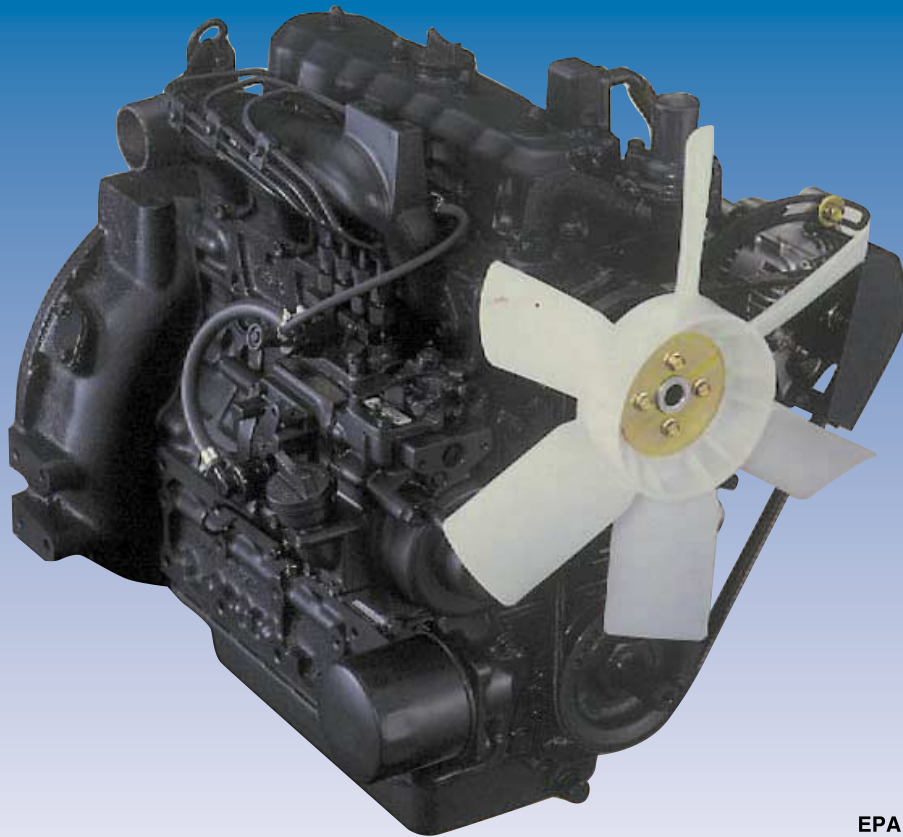


# *KUBOTA DIESEL ENGINE*

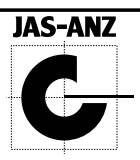


EPA Tier II Certified

## *For Generator*

*Displacement Range: 898 cc to 3318 cc*

*Stand-by Output Range: 7.4 kW to 43.1 kW*



# A Line Up of Quiet, Compact, Reliable Diesel Engines Made Especially for G

Kubota, a leading supplier of reliable diesel engines, introduces the convenient One Side Maintenance type E-TVCS engines.

Thanks to Kubota's innovative combustion systems, this system is designed to be more quiet, compact, and fuel efficient than conventional models in the same class.

If you are looking for a small sized diesel engine to power your generator, ask the people who specialize in it

–Ask Kubota.

## Features

### E-TVCS (Three Vortex Combustion System)

Kubota's highly efficient combustion system, located in a specially designed piston with a valve recess and a fan-shaped concave, produces an ideal air/fuel mixture by creating 3 vortices in the combustion chamber. This results in better cross flow of air and exhaust gas, lower air intake temperature and improved combustion efficiency.

### High in output, low in fuel consumption

E-TVCS superb combustion system not only improved the power output, but it has also reduced the engine's fuel consumption.

### Lower noise level

Noise levels are held to an unprecedented low level thanks to the E-TVCS, an Offset Piston with the standard built-in steel strut, and the increased rigidity of the crank and gear cases.

