TRADITIONELLE DEUTSCHE QUALITÄT

KÖNNER SÖHNEN

Please, read this manual carefully before use!

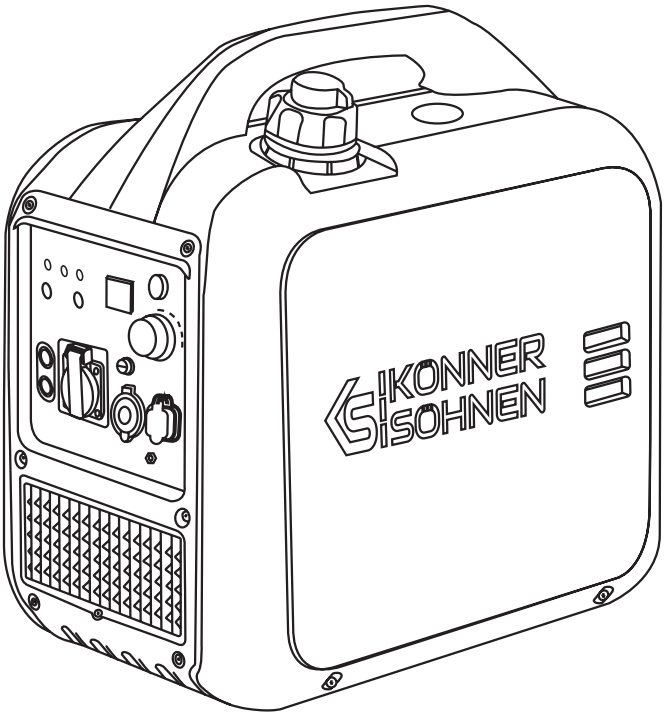
User Manual

EN

Inverter generator

KS 1900i S

KS 1900iG S



TRADITIONELLE DEUTSCHE QUALITÄT

KÖNNER SÖHNEN

INTRODUCTION

Thank you for choosing **Könner & Söhnen®** products. This manual contains a brief description of safety, setup and use. More information can be found on the official importer's website in the support section: **konner-sohnen.com/pages/instructions**

You can also go to the support section and download the manual by scanning the QR code or on the website of the official importer of **Könner & Söhnen®** at **www.konner-sohnen.com**

Please, read this manual carefully before use!

The manufacturer of **Könner & Söhnen®** products reserves the right to make changes that may not be reflected in this manual, namely:

- The manufacturer reserves the right to make changes in the product design, configuration and construction.

- The images and drawings in this manual are for reference only and may differ from the actual components and inscriptions on the products.

Contact information that you are free to use in case of any problems can be found at the end of this manual. All information in this user manual is up-to-date as of the time of publication. The current list of service centers can be found on the official importer's website at **www.konner-sohnen.com**

ATTENTION – DANGER! **Failure to follow the recommendations marked with this sign may lead to serious injury or death of the operator or third parties.**

IMPORTANT! **Useful information while operating the machine.**

SAFETY INFORMATION 1

Do not use the generator in rooms with poor ventilation or in conditions of excessive humidity. Do not place the generator in water or on moist soil. Do not expose the generator to rain, snow, as well as to direct sunlight for a long time. Place the generator on a flat, hard surface, away from flammable liquids/gases (at a minimum distance of 1 m). Install the generator at a distance of not less than 1 m from the front control panel and not less than 50 cm on each side, including the upper part of the generator. Keep unauthorized persons, children, and animals away from work area. Wear safety shoes and gloves.

ATTENTION – DANGER! **When using the generator, attention must be paid to the actual power consumption of the connected electrical devices, including the power factor (cosφ) and the starting power, which for devices with motors can be several times higher than the rated power and must not exceed the maximum output of the generator.**

ATTENTION – DANGER! **As exhaust gases contain poisonous carbon dioxide (CO_2) and carbon monoxide (CO) gases which are dangerous for life, it is strictly forbidden to install the generator in residential buildings, premises connected to residential buildings by a common ventilation system, other rooms from which exhaust gases may enter living premises.**

ELECTRICAL SAFETY 1.1

ATTENTION – DANGER! **The device generates electricity. Follow safety precautions to avoid electric shock.**

IMPORTANT! **The generator should be used as an IT or TN system based on the application. Earthing and additional protective measures such as insulation monitoring or protection against accidental contact (residual current device) must be provided based on the application and the system used.**

The generator produces electricity that may lead to an electric shock while neglecting compliance regulations. Könner & Söhnen generators were initially designed as an IT system with basic protection by insulation of hazardous live parts according to DIN VDE 0100-410. The generator housing is insulated from the current-carrying L and N conductors. A layperson without electrical knowledge may only connect one power consumer to the generator without additional protective measures. Connection of a distribution system with more than one consumer may only be carried out by qualified electricians or persons trained in electrical engineering, observing appropriate safety precautions.

ATTENTION – DANGER! **It is forbidden to connect to the generator devices which can generate current pulses and direct energy towards the generator (voltage stabilizers, devices with electronic brakes, on-grid and hybrid inverters, etc.).**

The generator and power consumers form a closed system, with elements affecting each other. This system is physically different from the public network since it is significantly affected by factors such as unbalanced phase load and non-linear current consumption by power consumers that can cause damage to the generator and power consumers connected to it.

