TCD 2011

For mobile machinery

23 - 74.9 kW|31 - 100 hp at 1600 - 2800 min^{-1}|rpm
EU Stage IIIA / US EPA Tier 3

- 2, 3 and 4-cylinder engines and 4-cylinder engines with inline turbocharging, oil-cooled or optionally with an integrated cooling system. The 4-cylinder engine is also available with water cooling and charge air cooling.
- The compact engine design and an optional PTO drive reduce the installation costs and increase the number of applications.
- Best cold starting properties even under extreme conditions.

- The engines in the power range < 56 kW meets to the US EPA Tier 4 i.

- The robust engine design allows worldwide operation even with high sulphur fuels.
- All parts for maintenance on one side of the engine, long oil change intervals and easy changing of engine fluids reduce the running costs and increase the availability of the machinery.
- An efficient injection system and optimized combustion ensure optimum engine performance at low consumption.

Technical data

air/oil-cooled with integrated cooling system

Engine type		D 2011 L2 I	D 2011 L3 I	D 2011 L4 I	TD 2011 L4 I
No. of cylinders		2	3	4	4
Bore/stroke	mm | in	94/112 |3.7/4.41	94/112 |3.7/4.41	96/125 |3.78/4.92	96/125 |3.78/4.92
Capacity	l | cu in	1.55 |94.6	2.33 |142.2	3.62 |220.9	3.62 |220.9
Compression ratio		19:1	19:1	19:1	18:1
Nominal speeds	min^{-1} | rpm	2300 - 2800	2300 - 2800	2300 - 2600	2300 - 2600

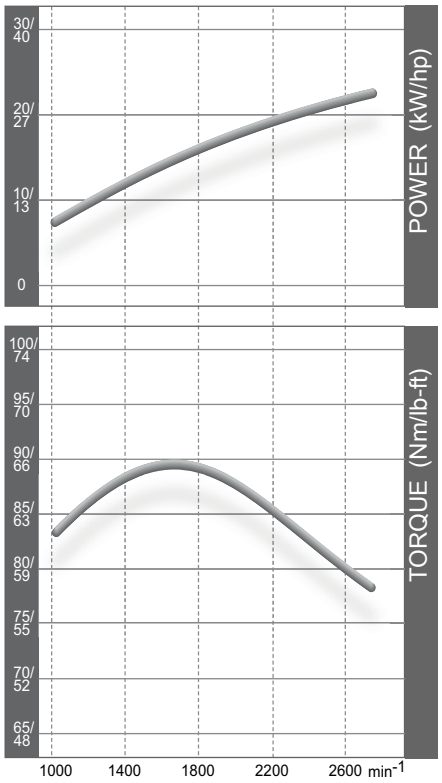
Power output[1)]		D 2011 L2 I	D 2011 L3 I	D 2011 L4 I	TD 2011 L4 I
Power output as per ISO 14396	kW | hp	23 |31	36.4 |49	47.5 |64	57.6 |77.2
at speed	min^{-1} | rpm	2800	2800	2600	2600
Max. torque	Nm | lb/ft	90 |66.4	137 |101	190 |140.1	240 |177
at speed	min^{-1} | rpm	1700	1700	1700	1600
Minimum idling speed	min^{-1} | rpm	900	900	900	900
Specific fuel consumption[2)]	g/kWh | lb/hph	227 |0.373	225 |0.370	226 |0.372	233 |0.383
Weight as per DIN 70020 Part 7A[3)]	kg | lb	175 |386	217 |478	270 |595	270 |595

1) Capacity data on flywheel net.
2) Best full load consumption refers to diesel with a density of 0.835 kg/dm^3 at 15°C | 6.96 lb/US gallon at 60°F.
3) Without starter/dynamo, cooler and fluids but with flywheel and flywheel housing.

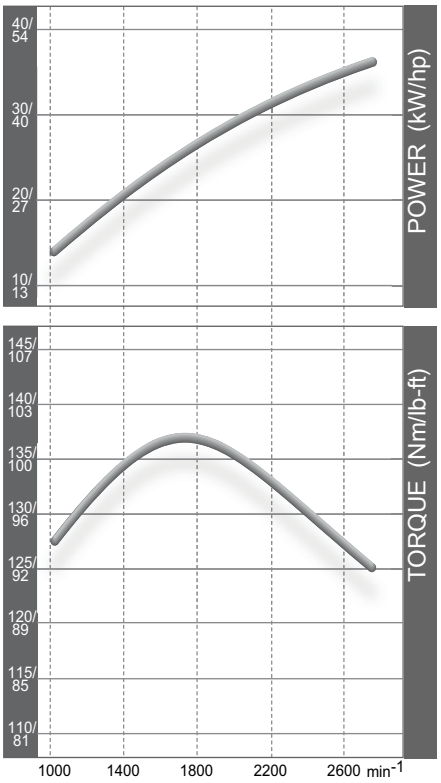
The data on this data sheet are for information purposes only and are not binding values. The data in the quotation is definitive.

