

# GENERATING SET GE SX-11000 KDT

The images are for reference



## FEATURES

- Control panel with digital control unit
- Automatic voltage regulation "AVR"
- Four pole circuit breaker
- ELCB-GFI (Ground Fault Interruptor)
- Bunded base suitable to contain any liquids leakage from engine avoiding environmental pollution
- Central lifting eye
- The rounded edges of the canopy designed for rainwater drainage away
- Canopy with large opening to allow easy maintenance (replacement of air, oil, fuel filters)
- Central lifting eye
- Large fuel tank
- Fuel level sensor
- External plugs for oil and water drainage
- Emergency stop button
- Prepared for remote Start and Stop control
- Prepared for connection to PAC-I switching panel (ATS)
- Low noise level
- Meets EC/UE directives



water cooled



diesel



three-phase



electric start

## POWER RATINGS

|                                    |                              |
|------------------------------------|------------------------------|
| * Stand-By three-phase power (LTP) | 11 kVA (8.8 kW) / 400V/15.9A |
| * PRP three-phase power            | 10 kVA (8 kW) / 400V/14.4A   |
| * PRP single-phase power           | 7 kVA/kW / 230V/30.4A        |
| Frequency                          | 50 Hz                        |
| Cos φ                              | 0.8                          |

\* Powers declared according to ISO 8528

## DEFINITION

Valid declared powers up to the followings environmental conditions: temperature 25°C, altitude 100 meters above sea level)

**LTP power: stand-by power:** Maximum available power for use with variable loads for a yearly number of hours limited at 500 h. No overload is admitted.

**PRP power:** continue power with variable loads. Maximum power for use with variable loads for a yearly illimited nubers of hours.

**COP power:** continuous power with constant load. Maximum power for use with constant loads for a yearly unlimited numbers of hours.

## ENGINE 3000 RPM

### 4 STROKE, NATURAL ASPIRATED

|                                                  |                                     |
|--------------------------------------------------|-------------------------------------|
| Model                                            | KOHLER KDW702                       |
| Stand-By net power                               | 10.3 kW (14 hp)                     |
| PRP net power                                    | 9.3 kW (12.6 hp)                    |
| COP net power                                    | /                                   |
| Cylinders / Displacement                         | 2 / 686 cm <sup>3</sup> (0.686 lt.) |
| Bore / Stroke                                    | 75 / 77,6 (mm)                      |
| Compression ratio                                | 22.8 :1                             |
| BMEP (Brake Mean Effective Pressure : LTP - PRP) | /                                   |
| Speed governor type                              | Mechanical                          |
| <b>FUEL CONSUMPTION</b>                          |                                     |
| 110 % (Stand-by power)                           | 3.9 lt./h                           |
| 100 % to PRP                                     | 3.4 lt./h                           |
| 75 % to PRP                                      | 2.6 lt./h                           |
| 50 % to PRP                                      | 1.9 lt./h                           |
| <b>COOLING SYSTEM</b>                            |                                     |
| Total system cap. - only engine                  | lt - 1.1 lt                         |
| Fan air flow                                     | 72 m <sup>3</sup> /min.             |
| <b>LUBRICATION SYSTEM</b>                        |                                     |
| Total oil system capacity                        | /                                   |
| Oil capacity in sump                             | 1.6 lt                              |
| Oil consumption at full load                     | /                                   |

### EXHAUST SYSTEM

|                                |                          |
|--------------------------------|--------------------------|
| Maximum exhaust gas flow       | 2.2 m <sup>3</sup> /min. |
| Max. exhaust gas temp.         | 540 °C                   |
| Maximum back pressure          | 6000 kPa (0.06 bar)      |
| External diameter exhaust pipe | /                        |

### ELECTRICAL SYSTEM

|                                  |         |
|----------------------------------|---------|
| 12 Vdc                           |         |
| Starter motor power              | 1.6 kW  |
| Battery charging alternator cap. | 40 A    |
| Cold start                       | - 15 °C |

With cold start aid /

### AIR FILTER

|                     |                           |
|---------------------|---------------------------|
| Dry                 |                           |
| Combustion air flow | 1.02 m <sup>3</sup> /min. |

### HEAT REJECTED AT FULL LOAD

|                   |   |
|-------------------|---|
| To exhaust system | / |
| To water and oil  | / |
| Radiated to room  | / |
| To charge cooler  | / |

