



# GENERATING SET GE 35 KSX

The images are for reference



## FEATURES

- Automatic voltage regulation AVR
- The rounded edges of the canopy designed for rainwater drainage away
- Bunded base suitable to contain any liquids leakage from engine avoiding environmental pollution
- External caps for oil and water drain
- Large doors for better and easy maintenance (air, oil, fuel filters replacement)
- Central lifting eye
- Forklift pockets
- Control panels with digital control units: Manual / Manual with sockets / Automatic
- Meets EC directives for noise and safety



water cooled



diesel



single-phase power



three-phase power



electric

## POWER RATINGS

* Stand-By three-phase power	33 kVA(26.4 kW) / 400V /47.6A
* PRP three-phase power	30 kVA(24 kW) / 400V / 43.3A
* PRP single-phase power	11 kVA / kW /230V / 47.6A
* COP power	/
Frequency	50 Hz
Cos φ	0.8

\* Output powers according to ISO 8528-1

## 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 1500 RPM

### 4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED

Model	KOHLER - KDI 2504TM-30
* Stand-By net power	31.1 kW (42.3 hp)
* PRP net power	28.2 kW (38.3 hp)
* COP net power	/
Cylinders / Displacement	4 / 2482 cm <sup>3</sup> (2.482 lt.)
Bore / Stroke	88 / 102 (mm)
Compression ratio	18.5 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	940 kPa
Speed governor type	Mechanical
<b>FUEL CONSUMPTION</b>	
110 % (Stand-by power)	8.3 lt./h
100 % to PRP	7.5 lt./h
75 % to PRP	5.7 lt./h
50 % to PRP	4 lt./h
<b>COOLING SYSTEM</b>	
Total system cap. - only engine	9.1 lt
Fan air flow	70.8 m <sup>3</sup> /min
<b>LUBRICATION SYSTEM</b>	
Total oil system capacity	/
Oil capacity in sump	11.2 lt.
Oil consumption at full load	< 0.017 l/h

\* Output powers according to ISO 3046-1

<b>EXHAUST SYSTEM</b>	
Maximum exhaust gas flow	6.2 lt./mim.
Max. exhaust gas temp.	455 °C
Maximum back pressure	8 kPa (0.08 bar)
External diameter exhaust pipe	/
<b>ELECTRICAL SYSTEM</b>	
Starter motor power	2.2 kW
Battery charging alternator cap.	55 A
Cold start	-10°C
With cold start aid	- 15 °C
<b>AIR FILTER</b>	
Combustion air flow	2 m <sup>3</sup> /min
<b>HEAT REJECTED AT FULL LOAD</b>	
To exhaust system	/
To water and oil	/
Radiated to room	/
To charge cooler	/

## ALTERNATOR

SYNCHRONOUS, THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS	
Continuous power	30 kVA
Stand-by power	33 kVA
Three phase voltage	380-415 Vac
Frequency	50 Hz
Cos φ	0.8
Model A.V.R.	HVR-11
Voltage regulation acc.	± 1.0 %
Sustained short circuit current	2.5 I <sub>n</sub>
Transient dip (100% load)	10 %
Recovery time	≤ 3 sec.
Efficiency at 100% load	87,1 % (400V - Cos φ 0.8)
Insulation	Class H
Connection - Terminals	Star - N°6
Electromagnetic compatibility ( R.F.I. suppr.)	EN 55011
Waveform distortion - THD	< 3 %
Telephone interference - THF	/

REACTANCES (30 kVA - 400V)	
Direct axis synchronous - X <sub>d</sub>	243 %
Direct axis transient - X' <sub>d</sub>	19 %
Subdirect axis transient - X'' <sub>d</sub>	8 %
Quadrature axis synchronous - X <sub>q</sub>	135 %
Quadr. axis subtransient - X'' <sub>q</sub>	/
Negative sequence - X <sub>2</sub>	/
Zero sequence - X <sub>0</sub>	/
TIME CONSTANTS	
Transient - T' <sub>d</sub>	0.01 sec
Subtransient - T'' <sub>d</sub>	0.005 sec
Open circuit - T' <sub>do</sub>	0.125 sec
Armature - T <sub>a</sub>	/
Short-circuit ratio K <sub>cc</sub>	0.58
IP protection degree	IP 23
Cooling air flow	0.115 m <sup>3</sup> /sec.
Coupling   Bearing	Direct SAE 3 - 11.5 ½ - N°1

