

SILENTSTAR 185 T VO

185 kVA


Standard Equipment and Features

Exhaust

- » Exhaust collectors protection
- » Silenced muffler -15 dBA

Fuel supply

- » Daily fuel tank with inspection hatch to allow cleaning
- » Low fuel level shutdown automatic system
- » Fuel gauge

Handling

- » Anti-turning forklift pockets
- » Handling from the short side

Base Frame

- » Anti vibrating mounting pads
- » Battery compartment externally accessible for easy service
- » Anti pollution Bunded base

Engine

- » High coolant temperature and low oil pressure shutdown system
- » External oil drain points
- » Engine liquids (oil and antifreeze)
- » Tropicalized radiator
- » Rotating components protection guards

Alternator

- » AVR Automatic Voltage Regulator

Protection & connection Panel

- » Magneto-thermal protection on panel board
- » Differential protection (adjustable only on variant +10 & +11)
- » Emergency stop button
- » Socket module (only variant +12)
- » Power outlet at the bottom
- » Earth leakage point
- » Machine electric wiring IP 44
- » Startup battery (pre-charged)

Documentation

- » CE conformity declaration - User and maintenance manuals

Normes:

- » All our Generating sets are compliant to CE Marking
- » 89/336/WEC Electromagnetic compatibility
- » 2000/14/CE Noise Emission for outdoor use

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Generatig set		
Speed	rpm	1500
Frequency	Hz	50
PRP prime power	kVA	185
Prime power $\cos\varphi = 0,8$	kW	148
LTP limited time running power	kVA	205
Limited time running power ($\cos\varphi = 0,8$)	kW	164
Standard voltage	V	400/230
Current PRP $\cos\varphi = 0,8$	A	267,3
Noise level		
Noise power	LwA	93
Noise pressure level to 7 m	dB(A)	68
Noise pressure level to 1 m	dB(A)	77
Fuel consumption		
Fuel type		Diesel
Fuel tank capacity	L	450
Autonomy at 3/4 load	h	15
Consummation at 4/4 load	L/h	40
Consummation at 3/4 load	L/h	30
Fuel consumption at 1/2 load	L/h	20,5
General features		
Battery capacity	Ah	2x120
Voltage	V	24
Exhaust tube \varnothing	mm	100
Exhaust temperature	° C	529
Exhaust gaz flow	l/s	531
Combustion air flow	l/s	190
Cooling fan air flow	m ³ /s	3,1
Dimensions / Weight		
Dimensions (L x w x h)	cm	360 x 130 x 205
Weight	kg	2550
LTP	PRP	COP

Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. This rating is applicable to installations served by a reliable normal utility source. This rating is only applicable to variable loads with an average load factor of 80 percent of the standby rating for a maximum of 200 hours of operation per year and a maximum of 25 hours per year at 100% of its standby rating. The standby rating is only applicable to emergency and standby applications where the generator set serves as the back up to the normal utility source. No sustained utility parallel operation is permitted with this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally Rated.

Applicable for supplying power in lieu of commercially purchased power. Prime power is the maximum power available at a variable load for an unlimited number of hours. A 10% overload capability is available for limited time. (Equivalent to Prime Power in accordance with ISO8528 and Overload Power in accordance with ISO3046, AS2789, DIN6271, and BS5514). This rating is not applicable to all generator set models.

It is the power that the generating set is capable to supply, in continuous operation, for an unlimited number of hours per year at the reference environmental conditions. This is valid as long as the engine undergoes a scheduled maintenance, as specified by the manufacturer. The generating set is able to provide power equal to 100% of the nominal load. COP power is typically 30% lower than the LTP one. No overload capability is allowed for this rating.

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Engine		
Factory		VOLVO
Emissions		Stage 2
Model		TAD 732 GE
Speed governor		Electronic
Cooling system		Liquid
Speed	rpm	1500
Nominal power	HP	220,5
Gross engine power	kW	161
Cycle		Diesel 4 stroke
Injection		Direct
Aspiration		Turbo
Numbers of cylinders		6L
Bore x Stroke	mm	108 x 130
Displacement	L	7,15
Engine oil features		15W40-API CG4-ACEA E3-E5
Engine oil consumption	%	0,2
Total oil capacity	L	34
Coolant liquid capacity	L	37,1
Alternator		
Factory		Marelli
Model		MJB250MB4
Prime power 3F+N 400V (480V)	kVA	185
Prime power 1F+N 230V (240V)	kVA	74
Voltage regulator		±0,5%
Poles		4
Phases		3+N
Standard windings connection		Star serie
Stator/Rotor impregnation		H (ext. Temp. 40°C)
Efficiency pf-0,8 4/4	%	93
Couple engine		Elastic disk
Short circuit current		≥ 300% (3In)
Degree of protection		IP23
Cooling system		Autoventilate
Maximum overspeed	rpm	2250
Waveform distortion	%	< 2
Exciter		Diode bridge
Standard operating environmental conditions		
Ambient temperature	°C	25
Relative Humidity	%	30
Maximum altitude	m	1000