IMPORTANT! **Using device for other purposes deprives the right for free warranty.**

ATTENTION – DANGER! **Be careful. Do not operate the generator, if you are tired, under the influence of drugs or alcohol. Inattention may cause a serious injury.**

PRECAUTIONS WHEN WORKING WITH GASOLINE GENERATOR 1.2

Do not start the generator operation upon presence of electric load! Disconnect the load before you stop the engine. **Use only unleaded gasoline with an octane rating of 90–95 containing no more than 10% ethanol.** The use of kerosene or any other type of fuel is not allowed! Always follow the manufacturer's recommendations regarding the shelf life and storage of fuel. The fuel in the tank comes into contact with air, which can affect its quality. Over time, depending on the quality of the fuel, deposits may accumulate in the float chamber of the carburetor, which must be drained regularly to ensure the carburetor functions properly. If the generator is not used for an extended period of time, we recommend completely draining the gasoline from the carburetor and the tank via the drain screw on the carburetor to prevent the formation of deposits in the fuel system. Failure to follow these recommendations may lead to the damage of the carburetor.

ATTENTION – DANGER! **Fuel contaminates the land and groundwater. Do not allow the leaking gasoline from the tank!**

PRECAUTIONS WHEN WORKING WITH HYBRID GENERATOR 1.3

IMPORTANT! **For dual fuel models, propane-butane mixture for cars (LPG) or propane can be used as gas! It is forbidden to use any other gas!**

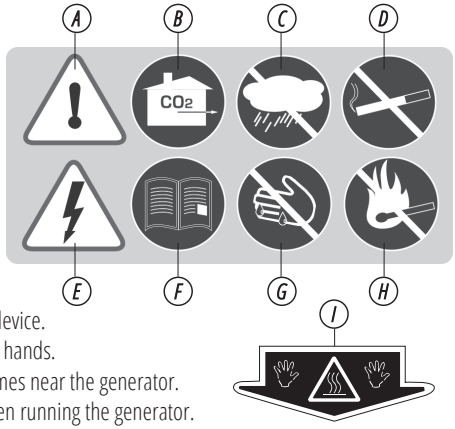
Do not start the generator operation upon presence of electric load! Before usage make sure, that all the hoses are connected properly. In case of gas leakage, stop the gas flow from the source to generator and ventilate the room as soon as possible. For stopping gas powered engine: disconnect all the connected devices first, then close the gas valve, then turn off the engine. After that set the starter switch to OFF position and turn off the gas supply valve.

ATTENTION – DANGER! **Do not allow sparks near gas powered genereтor during its work.**

ATTENTION – DANGER! **The gas cylinder valve must not be closed when the generator is not running. The generator must not be operated on gas in basements.**

ATTENTION – DANGER! **Pay attention! The pressure reducer supplied with the generator has a connection according to DIN 477: W 21.80×1/14" left. If the gas cylinder has a different connection, suitable adapters must be used to prevent possible gas leaks.**

SAFETY SYMBOLS DECRYPTION 2



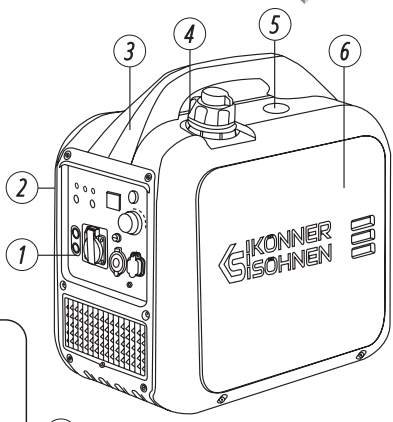
A. Be careful when using the device! Follow safety rules listed in manual.
B. Use the generator only in areas that are well ventilated, or on open areas. The exhaust gases contain CO_2, which are dangerous to life.
C. Do not use or store the device in high humidity.
D. Do not smoke when using the generator!
E. The device generates electricity. Follow safety precautions to avoid electric shock.
F. Carefully read the manual before using the device.
G. Do not touch the generator with wet or dirty hands.
H. Follow fire safety rules, do not use open flames near the generator.
I. Please don't touch! The muffler heats up when running the generator.

Indicates the noise level. For different models this indicator is different. All charachtetistics are given in the "Specifications".

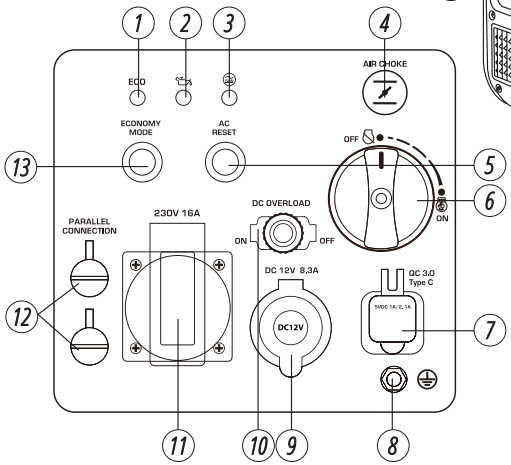
Information on the required level of oil in the crankcase

Grounding

1. Control panel
2. Manual starter (on the other side of the generator)
3. Carrying handles
4. Fuel tank cap air vent
5. Maintenance cover (for spark plug change)
6. Maintenance cover (for motor oil change)