## GENERAL SPECIFICATIONS

Fuel tank capacity	100 lt. / 350 lt.
Running time (75% to PRP)	17.5 h / 61.4h (350 lt)
Starter battery	12 Vdc - 80Ah / 700A CCA(EN)
IP protection degree	IP 44

* Measured acoustic power L <sub>wA</sub> (pressure L <sub>pA</sub> )	89 dB(A) (64 dB(A) @ 7m)
* Guaranteed acoustic power L <sub>wA</sub> (pressure L <sub>pA</sub> )	91 dB(A) (66 dB(A) @ 7m)
Performance class (ISO 8528)	G2

\* Acoustic power according to European Directive 2000/14/CE

## MANUAL CONTROL PANEL

- Controller Intellilite4 AMF9
- Supply switch
- Siren
- Emergency stop button
- TCM 35 remote control plug
- Circuit breaker
- Earth leakage circuit breaker (GFI)
- Power terminal board
- Earth terminal (PE)

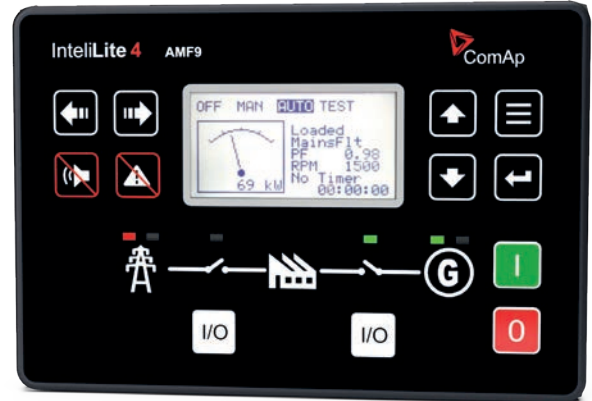
## MANUAL CONTROL PANEL WITH SOCKETS

- Controller Intellilite4 AMF9
- Supply switch
- Siren
- Emergency stop button
- TCM 35 remote control plug
- Circuit breaker
- Earth leakage circuit breaker (GFI)
- Output sockets: 1x 400V 63A 3P+N+T CEE IP67  
 1x 400V 32A 3P+N+T CEE IP67  
 1x 400V 16A 3P+N+T CEE IP67  
 1x 230V 16A 2P+T CEE IP67  
 1x 230V 16A 2P+T SCHUKO
- Earth leakage with integral over-current circuit breaker for 400V 32A socket
- Earth leakage with integral over-current circuit breaker for 400V 16A socket
- Earth leakage with integral over-current circuit breaker for 230V 16A socket
- Earth terminal (PE)

# CONTROL PANEL

## MANUAL CONTROL PANEL WITH SOCKETS

- Controller InteliLite4 AMF9
- Supply switch
- Siren
- Emergency stop button
- TCM 35 remote control plug
- Terminal board for connection to PAC (ATS)
- Battery charger
- Circuit breaker
- Earth leakage circuit breaker (GFI)
- Power terminal board
- Earth terminal (PE)



