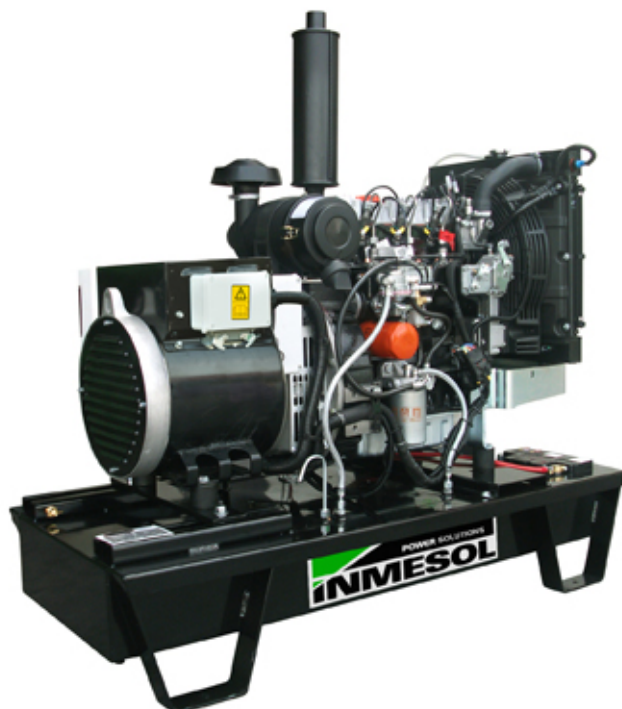


AL-017 - LOMBARDINI - LDW 1603

1.500 R.P.M. | 50 Hz

TECHNICAL SPECIFICATIONS



Model:

AL-017

Stand-by automatic gen set.



Image for guidance purposes.

ENGINE	MAKE	MODEL
	LOMBARDINI	LDW 1603

ALTERNATOR	MODEL
	ZANARDI ATO 28-3VS/4

(400 / 230 V)

CONTINUOUS POWER:
(PRP "Prime Power" norma ISO 8528-1) **15 kVA**

STAND-BY POWER:
(LTP "Limited Time Power" norma ISO 8528-1) **17 kVA**

Amperes in the different voltages:

VOLTAGE	HZ	PHASE	COS Ø	PRP KVA/KW	LTP KVA/KW	AMPERAGE
415/240	50	3	0,8	15,2/12,2	16,9/13,5	23,51
400/230	50	3	0,8	15,2/12,2	16,9/13,5	24,39
380/220	50	3	0,8	15,2/12,2	16,9/13,5	25,67
240/139	50	3	0,8	15,2/12,2	16,9/13,5	40,64
230/133	50	3	0,8	15,2/12,2	16,9/13,5	42,41
220/127	50	3	0,8	15,2/12,2	16,9/13,5	44,34

ELECTRO EXIM SRL

ELECTRO EXIM SRL
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AL-017 - LOMBARDINI - LDW 1603

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ENGINE CHARACTERISTICS

MAKE	MODEL
LOMBARDINI	LDW 1603

GENERAL DATA

Power PRP (kWm)	14
Power LTP (kWm)	15.50
No. cylinders	3
Cylinder capacity (L)	1.60
Diameter per stroke (mm)	88 x 90,4
Compression ratio	-
Cooling system	LIQUID
Injection	INDIRECT
Suction	NATURAL
Series regulator	MECHANICAL
Fly wheel coupling	4 - 7,5"

Lubrication system

Oil capacity (L)	3.80
Oil consumption (%)	0.02
Min. alarm oil pressure (bar)	-

Ventilation system

Air cooling flow (m3/h)	2399
Combustion air flow (m3/h)	61.80
Max. back pressure for fan (mbar)	0

Exhaust system

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

Electrical system

VDC (V)	12
Battery (Ah)	60
Engine start-up (kW)	-

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AL-017 - LOMBARDINI - LDW 1603

1.500 R.P.M. | 50 Hz

ALTERNATOR CHARACTERISTICS

MODEL

ZANARDI ATO 28-3VS/4

(400 / 230 V)

GENERAL DATA

Power PRP (kVA)	17.00
Power LTP (kVA)	18.70
Efficiency Alt. 3/4 %	87.30
Efficiency Alt. 4/4 %	87.10
No. Poles	4
Voltage regulator	COMPOUND TRANS
No. wires	6
Insulation	H
Xd (%)	-
X'd (%)	-
X	-
Degree of protection	IP23

GENERATOR SET CONSUMPTION

% POWER USED	LITRES/HOUR
50%	2.08
75%	3.09
100%	4.12

DIMENSIONS, CAPACITIES, APPROXIMATE WEIGHT AND NOISE

LENGTH	DIMENSIONS (MM)	
	WIDTH	HEIGHT
1300	580	1383
FUEL TANK (LITRES)		WEIGHT (KG)
80		398.00
NOISE LEVEL (dB (A))		

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AL-017 - LOMBARDINI - LDW 1603

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**.

