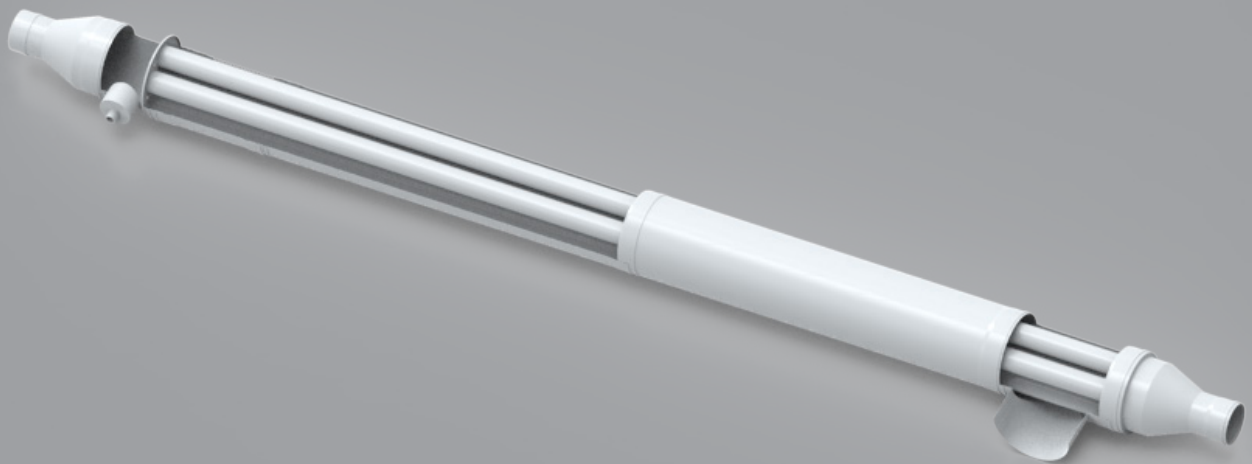




PAKOLE

INSTRUCTIONS FOR INSTALLATION AND SERVICING

CONDENSATION AUXILIARY UNIT



Appliance types:


ZENIT CONDENSER

condenser_008_019_011_191002_V003_EN

TABLE OF CONTENTS

1. SAFETY INFORMATION	3
2. GENERAL INSTRUCTION	4
Installer's responsibilities	4
Data board	4
Standards and laws	5
Safety signs	5
Safe usage	5
3. TRANSPORTATION, UNPACKING, HANDLING	6
4. OPERATION PRINCIPLE	6
5. INSTALLATION	7
external structure	7
Internal structure	7
Installation of Condenser Unit	8
Electrical connection	8
Connecting of the thermostat	8
6. APPLIANCE OPERATION	9
Operation of automatic burner control (HONEYWELL S4965R typ)	10
7. MAINTENANCE	10
Check at the beginning of season	10
Maintenances	11
8. TROUBLESHOOTING	11
Malfunctions	11

1. SAFETY INFORMATION

 **Read and understand this manual thoroughly before installing starting or servicing this equipment. The improper installation or using can cause serious damages! Keep this manual in a safe place in order to obtain information in case of incidental problems!**


GENERAL SAFETY NOTICES

Disregard of instructions and notices of this Manual can cause serious bodily injuries or damages as follows: burning, explosion, suffocation, carbon monoxide poisoning, electric shock and in extreme case death!

 **This appliance can only be used and serviced by such persons who understood and follow the instructions of this Manual**


If you need help or information concerning the appliances – for example installation guide or labels etc. – in that case contact with the manufacturer!

This appliance must not be used by children and mentally or sensitively deficient persons! Take care that the children do not handle it and do not play with devices!

 **ATTENTION! Fire, burning, inhalation and explosion hazard! Keep all flammable objects as follows building materials, papers, or carton unites away from heater according to the instructions! Never use this appliance in such rooms where there are flammable volatile materials or the following materials, which can get into the device: petrol, solvent, thinner, fine grained dusty or unknown chemical materials!**

 **ATTENTION! This appliance can not be used in domestic circumstances or mobile home!**

ATTENTION! For your safety, if you smell gas do the followings:

-  - **Open windows.**
- **Do not try to light any appliance.**
- **Do not use electrical switches.**
- **Do not use any telephone in your building.**
- **Leave the building.**
- **Immediately call your local gas supplier after leaving the building. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the Fire Department.**

The **CONDENSER** member is used to utilize the heat content of the flue gas. The regulations relating to the heater are still valid and it is mandatory to observe them. In case of proper using the appliance guarantees safety and energy-saving operation! The combustion products issued during combustion process leave through the flue system into the open air. In case of further possible questions regarding the applicability please turn to the local Fire Protection Office!