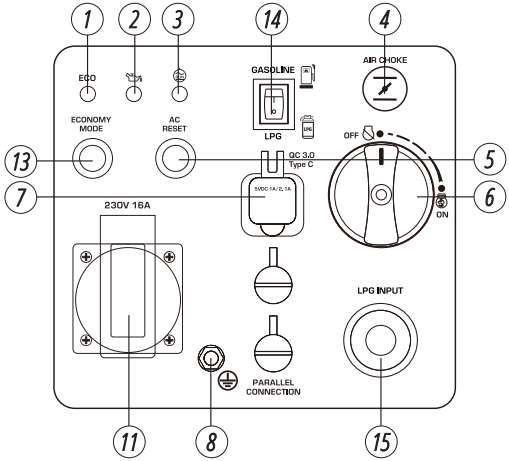


CONTROL PANEL FOR MODEL KS 1900i S



1. Economy mode indicator
2. Oil level indicator
3. RUN/Overload indicator
4. Air choke
5. Reset button
6. Fuel tap + ignition
7. USB-Outputs 2×5V USB
8. Earthing bolt
9. 12V/8.3A DC outlet
10. 12V DC fuse
11. AC outlet Schuko 230V 16A
12. Generator parallel socket
13. Economy mode button
14. Fuel selector switch
15. LPG connection

CONTROL PANEL FOR MODEL KS 1900iG S



IMPORTANT!

The manufacturer reserves the right to make changes and/or improvements to the design, components, and technical attributes without notice or obligation. The pictures in this manual are schematical and may not match the parameters of original product.

COMPONENTS OF SET 4

1. Generator
2. Packaging
3. Operating instructions
4. Spark plug wrench– 1pc
5. Screw-driver PH2 6,0 mm – 1pc
6. Case for accessories – 1pc
7. Open end wrench 8×10 mm– 1pc
8. Portable plug 230V 16A – 1pc

In addition to the components shown in the figure of a gasoline generator, a generator with a hybrid system (LPG/ gasoline) is equipped with a hose for supplying LPG to the generator.

1. Built-in reducer (30-50 mBar).

2. Gas cylinder connection hose (1.5 m).

SPECIFICATIONS 5

Model	KS 1900i S	KS 1900iG S
Rated voltage	230 V	230 V
Peak power	2,0 kW	2,0 kW*
Nominal power	1,9 kW	1,9 kW*
Power factor, cos φ	1	1
Frequency	50 Hz	50 Hz
Current (max.)	8,7 A	8,7 A
Outlets	1×Schuko 230V 16A	1×Schuko 230V 16A
Engine start	manual	manual
Fuel tank volume	4 l	4 l
Working time at 50% load**	4,5 h	4,5 h
Noise level Lpa (7m)/Lwa	72/94 dB	72/94 dB
Output 12V	12V/8,3A	–
USB-Outputs	5V/1A, 5V/2,1A	5V/1A, 5V/2,1A
Engine volume	79,7 cm^3	79,7 cm^3
Engine type	gasoline, 4 stroke cycle engine	LPG/gasoline 4 stroke cycle engine
Engine power	3,2 hp	3,2 hp
Generator parallel connection	+	+
Crankcase volume	0,45 l	0,45 l
Net dimensions (L×W×H)	440×290×440 mm	440×290×440 mm
Net weight	17 kg	17 kg
Protection class	IP23M	IP23M
Nominal voltage tolerance – max. 5%		

*LPG operation reduces generator power by 10%.

**Fuel consumption depends on many factors, such as load, fuel quality, season, altitude, technical condition of the generator.

The optimal operating conditions are ambient temperature of 17-25°C, barometric pressure of 0.1 MPa (760 mm Hg), and relative humidity of 50-60%. Under these environmental conditions, the generator can provide maximum performance in terms of the declared specifications.

In the event of deviations from these environmental indicators, the generator performance may vary. Please note that continuous loads exceeding 80% of the generator's rated power are not recommended in order to extend its service life.

TERMS OF USE OF INVERTER GENERATOR 6

It is recommended to ground the generator before operating it for the first time. Before starting the device, remember that the total power of the connected power consumers should not exceed the nominal power of the generator.

IMPORTANT! **Inverter generators produce 230 V at 50 Hz and must not be used as a replacement for the main power grid when powering devices designed to feed energy into the electrical grid (such as grid-tied inverters, hybrid inverters, microinverters, etc.). These devices may detect the 230 V 50 Hz output from the inverter generator as the main power supply and can damage the generator through backfeeding.**

IMPORTANT! **Make sure that the control panel, the blinds and the underside of the inverter are well cooled and protected against the ingress of small solids, dirt, and water. Improper operation of the cooler can cause damage to the motor, inverter or alternator.**

GENERATOR OPERATION 7

OIL LEVEL INDICATOR (RED)

The low oil indicator lights up when the oil level is too low. The ignition is deactivated and the engine stops. The engine will not start until oil is added.

RUN/OVERLOAD

When the generator is running normally, the AC lights up green. If there is an abnormality in the generator, the AC flashes red, the machine automatically protects and cuts of the output. Need to press the AC to reset.

The overload indicator lights up when the connected generator is overloaded, the inverter control unit overheats or the AC output voltage rises. If the overload indicator goes on, the engine will continue to operate, but the generator will no longer produce electricity. In this case, you must perform the following steps:

1. Turn off all connected electrical appliances and stop the engine.
2. Reduce the total power of the connected devices until the nominal power of the generator is reached.
3. Check if the vent grid is clogged. Remove excess dirt or debris, if any.
4. After checking, start the engine.

