

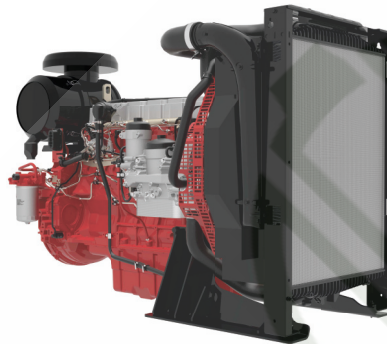
# TCD 2013

for generator sets

90 - 260 kW | 121 - 349 hp at 1500/1800 min<sup>-1</sup> | rpm

EU Stage IIIA

- Watercooled 4 or 6-cylinder inline engines with turbocharging and charge air cooling.
- The powerful DEUTZ Common Rail (DCR<sup>®</sup>) injection system and the electronic engine control (EMR 4) with intelligent link to the drive management ensure optimum engine performance at low fuel consumption.
- Easy, inexpensive installation due to minimum weight and small installation space.



- Low noise emissions due to acoustically optimized components with very smooth running and high durability.
  - Wet cylinder liners, long oil change intervals and easy changing of the engine fluids reduce the running costs and increase the availability of the machinery.
  - Best cold starting performance even under extreme conditions.
  - The TCD 2013 meets the requirements of EU Stage IIIA.
- Air filter and cooling system are fully pre-assembled.

## Technical data

Engine type		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
No. of cylinders		4	6	6
Bore/stroke	mm   in	108/130   4.3/5.1	108/130   4.3/5.1	108/130   4.3/5.1
Displacement	l   cu in	4.8   293	7.2   439	7.2   439
Weight with cooling system and air filter	kg   lb	624   1376	815   1797	870   1918
Governing standard <sup>1)</sup>		G2	G3	G3

## 50 Hz / 1500 min<sup>-1</sup>

Power		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
Continuous Power (COP) <sup>2)</sup>	kW   hp	90.3   121.1	135.9   182.2	225.6   302.5
Prime Power (PRP) <sup>3)</sup>	kW   hp	95.3   127.8	143.5   192.4	238.2   319.4
Limited Time Power (LTP) <sup>4)</sup>	kW   hp	100.3   134.5	151.0   202.5	250.7   336.2
Fan power consumption	kW   hp	2.6   3.5	5.5   7.4	8.8   11.8
Typical Generator Output COP <sup>5)</sup>	kVA	99	150	249
Typical Generator Output PRP <sup>5)</sup>	kVA	104	159	264
Typical Generator Output LTP <sup>5)</sup>	kVA	110	167	278

## 60 Hz / 1800 min<sup>-1</sup>

Power output		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
Continuous Power (COP) <sup>2)</sup>	kW   hp	102.9   138.0	156.2   209.5	234.4   314.3
Prime Power (PRP) <sup>3)</sup>	kW   hp	108.6   145.6	164.8   221.0	247.4   331.8
Limited Time Power (LTP) <sup>4)</sup>	kW   hp	114.3   153.3	173.5   232.7	260.4   349.2
Fan power consumption	kW   hp	4.4   5.9	9.6   12.9	15.2   20.4
Typical Generator Output COP <sup>5)</sup>	kWe	89	135	202
Typical Generator Output PRP <sup>5)</sup>	kWe	94	143	214
Typical Generator Output LTP <sup>5)</sup>	kWe	99	151	226

1) According to ISO 8528-5.

2) Continuous Power: No time limitation, plus 10% additional power for governing purpose only.

3) Prime Power: Average power output ≤ 80%, no time limitation, plus 5% additional power for governing purpose only.

4) Limited Time Running Power: For up to 500 h/year, thereof a maximum of 300 h/year continuous running.

5) In consideration of a generator efficiency level of 90 - 92 % and a power factor of 0.8.

The engine company.



