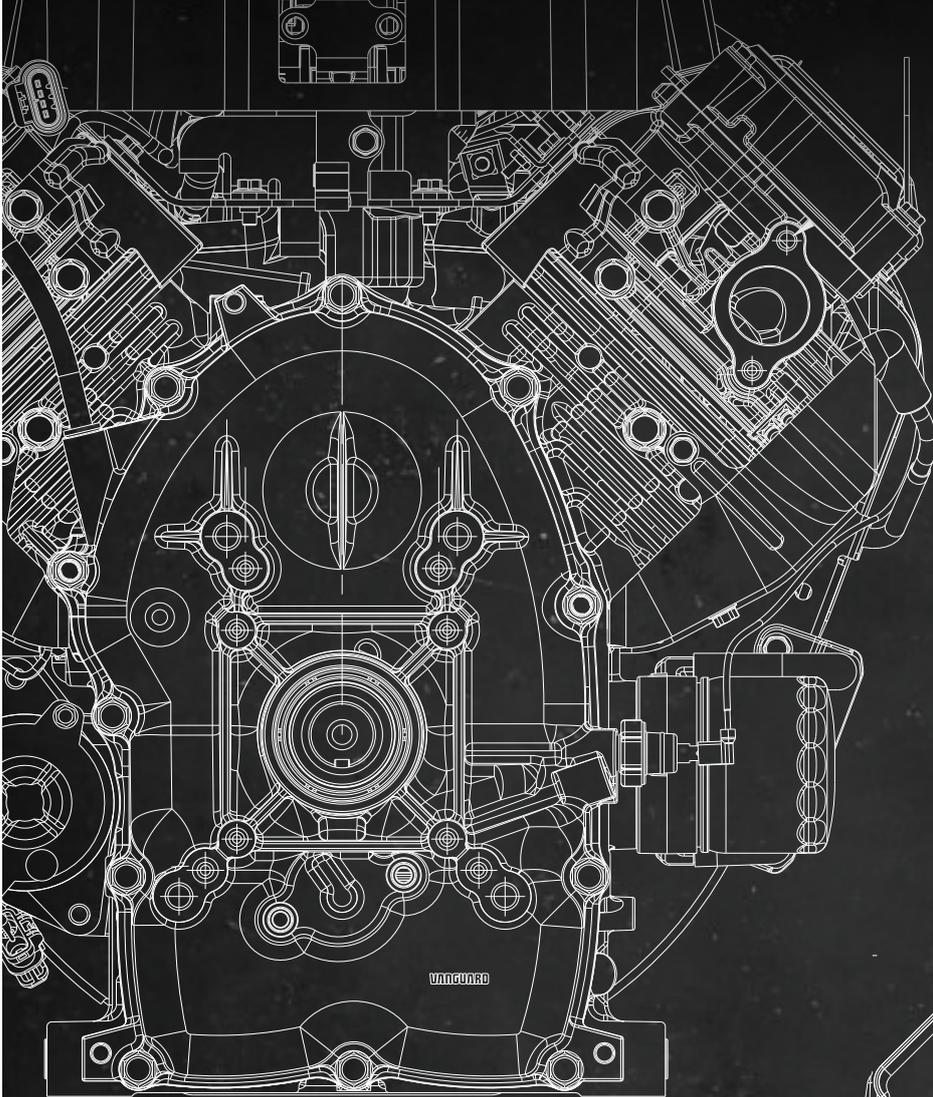


VANGUARD®



POWER TO PERFORM

Vanguard®
EFI/ETC Engines

BRIGGS & STRATTON

Unrelenting. Robust Power.

Your work requires an efficient and durable power solution – look no further than Vanguard Electronic Fuel Injected (EFI)/Electronic Throttle Controlled (ETC) engines.

VERSATILE POWER

Whether powering concrete trowels, remote controlled equipment, wood chippers or more, Vanguard EFI/ETC **EU Stage 5 Compliant** engines deliver the durable performance your job demands. Application engineered to deliver compact power solutions with exceptional power-to-weight ratio, improved load acceptance, and remote operation capabilities ensures that you can get the job done and at a cost lower than an expensive diesel engine.

POWERING WITH VANGUARD EFI/ETC

Designed to keep your engineering costs to a minimum, Vanguard EFI/ETC engines are easy to install and are available with a broad range of accessories. Together with application engineering support from our Power Application Center, we'll make powering, or repowering, with Vanguard as simple and efficient as possible.

Horizontal Shaft EFI/ETC Engines

Single-Cylinder Range

Vanguard 400 EFI/ETC - 10,4 Gross kW* (14,0 Gross HP)

408cc

V-Twin Range

Vanguard EFI/ETC 17,2 Gross kW* (23,0 Gross HP)

627cc

**Vanguard EFI/ETC 24,6 / 27,6 / 29,9 Gross kW*
(33,0 / 37,0 / 40,0 Gross HP)**

993cc



* All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.



