

1/ GENERAL

1500 rpm

Engine model	CURSOR87 TE1F	
Basic engine type	F2CE9685E*E003 - 5801517902	
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 common rail	
Electronic engine control unit	BOSCH EDC7 UC31	
Induction System	turbo aftercooler air/air	
Bore	mm	117
Stroke	mm	135
Total displacement	lit	8,7
Mean piston speed	m/s	6,75
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	0,3
flywheel only	kgm ²	1,94
Degree of irregularity at PRP	0,027	
BMEP gross		
Prime Power	bar/kPa	18,4 (1839)
Stand-by Power	bar/kPa	16,7 (1670)
Dry weight (including cooling package)	kg	~ 1000
Energy to coolant	kcal/kWh	405
Energy to charge cooler	kcal/kWh	150
Energy to radiation	kcal/kWh	34
Dimensions L x W x H	mm	2000 x 980 x 1230

2/ PERFORMANCES

1500 rpm

Continuous Power	(gross)	kWm	145
Prime Power	(gross)	kWm	182
Stand-By Power	(gross)	kWm	200
Fan consumption		kWm	5
Continuous Power	(net)	kWm	140
Prime Power	(net)	kWm	177
Stand-By Power	(net)	kWm	195
Performance condition			
temperature		°C	≤ 40
altitude a.s.l		m	≤ 1000
Derating			
temperature > T 40°C		%/5°C	3%
altitude >1000 <3000 m		%/500m	3%
altitude >3000 m		%/500m	6%

3/ COOLING SYSTEM

1500 rpm

Type		liquid
Recommended coolant		water + 50 % paraflu 11
Coolant capacity		
engine only	liter	15
radiator and hoses	liter	20
Coolant pump flow	l/min	239,5
Thermostat: start to open	°C	95,8
Thermostat: fully open	°C	90,1
Engine coolant outlet max temp.	°C	85
Engine coolant inlet temp.	°C	95
Pressure cap setting	kPa (bar)	70 (0,7)
Shutdown switch setting	°C	103
Maximum additional restriction	Pa	-
Air To Boil	Prime Power	°C
		53
Fan		
diameter	mm	685
number of blades		12
drive ratio		1,03 : 1
speed	rpm	1545
air flow	m ³ /s	5
power consumption	kWm	6,8

4/ LUBRICATION SYSTEM

1500 rpm

Oil sump capacity		
max	liter	23
min	liter	12,5
Oil system capacity including filter	liter	28
Oil pressure at rated speed	kPa	300-500
Oil temperature		
normal	°C	0
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 ³ /h (Kg/h)	969 (1163)
Air intake restriction, clean filter	kPa (mbar)	2 (20)
Air intake restriction, dirty filter	kPa (mbar)	5 (50)
Air filter type		dry

6/ EXHAUST SYSTEM

1500 rpm

Gas flow at stand-by Power	kg/h	1205
Max temperature at PRP (25°C)	°C	522
Max allowable back pressure	kPa (mbar)	5 (50)
Energy to exhaust	kcal/kWh	785

7/ FUEL SYSTEM

1500 rpm

Fuel consumption at		
Stand-By	gr/kWh (l/h) [kg/h]	223 (53,1) [44,6]
Full load	gr/kWh (l/h) [kg/h]	224,2 (48,6) [40,8]
80%	gr/kWh (l/h) [kg/h]	227,6 (39,4) [33]
50%	gr/kWh (l/h) [kg/h]	-
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	4,5
pull current	Amp	12
hold current	Amp	12
break away current ^{+20°C}	Amp	1020
cranking current ^{+20°C}	Amp	-
Number of teeth on starter motor		10
Number of teeth on flywheel		149
Starting batteries		
recommended capacity	Ah	2x 120
discharge current	Amp	540
(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	3,6
HC	Hydrocarbons	gr/kWh	0,1
No _x +HC		gr/kWh	-
CO	Carbon monoxide	gr/kWh	0,4
PT	Particles	gr/kWh	0,095