Other standards can give you directions in terms of proper using of natural and propane gas as follows: leading/piping, storing etc.! Concerning the detailed content of these standards the local Bureau of Standards can help.

Carbon- monoxide poisoning: The initial symptoms of carbon-monoxide poisoning are similar to influenza namely headache, dizziness and/or nausea! If these symptoms are observed in that case the appliance probably does not work satisfactorily! First of all go fresh air, ventilate the rooms and have the appliance investigated!

Propane-gas: The propane-gas is odourless! Mercaptan-derivative as scented component is mixed into the gas to be able to observe the possible escape! In spite of the typical smell is not felt the propane gas can be present in the environmental air in case of escaping!

2. GENERAL INSTRUCTION

- Make sure that read and understood all the warnings, correct keeping of which can guarantee the safety and faultless operation !
- During the installation be always circumspect! Follow the valid instructions and recommendations!
- The appliance can be operated by specified voltage and frequency marked on its data board! The electrical connections and groundings are prepared as per N 60335 standard!
- Electrical grounding specification: present appliance is equipped with three points grounding connection in the interests of your protection!
- It needed to ensure the sufficient quantity of combustion air if the appliance is installed without outside air supply!
- Keep away the device from the following strong effects: wind, high pressure water jet, rain or dropping water!
- The appliance must not be used in the open air!
- The application of device is STRICTLY PROHIBITED in such rooms, which are used for sleep or continuous stay!
- Keep away the flammable materials from the appliance and its near environment as follows: fuels, thinner or other flammable fluids and vapours!
- In the interests of avoiding of dust explosion do not used the device in such rooms where the degree of dust concentration is high if the device is installed without outside air supply!
- Before starting of appliance in every case check it in order to detect the possible damages! Never use damaged equipment!
- In case of propane-gas operation never install the device in basement or from that lower being rooms! The propane-gas is heavier specific gravity than the air for this reason in case of possible escaping it will spread towards the lower located rooms !
- Only use that kind of flexible gas pipe and pressure regulator, which is offered for the appliance by the manufacturer!
- Before every starting of heater appliance check the condition of connecting gas hose and if it is particularly worn or damaged in that case exchange it for a new one specified by manufacturer!
- Preserve the equipment in genuine condition, do not leave it to grow old!
- Do not use seriously aged equipment any longer!
- Fix the appliance on such stable surface, which during operation despite warming of appliance preserves its stability !
- If the appliance is put out of use in every case it must be cut off the current and gas!
- Never block the air supply and exhaust pipes!
- Keep away the children and animals from the equipment!
- Never service/mend such devices, which are hot and during operation or electrical charged!
- Never mount such air duct unit on front or back side of device, which is not approved by manufacturer!
- Use exclusively genuine-approved by manufacturer-spare parts, do not install similar quality spare parts for substitution! These kind of substitute parts can cause serious damages concerning the operation of appliance!
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INSTALLER'S RESPONSIBILITIES

- making up of gas and electrical connection in compliance with the specifications (it is proposed to connect with the local Building Supervisory Authority or Fire-service),
- installation of equipment in accordance with the definitions of this manual,
- installation according to the fire prevention rules,
- supply of the necessary materials/components for installation(which are not belong to appliance),
- planing of air duct systems (ventilation/connections)
- service execution,
- placing the copy of present manual at owner's disposal,
- assuring of sufficient air circulation around the appliance,
- determination and assuring of needed air for burning, ventilation and blowing in according to the specifications.

DATA BOARD

The appliance is equipped with data board, which is placed on outside of device's door. On this data board there are information concerning the type of device, gas type, electrical connection and flue types.

Manufacturer PAKOLE Trade Kft. 8000 Székesfehérvár, Börgöndi út 8-10.	Type Condenser
Electrical connection: AC 230V 50Hz	Nominal input:
Max.current entry: 1,1 A	Pconnecting max.: 60 mbar
Flue system B23, C13, C33, C53	Jet pressure:
Series number: 20-9574-27290	Pconnecting min.:
Gas type: Naturalgas	Electrical protection: IP21
	Category: II2H3+,II2H3P
	Targeted country: GB
	NOx 4

EAC

CE
1008 14

PIN:

1008 CP 2745

Date/place of production
2017.09.23.

ATTENTION! Do not use the appliance in such place where corrosive materials can be in the air! If the appliance has to be applied in this circumstances outside air has to be ensured for combustion air!

