



KONVEKTA

Technical leadership starts with ideas.

Operating Instruction for KONVEKTA air conditioning unit:

KL60i

with Thermotronic

- R134a
- 24V
- 2-circuit

ID#: BBA-78-6712AB
Version: A07

Konvekta AG
Am Nordbahnhof 5
34613 Schwalmstadt
Germany



+49 (0) 66 91 / 76 – 0



+49 (0) 66 91 / 76 - 200



Info@konvekta.com

www.konvekta.com

Contents

Page:

• Introduction	3
• Information on the operating instructions	4
 1. Technical data a/c unit	 4
1.1. Technical data compressor.....	4
 2. Intended use	 5
2.1. General information on air conditioning unit.....	5
2.2. Operating Conditions	5
 3. Operation.....	 6
3.1. Operation panel / function of the keys	6
3.2. Operation of a/c system.....	6
 4. Maintenance / Service	 6
4.1. Filter	7
4.2. Condenser coil.....	7
4.3. Troubleshooting	7
 5. Warranty Conditions.....	 8
 6. Waste disposal in accordance with legal provisions.....	 8
 7. History of modification.....	 8

Appendix:

- Maintenance Schedule Bus [WP07050618](#)

Introduction

These operating instructions have been written for drivers, operators and the maintenance staff of your air conditioning unit.

In this context, we refer implicitly to the compliance with our general installation guidelines. These can be obtained from the KONVEKTA technical after sales service: TKD@konvekta.com.

Please observe our valid safety instructions, available under www.konvekta.de/asv.html. In case of order placement or any other conclusion of contract the safety instructions get integral part of the contract.

It contains:

- Operating instructions
- Safety information 
- Service information

These operating instructions have to be read carefully and made use of before the first start-up and after that regularly by each person who is involved in handling the machine:

- Operation including troubleshooting and waste disposal of fuels and auxiliary agents.
- Servicing, inspection, repair
- Transport

This facilitates the handling and avoids trouble caused by improper operation. Working in compliance with these operating instructions increases operation reliability and service life of the air conditioning unit and reduces life cycle costs.

 **Please complete these instructions by adding the national provisions for prevention of accidents and environmental protection.**

 **These instructions are part of the air conditioning unit. Always have a copy at hand in the driver's cabin.**

You will certainly understand that we will not recognize any warranty claims due to improper handling, inadequate maintenance, applications that do not correspond with the determined use, utilization of unadmitted fuels or the non-observance of safety provisions.

KONVEKTA will annul without prenotice all obligations concerning guarantee, service contracts etc. regardless if granted by KONVEKTA or its distributors in case other than original KONVEKTA spare parts or parts bought from KONVEKTA AG have been used for maintenance and repair.

These operating instructions contain all necessary information to operate your air conditioning unit. In case you need more explanations please contact the next KONVEKTA service station^①.

^① On our website www.konvekta.com in category >service< you will find a survey of contact details of all our service partners close to your location.



Information on the operating instructions

These Operating instructions are valid for the a/c unit, type:

- **KL60i / Recirculating air**

When taking the unit into operation we recommend adding the following data.

This will also be important for your orders of spare parts, and in case of warranty.

Serial number of evaporator:

Serial number of condenser:

Order No.: A (X) /

Year of construction: / (MM/JJ)

Date of first operation: / / (TT/MM/JJ)

The machine is in accordance with the EC machinery directive 2006/42/EC.

The unit contains or needs fluorinated greenhouse gas for operation and is subject to identification requirements in accordance with F-Gas Regulation 517/2014.

Due to the fact that scope of supply depends on the order, equipment of your product may differ in some parts of description.

In case your product is equipped with details not shown or described in the operating instruction, your KONVEKTA -Service-Station will always be at disposal for informing you about correct operation.

In the course of further developments we reserve the right to technical modifications without pre-notice. Guarantee and liability conditions of **KONVEKTA AG's** general business conditions are not enlarged by the above notes.

Indications and photos should neither be copied and circulated nor used for competitor's purposes. All rights according to the copyright remain expressly reserved.

Hersteller: KONVEKTA AG, P.O. Box 2280, D-34607 Schwalmstadt

1. Technical data a/c unit

Refrigerant	R134a
GWP	1.430

Type	VD6067	VD6069	DKD654	DKD655
Operating voltage	24 Volt DC	24 Volt DC	24 Volt DC	24 Volt DC
Current consumption	27 Ampere	27 Ampere	24 Ampere	24 Ampere
Cooling capacity	18.000 Watt	18.000 Watt	27.000 Watt	27.000 Watt
Air volume	3.300 m³/h	3.300 m³/h	6.000 m³/h	6.000 m³/h

1.1. Technical data compressor



 **Important to avoid leakages at the shaft seal of the compressor:**

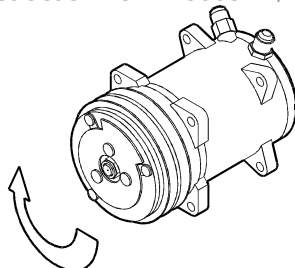
The compressor should be started every 4 weeks for approx. 15 minutes!

