



KONVEKTA

Technical leadership starts with ideas.

Operating Instructions

for KONVEKTA Air Conditioning unit

HLK1-7/4



R134a
24 Volt DC

ID#: BBA-KLC7332AA
Version: A01

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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.

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 none-admitted fuels or the non-observance of safety provisions. KONVEKTA will annul without prior notice 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

^①On 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 air conditioners type:

➤ **HLK1-7**

☞ 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 the unit:

Order No.:

Year of construction: (MM/YY)

Date of first operation: (DD/MM/YY)

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 notice. Guarantee and liability conditions of **KONVEKTA AG**'s general business conditions are not enlarged by the above notes.

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

1. Technical data



Important!

In vehicles that are equipped with an a/c unit with heating function the heating medium has to consist of water/glycol – antifreeze protection (conform the mixing ratio to manufacturers` instructions). This is absolutely necessary to prevent the heaters from frost damage! (The prevalent antifreeze filling of the vehicle manufacturers goes down to -40 °C)

1.1. Air conditioning unit

Type		HLK1-7
Refrigerant / - quantity approx.	Kgs	R134a / 20
Operating voltage	Volt DC	24
Current consumption	Ampere	150
Cooling capacity	Watt	40.500
Heating capacity	Watt	41.000
Air volume	m ³ /h	10.000
Measurements:		
- Length	mm	690
- Width	mm	2240
- Height	mm	860
Weight of unit	kgs	256

1.2. 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!

Compressor Type	KVX50/660-K with power control
Weight (without clutch)	41 kgs
Oil brand / quantity	Esteröl SE55 / 2,6 litres
Magnetic clutch (<i>weight</i>) ¹⁾	24V DC 2x SPB Ø193mm - 2x SPA Ø276mm (<i>approx. 17 kgs</i>) or 9xPK Ø225mm (<i>approx. 12 kgs</i>)

¹⁾ Ø depending on vehicle type

2. General information a/c unit



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

- The air conditioning unit is operational with running engine only.
- At cooling operation the humidity inside the vehicle is decreased, which avoids steamed-up windows.
- The air conditioning 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/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 return air grid (optional) retains contaminants. If the outside 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.
- 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

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

2.1. Intended use

The **KONVEKTA** air conditioning unit is 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 instructions as well as the proof of regular inspections.

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 accident!

- Focussing 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
- Protect all displays against irritating sunglare and any other optical disturbances
- Please note that the control panel keys have not been designed for heavy stressing
- Excessive or fast pressing of the keys for adjusting the set temperature does not accelerate the cooling down process. It possibly damages the control panel and so affects the general performance of the air conditioning unit

 **see original operating instruction "digital a/c control"**

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](#).

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.

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

General information on repair and maintenance work can be requested by e-mail at:

TKD@konvekta.com



Danger of accidents!

Skilled assembly and repair personnel should be trained in the sense of EN 378 - part 4 and should follow the legal regulations accurately.

Work on or changes to the air-conditioning unit which is not carried out correctly can lead to functional defects and endanger operational safety. We recommend that work and changes are only performed at a **KONVEKTA** Service Station. The stated maintenance work which is regularly required as described in the maintenance verification should be carried out in an authorised **KONVEKTA** Service Station.

Before carrying out any maintenance on your air-conditioning unit, please read the KONVEKTA safety instructions (TD00052A[®]) carefully to avoid dangers and accidents!

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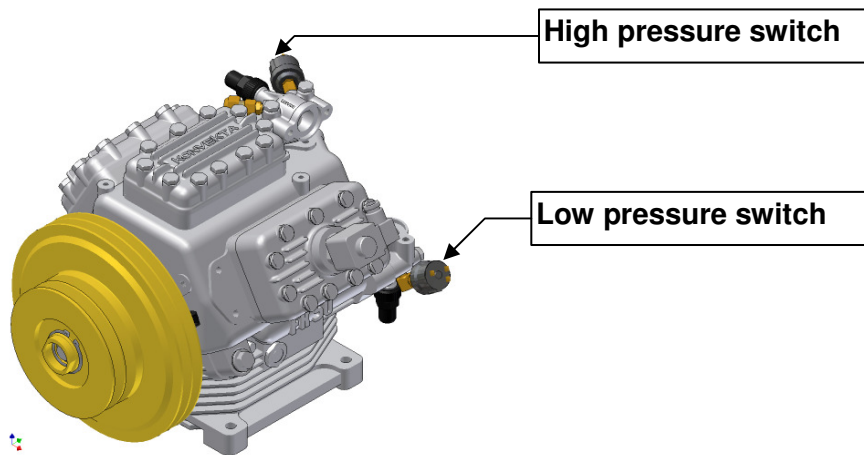
^② Source of supply: **KONVEKTA AG**, P.O. Box 2280, D-34607 Schwalmstadt

4.1. Oil change Compressor

First oil change at the first vehicle maintenance. Then approx. every 3 years. At every oil change the oil suction strainer has to be cleaned. Observe the oil quantity according to the compressor type (see chapter: [1.2 Compressor](#)).

