

Honda V-Twin Engines



HONDA

Welcome to the Next Generation of Honda V-Twin Technology

Like the rest of the models in Honda's extensive lineup of GX general purpose engines, these newly redesigned Honda V-twins offer the kind of high power, easy usability, and all-around hardworking toughness the world has come to expect from Honda. Their 4-stroke OHV combustion ensures reliable, easy starting and smooth, stable power output, not to mention cleaner emissions and reduced noise and vibration. Designed for versatility, including PTO shaft variations and mounting flanges conforming to all SAE standards, their user-friendly high reliability, functionality, and flexibility make them the perfect choice for a vast range of applications.



Reliable and Easy To Use Improved Starting and Reliability

- Highly reliable shift-type electric starter ensures easy starting even in extreme cold down to -30°C.
- Transistorized magneto ignition equipped with a 12V-20A AC generator provides dependable battery charging capacity even during idling.
- Optional recoil starter available for GX/GXV610K1 and GX/GXV620K1.
- Centrifugal mechanical decompression ensures smooth, easy starts.
- Automotive-style lubrication system featuring a high-pressure trochoid pump and cartridge-style air filter ensures high durability.
- Optional Auto Throttle™—Electronic solenoid-activated system for quick throttle response in generator applications.

Highly Efficient 90° V-Twin OHV Format

- The 90° V-twin OHV format featuring an advanced combustion chamber design and superior intake and exhaust efficiency combines the ordinarily opposed elements of good fuel economy and high power output at the highest possible levels. An advanced breather design and 3-piece oil ring improve oil circulation efficiency for lower oil consumption. The result is excellent reliability plus reduced running and maintenance costs.



Stable Governor Performance

- Separate-shaft governor optimized by a needle-bearing-supported output shaft helps smooth out engine speed fluctuations caused by varying loads.

Large-Capacity Air Cleaner

- Compact, large-capacity, Honda automotive-style air cleaner ensures efficient intake of cooler, denser air to suppress potential power degradation caused by the intake of hot air.
- Generous 3,100cm² cleaning element surface area and low-positioned air intake port help reduce air cleaner dust build-up.

Low Noise

- Cam and oil pump gears made of light-weight, durable, heat-resistant resin minimize gear-meshing noise.
- Plastic resin fan cover helps screen out engine noise.
- All-resin Scirocco cooling fan features irregular-pitch blades to minimize fan noise.
- Improved crankcase rigidity, extra-durable crankshaft, and optimized cam shape reduce mechanical noise and contribute to quieter, smoother continuous operation.



Low Vibration

- Honda-developed high-strength sintered aluminum connecting rods reduce weight in overlap areas to minimize vibration caused by the cylinder offset.
- Compact 90° V-twin configuration contributes to overall compactness and extremely low-vibration operation.



Clean Running

Clears Strict CARB and EPA Emissions Regulations

- V-twin series Honda engines featuring high-efficiency OHV combustion and a compact semi-hemispherical combustion chamber design already clear the CARB emissions regulations that are currently the strictest in the world, and will also clear the even tougher EPA regulations that will take effect in 2001.

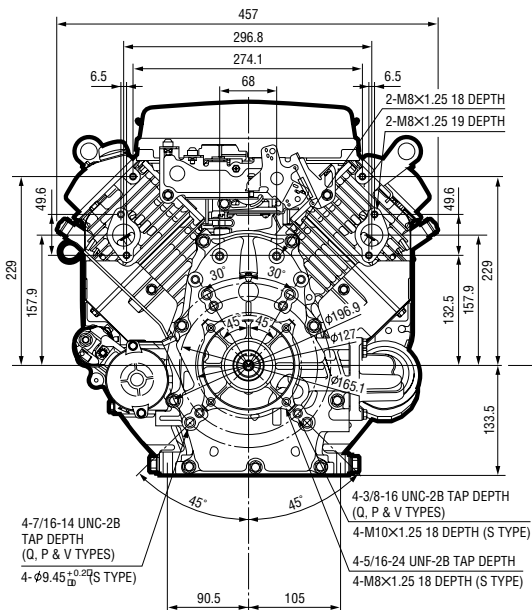
EPA = U.S. Environmental Protection Agency
CARB = California Air Resources Board

