TRADITIONELLE DEUTSCHE QUALITÄT

KÖNNER SÖHNEN

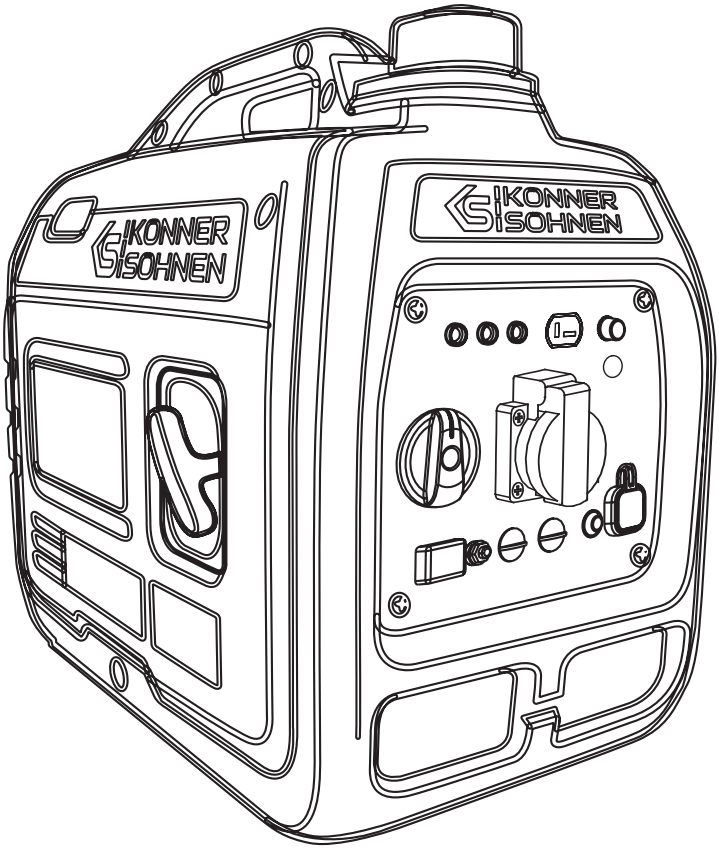
Please, read this manual carefully before use!

Owner's Manual

EN

Inverter Generator

KS 2100i S
KS 2100iG S
KS 3100i S
KS 3100iG S
KS 5500iES ATSR
KS 5500iEG S



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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

WORKING AREA

ATTENTION – DANGER! **When installing the generator, pay attention to the capacity of electrical appliances and their starting current, which may be several times higher than the rated current. The generator cannot run in overload conditions when starting consumers with an inrush current higher than the generator's maximum output.**

ATTENTION – DANGER! **Pay attention to the number of phases of the generator and the electrical system. A three-phase generator is only suitable for three-phase power consumers. Never connect a three-phase generator to a three-phase home network if there are no three-phase power consumers.**

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.**

- Do not use generator in the rain, snow and high humidity conditions, do not touch the generator with wet hands. It's prohibited to leave it in direct sunlight in summer for a long time. It is recommended to store and use the generatir under a canopy or in a well ventilated area.

- 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. To reduce vibration during operation and to avoid damage to the surface, where the generator is installed, it is equipped with dampers.

- Please don't use the generator near flammable gases, liquids or dust. When using the generator exhaust system gets very hot. This may cause fire or explosion of these materials.

- Be sure to follow cleanliness and good lighting in the work area. Clutter and poor lighting may cause an injury.

- Do not let the presence of unauthorized persons, children or animals when working with generator. If necessary, make sure to fencing the working area.

- Please use safety shoes and protective gloves when working with generator.

ELECTRICAL SAFETY

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.

- All connecting the generator to the network must be made by certified electrician in accordance with all electrical rules and regulations.

- It is not allowed to supply current from the electrical network to the generator when the power supply is restored.

- Do not allow moisture in the generator. The water inside the device increases the risk of an electric shock.

- In the high humidity level conditions generator exploit is prohibited. Keep the generator in a dry place only.

- Avoid direct contact with grounded surfaces (pipes, radiators, etc.).

- Be careful when working with power cables. Immediately replace it in case of damage, as damaged wire increases the risk of electric shock.

- Network connection should only be carried out by a qualified technician

- Connect the generator to the protective ground before operation.

