

IV-165 - VOLVO - TAD 731 GE

1.500 R.P.M. | 50 Hz

TECHNICAL SPECIFICATIONS



Model:

IV-165

Stand-by automatic gen set.

Image for guidance purposes.

ENGINE	MAKE	MODEL
	VOLVO	TAD 731 GE

ALTERNATOR	MODEL
	MECC-ALTE ECP 34-2L/4

(400 / 230 V)

CONTINUOUS POWER:
(PRP "Prime Power" norma ISO 8528-1) **150 kVA**

STAND-BY POWER:
(LTP "Limited Time Power" norma ISO 8528-1) **165 kVA**

Amperes in the different voltages:

VOLTAGE	HZ	PHASE	COS Ø	PRP KVA/KW	LTP KVA/KW	AMPERAGE
415/240	50	3	0,8	150,0/120,0	165,0/132,0	229,82
400/230	50	3	0,8	150,0/120,0	165,0/132,0	238,44
380/220	50	3	0,8	150,0/120,0	165,0/132,0	250,99
240/139	50	3	0,8	150,0/120,0	165,0/132,0	397,4
230/133	50	3	0,8	150,0/120,0	165,0/132,0	414,68
220/127	50	3	0,8	150,0/120,0	165,0/132,0	433,53

ELECTRO EXIM SRL

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ENGINE CHARACTERISTICS

MAKE	MODEL
VOLVO	TAD 731 GE

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 (m3/h)	10440
Combustion air flow (m3/h)	592
Max. back pressure for fan (mbar)	0

Exhaust system

Exhaust gas flow (m3/h)	1650
Exhaust back pressure (mbar)	50
Temp. exhaust gases (°C)	520

Electrical system

VDC (V)	12
Battery (Ah)	120
Engine start-up (kW)	3.10

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ALTERNATOR CHARACTERISTICS

MODEL

MECC-ALTE ECP 34-2L/4 (400 / 230 V)

GENERAL DATA

Power PRP (kVA)	150
Power LTP (kVA)	165
Efficiency Alt. 3/4 %	93.50
Efficiency Alt. 4/4 %	93.20
No. Poles	4
Voltage regulator	DSR
No. wires	12
Insulation	H
Xd (%)	240
X'd (%)	14.80
X	6.20
Degree of protection	IP21

GENERATOR SET CONSUMPTION

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

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT AND NOISE

LENGTH	DIMENSIONS (MM)	
	WIDTH	HEIGHT
2950	1100	1759
FUEL TANK (LITRES)		WEIGHT (KG)
220.00		2180.00
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**.

REGULATIONS

The machine holds the "CE" marking, and the corresponding Declaration of Conformity is issued with each of them, in which it specifies that the machine complies with **R.D 842/2002 Low Voltage Regulations and with the European Directives:**

- 2006/42 on Safety in Machinery.
- 2006/95/CE on Electrical Safety.
- 2004/108/CE on Electromagnetic Compatibility.
- 2005/88/CE on NOISE EMISSIONS by equipment for outdoor use (for SOUNDPROOF GENERATOR SETS).

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SB STAND-BY 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 epoxy paint.	✓	✓
Canopy of steel sheet sound proofed with fireproof rockwool, and treated with degreasing liquids and applied with a phosphate coat and epoxy paint.	•	✓
Fuel tank integrated in the chassis provided with fuel level gauge and fuel lines to the engine.	✓	✓
Engine with mechanical engine driven pusher fan.	✓	✓
Industrial silencer with -15 db(A) noise reduction and exhaust outlet tube.	✓	•
Residential silencer with -35 db(a) noise reduction with exhaust tube and protection cap.	•	✓
4 Pole thermal and magnetic circuit breaker.	✓	✓
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 belts and moving parts as well as on electrical component.	✓	✓
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)	•	✓
4 Lifting points for gen sets from 450 kVA and bigger.	✓	•
Prepared for extended fuel tank, fully bonded for leakage protection.	✓	✓
Base frame prepared for trailer kit	✓	✓
Standard electronic speed governor on engines from 220 kVA and up.	✓	✓
Electric control cubicle with digital control module, automatic mains failure, manual start or remote start on signal.	✓	✓
Battery charger for gen set with 12VCC battery (2A).	✓	✓
Battery charger for gen set with 24VCC battery (5A).	✓	✓
Electric engine coolant preheating on gen sets with automatic mains failure controller.	✓	✓
Horizontal outlet for hot air	•	✓

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DSE 6020 MKII AUTOMATIC CONTROL PANEL

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PROTECTION, DISTRIBUTION AND AUTOMATIC CONTROL panel which starts the generator set when it detects a mains failure and stops it when the mains is restored with the control unit DSE 6020 MKII. It also starts and stops the group manually via a pushbutton or remote start-up by contact



Imágenes orientativas.

