

Model: IV-385 - 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:** 350 kVA

PRP "Prime Power" norma ISO 8528-1

## LTP

**STAND-BY POWER:** 390 kVA

LTP "Limited Time Power" norma ISO 8528-1

## ENGINE

| MAKE  | MODEL       |
|-------|-------------|
| VOLVO | TAD 1342 GE |

## ALTERNATOR

| MAKE     | MODEL   |
|----------|---------|
| STAMFORD | HCI444E |

| VOLTAGE | HZ | PHASE | COS Ø | PRP kVA/kW  | LTP kVA/kW  | AMP. (LTP) |
|---------|----|-------|-------|-------------|-------------|------------|
| 400/230 | 50 | 3     | 0,8   | 350,0/280,0 | 389,2/311,4 | 562,42     |

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## ENGINE CHARACTERISTICS

| MAKE | MODEL |
|------|-------|
|------|-------|

VOLVO

TAD 1342 GE

### General Data

|                          |               |
|--------------------------|---------------|
| Power PRP (kWm)          | 303           |
| Power LTP (kWm)          | 333           |
| No. cylinders            | 6             |
| Cylinder capacity (L)    | 12.78         |
| Diameter per stroke (mm) | 131 x 158     |
| Compression ratio        | 18.10         |
| Cooling system           | LIQUID        |
| Injection                | COMMON RAIL   |
| Suction                  | TURBO-INTERC. |
| Series regulator         | -             |
| Fly wheel coupling       | 1 - 14        |

### Lubrication system

|                               |      |
|-------------------------------|------|
| Oil capacity (L)              | 36   |
| Oil consumption (%)           | 0.06 |
| Min. alarm oil pressure (bar) | 2.20 |

### Ventilation system

|                                   |       |
|-----------------------------------|-------|
| Air cooling flow (m³/h)           | 24120 |
| Combustion air flow (m³/h)        | 1476  |
| Max. back pressure for fan (mbar) | 0     |

### Exhaust system

|                              |      |
|------------------------------|------|
| Exhaust gas flow (m³/h)      | 3210 |
| Exhaust back pressure (mbar) | 100  |
| Temp. exhaust gases (°C)     | 395  |

### Electrical system

|                      |         |
|----------------------|---------|
| VDC (V)              | 24      |
| Battery (Ah)         | 2 x 180 |
| Engine start-up (kW) | 7       |

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| STAMFORD | HCI444E |

### General Data

|                       |        |
|-----------------------|--------|
| Power PRP (kVA)       | 350    |
| Power LTP (kVA)       | 400.00 |
| Efficiency Alt. 3/4 % | 94.40  |
| Efficiency Alt. 4/4 % | 93.50  |
| No. Poles             | 4      |
| Voltage regulator     | AS440  |
| No. wires             | 12     |
| Insulation            | H      |
| Xd (%)                | 2.71   |
| X'd (%)               | 0.18   |
| X                     | 0.13   |
| Degree of protection  | IP23   |

## GENERATOR SET CONSUMPTION

| % POWER USED | LITRES/HOUR |
|--------------|-------------|
| 50%          | 37          |
| 75%          | 53          |
| 100%         | 68          |

## DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

| Dimensions (mm) |       |        |
|-----------------|-------|--------|
| LENGTH          | WIDTH | HEIGHT |
| 4200            | 1600  | 2245   |

| FUEL TANK (LITRES) | WEIGHT (KG) |
|--------------------|-------------|
| 534                |             |

| NOISE LEVEL (dB (A)) |
|----------------------|
| 72 @ 7 m             |

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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**.



**INMESOL S.L company with ISO 9001 quality certification system for the:**

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

### Europe regulations:

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

### International regulations:

Upon request, INMESOL can supply equipment that complies with the International Legislation and Regulations:

- "Technical Regulation on Safety of Machinery & Equipment" No. 753, repealing GOST R standards for exports to Russia.
- Resolution n° 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.

### Information:

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

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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 applied with a phosphate coat and polyester (QUALICOAT) paint.

Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and applied with a phosphate coat and polyester (QUALICOAT) paint.

Sealed chassis

Fuel tank integrated in the base frame provided with fuel level gauge and fuel connections to the engine.

Engine with mechanical engine driven pusher fan.

Residential silencer with -35 db(A) noise reduction with exhaust tube and protection cap.

Electric control cubicle with control module including protection and reading of electrical measures engine instrumentation fuel level and engine running hours, etc. remote start possibility

Thermal and magnetic circuit breaker and thermal 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.

Manual engine oil extraction pump.

Self excited and auto regulated alternator.

Integrated lifting hook for single point lifting with crane, gensets up to 450 kVA (Except in swing-out cover model)

Base frame is prepared for trailer kit installation.

Standard electronic speed governor on engines from 220 kVA (LTP) and up.

Horizontal outlet for hot air (till canopy 4200x1600x2245)

## OPTIONS

Battery charger

Coolant preheating

AMF/ATS panel to turn a manual gen set to automatic version

Integral additional socket panel from 20 kVA till 400 kVA PRP

Residential silencer

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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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**DSE 7310 MKII** MANUAL CONTROL PANEL

## 4. PROTECTIONS

| MAGNETO. PROTECTION (A) | EARTH LEAK PROTECTION  | DISTRIBUTION                    |
|-------------------------|------------------------|---------------------------------|
| 630A, 3P                | Electronic, adjustable | CEE5P16A+Schuko+power terminals |