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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AL-017 - LOMBARDINI - LDW 1603

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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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AL-017 - LOMBARDINI - LDW 1603

1.500 R.P.M. | 50 Hz

DSE 6020 MKII AUTOMATIC CONTROL PANEL

DSE 6020 MKII AUTOMATIC CONTROL PANEL

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

AL-017 - LOMBARDINI - LDW 1603

1.500 R.P.M. | 50 Hz

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)
- Cos phi
- Voltages between phases (L1-L2, L2-L3, L1-L3).

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

AL-017 - LOMBARDINI - LDW 1603

1.500 R.P.M. | 50 Hz

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

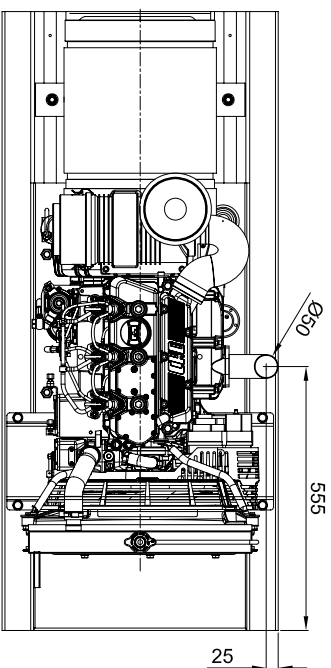
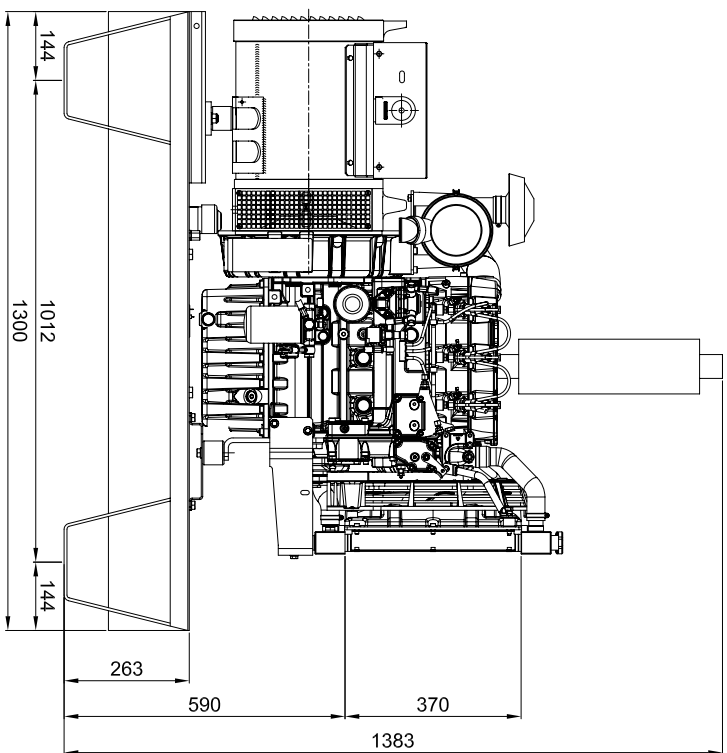
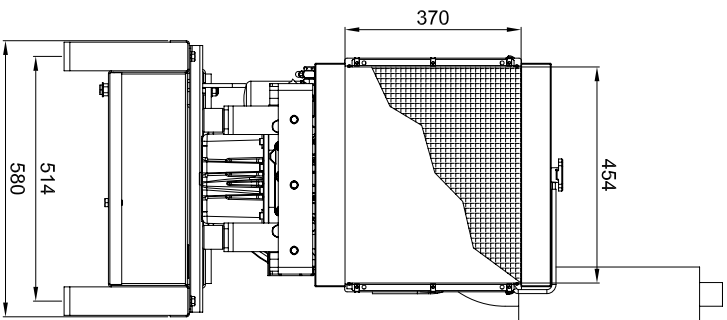
AL-017 - LOMBARDINI - LDW 1603

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DSE 6020 MKII AUTOMATIC CONTROL PANEL