IMPORTANT! **The overload indicator may light up within several seconds after start-up or when connecting electrical devices requiring a high starting current, such as a compressor or voltage indicator. However, this is not a malfunction.**

FUEL TANK CAP AIR VENT

The fuel cap is equipped with a vent for air supply to the fuel tank. When the engine is running, the vent must be in the "ON" position (OPEN). This will allow fuel to enter the carburetor for engine operation. After the generator stops, allow it to cool down and close the air vent on the fuel cap. When the generator is not in use, close the vent to the "OFF" position.

EARTHING BOLT

The generator described in this manual is designed as mobile power sources in an IT system with insulated live wires and are operated without grounding. The grounding screw and PE contacts in the sockets serve to equalize the potential. Please observe protective measures when operating multiple power consumers in the IT system.
Grounding is required when using the generator to build a TN system with a grounded neutral conductor.

DC OVERLOAD PROTECTION

The DC protector automatically switches to "OFF" when the current of the operating electrical device is higher than the rated current. To use this equipment again, turn on the DC OVERLOAD breaker.

IMPORTANT! **If the DC OVERLOAD breaker turns off, reduce the load of the connected electrical device. If the DC OVERLOAD breaker turns off again, stop operation and contact your nearest Könner & Söhnen service center.**

CHECK BEFORE GETTING STARTED 8

CHECKING THE FUEL LEVEL

1. Unscrew the fuel cap and check the fuel level in the tank.
2. Fill the fuel tank to the fuel filter level.
3. Tighten the fuel cap securely.
4. Open the air intake vent on the fuel cap.

Recommended fuel: unleaded gasoline with an octane rating of 90–95 containing no more than 10% ethanol.
Fuel tank volume: 4 l.

IMPORTANT! **Wipe up spilled fuel immediately with a clean, dry, soft cloth, as the fuel may harm painted surfaces or plastic parts.**

IMPORTANT! **Be sure to observe the expiration date of the gasoline. If the generator is not going to be used for an extended period, always drain the gasoline from the carburetor and, if necessary, from the fuel tank.**

CHECKING THE OIL LEVEL

The generator is transported free of motor oil. Do not start the engine until it is filled with sufficient amount of motor oil.

1. Open the service cover (fig. 1).
2. Unscrew the oil dipstick (fig. 2) and wipe it out with a clean cloth.
3. Fill the crankcase with engine oil. The recommended amount of oil for each model is indicated in the specification chart.
4. Insert the dipstick without screwing it in.
5. Check the oil level by a mark on the oil dipstick (fig. 3).
6. Add oil if its level is below the mark on the oil dipstick.
7. Screw on the dipstick.

Recommended motor oil: SAE 10W30, SAE 10W40.
Recommended motor oil grade: API Service SG type or higher.
Motor oil quantity: 0,45 l.

Fig. 1

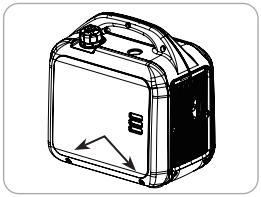


Fig. 2

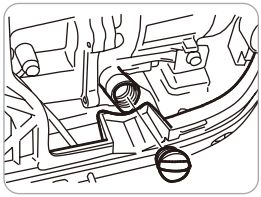
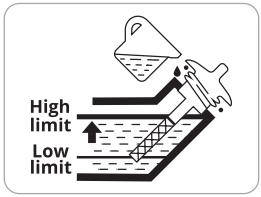


Fig. 3



GETTING STARTED 9

Before starting the engine, make sure that the rated power of power consumers matches with the power of generator. Do not exceed the nominal power of the generator. Do not connect any devices before you start the engine!

IMPORTANT!

Do not change the controller settings in terms of the amount of fuel governor (this adjustment was made at the factory). Otherwise, this may result in changes in the engine operation or its failure.

ATTENTION – DANGER!

When drawing power between the rated and maximum power levels, the generator must not run for longer than 5 seconds. This is common, for example, when starting the electric motor. The required starting power of the motor must not exceed the maximum starting power of the generator.

ATTENTION – DANGER!

Emergency generators should not run continuously (e.g. by adding fuel to the tank or connecting a large fuel tank) or longer than recommended: 4-6 hours for LPG/gasoline or gasoline generators (depending on load).

This material is for informational purposes only and does not constitute a manual for installing the equipment or connecting it to the mains, but we strongly recommend that you read the instructions below. Equipment connection must always be carried out by a certified electrician responsible for the installation and electrical connection of the equipment according to local laws and regulations. The manufacturer assumes no liability for improper connection of the equipment or for any material or physical damage that may result from improper installation, connection or operation of the equipment.

COMMISSIONING

1. Fill the crankcase with engine oil. The recommended amount of oil for each model is indicated in the specification chart.
2. Check oil level with an oil dipstick. It should be between the MIN and MAX marks on the oil dipstick.
3. Check fuel level.
4. Check the air filter for correct installation.

IN THE FIRST 20 OPERATING HOURS OF THE GENERATOR, THE FOLLOWING REQUIREMENTS SHOULD BE MET:

1. During commissioning, do not connect power consumers, the power of which exceeds 50% of the nominal (operating) power of the device.
2. After the first 20 operating hours, be sure to change the oil. It is better to drain oil while the engine is still hot after operation to ensure quick and complete oil draining.
3. Check and clean the air filter, fuel filter and spark plug.