## 50 Hz / 1500 min<sup>-1</sup>

Fuel Consumption (PRP) <sup>6)</sup>		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
Fuel consumption 25% load	g/kWh   lb/hph	296   0.49	256   0.42	253   0.42
Fuel consumption 50% load	g/kWh   lb/hph	260   0.43	248   0.41	235   0.39
Fuel consumption 75% load	g/kWh   lb/hph	250   0.41	235   0.39	225   0.37
Fuel consumption 100% load	g/kWh   lb/hph	215   0.35	210   0.35	210   0.35

Heat balance & cooling system		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
Heat dissipation (engine radiator) <sup>2)</sup>	kW   hp	50.0   67.1	74.0   99.2	133.0   178.4
Heat dissipation (CAC) <sup>2)</sup>	kW   hp	18.8   25.2	23.0   30.8	39.0   52.3
Heat dissipation (convection)	kW   hp	9.0   12.1	14.0   18.8	23.0   30.8
Cooling air flow	m <sup>3</sup> /h   cfm	6480   3814	9360   5509	15480   9111

Inlet & exhaust data		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
max. intake depression	mbar   psi	10   0.15	10   0.15	10   0.15
Combustion air volume	m <sup>3</sup> /h   cfm	450   265	600   353	744   438
max. exhaust gas temperature	°C   °F	530   986	485   905	515   959
Exhaust gas flow	m <sup>3</sup> /h   cfm	1248   735	1764   1038	2304   1356

## 60 Hz / 1800 min<sup>-1</sup>

Fuel Consumption (PRP) <sup>6)</sup>		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
Fuel consumption 25% load	g/kWh   lb/hph	311   0.51	274   0.45	255   0.42
Fuel consumption 50% load	g/kWh   lb/hph	274   0.45	255   0.42	234   0.38
Fuel consumption 75% load	g/kWh   lb/hph	237   0.39	241   0.40	245   0.40
Fuel consumption 100% load	g/kWh   lb/hph	212   0.35	213   0.35	218   0.36

Heat balance & cooling system		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
Heat dissipation (engine radiator) <sup>7)</sup>	kW   hp	57.0   76.4	73.0   97.9	141.0   189.1
Heat dissipation (CAC) <sup>7)</sup>	kW   hp	20.4   27.4	26.0   34.9	46.0   61.7
Heat dissipation (convection)	kW   hp	10.0   13.3	16.0   21.5	24.0   32.2
Cooling air flow	m <sup>3</sup> /h   cfm	7560   4450	13320   7840	18720   11018

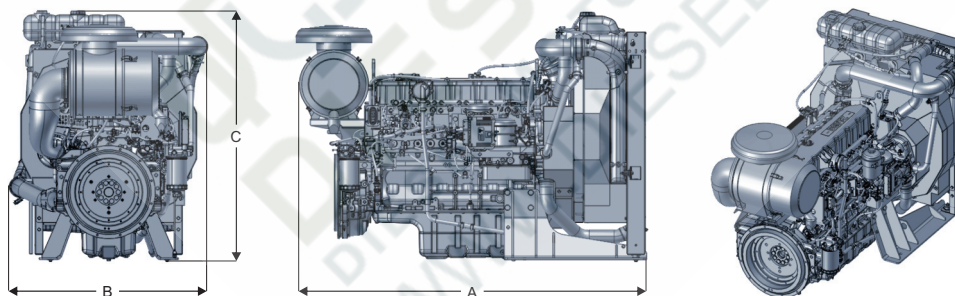
Inlet & exhaust data		TCD 2013 L4 2V	TCD 2013 L6 2V	TCD 2013 L6 4V
max. intake depression	mbar   psi	20   0.29	20   0.29	20   0.29
Combustion air volume	m <sup>3</sup> /h   cfm	492   290	660   388	834   505
max. exhaust gas temperature	°C   °F	540   1004	511   952	485   905
Exhaust gas flow	m <sup>3</sup> /h   cfm	1398   823	2046   1204	2382   1402

6) Refers to diesel with a density of 0.835 kg/dm<sup>3</sup> at 15°C | 6.96 lb/US gallon at 60°F.

7) The heat quantities are valid for the dimensioning of the cooling system.

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

## Dimensions



		A	B	C
TCD 2013 L4 2V	mm	1589	880	1247
TCD 2013 L6 2V	mm	1909	879	1263
TCD 2013 L6 4V	mm	1865	1046	1322

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

For more information please contact the DEUTZ AG Köln or the responsible sales partner.

