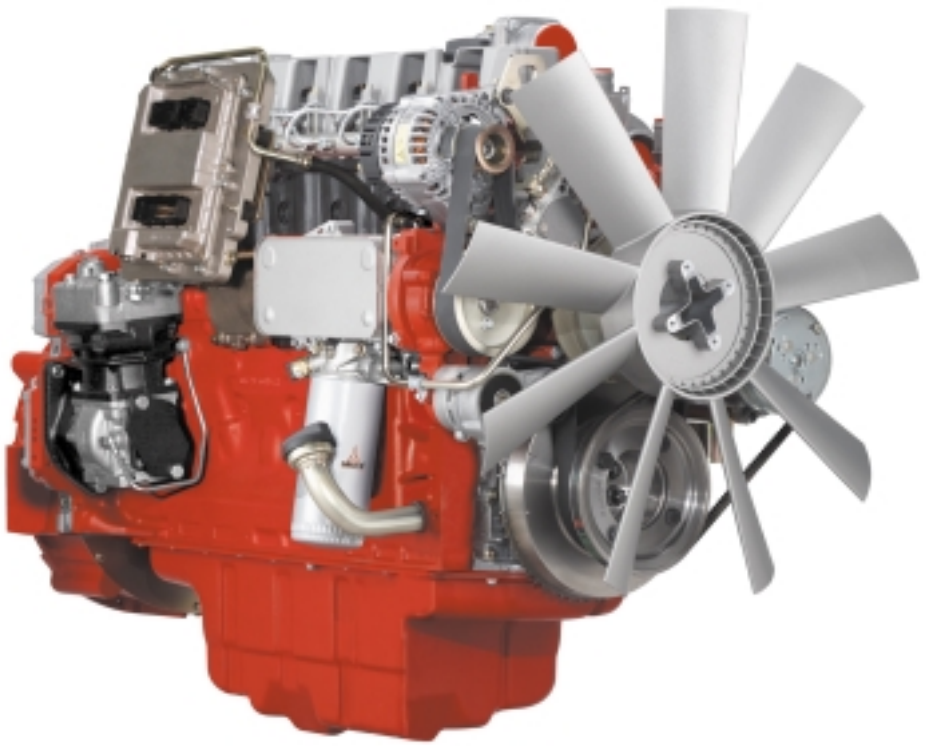
TCD 2012

The Engine for Construction Equipment.
67 – 155 kW | 91 – 210 hp at 2400 rpm



The engine company.

DEUTZ®

Engine description

Cooling sytem:	Liquid cooling.
Crankcase/ cylinder:	Crankcase of grey cast iron, integrated liners (patent bore).
Crankcase breather:	Open.
Cylinder head:	One piece greycast block type cylinder head.
Valve arrangement/ timing:	Hanging in cylinder head, one intake and one exhaust valve per cylinder, actuated via tappets, pushrods and rocker arms, driven by camshaft in bi-metal bearings.
Piston:	Three-ring piston, two combustion rings, one oil scraper ring.
Piston cooling:	Oil-cooled with spray nozzles.
Turbocharging:	Wastegate turbocharger with charge air cooling (air/air).
Connecting rod:	Drop-forged steel.
Crankshaft bearings:	Bi-metal bearings, one fit bearing.
Connecting rod bearrings:	Four-metal, tri-metal sliding bearing.
Crankshaft:	Drop-forged steel.
Camshaft:	Steel in bi-metal bearings.
Camshaft drive:	From the camshaft via straight, high toothed spur gears.
Lubrication:	Forced-feed circulation lubrication.
Lube oil cooler:	Externally arranged.
Lubricating oil filter:	Paper-type microfilter as replaceable cartridge, full-flow filter.
Injection pump/ governor:	Two high-pressure plug pumps, electronical speed governor (EMR3).
Fuel lift pump:	Outer gear pump in belt drive.
Injector:	7-hole nozzle in Injector.
Fuel filter:	Replaceable cartridge.
Alternator:	Three-phase alternator, 14 V / 55 A (Standard).
Starter motor:	12 V / 3 kW (Standard).
Heating:	Optional connection for cab heating.
Options for customized applications:	e.g. 12 V / 24 V electrical equipment, hydraulic pumps, flywheel housings, oil pans, cooling fan positions.

Characteristics

Modern, water-cooled 4- and 6-cylinder in-line engines | Turbocharging with charge air cooler | Robust engine with high power density | Power take-off options integrated into the gear drive | Electronic engine control with intelligent adaptation to drive management | High-pressure fuel injection with DEUTZ common rail system (DCR®)| 4-cylinder optional with mechanical injection system up to 88 kW