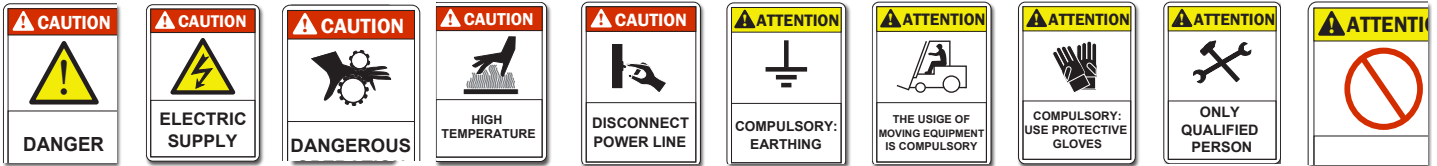
The manufacturer can not assume responsibility for fault of equipment in case the installation is not happened according to the above. This responsibility concerns completely the installer. In order to avoid such eventualities, if it is not certain to fit to the building or activity, ask our colleague for help

Both the owner and the installer have to identify every possible material, which can be present in the building (inflammable materials, corrosive materials, halo hydrocarbons etc.), and with knowledge of these materials must be planed the heater system!

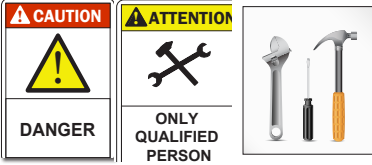
STANDARDS AND LAWS

Every appliance installation must be satisfied the valid laws and standards. These laws refer to the gas and electrical installation respectively the ventilation (special specifications refer to park houses, aeroplane hangars etc).

SAFETY SIGNS



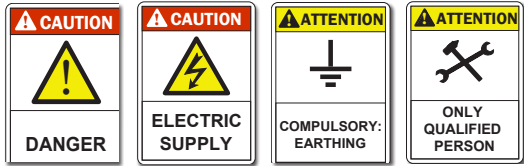
SAFE USAGE



Please observe the following rules during installation, first set-up, usage or maintenance:

- Installation must be carried out always strictly complying with the current standards of the country where the appliance is going to be used and following, of course, the instructions given by the producer.
- The installation and maintenance operations of the unit can be carried out by qualified and trained personnel only.

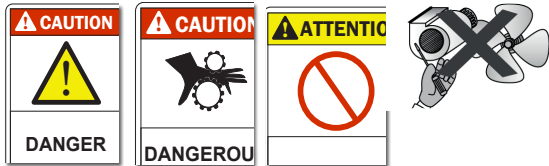
Qualified service engineers are those having specific technical experience and/or valid license in the field of heating and cooling installation for home and industry. In any case, call the Manufacturer office or the closest dealer (www.pakole.com) and ask for further informations.



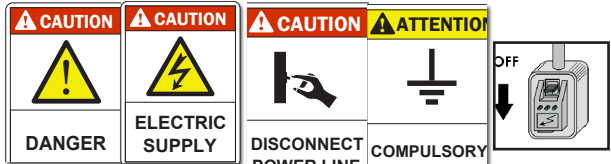
- According to the installation project, install the electric power lines.
- Always make sure that the unit and all its electrical parts have been correctly earthed prior starting up the unit.



- If you have to disassemble the unit, use special protective gloves.
- Beware of sharp edges inside the unit!
- Beware of roof corners of outdoor units!
- Keep suction grids always clear!



- Before cleaning or maintaining the unit, make sure that all electrical parts have been switched off, the appliance gas supply chain is closed and wait until the appliance cools down. In particular, make sure that the fan is off and cannot be inadvertently started prior to opening inspection panels.
- Fans can reach a speed of 1000 rpm. Do not insert any object nor hands in the electric fan.



- We recommend to install a safety switch which can be easily reached to cut off the current, near the unit. Before any cleaning and servicing operation, cut off the power line to the unit.
- Before opening the unit, make sure that all electrical parts have been switched off. In particular, make sure that the fan is off and cannot be inadvertently started prior to opening inspection panels.

CHECK THE EARTHING !!



- This unit is designed to be used for heating purposes only. Any different use is not allowed as it may be dangerous.
- Should the unit work in a house where disabled people and/or children live, it must be placed safely away from their reach. Always make sure that the access door to the inside control board stay locked.
- An incorrect installation can cause damages to people, animals and property. In case of erroneous installation, the manufacturer cannot be held responsible for such damages.
- **The manufacturer cannot be held responsible for such damages by improper uses, errate uses, etc.**



- Never use the unit to support other equipment.
- Never leave tools, spare parts, etc. inside the unit.
- Make sure that all inspection panels are closed properly.
- Do not expose the unit to inflammable gases.