## ALTERNATOR

| SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, SELF-REGULATED |                                   |
|--------------------------------------------------------|-----------------------------------|
| Continuous power                                       | 11.5 kVA                          |
| Stand-by power                                         | 12.5 kVA                          |
| Three phase voltage                                    | 380 ÷ 415 Vac                     |
| Frequency                                              | 50 Hz                             |
| Cos $\varphi$                                          | 0.8                               |
| Model A.V.R.                                           | HVR 10                            |
| Voltage regulation acc.                                | $\pm 1$ %                         |
| Sustained short circuit current                        | $\leq 3 I_n$                      |
| Transient dip (100% load)                              | $< 15$ %                          |
| Recovery time                                          | /                                 |
| Efficiency at 100% load                                | 83.5 % (400V - Cos $\varphi$ 0.8) |
| Insulation                                             | Class H                           |
| Connection - Terminals                                 | Star - N°6                        |
| Electromagnetic compatibility (R.F.I. suppr.)          | /                                 |
| Waveform distortion - THD                              | $< 4$ %                           |
| Telephone interference - THF                           | /                                 |

| REACTANCES (11.5 KVA - 400V)        |                            |
|-------------------------------------|----------------------------|
| Direct axis synchronous - $X_d$     | 239 %                      |
| Direct axis transient - $X'_d$      | 19 %                       |
| Subdirect axis transient - $X''_d$  | 4,6 %                      |
| Quadrature axis synchronous - $X_q$ | 130 %                      |
| Quadr. axis subtransient - $X''_q$  | /                          |
| Negative sequence - $X_2$           | /                          |
| Zero sequence - $X_0$               | /                          |
| TIME CONSTANTS                      |                            |
| Transient - $T'_d$                  | 0,046 sec                  |
| Subtransient - $T''_d$              | 0,006 sec                  |
| Open circuit - $T'_{do}$            | 0,58 sec                   |
| Armature - $T_a$                    | /                          |
| Short-circuit ratio $K_{cc}$        | 0.72                       |
| IP protection degree                | IP 23                      |
| Cooling air flow                    | 0.082 m <sup>3</sup> /sec. |
| Coupling   Bearing                  | Direct SAE 5 - 7 1/2 - N°1 |

## GENERAL SPECIFICATIONS

|                           |                              |
|---------------------------|------------------------------|
| Fuel tank capacity        | 38 lt.                       |
| Running time (75% to PRP) | 14.5 h                       |
| Starter battery           | 12 Vdc - 37Ah / 330A CCA(EN) |
| IP protection degree      | IP 23                        |

|                                                           |                              |
|-----------------------------------------------------------|------------------------------|
| * Measured acoustic power $L_{wA}$ (pressure $L_{pA}$ )   | 91.8 dB(A) (66.5 dB(A) @ 7m) |
| * Guaranteed acoustic power $L_{wA}$ (pressure $L_{pA}$ ) | 93 dB(A) (68 dB(A) @ 7m)     |
| Performance class                                         | G1                           |

\* Acoustic power in accordance with Directive 2000/14/EC

# CONTROL PANELS

## AUTOMATIC MANUAL CONTROL PANEL

- Controller IntelliNano Plus
- Supply switch
- Engine protection circuit breakers :1x30A - 1 x 16A
- Emergency stop button
- Siren
- TCM 35 remote control plug
- PAC (ATS) plug 16 poles (Automatic control panel only)
- Battery charger (Automatic control panel only)
- Fuses: 3x 2A
- Circuit breaker
- Earth leakage circuit breaker (GFI)
- Output sockets: 1x 400V 16A 3P+N+T CEE IP 67  
1x 230V 16A 2P+T CEE IP 67  
1x 230V 16A 2P+T Schuko
- Earth terminal (PE)



| INTELINANO PLUS CONTROLLER CHARACTERISTICS |                                                                                                                                                                                                                                       |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating mode                             | <ul style="list-style-type: none"> <li>• MAN.- AUTO</li> </ul>                                                                                                                                                                        |
| Display                                    | <ul style="list-style-type: none"> <li>• Graphic back-light LCD display 128x64 pixels</li> </ul>                                                                                                                                      |
| LEDs                                       | <ul style="list-style-type: none"> <li>• Engine operation</li> <li>• AUTO operating mode</li> <li>• Alarm</li> </ul>                                                                                                                  |
| Buttons                                    | <ul style="list-style-type: none"> <li>• START button</li> <li>• STOP button</li> <li>• AUTO button</li> <li>• N° 2 buttons for controller programming</li> </ul>                                                                     |
| Generator Measures                         | <ul style="list-style-type: none"> <li>• Voltage : L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 (L1-L2 with AUTOMATIC panel)</li> <li>• Current : I1</li> <li>• Powers : kVA</li> <li>• Frequency</li> </ul>                                |
| Engine Measures                            | <ul style="list-style-type: none"> <li>• Water temperature (optional)</li> <li>• Oil pressure (optional)</li> <li>• Fuel level</li> <li>• Rpm meter</li> <li>• Battery voltage</li> <li>• Maintance</li> <li>• Hours meter</li> </ul> |
| Generator Protections                      | <ul style="list-style-type: none"> <li>• Short circuit</li> <li>• Over-Undervoltage</li> <li>• Over-Underfrequency</li> <li>• Phase sequence</li> </ul>                                                                               |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engine Protections                          | <ul style="list-style-type: none"> <li>• Overspeed</li> <li>• High water temperature warning</li> <li>• Low oil pressure warning</li> <li>• Low fuel level warning</li> <li>• Under battery voltage</li> <li>• Battery charge alternator failure</li> <li>• Start failure</li> <li>• Stop failure</li> <li>• Emergency stop</li> </ul>                                                                                                                   |
| AMF functins (Automatic control panel only) | <ul style="list-style-type: none"> <li>• Measure mains voltage : L1-L2 / L2-L3 / L3-L1 - N-L1 / N-L2 / N-L3</li> <li>• Measure mains frequency</li> <li>• Three phase detection</li> <li>• Over-Under mains voltage</li> <li>• Over-Under mains frequency</li> <li>• Phase sequence</li> </ul>                                                                                                                                                           |
| Features                                    | <ul style="list-style-type: none"> <li>• Event log and alarms (10 events)</li> <li>• Operator interface with icons, no text</li> <li>• Remote Start and Stop</li> <li>• Pre-heating</li> <li>• Fully programmable from the panel or from PC</li> <li>• Direct connection to engines with ECU via Can bus J1939</li> <li>• Manual operation (MRS) with remote start</li> <li>• IP65 protection</li> <li>• Operation temperature: -20°C / +70°C</li> </ul> |
| Communication                               | <ul style="list-style-type: none"> <li>• Setup USB port</li> <li>• CAN BUS interface (J1939 only)</li> </ul>                                                                                                                                                                                                                                                                                                                                             |



