

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

RENTAL Genset with manual control panel.



Image for guidance purposes.

## PRP

**CONTINUOUS POWER:** 150 kVA

PRP "Prime Power" norma ISO 8528-1

## LTP

**STAND-BY POWER:** 165 kVA

LTP "Limited Time Power" norma ISO 8528-1

## ENGINE

MAKE	MODEL
VOLVO	TAD731GE

## ALTERNATOR

MAKE	MODEL
MECC-ALTE	ECP34-1LC

VOLTAGE	HZ	PHASE	COS Ø	PRP kVA/kW	LTP kVA/kW	AMP. (LTP)
400/230	50Hz	3	0,8	150,0/120,0	165,0/132,0	238,16

Rev.: 14/07/2020

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

## ENGINE CHARACTERISTICS

MAKE	MODEL
VOLVO	TAD731GE

### General Data

Power PRP (kWm)	133
Power LTP (kWm)	148
No. cylinders	6
Cylinder capacity (L)	7.15
Diameter per stroke (mm)	108 x 130
Compression ratio	18
Cooling system	LIQUID
Injection	DIRECT
Suction	TURBO-INTERC.
Series regulator	MECHANICAL
Fly wheel coupling	2-11.5

### Lubrication system

Oil capacity (L)	20
Oil consumption (%)	0.35
Min. alarm oil pressure (bar)	2

### Ventilation system

Air cooling flow (m <sup>3</sup> /h)	10440
Combustion air flow (m <sup>3</sup> /h)	592
Max. back pressure for fan (mbar)	

### Exhaust system

Exhaust gas flow (m <sup>3</sup> /h)	1650
Exhaust back pressure (mbar)	50
Temp. exhaust gases (°C)	520

### Electrical system

VDC (V)	12
Battery (Ah)	120
Engine start-up (kW)	3.1

Rev.: 14/07/2020

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

## ALTERNATOR CHARACTERISTICS

MAKE	MODEL
MECC-ALTE	ECP34-1LC

### General Data

Power PRP (kVA)	150
Power LTP (kVA)	165
Efficiency Alt. 100 %	93.2
Efficiency Alt. 110 %	92.9
No. Poles	4
Voltage regulator	DSR
No. wires	12
Insulation	H
Xd (%)	225.3
X'd (%)	13.9
X	5.8
Degree of protection	IP23

## GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	18
75%	26
100%	34

## DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT

Dimensions (mm)		
LENGTH	WIDTH	HEIGHT
3640	1200	2295

FUEL TANK (LITRES)	WEIGHT (KG)
1100	2560

NOISE LEVEL (dB (A))
64dB(A)@7m

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

## 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 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.

### 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.

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

**RR** RENTAL  
RANGE

## Scope of supply



Engine/alternator assembly, coupled and installed on a heavy electric wilded steel profile base frame through antivibration pad, then treated with rust removing products for zink layer application and Polyester (QUALICOAT) painting, "special treatment for external and corrosive environment."

Soundproof canopy treated with rust removing products for zink layer application and Polyester (QUALICOAT) painting, "special treatment for external and corrosive environment." Then lined with rock wool material of high density.

Liquid cooled engine with integrated mechanical radiator and blower fan.

Integrated exhaust residential silencer of -35 db (A) antenuation, with rain cap protection.

Lifting hook crane.

Fork lift pockets for easy lifting from the bottom.

Hook for towing.

Radiator water filling cover register.

Easy acces to radiator cleaning, and replacement.

Integrated metallic fuel tank of 24 hours autonomy with liquid leakage protection.

Large fuel tank register for cleaning.

Fuel draining plug.

Internal fuel filler cap with security locable key.

Protection of heat, mobile, and live comoponents.

Manual oil sump pump.

Baseframe prepared to be mounted on a trailer.

External emergency stop push button.

Engine starting battery "maintenance free" complete with wires connection, terminal protection and on-off switch.

Alternator battery charger with earth plug.