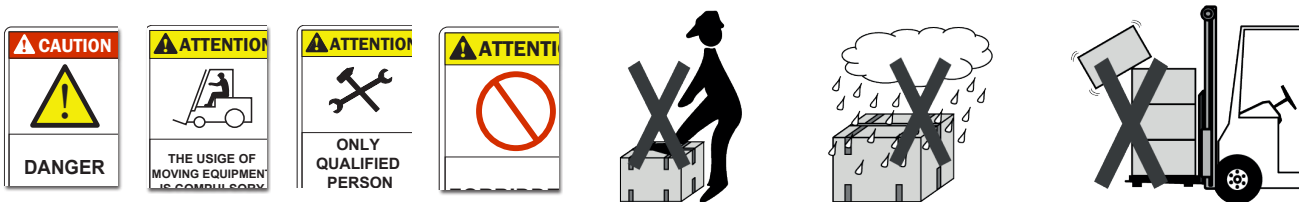


- In case of breakdown or failure: turn unit off, do not try to repair it on your own, call operator.
- If you are going to leave the heater switched off for a long time, first make sure that in no way this could cause harm to anyone in any way.

3. TRANSPORTATION, UNPACKING, HANDLING

- The delivery must be made according to the following:
 - The package must be carefully secured in the loading space.
 - The package must be transferred in a closed space (always keep packing parts away environmental impacts).
- The unit has a special safety packing for transport and delivery which must be kept in good conditions till the unit is positioned on the installation place.
- Make sure that the unit has all its parts, as specified in the order.
- Check if there are any damages and if the unit abbreviation is the same as the one of the ordered model.
- Every unit is factory tested before shipment, therefore, if there are damages, report them immediately to the carrier.

Transporting, unloading and moving is a process which must be made carefully to avoid any kind of damages. Try not to use the unit's components as hand holds. When lifting, bear in mind that the centre of gravity of the unit may be off-centre.



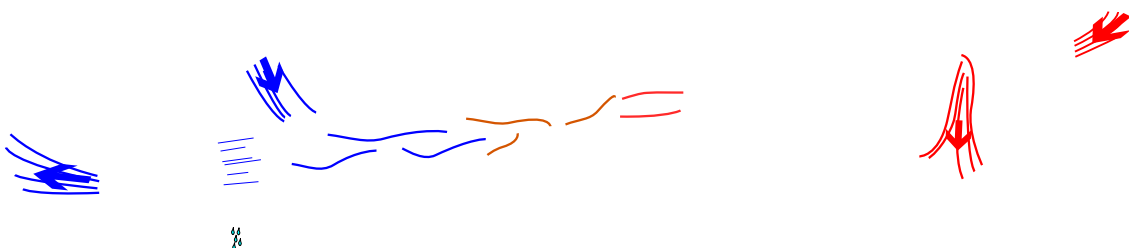
The appliances will be delivered in card board box. The unpacking process of the appliance:

- Unload the burner the tubes and the accessories from the card board box.
- **Do not remove the protection cap from the burners gas connection or from the gas joining set (optional) until you do not connect it to the pipe line.**
- Check the unit and its accessories for any damages which could be arise during the transportation.
- If there are any damages found, report them immediately to the manufacturer or your closest dealer.

There is an envelope inside the unit containing the Instructions for Installation and Servicing, User's Guide use and Guarantee and services and the warranty documents.

4. OPERATION PRINCIPLE

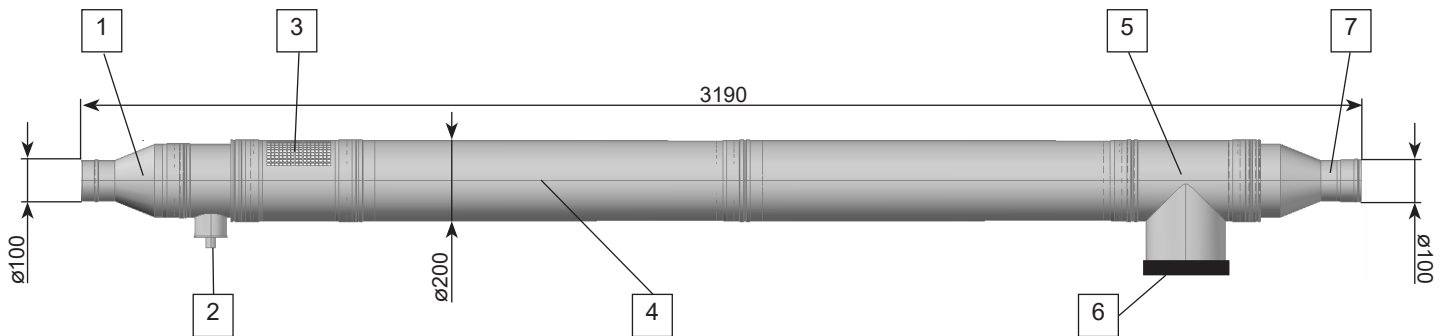
The Condenser member is used to utilize the heat inherent in the flue gas. It operates using the principle of reverse-current air-air heat exchangers. The ambient air is heated by the flue gas flown through the internal pipe system which is then flown through around these pipes by the fan. This heated up air is then returned to the space to be heated. The flue gas cools down below the condensation temperature of the water and we recover the heat content arising out of the change of the physical state of the water thus increasing the efficiency of the basic heater, Therefore flue gas and condensed water is discharged from the compiled down Condenser member. Similar care must be taken when discharging condense water as in case of certain air conditioning equipment. The operation of the fans providing the flow of the ambient air can be controlled by thermostat.