It has the following:

- 1** EMERGENCY STOP PUSHBUTTON
- 2** PROTECTIONS:
 - Magnetothermal switch (preheating resist.) 2P (16 A)
 - Protection fuses for control module
- 3** BATTERY CHARGER

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DSE 6020 MKII AUTOMATIC CONTROL PANEL

- 4 DSE 6020 MKII PROTECCION CONTROL MODULE.** It has a digital LCD screen, which provides easy reading of the information regarding the ENGINE, ALTERNATOR, MAINS and CHARGING.

READINGS that can be made::

ENGINE:

- Coolant temperature
- Fuel level
- Operating hours
- Oil pressure
- Battery voltage
- Number of start-ups
- Turning speed (rpm)
- Battery alternator voltage.

ALTERNATOR AND CHARGE:

- Voltages between phases and between phases and neutral.
- Reactive Power (kVAr)
- Intensities
- Apparent Power (kVA)
- Frequency
- Cos phi
- Active Power (kW)
- Active energy meter (kW-h)

MAINS:

- Frequency
- Reactive Power (kVAr)
- Voltages between phases and neutral (L1-N, L2-N, L3-N).
- Apparent Power (kVA)
- Voltages between phases and (L1-L2, L2-L3, L1-L3).
- Cos phi

CONTROL of the set:

- STARTS and STOPS the set AUTOMATICALLY when mains failure is detected and when it is restored, respectively.
- Breaker control via fascia buttons
- It can also operate MANUALLY a REMOTE START

Protection of the engine and alternator, with the ALARMS activated:

ENGINE:

- Low oil pressure
- Low fuel level
- High coolant temperature
- Engine maintenance alarms for fuel filter, air filter and oil filter
- Low and High battery Voltage.
- Failure of the alternator to charge batteries

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DSE 6020 MKII AUTOMATIC CONTROL PANEL

ALTERNATOR:

- Low and High Voltage
- Low and High Frequency
- Overload due to Intensity (A)
- Power Overload (KW)

MAINS:

- Low and High Voltage
- Low and High Frequency

OTHER CHARACTERISTICS:

- The real-time clock provides an exact record of events.
- Extensive number of configurable inputs and outputs.
- Configurable alarms and timers.
- USB connectivity
- Fully configurable via software and PC.
- Communication via USB cable for remote control
- 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.
- ALTERNATIVE CONFIGURATIONS, which open up the working possibilities

5 DISTRIBUTION:

- Direct output of the magnetothermal switch.

6 OPTIONAL:

- 4-Pole Switchboard installed next to the controller in the same metal cabinet.
- 4-Pole Switchboard in metal cabinet independent from the Automatic Panel