IMPROVED PERFORMANCE

Vanguard EFI technology utilizes the Engine Control Module (ECM) to tune every single operating point unique to the engine. It 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 engine and when. This in turn means improved starting at all temperatures, smooth performance at all elevations, quick load acceptance and reduced fuel consumption.



CONSISTENT POWER

Vanguard ETC technology reacts instantaneously to any applied load from its environment to maintain power when the application demands it. The flywheel speed sensor detects any change in RPM and sends a signal to the throttle body, ensuring consistent speed – which means consistent power and quality of work.

	Single-Cylinder EFI/ETC	Small Block EFI/ETC	BIG BLOCK™ EFI/ETC	BIG BLOCK EFI/ETC	BIG BLOCK EFI/ETC
Fuel Savings as fuel is delivered more efficiently.	●	●	●	●	●
Load Governance with on-demand power for maximum performance at faster speeds.	●	●	●	●	●
Increased Power to get more done. Engine delivers the precise power needed to match the operating conditions and speed.	●	●	●	●	●
Startability means no-choke, no-hassle starting regardless of temperature or pressure.	●	●	●	●	●
Altitude Compensation for smooth performance as environmental conditions change at different altitudes.	●	●	●	●	●
Throttle Response that instantly adjusts engine power to load, ensuring consistent engine speed.	●	●	●	●	●

* All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.

** See www.vanguardpower.com for warranty details.

† Only available for Vanguard 400 EFI/ETC. Extra year warranty after engine registration. See www.vanguardpower.com for warranty details.

Single-Cylinder Vanguard 400 EFI/ETC 10,4 Gross kW*

BETTER FUEL EFFICIENCY. IMPROVED PERFORMANCE.

The new Vanguard 400 EFI/ETC – 10,4 Gross kW* (14,0 Gross HP) with EFI and ETC technology has been specifically designed to address many of the most common performance related needs in the field today. The electronic fuel injection provides easier all-weather chokeless starting while the electronic throttle control reacts instantaneously to any load to maintain smooth and consistent power in any condition. Ideal for powering: concrete saws, pumps, alpine mowers, shredders and more.



10,4
Gross kW*

408
Displacement (cc)

1
No. of Cylinders

PETROL
Fuel Type

Engine Type	Single-cylinder, 4-stroke, air cooled, OHV (Overhead Valve)
Model Number	25E3
Gross Power kW (HP) @ 3'600 rpm	10,4* (14,0)
Displacement (cc)	408
Cylinder	Cast iron sleeve
Bore & Stroke (mm)	88,0 x 67,0
Fuel Tank Capacity (l)	5,99
Oil Capacity (l)	0,94
Dry Weight (kg)	39,5
Dimensions L x W x H (mm)	See dimensional drawings (pg. 5)

STANDARD FEATURES:

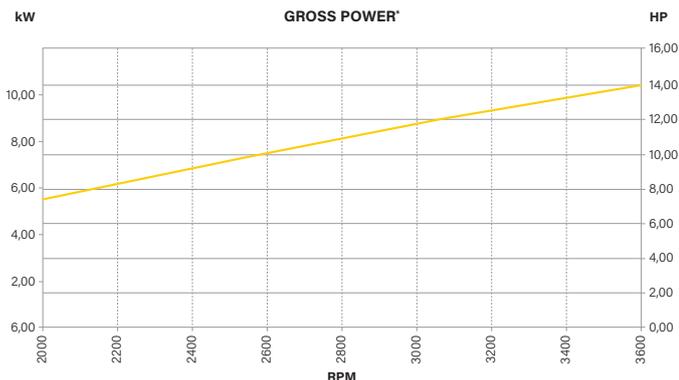
- Electronic fuel injection
- Electronic throttle control
- Electric start
- Integrated cyclonic air cleaner
- Super Lo-Tone muffler
- Splash lubrication
- CAN J1939 communication

OPTIONAL FEATURES:

- 45° inclination package
- Clear flange muffler
- Low oil sensor
- Low mount or remote air cleaner
- Remote mount control panel
- Remote speed option

CRANKSHAFT OPTIONS:

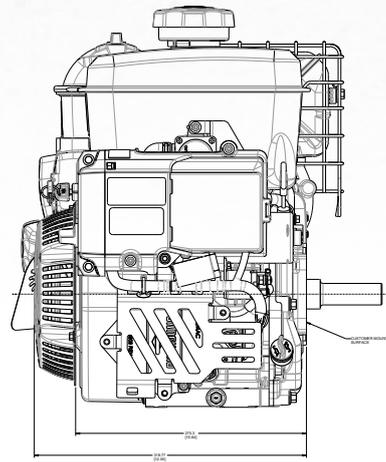
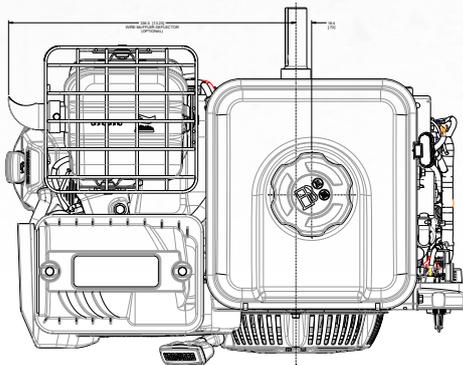
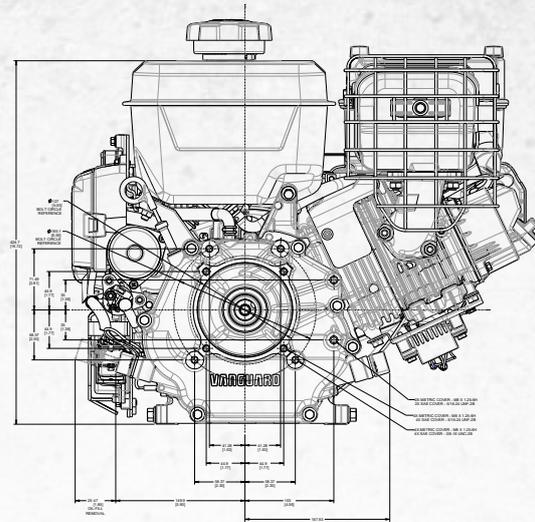
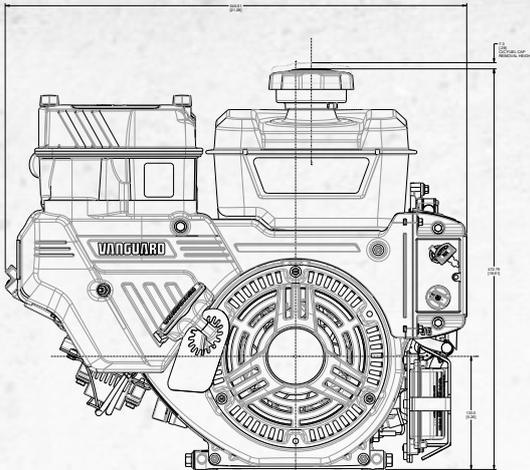
- 1" dia. 3,488" length straight keyway (25,40mm dia. 88,6mm length)
- 25mm dia. 63,1mm length straight keyway
- Taper SAE 4,198" (106,6 mm length)
- 1" dia. 3,480" length threaded (25mm dia. 88,4mm length)



* All power (kW) and torque (Nm) levels are stated Gross per SAE J1940 as rated by Briggs & Stratton.

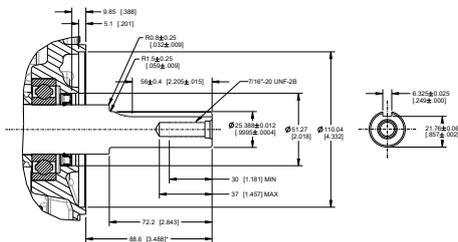
** Extra year warranty after engine registration. See www.vanguardpower.com for warranty details.

DIMENSIONS (unit mm [in])

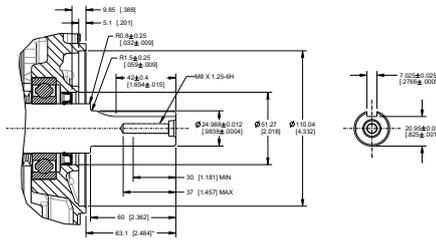


CRANKSHAFT OPTIONS**

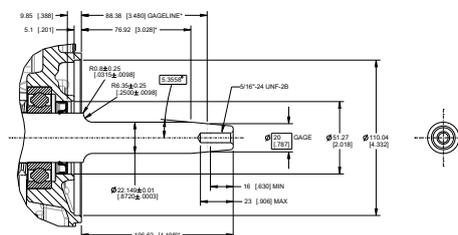
**1" DIA. 3,488" LENGTH STRAIGHT KEYWAY
(25,40mm dia 88,6mm length)**



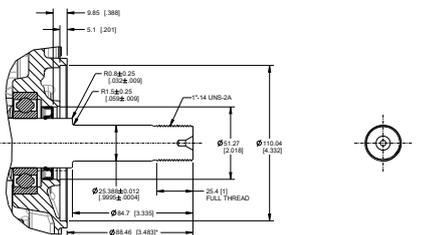
**25MM DIA. 63,1MM LENGTH
STRAIGHT KEYWAY**



**TAPER SAE 4,198"
(106,6 mm length)**



**1" DIA. 3,480" LENGTH THREADED
(25,40mm dia 88,4mm length)**



* All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.

** Contact your Vanguard representative for additional crankshafts.

V-Twin Small Block Vanguard EFI/ETC 17,2 Gross kW*

COMPACT. EFFICIENT POWER.

The 17,2 Gross kW* (23,0 Gross HP) Vanguard EFI with ETC engine is designed to deliver optimized power in a compact envelope. Featuring EFI and ETC this engine delivers unparalleled power at all altitudes. With a dual starting system as standard, these engines can be operated even with a flat battery. Ideal for powering: fire pumps, wood chippers, construction equipment, agricultural equipment and remote operational equipment.