This also applies when the vehicle is not into operation for a longer period or when the air conditioning unit is not used!

Type	SD7H15	TM31
weight	7,5 kg	10,7 kg
oil brand	PAG	ZXL 100PG
- quantity	corresponding to version ^①	0,5
magnetic clutch	6PK/Ø132 mm/24 Volt DC	24 VDC / 4,8kg

^① List is attached to compressor, (Instruction no: TD00031A)“

Attention for SD7H15:
Only clockwise rotation!



2. Intended use

The **KONVEKTA** air conditioner represents an air conditioning system that works with the ozone friendly refrigerant R 134a and which creates a pleasant and individually adjustable room temperature by means of forced convection. The determined use includes also the observance of the Operating instruction and the proof of regular inspections as well.

2.1. General information on air conditioning unit



Attention in case of roof top a/c units: Never switch on the a/c unit during carwash!

- The a/c unit is operational with running engine only.
- At cooling operation the humidity inside the vehicle is decreased, which avoids steamed up windows.
- The a/c unit works most effectively with windows and doors shut. If, however, the interior of the standing vehicle has been heated up severely by exposure to sunlight, short-time opening of windows and doors may accelerate the cooling down process.
- At high outside temperature and humidity condensate might drip off the evaporator and make a puddle under the vehicle. This is quite normal and no sign for a leakage.
- The filter (in the area of evaporator) retains contaminants. If the external air is contaminated with gas switch over to return air operation. The filter should be cleaned or replaced respectively on a regular basis so that the capacity of the a/c unit is not affected (see chapter 0).
- If you think that the air conditioning unit has been damaged switch it off immediately in order to avoid further damage. The air conditioning unit may be taken into operation again only after it has been checked at a KONVEKTA Service Station.

2.2. Operating Conditions

NOTE: KONVEKTA uses components made of copper and aluminium, which last a whole unit lifetime under normal environmental conditions. Should the units be operated under aggressive environmental conditions, i.e. air containing salt-, phosphate- or ammoniac extremely, a corrosion of the copper- and aluminium components cannot be ruled out. The copper- and aluminium components of the KONVEKTA systems are not suitable for such extreme application conditions. We indicate emphatically, that corrosion is not subject to warranties for defects. KONVEKTA does not take over any warranties for defect, neither for corrosion nor for consequential damage resulting there from, nor for damages caused by cleaning the systems with highly compressed or corrosion advancing substances.

3. Operation



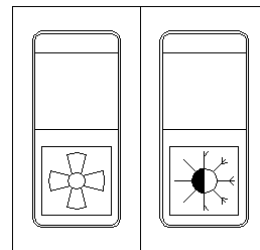
Danger of accidents

- Focusing your attention on the road traffic is of top priority.
- Only operate your air conditioning unit when the traffic situation allows it
- Make sure you can clearly recognize and read all operation- and display-elements at any time

3.1. Operation panel / function of the keys

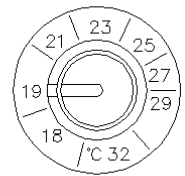
Operating elements are placed on dashboard:

VENT	switch ventilation	position II - ventilation fast position 0 - OFF position I - ventilation slow
A/C	switch air conditioning unit on/off	position 0 - OFF position I - ON
Potentiometer	temperature control	room temperature



VENT

A/C



Potentiometer

3.2. Operation of a/c system

- Start vehicle engine (refer to orig. operating instruction of the vehicle).
- The a/c unit is switched on by pressing switch „**A/C**“, ventilation runs automatically according to the adjusted blower step (switch **VENT**)
- Adjust air volume by pressing switch „**VENT**“ position „I“, „0“ or „II“)

Note: The compressors can only operate, if switch „**A/C**“ is in position „I“.

4. Maintenance / Service

Please arrange regular dates for maintenance works and services with a KONVEKTA service station, as indicated in maintenance schedule bus no. WP07050618.

- Only qualified staff is allowed to carry out these works! -

For general instructions on repair – and maintenance works please contact via email:

TKD@konvekta.com.



Danger of accident!

Qualified staff in charge of installation and maintenance have to be trained in accordance with EN 378-Part 4 and (EG) No.307 / 2008 and must strictly follow the legal provisions.