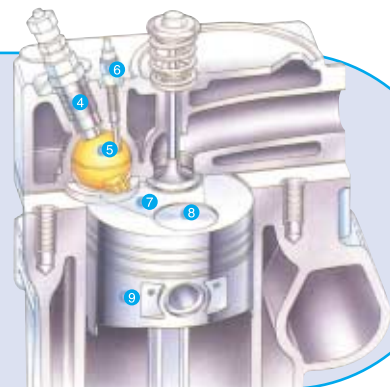
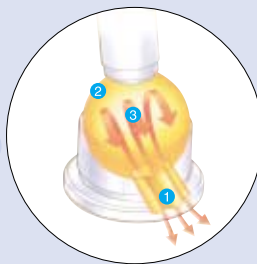
### High capacity governor and large size flywheel

By incorporating a high capacity flyweight governor with a large size flywheel, Kubota can control the governor regulation within 5%. Moreover, the SUPER THREE series and V3300(T) have a dual governor system that can be controlled with one lever. (1500 rpm or 1800 rpm)

### Super Glow System

The Super Glow System, not necessary in temperatures above 5°C, comes as standard equipment to start the engine in cold temperatures. For example, at -20°C (-4°F), the engine will start with only 10 seconds of preheating time.

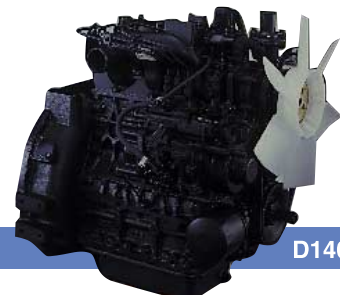
- 1 Shape of the combustion chamber inlet
- 2 Combustion chamber
- 3 Three vortex
- 4 Injection nozzle
- 5 Combustion chamber
- 6 Glow plug
- 7 Fan-shaped concave
- 8 Valve recess
- 9 Piston



D905-BG



V1505-BG



D1403-BG

# and Cleaner Exhaust Generators.

## Compact, Tough and Reliable Engines

Kubota is the leader in pioneering the compact engine concept. Our compact technology delivers "High Power Density" and "High Power Quality" engines that are also known for their "Toughness" and "Reliability"

## Cleaner Exhaust Engines

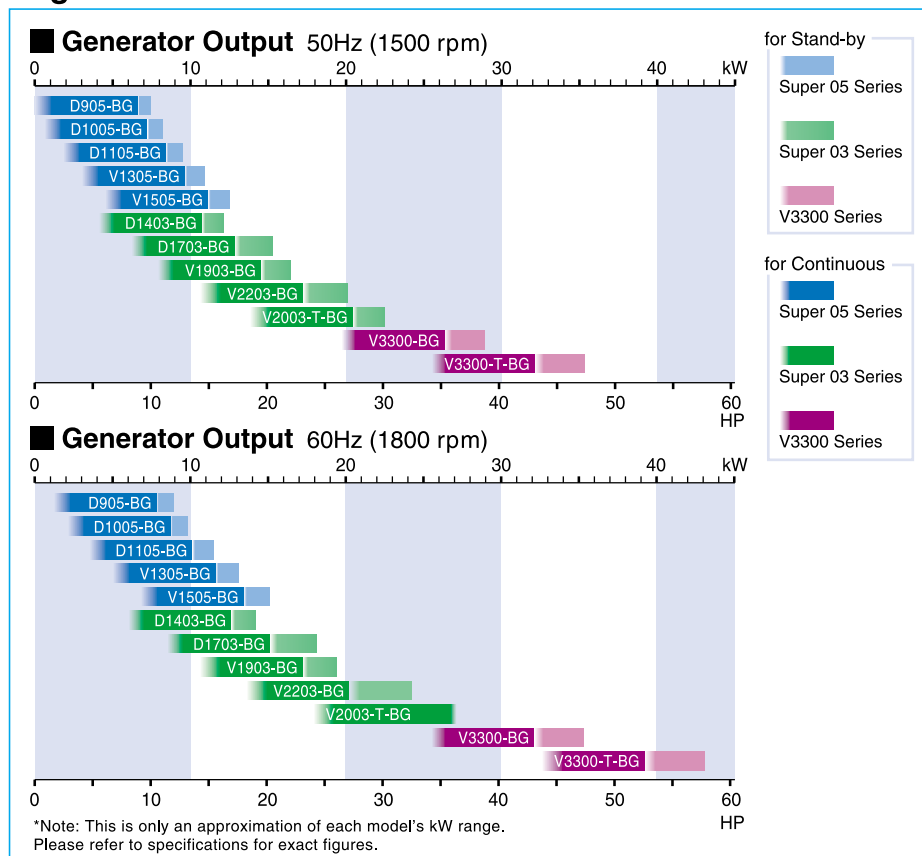
One of Kubota's major commitments has always been the development of a cleaner exhaust engine. Kubota was the first engine manufacturer to pass the U.S. CARB ULGE emission regulations for engines under 25HP. Kubota produced engines that have been certified, or are now currently in compliance with all emission regulations around the world.