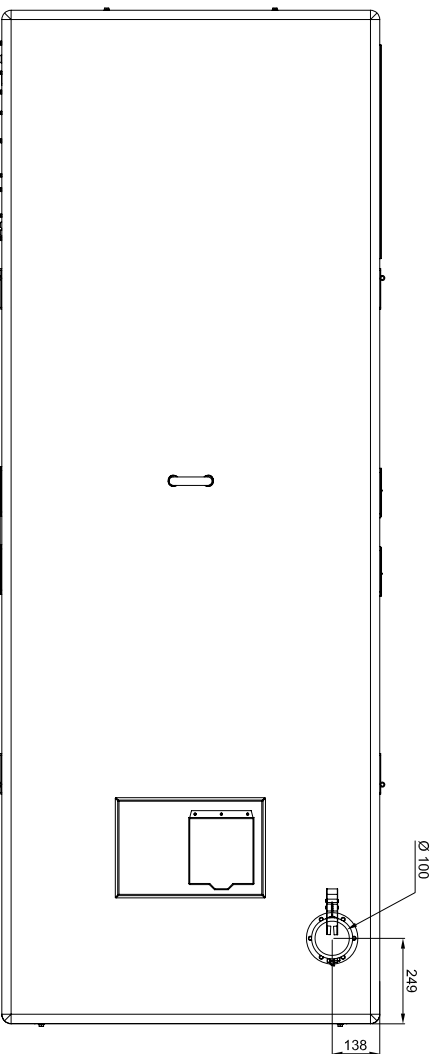
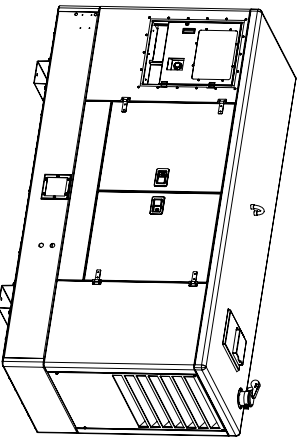
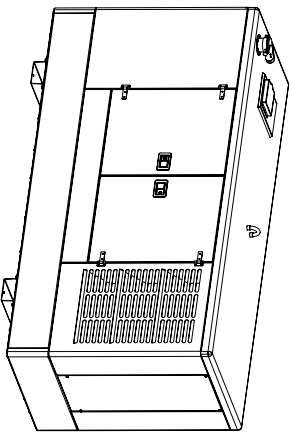
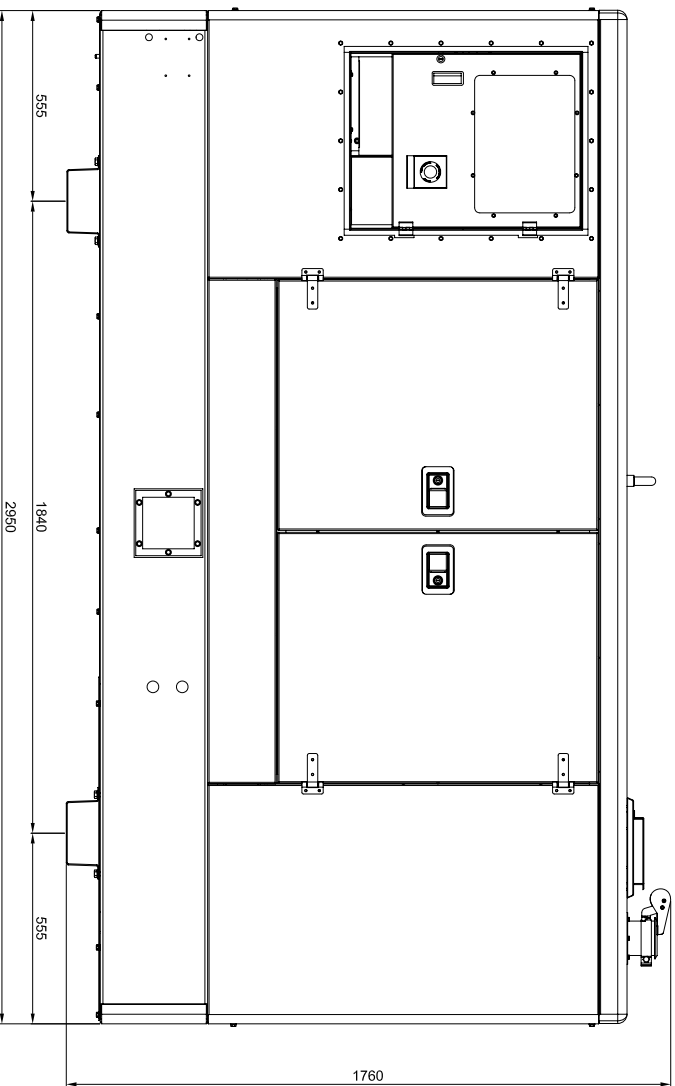
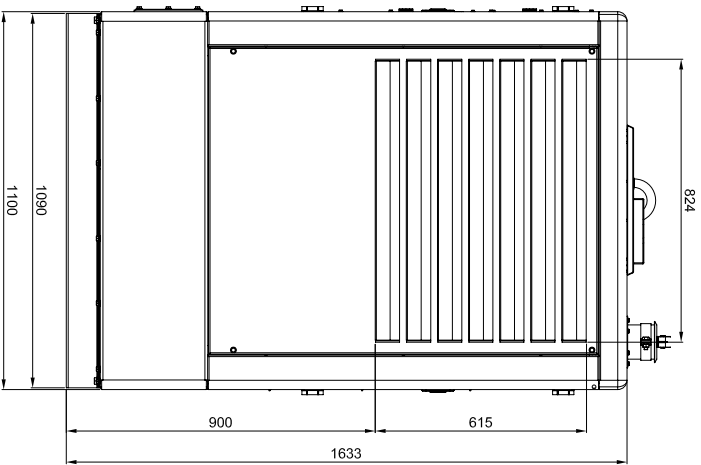
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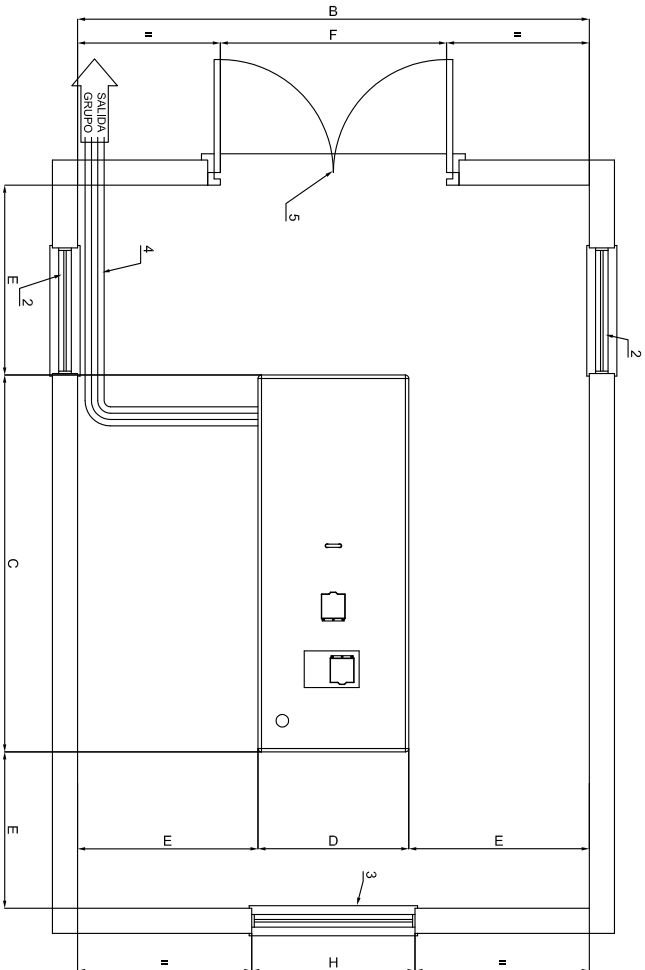
