



## Engine Datasheet TCD2013L06 4V 1500 min<sup>-1</sup>

<b>Engine</b>		
Type		TCD 2013 L06 4V
Speed	[min <sup>-1</sup> ]	1500
Net frequency	[Hz]	50
Power standard		LTP
Power level		-
Exhaust emission standard		COM II
<b>General</b>		
Aspiration		turbo, CAC
No of cylinders		6
Configuration		in-line
Injection system		Common Rail
Displacement	[l]	7,15
Bore	[mm]	108
Stroke	[mm]	130
Compression ratio		17
Mean effective pressure	[bar]	28,0
Piston speed	[m/s]	6,5
Rotation (looking at flywheel)		CCW
No of teeth on flywheel ring gear		129
Governor performance		
Speed droop (static) mech. gov.	[%]	-
Speed droop (static) electr. gov. (EMR/GAC)	[%]	0 - 3
Governing standards		
to ISO 8528 Parts 1 and 5		G3
Moment of inertia		
Engine without flywheel	[kg m <sup>2</sup> ]	0,57
Flywheel (standard genset spec.)	[kg m <sup>2</sup> ]	2.6
Max. step load acceptance, 1st step	[%]	-
Sound power at full load, incl. cooling system <sup>5</sup>	[dB(A)]	112,1
Sound press. (1m average, full load), incl. cool. syst.	[dB(A)]	97,6
Weight		
Engine dry, w/o cooling system	[kg]	764
Engine with cooling system	[kg]	954
Lubrication system		
Oil specification		TR0199-99-3002/6
Oil consumption (as % of fuel consumption)		0,02
Oil capacity (sump)	[l]	24
Min. oil pressure (warning)	[bar]	1,5
Min. oil pressure (shut down)	[bar]	1,35
Max. permissible oil temperature (oil pan)	[°C]	130
<b>Output</b>		
Gross output(LTP or StandBy Power) <sup>1</sup>	[kW]	250
Fan reduction	[kW]	11,6
Net flywheel	[kW]	238,4
Electrical output <sup>2</sup>	[kVA]	268
Gross output(PRP or Prime Power) <sup>1a</sup>	[kW]	227
Gross output(Continuous Power) <sup>1b</sup>	[kW]	207



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### Fuel System

#### Fuel consumption

25% load <sup>3</sup>	[l/h]	14,6
50% load <sup>3</sup>	[l/h]	28,7
75% load <sup>3</sup>	[l/h]	39,9
100% load <sup>3</sup>	[l/h]	49,9
25% load	[g/kWh]	233
50% load	[g/kWh]	229
75% load	[g/kWh]	213
100% load	[g/kWh]	200
Max. suction head of fuel feed pump	[m]	-

### Cooling System

#### General engine cooling data

Max. perm. coolant outlet temperature	[°C]	103
Max. perm. flow resistance (cool. syst. and piping)	[bar]	0,33
Max. temperature of coolant (warning)	[°C]	108
Max. temperature of coolant (shutdown)	[°C]	110
Temperature at which thermostat starts to open	[°C]	83
Temperature at which thermostat is fully open	[°C]	98
Delivery of coolant pump	[m <sup>3</sup> /h]	14,7
Min. pressure before coolant pump	[bar]	0,3
Temperature at CAC outlet at standard conditions	[°C]	40

#### DEUTZ cooling system

Coolant capacity (engine)	[l]	9,8
Coolant capacity (incl. cooling unit)	[l]	27,0
Air to boil (max. permissible cool. air temp. at fan)	[°C]	54
Fan power consumption <sup>4</sup>	[kW]	11,6
Cooling air flow	[m <sup>3</sup> /h]	16200
Air pressure loss, external	[ mbar ]	1,5

#### Heat Balance

Heat dissipation (engine radiator) <sup>6</sup>	[kW]	122,3
Heat dissipation (CAC) <sup>6</sup>	[kW]	48,0
Heat dissipation (convection)	[kW]	25,0

### Inlet / Exhaust Data

Max. intake depression (Switch setting)	[mbar]	30
Combustion air volume	[m <sup>3</sup> /h]	909
Max. exhaust back pressure	[mbar]	50
Max. exhaust gas temperature	[°C]	530
Exhaust gas flow (at above temp)	[m <sup>3</sup> /h]	2547
Exhaust flange / pipe diameter	[mm]	-



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### Electrical System

Voltage	[V]	24
Starter	[kW]	5
Alternator output	[A]	80
Batteries (minimum capacity, cold start limit -5°C)	[Ah]	140

<sup>1</sup> ISO 14396 This is the maximum power available for 500h/year (operation period max 300h) with a mean load factor of 90%

<sup>1a</sup> ISO 14396 This is the maximum power available for unlimited number of hours per year with a mean load factor of 80%.

Overload is permissible for 1 hour every 12 hours of operation

<sup>1b</sup> ISO 14396 This is the maximum power available for unlimited number of hours per year with a mean load factor of 90%.

Overload is permissible for 1 hour every 12 hours of operation

<sup>2</sup> Ratings in accordance with ISO 8528-LTP, based on alternator efficiency of 90%.

<sup>3</sup> At calorific value 42700 kJ/kg + 5 %, density 0.835 kg/dm<sup>3</sup>, temperature 280 K.

<sup>4</sup> Technical data and max. permissible torque for fan drive see data sheet.

<sup>5</sup> Sound power values measured in accordance with ISO 6798.

<sup>6</sup> The heat quantities are valid for the dimensioning of the cooling system. They are given for the engine with the highest fuel consumption.

For further information see ELTAB / Pocket book.

For further application guidance see DEUTZ Installation Manual.

All data are provided for informational purposes only and are subject to amendment.