Code: AVI0275540T7310400M

Model: AV-275 - INDUSTRIAL RANGE | 400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

Genset with manual control panel.

Image for guidance purposes.

PRP

CONTINUOUS POWER: 250 kVA

PRP "Prime Power" norma ISO 8528-1

LTP

STAND-BY POWER: 275 kVA

LTP "Limited Time Power" norma ISO 8528-1

ENGINE

MAKE	MODEL
VOLVO	TAD 734 GE

ALTERNATOR

MAKE	MODEL
STAMFORD	UCDI274K

VOLTAGE	HZ	PHASE	COS Ø	PRP kVA/kW	LTP kVA/kW	AMP. (LTP)
400/230	50	3	0,8	250,0/200,0	275,0/220,0	397,4

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POWER GENERATORS INMESOL

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ENGINE CHARACTERISTICS

MAKE	MODEL
VOLVO	TAD 734 GE

General Data

Power PRP (kWm)	217.00
Power LTP (kWm)	241.00
No. cylinders	6
Cylinder capacity (L)	7.15
Diameter per stroke (mm)	108 x 130
Compression ratio	17
Cooling system	LIQUID
Injection	DIRECT
Suction	TURBO-INTERC.
Series regulator	ELECTRONIC
Fly wheel coupling	2-11,5"

Lubrication system

Oil capacity (L)	29
Oil consumption (%)	0.06
Min. alarm oil pressure (bar)	1

Ventilation system

Air cooling flow (m^3/h)	18720
Combustion air flow (m^3/h)	684
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m^3/h)	1980
Exhaust back pressure (mbar)	100
Temp. exhaust gases (°C)	495

Electrical system

VDC (V)	24
Battery (Ah)	120
Engine start-up (kW)	5

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ALTERNATOR CHARACTERISTICS

MAKE	MODEL
STAMFORD	UCDI274K

General Data

Power PRP (kVA)	250
Power LTP (kVA)	275.00
Efficiency Alt. 3/4 %	93.40
Efficiency Alt. 4/4 %	92.60
No. Poles	4
Voltage regulator	AS440
No. wires	12
Insulation	H
Xd (%)	2.55
X'd (%)	0.12
X	0.08
Degree of protection	IP23

GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	30
75%	42
100%	52.00

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

Dimensions (mm)		
LENGTH	WIDTH	HEIGHT
3000	1200	1834

FUEL TANK (LITRES)	WEIGHT (KG)
450	2050

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INMESOL GENERATOR SET

GENERAL DESCRIPTION

The “INMESOL” generator set is an electrical energy generating machine which is used in places where there is **no mains supply** or when there is a MAINS failure.

The mobile elements, distribution belt, fan, etc., and those parts which reach high temperatures during operation, exhaust manifold, etc, include their corresponding protections, in compliance with the requirements of the Machinery Directive **2006/42**.

REGULATIONS

Inmesol, S.L. company with ISO 9001 quality management system certificate and ISO 14001 Environmental Management System Certificate for the:

Design, manufacture, marketing and technical assistance of power GENSETs, lighting towers, welding GENSETs, tractor with PTO GENSET and hybrid generation systems.

Inmesol power GENSET sets comply with European legislation and were given the CE marking which includes the following directives:

- 2006/42/EC on machinery safety.
- 2005/88/EC on NOISE EMISSIONS by equipment for outdoor use (amends the 2000/14/EC).
- 2014/30/UE on Electromagnetic Compatibility.
- 2014/35/UE on electrical safety, electrical equipment designed to be used within certain voltage limits
- 2002/88/EC and 2004/26/EC amending the 97/68 on the emission of gases and pollutant particles from internal combustion engines that are installed in non-road mobile machinery.

International

It also complies with International Legislation and Regulations:

- “Technical Regulation on Safety of Machinery & Equipment” No. 753, repealing GOST R standards for exports to Russia.
- Resolution nº 90708 dated August 30th 2013 “Reglamento Técnico de Instalaciones Eléctricas RETIE” issued by the Ministry of Mining and Energy, Section 20.21 Engines and power generators, for exports to Colombia.

The power ratings are for reference to environmental conditions: barometric pressure 100 kPa, 25°C and 30% relative humidity. These are defined by ISO 8528 and ISO 3046.

PrimePower (PRP) “Main Service” is applicable for power GENSETs that function as main electric power source. It may be overloaded by 10% in limited time points, maximum once every 12 hours.

StandbyPower (LTP) “Emergency Service” applies to power GENSETs that run during Electrical Grid failure. This power may NOT BE OVERLOADED.