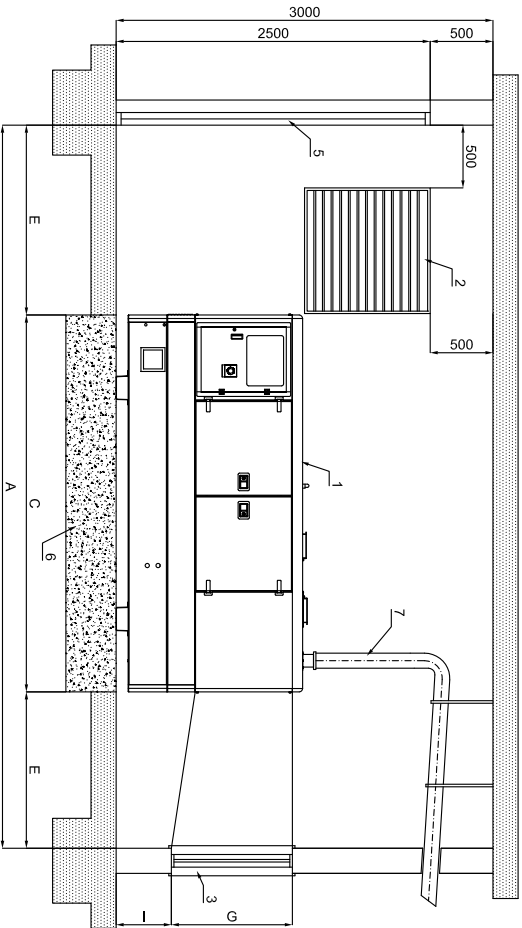
The following table shows the different amperages of the magnetothermal switches and the switchboards according to the set's power - Three-phase generators (single phase by request):