Your benefits

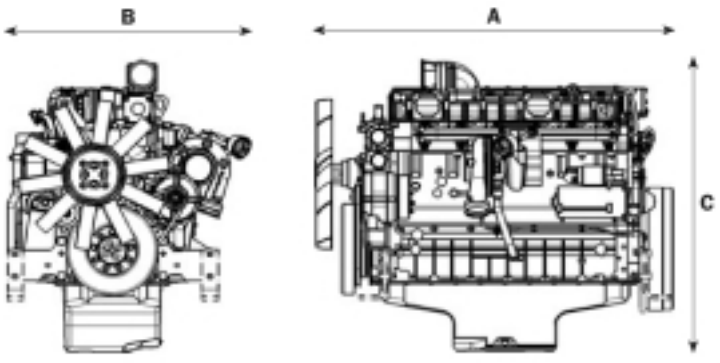
- Good cost-effectiveness thanks to simple and inexpensive installation, good durability and long service intervals.
- Low noise emission ensures further savings due to reduced soundproofing measures.
- Lean engine structure and the variable design of the engine's front end offer maximum flexibility.
- The 2012 with DVERT® platform for future exhaust emission levels Stage III B / IV and EPA Interim Tier 4 / Tier 4.
- High running smoothness, thanks to mass balancing shafts in the 4-cylinder engine, guarantee high operating comfort.
- The 2012 meets the exhaust emission regulations 2004/26/EU, Step III A as well as US-EPA Tier 3 for mobile machinery.

Engine model		**TCD 2012 L4**	**TCD 2012 L6**
Number of cylinders		4	6
Bore/stroke	mm | inch	101/126 | 4/5	101/126 | 4/5
Swept volume	l | cu inch	4.04 | 247	6.06 | 370
Compression ratio		1 : 18	1 : 18
Max. rated speed	rpm	2400	2400
Mean piston speed	m/s | ft/sec	10.1 | 33	10.1 | 33

EU Stage III A / US-EPA Tier 3 Power ratings for mobile construction machines[1)]

Power output to ISO 14396	kW | hp	103 | 138	155 | 208
At engine speed	rpm	2400	2400
At mean, effective pressure	bar | psi	12.8 | 186	12.8 | 186
Max. torque	Nm | lb-ft	520 | 384	810 | 597[4)]
At engine speed	rpm	1600	1600
Minimum idle speed	rpm	650	650
Specific fuel consumption[2)]	g/kWh | lb/hp-hr	215 | 0.35	215 | 0.35
Weight acc. to DIN 70020, Part 7A[3)]	kg | lb	400 | 882	510 | 1125

Dimensions		**A**	**B**	**C**
TCD 2012 L4	mm	783	629	812
	inch	31	25	32
TCD 2012 L6	mm	1041	667	897
	inch	41	26	35



1) Output data without deduction of fan output.

2) Best full-throttle diesel fuel consumption at a density of 0.835 kg/dm3 at 15° C (6.96 lb/US gallon at 60° F).

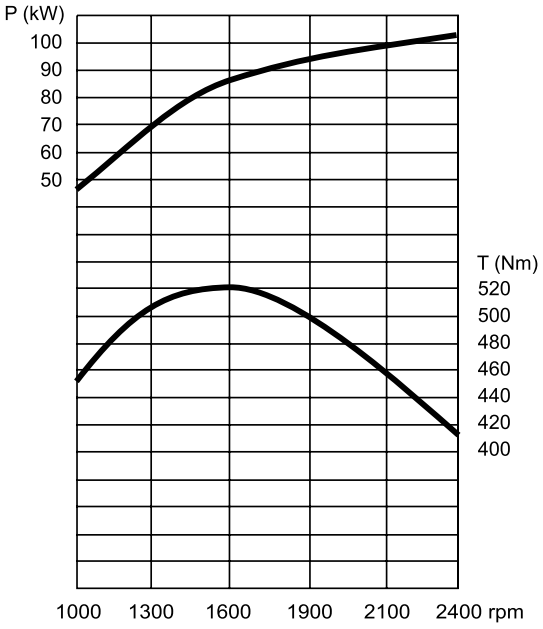
3) Without starter/alternator, radiator and fluids, but with flywheel and flywheel housing.

4) 850 Nm | 627 lb-ft with switched EGR.

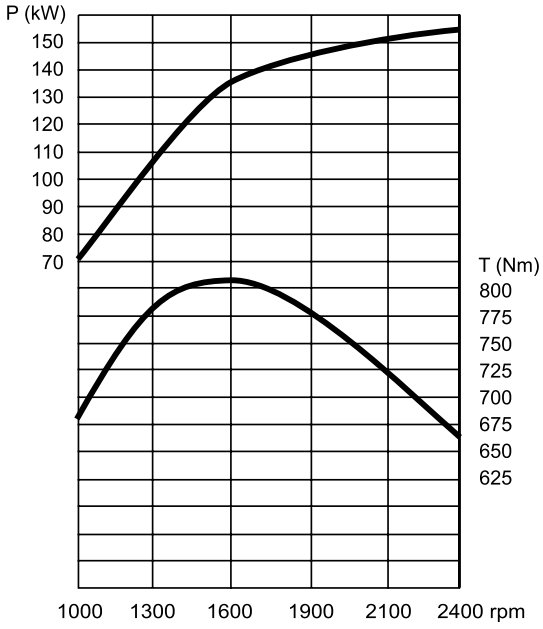
The figures indicated in this data sheet are for information purposes only and are not binding.

The specifications in the quote are determinative.

Engine TCD 2012 L4



Engine TCD 2012 L6



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