17,2
Gross kW*

627
Displacement (cc)

2
No. of Cylinders

PETROL
Fuel Type

Engine Type	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)
Model Number	38E3
Gross Power kW (HP) @ 3'600 rpm	17,2* (23,0)
Displacement (cc)	627
Cylinder	Cast iron sleeve
Bore & Stroke (mm)	75,5 x 70,0
Fuel Tank Capacity (l)	N/A
Oil Capacity (l)	1,7
Dry Weight (kg)	35,0
Dimensions L x W x H (mm)	See dimensional drawings (pg. 7)

STANDARD FEATURES:

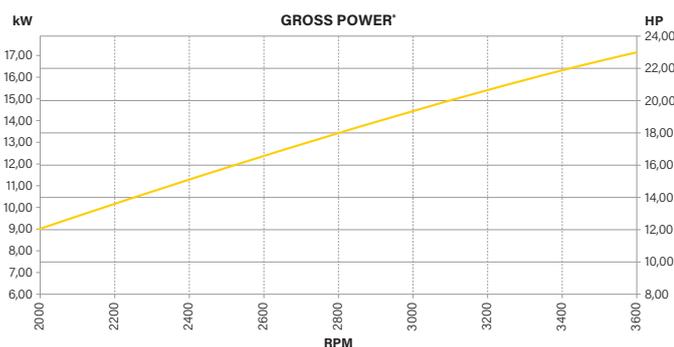
- Electronic fuel injection
- Electronic throttle control
- Electric start
- Full pressure lubrication with oil filter
- Oil cooler
- Dynamically balanced crankshaft
- Flat panel air cleaner
- CAN J1939 communications

OPTIONAL FEATURES:

- Rewind start
- Solenoid shift starter
- Cyclonic air cleaner
- Oil pressure switch
- High & side mount mufflers
- Flywheel stub shaft
- Idle down
- Remote or engine mounted throttle control

CRANKSHAFT OPTIONS:

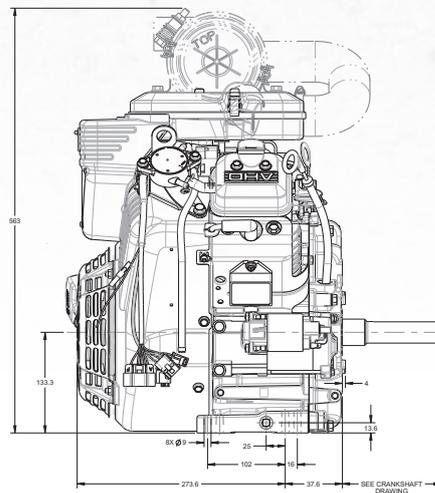
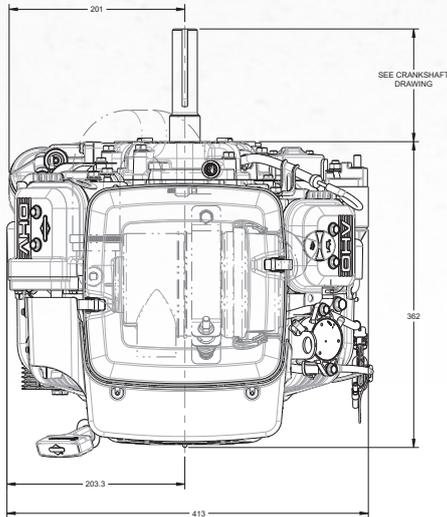
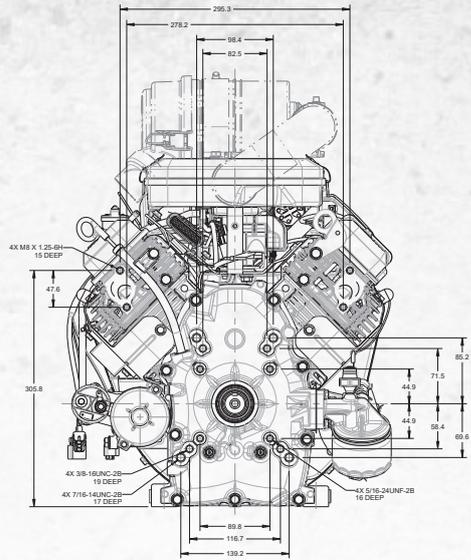
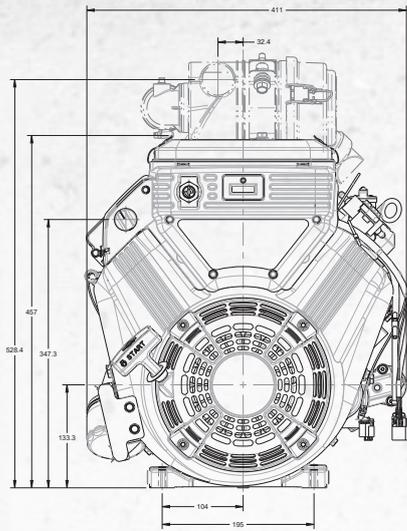
- 1" dia. 3" straight keyway (25,40mm dia. 76,20mm length)
- Tapered SAE 2,25"/12" and 10:1 taper
- Spline crankshaft (9-Tooth and 11-Tooth)



* All power (kW) and torque (Nm) levels are stated Gross per SAE J1940 as rated by Briggs & Stratton.

