SINGLE-CYLINDER  
**VANGUARD 400 EFI/ETC – 14.0 GROSS HP**



HORIZONTAL • SINGLE-CYLINDER

<b>Engine Type</b>	Single-cylinder, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	25E3
<b>Gross Power HP (kW) @ 3 600 rpm</b>	14.0 (10.4 <sup>1</sup> )
<b>Displacement (cc)</b>	408
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	88.0 x 67.0
<b>Fuel Tank Capacity (l)</b>	5.99
<b>Oil Capacity (l)</b>	0.94
<b>Dry Weight (kg)</b>	39.5
<b>Dimensions L x W x H (mm)</b>	541 x 363 x 472
<b>Features</b>	EFI <sup>3</sup> /ETC, dual ball bearing, Super Lo-Tone muffler, integrated cyclonic air cleaner, CAN J1939 communication
<b>Optional</b>	Low oil sensor, 45° inclination package, clear flange muffler, low mount or remote air cleaner, remote mount control panel



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> Extra year warranty after engine registration. See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

<sup>3</sup> In-house designed EFI System.

A technical line drawing of a V-Twins engine is the background of the advertisement. The drawing shows the engine block, cylinder heads, and various mechanical components. At the top of the image, there is a yellow triangle. On the left side, there are two vertical dimension lines with arrows. The top one is labeled '316' and the bottom one is labeled '133.5'. On the right side, there is a horizontal dimension line labeled '40' at the top and '91' at the bottom. The text 'Horizontal Shaft Commercial Engines.' is written in yellow, and 'V-Twins.' is written in white.

# Horizontal Shaft Commercial Engines.

# V-Twins.

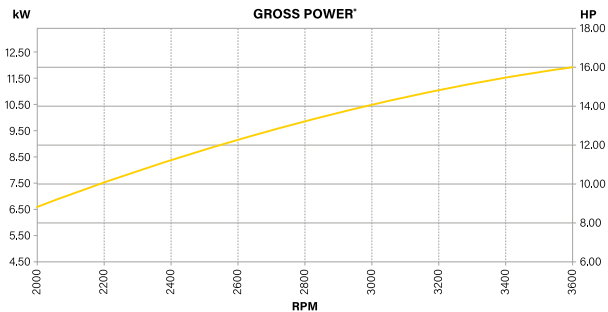
Built to deliver productivity at its best,  
regardless of the application or environment.

HORIZONTAL • V-TWIN  
**VANGUARD 16.0 GROSS HP**

HORIZONTAL • V-TWIN



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	3054
<b>Gross Power HP (kW) @ 3 600 rpm</b>	16.0 (11.9 <sup>1</sup> )
<b>Displacement (cc)</b>	479
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	68,0 x 66,0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	32.7
<b>Dimensions L x W x H (mm)</b>	279 x 410 x 438
<b>Features</b>	Oil filter, full pressure lubrication
<b>Optional</b>	Rewind start, fuel tank <sup>1</sup> , muffler



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

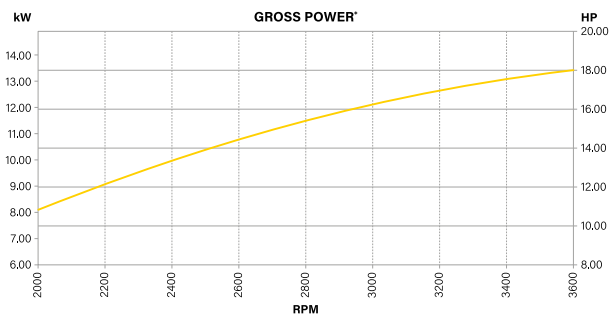
<sup>3</sup> Optional fuel tank shown.