***Honda —
Power With a Clear Advantage.***



GX Horizontal Shaft V-Twins

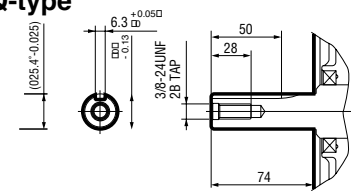
GX610/GX620 Dimensions (Q-type) (unit: mm)



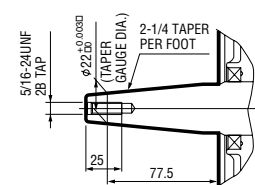
PTO Shaft Dimensions

(unit: mm)

Q-type



V-type



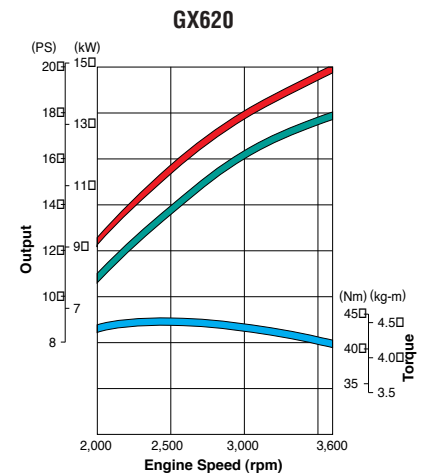
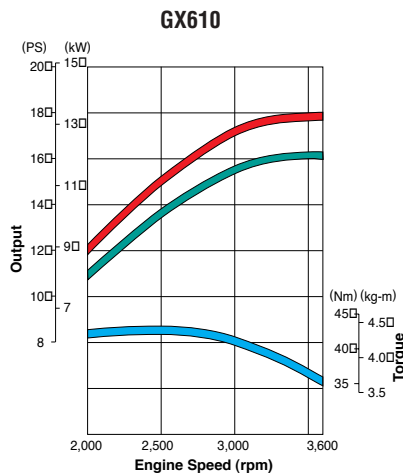
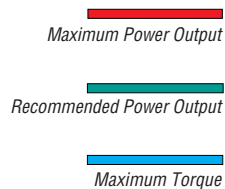
PERFORMANCE CURVES