Self excited and auto regulated alternator.

Manual control panel with a microprocessor for control , protection and generating set reading parameters as voltage, amperage, working hours, etc.

Circuit breaker 4P and regulable earth leakage

Prepared for earth stud installation (earth stud not included).

Vertical outlet for hot air

On/off battery switch

Documents Bag

Door retainer

Cables lock for fixing the power cables.

One silencer of industrial type and another silencer of residential type to decrease the exhaust sound level.

Special anti vibration mounts fitted between the alternator/engine block and the frame, to decrease the amount of vibrations that are transmitted to the frame and to absorb all mechanical chocks from transportation.

## OPTIONS

Coolant preheating resistor.

Battery charger

Automatic/manual fuel transfer pump.

Total plus alternator protection.

Diferent colour.

External linkbox for arround cables.

Kit of 3-way valves for external fuel tank connection (optional single lever).

Fast fuel plug connection between external and internal fuel tanks

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

Voltage and frequency change selector (50 Hz - 60 Hz).

Electrical power socket kit

Soundproof canopy auxiliary internal lighting

Upgrades to switchboards from other brands.

Rev.: 14/07/2020

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

## DSE 6110 MKIII MANUAL CONTROL PANEL

MANUAL CONTROL, PROTECTION AND DISTRIBUTION panel, assembled on the generator set in metal cabinet with a DSE 6110 MKIII engine protection unit.



Image for guidance purposes.

It has the following:

### 1. STARTER SWITCH

### 2. PROTECTIONS:

Magnetothermal Protection.

Earth Leak Protection

Protection fuses for control module

Rev.: 14/07/2020

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

## DSE 6110 MKIII MANUAL CONTROL PANEL

### 3. DSE 6110 MKIII PROTECTION CONTROL MODULE.

#### LCD SCREEN:

It is equipped with a digital LCD screen, which makes it easy to read the information concerning the ENGINE, ALTERNATOR and LOAD available in several languages. The readings that can be obtained are:

ENGINE:	ALTERNATOR AND CHARGE:
Coolant temperature	Voltages between phases and between phases and neutral.
Oil pressure	Intensities
Turning speed (rpm)	Frequency
Fuel level	
Battery voltage	
Battery alternator voltage	
Operating hours	
Number of start-ups	

#### CONTROL OF THE SET:

START AND STOP the set MANUALLY.

Possibility of doing it AUTOMATICALLY via START ON SIGNAL.

#### 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	Low load
Low fuel level..	

#### OTHER CHARACTERISTICS:

The real-time clock records the last 100 events.s.	Fully configurable via software and PC.
Configurable inputs and outputs.	Communication via USB cable for remote control
"DSE Net" for the connection of expansion modules. The possibilities of adapting the operation of the generator sets to the different current applications are expanded.	Programmable clock with multiple maintenance events which can be configured for optimal motor functioning. Weekly and/or monthly programming for up to 8 startups and shutdowns per week.
Configurable alarms and timers.	ALTERNATIVE CONFIGURATIONS, which open up the working possibilities.
USB connectivity	DATA LOGGING. Option to display, either graphically or in editable tables, information on the genset operation.
Sleep Mode	Option to inhibit start-up by external signal during a specific period.
Internal PLC editor	Customisable power up text and images
Fuel and start outputs configurable when using CAN.	Five key menu navigation
Tier 4 ECO engine support including exhaust fluids & filters	Backed-up real time clock.
CAN, MPU & alternator speed sensing (selectable depending on engine type).	

Rev.: 14/07/2020

Model: IVR-165 - RENTAL RANGE

400/230 V - THREE-PHASE | 1.500 R.P.M. | 50 Hz

**DSE 6110 MKIII MANUAL CONTROL PANEL**

**4. PROTECTIONS**

MAGNETO. PROTECTION (A)	EARTH LEAK PROTECTION	DISTRIBUTION
250A, 4P	Electronic, adjustable	Power terminals