VARMEKS
HEAT PUMPS

VARM ALL SERIES

HEAT PUMP USER MANUAL

200 - 300 L.

R290
REFRIGERANT
NATUREL

PLEASE READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY.
BE SURE TO KEEP THIS GUIDE FOR FUTURE REFERENCE.

www.varmeks.com.tr

Contents

This manual provides all the necessary informa on for the proper use of the equipment, ensuring op mal performance and safety for the operators.

1. PURPOSES AND CONTENTS OF THE MANUAL

This manual provides essenal informaon for the installaon, operaon, and maintenance of the units, aimed at helping operators use the equipment efficiently, even without prior knowledge of the apparatus. This manual describes the equipment's specificaons at the me of its market release. It may not include subsequent technological updates made by the company to enhance performance, ergonomics, safety, and funconality. As such, the company is not obligated to update manuals for earlier versions of the equipment. It is strongly recommended that users adhere to the instrucons in this manual, parcularly those related to safety and roune maintenance.

1. 1 CONSERVATION OF THE MANUAL

The manual should be kept as a reference for the appliance, stored in a dry, safe place, and made accessible to all users who may need it for guidance on proper operaon. The company reserves the right to make changes to its products and manuals without being required to update earlier versions. It is not responsible for any errors resulng from prinng or transcripon. Any updated copies or secons of the manual provided by the manufacturer should be stored alongside the original. For any addional informaon regarding the manual or the operaon and maintenance of the appliance, the company is available to assist.

1. 2 SYMBOLS USED IN THE MANUAL

	Indicates acons that could be hazardous to people and/or interfere with the proper operaon of the equipment.
	Indicates operaons that are not allowed.
	Indicates important instrucons that the operator must follow to ensure the proper and safe operaon of the equipment. It also includes general notes.

 **CAUTION :** Risk of fire due to flammable materials.

 **WARNING :** Service acvies must strictly follow the manufacturer's recommendaons. Repairs or maintenance that require specialized experse should only be carried out under the guidance of a professional trained in the handling of flammable refrigerants.

	**WARNING**	This symbol indicates the appliance uses flammable refrigerants. W Leakage of refrigerants exposed to an external ignion source could cause a fire hazard.
	**CAUTION**	This symbol signifies that the operang manual must be thoroughly read.
	**CAUTION**	This symbol denotes that only trained personnel should handle this equipment, referring to the installaon manual as a guide. at the operang manual must be thoroughly read.
	**CAUTION**	This symbol indicates service technicians should use the installaon manual as a reference while handling the equipment.
	**CAUTION**	This symbol signifies that informaon such as the installaon or operang manual is available for consultaon.

2. RELATED ATTENTION

This appliance may be used by children aged 8 years and above, and by persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, provided they are supervised or instructed in the safe use of the appliance and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be carried out by children without supervision.

Children aged 3 to 8 years may only operate the tap connected to the water heater.

If the power supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons to avoid a hazard.

The appliance shall be installed in accordance with national wiring regulations.
Do not use any means to accelerate defrosting or cleaning other than those recommended by the manufacturer.

The appliance shall be stored in a well-ventilated area, free from continuously operating ignition sources such as open flames, gas appliances, or electric heaters. Do not pierce or burn the appliance. Refrigerants may be odorless.

National gas regulations must be observed. Servicing and repairs shall only be carried out as recommended by the manufacturer and by qualified personnel competent in handling flammable refrigerants.

The appliance shall be stored in a manner that prevents mechanical damage.
This appliance is intended for use by trained or expert users in shops, light industry, farms, or for commercial use by lay persons.

The A-weighted sound pressure level is below 70 dB.

3. PERMITTED USE

- The company accepts no liability, whether contractual or non-contractual, for any damage to persons, animals, or property resulting from incorrect installation, adjustment, maintenance, misuse, or failure to fully read and understand the information provided in this manual.
- These units are intended solely for water heating. Any other application shall be considered improper and is prohibited unless explicitly authorized by the manufacturer.
- The installation location, as well as the hydraulic and electrical systems, shall be determined by a qualified system designer, who must take into account both the technical requirements and any applicable local regulations or specific permit requirements.
- All work must be carried out by qualified and experienced personnel familiar with the regulations in force in the respective country.

4. GENERAL SAFETY GUIDELINES

Before operang the units, all users must be fully familiar with the equipment's funcons and controls and should read and understand the informaon provided in this manual.