HORIZONTAL • V-TWIN  
**VANGUARD 18.0 GROSS HP**

HORIZONTAL • V-TWIN



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	3564
<b>Gross Power HP (kW) @ 3 600 rpm</b>	18.0 (13.4 <sup>1</sup> )
<b>Displacement (cc)</b>	570
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	72.0 x 70.0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	33.6
<b>Dimensions L x W x H (mm)</b>	318 x 410 x 438
<b>Features</b>	Oil filter, full pressure lubrication
<b>Optional</b>	Rewind start, fuel tank <sup>1</sup> , muffler



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

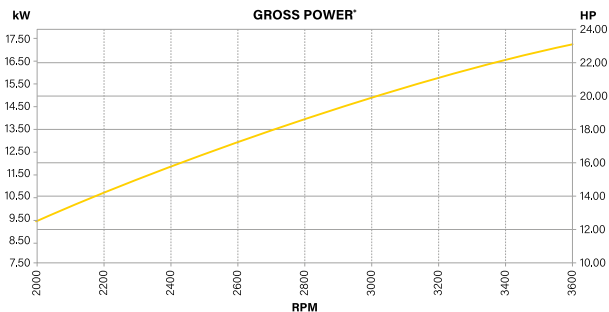
<sup>3</sup> Optional fuel tank shown.

HORIZONTAL • V-TWIN  
**VANGUARD 23.0 GROSS HP**

HORIZONTAL • V-TWIN



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	3864
<b>Gross Power HP (kW) @ 3 600 rpm</b>	23.0 (17.2 <sup>1</sup> )
<b>Displacement (cc)</b>	627
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	75.5 x 70.0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	35.0
<b>Dimensions L x W x H (mm)</b>	318 x 407 x 449
<b>Features</b>	Oil filter, full pressure lubrication
<b>Optional</b>	Rewind start, fuel tank <sup>1</sup> , muffler, cyclonic air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

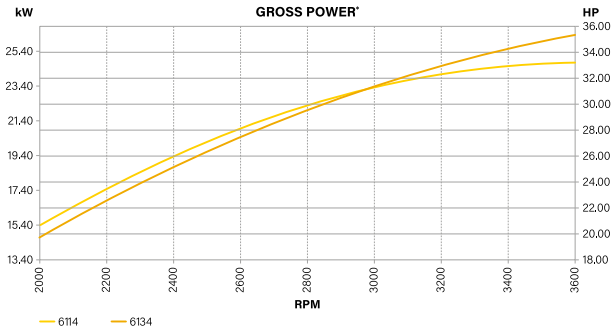
<sup>3</sup> Optional fuel tank shown.

HORIZONTAL • V-TWIN  
**VANGUARD 33.0 - 35.0 GROSS HP**

HORIZONTAL • V-TWIN



Engine Type	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)	
Model Number	6114	6134
Gross Power HP (kW) @ 3 600 rpm	33.0 (24.6 <sup>1</sup> )	35.0 (26.1 <sup>1</sup> )
Displacement (cc)	993	
Cylinder	Cast iron sleeve	
Bore & Stroke (mm)	85.5 x 86.5	
Fuel Tank Capacity (l)	NA	
Oil Capacity (l)	2.3	
Dry Weight (kg)	568	
Dimensions L x W x H (mm)	379 x 496 x 725	
Features	Oil filter, full pressure lubrication, cyclonic air cleaner	
Optional	Muffler, flat panel air cleaner	



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.  
<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

# THE PERFECT **DIESEL ALTERNATIVE.**

Our EFI/ETC Vanguard V-Twin engines are powering change across the board.

- > Improved performance.
- > Better fuel efficiency.
- > Consistent speed.
- > Easy all-weather electric starting.
- > Altitude compensation.
- > Stale fuel resistance.
- > CAN J1939 communications.
- > OEM selectable speed.\*



**Maximised  
productivity and  
fuel efficiency.**

\* OEM Selectable Speed System available on models 61A1, 61A2 and 61G2.