\*Kubota's D1105 is the world's 1st ULGE diesel engine under 25HP to be certified (certificate shown at left) by CARB on Apr. 13, 1993.



## Engine Selection Guide



## 50Hz (1500 rpm)

Engine Model	Allowable Engine kW for Stand-by power generator
D905-BG	7.4kW
D1005-BG	8.2kW
D1105-BG	9.5kW
V1305-BG	10.9kW
V1505-BG	12.5kW
D1403-BG	12.1kW
D1703-BG	15.0kW
V1903-BG	16.4kW
V2203-BG	20.1kW
V2003-T-BG	22.5kW
V3300-BG	28.9kW
V3300-T-BG	35.3kW

## 60Hz (1800 rpm)

Engine Model	Allowable Engine kW for Stand-by power generator
D905-BG	8.9kW
D1005-BG	9.8kW
D1105-BG	11.5kW
V1305-BG	13.1kW
V1505-BG	15.1kW
D1403-BG	14.2kW
D1703-BG	18.1kW
V1903-BG	19.4kW
V2203-BG	24.2kW
V2003-T-BG	27.1kW
V3300-BG	35.3kW
V3300-T-BG	43.1kW



V2203-BG



V2003-T-BG



V3300-T-BG

## Specifications

Model			D905-BG	D1005-BG	D1105-BG
Type			Vertical 4-cycle liquid cooled Diesel		
No. of Cylinders			3		
Bore x Stroke		mm (in)	72.0 x 73.6 (2.83 x 2.90)	76.0 x 73.6 (2.99 x 2.90)	78.0 x 78.4 (3.07 x 3.09)
Displacement		L (cu.in.)	0.898 (54.8)	1.001 (61.08)	1.123 (68.53)
Combustion System			E-TVCS		
Intake System			Natural aspirated		
Fuel Injection Pump			Bosch type PFR MD pump		
Direction of Rotation			Counterclockwise (viewed from flywheel side)		
Injection Nozzle			Throttle type		
Compression Ratio			22.0		
Lubricating Oil			Quality better than CD class		
Oil Pan Capacity		L (gal)	5.1 (1.35)		
Cooling System			Radiator cooling		
Starter Capacity		V-A	12-0.9	12-1.0	
Alternator Capacity		V-A	12-12.5	12-30.0	
Used Fuel			Diesel fuel No. 2-D (ASTM D975)		
Dry Weight		kg (lbs)	93.0 (205.0)		
Stand-by	For 60Hz (1800 rpm)	kW [HP] (PS)	8.9 [11.9] (12.1)	9.8 [13.1] (13.3)	11.5 [15.4] (15.6)
	For 50Hz (1500 rpm)		7.4 [ 9.9] (10.0)	8.2 [11.0] (11.2)	9.5 [12.8] (13.0)
Continuous	For 60Hz (1800 rpm)		7.8 [10.5] (10.7)	8.7 [11.6] (11.8)	10.1 [13.6] (13.8)
	For 50Hz (1500 rpm)		6.6 [ 8.8] ( 8.9)	7.2 [ 9.7] ( 9.8)	8.4 [11.3] (11.5)

