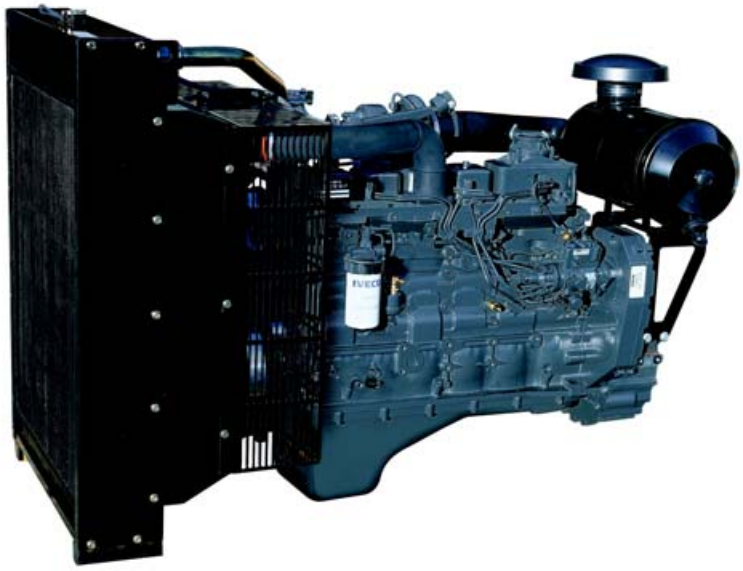
GENSET ENGINE

NEF67 SM1

NEF

The 4 and 6 cylinder Diesel engines of the NEF family, are the most versatile and efficient offered by Iveco Motors in genset duty market engines.

Traditional injection systems and full electronic control system of the fuel feed, allow a wide power range. This engine targets markets in which emissions control legislation is not applied.



PERFORMANCES

RATINGS [1]		1500 rpm		1800 rpm	
		PRIME	STAND-BY	PRIME	STAND-BY
Rated output [2]	kWm	110	121	126	138

1) Ratings in accordance with ISO 8528 - For duty at temperature over 40°C and/or altitude over 1000 meters must be considered a power derating factor. Contact the Iveco Motors sales organization.

2) Net power at flywheel available after 50 hours running with a ± 3 % tolerance.

PRIME POWER

The Prime Power is the maximum power available with varying loads for an unlimited number of hours. The average power output during a 24 h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions.

A 10% overload is permissible for 1 hour every 12 hours of operation.

STAND-BY POWER

This is the maximum power available for a period of 500 hours/year with a mean load factor of 90% of the declared stand-by power. No kind of overload is permissible for this use.

CONTINUOUS POWER

Contact the Iveco Motors sales organization.

IVECO MOTORS

FPT POWERTRAIN TECHNOLOGIES

TECHNICAL DATA

Engine model		NEF67 SM1
Diesel 4 stroke - Injection		direct, mechanical
Nb. of cylinders and arrangement		6, in line
Speed governor		mechanical
Total displacement	liters	6.7
Bore x Stroke	mm	104 x 132
Aspiration		turbocharged
Cooling system		liquid (water + 50% Paraflu 11)
Flywheel housing / Flywheel		SAE3 / 11" ½
Flywheel rotation		CCW
Lube oil specifications		ACEA E3 - E5
Lube oil consumption		< 0,1% of fuel consumption
Fuel specifications		EN 590
Oil and filters interval for replacement	hours	600

		RPM	1500	1800
Fuel consumption at :				
100% load	l/h (g/kWh)		28.8 (212.5)	33.9 (216.3)
80% load	l/h (g/kWh)		23.2 (214.0)	27.5 (219.4)
50% load	l/h (g/kWh)		14.6 (216.3)	18.3 (233.2)

Coolant capacity:			
	engine only	liters	~ 10.5
	engine + radiator	liters	~ 40.5
ATB (without canopy)		°C	51

No remote cooling radiator allowed.

Lube oil total system capacity including pipes, filters etc. :	liters	~ 17.2
Electrical system		12 Vcc
Starting batteries :		
recommended capacity	Ah	1 x 100
discharge current (EN 50342)	A	800
Cold starting :		
without air preheating	°C	-10
with air preheating	°C	-25
Engine dry weight	kg	610