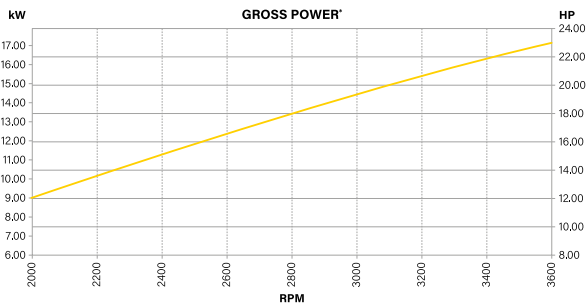


HORIZONTAL • V-TWIN EFI/ETC  
**VANGUARD EFI/ETC 23.0 GROSS HP**

HORIZONTAL • V-TWIN EFI/ETC



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	38E3
<b>Gross Power HP (kW) @ 3 600 rpm</b>	23.0 (17.2 <sup>1</sup> )
<b>Displacement (cc)</b>	627
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	75.5 x 70.0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	35.0
<b>Dimensions L x W x H (mm)</b>	318 x 407 x 449
<b>Features</b>	EFI/ETC, full pressure lubrication, oil filter, CAN J1939 communication
<b>Optional</b>	Rewind start, muffler, cyclonic air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

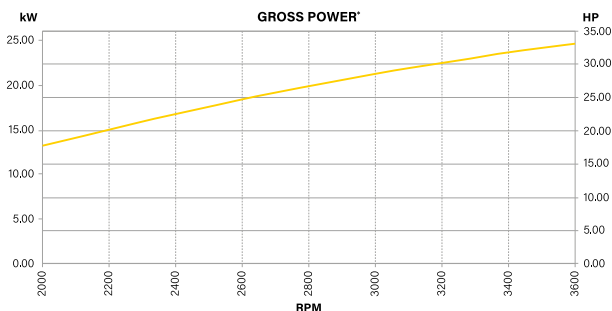


HORIZONTAL • V-TWIN EFI/ETC  
**VANGUARD EFI/ETC 33.0 GROSS HP**

HORIZONTAL • V-TWIN EFI/ETC



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	61A1
<b>Gross Power HP (kW) @ 3 600 rpm</b>	33.0 (24.6 <sup>1</sup> )
<b>Displacement (cc)</b>	993
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	85.5 x 86.5
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	2.3
<b>Dry Weight (kg)</b>	56.7
<b>Dimensions L x W x H (mm)</b>	379 x 496 x 725
<b>Features</b>	EFI/ETC, cyclonic air cleaner, full pressure lubrication, oil filter, CAN J1939 communication, OEM selectable speed
<b>Optional</b>	Muffler, flat panel air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

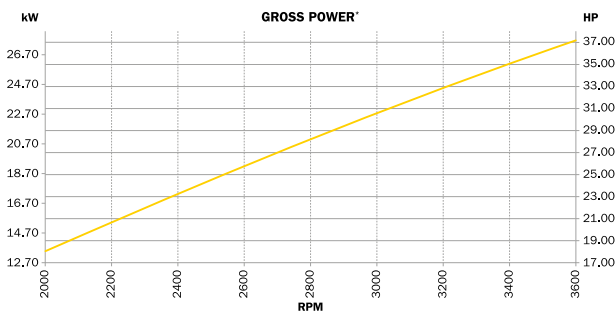
<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

HORIZONTAL • V-TWIN EFI/ETC  
**VANGUARD EFI/ETC 37.0 GROSS HP**

HORIZONTAL • V-TWIN EFI/ETC



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	61A2
<b>Gross Power HP (kW) @ 3 600 rpm</b>	37.0 (27.6 <sup>1</sup> )
<b>Displacement (cc)</b>	993
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	85.5 x 86.5
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	2.3
<b>Dry Weight (kg)</b>	56.7
<b>Dimensions L x W x H (mm)</b>	379 x 496 x 725
<b>Features</b>	EFI/ETC, cyclonic air cleaner, full pressure lubrication, oil filter, CAN J1939 communication, OEM selectable speed
<b>Optional</b>	Muffler, flat panel air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

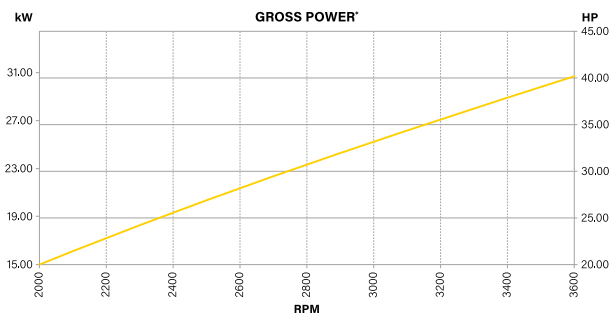
<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