Model			V1305-BG	V1505-BG	D1403-BG
Type			Vertical 4-cycle liquid cooled Diesel		
No. of Cylinders			4		3
Bore x Stroke		mm (in)	76.0 x 73.6 (2.99 x 2.90)	78.0 x 78.4 (3.07 x 3.09)	80.0 x 92.4 (3.15 x 3.64)
Displacement		L (cu.in.)	1.335 (81.47)	1.498 (91.41)	1.393 (85.01)
Combustion System			E-TVCS		
Intake System			Natural aspirated		
Fuel Injection Pump			Bosch type PFR MD pump		
Direction of Rotation			Counterclockwise (viewed from flywheel side)		
Injection Nozzle			Throttle type		
Compression Ratio			22.0		23.0
Lubricating Oil			Quality better than CD class		
Oil Pan Capacity		L (gal)	6.0 (1.59)		7.0 (1.85)
Cooling System			Radiator cooling		
Starter Capacity		V-A	12-1.2		
Alternator Capacity		V-A	12-30		12-40
Used Fuel			Diesel fuel No. 2-D (ASTM D975)		
Dry Weight		kg (lbs)	110.0 (242.5)		148.0 (326.3)
Stand-by	For 60Hz (1800 rpm)	kW [HP] (PS)	13.1 [17.5] (17.8)	15.1 [20.2] (20.5)	14.2 [19.1] (19.4)
	For 50Hz (1500 rpm)		10.9 [14.6] (14.8)	12.5 [16.8] (17.0)	12.1 [16.2] (16.4)
Continuous	For 60Hz (1800 rpm)		11.6 [15.5] (15.7)	13.4 [17.9] (18.2)	12.6 [16.9] (17.1)
	For 50Hz (1500 rpm)		9.6 [12.9] (13.1)	11.1 [14.9] (15.1)	10.7 [14.3] (14.5)

Model			D1703-BG	V1903-BG	V2203-BG
Type			Vertical 4-cycle liquid cooled Diesel		
No. of Cylinders			3	4	
Bore x Stroke		mm (in)	87.0 x 92.4 (3.43 x 3.64)	80.0 x 92.4 (3.15 x 3.64)	87.0 x 92.4 (3.43 x 3.64)
Displacement		L (cu.in.)	1.647 (100.51)	1.857 (113.32)	2.197 (134.07)
Combustion System			E-TVCS		
Intake System			Natural aspirated		
Fuel Injection Pump			Bosch type PFR MD pump		
Direction of Rotation			Counterclockwise (viewed from flywheel side)		
Injection Nozzle			Throttle type		
Compression Ratio			23.0		
Lubricating Oil			Quality better than CD class		
Oil Pan Capacity		L (gal)	7.0 (1.85)	9.7 (2.56)	
Cooling System			Radiator cooling		
Starter Capacity		V-A	12-1.2	12-1.4	
Alternator Capacity		V-A	12-40		
Used Fuel			Diesel fuel No. 2-D (ASTM D975)		
Dry Weight		kg (lbs)	148.0 (326.3)	180.0 (396.8)	
Stand-by	For 60Hz (1800 rpm)	kW [HP] (PS)	18.1 [24.3] (24.6)	19.4 [26.0] (26.4)	24.2 [32.5] (33.0)
	For 50Hz (1500 rpm)		15.0 [20.1] (20.4)	16.4 [22.0] (22.3)	20.1 [26.9] (27.3)
Continuous	For 60Hz (1800 rpm)		15.1 [20.3] (20.6)	17.2 [23.0] (23.3)	20.2 [27.1] (27.5)
	For 50Hz (1500 rpm)		12.8 [17.2] (17.4)	14.5 [19.5] (19.8)	17.2 [23.0] (23.3)

Model			V2003-T-BG	V3300-BG	V3300-T-BG
Type			Vertical 4-cycle liquid cooled Diesel		
No. of Cylinders			4		
Bore x Stroke		mm (in)	83.0 x 92.4 (3.27 x 3.64)	98.0 x 110 (3.86 x 4.33)	
Displacement		L (cu.in.)	1.999 (121.99)	3.318 (202.48)	
Combustion System			E-TVCS		
Intake System			Turbo charged	Natural aspirated	Turbo charged
Fuel Injection Pump			Bosch type PFR MD pump		
Direction of Rotation			Counterclockwise (viewed from flywheel side)		
Injection Nozzle			Throttle type		
Compression Ratio			23.0		
Lubricating Oil			Quality better than CD class		
Oil Pan Capacity		L (gal)	9.7 (2.56)	13.2 (3.49)	
Cooling System			Radiator cooling		
Starter Capacity		V-A	12-1.4	12-2.5	
Alternator Capacity		V-A	12-40	12-45	
Used Fuel			Diesel fuel No. 2-D (ASTM D975)		
Dry Weight		kg (lbs)	186.0 (410.1)	241.0 (531.3)	250.0 (551.1)
Stand-by	For 60Hz (1800 rpm)	kW [HP] (PS)	27.1 [36.3] (36.8)	35.3 [47.3] (48.0)	43.1 [57.8] (58.6)
	For 50Hz (1500 rpm)		22.5 [30.1] (30.5)	28.9 [38.8] (39.4)	35.3 [47.3] (48.0)
Continuous	For 60Hz (1800 rpm)		24.5 [32.8] (33.3)	32.1 [43.0] (43.6)	39.2 [52.5] (53.2)
	For 50Hz (1500 rpm)		20.4 [27.3] (27.7)	26.3 [35.3] (35.8)	32.1 [43.0] (43.6)