Torque curve

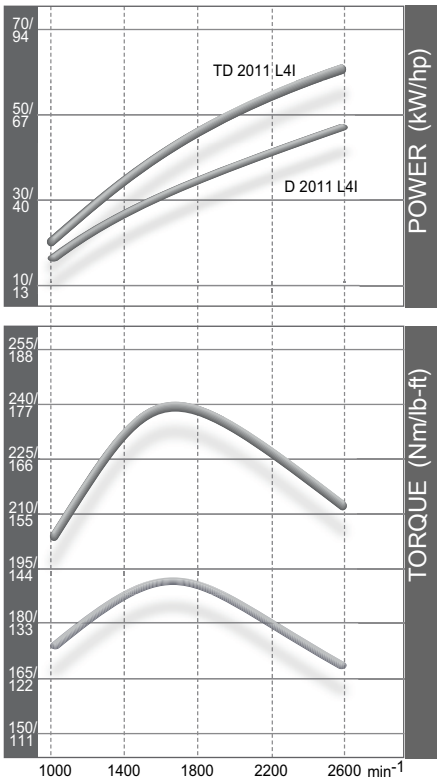
D 2011 L2 I - 23 kW|31 hp



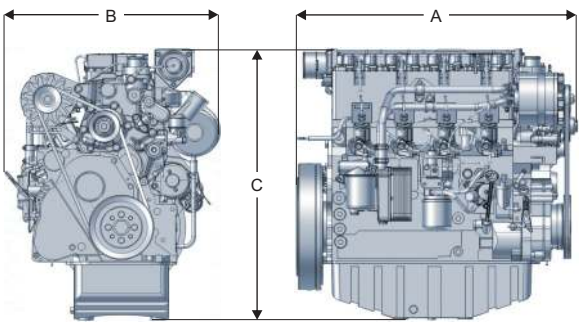
D 2011 L3 I - 36.4 kW|49 hp



(T)D 2011 L4 I - (57.6 kW|77.2 hp) 47.5 kW|64 hp



Dimensions



		A	B	C
air/oil-cooled with integrated cooling system				
D 2011 L2 I	mm | in	573 |22.56	448 |17.64	673 |26.5
D 2011 L3 I	mm | in	612 |24.09	448 |17.64	673 |26.5
D 2011 L4 I	mm | in	732 |28.82	448 |17.64	713 |28.07
TD 2011 L4 I	mm | in	722 |28.42	545 |21.46	724 |28.5
oil-cooled externally				
D 2011 L2	mm | in	478 |18.82	448 |17.64	673 |26.5
D 2011 L3	mm | in	598 |23.54	448 |17.64	673 |26.5
water-cooled externally				
D 2011 L4 W	mm | in	720 |28.35	486 |19.13	711 |27.99
TD 2011 L4 W	mm | in	720 |28.35	521 |20.51	711 |27.99
TCD 2011 L4 W	mm | in	720 |28.35	533 |20.98	711 |27.99

Note: The engine dimensions and weights vary depending on the scope of delivery.

Technical data
oil-cooled externally

Engine type		D 2011 L2	D 2011 L3
No. of cylinders		2	3
Bore/stroke	mm | in	94/112 |3.7/4.41	94/112 |3.7/4.41
Capacity	l | cu in	1.55 |94.6	2.33 |142.2
Compression ratio		19:1	19:1
Nominal speeds	min^{-1} | rpm	2300 - 2800	2300 - 2800

Power output[1)]		D 2011 L2	D 2011 L3
Power output as per ISO 14396	kW | hp	23.5 |31.5	36.5 |49
at speed	min^{-1} | rpm	2800	2800
Max. torque	Nm | lb/ft	93 |68.6	140 |103.3
at speed	min^{-1} | rpm	1700	1700
Minimum idling speed	min^{-1} | rpm	900	900
Specific fuel consumption[2)]	g/kWh | lb/hph	230 |0.378	230 |0.378
Weight as per DIN 70020 Part 7A[3)]	kg | lb	169 |373	210 |463

1) Capacity data without deduction of fan capacity
2) Best full load consumption refers to diesel with a density of 0.835 kg/dm³ at 15°C | 6.96 lb/US gallon at 60°F.
3) Without starter/dynamo, cooler and fluids but with flywheel and flywheel housing.