GX610K1



GX620K1

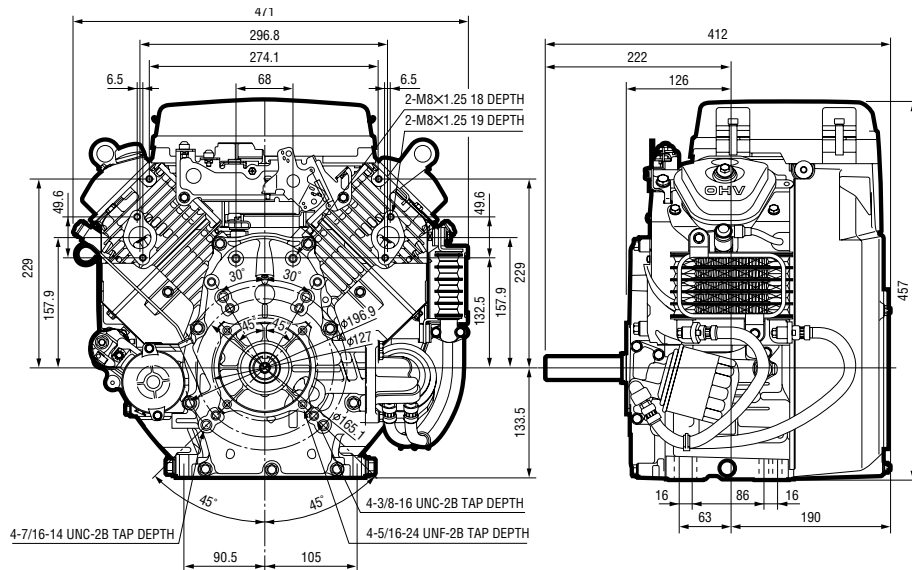


Model	GX610K1	GX620K1	GX670
Engine Type	Air-cooled 4-stroke OHV 90° V-twin; Horizontal Shaft		
Bore x Stroke	3.0 x 2.6 in (77 x 66 mm)		3.0 x 2.8 in (77 x 72 mm)
Displacement	37.5 cu in (614 cc)		40.9 cu in (670 cc)
Compression Ratio	8.3:1		
Maximum Power Output	18 HP/3,600 rpm (13.2 kW)	20 HP/3,600 rpm (14.9 kW)	24 HP/3,600 rpm (17.9 kW)
Recommended Maximum Power Output	16.2 HP/3,600 rpm (12.1 kW)	17.9 HP/3,600 rpm (13.3 kW)	21.5 HP/3,600 rpm (16 kW)
Maximum Torque	31.7 lbf ft (43.1 Nm)/2,500 rpm	32.5 lbf ft (44.1 Nm)/2,500 rpm	37.5 lbf ft (50.8 Nm)/2,500 rpm
Ignition System	Transistorized magneto		
Starting System	Electric or Electric/Recoil		Electric
ACG Output	12V-3A or 12V-20A		12V-20A
Decompression	Centrifugal		
Aircleaner	Heavy Duty Dual Element		
Oil Capacity	1.9 U.S. Qts (1.8 liters) w/oil filter replacement		2.01 U.S. Qts (1.9 Liter) w/oil filter
Fuel Consumption	0.51 lb/HPH (230 g/HPH, 313 g/kWh)		0.59 lb/HPH (269 g/HPH, 360 g/kWh)
Dimensions (LxWxH)	15.3 x 18 x 17.8 in (388 x 457 x 452 mm)		16.2 x 18.5 x 18 in (412 x 471 x 457 mm)
Dry Weight	92.6 lbs (42 kg)		94.8 lbs (43 kg)

Specifications are subject to change without notice.

GX Horizontal Shaft V-Twins

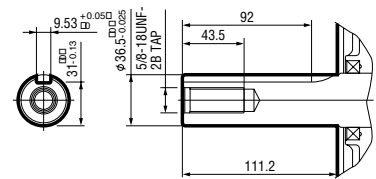
GX670 Dimensions (Q-type) (unit: mm)



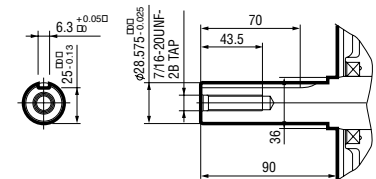
PTO Shaft Dimensions

(unit: mm)

B-type



T-type

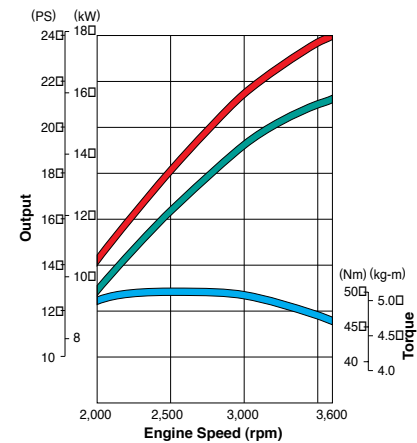


GX670

PERFORMANCE CURVES

Maximum Power Output
Recommended Power Output
Maximum Torque

GX670



New Features Improve Power and Reliability for the GX670!

