2008. The engine for construction.

9-27 kW at 1500-3000 rpm

These are the characteristics of the 2008:

3- and 4 cylinder naturally aspirated in-line engines.
Water cooled.
Compact engine design.
Innovative and efficient injection- and combustion system.
Customized component system with many different peripheral parts.
Cold starting ability even under extreme climatic conditions.
Full power PTO at flywheel end for axial or radial drives, two optional laid back PTOs from gear end cover.

Your benefit:

- Indirect injection, thus more smooth and quiet running engine helps reducing your insulation cost.
- Compact engine, thus reducing equipment redesigning cost.
- Convincing power to weight ratio.
- Low exhaust emissions meeting EU-RL 97/68 Stage 2 and US-EPA Nonroad (Tier 2).
- High reliability combined with long maintenance intervals means less after sales cost for your customers.
- Impressed low level on complexity helps your after sales business.

Engine description

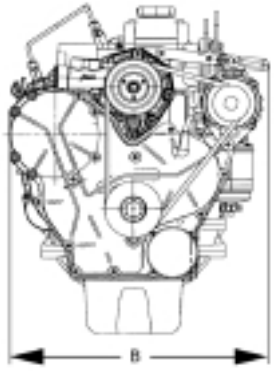
Type of cooling:	Water-cooled, water circulation pump driven by a V belt, thermostat and integrated bypass system
Crankcase:	Ribbed, thin-wall grey cast iron with detachable sump
Crankcase breather:	Closed-circuit breather
Cylinder head:	Adaptable inlet manifold
Valve arrangement/ Timing:	Overhead valves in cylinder head, one inlet and one exhaust valve per cylinder, actuated via hydraulic tappets, push rods and rocker arms, driven by anti-backlash helical cut gears and camshaft.
Piston	Three-ring piston, two compressions rings and one oil scraper ring
Piston cooling:	Splash oil-cooled
Connecting rod:	Drop-forged steel rod
Crankshaft and big end bearings	Ready-to-install bi-metal bearings
Crankshaft:	Steel forged in 3 cylinder Cast iron in 4 cylinder
Camshaft:	Chilled cast iron
Lubrication system:	Gear driven lubricating oil pump
Lube oil cooler:	Externally arranged water-cooled (optional)
Lube oil filter:	Full flow spin-on cartridge filter
Injection pump/ Governor:	Cassette type fuel pump, Ricardo Advanced Comet type indirect injection, fixed and variable speed, electronic governing
Fuel lift pump:	Diaphragm
Injection nozzle:	Pintle nozzle
Fuel filter:	Replaceable cartridge with water trap
Alternator:	Three-phase alternator, 14 V; 50 A (Standard)
Starter motor:	2,0 kW; 12 V
Options:	Intake manifold connections, exhaust manifolds connections, hydraulic pumps drives, engine mounts, multi oil pan drains, dipsticks, SAE 4/5 flywheel housings, fly wheel drives, alternator 12 V, oil filter position horizontal, vertical and remote, oil filler in cylinder head cover and low level fill on side of crankcase

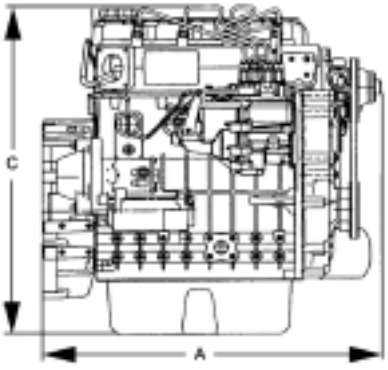
Technical Data

Engine Type		D 2008 L 3	D 2008 L 4
Number of cylinders		3	4
Bore/stroke	mm | inch	76/86 | 3.0/3.4	76/86 | 3.0/3.4
Displacement	l | cu inch	1.17 | 71	1.56 | 95
Compression ratio		23.5	23.5
Max. rated speed	min^{-1} | rpm	3000	3000
Mean piston speed	m/s | ft/sec	8.6 | 28.2	8.6 | 28.2