SCOPE OF SUPPLY

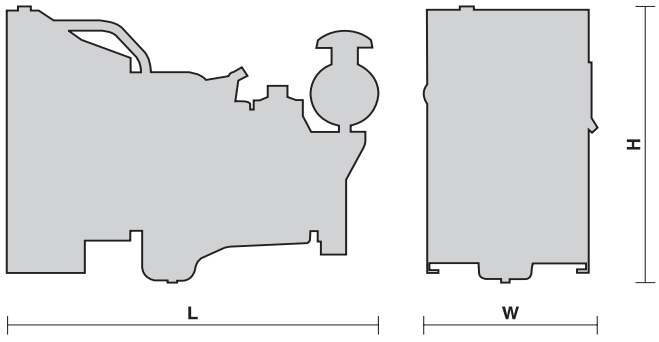
Iveco Motors engine NEF67 SM1 equipped with :
- Mounted radiator.
- Mounted belt driven pusher fan.
- Fan guard.
- Mounted air filter with replaceable cartridges.
- Fuel filter.
- Primary fuel filter/water separator.
- Replaceable oil filter.
- Front engine mounting brackets.
- Flywheel housing SAE 3 and flywheel 11" ½.
- Re-directable exhaust gas elbow.
- Recirculed oil breather system.
- Oil dipstick.
- HWT and LOP sensors.
- 12 Vdc electrical system.
- User's handbook.

THE ENGINE IS SUPPLIED WITHOUT LIQUIDS.

OPTIONAL EQUIPMENT

On request the engine can be supplied with :
- Oil drain pump.
- Oil drain valve.
- 120/230 Volt water jacket heater.
- WT and OP sensors for gauges.
- Low water level sensor.
- Turbo and exhaust gas guards.
- Exhaust gas flexible joint.
- 24 Vdc electrical system.

OVERALL DIMENSIONS



L = 1697 mm
W = 789 mm
H = 1318 mm

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Specifications subject to change without notice
Illustrations may include optional equipment.

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Local distributor

NEF67 SM1

121 kW (1500 rpm) - 138 kW (1800 rpm)

1/ GENERAL		1500 rpm	1800 rpm
Engine type		NEF67 SM1	
Basic engine type		F4GE0685B*B600 - 504112187 XY	
Number cylinders		6	
Firing order (N° 1 nearest to fan)		1-5-3-6-2-4	
Cylinder arrangement		in line	
Valves per cylinder		2	
Cycle		diesel 4 stroke	
Injection system		direct	
Induction System		Turbocharged	
Bore	mm	104	
Stroke	mm	132	
Total displacement	lit	6,7	
Mean piston speed	m/s	6,6	7,9
Compression ratio		17,5 : 1	
Flywheel rotation		anti clockwise viewed on flywheel	
Housing flywheel		SAE 3	
Flywheel		11"1/2	
Moment of inertia			
without flywheel	Nm^2	3,04	
flywheel only	Nm^2	6,96	
BMEP gross			
Prime Power	bar/kPa	13,6 / 1356,9	13,1 / 1311,6
Stand-by Power	bar/kPa	14,9 / 1492,5	14,4 / 1442,8
Dry weight (including cooling package)	kg	~ 610	
Energy to coolant	kcal/kWh	588,8	602,1
Energy to radiation	kcal/kWh	126,5	105,6
Dimensions L x W x H	mm	1697 x 789 x 1318	

2/ PERFORMANCES			1500 rpm	1800 rpm
Continuous Power	(gross)	kWm	92	107,3
Prime Power	(gross)	kWm	114	132,4
Stand-By Power	(gross)	kWm	125	145
Fan consumption		kWm	4	6,9
Continuous Power	(net)	kWm	88	100,4
Prime Power	(net)	kWm	110	125,5
Stand-By Power	(net)	kWm	121	138,1
Performance condition				
temperature		°C	≤ 40	
altitude a.s.l		m	≤ 1000	
Derating				
temperature	> T 40°C	%/5°C		
altitude	>1000 m	%/500m		

IVECO MOTORS

FPT POWERTRAIN TECHNOLOGIES

3/ COOLING SYSTEM		1500 rpm	1800 rpm
Type		liquid	
Recommanded coolant		water + 50 % paraflu 11	
Coolant capacity			
engine only	liter	10,5	
radiator and hoses	liter	30	
Coolant pump flow	l/min	141	169,2
Pressure cap setting	kPa (bar)	70 (0,7)	
Shutdown switch setting	°C	103	
Maximum additional restriction	Pa	196	
Air To Boil Prime Power	°C	51	
Fan			
diameter	mm	685	
number of blades		12	
drive ratio		1,4 : 1	
speed	rpm	2115,0	2538,0
air flow	m^3/s	6,1	7,3
power consumption	kWm	4,0	6,9

4/ LUBRICATION SYSTEM		1500 rpm	1800 rpm
Oil sump capacity			
max	liter	12	
min	liter	8	
Oil system capacity including filter	liter	17,2	
Oil pressure at rated speed	kPa	350-550	
Oil temperature			
normal	°C	---	
max	°C	120	
Engine angularity			
longitudinal	degrees	25°	
transverse	degrees	25°	
Servicing interval	hours	600	
Oil specification		ACEA E3/E5	
Oil consumption	%fuel	< 0,1	