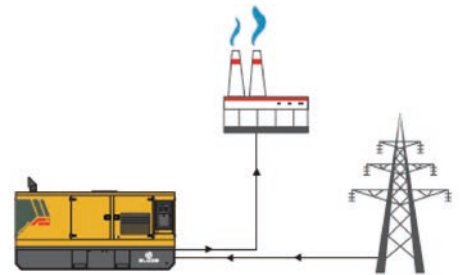
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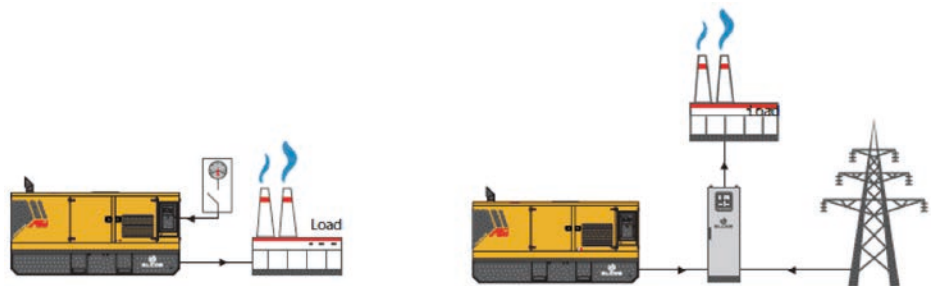
Variant +10 (QPE-C-OSC) 105-250 SS + 275-400 SS
Automatic panel with switching on board

The QPE-C panel represents the evolution of the panels for the control and management of the generating set, with its microprocessor logic it is able to meet any user-requested features. In fact, the dual operation mode MANUAL or AUTOMATIC guarantees to every type of functionality protection, analysis and control of the generating set in order to make the management easy and efficient. Variant +010 unit is equipped with switching on board. Switching made with motorized changeover switch: 4P 250A (from 105KVA to 150KVA) 4P 400A (from 180KVA to 275KVA) 4P 630A (from 300KVA to 400KVA).



Variant + 11 (QPE-C-OSC) 105-250 SS + 275-400 SS + 450-630 SS
Multifunction Panel QPE without switching on board

The QPE-C panel represents the evolution of the panels for the control and management of the generating set, with its microprocessor logic it is able to meet any user-requested features. In fact, the dual operation mode MANUAL or AUTOMATIC guarantees to every type of functionality protection, analysis and control of the generating set in order to make the management easy and efficient. Variant +011 has separate switching inside a wall or floor ATS panel. IP55.



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Control Module

The control panel QPE-C gives you the industry leading control solution for your power needs.

The QPE-C control panel used MC4 control module for single genset applications. The module incorporates a number of advanced features to meet the most demanding on-site application.

The MC4 is an auto mains (Utility) failure control module, it offers a cost effective way of monitoring and communicating with your genset and includes the additional capability of being able to monitor a mains supply.

It includes USB, for Mod BUS Communication and RS485 ports.



Features

APPLICATIONS

Emergency to the mains
Self-production
Fire fighting
Construction site
Rent

CONTROLS

Manual start up and stop
Automatic start up and stop from AMF
Start up and stop through contact
Fuel pump control
Lock
Reset
Programmable automatic test
Emergency stop button
Main counter command closed
G.s. counter command closed

ENGINE MEASURES

*Engine RPM
Engine oil pressure BAR
* Engine oil temperature
*Engine oil level
* Cooling system pressure
Cooling system temperature°C
Coolant level %
*Fuel consumption
Fuel level %
Total operating hours
Partial operating hours (resettable)
Hours to maintenance
Battery charger voltage
Start up counter