HORIZONTAL • V-TWIN EFI/ETC  
**VANGUARD EFI/ETC 40.0 GROSS HP**

HORIZONTAL • V-TWIN EFI/ETC



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	61G2
<b>Gross Power HP (kW) @ 3 600 rpm</b>	40.0 (29.9 <sup>1</sup> )
<b>Displacement (cc)</b>	993
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	85.5 x 86.5
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	2.3
<b>Dry Weight (kg)</b>	56.7
<b>Dimensions L x W x H (mm)</b>	379 x 496 x 725
<b>Features</b>	EFI/ETC, cyclonic air cleaner, full pressure lubrication, oil filter, CAN J1939 communication, OEM selectable speed <sup>1</sup>
<b>Optional</b>	Muffler, flat panel air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



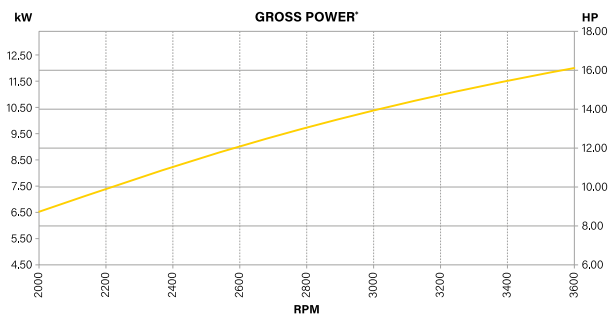
# Vertical Shaft Commercial Engines.

# V-Twins.

The robust line of premium commercial engines are the workhorses for a variety of applications. Power that outperforms all the rest.



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	3057
<b>Gross Power HP (kW) @ 3 600 rpm</b>	16.0 (11.9 <sup>1</sup> )
<b>Displacement (cc)</b>	479
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	68,0 x 66,0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	32.4
<b>Dimensions L x W x H (mm)</b>	434 x 409 x 307
<b>Features</b>	Oil filter, full pressure lubrication
<b>Optional</b>	Rewind start



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

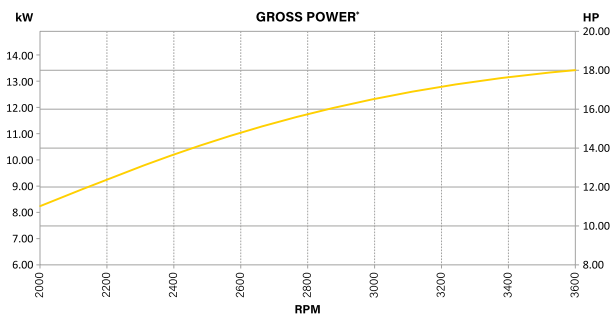
<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

VERTICAL • V-TWIN  
**VANGUARD 18.0 GROSS HP**

VERTICAL • V-TWIN



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	3567
<b>Gross Power HP (kW) @ 3 600 rpm</b>	18.0 (13.4 <sup>1</sup> )
<b>Displacement (cc)</b>	570
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	72.0 x 70.0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	33.3
<b>Dimensions L x W x H (mm)</b>	434 x 409 x 345
<b>Features</b>	Oil filter, full pressure lubrication
<b>Optional</b>	Rewind start, Electronic Fuel Management (EFM)

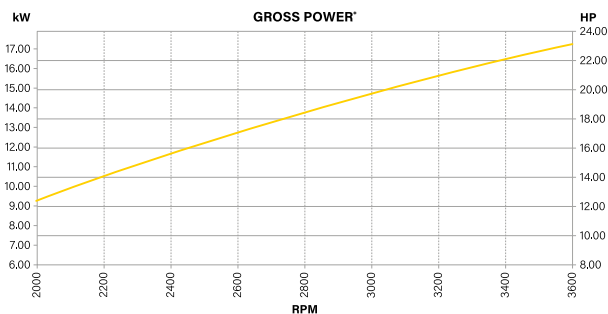


<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	3867
<b>Gross Power HP (kW) @ 3 600 rpm</b>	23.0 (17.2 <sup>1</sup> )
<b>Displacement (cc)</b>	627
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	75.5 x 70.0
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.42
<b>Dry Weight (kg)</b>	35.0
<b>Dimensions L x W x H (mm)</b>	449 x 409 x 345
<b>Features</b>	Oil filter, full pressure lubrication
<b>Optional</b>	Rewind start