Oil Cooler

In addition to their high-pressure automotive-style lubrication system and cartridge-type air filter, the new V-twin GX's come equipped with a forced-air oil cooler that constantly maintains optimum oil temperature to ensure consistently smooth, powerful performance even during extended operation.



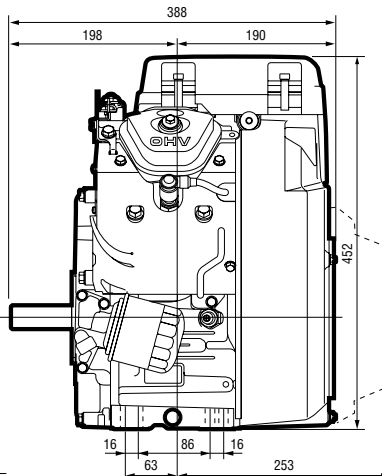
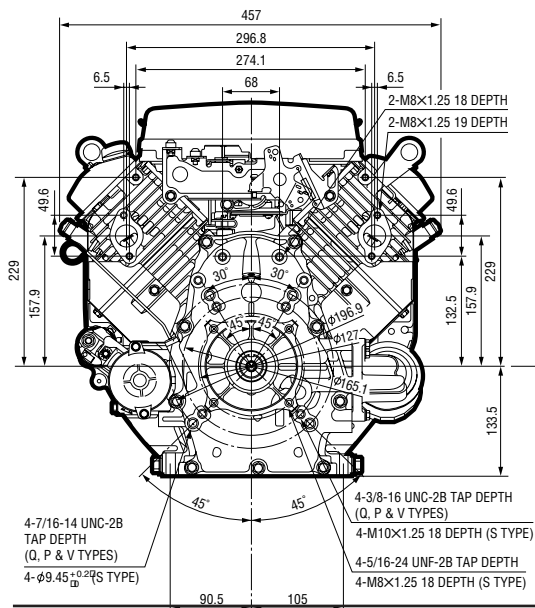
Twin-Barrel Carburetor

In addition to a diaphragm fuel pump that automatically supplies exactly the right amount of fuel, the carburetor itself features twin valves that reduce air-intake resistance to ensure consistently high power output and stable rpm.



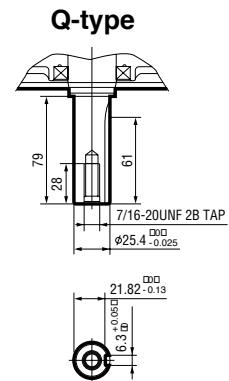
Vertical Shaft V-Twins

GXV610/GXV620 Dimensions (Q-type) (unit: mm)



PTO Shaft Dimensions

(unit: mm)

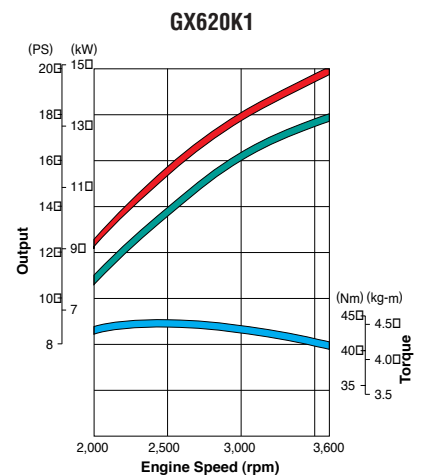
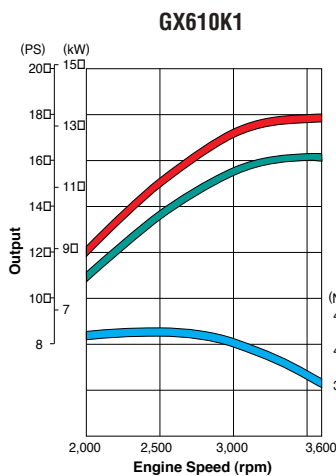
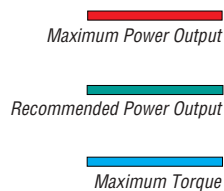