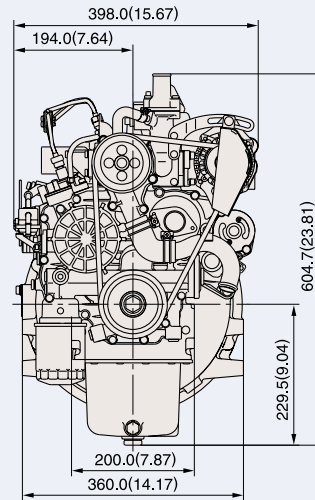
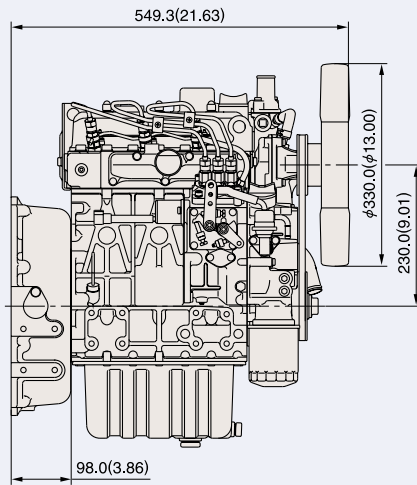
\*Specifications are subject to change without notice.

\*Dry weight is according to Kubota's standard specification. When specification varies, the weight will vary accordingly.

# Dimensions

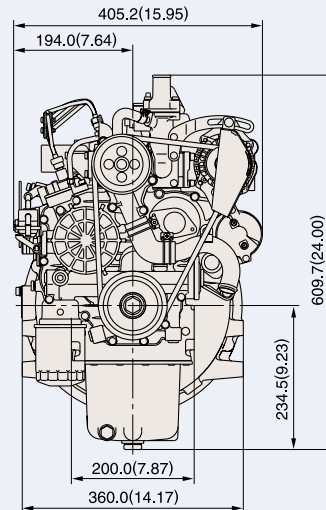
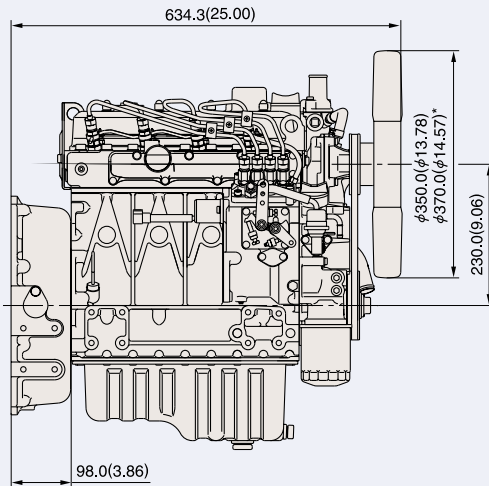
Unit : mm(in)