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

VERTICAL • V-TWIN EFI  
**VANGUARD 26.0 GROSS HP**

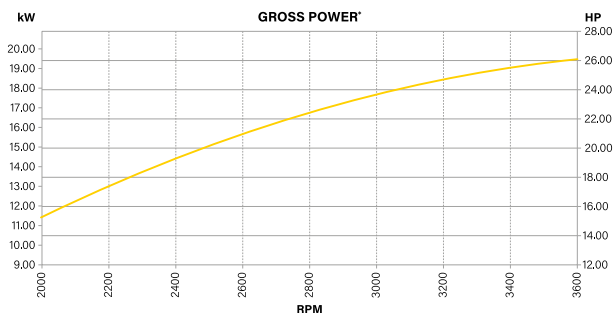
VERTICAL • V-TWIN



Optional Feature



<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	49R9
<b>Gross Power HP (kW) @ 3 600 rpm</b>	26.0 (19.4 <sup>1</sup> )
<b>Displacement (cc)</b>	810
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	83.8 x 73.4
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.98
<b>Dry Weight (kg)</b>	41.7
<b>Dimensions L x W x H (mm)</b>	505 x 462 x 582
<b>Features</b>	Oil filter, full pressure lubrication, cyclonic air cleaner
<b>Optional</b>	Oil Guard System



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.



VERTICAL • V-TWIN EFI  
**VANGUARD EFI 28.0 GROSS HP**

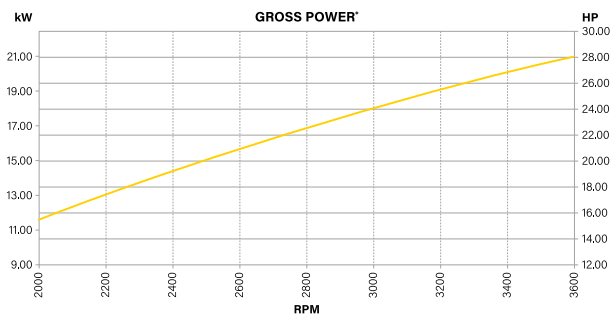


Optional Feature



VERTICAL • V-TWIN

<b>Engine Type</b>	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
<b>Model Number</b>	49E8
<b>Gross Power HP (kW) @ 3 600 rpm</b>	28.0 (20.9 <sup>1</sup> )
<b>Displacement (cc)</b>	810
<b>Cylinder</b>	Cast iron sleeve
<b>Bore &amp; Stroke (mm)</b>	83.8 x 73.4
<b>Fuel Tank Capacity (l)</b>	NA
<b>Oil Capacity (l)</b>	1.98
<b>Dry Weight (kg)</b>	41.7
<b>Dimensions L x W x H (mm)</b>	505 x 462 x 582
<b>Features</b>	EFI, oil filter, full pressure lubrication, cyclonic air cleaner
<b>Optional</b>	Oil Guard System, flat panel air cleaner, integrated air cleaner



<sup>1</sup> All power levels are stated in gross horsepower per SAE J1940 as rated by Briggs & Stratton.

<sup>2</sup> See [www.vanguardpower.com](http://www.vanguardpower.com) for warranty details.

# VANGUARD®



**Our commercial engine and lithium-ion battery pack warranties** are backed by the Briggs & Stratton global service network.