# WEIGHT - DIMENSIONS AND ACCESSORIES

GE SX-11000 KDT



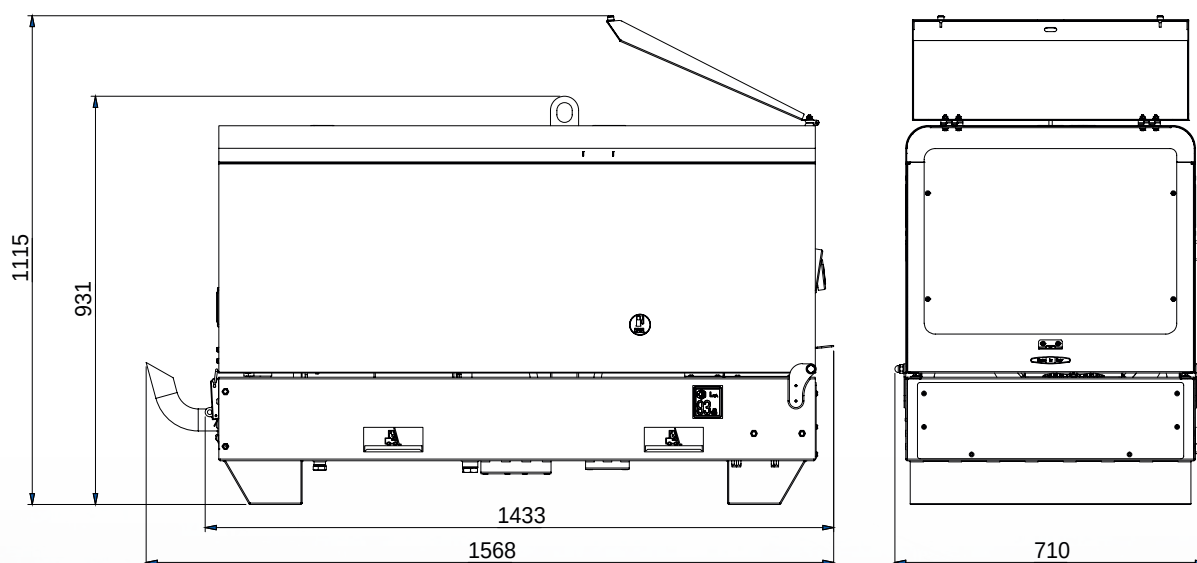
## DRY WEIGHT MACHINE:

- 340 Kg

Generating set pictured may include optional accessories.



## DIMENSIONS DRAW (mm)



## OPTIONS ON REQUEST

- Load transfer switch (ATS) PAC 17 (25A) (Only with automatic control panel)
- Load transfer switch (ATS) PAC I 42 809ATS (60A)
- Remote control TCM35
- Trolley CTM255
- Site tow CTL255
- Road trailer CTV4
- Earthing



## VERSIONS ON REQUEST

- Version with automatic panel



## FACTORY INSTALLATION OPTIONS

- Gauges - water temperature and oil pressure
- Engine heater
- Main battery switch
- Isometer
- Radio control

## GENERAL INFORMATION

### COMPLIANCE GENERATING SETS WITH EC DIRECTIVES AND STANDARDS

2006/42 / EC (Machines Directive)  
2014/35 / EU (Low Voltage Directive)  
2014/30 / EU (EMC Directive)  
2000/14 / EC (Directive Acoustic Emission for machines for use outdoors)  
ISO 8528 (Reciprocating internal combustion engine driven alternating current generating sets )



ISO 9001:2015 - Cert. 0192

### WARRANTY

All devices are covered by the manufacturer's warranty.

The company reserves the right to change this specification without notice. For further information please contact the sales department.

