

CURSOR13 TE1F

327 kW (1500 rpm)

Engine CURSOR13 TE1F

1/ GENERAL

1500 rpm

Engine model	CURSOR13 TE1F	
Basic engine type	F3BE9685G*E001 - 5801776042 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 ²	1,05
flywheel only	kgm ²	1,44
BMEP gross		
Prime Power	bar/kPa	19,7 / 1975,1
Stand-by Power	bar/kPa	21,8 / 2180,1
Dry weight (including cooling package)	kg	~ 1228
Energy to coolant	kcal/kWh	333
Energy to charge cooler	kcal/kWh	212
Energy to radiation	kcal/kWh	97,3
Dimensions L x W x H	mm	2310 x 1070 x 1500

2/ PERFORMANCES

1500 rpm

Continuous Power	(gross)	kWm	255
Prime Power	(gross)	kWm	319
Stand-By Power	(gross)	kWm	350
Fan consumption		kWm	23
Continuous Power	(net)	kWm	232
Prime Power	(net)	kWm	296
Stand-By Power	(net)	kWm	327
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	45,7
Fan			
diameter	mm		802
number of blades			12
drive ratio			1,37 : 1
speed	rpm		2055
air flow	m ³ /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			0
normal	°C		---
max	°C		120
Engine angularity			0
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 ³ /h (Kg/h)		1411 (1665)
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		1736
Max temperature at PRP (25°C)	°C		490
Max allowable back pressure	kPa (mbar)		5 (50)
Energy to exhaust	kcal/kWh		580

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7/ FUEL SYSTEM

1500 rpm

Fuel consumption at			
Stand-By	gr/kWh (l/h) [kg/h]		204,0 (85,0) [71,4]
Full load	gr/kWh (l/h) [kg/h]		212,5 (81,0) [68,0]
80%	gr/kWh (l/h) [kg/h]		242,2 (73,8) [62,0]
50%	gr/kWh (l/h) [kg/h]		256,3 (48,8) [41,0]
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 _x	Oxides of nitrogen	gr/kWh	3,28
HC	Hydrocarbons	gr/kWh	0,1
No _x +HC		gr/kWh	3,38
CO	Carbon monoxide	gr/kWh	0,81
PT	Particles	gr/kWh	0,05