AMF25 CONTROLLER CHARACTERISTICS	
Operating mode	<ul style="list-style-type: none"> <li>• OFF - MAN. - AUTO - TEST</li> </ul>
Display - Pulsanti-LEDs	<ul style="list-style-type: none"> <li>• Backlit display, LCD 132x64 pixels</li> <li>• Buttons / Buttons: START - STOP - RESET ALARMS / FAULT RESET</li> <li>• LEDs: Generator / GCB ON status - Grid status</li> </ul>
Generator Measures	<ul style="list-style-type: none"> <li>• Voltage : L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3</li> <li>• Current : I1 - I2 - I3</li> <li>• Frequency Hz</li> <li>• Powers : kVA - kW - kVAR (totali e per fase)</li> <li>• Energy : kVAh - kWh - kVARh</li> <li>• Cos φ (medium and per phase)</li> </ul>
Engine Measures	<ul style="list-style-type: none"> <li>• Water temperature</li> <li>• Oil pressure</li> <li>• Fuel level</li> <li>• Rpm meter</li> <li>• Battery voltage</li> <li>• Maintenance</li> <li>• Hours meter</li> <li>• Starts number</li> </ul>
Generator Protections	<ul style="list-style-type: none"> <li>• Overload</li> <li>• Overcurrent</li> <li>• Short circuit</li> <li>• Over-Undervoltage</li> <li>• Over-Underfrequency</li> <li>• Voltage asymmetry</li> <li>• Unbalanced current</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>• Over-Under battery voltage</li> <li>• Battery charge alternator failure</li> <li>• Start failure</li> <li>• Stop failure</li> <li>• Emergency stop</li> <li>• Low water level shutdown (option)</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>• Voltage asymmetry</li> <li>• Phase sequence</li> <li>• Dual mutual stand-by application</li> </ul>
Features	<ul style="list-style-type: none"> <li>• Event history, 150 stored events</li> <li>• 3 programmable test timers</li> <li>• Programming from panel or from PC</li> <li>• 3 selectable languages (other languages available)</li> <li>• Direct connection to engines with ECU (Stage V, Tier 4 Final) via Can Bus J1939</li> <li>• External Start and Stop</li> <li>• Programmable inputs and outputs</li> <li>• Alternative configurations (50 / 60Hz)</li> <li>• IP 65 protection</li> <li>• Operating temperature: -20 ° C - + 70 ° C</li> </ul>
Communication	<ul style="list-style-type: none"> <li>• USB port</li> <li>• RS232- RS485 (optional)</li> <li>• Modbus RTU / TCP (optional)</li> <li>• GSM modem. Commands alarms, events via SMS (optional)</li> <li>• Internet connection with Ethernet (optional)</li> <li>• Online control and monitoring on web pages (embedded web server) (optional)</li> <li>• SNMP (optional)</li> <li>• GPS / 4G modem (optional) (geographical tracking via WebSupervisor)</li> <li>• Internal PLC support</li> </ul>

# WEIGHT - DIMENSIONS AND ACCESSORIES

GE 35 KSX



## DRY WEIGHT MACHINE:

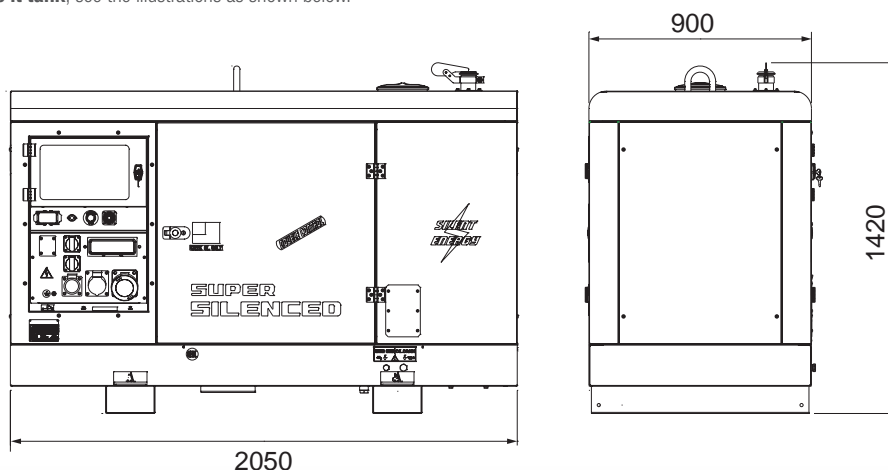
- 986 Kg
- 1356 Kg (tank version 350 lt)

Generating set pictured may include optional accessories.



## DIMENSIONS DRAW

- 2050 x 900 x 1730 mm (tank version 350 lt)
- For version with **100 lt tank**, see the illustrations as shown below.



## ACCESSORI A RICHIESTA

- Load transfer switch (ATS) PAC 42 (60A) (Only with automatic control panel)
- Load transfer switch (ATS) PAC-I 42 (60A) (Only with Manual control panels)
- Remote control TCM35
- Site tow CTL20
- Road trailer CTV1/O
- Road trailer CTV1/S
- Earthing kit
- Transportation sleigh



## VERSIONS ON REQUEST

- Manual control panel with sockets
- Automatic Digital Control Panel (without sockets)
- Control panel Automatic Digital with integrated network / GE switching 80A)



## FACTORY INSTALLATION OPTIONS

- Gauges - water temperature and oil pressure
- Earth leakage relay
- Engine heater
- Insulation monitoring
- Radio control
- Main battery switch
- Spark arrestor
- 3-way valve fuel system with quick connection for external fuel tank supply
- 350 litre internal tank
- Sensor for low level water
- Sensor liquid in base-frame
- Air Grid Heater
- Plug-in module with dual port RS232 and RS485
- 4G/GPS modem with antenna
- Internet-Ethernet plug-in module including Web server
- Remote module for 15 allarms or states

## 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 9001:2008 - 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.

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