	It is strictly prohibited to remove or tamper with any safety device. Do not remove the grilles on the fan outlet or the top cover.
	The use of this equipment by children or unassisted disabled persons is prohibited.
	Do not touch the appliance while barefoot or with wet or damp body parts.
	Do not pull, detach, or twist the electrical cables connected to the unit, even if it is disconnected from the power supply.
	Do not stand on the device, sit on it, or lean against any part of the equipment.
	Do not spray or pour water directly onto the device.
	Do not dispose of, abandon, or leave packaging materials (such as cardboard, staples, plasc bags, etc.) within reach of children, as they may pose a potenal hazard.
	Any roune or non-roune maintenance must be performed only when the equipment is turned off and disconnected from the power supply.
	The plasc cover may only be removed by qualified personnel.
	Do not insert your hands, screwdrivers, wrenches, or other tools into the moving parts of the equipment.
	The equipment supervisor and maintenance personnel must receive appropriate training to perform their tasks safely.
	Operators must know how to use personal protecve equipment and be familiar with the accident prevenon guidelines outlined in naonal and internaonal laws and regulaons.

4.1 WORKERS' HEALTH AND SAFETY

The European Community has adopted several direcves regarding workplace health and safety, including Direcves 89/391/CEE, 89/686/CEE, 2009/104/CE, 86/188/CEE, and 77/576/CEE. Employers are required to implement these provisions and ensure that employees comply with them.

	Do not modify or replace any parts of the equipment without the explicit consent of the manufacturer. The manufacturer shall not be held responsible for any consequences resulng from unauthorized acons.
	Using components, expendable materials or spare parts that are not approved by the manufacturer and/or listed in this manual may be hazardous to operators and/or cause damage to the equipment.
	The operator's workspace must be kept clean, organized, and free from obstacles that may hinder movement. Adequate lighng should be provided to ensure the operator can perform tasks safely. Insufficient or overly bright lighng can pose risks.
	Ensure that workspace are always properly venlated, and that exhaust systems are funconing, in good condion, and compliant with applicable legal requirements.

4.2 PERSONAL SAFETY EQUIPMENTS

When operang and maintaining the units, it is advised to wear the following personal protecve equipment.

	Protecve clothing: Maintenance personnel and operators must wear protecve clothing that meets the applicable safety standards. In areas with slippery floors, safety shoes with non-slip soles must be worn.
	Gloves: Protecve gloves must be worn during maintenance or cleaning operaons
	Mask and Goggles: Respiratory protecon (mask) and eye protecon (goggles) should be worn during cleaning and maintenance procedures.

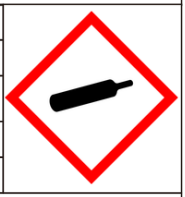
4.3 SAFETY SYMBOLS

The unit is equipped with the following safety signs, which must be followed:

	General hazards
	Risk of electric shock
	Moving parts
	Hazardous surfaces

4.4 REFRIGERANT SAFETY DATA SHEET

Excerpt from the Safety Data Sheet in accordance with Regulation (EC) No. 1907/2006 (REACH), as amended by Regulation (EU) 2015/830.

Denomination:	R290 (99.5% -propane).	
Reference of SDS	Not subject to registration obligations as a downstream user of substances or mixtures already registered.	
IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ENTERPRISE		
1.1. Product iden		
Chemical name:	Propane	
	CAS number: 74-98-6	
	CE number: —	
	Index number: —	
Registration number:	—	
Chemical formula:	C3H8	
1.2 Relevant identified uses of the substance or mixture and uses advised against		
Identified uses:	Refrigerant	
HAZARDS IDENTIFICATION		
2.1 Classification of the substance or mixture		
Classification according to Regulation (EC) No 1272/2008		
Physical hazards	Gases under pressure: Liquefied gas	
Indications of danger	May explode if heated	
Health hazards	Asphyxia	
	Rapid evaporation can cause frostbite	
	May cause cardiac arrhythmia.	
FIRST AID MEASURES		
4.1. Description of first aid measures		
General information:	Do not give anything to an unconscious person. Seek immediate medical assistance.	

5. GENERAL CHARACTERISTICS

The hot water heat pump is one of the most cost-effecve systems for heang water in residenal or small business applicaons. By ulizing free, renewable energy from the air, this unit offers high efficiency with low operaonal costs. Its performance can be up to 3 to 4 mes more efficient than tradional gas boilers or electric water heaters.