1. picture: Operation principle of Condenser unit

5. INSTALLATION

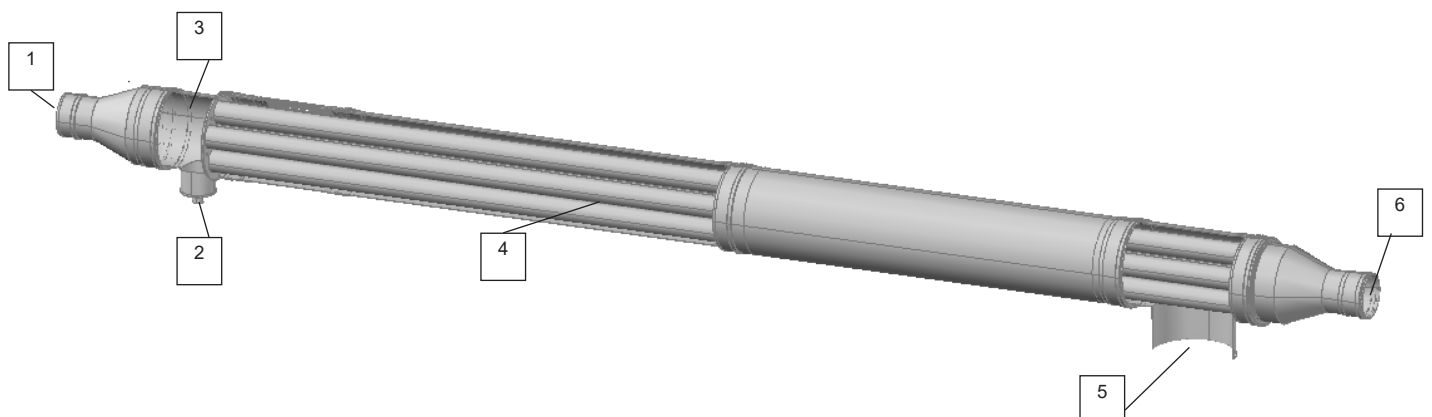
EXTERNAL STRUCTURE



1. Outlet of the cooled down flue gas
2. Condensed water outlet
3. Suction of the ambient air
4. Heat exchanger elements
5. Regulator of the blow down temperature of the fan
6. Fan, blowing out of heated ambient air
7. Inlet of hot flue gas

2. picture: External structure of condenser

INTERNAL STRUCTURE



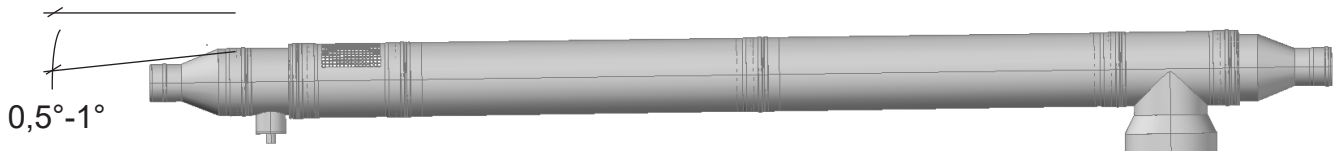
1. Outlet of the cooled down flue gas
2. condensed water outlet
3. Suction of the ambient air
4. Heat exchanger elements
5. Blowing out of heated ambient air
6. Inlet of hot flue gas

3. picture: Internal structure of condenser

INSTALLATION OF CONDENSER UNIT

When installing the Condenser member attention must always be paid to its inclination otherwise the condense water flows back to the fan and may cause its breakdown. When the inclination is too large excessive load is put on the fan of the basic heating appliance as it should deliver in the opposite direction of the natural flow direction.

When condenser is applied for all types of ZENIT equipment it must be taken into consideration that the maximum flue gas discharge lengths indicated in the operating instructions of the dark-radiating equipment must be reduced by 3 meters.