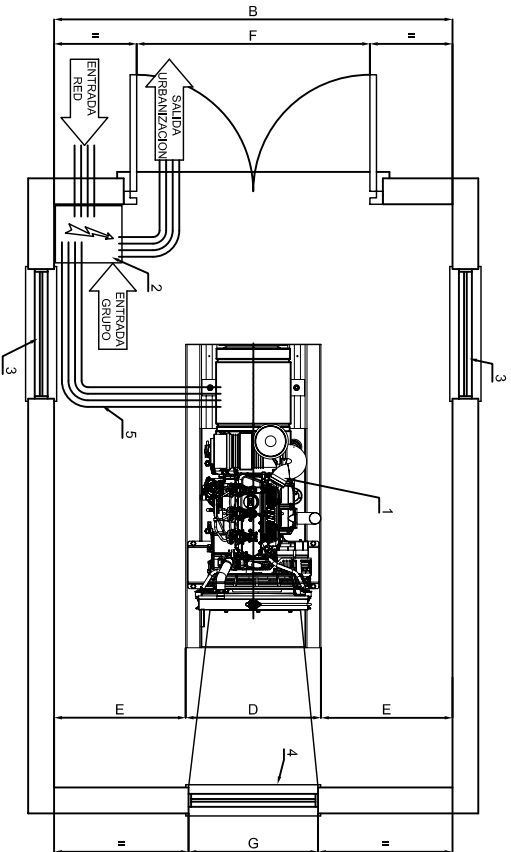
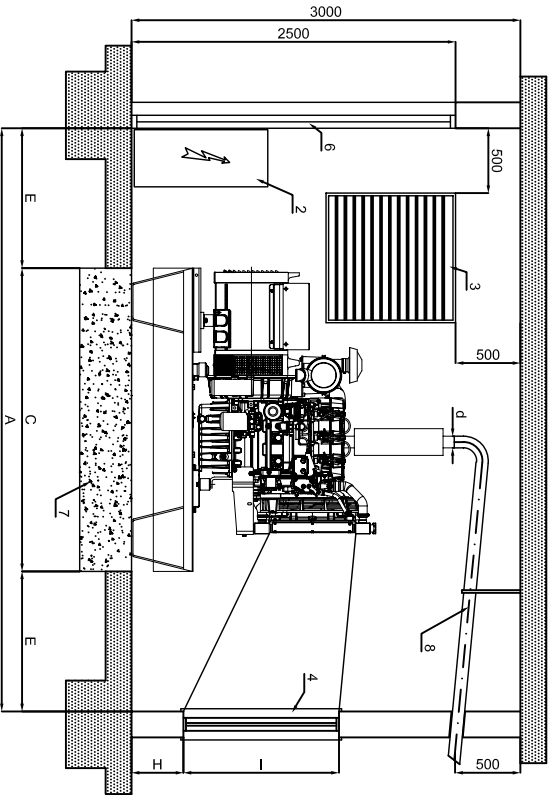
The following table shows the different amperages of the magnetothermal switches and the switchboards according to the set's power - Three-phase generators (single phase by request)::

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 = 80 LTS

		PROYECTO:			
Las informaciones o datos de esta obra, a de todo, se han elaborado en el taller de INMESOL, S.L. y no se han verificado en el terreno. Por lo tanto, INMESOL, S.L. no se responsabiliza de los errores o de los daños que puedan ocasionar los datos o las informaciones que se han suministrado.		G.E. EST-STD 15 Kva LOMBARDINI (LDW1603)			
MODIFICADO	U.S.BELAR	28-jun-2011	MATERIAL		
COMPROBADO	U.S.BELAR	28-jun-2011	TOLERANCIA GENERAL		
CODIGO			UDS.		
PESO			EXPEDIENTE:		
ESCALA			Nº PLANO		
		MARCA			
		DIMENSIONES GENERALES			



DIMENSIONES DE SALA SEGUN POTENCIA

POTENCIA	A	B	C	D	E	F	G	H	I	d	PESO	SECCION HUECO ENTRADA AIRE
6 Kva AIRE	2092	1600	1092	600	1000	620	400	500	600		260	2x0.50 m2
7 Kva	3300	1580	1300	580	1000	600	400	500	600	50	300	2x0.50 m2
11 Kva	3300	1580	1300	580	1000	600	700	500	600	50	320	2x0.50 m2
15 Kva AIRE	3300	1580	1300	580	1000	600	700	500	600	50	380	2x0.50 m2
15 Kva	3300	1580	1300	580	1000	600	700	500	600	50	400	2x0.50 m2
19 Kva	3300	1580	1300	580	1000	600	700	500	600	50	480	2x0.50 m2

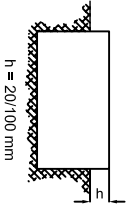
- NOMENCLATURA
- 1.- GRUPO ELECTROGENO
 - 2.- CUADRO DE CONTROL
 - 3.- HUECO ENTRADA DEL AIRE
 - 4.- TUNEL DE EXPULSION DEL AIRE
 - 5.- BANDEJA PASACABLES
 - 6.- PUERTA DE ACCESO
 - 7.- BASE HORMIGON ARMADO H-175
 - 8.- TUBO DE ESCAPE

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

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)



PROYECTO:

GRUPO ESTATICO ESTANDAR LOMBARDINI

MODIFICADO	J.S.BELAR	07-11-2011	MATERIAL	
DIBUJADO	J.S.BELAR	03-MAR-2006	TOLERANCIA GENERAL	
COMPROBADO	J.L.SOLANO	07-11-2011	UDS.	
DENOMINACION	GRUPOS EST-STD LOMBARDINI		EXPEDIENTE:	
PESO			Nº PLANO	
ESCALA			MARCA	