CONT. POW.		CONTINUOUS POWER MAGNETOTHERMAL PROTECTION IV POLES (A)	SWITCHBOARD IV POLES (A)
SET'S POWER	10 kVA	16	25
	15 kVA	25	25
	20 kVA	32	30
	30 kVA	50	45
	40 kVA	63	60
	50 kVA	80	100
	60 kVA	100	100
	75 kVA	125	125
	80 kVA	125	125
	100 kVA	160	160
	125 kVA	250	260
	150 kVA	250	260
	160 kVA	250	260
	170 kVA	250	260
	200 kVA	400	400



CAPACIDAD DE DEPOSITO = 220 LTS

INMIESOL INSTRUMENTOS Y MATERIALES		PROYECTO:		G.E. INSONORIZADO 80-150 Kva R13	
Las tolerancias o surtos de espesor de origen, a de todo, se aplican a las superficies de trabajo, a menos que se indique lo contrario en el plano. Las tolerancias se aplican a las superficies de trabajo, a menos que se indique lo contrario en el plano.		MODIFICADO		MATERIAL	
CODIGO		DIBUJADO		TOLERANCIA GENERAL	
PESO		COMPROBADO		UDS.	
ESCALA		DENOMINACION:		EXPEDIENTE:	
		G.E. INSONORIZADO 80-150 Kva R13		Nº PLANO	
		DIMENSIONES GENERALES		MARCA	



DIMENSIONES MINIMAS DE SALA SEGUN POTENCIA										
POTENCIA (Kva)	A	B	C	D	E	F	G	H	I	SECCION HUECO ENTRADA AIRE
8-15 ABATIBLE	3365	2800	1365	800	1000	900	700	850	450	2x0.50 m ²
10-15	3600	2900	1600	900	1000	1100	700	850	450	2x0.50 m ²
20-30	4000	2950	2000	950	1000	1200	750	850	450	2x0.50 m ²
40-60-75	4500	3100	2500	1100	1000	1400	900	1100	450	2x0.90 m ²
85-105-130	5000	3200	3000	1200	1000	1400	900	1100	450	2x1.00 m ²
150-180-200-250	5600	3350	3600	1350	1000	1550	1150	1300	500	2x2.50 m ²
300-400	6200	3600	4200	1600	1000	1800	1250	1600	650	2x3.00 m ²
450-470-500-510-630-650	6800	4000	4800	2000	1000	2200	1300	1800	725	2x3.50 m ²

- NOMENCLATURA
- 1.- GRUPO ELECTROGENO
 - 2.- HUECO ENTRADA DEL AIRE
 - 3.- TUNEL EXPULSION DEL AIRE
 - 4.- BANDEJA PASACABLES
 - 5.- PUERTA DE ACCESO
 - 6.- BASE HORMIGON ARMADO H-175
 - 7.- TUBO DE ESCAPE

CALCULO ESPESOR LOSA DE HORMIGON

$$E = \frac{W}{d \times D \times C}$$

E = altura bloque de hormigon
W = peso total grupo electrogeno
d = densidad del hormigon (2400 kg/m³)
D = anchura bloque de hormigon (m)
C = longitud bloque de hormigon (m)

h = 20/100 mm

EL Ø DE LA TUBERIA DE EXTENSION DEL ESCAPE PUEDE SER EL MISMO QUE EL DEL SILENCIADOR HASTA 5 m. PARA DISTANCAS MAYORES DE 5 m. DEBE AUMENTARSE EL Ø DE LA TUBERIA 10 mm POR CADA 10 m MAS DE DISTANCIA ENTRE EL GRUPO ELECTROGENO Y LA SALIDA EXTERIOR

				GRUPO INSONORIZADO			
PROYECTO:				MODIFICADO:			
CODIGO:				DISEÑADO:			
PESO:				APROBADO:			
ESCALA:				J.L. SOLANO			
DENOMINACION:				MATERIAL:			
GRUPO INSONORIZADO				TOLERANCIA GENERAL:			
DIMENSIONES DE SALA				N° MOD:			
MARCA:				EXPEDIENTE:			