- Do not connect or disconnect a generator to electricity consumers, which are placed in water on a wet or damp soil.

- Do not touch parts of the generator under voltage.

- Connect the generator to those customers only which meet the electrical characteristics and the rated power of the generator.

- Store all electrical equipment dry and clean. Wires with damaged or spoiled insulation should be replaced. You should also replace worn, damaged or rusty contacts.

IMPORTANT! **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.**

PERSONAL SAFETY

- Be careful. Do not operate the generator, if you are tired, under the influence of drugs or alcohol. Inattention may cause a serious injury.
- Avoid inadvertent start. Make sure to set the switch to Off when you turn off the generator.

ATTENTION – DANGER! **Non compliance to these requirements may result in generator combustion or explosion, as well as in electric wiring ignition inside the structure.**

- To avoid inhaling exhaust gas, the generator does not have to work in conditions of poor ventilation. Exhaust gas contains poisonous carbon monoxide.
- Make sure no outsider objects are on the generator when it is turned on. Using device for other purposes deprives the right for free warranty. It is not allowed to sit or stand on the generator.
- Always keep a stable position and balance when starting the generator.
- Do not overload the generator, use it only for the purpose.

PRECAUTIONS WHEN WORKING WITH GASOLINE GENERATOR

- Do not start the generator operation upon presence of electric load. Disconnect the load before you stop the engine.
- Generator installation is to be performed at minimum 1 meter safety distance from flammable objects. All explosive and flammable materials or substances are to be kept away from the generator, for its engine produces heat during operation.
- Do not refuel the running generator.
- It is forbidden to smoke during generator refuelling operations.
- **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.
- Observe the fuel tank refilling. Do not allow overfilling.
- It is forbidden to touch the exhaust system during the generator start and in process of its running.
- It is forbidden to run the generator in cases when its exposure to rain, snow and possibility of soakage exist.
- Before running the generator, it is necessary to define the place and means of its emergency stop.


ATTENTION – DANGER!


Fuel contaminates the land and groundwater. Do not allow the leaking gasoline from the tank!

PRECAUTIONS WHEN WORKING WITH HYBRID GENERATOR


IMPORTANT!


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

Do not start the generator operation upon presence of electric load! Disconnect the load before you stop the engine.

- You are allowed to connect all the power consuming supplies only after generator got warmed up. If you start generator with appliances being connected the engine may work unstable due to the fuel remains in the carburetor.
- Disconnect the load before you stop the 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.
- 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 switch off all the electric appliances connected 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 genereto during its work

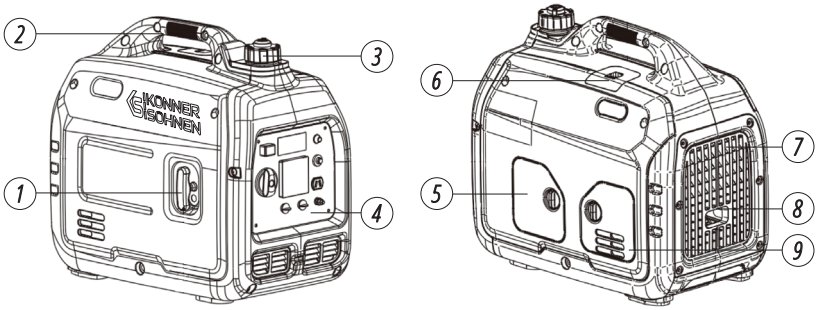

ATTENTION - DANGER!


The gas cylinder valve must not be closed when the generator is not running. The generator must not be operated on gas in basements.

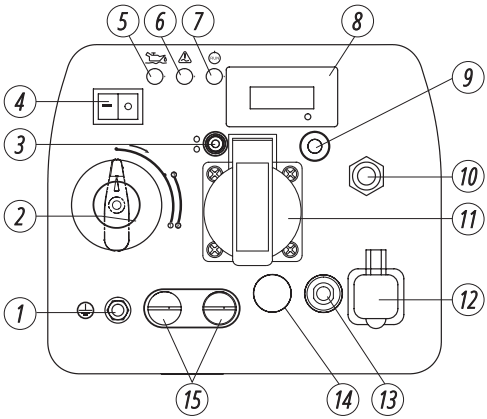

ATTENTION - DANGER!