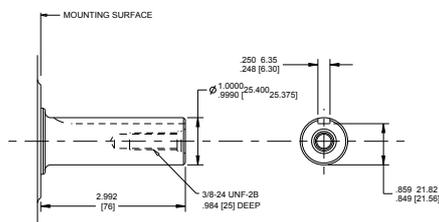
** See www.vanguardpower.com for warranty details.

DIMENSIONS (unit mm)

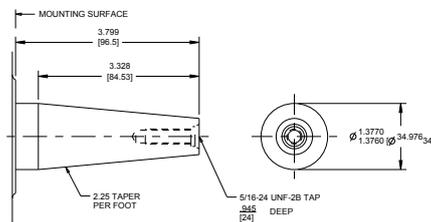


CRANKSHAFT OPTIONS**

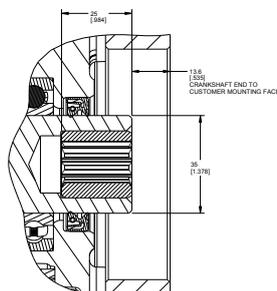
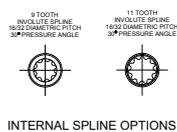
**1" DIA. 3" LENGTH STRAIGHT KW
(25,40mm dia 76,20mm length)**



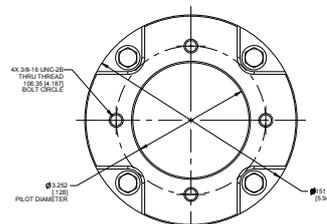
TP SAE 2,25"/12" AND 10:1 TAPER



SPLINE CRANKSHAFT (9-TOOTH & 11-TOOTH)



SAE "A" ADAPTER PLATE



* All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.

** Contact your Vanguard representative for additional crankshafts.

V-Twin BIG BLOCK Vanguard EFI/ETC 24,6/27,6/29,9 Gross kW*

UNDENIABLE POWER.

The 24,6-29,9 Gross kW* (33,0-40,0 Gross HP) Vanguard EFI engines with ETC are designed to deliver maximum power with increased torque. Featuring EFI these engines are designed to deliver easy all weather starting together with improved load acceptance. With Electronic Throttle Control these engines deliver instant power on-demand. Ideal for powering: utility vehicles, wood chippers, construction equipment, agricultural equipment and remote operational machinery.



24,6 - 29,9
Gross kW*

993
Displacement (cc)

2
No. of Cylinders

PETROL
Fuel Type

Engine Type	V-Twin, 4-stroke, air cooled, OHV (Overhead Valve)		
Model Number	61A1 [†]	61A2 [‡]	61G2
Gross Power kW (HP) @ 3'600 rpm	24,6* (33,0)	27,6* (37,0)	29,9* (40,0)
Displacement (cc)	993		
Cylinder	Cast iron sleeve		
Bore & Stroke (mm)	85,5 x 86,5		
Fuel Tank Capacity (l)	N/A		
Oil Capacity (l)	2,3		
Dry Weight (kg)	56,7		
Dimensions L x W x H (mm)	See dimensional drawings (pg 9)		

STANDARD FEATURES:

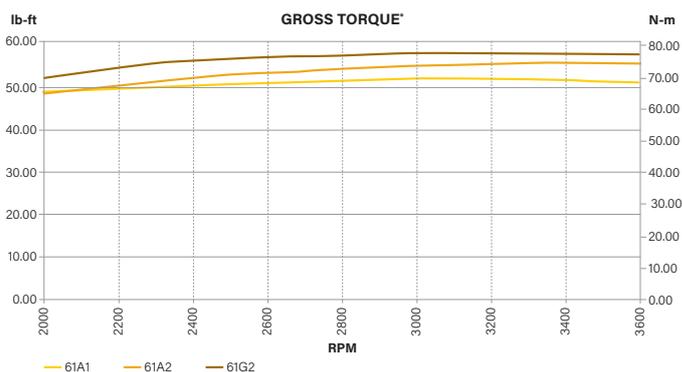
- Electronic fuel injection
- Electronic throttle control
- Electric start
- Solenoid shift starter
- Full pressure lubrication with oil filter
- Oil cooler
- Oil pressure switch
- Dynamically balanced crankshaft
- Cyclonic air cleaner
- CAN J1939 communications
- OEM selectable speed[†]

OPTIONAL FEATURES:

- Alternators 20, 20-50A
- Flywheel stub shaft
- Flat panel air cleaner
- High & mid mounted muffler
- Remote or engine mounted throttle control

CRANKSHAFT OPTIONS:

- 1-1/8" and 1-7/16" straight keyway (28,5 and 36,5mm dia.)
- Tapered SAE 2,25"/12" and 10:1 taper
- Spline crankshaft (11-tooth & 13-tooth)