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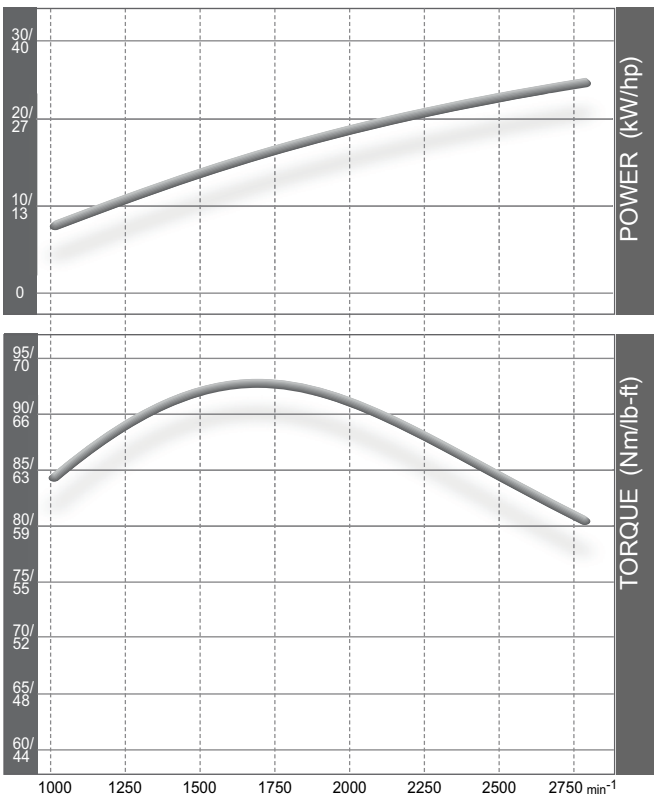
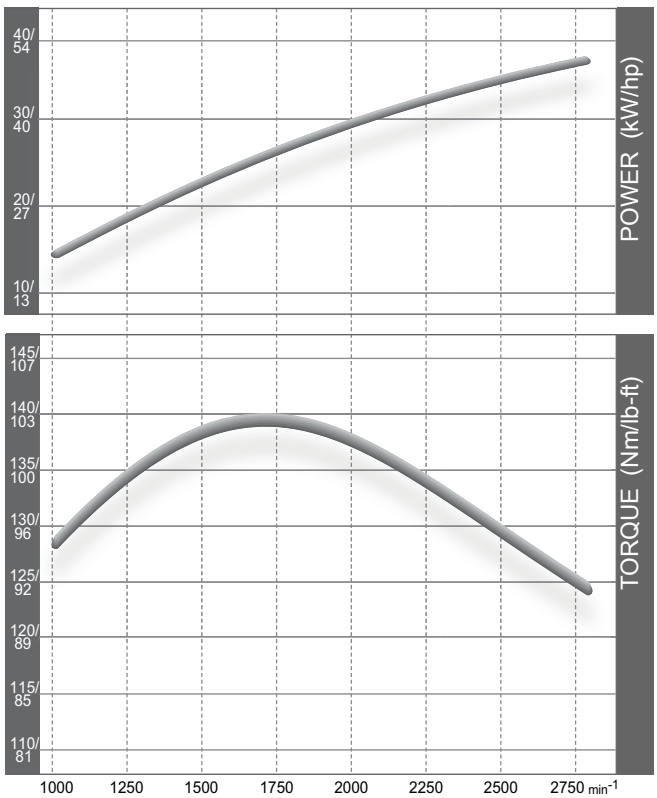
Torque curve

D 2011 L2 - 23.5 kW|31.5 hp



D 2011 L3 - 36.5 kW|49 hp



Technical data
water-cooled externally

Engine type		D 2011 L4 W	TD 2011 L4 W	TCD 2011 L4 W
No. of cylinders		4	4	4
Bore/stroke	mm | in	96/125 |3.78/4.92	96/125 |3.78/4.92	96/125 |3.78/4.92
Capacity	l | cu in	3.62 |220.9	3.62 |220.9	3.62 |220.9
Compression ratio		19:1	18:1	18:1
Nominal speeds	min^{-1} | rpm	2200 - 2600	2200 - 2600	2300 - 2600

