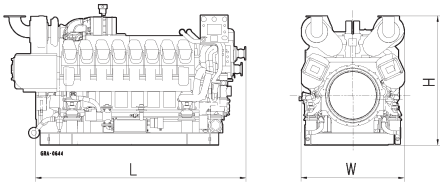
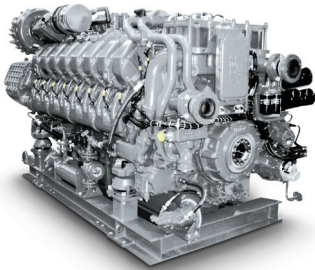




Oil & Gas

SERIES 4000

Generator/pump power packages
for the oil & gas industry - constant speed -



Engine	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V	2400x1520x1930 (100x63x69)	6410 (14132)
16V	2850x1520x1930 (119x63x69)	7610 (16777)
20V	3470x1510x2050 (137x60x81)	10680 (23545)

All dimensions are approximate, for complete information refer to the installation drawing.

Engine		
Bore/stroke	mm (in)	12V/16V: 165/190 (6.5/7.5), 20V: 170/210 (6.7/8.3)
Cylinder configuration		90°V
Displacement/cylinder	l (cu in)	12V/16V: 4.06 (248), 20V: 4.77 (291)
Displacement, total	l (cu in)	12V: 48.7 (2972); 16V: 65.0 (3967), 20V: 95.4 (5822)
Fuel specification		EN 590, Grade No.1-D/2-D

Optional equipment and finishing shown. Standard may vary.

	Continuous Power 3A	Prime Power 3B	Prime Power limited 3C
Optimization	6	6	6
Engine Type	Rated Power kW (bhp) at 1500 rpm - (50 Hz)		
12V 4000 P61*	1140 (1528)	1320 (1770)	1320 (1770)
16V 4000 P61*	1520 (2038)	1760 (2360)	1760 (2360)
20V 4000 P63	2245 (3011)	2600 (3487)	2600 (3487)
Optimization	2, 6	2, 6	2, 6
Engine Type	Rated Power kW (bhp) at 1800 rpm - (60 Hz)		
12V 4000 P81*	1380 (1850)	1600 (2145)	1600 (2145)
16V 4000 P81*	1840 (2465)	2105 (2820)	2105 (2820)
20V 4000 P83	2425 (3250)	2800 (3755)	2800 (3755)

Optimization: 2 Exhaust emission EPA 40 CFR 89/Tier 1
6 Exhaust emission IMO
* ATEX Zone 2 classification available

Application	Power definition	
3A	Continuous operation w/100% load	Load factor: ≤ 100 %, Operating hours: unrestricted, Overload: 10% capability (ICXN)
3B	Continuous operation w/ variable load	Load factor: < 75%, Operating hours: unrestricted, Overload: 10% capability (ICXN)
3C	Standby operation w/variable load	Load factor: < 75%, Operating hours: max. 1000 /yr, Overload: 10% capability (ICXN)

Power output within 5% tolerance at standard conditions. Power definition according to ISO 3046 (ratings also correspond to SAE J 1995 and SAE J 1349 standard conditions)

Standard equipment	
Starting system	Electric starter
Fuel system	Common rail injection system, Double-walled high pressure fuel lines, Duplex fuel filters with changeover valves
Lube oil system	Multi-stage lube oil filters with changeover valve, Closed crankcase breather system
Combustion air system	Horizontal air inlet
Exhaust gas system	Horizontal exhaust gas outlet
Cooling system	HT (JW) and LT (CAC) coolant circuit with coolant pumps, Water cooled exhaust gas manifolds and turbochargers < 220°C
Flywheel/housing	SAE 00 flywheel and flywheel housing
Engine mounting	Resilient engine mounts at engine front and rear
Electronics and instrumentation	MDEC (12V/16V), ADEC (20V) engine control and management systems with extended sensor scope for offshore applications

Optional equipment	
Starting system	Redundant starting system (electric, pneumatic, hydraulic)
Fuel system	Fuel pre-filter with water separator
Lube oil system	Lube oil centrifugal filters, Special oil sump for inclinations up to 25° in all directions, Hand pump for waste oil removal
Combustion air system	Engine mounted air filters, Heavy duty air filters (shipped loose), Electrically operated air shut-off flaps
Coolant system	Coolant connecting parts (flex. hoses and rubber bellows), Radiator fan drive, Coolant preheating
Power transmission	Resilient type coupling
Accessory drives	Battery charging alternator, 28VDC, Auxiliary PTO's for hydraulic pump drives
Certification	3 rd party certification available upon request

Reference conditions:

- > Intake-air temperature: 25°C (77°F)
- > Ambient air pressure: 1000 mbar (14.5 psi)
- > Charge air coolant temp.: 45°C (113° F)
- > Altitude above sea level: 100 m (328 ft)
- > Rated power available up to 40°C (104°F) and 400 m (1312 ft)

Subject to change without notice. Customization possible.
Engines illustrated in this document may feature options not fitted as standard.