**3-year commercial warranty** on engines – additional one year for selected single cylinder horizontal shaft engines.



**8-year commercial warranty** on our swappable and fixed battery packs.

For more information about the limited global warranty, visit [www.vanguardpower.com](http://www.vanguardpower.com)



Features Key:  
— Not available  
s Standard  
o Optional

	Model Number	Nominal Voltage (V)	Discharge Cut Off Voltage (V)	Nominal Capacity / Energy (Ah / kWh)	Weight (kg)	Durability (cycles) at 80% Capacity Retention	Charge Time 1050W (hrs)	Charge Time 1425W (hrs)	Charge Time 3000W (hrs)	Dimensions (mm) L x W x H	Battery Management System (BMS)	Single CANbus J1939Communication	Dual CANbus Communication	J1939 Communication	Plug-in Ready Charging System	Aluminum Diecast Enclosure	Parallel Capable
Vanguard Commercial Battery Packs																	
Vanguard 48V 1.5kWh Swappable Battery Pack - Si1.5	80105739	51.4	35	28.4 / 1.5	11.8	1000	—	1.25	—	258 x 136 x 425	s	s	—	s	s	s	Yes
Vanguard 48V 1.5kWh Fixed Battery Pack - Fi1.5	80113908	51.4	35	28.4 / 1.5	11.8	1000	—	1.25	—	256 x 131 x 371	s	s	—	s	s	s	Yes
Vanguard 24V 3.5kWh Fixed Battery Pack - Fi3.5	80127410	25.8	17.5	135.9 / 3.5	26.3	2000	6	5	4	482 x 272 x 266	s	—	s	s	s	s	Yes
Vanguard 48V 3.5kWh Fixed Battery Pack - Fi3.5	80110583	51.6	35	67.5 / 3.5	26.3	2000	4	3	2	482 x 272 x 266	s	—	s	s	s	s	Yes
Vanguard 48V 5.0kWh Fixed Battery Pack - Fi5.0	80112254	51.6	35	98.7 / 5.1	39	2000	5.5	4	2.5	597 x 266 x 362	s	—	s	s	s	s	Yes
Vanguard 48V 7.0kWh Fixed Battery Pack - Fi7.0 (long)	80104774	51.6	35	135.9 / 7.0	47.6	2000	8	4	—	877 x 281 x 262	s	—	s	s	s	s	Yes
Vanguard 48V 7.0kWh Fixed Battery Pack - Fi7.0 (tall)	80112214	51.6	35	135.9 / 7.0	46.3	2000	8	4	—	597 x 266 x 362	s	—	s	s	s	s	Yes

Total energy measured using a 0.2C discharge per IEC 61960-3:2017.

Features Key:  
— Not available  
s Standard  
o Optional

Features Key:														
— Not available														
s Standard														
o Optional														

Vanguard Horizontal Shaft Single-Cylinder Commercial Engines

Vanguard 160 – 5.0 GROSS HP	10V3	169	3.1	17.9	0.6	274 x 366 x 361	s	s	—	—	s	—	s	—	—	—	s	—	s	—	s	—	s	—	o
Vanguard 200 – 6.5 GROSS HP	12V3	203	3.1	17.9	0.6	289 x 375 x 361	s	s	—	—	s	—	s	—	—	—	s	—	s	—	s	—	s	—	o
Vanguard 300 – 10.0 GROSS HP	19V3	307	4.8	32.21	0.89	330 x 439 x 447	s	s	—	—	s	—	s	—	—	—	s	—	s	—	s	—	s	—	o
Vanguard 400 – 14.0 GROSS HP	25V3	408	5.74	35.5	0.94	363 x 455 x 460	s	s	—	—	s	—	s	—	—	—	s	—	s	—	s	—	s	—	o
Vanguard 400 EFI/ETC 14.0 GROSS HP	25E3	408	5.99	39.5	0.94	541 x 363 x 372	s	—	s	—	—	s	s	—	—	—	—	—	s	—	s	—	—	—	o