GXV610K1



GXV620K1

PERFORMANCE CURVES

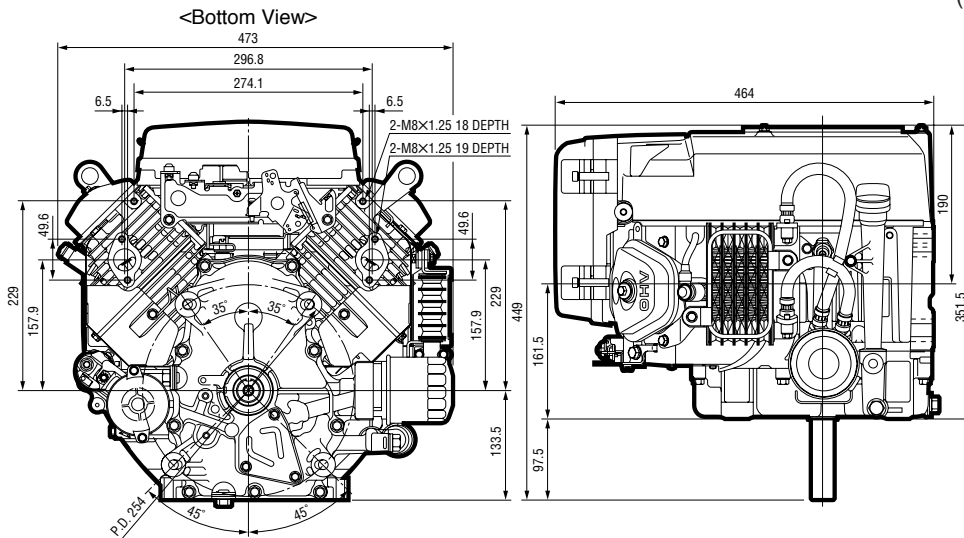


Model	GXV610K1	GXV620K1
Engine Type	Air-cooled 4-stroke OHV 90° V-twin; Vertical Shaft	
Bore x Stroke	3.0 x 2.6 in (77 x 66 mm)	
Displacement	37.5 cu in (614 cc)	
Compression Ratio	8.3:1	
Maximum Power Output	18 HP/3,600 rpm (13.4 kW)	20 HP/3,600 rpm (14.9 kW)
Recommended Maximum Power Output	16.2 HP/3,600 rpm (12.1 kW)	17.9 HP/3,600 rpm (13.3 kW)
Maximum Torque	31.7 lbf ft (43.1 Nm)/2,500 rpm	32.5 lbf ft (44.1 Nm)/2,500 rpm
Ignition System	Transistorized magneto	
Starting System	Electric or Electric/Recoil	
ACG Output	12V-3A or 12V-20A	
Decompression	Centrifugal	
Aircleaner	Heavy Duty Dual Element	
Oil Capacity	2.3 U.S. Qts (2.2 liters) w/oil filter replacement	
Fuel Consumption	0.51 lb/HPH (230 g/HPH, 313 g/kWh)	
Dimensions (LxWxH)	18.1 x 18 x 17 in (459 x 457 x 431 mm)	
Dry Weight	94.8 lbs (43 kg)	

Specifications are subject to change without notice.