Power ratings for construction equipment engines[1]			
Power ratings for automotive- and industrial engines [2]	kW | hp	20 | 27	27 | 36
at speed	min^{-1} | rpm	3000	3000
Mean effective pressure	bar | psi	6.9 | 100.0	6.8 | 98.6
Power ratings for continuous operation [3]	kW |hp	18 | 24	24 | 32
at speed	min^{-1} | rpm	3000	3000
Mean effective pressure	bar | psi	6.2 | 89.9	6.1 | 88.5
Max. torque	Nm | lb-ft	71 | 52	92 | 68
at speed	min^{-1} | rpm	2000	2000
Minimum idle speed	min^{-1} | rpm	900	900
Specific fuel consumption [4]	g/kWh | lb/hp-hr	250 | 0.405	250 | 0.405
Weight to DIN 70020, Part 7A	kg | lb	155 | 342	189 | 417

Dimensions





Engine type		A	B	C
D 2008 L 3	mm | inch	538 | 21.2	480 | 18.9	620 | 24.4
D 2008 L 4	mm | inch	627 | 24.7	480 | 18.9	620 | 24.4

Model designation

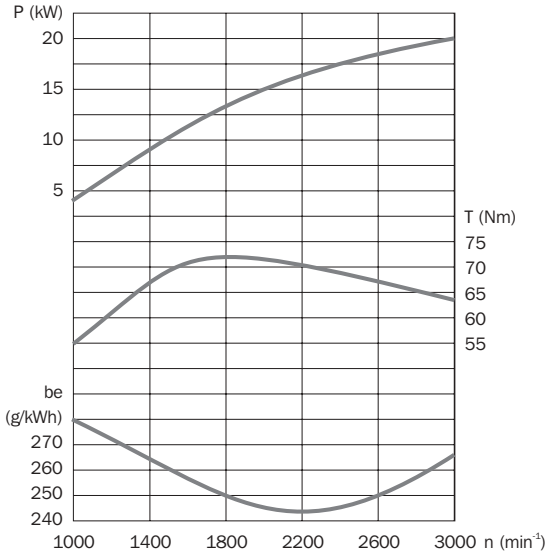
D 2008 L 4

- Number of cylinders
- L = in-line engine
- Engine family designation
- D = Diesel engine

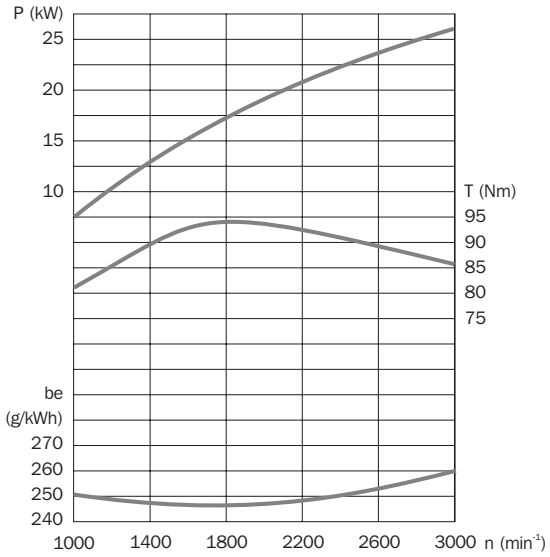
1) Power ratings at flywheel net, without cooling system
2) For intermittent operation to ISO 3043-1/ISO 1585
3) For stop power acc. to 3046/1 (ICXN)
4) At optimal operating point. Specific fuel consumption based on diesel fuel with a specific gravity of 0.835 kg/dm³ at 15°C

The values given in this data sheet are for information purposes only and not binding. The information given in the offer is decisive.

Standard engines



D 2008 L 3



D 2008 L 4

Order no. 0031 2079 / 03 / 2004 / VM-V

The engine company.

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