

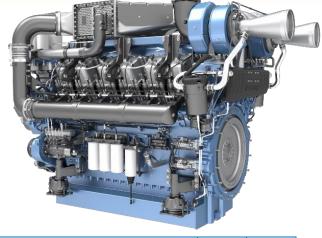
# **PowerKit Engine 12M55 Series**

# **General Specifications**

Bore x Stroke 180 x 215 mm Displacement 65.65 L N° of Cylinders 12 Cylinders Arrangement At Vee

Common Rail Fuel System Governor (Gov.) **ECU** 

Aspiration (Asp.) T/A-W



Diesel Engine		Gross Engine Output		Typical Generator Output				
Speed Rpm	Prime Power PRP	Standby Prime Power ESP Power (PRP)		Standby Power (ESP)		Asp.	Gov.	
	kWm	kWm	kWe	kVA	kWe	kVA		
1500	1850	2020	1680	2100	1840	2300	T/A-W	ECU
1500	1985	2210	1824	2280	2040	2550	T/A-W	ECU
1500	2200	2450	2000	2500	2200	2750	T/A-W	ECU
1800	2050	2230	1852	2315	2000	2500	T/A-W	ECU
1800	2200	2420	2045	2557	2250	2813	T/A-W	ECU
1800	2450	2700	2250	2813	2500	3125	T/A-W	ECU
	Speed Rpm 1500 1500 1500 1800 1800 1800	Speed Rpm Prime Power PRP kWm   1500 1850   1500 1985   1500 2200   1800 2050   1800 2200   1800 2450	Speed Rpm Prime Power PRP kWm Standby Power ESP kWm   1500 1850 2020   1500 1985 2210   1500 2200 2450   1800 2050 2230   1800 2200 2420	Speed Rpm Prime Power PRP kWm Standby Power ESP Power ESP Power ESP Prime Power ESP Power ES	Speed Rpm Prime Power PRP kWm Standby Power ESP kWm Prime Power (PRP)   1500 1850 2020 1680 2100   1500 1985 2210 1824 2280   1500 2200 2450 2000 2500   1800 2050 2230 1852 2315   1800 2200 2420 2045 2557   1800 2450 2700 2250 2813	Speed Rpm Prime Power PRP kWm Standby Power ESP kWm Prime Power (PRP) Star Power Power (PRP) Star Power Power (PRP)   1500 1850 2020 1680 2100 1840   1500 1985 2210 1824 2280 2040   1500 2200 2450 2000 2500 2200   1800 2050 2230 1852 2315 2000   1800 2200 2420 2045 2557 2250   1800 2450 2700 2250 2813 2500	Speed Rpm Prime Power PRP kWm Standby Power ESP kWm Prime Power (PRP) Standby Power (ESP)   1500 1850 2020 1680 2100 1840 2300   1500 1985 2210 1824 2280 2040 2550   1500 2200 2450 2000 2500 2200 2750   1800 2050 2230 1852 2315 2000 2500   1800 2200 2420 2045 2557 2250 2813   1800 2450 2700 2250 2813 2500 3125	Speed Rpm Prime Power PRP kWm Standby Power ESP kWm Prime Power (PRP) Standby Power (ESP) Asp.   1500 1850 2020 1680 2100 1840 2300 T/A-W   1500 1985 2210 1824 2280 2040 2550 T/A-W   1500 2200 2450 2000 2500 2200 2750 T/A-W   1800 2050 2230 1852 2315 2000 2500 T/A-W   1800 2200 2420 2045 2557 2250 2813 T/A-W   1800 2450 2700 2250 2813 2500 3125 T/A-W

Aspiration: T/A-W = Turbocharged & Air-to-Water Aftercooled

## Standard Equipment

### **Engine and block**

Vermicular graphite cast iron cylinder block and cylinder head

Alloyed cast iron, wet cylinder liners with fire ring on the

Separate cylinder head with 4 valves, top-down cooling Hydraulic bolt for both the cylinder head and bearing cap

Hardened steel forged crankshaft with induction hardened journals, crankpins and radius

Monoblock piston with PCJ

#### **Cooling system**

Radiator and hoses supplied separately

Two separate circuits

High temperature circuit equipped with thermostaticallycontrolled system with two gear driven coolant pumps

Low temperature circuit equipped with belt driven coolant pump

#### **Fuel system**

Super-high fuel supply system for more peak fire pressure

Pre-filter and main filters with electric fuel pump

### **Lubrication system**

Fin oil cooler, 5 oil filters and 1 centrifugal oil filter

Bypass oil and oil thermostat to keep the oil temperature steady

Electrical oil pre-lube pump to pre-lubricate the engine and ensure good starting ability

#### Air intake and exhaust system

2 single-stage turbochargers

Air filters with restriction indicator

Exhaust manifold and turbocharger shield for heat isolating

#### **Electrical system**

2 x 24 Vdc electric starter motors and n° 1 battery

charging alternator

LOP + HWT sensors

## Flywheel and housing

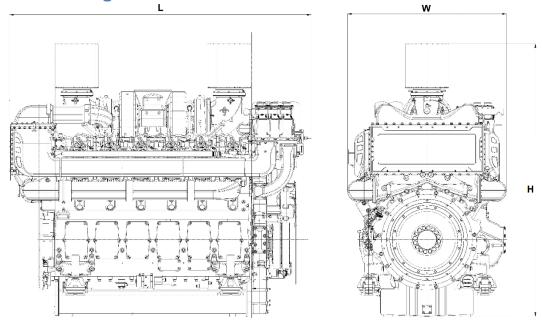
SAE 00 flywheel housing and 21" flywheel

These engines are designed for emergency standby power (ESP) applications only. The indicated PRP Power is for reference only.



# **PowerKit Engine 12M55 Series**

# **Dimensions and Weight**



Diesel Engine		Dimensions and dry weights without radiator						
Model	Speed Rpm	L mm	W mm	H mm	Weight Kg.			
12M55G2300/5	1500	2934	1544	2655	9550			
12M55G2550/5	1500	2934	1544	2655	9550			
12M55G2750/5	1500	2934	1544	2655	9550			
12M55G2000/6	1800	2934	1544	2655	9550			
12M55G2250/6	1800	2934	1544	2655	9550			
12M55G2550/6	1800	2934	1544	2655	9550			

# **Ratings definitions**

## **Emergency Standby Power (ESP)**

Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating. Typical operational hours of the engine is 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

## **Unlimited Prime Rated Power (PRP)**

Prime Power is the maximum power available for unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's PRP power rating during any 24 hour period. An overload capability of 10% is available, however, this is limited to 1 hour within every 12 hour period.

#### **Continuous Power (COP)**

Continuous Power is the maximum power available for an unlimited period of use at a constant load factor. No overload capability is allowed.

- 1) All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of ±5%.
- Test conditions: 100 kPa, 25°C air inlet temperature, relative humidity of 30%, with fuel density 0.84 kg/L. Derating may be required for conditions outside these; please contact the factory for details.
- 3) Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan and optional equipment.