ENGINE START

IMPORTANT!

Useful tip: If the engine stalls shortly after starting or does not start at all, we recommend draining deposits from the carburetor and checking the oil level. The generator is equipped with a low oil level indicator, and the engine will stop if the engine oil level is too low.

IMPORTANT!

Deposits from the carburetor's float chamber should be drained regularly. If the generator is not going to be used for an extended period, close the fuel tap and drain the gasoline from the carburetor to prevent possible deposits from forming inside the carburetor.

1. Check the oil level.
2. Check the fuel level.
3. Turn off ECONOMY MODE if it is on.
4. Open the vent on the fuel cap to the "ON" position (fig. 4).
5. Pull out the CHOKE on the control panel to close it.

NOTE

The warmer the engine, the less the CHOCKE lever needs to be pulled.

6. Set the lever to „ON" (see Fig. 5).

a. The ignition is enabled.

b. The fuel tap is open.

6. Pull the manual starter until a slight resistance is felt, then pull it toward you relatively sharply. Slowly turn the manual starter by hand, do not release it abruptly.
7. After the engine has started, let it warm up and then push the CHOCKE lever in so that the choke is open and the engine can run at full power.

Fig. 4

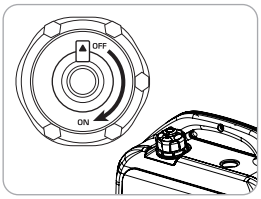
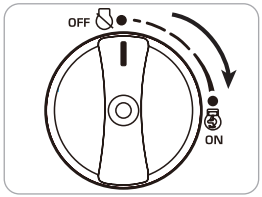


Fig. 5



IMPORTANT!

Useful tip: to ensure long-term operation of the generator engine, it is important to observe the following tips:

- **Before connecting the load, allow the engine to run for 1-2 minutes to warm it up.**
- **When disconnecting the load after lengthy operation, do not turn off the generator. Allow the generator to run idle for 1-2 minutes so that it cools down.**

RUNNING GENERATOR ON LPG (KS 1900iG S)

1. Check the oil level.
2. Set the fuel switch to "ON" and close the air choke.
3. The inverter generators KS 1900iG S use smart fuel switching system. In order to use LPG as fuel you need to connect a hose to the corresponding connector and open the valve on the gas cylinder. The solenoid valve

Fig. 6

will automatically shut off the gasoline supply from the gasoline tank.

4. Connect the LPG hose to the LPG input (connect hose end **A** to the to the generator's LPG connection and tighten it firmly by hand).
5. Connect the hose end with the reducer to the gas cylinder (connect hose end **B** to the gas cylinder, as shown in Fig. 6).
6. Open the gas valve on the cylinder, making sure that no gas is leaking.
7. Press the button on the zero pressure regulator (screwed together with the pressure reducer) for 2-3 seconds to fill the hose with gas.
8. For manual start, pull the manual starter until a slight resistance is felt, then pull it toward you relatively sharply. Slowly turn the manual starter by hand, do not release it abruptly.
9. After starting the engine, turn the ENGINE to the "ON" position (fig. 5).

IMPORTANT! **Disconnect the load from the generator before changing fuel. The ECONOMY MODE switch must be in the "OFF" position.**

Fuel can be changed without stopping the generator. When switching from gasoline to LPG operation, the generator may briefly run unstably.

If it is necessary to switch to LPG operation while running on gasoline, connect the gas hose, open the valve on the gas cylinder, and set the fuel selector switch to LPG.

If it is necessary to switch to gasoline operation while running on LPG, set the fuel selector switch to Gasoline and close the gas valve on the gas cylinder.

FUNCTIONAL DESCRIPTION OF INVERTER GENERATORS 10

It is forbidden to start the generator with the ECONOMY MODE ON. Economy mode should be turned on only after starting the generator and only with a low load. Failure to comply with this requirement may result in generator failure and void warranty repair.

ECONOMY MODE FUNCTION

1. Start the engine.
2. Set the Economy mode button to "ON".
3. Plug the device into an AC outlet.
4. Make sure the AC indicator light is on.
5. Turn on the electrical device.

IMPORTANT! **ECONOMY MODE should be disabled when starting the generator and should only be activated at loads up to 20% of the rated power so that the speed can be kept lower at light loads to save fuel.**

The voltage across the inverter module's capacitors is kept lower in ECONOMY MODE, which saves fuel at low loads. However, connecting more powerful power consumers can lead to overload and voltage distortion until the engine reaches the required speed. Turn off ECONOMY MODE if you want to connect more powerful power consumers.

IMPORTANT! **Ensure that the starting power of electrical appliances with motors does not exceed the maximum power of the generator.**

PARALLEL FUNCTION

You can increase the total output power of the generators by connecting the two inverter generators together with special cables for parallel connection (not included in a set). Parallel connection of two generators ensures total rated output power of these generators. When the generators are connected in parallel, the power loss is 0.2 kW of the total rated power that can be obtained.

During parallel operation, the ECONOMY MODE switch must be in the same position on both generators.

1. Connect the parallel cable to the dedicated outputs on the generator control panel. Do not use any other cables, don't combine different generator models.
2. Start the engines of the same generator models (KS 1900i S), check that the green WORKING MODE indicator on each generator is on.
3. Plug the appliance into a socket.
4. Switch on the appliance.

