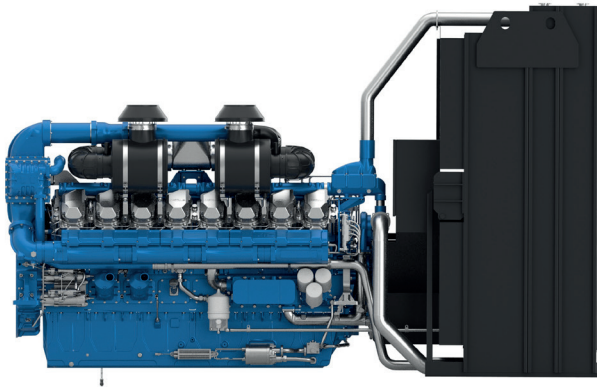




# 16M33

PowerKit ESP/PRP/DCP/COP Diesel Engine



Bore & Stroke (mm)	150 x 185
Displacement (L)	52.3
N° of Cylinders	16
Cylinders Arrangement	At Vee
Fuel System	High Pressure Common Rail
Governor (Gov.)	ECU
Aspiration (Asp.)	Turbocharged & air-to-water cooled

### Customer benefits

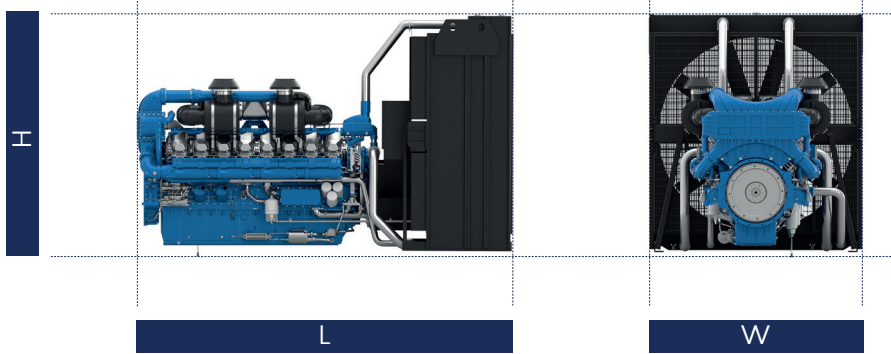
Warranty terms – 2 yrs unlimited hrs, 4 yrs/800h ESP  
 50°C Cooling package standard with low derating  
 Low fuel consumption across the range  
 Extended mean time between overhauls (MTBO)

ESP/ PRP/ DCP												
Diesel Engine Models	Gross Engine Output			Typical Generator Output						RPM	Asp.	Gov.
	ESP	PRP	DCP	ESP		PRP		DCP				
	kWm			kWe	kVA	kWe	kVA	kWe	kVA			
16M33G1900/5	1680	1530	1530	1520	199	1400	1750	1400	1750	1500	T/A-W	ECU
16M33G2000/5	100	1680	1680	1650	2050	1500	1875	1500	1875	1500	T/A-W	ECU
16M33G2250/5^	1980	1800	-	1800	2250	1650	2050	-	-	1500	T/A-W	ECU
16M33G1400/6	1580	1440		1400	1750	1275	1594	-	-	1800	T/A-W	ECU
16M33G1500/6	1680	1530	1530	1500	1875	1365	1706	1365	1706	1800	T/A-W	ECU
16M33G1650/6	1785	1625	-	1650	2063	1500	1875	-	-	1800	T/A-W	ECU
16M33G1750/6^	1920	1750	-	1750	2188	1590	1988	-	-	1800	T/A-W	ECU

\* ^ Primarily for ESP applications

COP									
COP Diesel Engine Models	Gross Engine Output		Typical Generator Output				RPM	Asp.	Gov.
	COP	PRP	COP		PRP				
	kWm		kWe	kVA	kWe	kVA			
16M33G2D0/5	1200	1530	1080	1350	1400	1750	1500	T/A-W	ECU
16M33G2D0/6	1380	1625	1249.6	1562	1480	1850	1800	T/A-W	ECU

## Dimensions and dry weight (mm/kg)



Diesel Engine	Speed RPM	Dimensions and dry weights including radiator							
		Standard radiator				Electrical optional radiator			
		L	W	H	Weight	L	W	H	Weight
		mm	mm	mm	Kg	mm	mm	mm	Kg
16M33G1900/5	1500	3967	2237	2485	6450	3678	2241	2643	6400
16M33G2000/5	1500	3967	2237	2485	6450	3678	2241	2643	6400
16M33G2250/5^	1500	3967	2237	2485	6450	3678	2241	2643	6400
16M33G2D0/5	1500	3967	2237	2485	6450	3678	2241	2643	6400
16M33G1400/6	1800	3967	2237	2485	6450	3678	2241	2643	6400
16M33G1500/6	1800	3967	2237	2485	6450	3678	2241	2643	6400
16M33G1650/6	1800	3967	2237	2485	6450	3678	2241	2643	6400
16M33G1750/6^	1800	3967	2237	2485	6450	3678	2241	2643	6400
16M33G2D0/6	1800	3967	2237	2485	6450	3678	2241	2643	6400

## Standard Equipment

Engine and block	<p>Cast iron cylinder block with inspection door per cylinder</p> <p>Cast iron cylinder liners, wet type and replaceable valves guides and seats</p> <p>Separate cast iron cylinder heads with 4 valves</p> <p>Hardened steel forged crankshaft with induction hardened journals, crank pins and radius</p> <p>Lube oil cooled light alloy pistons with high performance piston rings</p>
Cooling System	<p>Radiator and hoses supplied separately</p> <p>Two separate circuits</p> <p>High temperature circuit equipped with thermostatically-controlled system with two gear driven coolant pumps</p> <p>Low temperature circuit equipped with belt driven coolant pump</p>
Lubrication system	<p>Full flow screw able oil filters</p> <p>Lube oil purifier with replaceable cartridge</p> <p>Water cooled lube oil cooler</p>
Fuel system	<p>High pressure common rail system with one high pressure pump gear driven in the V angle of cylinder block</p> <p>Two rails mounted on the sides of the engine, double wall, under inlet manifold</p> <p>Duplex fine filter and water separation filter assembly with transparent cup for better efficiency</p> <p>Electric fuel priming pump integrated in the filters support</p>
Air intake and exhaust system	<p>The 2 compressors are feeding a single water-air intercooler, mounted over the flywheel housing, with vertical flow</p> <p>Special rear mounted air filter with restriction indicator</p> <p>Exhaust manifold and turbocharger shield for heat isolating</p>
Electrical System	<p>2 x 24V DC electric starter motors and n° 1 battery charging alternator</p> <p>Low oil pressure &amp; high water temperature sensors</p>
Flywheel and housing	<p>SAE 0 flywheel housing and 18" flywheel</p>

## 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.

### Data Centre Power (DCP)

Data Centre Power is defined as being the maximum power which a generating set is capable of delivering while supplying a variable or continuous electrical load and during unlimited run hours. Depending on the sites to supply and the availability of reliable utility, the generating set manufacturer is responsible to define what power level he is able to supply to fulfil that requirement including hardware or software or maintenance plan adaptation.

### 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.

### 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.

- 1) All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of  $\pm 5\%$ .
- 2) 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.