D905-BG  
D1005-BG  
D1105-BG



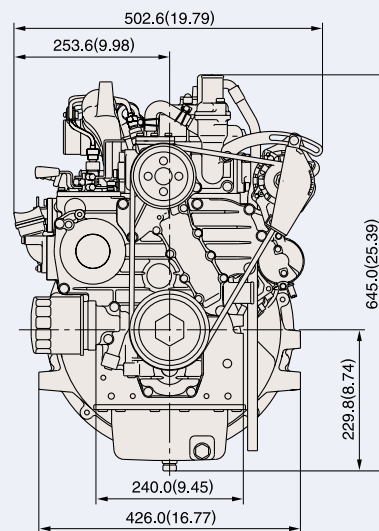
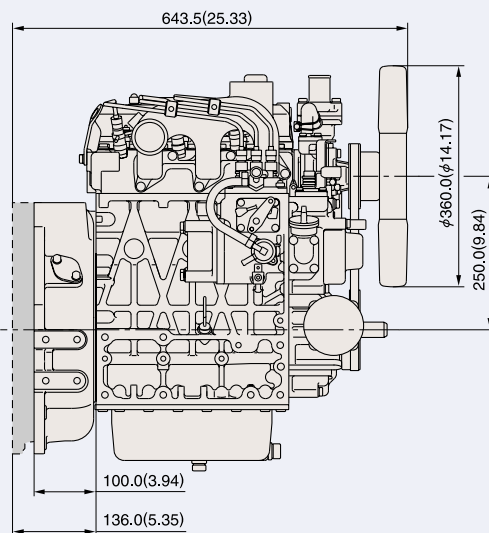
Attached short SAE No.5 Flywheel housing and Clutch No.6-1/2" Flywheel.


V1305-BG  
V1505-BG



\*The asterisked dimensions are for Model V1505-BG.  
Attached short SAE No.5 Flywheel housing and Clutch No.6-1/2" Flywheel.

D1403-BG  
D1703-BG

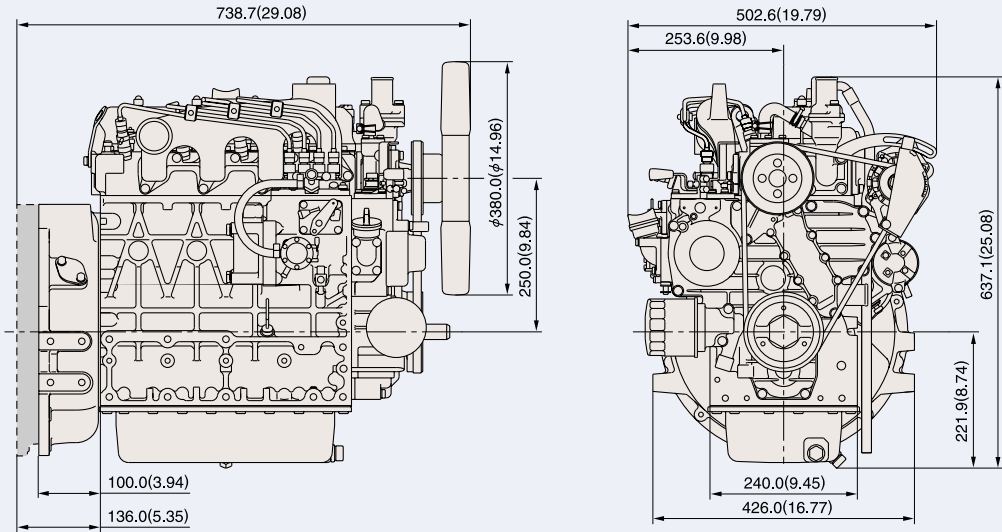


Attached short SAE No.4 Flywheel housing and Clutch No. 7-1/2" Flywheel.  \*The silhouetted portion is for normal SAE No.4 Flywheel housing.

# Dimensions

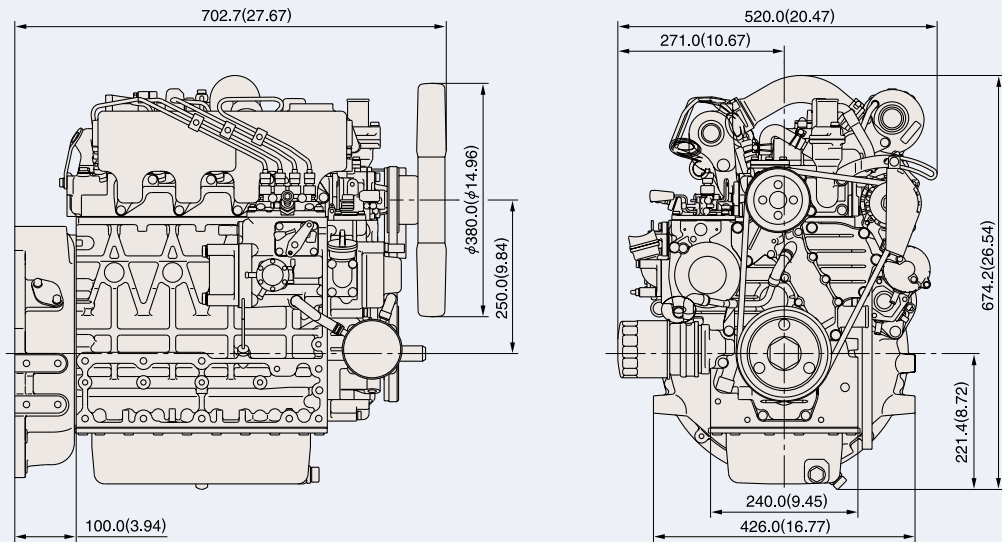
Unit : mm(in)