Power output[1)]		D 2011 L4 W	TD 2011 L4 W	TCD 2011 L4 W
Power output as per ISO 14396	kW | hp	50 |67	68 |91	74.9 |100
at speed	min^{-1} | rpm	2600	2600	2600
Max. torque	Nm | lb/ft	210 |154.9	280 |206.5	350 |258.2
at speed	min^{-1} | rpm	1700	1600	1600
Minimum idling speed	min^{-1} | rpm	900	900	900
Specific fuel consumption[2)]	g/kWh | lb/hph	218 |0.358	223 |0.367	216 |0.355
Weight as per DIN 70020 Part 7A[3)]	kg | lb	270 |595	269 |593	269 |593

1) Capacity data without deduction of fan capacity
2) Best full load consumption refers to diesel with a density of 0.835 kg/dm³ at 15°C | 6.96 lb/US gallon at 60°F.
3) Without starter/dynamo, cooler and fluids but with flywheel and flywheel housing.

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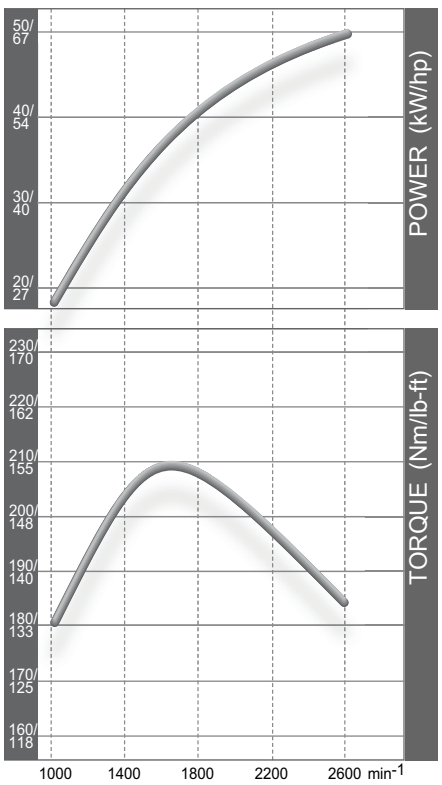
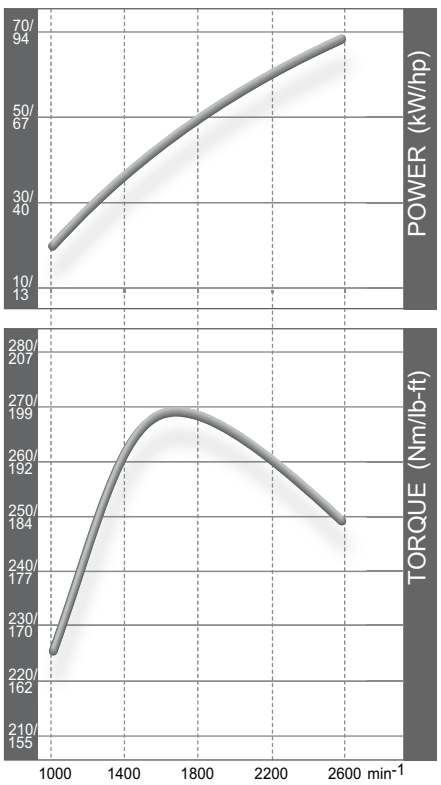
Torque curve

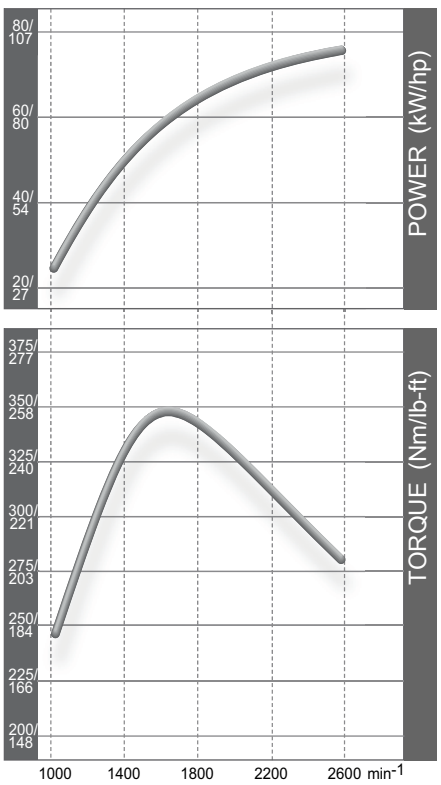
D 2011 L4 W - 50 kW|67 hp



TD 2011 L4 W - 68 kW|91 hp



TCD 2011 L4W - 74.9 kW|100 hp



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