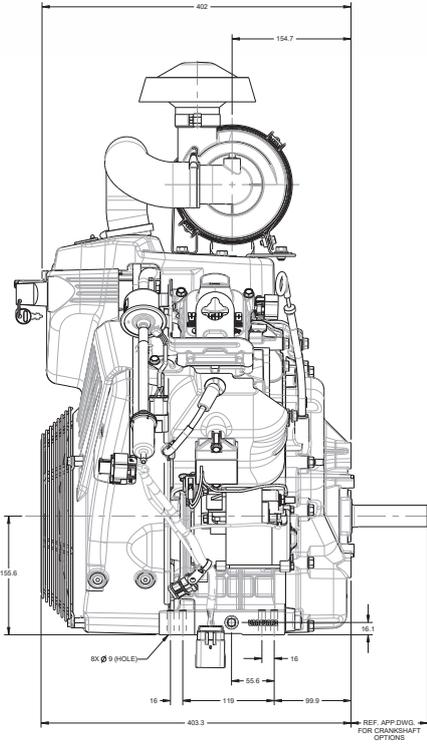
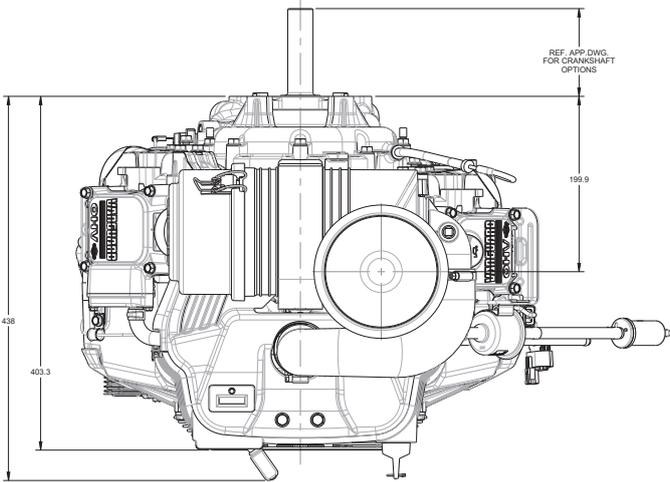
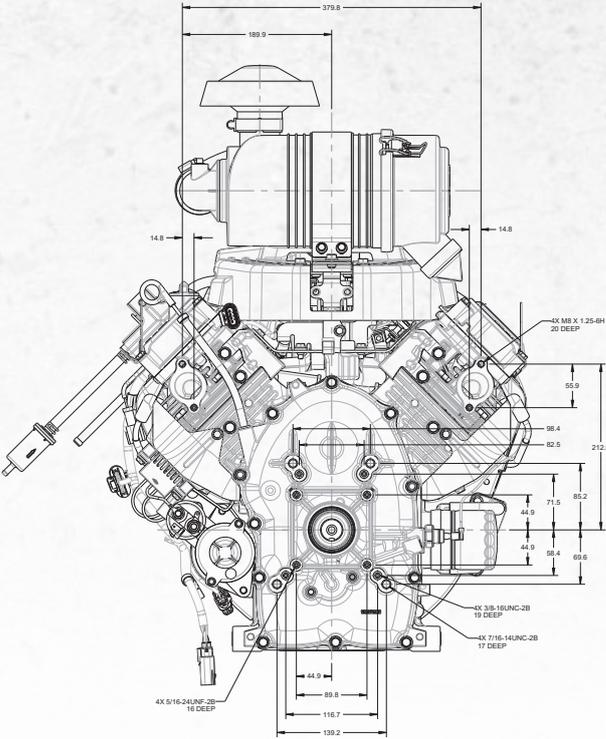
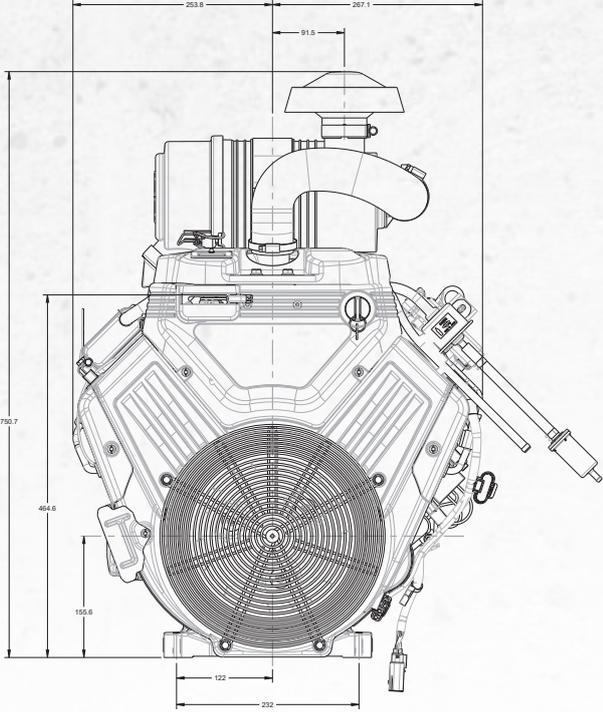
* All power (kW) and torque (Nm) levels are stated Gross per SAE J1940 as rated by Briggs & Stratton

** See www.vanguardpower.com for warranty details.

[†] Available Summer 2023.

