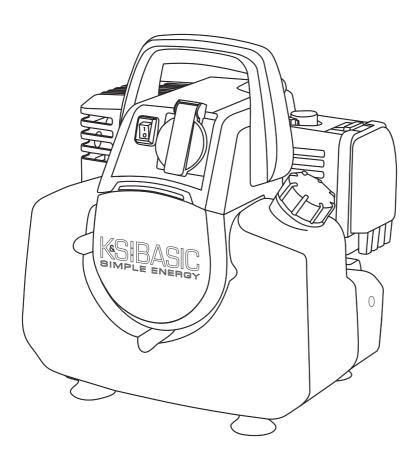




# **Inverter Generator**

KSB 10i



#### INTRODUCTION



Thank you for your purchase of **K&S BASIC** products. This manual contains a brief description of safety, use and debugging. More information can be found on the official manufacturer's website in the support section:

#### ks-power.de/betriebsanleitungen.

You can also go to the support section and download the full version of the manual by scanning the OR code, or on the website of the official importer of TM K&S Basic products: www.ks-power.de/en



We care about the environment, therefore, we consider it expedient to save paper and leave in print a short description of the most important sections.



#### Be sure to read the full version of the manual before getting started!



Manufacturer reserves the right to make alterations into the generators, which may not be reflected in this manual. Pictures and photos of the product may vary from its actual appearance. At the end of this manual, You may find contact information which you are free to use in case of any issues occurrence.

All data, specified in this operation manual is the most up to date for the moment of its publishing. The current list of service centers you can find at the website of official importer: **www.ks-power.de/en** 



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**

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). Keep unauthorized persons, children, and animals away from work area. Wear safety shoes and gloves.



ATTENTION – DANGER!



As exhaust gases contain poisonous carbon dioxide (CO.) 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**



ATTENTION – DANGER! /



The device generates electricity. Follow safety precautions to avoid electric shock.

The generator produces electricity that may lead to an electric shock while neglecting compliance regulations. Wires with damaged or spoiled insulation should be replaced. You should also replace worn, damaged or rusty contacts.



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. Do not start the generator operation upon presence of electric load! Disconnect the load before you stop the engine. Only mixture of gasoline and oil at a ratio of 50:1 (50 parts fuel to one part oil for two-stroke engines, the part of the oil in the mixture will be 2%) is recommended for the generator. It is forbidden to use gasoline, kerosene or other fuel types! For the fuel mixture, use oil for two-stroke engines marked 2T, concentration 50:1. Contact service center for further recommendations if oil with 2T marking is not available in your region. Before running the generator, it is necessary to define the place and means of its emergency stop. Do not refuel the running generator.



ATTENTION – DANGER!



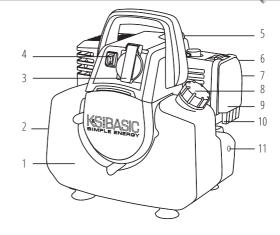
Fuel contaminates the land and groundwater. Do not allow the leaking fuel from the tank!

#### **MAIN OVERVIEW**

- 1. Fuel tank
- 2. Earthing bolt
- 3. 1x16A AC outlet
- 4. Engine start
- 5. Spark plug
- 6. Air choke

(on the other side of the generator)

- 7. Manual starter
- 8. Fuel tank cap
- 9. Air filter
- 10. Hand pump (primer)
- 11. Work indicator





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.



Model	KSB 10i				
Voltage, V	230				
Maximum power, kW	1.0				
Nominal power, kW	0.8				
Frequency, Hz	50				
Current, A (max.)	4.3				
Outlets	1*16A				
Engine start	manual				
Fuel tank volume, l	3.5				
Noise level Lpa (7m)/Lwa, dB	70/95				
Engine model	KSB 80i				
Engine volume, cm <sup>3</sup>	42.7				
Engine type	gasoline powered one-cylinder, two-stroke				
Engine power, hp	2.0				
Power factor, $\cos\phi$	1				
Dimensions (L*W*H), mm	320*250*330				
Net weight, kg	8.5				
Protection class	IP23M				
Nominal voltage tolerance – max. 5%					

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

To ensure reliability and increase the engine service life, peak powers may be slightly limited by circuit breakers.

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

Before starting the device, remember that the total power of the connected power consumers should not exceed the nominal power of the generator.

## **GENERATOR OPERATION**

#### GENERATOR TRANSPORTATION

Before you start to transfer the generator, please ensure to turn off the engine and give it some time to cool. Transport the generator with a handle, do not rush.

#### OPERATION INDICATOR

Once the generator is working in the normal mode, output voltage light is green. In case of overload, indicator lights red. After 2 minutes working in overload mode, protection device switches on and turns off the power generation to protect the connected electrical equipment and generator. In the event of a short circuit, protection device immediately shuts off electricity. In both cases, indicator is blinking red, but the engine does not stop.

Restart the engine to make the generator produce electricity again.



IMPORTANT!