5/ INTAKE SYSTEM		1500 rpm	1800 rpm
Air consumption at 100 % of load	m^3/h (Kg/h)	475 (571,6)	602 (725,3)
Air intake restriction, clean filter	kPa (mbar)	---	
Air intake restriction, dirty filter	kPa (mbar)	5 (50)	
Air filter type		dry	

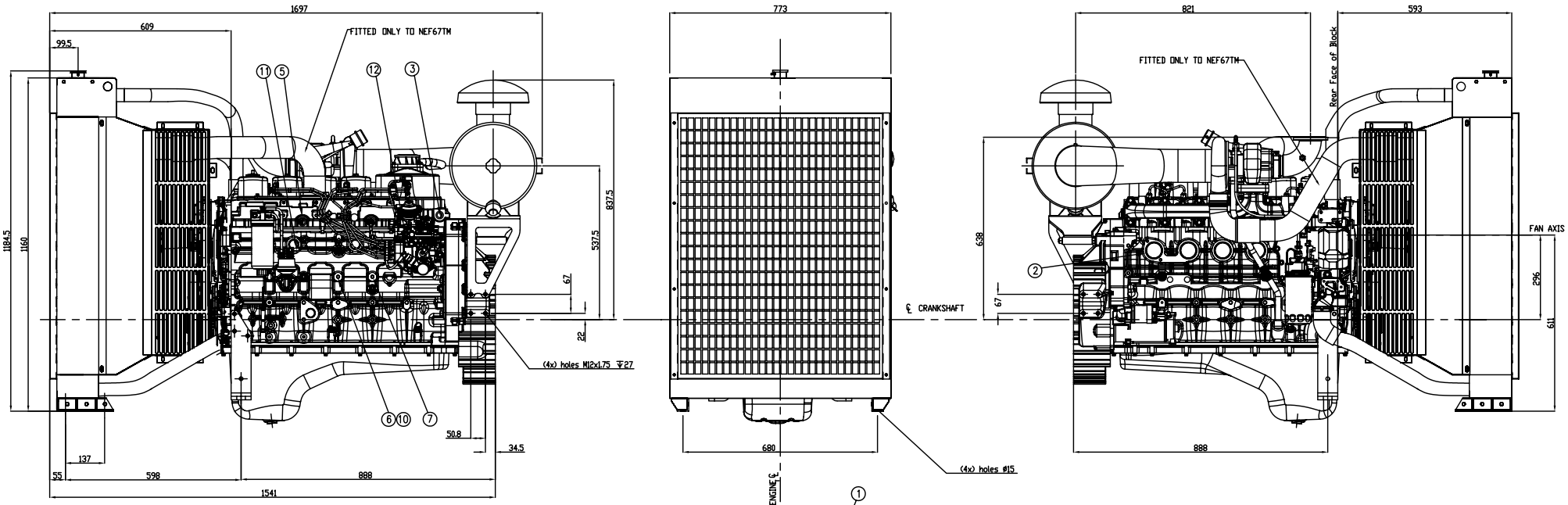
6/ EXHAUST SYSTEM		1500 rpm	1800 rpm
Gas flow at stand-by Power	kg/h	599	757
Max temperature at PRP (25°C)	°C	528	488
Max allowable back pressure	kPa (mbar)	5 (50)	
Exhaust gas temperature	kcal/kWh	641,1	643,4