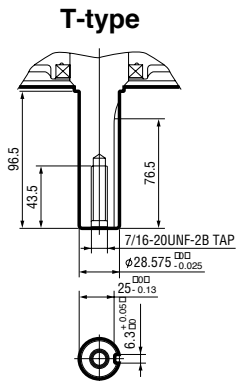
Vertical Shaft V-Twins

GXV670 Dimensions (Q-type) (unit: mm)



PTO Shaft Dimensions

(unit: mm)



PERFORMANCE CURVES



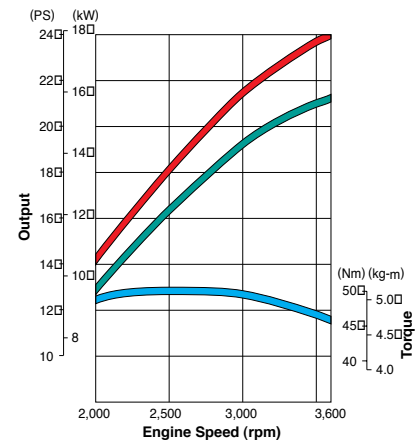
GXV670

Maximum Power Output

Recommended Power Output

Maximum Torque

GX670



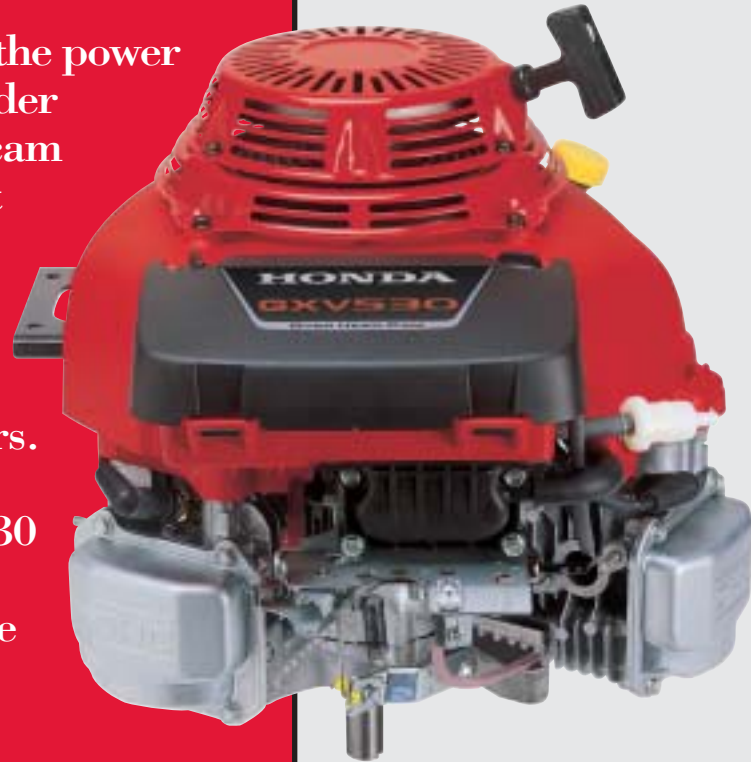
Model	GXV670
Engine Type	Air-cooled 4-stroke OHV 90° V-twin; Vertical Shaft
Bore x Stroke	3.0 x 2.8 in (77 x 72 mm)
Displacement	40.9 cu in (670 cc)
Compression Ratio	8.3:1
Maximum Power Output	24 HP/3600 rpm (17.9 kW)
Recommended Maximum Power Output	21.5 HP/3600 rpm (16 kW)
Maximum Torque	37.5 lbf ft (50.8 Nm)/2500 rpm
Ignition System	Transistorized magneto
Starting System	Electric
ACG Output	12V-20A
Decompression	Centrifugal
Aircleaner	Heavy Duty Dual Element
Oil Capacity	2.6 U.S. Qts w/oil filter replacement (2.5 liters)
Fuel Consumption	0.59 lb/HPh (269 p/HPh, 360 g/kWh)
Dimensions (LxWxH)	18.3 x 18.6 x 17.7 in (464 x 473 x 449 mm)
Dry Weight	99.2 lbs (55 kg)

Specifications are subject to change without notice.