Pay attention! Usage of gasoline together with liquefied gas is forbidden! When you operate using gasoline, you must stop LPG supply. When you operate generator using LPG - you must stop gasoline supply.

MODELS KS 2100i S, KS 2100iG S, KS 3100i S, KS 3100iG S



1. Manual starter
2. Carrying handles
3. Fuel tank cap air vent
4. Control panel
5. Air filter service cover
6. Spark plug service cover
7. Ventilation grille
8. Muffler
9. Service cover (for motor oil change)

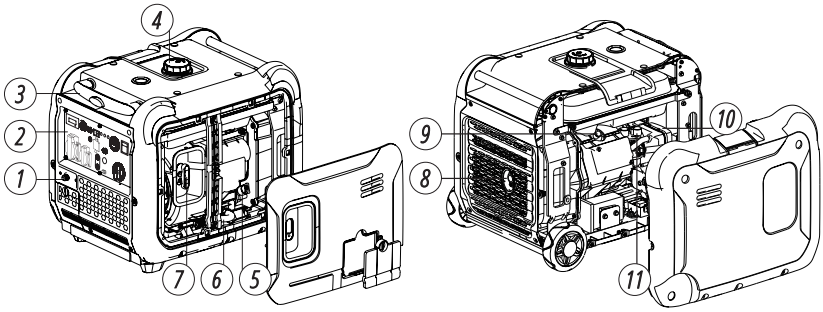


1. Earthing bolt
2. Multifunctional engine switch
3. Fuel indicator. Green indicator is used for LPG and the blue one for gasoline.
4. Economy mode switch (Economy Mode)
5. Oil level indicator
6. Overload indicator
7. Voltage indicator
8. LED display
9. Reset button
10. LPG input (for models KS 2100iG S, KS 3100iG S)
11. AC outlet Schuko 230V 16A
12. USB QC 3.0 + Type C
13. 12V DC fuse
14. 12V/8.3A DC outlet
15. Generator parallel socket

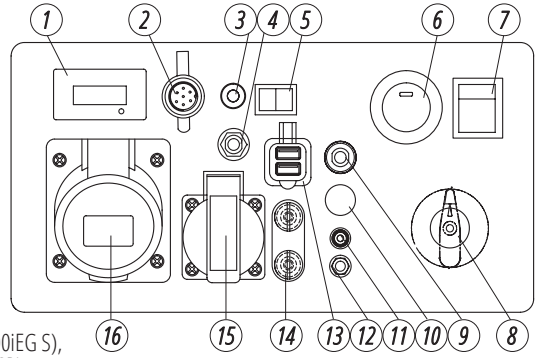
IMPORTANT!

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

MODELS KS 5500iES ATSR, KS 5500iEG S



1. LPG input (for model KS 5500iG S)
2. Control panel
3. Carrying handles
4. Fuel tank cap
5. Oil filler neck
6. Oil drain pipe
7. Manual starter
8. Muffler
9. Spark plug
10. Carburetor
11. Air filter



1. LED display
2. ATS output (for model KS 5500iES ATSR)
3. Reset button
4. 230V AC fuse
5. Economy mode switch (Economy Mode)
6. Electric start
7. Engine start button
8. Fuel type switch (for model KS 5500iEG S), fuel valve (for model KS 5500iE ATSR)
9. 12V DC fuse
10. 12V/8.3A DC outlet
11. Fuel indicator. Green indicator is used for LPG and the blue one for gasoline.
12. Earthing bolt
13. USB QC 3.0 + Type C
14. Generator parallel socket
15. AC outlet Schuko 230V 16A
16. AC outlet CEE 230V 32A

The package includes everything you need to use LPG as fuel:

1. The hose is equipped with an additional reducer that is mounted on the cylinder to increase the reliability of the gas line.

2. Gas cylinder connection hose (1.5 m).

3. Built-in reducer that provides gas supply during engine operation, prevents gas leakage, as well as terminates gas supply when the generator is off.