[‡] Available January 2024.

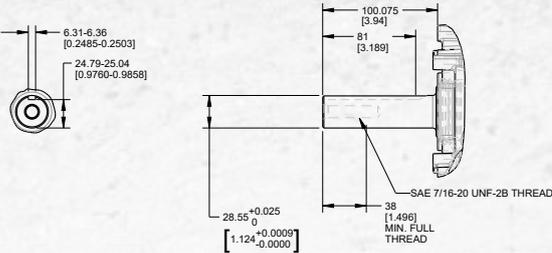
DIMENSIONS (unit mm)



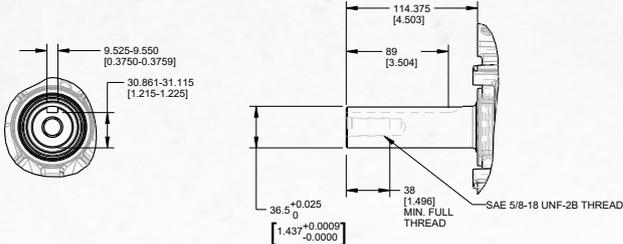
* All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.

CRANKSHAFT OPTIONS**

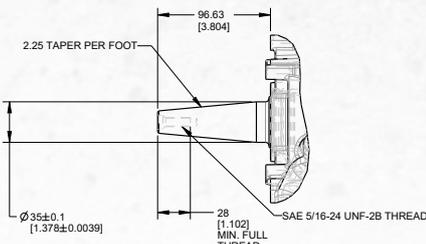
1-1/8" (28,5mm) DIA. STRAIGHT KW



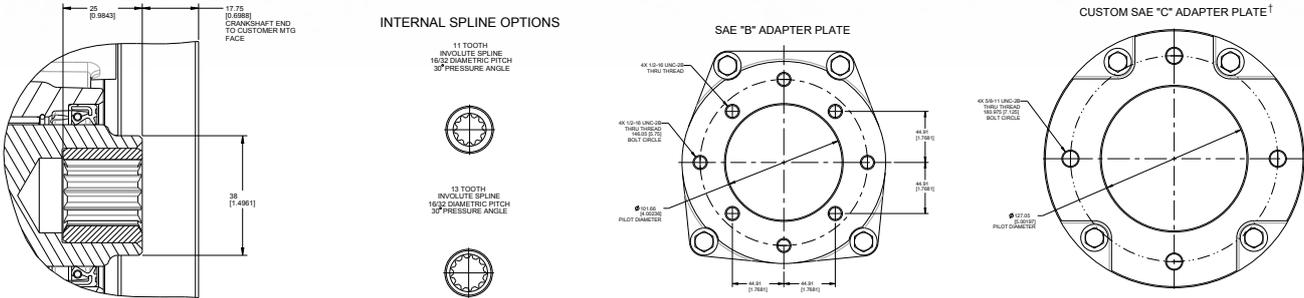
1-7/16" (36,5mm) DIA. STRAIGHT KW



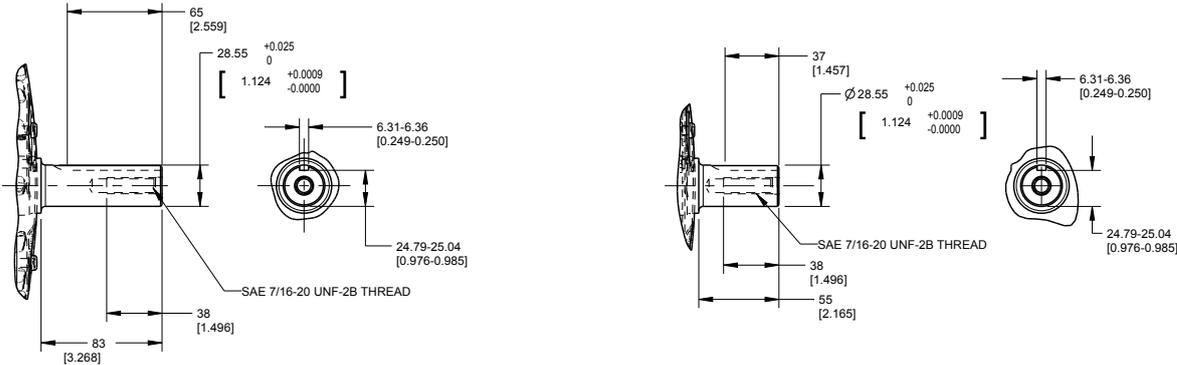
TP SAE 2,25" / 12" & 10:1



SPLINE CRANKSHAFT (11-TOOTH & 13-TOOTH)



FRONT PTO OPTIONS



OPTIONAL LONG FRONT P.T.O.