COMMUNICATION

CAN-BUS communication
16-relay module (optional)
GSM remote management modem (optional)
Remote management software (optional)
Remote panel (optional)
Converter485/USB (optional)
Converter485/LAN (optional)
USB port for saving parameters and firmware updates
RS485 serial output

EQUIPMENT

Microprocessor logic
Backlit refractive display
16 events alarm history list
Multi-language management
Troubleshooting with suggestions

ALTERNATOR MEASURES

Gen set voltage three-phase
Gen set star voltage RN.SN.TN.
Gen set three-phase current
Gen set frequency
Gen set apparent power KVA
Gen set actual power KW
Gen set reactive power KWr
Genset KWh
Gen set power factor cosfi
MAINS MEASURES
Mains voltage RST
Mains frequency

SIGNALS / PROTECTIONS

Failed to start
Failed to stop
* Low oil level
Low oil pressure
Minimum oil pressure (pre-alarm)
Low cooling liquid level
Very high cooling liquid level
High temperature (pre-alarm)
Generator battery charger
No fuel
Low fuel level (pre-alarm)
Start up
Stop
Fuel pump running
Battery connected
Battery charging
Battery undervoltage
Battery overvoltage
Genset overvoltage
Genset undervoltage
Genset overload
Genset short circuit
Genset maximum frequency
Genset minimum frequency
Genset connected
Genset contactor closed
Circuit breaker protection
Mains connected
Mains overvoltage
Mains undervoltage
Mains contactor closed
Emergency button pressed

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Optional

Canopy - Soundproofing

- » Soundproof canopy-container 55 dB(A) at 7mt
- » Air intake / outlet noise attenuators for room -25dB(A)

Exhaust

- » External residential muffler -35 dbA
- » Exhaust flex tube
- » FAP) Antiparticulate - Exhaust catalyst

Fuel supply

- » Diesel connections
- » Automatic fuel refilling system
- » Tank connections 3 way valve

Engine

- » Engine heater 230 V
- » Oil pressure & antifreeze temperature gauge
- » Oil change pump
- » Electronic speed governor
- » Battery DC circuit breaker
- » -40 C° Engine liquids
- » Super hot Engine heater 230 V
- » Automatic refilling oil system
- » 1000 working hours spare parts kit

Alternator

- » Parallel arranged AVR

Panel

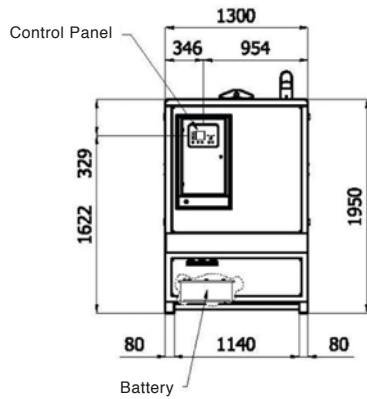
- » ATS switching cabinet (QC) (only variant +11)
- » Remote management software (only variant +10 & +11)
- » Remote panel (only variant +10 & +11)
- » Converter 485/USB (only variant +10 & +11)
- » Converter 485/LAN (only variant +10 & +11)
- » 16-relay module (only variant +10 & +11)
- » GSM remote management modem (only variant +10 & +11)
- » Radio control (only variant +11 & +12)
- » UTIF counter with ARCUDI terminal box
- » Remote control with 20 mt cable (only variant +12)
- » Output power socket
- » GSM remote control system with web application without SIM card (only variant +10 & +11)
- » GPS tracking system (only variant +10 & +11)

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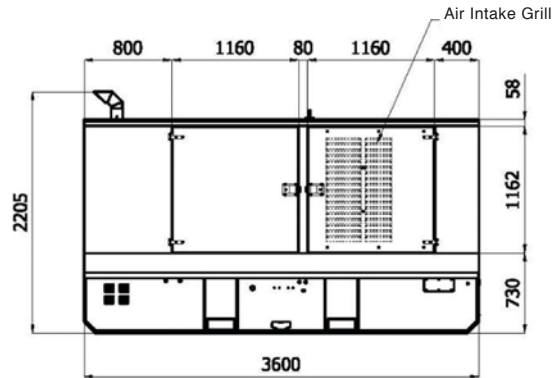
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OVERALL DIMENSIONS (mm)