V1903-BG  
V2203-BG



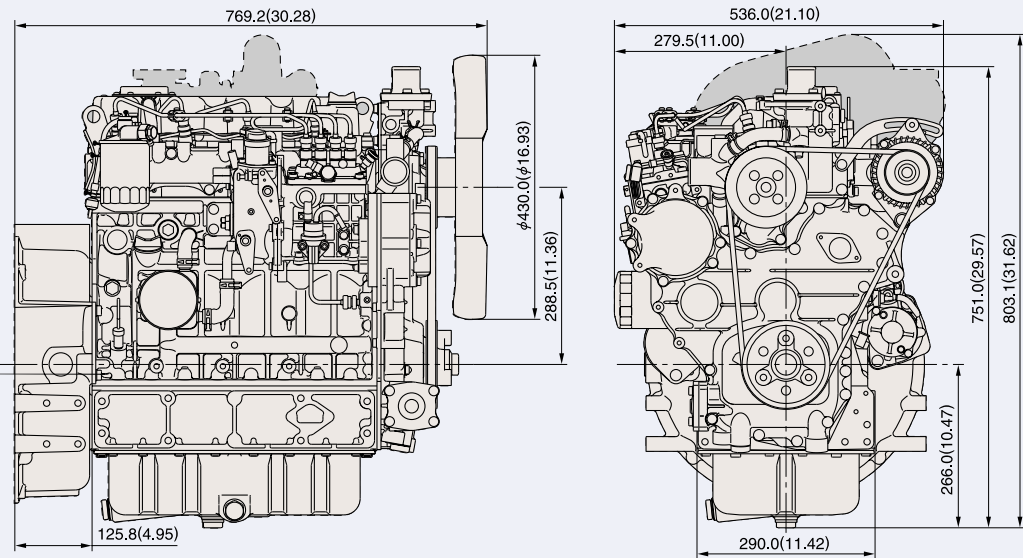
Attached short SAE No.4 Flywheel housing and Clutch No.7-1/2" Flywheel. \*The silhouetted portion is for normal SAE No.4 Flywheel housing.

V2003-T-BG



Attached short SAE No.4 Flywheel housing and Clutch No.7-1/2" Flywheel.

V3300-BG  
V3300-T-BG



Attached short SAE No.3 flywheel housing and Clutch No.11-1/2" Flywheel.

\*The silhouette is for turbo only.

# YOUR "BEST BUSINESS PARTNER"

KUBOTA's Goal is not only to be your engine supplier, but to be your "BEST BUSINESS PARTNER" by providing you with Comprehensive Strengths. KUBOTA's "High Quality", "Flexible Power Range" diesel engines will provide you more than just dependable power, but the power to move your business further ahead.

## Manufacturing Facilities

KUBOTA is one of the few engine manufacturers that produces engines from the casting level. In order to ensure optimum quality and customer satisfaction, KUBOTA has installed and will continue to upgrade its "state of the art" manufacturing facilities.



Automatic piston assembly line



ES casting line

## Quality Control & Emission Control

KUBOTA enforces stringent quality & emission test standards to create powerful, clean emission, quiet running, and virtually maintenance-free engines.

The emission test room at KBT R&D Center



## Support

KUBOTA's WWS (World-Wide Service) Network covers 50 countries around the world to serve you.



WWS Network

## Application Engineering

KUBOTA is actively involved from the very beginning in the Research and Development process of your products to provide the "Best-Matching" engine for your application.



Application checking

\*Specifications and dimensions are subject to change without prior notice.

# Kubota

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KUBOTA ENGINE

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