Model	KS 2100i S	KS 2100iG S	KS 3100i S	KS 3100iG S
Voltage	230 V			
Maximum power	2,0 kW	2,0* kW	3,1 kW	3,1* kW
Nominal power	1,8 kW	1,8* kW	2,8 kW	2,8* kW
Frequency	50 Hz			
Current (max.)	8,7 A	8,7 A	13,5 A	13,5 A
Outlets	1×Schuko 230V 16A			
Engine start	manual	manual	manual	manual
Fuel tank volume	4,0 l	4,0 l	4,0 l	4,0 l
LED display	voltage, frequency, working hours			
Noise level Lpa (7m)/Lwa	62/95 dB	63/96 dB	63/96 dB	63/96 dB
Output 12V	12V/8,3A	12V/8,3A	12V/8,3A	12V/8,3A
USB + Type C	USB QC 3.0 + Type C			
Engine model	KS 110i	KS 110i	KS 160i	KS 160i
Engine volume	79,7 cm^3	79,7 cm^3	145 cm^3	145 cm^3
Engine type	gasoline, 4 stroke cycle engine	LPG/gasoline 4 stroke cycle engine	gasoline, 4 stroke cycle engine	LPG/gasoline 4 stroke cycle engine
Engine power	3,3 hp	3,3 hp	4,6 hp	4,6 hp
Generator parallel socket	+	+	+	+
Crankcase volume	0,35 l	0,35 l	0,45 l	0,45 l
Power factor, cos φ	1	1	1	1
ATS input	–	–	–	–
Dimensions (L×W×H)	510×320×475 mm			
Lithium battery	–	–	–	–
Net weight	18,5 kg	19 kg	21,5 kg	22 kg
Protection class	IP23M			
Nominal voltage tolerance – max. 5%				

*LPG operation reduces generator power by 10%.

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.

Model	KS 5500iES ATSR	KS 5500iEG S
Voltage	230 V	
Maximum power	5,5 kW	5,5* kW
Nominal power	5,0 kW	5,0*kW
Frequency	50 Hz	
Current (max.)	23,9 A	23,9 A
Outlets	1×Schuko 230V, 1×CEE 230V 32A	
Engine start	manual/electric	manual/electric
Fuel tank volume	13,5 l	13,5 l
LED display	multifunctional**	
Noise level Lpa (7m)/Lwa	66/97 dB	66/97 dB
Output 12V	12V/8,3A	12V/8,3A
USB + Type C	USB QC 3.0 + Type C	
Engine model	KS 330i	KS 330i
Engine volume	312 cm^3	312 cm^3
Engine type	gasoline, 4 stroke cycle engine	LPG/gasoline 4 stroke cycle engine
Engine power	9,5 hp	9,5 hp
Generator parallel socket	+	+
Crankcase volume	0,85 l	0,85 l
Power factor, cos φ	1	1
ATS input	+	–
Dimensions (L×W×H)	680×510×605 mm	765×510×605 mm
Lithium battery	1,6 Ah	1,6 Ah
Net weight	52 kg	52,5 kg
Protection class	IP23M	
Protection class	IP23M	
Nominal voltage tolerance – max. 5%		

*LPG operation reduces generator power by 10%.

**Multifunctional LED-display: load, fuel level, voltage, frequency, working hours; overload indicator, voltage indicator, oil level indicator.

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 4

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 5

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.

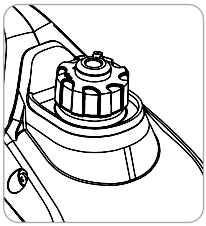
The overload indicator lights up when the connected generator is overloaded, the inverter control unit overheats or the AC output voltage rises. If the overload indicator goes on, the engine will continue to operate, but the generator will no longer produce electricity. In this case, you must perform 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 INDICATOR (FOR DUAL-FUEL GENERATORS)

The indicator shows the type of fuel used to run the generator: green for LPG and blue for gasoline.



FUEL TANK CAP AIR VENT (EXPECT FOR MODELS KS 5500iES ATSR, KS 5500iEG S)

The fuel cap is equipped with a vent for air supply to the fuel tank. When the engine is running on gasoline, 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 6

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: see specifications table.

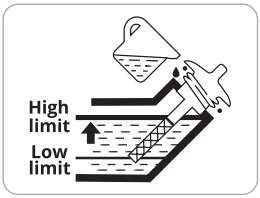
IMPORTANT! **Wipe up spilled fuel immediately with a clean, dry, soft cloth, as the fuel may harm painted surfaces or plastic parts.**

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.
2. Unscrew the oil dipstick 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.
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: see specifications table.

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

IMPORTANT!

The generator is supplied with disconnected battery. When using the generator for the first time, open the maintenance door and connect the battery line. For long-term storage of generator, disconnect the battery line. (for models KS 5500iES ATSR, KS 5500iEG S).