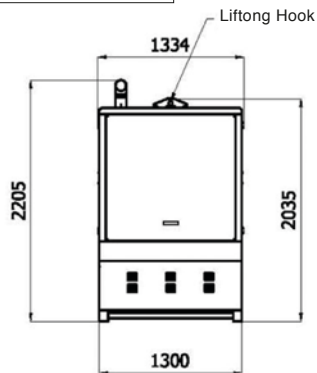
REAR VIEW



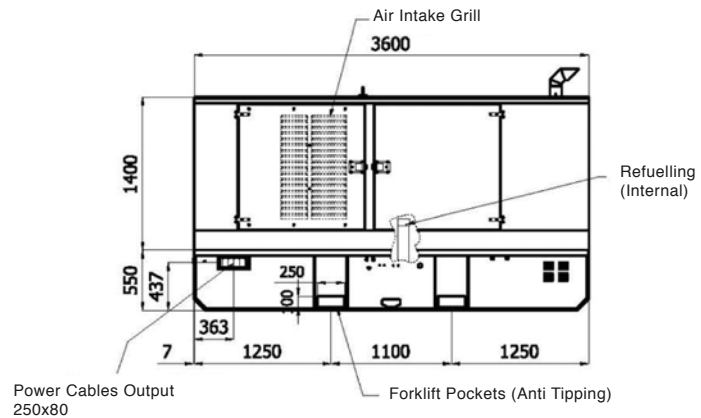
LEFT SIDE VIEW



FRONT VIEW

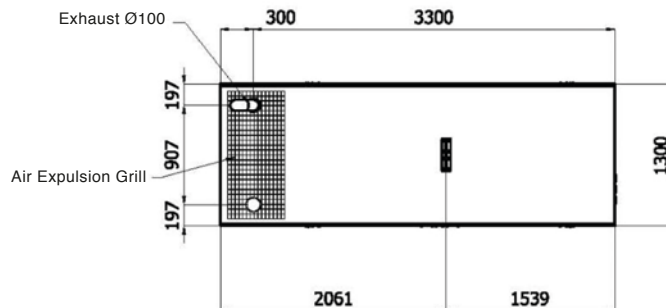


RIGHT SIDE VIEW



TOP VIEW

RIGHT



FRONT

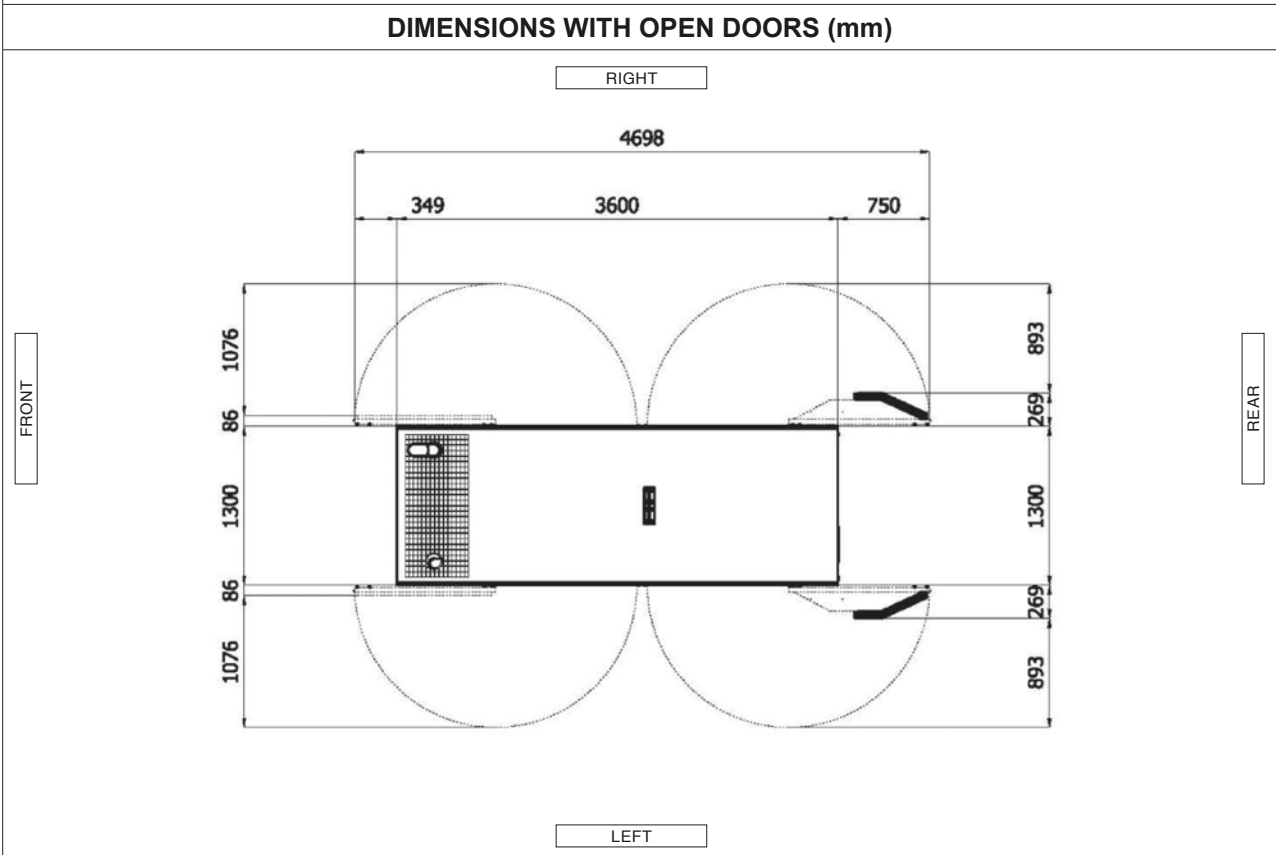
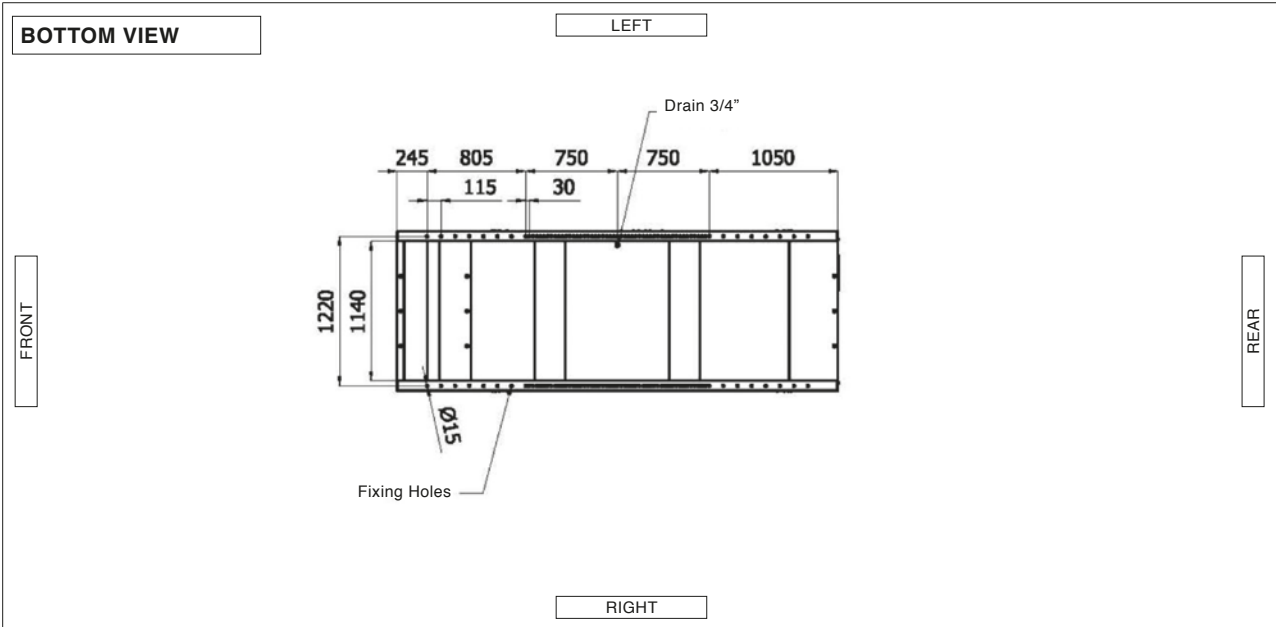
REAR

LEFT

- 1) Forms and dimensions refer to the generating set on catalog.
- 2) Forms and dimensions are subject to change in order to update or improve the products.

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VENTILATION OF THE ROOM

The windows area in the generating set room needs to be (recommended):

- Aspiration : 1,35 m²
- Expulsion : 0,70 m²

ATTENTION : For a correct ventilation the expulsion air and the exhaust gas needs to be conveyed in the open-air.

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