



# Generating sets IVECO MOTORS range

# IA-400

## FEATURING

Reliable power from your world leading manufacturer.

Every generator set is subjected to a comprehensive test program which includes full load testing and the checking and proving of all control and safety shut-down functions.

Delivered in a complete package that is ready to be filled with fuel and connected to your power cable.

Designed to Comply with European 2002/88/EC and American EPA CARB directives. Power in total environmental friendliness.



Generator set pictured may include optional accessories

## 3 PHASE OUTPUTS

GENERATOR SET MODEL	RATING	50HZ		60 HZ	
		KVA	KW	KVA	KW
IA-400	PRIME	400	320	420	336
	STAND-BY	440	352	462	370

Ratings at 0.8 pf - Generator designed to operate in ambient temperatures up to 52 °C

Standard Voltages 380 - 415 Volts 3 Phase 50HZ

## RATING DEFINITIONS:

### STANDBY POWER

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. When used at Standby Rating the alternator will be peak continuous rated (according to ISO3046)

### PRIME POWER

These ratings are applicable for supplying continuous power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours

## TECHNICAL DATA (50HZ)

Engine make:	IVECO-FPT		Lube oil specification:	ACEA E3/E5
Engine model :	CURSOR13TE3-E.U.I		Oil sump capacity:	liters 35
Basic Engine TYPE :	F3BE0685A*B101-8050770XZ		Maximum oil temperature:	°C 120
N° of cylinders:	6 in line		Minimum oil pressure:	KPa 250
Cubic capacity :	liters	12.9	Specific lube oil consumption:	Max 0.2% of fuel Consumption
Bore / stroke :	mm.	135 / 150	100% load	L/h 81.3
Aspiration:	turbo air to air aftercooled		80% load	L/h 63.8
Cooling system:	water		Fuel consumption at: 50% load	L/h 41.9
Engine speed:	RPM	1500	Heat rejection to coolant system:	Kcal/KWh 370
Net Power at flywheel:	KW	387	Heat radiated from generator:	Kcal/KWh 32
BMEP:	Kg/Cm <sup>2</sup>	24.8	Exhaust temperature:	°C 445
Mean Piston speed:	m/s	7.5	Exhaust gas flow:	Kg/h 2210
Coolant capacity:	liters	48	Cooling air flow:	m <sup>3</sup> /s 6.8
Heat rejection to exhaust system:	Kcal/KWh	703	Combustion air flow:	m <sup>3</sup> /h 1770

**Note:** 1) Ratings in accordance with ISO 8528 - The Nominal power are available after 50 hours running with ± 3% tolerance. The indicated power may change in function of the utilized alternator. For duty at temperature over 40°C and/or altitude over 1000 meters must be considered a power derating factor. Contact the Adpower Fzco sales organization.  
2) EPA TIER 2 certification available.

## STANDARD SPECIFICATION IA-400

### 1. ENGINE

IVECO (FPT) heavy duty diesel engine.

#### 1.1 Governor

Electronic, compliance with ISO8528, Class G3. The governor plays key role in frequency control as well as in engine paralleling capabilities. The electronic governor gives generally + 0.25% steady state frequency with isochronous functioning.

#### COOLING RADIATOR

2. Radiator and cooling fan complete with protection guards, designed to cool the engine in ambient temperatures up to 52° C. The radiator is mounted on the base frame to avoid vibrations coming from the engine.

#### FILTRATION SYSTEM

3. Cartridge type air filter with security element. Cartridge fuel filter and full lube oil filter. All filters have replaceable elements.

#### EXHAUST SYSTEM

4. Heavy-duty industrial silencer.

#### ELECTRICAL SYSTEM

5. 24 Volt system with battery charging alternator, Starter motor, High capacity maintenance free lead acid battery, battery rack mounted on the generating set base frame, and heavy duty interconnecting cables with terminations.

6. **ALTERNATOR** Screen protected and drip-proof, self-exciting, self-regulating brush-less alternator. Four poles, STAR winding connection, suitable for tropical humid and saline climates. H class insulation.

#### AUTOMATIC VOLTAGE

#### 7. REGULATOR

Static electronic design voltage regulator. Steady voltage precision within  $\pm 1.5\%$  from no load to full load including cold and hot variations, at any Power factor between 0.8 and unity.

### 8. MOTOR STARTING

An overload capacity equivalent to between 160% to 300% (depending on alternator frame size) of full load impedance at zero powerfactor can be sustained for 10 seconds.

### 9. MOUNTING ARRANGEMENT

#### 9.1 Base Frame

The complete generating set is mounted on heavy duty steel fabricated base frame which is anti rust coated.

#### 9.2. Coupling

Engine and alternator are directly coupled by means of SAE flange so there is no possibility of misalignment after prolong use. The engine fly wheel is flexibly coupled to the alternator rotor.

#### 9.3 Anti Vibration Mounting Pads

Anti vibration pads are fitted between engine-alternator & base frame ensuring complete vibration isolation of rotating assemblies.

### 10. CONTROL PANEL

Two options are available

#### 10.1 MANUAL CONTROL PANEL (STANDARD)

The manual starting control panel has been designed and built to combine all the instruments control and the warning lights for engine and alternator. The sheet steel made panel is carefully painted for tropical climates and is designed for a dusty environment. Includes following equipment Ammeter, voltmeter with selector switch - frequency meter moulded case three pole circuit breaker with thermal and magnetic release - automatic shut down in case of HWT, LWL, LOP and over speed - starting key and stop push button - acoustical signal - warning light for high cooling water temperature, low oil pressure, battery charging gauges for water temperature and oil pressure - hours meter.

### 10.2 AUTO Matic CONTROL PANEL (OPTIONAL)

This Panel has built in AMF feature, which starts Generator within few seconds of utility break down and restores main supply to customer when utility is again available. The generator mounted control panel excludes Auto transfer switch.

### 11. FUEL SYSTEM

Thermoplastic removable fuel tank with a total capacity of 500 liters is provided on the base frame. The Fuel tank is easy to clean and is equipped with visual fuel level indicator.

### 12. DIMENSIONS

Length	3530 mm
Width	1286 mm
Height	1820 mm
Weight	2800 Kg

### 13. DOCUMENTATION

A full set of operation and maintenance manual are provided.

### 14. FACTORY TESTS

Generating set is subject to a strict load test before delivery. A test certificate can be provided as optional.

### 15. QUALITY STANDARDS

Generating set meets the following standards ISO 8528, IEC 34.1, CEI 2.3, VDE 0530, BS 4999-5000, NF 51-100. IVECO aifo is fully accredited ISO 9001 company.

### 16. WARRANTY

Generating set is guaranteed for a period of 12 months from date of commissioning or 18 months from date of shipment whichever ever occurs earlier.



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