Vanguard Horizontal Shaft V-Twin Commercial Engines

Vanguard 16.0 GROSS HP	3054	479	o	32.7	1.42	279 x 410 x 438	s	s	—	—	s	—	—	—	s	—	s	—	s	—	—	s	—	—	—
Vanguard 18.0 GROSS HP	3564	570	o	33.6	1.42	318 x 410 x 438	s	s	—	—	s	—	—	—	s	—	s	—	s	—	—	s	—	—	—
Vanguard 23.0 GROSS HP	3864	627	o	35.0	1.42	318 x 407 x 449	s	s	—	—	s	—	—	s	o	s	—	s	—	—	—	s	—	—	—
Vanguard 33.0 GROSS HP	6114	993	—	56.8	2.3	379 x 496 x 725	s	s	—	—	s	—	—	o	s	s	—	s	—	—	—	s	—	—	—
Vanguard 35.0 GROSS HP	6134	993	—	56.8	2.3	379 x 496 x 725	s	s	—	—	s	—	—	o	s	s	—	s	—	—	—	s	—	—	—
Vanguard EFI/ETC 23.0 GROSS HP	38E3	627	—	35.0	1.42	318 x 407 x 449	s	—	s	—	—	s	—	o	s	—	—	s	—	—	—	s	—	—	—
Vanguard EFI/ETC 33.0 GROSS HP	61A1	993	—	56.7	2.3	379 x 496 x 725	s	—	s	s	—	s	—	o	s	—	—	s	—	—	—	s	—	—	—
Vanguard EFI/ETC 37.0 GROSS HP	61A2	993	—	56.7	2.3	379 x 496 x 725	s	—	s	s	—	s	—	o	s	—	—	s	—	—	—	s	—	—	—
Vanguard EFI/ETC 40.0 GROSS HP	61G2	993	—	56.7	2.3	379 x 496 x 725	s	—	s	s	—	s	—	o	s	—	—	s	—	—	—	s	—	—	—

Vanguard Vertical Shaft V-Twin Commercial Engines

Vanguard 16.0 GROSS HP	3057	479	—	32.4	1.42	434 x 409 x 307	s	s	—	—	s	—	—	s	—	s	—	s	—	—	—	s	—	—	—
Vanguard 18.0 GROSS HP	3567	570	—	33.3	1.42	434 x 409 x 345	s	s	—	—	s	—	—	s	—	s	o	s	—	—	—	s	—	—	—
Vanguard 23.0 GROSS HP	3867	627	—	35.0	1.42	449 x 409 x 345	s	s	—	—	s	—	—	s	—	s	—	s	—	—	—	s	—	—	—
Vanguard 26.0 GROSS HP	49R9	810	—	41.7	1.98	505 x 462 x 582	s	s	—	—	s	—	—	—	s	s	—	s	—	—	—	s	—	o <sup>1</sup>	—
Vanguard EFI 28.0 GROSS HP	49E8	810	—	41.7	1.98	505 x 462 x 582	s	s	—	—	s	o	—	o	s	—	—	s	—	—	—	s	—	o <sup>1</sup>	—

The gross power rating for individual gasoline engine models is labeled in accordance with SAE (Society of Automotive Engineers) code J1940 Small Engine Power & Torque Rating Procedure, and is rated in accordance with SAE J1995. Torque values are derived at 2600 RPM for those engines with “rpm” called out on the label and 3060 for all others; horsepower values are derived at 3600 RPM. The gross power curves can be viewed at [www.BRIGGSandSTRATTON.COM](http://www.BRIGGSandSTRATTON.COM). Net power values are taken with exhaust and air cleaner installed whereas gross power values are collected without these attachments. Actual gross engine power will be higher than net engine power and is affected by, among other things, ambient operating conditions and engine-to-engine variability. Given the wide array of products on which engines are placed, the gasoline engine may not develop the rated gross power when used in a given piece of power equipment. This difference is due to a variety of factors including, but not limited to, the variety of engine components (air cleaner, exhaust, charging, cooling, carburetor, fuel pump, etc.), application limitations, ambient operating conditions (temperature, humidity, altitude), and engine-to-engine variability. Due to manufacturing and capacity limitations, Briggs & Stratton may substitute an engine of higher rated power for this engine. All Vanguard engines are stated in gross horsepower at 3 600 rpm per SAE J1940 as rated by Briggs & Stratton.<sup>1</sup> Oil Guard System allows 45° inclination.

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