OPTIONAL SHORT FRONT P.T.O.

* All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.
 ** Contact your Vanguard representative for additional crankshafts.
 † Pilot diameter and hole locations meets SAE C specifications. Outline shape is unique for Vanguard but does not affect pump mounting.

Why Power with EFI/ETC Engines:

Vanguard EFI/ETC engines are application engineered to deliver round the clock power and efficiency to get work done.

APPLICATION EFFICIENCY

- > Superior power to weight ratio
- > Optimized weight, noise and vibration
- > Load pickup with on-demand power
- > Altitude compensation
- > CAN J1939 remote operation capabilities: easier integration with OEM equipment
- > OEM Selectable Speed (BIG BLOCK EFI/ETC engines)[†]

RELIABILITY

- Easy all weather choke-less starting
- Improved stale fuel resistance

DURABILITY

- Heavy duty sump and cylinder
- Automotive material pistons
- IP 66 connectors
- 3-year limited commercial warranty*
- 3+1 year limited commercial warranty**
(only Vanguard 400 EFI/ETC)

POWER APPLICATION EXPERTS

- Full application engineering support from our Power Application Center
- Ensure the best integration of engine and machine at no added cost our Power Application Center to ensure the best integration of engine and machine at no added cost

EMISSIONS COMPLIANT

- EU Stage 5 and global emissions compliance

MAINTENANCE

- Vanguard 400 EFI/ETC: 200 hrs oil replacement and 600 hrs air cleaner replacement -
- Diagnostics capabilities for easier and faster troubleshooting with the Briggs & Stratton EFI Diagnostics Tool, leading to reduced equipment downtime and improved ROI



Every Vanguard engine is backed by a full **3-year limited commercial warranty*** and a comprehensive factory trained dealer network.

NEW OEM Selectable Speed[†]

Vanguard EFI/ETC 24,6 , 27,6 and 29,9 Gross kW[‡]

- > One engine for multiple applications when the only difference is the engine operating speed.
- > Engine's ECU easily re-flashed on site, just using the EFI/ETC diagnostics tool.
- > Reduces the number and variety of engines to purchase.
- > Increases flexibility in inventory management.
- > Calibration updates can be incorporated into existing inventory.

* See www.vanguardpower.com for warranty details.

** Extra year warranty after engine registration. See www.vanguardpower.com for warranty details.

† Available Summer 2023.

‡ All power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.

ENGINE TECHNICAL SPECIFICATIONS



**

Single-Cylinder



V-Twin



ENGINE	10,4 Gross kW* (14,0 Gross HP)	17,2 Gross kW* (23,0 Gross HP)	24,6 - 27,6 Gross kW* (33,0 - 37,0 Gross HP)	29,9 Gross kW* (40,0 Gross HP)
MODEL NUMBER	25E3	38E3	61A1, 61A2	61G2
DISPLACEMENT cc	408	627	993	993
WEIGHT kg	39,5	35,0	56,7	56,7
LENGTH mm	541	318	379	379
WIDTH mm	363	407	496	496
HEIGHT mm	472	449	725	725
OIL CAPACITY ltr	0,94	1,7	2,3	2,3
FUEL TANK CAPACITY l	5,99			
VALVE CONFIGURATION	Overhead Valve (OHV)	Overhead Valve (OHV)	Overhead Valve (OHV)	Overhead Valve (OHV)
CYLINDER	Cast Iron Sleeve	Cast Iron Sleeve	Cast Iron Sleeve	Cast Iron Sleeve
AIR CLEANER	Integrated Cyclonic Air Cleaner	Dual-Clean™ Air Cleaner	5" Cyclonic Air Cleaner	5" Cyclonic Air Cleaner
IGNITION	Digital Ignition Coils	Magnetron	Digital Ignition Coils	Digital Ignition Coils
LUBRICATION	Splash	Full Pressure Lubrication	Full Pressure Lubrication	Full Pressure Lubrication
CAN J1939 COMMUNICATIONS	●	●	●	●
OEM SELECTABLE SPEED			●	●

OPTIONS

KEY SWITCH	●	●	●	●
LOW PROFILE AIR CLEANER	●	Standard	●	●
CYCLONIC AIR CLEANER	Integrated	●	Standard	Standard
FLYWHEEL STUB SHAFT		●	●	●
IDLE-DOWN SPEED CONTROL		●		
MUFFLER OPTIONS AVAILABILITY		●	●	●
45° INCLINATION PACKAGE	●			
CLEAR FLANGE MUFFLER	●			
REMOTE THROTTLE CONTROL	●	●	●	●

VANGUARD®

BRIGGS & STRATTON

Wolleraustrasse 41
8807 Freienbach, Switzerland
+41 (0)55 415 1200
INFO.CH@BASCO.COM
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WWW.VANGUARDPOWER.COM

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. 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 power levels are stated gross kilowatt at 3'600 rpm per SAE J1940 as rated by Briggs & Stratton.

** See www.vanguardpower.com for warranty details.

† Extra year warranty after engine registration. See www.vanguardpower.com for warranty details.