Nevertheless, to obtain long engine life, it is recommended that the active power average load (kW) connected to the power GENSET set in any period of 24 hours of operation does not exceed the following values:

- In Main Service 70% of the power PRP.
- In Emergency Service during Electrical Grid failure 80% of the power LTP.

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IN **INDUSTRIAL** RANGE

Scope of supply

Engine/alternator monobloc directly connected and installed via silent blocks on a frame made from high tensile electro welded steel profiles that are treated with degreasing liquids and aplicated with a phosphate coat and polyester (QUALICOAT) paint.
Fuel tank integrated in the base frame provided with fuel level jauge and fuel connections to the engine.
Engine with mechanical engine driven pusher fan.
Industrial silencer with -15 db(A) noise reduction and exhaust outlet tube.
Electric control cubicle with control module including protection and reading of electrical meassures engine instrumentation fuel level and engine running hours, etc. remote start possibility
Termal and magnetic circuit breaker and termal and magnetic circuit breaker and earth fault relay.
Battery charge alternator.
Starter battery complete with cables to the engine and pole protection.
Installation prepared for earthing spike (spike not included).
Security protection for heat and moving parts as well as live electrical components.
External emergency stop push button.
Self excited and auto regulated alternator.
4 Lifting points for gen sets from 450 kVA and bigger.
Base frame is prepared for trailer kit installation.
Standard electronic speed governor on engines from 220 kVA (LTP) and up.

OPTIONS

Battery charger
Coolant preheating
AMF/ATS panel to turn a manual gen set to automatic version (consult the last page)
Residential silencer

V1 PREWIRED VERSION FOR AMF

V2 GENSETS WITH AMF/ATS PANEL AND 4 POLE CIRCUIT BREAKER

V3 GENSET WITH AMF CONTROL PANEL BUT WITHOUT ATS PANEL AND SEPARATED ATS PANEL

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DSE 7310 MKII MANUAL CONTROL PANEL

MANUAL CONTROL, PROTECTION AND DISTRIBUTION panel, assembled on the generator set in metal cabinet with a DSE 7310 MKII engine protection unit.

Image for guidance purposes.

It has the following:

1. EMERGENCY STOP PUSHBUTTON.

2. PROTECTIONS:

Magnetothermal Protection.
Earth Leak Protection
Protection fuses for control module

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DSE 7310 MKII MANUAL CONTROL PANEL

3. DSE 7310 MKII PROTECTION CONTROL MODULE.

LCD SCREEN:

It has a digital LCD screen, which provides easy reading of the information regarding the ENGINE, ALTERNATOR and CHARGING.

ENGINE:	ALTERNATOR AND CHARGE:
Coolant temperature	Voltages between phases and between phases and neutral.
Oil pressure	Intensities
Turning speed (rpm)	Frequency
Fuel level	Active Power (kW)
Battery voltage	Reactive Power (kVAr)
Battery alternator voltage.	Apparent Power (kVA)
Operating hours	Cos phi
Number of start-ups	Active energy meter (kW-h)

CONTROL OF THE SET:

START AND STOP the set MANUALLY.

Possibility of doing it AUTOMATICALLY via START ON SIGNAL.

Dual Mutual Standby

PROTECTION OF THE ENGINE AND ALTERNATOR, WITH THE ALARMS ACTIVATED:

ENGINE:	ALTERNATOR:
Low oil pressure	Low and High Voltage
High coolant temperature	Low and High Frequency
Low and High battery Voltage	Overload due to Intensity (A)
Failure of the alternator to charge batteries	Short-circuit
Low fuel level.	Negative Phase Sequence.
	Power Overload (KW-kVA)
	Load control:
	▪ Connection and disconnection of artificial loads.
	▪ Disconnection of non-essential loads

OTHER CHARACTERISTICS:

The real-time clock provides an exact record of events	Possibility of SMS text messages
Extensive number of configurable inputs and outputs.	Ethernet communication and simultaneous use of RS232 and RS 485 ports
Configurable alarms and timers.	Programmer Clock with multiple maintenance events which can be configured for the optimal operation of the engine. Weekly and/ or monthly programming of up to 16 starts and stops per week.
USB connectivity	Enhanced PLC functionality.
Fully configurable via software and PC	Data logging function
Modbus RTU	The fuel consumption may be monitored on the screen and SMS messages with alarms and reports may be sent.

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4. PROTECTIONS

MAGNETO. PROTECTION (A)	EARTH LEAK PROTECTION	DISTRIBUTION
400A, 3P	Electronic, adjustable	Direct from circuit breaker