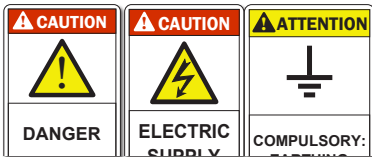


4. picture Minimum and maximum incline of Condenser unit

ELECTRICAL CONNECTION

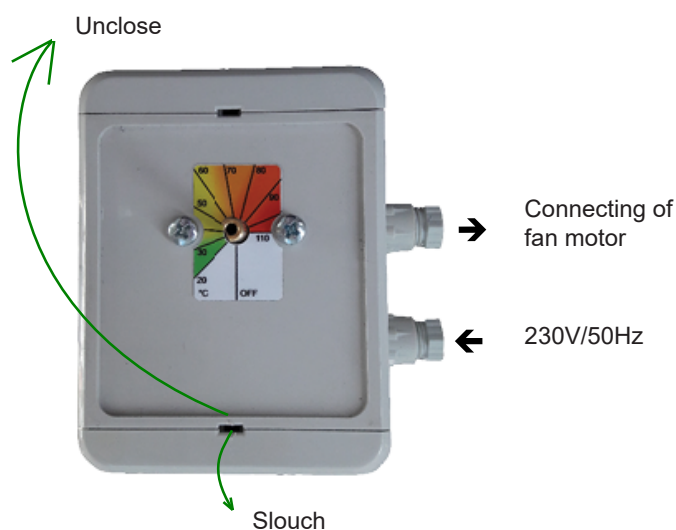


ATTENTION! Both the fan and the ignition control needs 230V/50Hz mains voltage. Before connecting the appliance to the gas pipe line, please disconnect it from the power line and close the gas valve front of the burner. The appliance must be connected to a grounded power supply system! If the above instructions are not followed that can lead to death, heavy injuries or property damages!

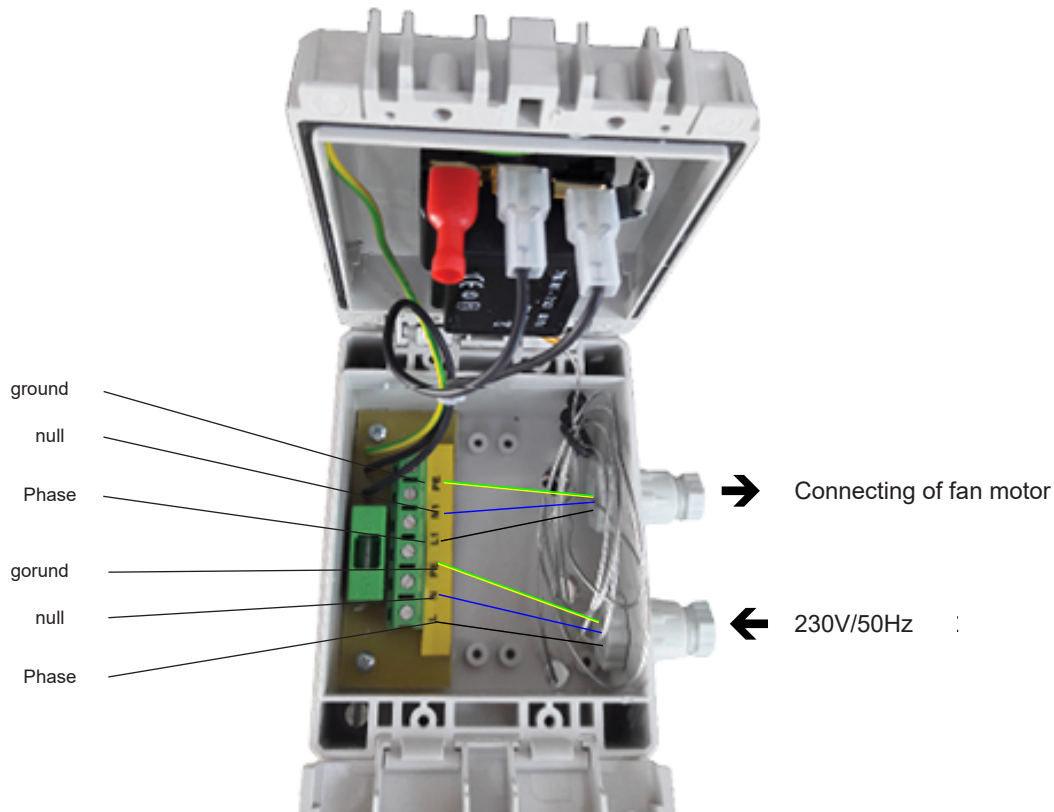


PLEASE CHECK THE EARTHING!