Any works or modifications at the air conditioner which are carried out improperly can lead to malfunction and so endanger operational reliability. We recommend having all works and modifications carried out at an authorized KONVEKTA Service Station^①. The same applies to the regular maintenance works as prescribed and specified in the maintenance certificate.

Before carrying out any maintenance works at your air conditioning unit, carefully read the KONVEKTA safety provisions (TD00052A[®]) in order to avoid any dangers and accidents!

^① On our website www.konvekta.com in category >service< you will find a survey of contact details of all our service partners close to your location

4.1. Filter

Clean air suction filter (in the area of evaporator) in the passenger **area monthly, in case of enormous dirt weekly.**

Important:

If the filter is soiled, the cooling performance of the air conditioner will decrease.

It is not allowed to operate the air conditioner without filter.

In case the a/c unit will be operated continuously with dirty filter, the evaporator blowers will be damaged!

4.2. Condenser coil

Always keep condenser coil fins clean. Severe soiling cause's excess pressure within the a/c-unit system and it automatically stops working.

Attention:

- The condenser fins have to be cleaned with compressed air at least **twice a year, in case of Severe soiling more often.**

4.3. Troubleshooting



Only qualified staff is allowed to carry out these works!

Trouble	Cause	Repair only by authorized Service Station^①
a/c is not running	thermostat open	check inside temperature ^② readjust thermostat ^②
	electric connections disconnected	check electric connections at switchboard
	relay defective	check relay, replace if necessary
	defrost thermostat has switched off	check evaporator blower, replace if necessary
	outside temperature too low (possible icing of evaporator)	switch on "ventilation" only
	evaporator coil dirty	clean evaporator coil with compressed air
	excess pressure caused by high outside temperature	run unit until pressure has stabilized ^②
	leakage in a/c unit, lack of refrigerant	check a/c unit for leakages, refill refrigerant
	excess pressure (pressure too high)	check axial fans check fuses at switchboard clean condenser coil with compressed air
	low pressure, dryer clogged	replace drier
	low pressure, screen of expansion valve clogged	clean screen; replace dryer
	magnetic clutch	check connections at magnetic clutch
Loud noise at compressor	compressor does not compress	check high and low pressure, replace compressor if necessary
	defective bearing at compressor	replace either bearing or entire compressor
	slack V-belt	check V-belt at compressor drive

^① On our website www.konvekta.com in category >service< you will find a survey of contact details of all our service partners close to your location

^② By user

5. Warranty Conditions

The current „General Warranty Conditions KONVEKTA AG“ will apply. A copy will be furnished by the warranty department. Please contact gwl@konvekta.com

6. Waste disposal in accordance with legal provisions

After the phase of use the last proprietor is responsible for the adequate waste management. The environmental regulations in the exporting country must be observed.

The following list contains the most important regulating literature, valid for the *Federal Rep. of Germany*:

- Resolution for dangerous substances
- Law for waste circulation (KRW/AfgG))
- Resolution for the proofs of utilization and removal
- Criminal Code (StGB) 28th section „criminal acts against the environment“ §326 - Environment jeopardizing waste management
- Law of chemicals § 27 - penal prescriptions
- Resolution for used oil
- Law of water balance
- Resolution for the waste management of old cars and the adaptation of road prescriptions
- Resolution (EC) No. 2037/2000 of the European Parliament and of the Council for materials that affect the ozone layer
- Resolution to prohibit certain ozone destroying halogen hydrocarbons.

The used refrigerant endangers the environment. When dealing with refrigerants the existing prescriptions and regulations are to be followed. **Only qualified staff is allowed to carry out these works!**

Water endangering substances - acc. to §§19g-19l - are solid, liquid, and gaseous substances. e.g.: mineral and tar oils (cooling oils), halogen containing organic combinations (refrigerants).

7. History of modification

Version	Date	Name	Remark	File
A01	01.03.2005	Pfluger	Added Technical data VD6069	BA78-6712AB
A02	14.03.2005	Pfluger	Added Technical data DKD654	BA78-6712AB
A03	22.02.2007	Pfluger	Updated “Warranty Conditions” and “Maintenance / Service”	BA78-6712AB
A04	26.11.2007	B. Keßler	Updated point 1.1 “Important”; added point 2.2	BA78-6712AB
A05	11.03.2009	B. Keßler	Delete technical data VD+DKD.	BA78-6712AB
A06	17.11.2016	B. Keßler	Added specifications of TM31 point 1.1 and file completely updated	BA78-6712AB
A07	27.02.2017	B. Keßler	Information on the operating instructions and technical data expanded with F-gas-regulation; updated point 6	BA78-6712AB