If the overload indicator lights up, follow the standard generator overload procedure described in section 5 (reduce the load and press the RESET button on both generators).

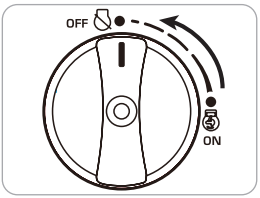
ATTENTION - DANGER! **Do not connect or disconnect parallel cables while the generator is running. If you plan to use only one generator, the parallel cables must be disconnected with the engine off.**

DISCONNECT ALL DEVICES BEFORE STOPPING THE GENERATOR!

Do not stop the generator with the devices turned on. This may disable the generator or devices connected to it!

TO STOP THE ENGINE FOR MODEL KS 1900i S

Fig. 7



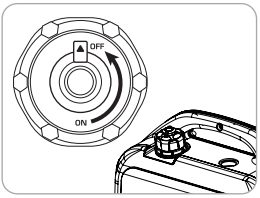
1. Turn off the connected electricity consumers.
2. Disconnect the connected electricity consumers from the generator.
3. Allow the generator to run idle for approx. 1-2 minutes.
4. Set the handle to "OFF" (Fig. 7).

a. The ignition is deactivated and the engine stops.

b. The fuel tap is closed.

5. Turn the fuel tank cap air vent knob to "OFF" (fig. 8) after the engine has completely cooled down.
6. Drain the fuel from the carburetor if you do not plan to use the generator for an extended period of time.

Fig. 8



TO STOP THE ENGINE FOR MODEL KS 1900iG S

1. Turn off all devices.
2. Allow the generator to run idle for approx. 1-2 minutes.
3. Turn the ENGINE to the "OFF" position (Fig. 7).
4. Close the gas valve
5. Unplug the devices.
6. After the generator stops, allow it to cool down and close the air vent on the fuel cap (set to OFF, as shown in Fig. 8, when switching off gasoline operation).

CHARGING AN EXTERNAL 12 V BATTERY

1. Start the engine.
2. Connect the red wire to the positive (+) terminal of the battery.
3. Connect the black wire to the negative (-) terminal of the battery.
4. Connect the wire to a 12V/8A DC socket on the control panel of the generator.
5. To start charging the battery, set Economy mode to "OFF".
6. Check if the DC overload protection is switched on.

IMPORTANT! **The 12 V socket can only be used as a backup source for recharging batteries and shall not be deemed as a full-featured battery charger.**

If the DC overload protection trips, stop charging the battery because the charging current is too high. Do not charge batteries if their current consumption is more than 5-8 A (depending on the generator model).

ATTENTION – DANGER! **The 12V connection on the generator is designed only as an emergency power source for 12V batteries and must not be used as a 12V power source for sensitive 12V power consumers.**

MAINTENANCE 11

This manual compliance! You can find a list of service center addresses on the website of exclusive importer: **www.konner-sohnen.com**

TECHNICAL MAINTENANCE WORKS

Unit	Action	At each start	First month or 20 operating hours	Every 3 months or 50 operating hours	Every 6 months or 100 operating hours	Every year or 300 operating hours
Motor oil	Level check	✓				
	Replacement		✓	✓		
Air filter	Check /Cleaning	✓	✓	✓		
	Replacement				✓	
Spark plug	Cleaning		✓	✓		
	Replacement				✓	
Fuel tank	Level check	✓				
	Cleaning					✓
Fuel filter	Check (clean out)		✓	✓		

– If the generator often operates at high temperature or high load, the oil should be replaced every 25 operating hours.

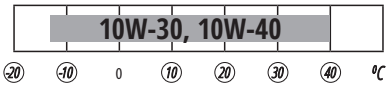
– If the engine often runs in dusty or other harsh conditions, clean the air filter every 10 operating hours.

– If you missed the maintenance time, perform it as soon as possible to save the generator engine.

IMPORTANT! **The manufacturer shall not be liable for any damage caused by failure to perform maintenance work.**

RECOMMENDED OILS 12

Use oils designed for four-stroke cycle vehicle engines SAE10W-30, SAE10W-40. Motor oils with other viscosity levels, may be used only if the average air temperature in your region does not exceed the limits of the temperature range, specified in the table.



Upon oil level decrease it is necessary to add the required quantity in order to provide the correct generator operation. It is necessary to check the oil levels according to technical maintanance schedule. Further details can be found in the full version of the manual on our website.

TO DRAIN ENGINE OIL, PERFORM THE FOLLOWING ACTIONS:

1. Please drain the oil while the engine is warm. This provides a quick and complete oil drain.
2. Wear protective gloves to avoid getting oil on the skin.
3. Remove the cover of generator (fig. 9).

4. Place a drain oil holding tank under the engine.
5. Turn the drain cap, located in the engine under the oil-depth gage cap (fig. 10).
6. Wait till the oil drains.
7. Replace the drain cap and tighten it well.
8. Close the maintenance cover.