CONNECTING OF THE THERMOSTAT



- The device can be operated under dry circumstances.
- National standard must be taken into account when installing the equipment electrically.
- Electrical grid connection may take place by plug sort fixed connecting to the phase.
- The device must be equipped with a two-pole (zero-phase interruptions) network disconnecting (main) switch in order to provide isolation.
- The network feed wire: 3 x 0.75 H05VV-F cable



5. picture: Connecting of thermostat

6. APPLIANCE OPERATION



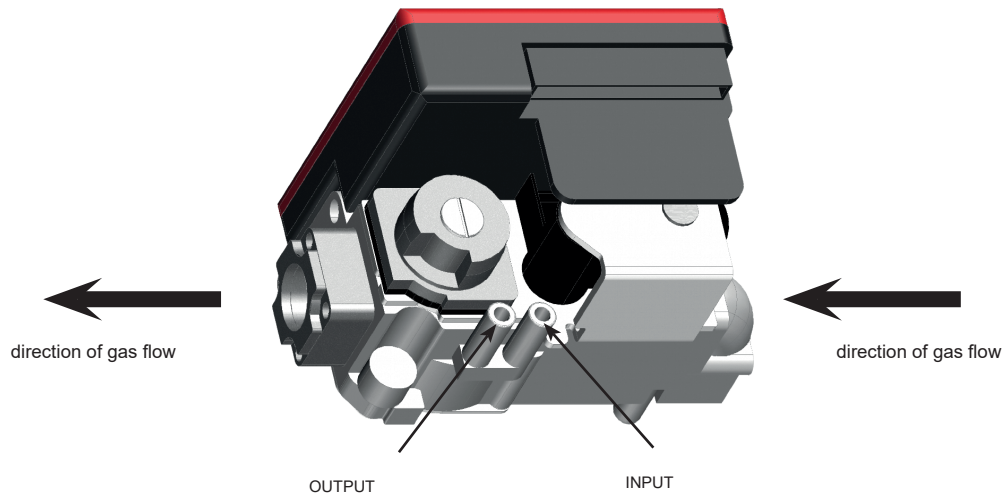
ATTENTION! When installing and commissioning the Condenser member the entire system must be checked in accordance with the instructions of the manufacturer below and the description laid down in the machine manual.



ATTENTION! The installation of appliance must be only executed by qualified service or specialist authorized by retailer. The 2 years guarantee of appliance can be ensured only in this case.

Before putting operation of appliance the leak-proof/pressure test of gas supply system must be fulfilled.

- Clean duct system of gas supply from any contamination.
- Check the presence and cleanness of gas filter located before the appliance
- Check the presence and suitability of pressure regulator located centrally or before every appliance.(the pressure regulator is needed if the gas supply pressure is higher than 60 mbar, in this way the capacity of pressure regulator can be max. 60 mbar)
- Make sure of protective ground of appliance.
- Check the proper electrical connection of temperature regulator.
- Open the gas supply valve.
- Check the gas pressure on the inlet side of solenoid valve.(the maximum allowed pressure is 60 mbar).
- Connect the mains voltage to the appliance (by temperature regulator or central stage main-switch).
- Check the outlet pressure of solenoid valve,whether the set up pressure – nozzle pressure – is suitable for the type of gas.
- At natural gas – depending on output: 8.6, 9.5 or 10 mbar
- At „S” gas – depending on output: 8.6, 10, 11, 11.8, or 12.5 mbar
- At propane and butane gas: 24.9 mbar



6. picture: Input and output gas pressure checking connections in case of HONEYWELL solenoid valve

OPERATION OF AUTOMATIC BURNER CONTROL (HONEYWELL S4965R TYP)

Following the switched on voltage the fan operates continuously assuring the 30 seconds pre-purge time. This time period ensures the three times air change of combustion volume in case of biggest appliance's power.

When the pressure is suitable - after 30 seconds – the sparking happens and the solenoid valve opens in this way the gas catches fire.

If the flame control of burner automation does not register flame during the safety time than repeats the all ignition procedure maximum two times. If in this time there is not registered flame then it stops the gas supply of burner and the appliance gets into error position and red control lamp is lighting.

In case during burning process the pressure decreases under the permissible minimal value on the positive side of air pressure(from the fan side),then automation prohibits:

- gas supply and fan stops

The appliance stands into error position and red control lamp is lighting.

Restart is possible after the switching off and on of mains voltage.

In case during burning process the pressure increases above the permissible maximum value on the negative side of air pressure switch (from the burner tube side, eg. at combustion back), then it switches back to rest position and the automation prohibits.

- gas supply and fan stops

The appliance stands into error position and red control lamp is lighting.