If case the excessive amount of gasoline that has arisen thought non-compliance startup creates difficulties when you first start the engine, unscrew the spark plug, completely open the air flaps and repeatedly pull the starter handle. Then tighten the spark plug in place to run the generator.

#### **CHECK BEFORE GETTING STARTED**

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Before you start working with the generator, please fill it with a mixture of gasoline and oil. Provide adequate ventilation for the generator not be overheated during the operation. Do not allow the leaking of gasoline, and beware of fire and sparks.



IMPORTANT!



Use a mixture of oil and gasoline at a ratio of only 50:1 (2%)! Manufacturers produce oil for 2-stroke engines of different concentrations 25:1 or 50:1. Mixture of oil ratio of only 50:1 is recommended for the generator (this is indicated on the oil package).

#### TO ADD FUEL:

- 1. Remove the fuel cap
- 2. Pour the mixture into the fuel tank with a funnel
- 3. Tightly screw the fuel cap

**Recommended fuel:** mixture of gasoline and oil.

**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!



Without adding oil to the gasoline engine overheats and piston may jam. You can use any oil from for known manufacturers for twoengines with air-cooling.

## **GETTING STARTED**

**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!** 





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



ATTENTION – DANGER!



In the power supply mode, the generator should operate no longer than 1 minute in the range from nominal to maximum power.

### COMMISSIONING

- 1. Check fuel level.
- 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. Check and clean the air filter, fuel filter and spark plug.

#### ENGINE START

- Do not connect the generator to the load before you start the engine.
- Do not let the fuel mixture flow and do not use instruments to facilitate the launch.
- Provide ventilation and beware of fire and sparks.
- 1. Put the engine switch in "ON" position.
- 2. Press the hand pump 3-5 times. Press until gasoline starts to flow from a transparent plastic tube.
- 3. 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.
- 5. After starting the generator heat the engine until it starts to work steadily with closed air dampers.
- 6. Turn leaver air flaps in position "OPEN".



#### 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.

### 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. Disconnect all electric devices.
- 2. Let the generator run at no load for 1-2 minutes for alternator to be cooled.
- 3. Set the engine switch to position "OFF".

**MAINTENANCE** 

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This manual compliance! You can find a list of service center addresses on the website of exclusive importer:

#### www.ks-power.de/en

#### **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
Air filter	Check /Cleaning	<b>&gt;</b>	<b>⋖</b>	<b>&gt;</b>		
	Replacement				<b>&gt;</b>	
Spark plug	Cleaning		<b>⊘</b>	<b>③</b>		
	Replacement				<b>⊘</b>	
Fuel tank	Level check	<b>⊘</b>			·	
	Cleaning					Ø



IMPORTANT!



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

#### AIR FILTER TECHNICAL MAINTENANCE

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. Open the clips on the upper cap of the air filter.
- 2. Remove the sponge filtering element.
- 3. Remove all dirt deposits inside the hollow case of the air filter.
- 4. Thoroughly wash the filtering element in warmsoapy water.
- 5. Dry the sponge filter.

### **SPARK PLUGS TECHNICAL MAINTENANCE**

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 – AT4117.
- 4. Measure the gap. It has to be within range 0.7-0.8 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

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** 





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.

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.

Potential faults and troubleshooting methods, as well as average device capacities can be found in the full version of the manual.

## **GENERATOR DISPOSAL**

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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.

## **WARRANTY SERVICE TERMS**

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The international manufacturer warranty is 1 year. 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.

All faults caused by the manufacturer during the warranty period will be eliminated free of charge. Warranty repair is carried out only if you have a fully completed warranty card, the Buyer's signature of acceptance of the warranty terms, as well as a document supporting the purchase (cash receipt, sales slip or invoice). In the absence thereof, as well as in the event of errors or corrections not authenticated by the seller's seal or illegible inscriptions in the warranty card or tear-off coupon, no warranty repair is carried out, no objections to quality are accepted and the warranty card is withdrawn by the service center as invalid. The device is accepted for repair clean and full.



# **EC Declaration of Conformity**

Nr. 104

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 generator "K&S BASIC"

Type / Model: KSB 10i

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 detailed 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: ISO 8528-10:1998

EN ISO 3744:1995 EN 55012:2007+A1 EN 61000-6-1:2007 AfPS GS 2014:01 ISO 8528-13:1998

Gasoline engine KSB 80i corresponds to European Emission Standard Euro V.
This is confirmed by EU TYPE-APPROVAL CERTIFICATE granted by NSAI certification.
Technical service responsible for carrying out the test -TÜV SÜD Auto service GmbH in München, Germany Date of issue 11/12/2018

#### 2000/14/EC 2005/88/EC Annex VI

For model KSB 10i Noise measured L<sub>wa</sub> = 91 dB (A), guaranteed L<sub>wa</sub> = 95 dB (A)

CE

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General director: Fomin P. P. Fomin

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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.



## **CONTACTS**

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