Fig. 9

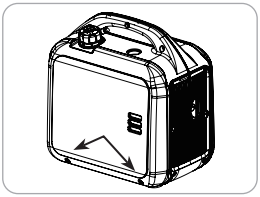
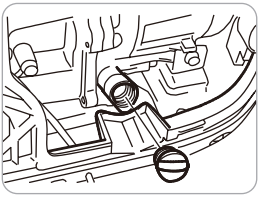
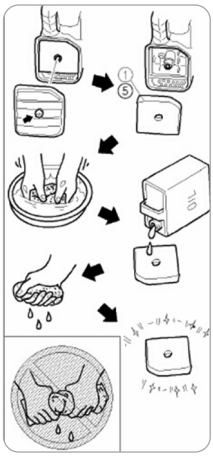


Fig. 10



NOTE **The engine oil can be pumped out using an oil suction pump instead of being drained.**



AIR FILTER TECHNICAL MAINTENANCE 13

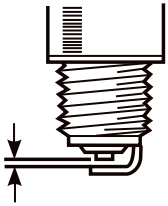
Air filter cleaning is to be performed each 50 hours of the generator operation (every 10 hours in unusually dusty conditions).

CLEANING THE FILTER:

1. Remove the cover of generator
2. Open the clips on the upper cap of the air filter.
3. Remove the sponge filtering element.
4. Remove all dirt deposits inside the hollow case of the air filter.
5. Thoroughly wash the filtering element in warmsoapy water.
6. Dry the sponge filter.
7. Dry filtering element is to be moistened by motor oil and excess oil is to be squeezed out.
8. Install the air filter case cover in its original position and tighten the screw.
9. Install the cover and tighten the screws.

SPARK PLUGS TECHNICAL MAINTENANCE 14

Spark plug has to be intact, without soot deposits and to have a correct gap.



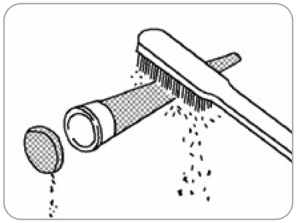
SPARK PLUG VERIFICATION:

1. Remove the cap from the spark plug.
2. Remove the spark plug by means of a corresponding spanner.
3. Examine the spark plug. If is is shattered – it is necessary to replace it. Recommended replacement spark plugs – TORCH-A5RTC.
4. Measure the gap. It has to be within range 0,6-0,7 mm.
5. In case of repeated use, the spark plug has to be cleaned by means of a metal brush. After that – set the correct gap.

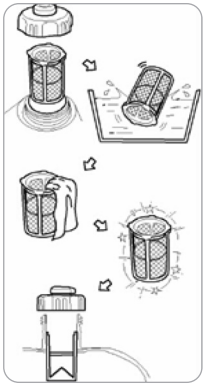
DAMPER AND FLAME ARRESTER MAINTENANCE 15

The engine and damper will get very hot after the generator has been started. Do not touch the engine or damper with any part of your body or clothing during inspection or repair until they have cooled down.

Remove the screws and then pull the protective cover towards you. Loosen the bolts and remove the cover, screen and flame arrester of the damper. Descale the screen and flame arrester of the damper with a wire brush.Inspect the screen and flame arrester of the damper. Replace them if they are damaged. Replace the flame arrester. Replace the screen and cover of the damper. Replace the cover and tighten the screws.



IMPORTANT! **Match the protrusion of the flame arrester to the hole in the pipe damper.**



FUEL FILTER 16

ATTENTION - DANGER! **Never use gasoline while smoking or in the immediate vicinity of an open flame.**

1. Remove the screws, and then remove the cover (fig. 11), and drain the fuel.
2. Hold and move up the clamp, then take off the hose from the tank (fig. 12).
3. Take out the fuel filter (fig. 13),
4. Clean the filter with gasoline.
5. Dry the filter and put it bank into tank.
6. Install the hose and clamp, then open the fuel valve to check whether it is leak.
7. Install the cover and tighten the screws.

Fig. 11

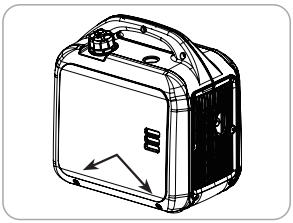


Fig. 12

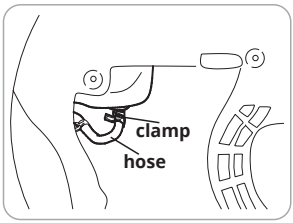
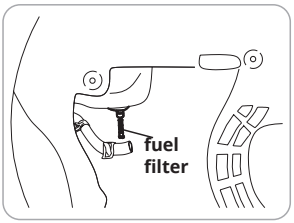


Fig. 13



STORAGE 17

IMPORTANT! **The generator must be stored and transported with a closed vent at all times!**

Storage room has to be dry and free from dust deposits. Storage room also has to be locked away from children and animals. It is recommended to store and use the generator at temperature of -20°C to +40°C. Avoid direct sunlight, rain on the generator. When using and storing hybrid generator, gas tank should be kept indoors at temperatures below +10°C. If the temperature is lower, gas will evaporate.

GENERATOR DISPOSAL 18

To prevent environment damage generator should be separated from ordinary waste. Please recycle them in the safest way, passing it to special place for disposal.