Powerful, Compact OHC V-Twin Engines

Ideal for home lawn tractors

In the GXV530, Honda has combined the power and durability of its 90° V-twin 2-cylinder engines with a space-saving overhead cam (OHC) design to create highly compact engines offering low vibration, low noise, cleaner exhaust, excellent reliability, and 530cc worth of high power output ideal for power-hungry applications such as home lawn tractors. Backed by Honda's world-renowned engine-building experience, the GXV530 offers a high-level fusion of superior power, reliability and cost performance guaranteed to convince the most demanding users.

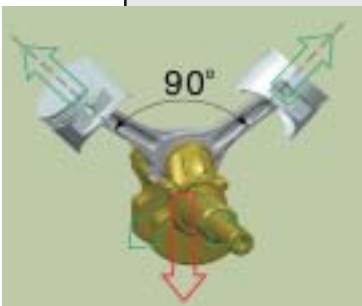


Powerful Performance

Extra-large 530cc displacement assures big power output and easy-to-use flat torque performance across the power band.

User-Friendly Low Vibration

A primary vibration-cancelling 90° V-twin cylinder layout and specially developed high-strength sintered-aluminum connecting rods that minimize cylinder offset and eliminate excess weight combine to reduce overall vibration to some of the lowest in the class.



Lower Exhaust Emissions

Four-stroke combustion, air resistance-reducing twin-barrel carburetors, and extra compact combustion chambers with center-positioned spark plugs all combine to promote more efficient, more complete fuel combustion providing low emission levels that clear CARB standards and are even below EPA 2006 levels.



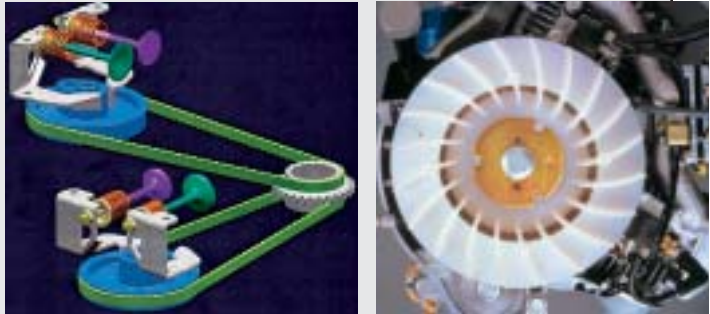
EPA = U.S. Environmental Protection Agency
CARB = California Air Resources Board

Advanced Lubrication Technology

The GXV530 features Honda's latest and most advanced lubrication system. QuadraLube™ Plus delivers oil to critical engine components through both pressure and splash lubrication. First, governor slinger paddles splash oil on the connecting rods, pistons, cylinders and upper ball bearing. Second, two timing belts carry oil to the cylinder heads lubricating the valve area. Plus, oil is pressure-fed to both connecting rod big ends and the crankshaft lower bearing. Finally, the oil pump forces lubrication through the Honda automotive-type oil filter to ensure a consistent supply of clean oil. This advanced oil delivery system allows the GXV530 to offer superior lubrication, reduced engine weight, quiet operation and a more compact design.