Restart is possible after the switching off and on of mains voltage.

7. MAINTENANCE

WARNING! Before every maintenance the appliance must be detached from the electrical supply and the gas supply must be turned off!
Disregard of these instructions can result in death, injury or property damage!

CHECK AT THE BEGINNING OF SEASON

Carry out starting test and check the regular operation of appliance. Checking of the regular operation.

Two kind of supervision should be fulfilled:

- a) Switch on the appliance, let it operate some minutes, then turn off the gas valve. The burner stops the operation. Wait for 6-8 seconds, then turn on the gas valve once more, the appliance starts the operation again..
- b) Let it operate some minutes. Then take down the exhaust end of heat radiant tubes and close the vent opening. The differential pressure switch switches over to OFF position from ON. The automation closes the solenoid valve and the appliance stops and red control lamp is lighting.
 Remove the closing of tube and reset the original condition. Start the appliance again by interruption then reconnecting of mains voltage.

Remove the obstacle in the way of the combustion product and restore it to its original condition. Restart the appliance by interrupting and resetting the main electric.

MAINTENANCES

The **ZENIT Condenser** appliance apart from the supervision and cleaning of radiant tubes (see: Maintenance supervision by the customer), do not need extra maintenances but to be able to preserve the SAFETY OPERATION and LONG LIFETIME of appliance it is recommended to have yearly supervision done by qualified service department.

MAINTENANCE SUPERVISION MUST INCLUDE THE FOLLOWING:

Maintenance supervisions by the customer

- a) Supervision and cleaning of heat radiant tubes.
Clean the external surface of tubes from any dust by a brush and make sure that there is not any burnout or warping.
- b) Check connection and sealing of burner tube and heat radiant tubes by a survey. In case there is lack of sealing, colouring shows it.
- c) Check the condition of reflectors if necessary clean them. Clean them by a soft cloth or diluted detergent.



ATTENTION! Before any maintenance operation the appliance must be disconnected from the power supply by turn off the electrical main switch and pull out the electrical plug on the back of the appliance.



ATTENTION! In case operational circumstances of appliance (atmosphere is contaminated with corrosive substances, dirt etc.) need it, then supervision and cleaning may have done more often! The main reason of this that the settled dirt on the radiant tubes can damage the efficiency of it and load the tubes hereby loading the suspensions of it significantly!

8. TROUBLESHOOTING

MALFUNCTIONS

WATER DRIPPING IS DETECTED ON THE FAN:

- Check that the incline of the Condenser unit is correct (see page 8.)

FAN DOES NOT ROTATE:

- Check that the temperature set by the thermostat is not too high.
- Check the fan for damage and not contains foreign matter, dirt that prevents it from rotating.

FAN ROTATES CONTINUOUSLY:

- Check that the value set by the thermostat is not lower than the ambient temperature.

IN THE EVENT OF ANY OTHER MALFUNCTION OR MALFUNCTION, CALL YOUR DEALER.

GUARANTEE AND SERVICES

PRESERVE THIS WARRANTY

Type: _____

Serial no.: _____

Date of purchasing: _____

LIMITED GUARANTEE *

The manufacturer guarantee the customer that the product and its parts are free from material and production failures. During normal use the warranty is 2 years. This warranty concerns the first retail customer.

The guarantee concerns the costs of laboratory investigations and the parts, which are needed for proper operation. The delivery and unforeseeable costs belong also to the mending costs and do not contain compensation costs.

Guarantee mending can only be realized by authorized retailer or service centre.

The guarantee does not concern the following failures, which are caused by: improper using, damaging, neglect, accident, lack of maintenance, normal attrition, transformation, modification and operation influenceable factor, contaminated fuel, installation of non-suitable part and mending which is done by not authorized retailer or service station.

The regular maintenance is the owner's responsibility.

The manufacturer does not assume the responsibility in case of accidentally happened or directly caused mistake respectively improper using.

***We reserve the right to change of this specification without extra notification. The guarantee can be applied in accordance with above defined.
Additional guarantee is not accepted.**

Guarantee servicing

If your appliance needs guarantee service in that case it can be requested at nearest authorized service station giving in the appliance for repairs.

Mending services

Take the appliance to the nearest authorized service station. If the device is not under guarantee the service cost will be invoiced to the customer at defined price. The service centres are independent from one another and may have different owners. We reserve the right to change of this specification without extra notification. If you would like to contact us the type and serial number of device always be at hand. In case of other needed information write to the following address:

PAKOLE TRADE Kft.

H-8000 Székesfehérvár, Börgöndi út 8-10.

Phone.: +36 22 316 484

e-mail: szerviz@pakole.hu



PAKOLE

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