Typical failures	Possible reason	Solution
Engine does not starting	Engine starting swinch set to OFF position	Set the engine starting switch to ON
	Fuel valve set to off position	Turn the valve to ON position
	Air flap is opened	Shut the air flap
	No fuel	Add fuel
	Low-quality or dirty fuel is in engine	Change the fuel
	Sparking plug smoked or corrupted distance between contacts is not nominal	Clean or replace the plug; Set proper distance between contacts
Low engine power / heavy starting	Dirt in fuel tank	Clean the fuel tank
	Dirt in the air filter	Clean the air filter
	Water in a fuel tank/ carburetor; carburetor is jammed	Empty the fuel tank, carburetor
	Distance between contacts of a sparking plug is not nominal	Set proper distance between contacts
Engine overheated	Cooling fins are dirty	Clean the cooling fins
	Air filter is dirty	Clean the air filter
No voltage while working engine	Circuit breaker is active	Turn on the cricuit breaker
	Connected cables are corrupted	Check the cables; if using extension cord, change it
	Plugged device failure	Try to connect other devices
Connected devices are not working while generator is running	Generator is overloaded	Unplug some devices to reduce load
	Short circuit occured in one of the devices connected	Unplug that device to restore the stability of a system
	Air filter is dirty	Clean the air filter
	Repetitions of an engine are lower than nominal	Contact the service center

AVERAGE POWER USAGE 20

Device	Average power usage, W
Iron	500-1100
Air hair dryer	450-1200
Coffee machine	800-1500
Electric cooking stove	800-1800
Toaster	600-1500
Air heater	1000-2000
Vacuum cleaner	400-1000
Radio	50-250
BBQ Grill electric device	1200-2300
Oven	1000-2000
Refrigerator	100-150
TV set	100-400
Hammer drill	600-1400
Drill	400-800
Freezer	100-400
Grinding machine	300-1100
Circular saw	750-1600
Angle grinder	650-2200
Electro jigsaw	250-700
Electro planer	400-1000
Compressor	750-3000
Water pump	750-3900
Electric sawing machine	1800-4000
Electric lawn	750-3000
Electric powered engines	550-5000
Electric fan	750-1700
High pressure machine	2000-4000
Air conditioner	1000-5000

WARRANTY SERVICE TERMS 21

The international manufacturer warranty is 1 year or 1000 hours (whichever comes first). The warranty period starts from the date of purchase. In cases when warranty period is longer than 1 year according to local legislation please contact your local dealer. The Seller which sells the product is responsible for granting the warranty. Please contact the Seller for warranty. Within the warranty period, if the product fails because of defects in the production process, it will be exchanged on the same product or repaired.

The warranty card should be kept throughout the warranty period. In case of warranty card loss, a second one will not be provided. The customer must provide the warranty card and buyer`s check during request for repair or exchange. Otherwise, the warranty service will not be provided. The warranty card, attached to the product during sale, should be correctly and fully completed by the retailer and customer, signed and stamped. In other cases, warranty is not considered as valid.

Provide clean product to the service center. Parts, that must be replaced, are the property of the service center.

EC Declaration of Conformity

Nr. 235

The following products have been tested by us with the listed standards and found in compliance with the European Community Machinery Directive 2006/42/EC, Electromagnetic compatibility Directive (EMC) 2014/30/EC, Noise Directive 2000/14/EC.

Manufacturer:	DIMAX INTERNATIONAL GmbH
Address:	Flinger Broich 203, 40235 Duesseldorf, Germany
Product:	Inverter generators "Könner & Söhnen"
Type / Model:	KS 1900i S, KS 1900iG S

The statement is based on a single evaluation of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo. The manufacturer should ensure that all product in series production are in conformity with the product sample detalied in this report. The applicant should hold the whole technical report at disposal of the competent all the right.

Applied EC Directives:
2006/42/EC Machinery Directive
2014/30/EU Electromagnetic compatibility Directive (EMC)
2000/14/EC Noise Directive(amended in 2005/88/EC)
(EU) 2016/1628 Non-Road mobile machinery emissions

Applied Standards:
EN ISO 8528-13:2016
EN 55012:2007/A1:2009
EN 61000-6-1:2007
EN IEC 61000-6-1:2019
EN ISO 3744:1995

Gasoline engine R80-i2 corresponds to European Emission Standard Stage V.
This is confirmed by EU TYPE-APPROVAL CERTIFICATE issued by department of transport of Madrid, Spain.
Technical service responsible for carrying out the test -IDIADA.
Date of issue 30/11/2020

2000/14/EC_2005/88/EC Annex VI

For model KS 1900i S, KS 1900iG S Noise measured Lwa = 92 dB (A), guaranteed Lwa= 88 dB (A)

Notification body , responsible for 2006/42/EC Machinery Directive, 2014/30/EU Electromagnetic compatibility Directive (EMC) certificate issuing is TÜV SÜD Product service GmbH Certification Body -Ridlerstrasse 65, 80339, Germany.
Notification body number is 0123.

Notification body, responsible for 2000/14/EC Noise Directive certificate issuing is TÜV SÜD Industrie Service GmbH., Westendstrasse 199, 80686 München, Germany.
Notification body number is 0036.

CE 23

Issued Date: 2025-07-01
Place of issue: Duesseldorf
Director: Fomin P.

DIMAX
International GmbH
Flinger Broich 203 40235 Düsseldorf
USt-ID DE296177274
koenner-soehnen.com

P. Fomin

We DIMAX INTERNATIONAL GmbH hereby declare that specified above conforms covering European Parliament and Council Directives, 2006/42/EC of 17 May 2006 Machinery Directive, Electromagnetic compatibility Directive (EMC) 2014/30/EC of 26 February 2014, Noise Directive 2000/14/EC of 8 May 2000. The CE mark above can be used under the responsibility of manufacturer. After completion of an EC declaration of Conformity and compliance with all relevant EC directives.

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