

# CURSOR13 TE2F

377 kW (1500 rpm)

Engine CURSOR13 TE2F

## 1/ GENERAL

1500 rpm

Engine model	CURSOR13 TE2F	
Basic engine type	F3BE9685F*E001 - 5801776041 XZ	
Number of cylinders	6	
Firing order (N° 1 nearest to fan)	1-4-2-6-3-5	
Cylinder arrangement	in line	
Valves per cylinder	4	
Cycle	diesel 4 stroke	
Injection system	direct E.U.I	
Electronic engine control unit	BOSCH EDC7 UC31	
Induction System	turbo aftercooler air/air	
Bore	mm	135
Stroke	mm	150
Total displacement	lit	12,88
Mean piston speed	m/s	7,5
Compression ratio	16,5 : 1	
Flywheel rotation	anti clockwise viewed on flywheel	
Housing flywheel	SAE 1	
Flywheel	14"	
Moment of inertia		
without flywheel	kgm <sup>2</sup>	1,05
flywheel only	kgm <sup>2</sup>	1,44
BMEP gross		
Prime Power	bar/kPa	22,6 / 2258,6
Stand-by Power	bar/kPa	24,8 / 2484,5
Dry weight (including cooling package)	kg	~ 1228
Energy to coolant	kcal/kWh	321
Energy to charge cooler	kcal/kWh	213
Energy to radiation	kcal/kWh	100
Dimensions L x W x H	mm	2310 x 1070 x 1500

## 2/ PERFORMANCES

1500 rpm

Continuous Power	(gross)	kWm	292
Prime Power	(gross)	kWm	365
Stand-By Power	(gross)	kWm	400
Fan consumption		kWm	23,1
Continuous Power	(net)	kWm	269
Prime Power	(net)	kWm	342
Stand-By Power	(net)	kWm	377
Performance condition			
temperature	°C		≤ 40
altitude a.s.l	m		≤ 1000
Derating			
temperature > T 40°C	%/5°C		4%
altitude >1000 <3000 m	%/500m		3%
altitude >3000 m	%/500m		6%

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## 3/ COOLING SYSTEM

1500 rpm

Type			liquid
Recommended coolant			water + 50 % paraflu 11
Coolant capacity			
engine only	liter		19,5
radiator and hoses	liter		47,5
Coolant pump flow	l/min		341
Thermostat: start to open	°C		70 (0,7)
Shutdown switch setting	°C		103
Maximum additional restriction	Pa		196
Air To Boil	Prime Power	°C	44,1
Fan			
diameter	mm		802
number of blades			12
drive ratio			1,37 : 1
speed	rpm		2055
air flow	m <sup>3</sup> /s		9,1
power consumption	kWm		23,1

## 4/ LUBRICATION SYSTEM

1500 rpm

Oil sump capacity			
max	liter		27
min	liter		14
Oil system capacity including filter	liter		35
Oil pressure at rated speed	kPa		250-500
Oil temperature			
normal	°C		---
max	°C		120
Engine angularity			
longitudinal	degrees		30°
transverse	degrees		30°
Servicing interval	hours		600
Oil specification			ACEA E3/E5
Oil consumption	%fuel		< 0,2

## 5/ INTAKE SYSTEM

1500 rpm

Air consumption at 100 % of load	m <sup>3</sup> /h (Kg/h)		1770 (1785)
Air intake restriction, clean filter	kPa (mbar)		2 (20)
Air intake restriction, dirty filter	kPa (mbar)		5 (50)
Air filter type			secco

## 6/ EXHAUST SYSTEM

1500 rpm

Gas flow at stand-by Power	kg/h		1867
Max temperature at PRP (25°C)	°C		520
Max allowable back pressure	kPa (mbar)		5 (50)
Energy to exhaust	kcal/kWh		591

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## 7/ FUEL SYSTEM

1500 rpm

Fuel consumption at			
Stand-By	gr/kWh (l/h) [kg/h]		204,5 (97,4) [81,8]
Full load	gr/kWh (l/h) [kg/h]		213,0 (92,9) [78,0]
80%	gr/kWh (l/h) [kg/h]		234,5 (81,0) [68,0]
50%	gr/kWh (l/h) [kg/h]		243,2 (53,0) [44,5]
Fuel specifications			EN 590
Feed pump max suction head	m		---

## 8/ ELECTRIC SYSTEM

1500 rpm

Voltage (negative to ground)	V		24
Starter motor			
make			DENSO
power	kW		5,5
pull current	Amp		12
hold current	Amp		12
break away current +20°C	Amp		1250
cranking current +20°C	Amp		
Number of teeth on starter motor			10
Number of teeth on flywheel			155
Starting batteries			
recommended capacity	Ah	2x	185
discharge current	Amp		1200
(EN 50342)			
Alternator			
voltage	V		28
charge	Amp		90

## 9/ COLD STARTING

1500 rpm

Without air preheating	°C		-10
With air preheating	°C		-25

## 10/ EMISSION GASEOUS AND PARTICLES

1500 rpm

No <sub>x</sub>	Oxides of nitrogen	gr/kWh	3,68
HC	Hydrocarbons	gr/kWh	0,09
No <sub>x</sub> +HC		gr/kWh	3,77
CO	Carbon monoxide	gr/kWh	0,69
PT	Particles	gr/kWh	0,099