4.2. High – and Low pressure switch

High – and Low pressure switch are situated at the compressor (in the engine compartment).



Low pressure switch

If the pressure in the cooling circuit is below 0,1 bar, the magnetic clutch is cut-off by the low pressure switch automatically. If pressure exceeds 2,2 bar, magnetic clutch is switched on.

High pressure switch

If pressure in the cooling circuit exceeds 25,5 bar, magnetic clutch is switched off by the high pressure switch. If pressure drops back to 18 bar, magnetic clutch is switched on.



If magnetic clutch is switched off, due to high- or low pressure in the cooling system, please contact **KONVEKTA Service Station**^①.

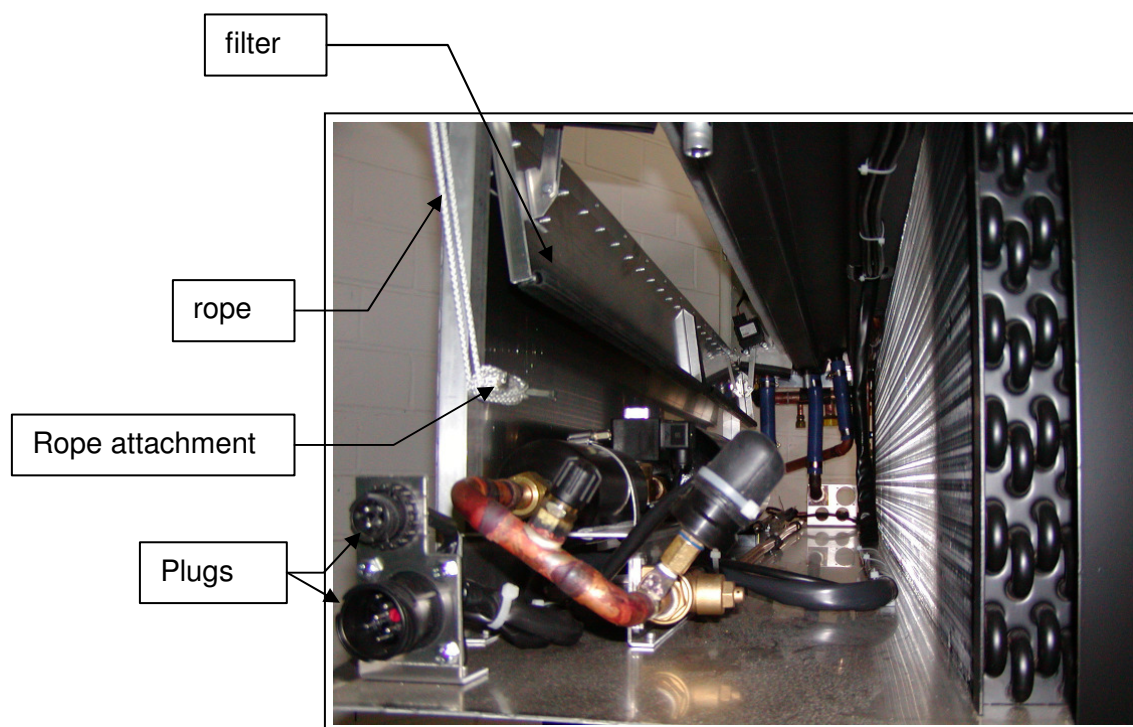
^① On our website www.konvekta.com in category >service< you will find a survey of contact details of all our service partners close to your location

4.3. Air filter (return air)

Open fresh air suction flap in driving direction left side (above the digital a/c control, see original operating instruction).

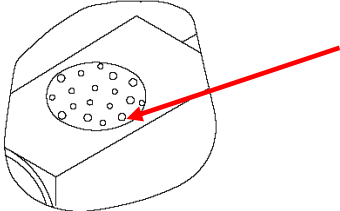
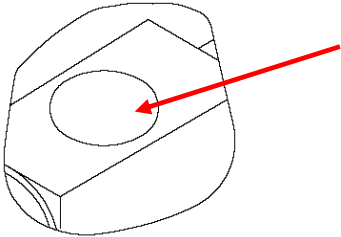
Remove return air filter by lifting tackle on the left side and let down filter (see photo).

Clean the filter or replace it, if necessary.



4.4. Sight glass

Check refrigerant level at sight glass, during a/c unit is in operation for at least 10 min. Engine speed: idling. Sight glass is situated on the right side of A/C unit at the condenser coil.

Sight glass: <i>pic: BB-YW0-029:</i>	Cause	Remedy
	Forming of bubbles in the sight glass 🔑 Lack of refrigerant!!	Contact KONVEKTA Service Station^①! - refill refrigerant - check a/c unit for leak-ages
	Free of bubbles	Amount of refrigerant is o.k.

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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).

© Source of supply:
- Bundesanzeiger
- Beuth Verlag
- dtv (Deutscher Taschenbuch Verlag)

7. History of modification

Version	Date	Name	Remark	File
A00	08.03.2010	Pfluger	Source file	BAKLC7332AA
A01	14.06.2017	B. Keßler	File completely updated; current consumption was 52A	BAKLC7332AA