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.

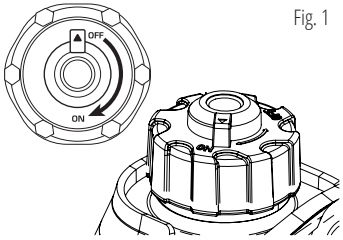
ENGINE START

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.**

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.

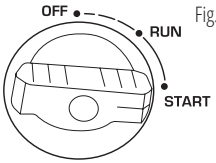
Fig. 1



FOR MODELS KS 2100i S, KS 3100i S

1. Check oil level.
2. Check fuel level.
3. Open the vent on the fuel cap to the "ON" position (fig. 1).
4. Set the multifunctional switch to a position in between "START" and "RUN" (fig. 2). Please note! The engine switch position depends on the ambient temperature and the composition of the gas mixture.

Fig. 2



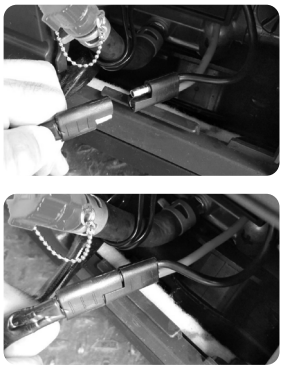
5. For manual start pull the manual starter until a slight resistance is felt, then pull it toward you relatively sharply. Slowly turn the manual starter by hand, do not release it abruptly.
6. Turn the multifunctional switch to the "RUN" position.

FOR MODEL KS 5500iES ATSR

1. The generator is supplied with disconnected battery. When using the generator for the first time, open the maintenance door and connect the battery line (see fig.). For long-term storage of generator, disconnect the battery line (for models KS 5500iES ATSR, KS 5500iEG S).
2. Check oil level.
3. Check fuel level.
4. Turn the fuel valve handle to the "ON" position (OPEN).
5. For manual start press MAIN POWER button to "ON" position, pull the handle of manual starter until a slight resistance is felt, then pull it relatively sharply. Slowly return the manual starter handle by hand, do not release it abruptly.

5.1. For electric start – press MAIN POWER button to "ON" position, then press the ELECTRIC START button.

Fig. 3



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.

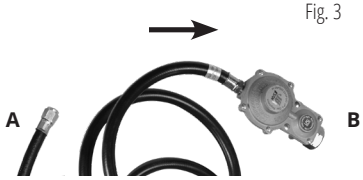
ATTENTION – DANGER!

Do not connect two or more devices at a time. The start-up of many devices requires high power. Devices should be connected one at a time according to their power rating.

RUNNING GENERATOR ON LPG (KS 2100iG S, KS 3100iG S , KS 5500iEG S)

1. Check the oil level.
2. For model KS 5500iEG S - set the fuel switch FUEL CHOICE to LPG.

Fig. 3



The inverter generators KS 2100iG S, KS 3100iG S use smart fuel switching system. In order to use LPG as fuel you need to connect a hose to the corresponding connector on the generator panel and open the valve on the gas cylinder. The solenoid valve will automatically shut off the gasoline supply from the gasoline tank.

3. 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).
4. Connect the hose end with the reducer to the gas cylinder (connect hose end **B** to the gas cylinder, as shown in Fig. 3).
5. Open the gas valve on the cylinder, making sure that no gas is leaking.
6. When using for the first time, fill the gas line with gas by turning the key (pressing start button) to the "OFF" position and slowly pull the starter handle to the full cord length 2 to 3 times.
7. For manual start KS 5500iE G model, press MAIN POWER button to "ON" position, pull the manual starter until a slight resistance is felt, then pull it toward you relatively sharply. Slowly return the manual starter by hand, do not release it abruptly. For electric start - press MAIN POWER button to "ON" position, then press the ELECTRIC START button. If the engine does not start on the first try, press the ELECTRIC START button again in 3-5 seconds.
8. To start KS 2100iG S, KS 3100iG S models, turn the Multifunctional engine switch to the "START" position (fig. 2). Pull the handle of manual starter until a slight resistance is felt, then pull it relatively sharply. Slowly return the handle manual starter by hand, do not release it abruptly. Turn the Multifunctional engine switch to the "RUN" position (fig. 2).

IMPORTANT!