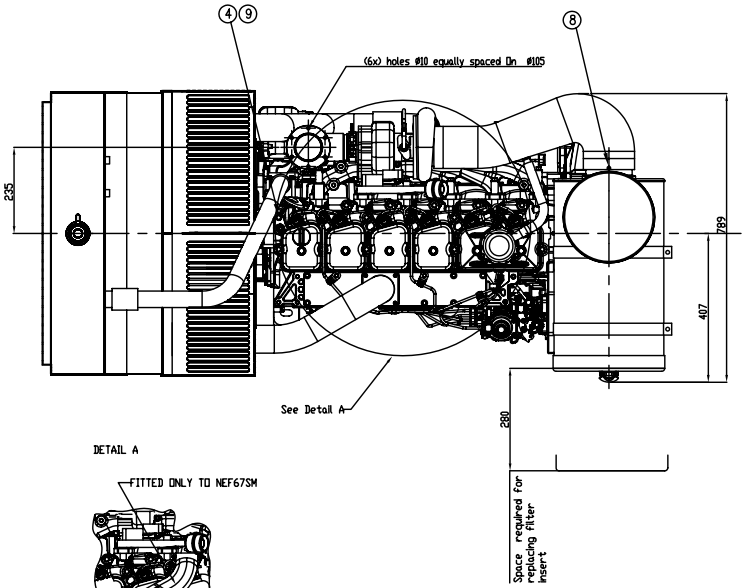
7/ FUEL SYSTEM		1500 rpm	1800 rpm
Fuel consumption at			
Stand-By	gr/kWh (l/h) [kg/h]	217,3 (32,3) [27,2]	216,8 (37,4) [31,4]
Full load	gr/kWh (l/h) [kg/h]	212,5 (28,8) [24,2]	216,3 (33,9) [28,5]
80%	gr/kWh (l/h) [kg/h]	214,0 (23,2) [19,5]	219,4 (27,5) [23,1]
50%	gr/kWh (l/h) [kg/h]	216,3 (14,6) [12,3]	233,2 (18,3) [15,4]
Fuel specifications		EN 590	
Feed pump max suction head	m	---	
Injection pump	type STANADYNE	DB4629-5944	

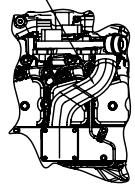
8/ ELECTRIC SYSTEM		1500 rpm	1800 rpm
Voltage (negative to ground)	V	12	
Starter motor			
make		Bosch	
power	kW	3	
pull current	Amp	60	
hold current	Amp	12	
break away current +20°C	Amp	1580	
cranking current +20°C	Amp	---	
Number of teeth on starter motor		10	
Number of teeth on flywheel		125	
Starting batteries			
recommended capacity	Ah 1x	100	
discharge current	Amp	650	
(EN 50342)			
Stop solenoid energized to run	Amp	---	
Alternator			
voltage	V	14	
charge	Amp	90	

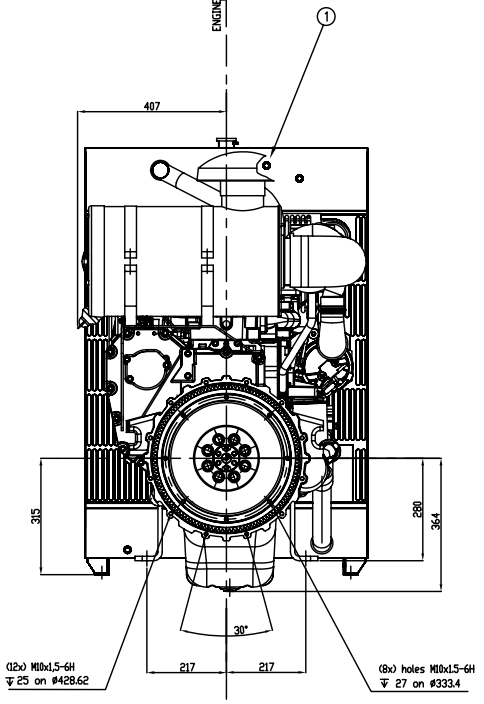
9/ COLD STARTABILITY		1500 rpm	1800 rpm
Without air preheating	°C	-10	
With air preheating	°C	-25	

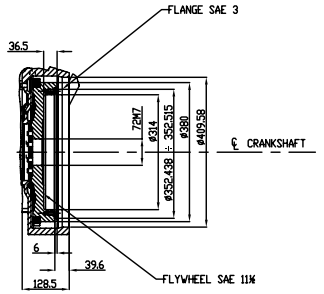
10/ EMISSION GASEOUS AND PARTICLES			1500 rpm	1800 rpm
No_x	Oxides of nitrogen	gr/kWh	9,03	8,67
HC	Hydrocarbons	gr/kWh	0,41	0,44
No_x+HC		gr/kWh	9,44	9,11
CO	Carbon monoxide	gr/kWh	0,98	0,53
PT	Particles	gr/kWh	---	---
	Smoke	Bosch	1,50	1











Pos.	Des.	Denomination
12	PIPE ø 8	Fuel return
11	PIPE ø 8	Fuel inlet
10	TBPO+TPO	Low oil pressure + Oil pressure
9	TATA+TTA	High water temperature + Water temperature
8	TIFA	Dust load indicator
7	TBPO	Low oil pressure
6	TPO	Oil pressure
5	TS	Water heater resistor switch
4	TATA	High water temperature
3	TTA	Water temperature
2	RS	Water heater resistor
1	TBLA	Low water level sensor

CAD DRAWING
HANDLING ON CAD SYSTEM ONLY

Schema Ingombro
Engine for Genset

NEF67TM/NEF67SM

IVECO
Iveco SpA

503111789 DA 62-9710

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