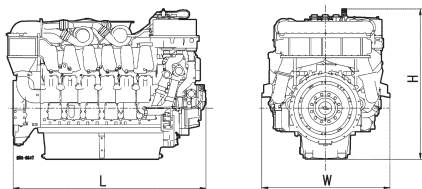
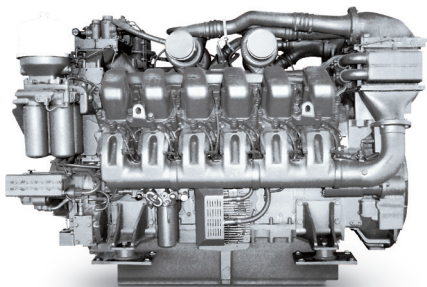




Oil & Gas

SERIES 4000

Diesel engines for the oil & gas industry
well services - Frac operation



Engine	Dimensions (LxWxH) mm (in)	Mass, dry kg (lbs)
12V 4000 S01	2413x1519x1746 (95x60x69)	6045 (13327)
16V 4000 S01	3020x1590x1740 (119x63x69)	7085 (15620)
12V 4000 S03	2490x1449x1870 (98x57x74)	6155 (13570)
16V 4000 S03	2975x1476x1867 (117x58x74)	7514 (16566)

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

Engine		
Bore/stroke	mm (in)	4000 S01: 165/190 (6.5/7.5), 4000 S03: 170/210 (6.7/8.3)
Cylinder configuration		90°V
Displacement/cylinder	l (cu in)	4000 S01: 4.06 (248), 4000 S03: 4.77 (291)
Displacement, total	l (cu in)	4000 S01: 48.7 (2972), 4000 S03: 57.2 (3491)
Fuel specification		EN 590, Grade No.1-D/2-D

Optional equipment and finishing shown. Standard may vary.

	Rated power ICFN			Peak torque		
	kW	bhp	rpm	Nm	lb-ft	rpm
Optimization	19					
Application	Continuous operation (4D)					
12V 4000 S83	1680	2253	1900	10000	7376	1540
12V 4000 S83L	1865	2500	1900	10460	7715	1560
16V 4000 S83	2237	3000	1900	13333	9834	1540
Optimization	□*					
16V 4000 S83L	2461	3300	1900	Please consult your distributor		
Optimization	2					
12V 4000 S81	1678	2250	1900	9339	6888	1650
16V 4000 S81	2237	3000	1900	12452	9184	1650

Optimization: 2 Exhaust emission EPA 40 CFR 89/ Tier 1 compliant
 19 Exhaust emission EPA 40 CFR part 89/Tier 2 compliant
 □* Emission optimized without certification (below Tier 1 level)
 * Alternative torque curves available to meet transmission input limits



Application	Power definition	
4D	Continuous operation w/low load	Load factor: < 40%, Operating hours: max. 2000/yr, Overload: Fuel stop (ICFN)

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	Hydraulic starter
Fuel system pump	Common rail injection system, Double-walled high pressure fuel lines, secondary fuel filters with hand priming (Tier 2 only)
Lube oil system	Multi-stage lube oil filters, Closed crankcase breather system (Tier 2 only)
Cooling system	Separate HT (JW) and LT (CAC) coolant circuits with separate coolant pumps and thermostats
Flywheel/housing	SAE 00 wet flywheel housing
Engine mounting	Trunnion mount (three-point mounting)
Electronics and instrumentation	DDEC/ADEC engine control and management systems

Optional equipment	
Lube oil system	2 or 4 liter centrifugal oil filters
Combustion air system	Air shut-off flaps (Tier 2 only)
Exhaust gas system	Exhaust gas bellows with companion flanges
Coolant system	Coolant connecting parts (weld-on flanges and rotatable elbows), Front crank PTO for radiator fan drive
Accessory drives	28 VDC battery charging alternator, Auxiliary PTO's for hydraulic pump drives

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)

Subject to change without notice. Customization possible.

Engines illustrated in this document may feature options not fitted as standard.