Disconnect the load from the generator before changing fuel. The ECONOMY MODE switch must be in the "OFF" position. Gasoline remains in the carburetor make it difficult to start the engine on LPG.

Let the generator run out of gasoline until it stops. When switching from gasoline to LPG operation, the generator may be unstable during the first 2-3 minutes and the low voltage protection may trip. If the red indicator (overload indicator) lights up in 2-3 minutes after running the generator on LPG when it is running stable, press the AC Reset BUTTON on a panel of generator to restore voltage supply. To do this, close the fuel valve with the generator running and wait until the generator stops completely. To do this, close the fuel valve while the generator is running (set the FUEL CHOICE knob to OFF) to stop the gasoline supply to the fuel system for the KS 5500iE G, wait for the generator to come to a complete stop. Then start the generator on LPG. You can also drain the remaining gasoline from the carburetor before starting the generator on LPG.

TO START LPG/GASOLINE GENERATOR IN GASOLINE MODE (KS 2100iG S, KS 3100iG S)

1. Close the gas valve on the cylinder.
2. Open the vent on the fuel cap to the "ON".
3. Turn the Multifunctional engineswitch to the "START" position (fig. 2).
4. 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.
5. Turn the Multifunctional engineswitch to the "RUN" position.

TO START LPG/GASOLINE GENERATOR IN GASOLINE MODE FOR MODEL KS 5500iEG S

1. Check oil level.
2. Check fuel level.
3. Set the fuel switch FUEL CHOICE to GASLONE.
4. For manual start turn MAIN POWER button to "ON" position, 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.

4.1. For electric start - turn MAIN POWER button to "ON" position, then press the ELECTRIC START button.

IMPORTANT! **Place the container with gas only vertically, according to the instruction manual for gas cylinders. The horizontal placement of gas cylinders leads to hybrid generator gearbox failure.**

IMPORTANT! **Fuel switch should only be performed with the load off.**

For models with electric start, check if the battery is charged. If necessary, recharge the battery with a dedicated charger for lithium-ion batteries or start the generator with a manual start and allow it to run idle while it is recharging.

IMPORTANT! **The generator is supplied with disconnected battery. When using the generator for the first time, open the maintenance door and connect the battery line (fig. 3). For long-term storage of generator, disconnect the battery line (for models KS 5500iES ATSR, KS 5500iEG S).**

FUNCTIONAL DESCRIPTION OF INVERTER GENERATORS 8

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

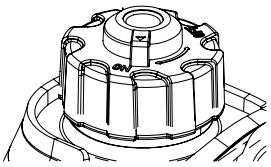
The total output power of the generators can be increased by connecting two inverter generators together using the Parallel Unit from Könner & Söhnen. Parallel connection of two generators ensures total rated output power of these generators. When the generators are connected in parallel, the power loss is 0.3 kW of the total rated power that can be obtained.

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, PROCEED AS FOLLOWS

1. Turn off all devices.
2. Allow the generator to run idle for approx. 1-2 minutes.
3. For dual fuel models close LPG supply valve on LPG bottle.
4. For model KS 5500iE G set the FUEL CHOICE knob to the "OFF" position.
5. For models KS 2100i S, KS 3100i S, KS 2100iG S, KS 3100iG S Turn the multifunctional engine switch to the "OFF" position. For models KS 5500iES ATSR, KS 5500iEG S press the ELECTRIC START button, then press MAIN POWER button to "OFF" position.
6. Unplug the devices.
7. 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. 4, for models KS 2100i S, KS 2100iG S, KS 3100i S, KS 3100iG S - when switching off gasoline operation).



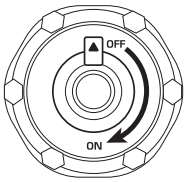


Fig. 4

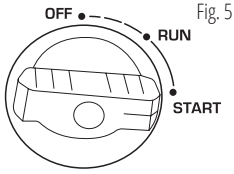


Fig. 5

IMPORTANT!

Inverter generators from Könner & Söhnen are equipped with lithium batteries with an operating voltage similar to conventional lead-acid batteries.

When the generator is running, the battery is charged automatically. If it is necessary to charge the battery with an external device, we recommend using the KS B1A charger or the charger for charging lead-acid motorcycle batteries with a nominal voltage of 12V with a charge current of not more than 2A.