Pleasant Low-Noise Operation

Honda-developed built-in OHC timing belts, lightweight resin cams, and an



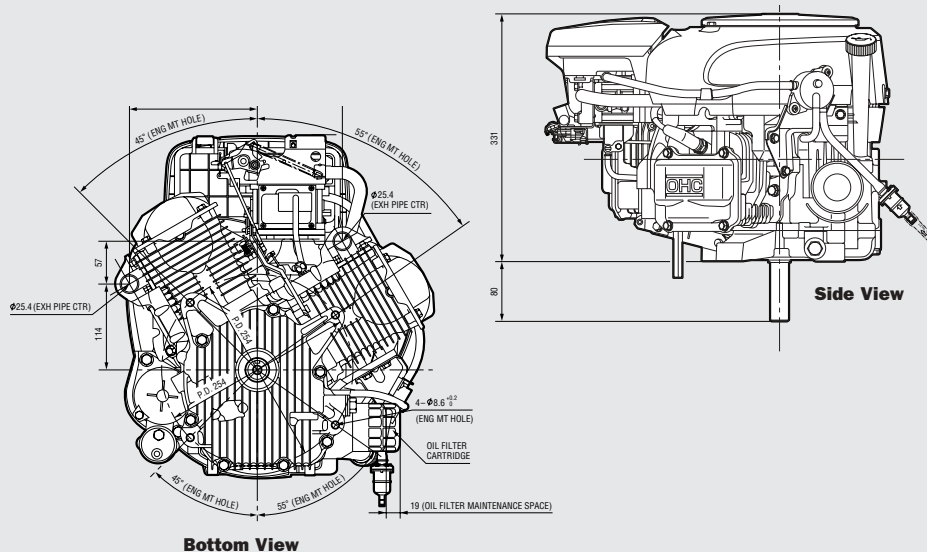
extra-quiet turbo cooling fan reduce engine noise to an absolute minimum, enhancing the smoother operating sound already inherent in the 2-cylinder V-twin layout.

Compact OHC Design

Cams positioned to the side of the valves (instead of above) makes GXV530 considerably more compact than conventional OHC models.

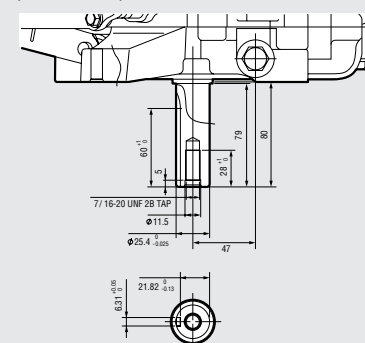
GXV530 Dimensions

(unit: mm)



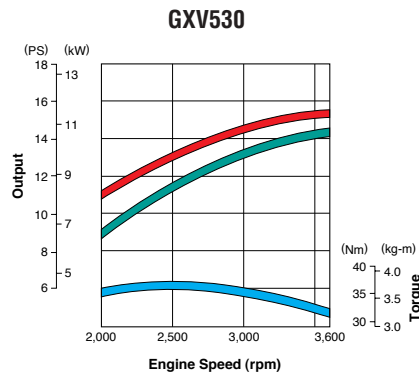
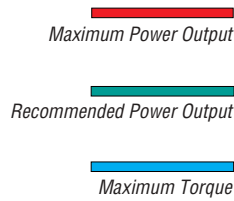
PTO Shaft Dimensions

(unit: mm)



OHC V-Twin Engines

PERFORMANCE CURVES



Model	GXV530 (vertical shaft)
Engine Type	Air-cooled 4-stroke OHC 90° V-twin
Bore x Stroke	3.03 x 2.24 in (77 x 57 mm)
Displacement	32.3 cu in (530 cm ³)
Compression Ratio	8:1
Maximum Power Output	16 HP (11.8 kW - 16 PS)/3600 rpm
Maximum Torque	26.9 lbf ft (36.5 Nm - 3.72 kg-m)/2500 rpm
Ignition System	Transistorized magneto
Aircleaner	Dual Element
Oil Capacity	1.38 qt with oil filter (1.3 liters)
Fuel Consumption	313 g/kWh (230 g/HPh, 0.51 lb/HPh)
Dimensions (LxWxH)	18 x 16.8 x 13 in (456 x 427 x 331 mm)
Dry Weight	67.2 lbs (30.5 kg)

Features	
Cylinder	Cast Iron Sleeve
Oil Filter	Standard
Fuel Pump	Optional
Control	1-lever or 2-lever
Starter	Electric or Electric+Recoil
Charge Coil	3A or 12A or 18A
Regulator/Rectifier	3A or 12A or 18A
Exhaust Pipe	Optional
Oil Drain Bolt	M20 x 1.5 or 3/8"-18NPTF*

*3/8"-18NPTF thread size is for temporary drain bolt provided assuming later installation of extension pipe.

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