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 9

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

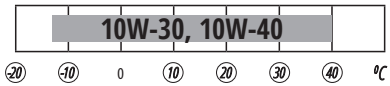
Unit	Action	At each start	First month or 20 operating hours	Every 3 months or 50 operating hours	Every 6 months or 100 operating hours	Every year or 300 operating hours
Motor oil	Level check	✓				
	Replacement		✓	✓		
Air filter	Check /Cleaning	✓	✓	✓		
	Replacement				✓	
Spark plug	Cleaning		✓	✓		
	Replacement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

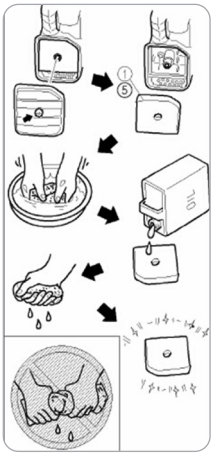
IMPORTANT! **The manufacturer shall not be liable for any damage caused by failure to perform maintenance work.**

RECOMMENDED OILS 10

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.



AIR FILTER TECHNICAL MAINTENANCE 11

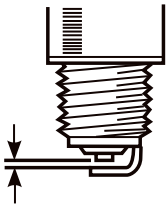
Air filter cleaning is to be performed each 50 hours of the generator operation (every 10 hours in unusually dusty conditions).

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 12

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



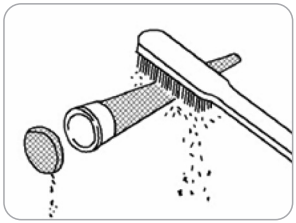
SPARK PLUG VERIFICATION:

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 – A5 RTC. For moddels KS 5500iES ATSR, KS 5500iEG S - A7 RTC.
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 13

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.



FUEL FILTER 14

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

1. Remove the fuel tank cap and fuel filter.
2. Clean the filter with gasoline.

3. Wipe the filter and replace it.
4. Replace the fuel tank cap.
Make sure that the fuel tank cap is tight.

BATTERY USE 15

The generator battery is not subject to service. Low temperatures may lower the capacity of the lithium-ion battery and may cause an unstable generator start. Battery warranted – three months from the date of purchase of the generator.

 **IMPORTANT!** 

The generator is supplied with disconnected battery. When using the generator for the first time, open the maintenance door and connect the battery line. For long-term storage of generator, disconnect the battery line (for models KS 5500iES ATSR, KS 5500iEG S).

STORAGE 16

 **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. Information on long-term storage and transportation can be found in the full version of the manual.

BATTERY AND GENERATOR DISPOSAL 17

To prevent environment damage generator and battery 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 19

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 20

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. 242

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 2100i S, KS 2100iG S, KS 3100i S, KS 3100iG S KS 5500iES ATSR, KS 5500iEG 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 (+2005/88/EC) Noise Directive (EU) 2016/1628 Non-Road mobile machinery emissions
Applied Standards:	EN ISO 3744:1995 EN 55012:2007+A1: 2009 ISO 8528-13:2016 EN 60204 1:2018

Gasoline engine KS 110i, KS 160i, KS 330i corresponds to European Emission Standard Euro V (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 24/02/2021

2000/14/EC_2005/88/EC Annex VI

For model KS 2100i S Noise measured Lwa = 91.5 dB (A), guaranteed Lwa = 95 dB (A)
For model KS 2100iG S, KS 3100i S, KS 3100iG S Noise measured Lwa = 94.2 dB (A), guaranteed Lwa = 96 dB (A)
For model KS 5500iES ATSR, KS 5500iEG S Noise measured Lwa = 93.8 dB (A), guaranteed Lwa = 97 dB (A)

Notification body , responsible for 2006/42/EC Machinery Directive, 2014/30/EU Electromagnetic compatibility Directive (EMC) and 2000/14/EC Noise Directive certificate issuing is TÜV Rheinland LGA Products GmbH , Tillystraße 2, 90431 Nürnberg, Country: Germany, Phone: +49 (0) 9116555225, Fax: +49 (0) 9116555226, Email: service@de.tuv.com, Website: www.tuv.com/safety
Notified Body number: 0197

CE
22

Issued Date: 2025-09-01
Place of issue: Duesseldorf
General 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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Імпортер та представник в Україні:
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www.konner-sohnen.com.ua