5.1 FLEXIBILITY AND BENEFITS OF UNIT INSTALLATION

Waste Heat Recovery: The unit can be installed in areas with abundant waste heat, such as kitchens, boiler rooms, or garages. This placement enhances energy efficiency, even at low outdoor temperatures during winter.
Hot Water and Dehumidificaon: Ideal for laundry or clothing rooms, the unit not only produces hot water but also helps lower the room temperature and reduce humidity.
Storage Room cooling: The unit can be placed in the storage areas where its low temperature helps keep food fresh.
Hot Water and Fresh Air Venlaon: Perfect for spaces like garages, gyms, or basements, the unit generates hot water while simultaneously cooling the room and providing fresh air.
Ecological and Economical Heang: An efficient and cost-effecve alternave to both fossil fuel boilers and heang systems, the unit ulizes renewable energy from the air, consuming significantly less energy.
Mulple Funcons: Thanks to its special air inlet and outlet design, the unit offers versale installaon opons. It can funcon not only as a heat pump but also as a fresh air blower, dehumidifier, or energy recovery device.

The unit is primarily designed as a heat pump for domesc hot water (DHW) producon. Any addional benefits, such as ambient cooling, dehumidificaon, or waste heat recovery, should be considered secondary features. These funcons cannot be precisely controlled. Performance data will therefore be provided exclusively in relaon to the water heang funcon.

5.2 COMPACT DESIGN

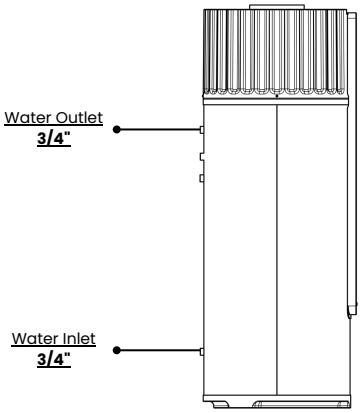
The unit is specifically designed to provide hot water for domesc use or small commercial applicaons. Its compact structure and sleek design are intended to facilitate easy and convenient installaon in indoor spaces.

5.3 AVAILABLE ACCESSORIES

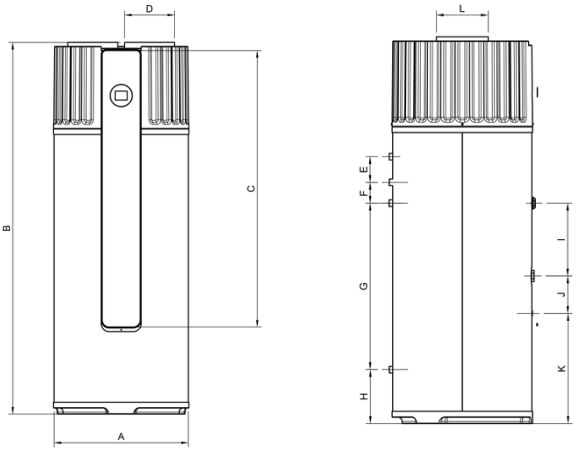
The following accessories are available:
• Vibration damper supports for floor installation.

6. OVERVIEW OF THE UNIT

6.1 HYDRAULIC CONNECTIONS



6.2 DIMENSIONS



Model	A	B	C	D	E	F	G	H	I	J	K	L
200	677	1467	1232	Ø250	140	110	395	245	110	395	245	Ø250
300	677	1860	1400	Ø250	124	100	800	260	350	180	530	Ø250

7. INSTALLATION

	WARNING: All operaons outlined below must be performed by QUALIFIED PERSONNEL. Before commencing any work on the unit, ensure that the power supply is disconnected.

7.1 GENERALITY

When installing or servicing the unit, it is essenal to strictly follow the instrucons outlined in this manual, adhere to all specificaons indicated on the labels aached to the unit, and take all necessary precauons. Failure to comply with the guidelines in this manual may result in hazardous situaons.

	Upon receiving the unit, immediately inspect its condion. The unit le the factory in perfect condion; any damage should be reported to the carrier and documented on the Delivery Note prior to signing.

The company must be nofied of the damage within 8 days. The customer should provide a wrien report along with photographs for any significant damage.

	Please note that all installaon diagrams in this chapter are for reference purposes only. The correct installaon setup must be assessed on a case-by-case basis by the installer.

7.2 SAFETY INSTRUCTIONS

To prevent injury to users or others, as well as property damage, the following instructions must be strictly followed. Failure to comply with these instructions may result in personal injury or damage to property.
The unit shall be installed only when it complies with all applicable local regulations, codes, and standards. Before installation, verify that the main power supply voltage and frequency are correct.
The following safety precautions must always be observed:

- Carefully read the WARNING section before installation.
- Ensure that all safety precautions are observed, as they contain important safety information.
- After reading these instructions, keep them in an accessible place for future reference.

7.2.1 Warnings

	The unit must be securely installed to prevent noise and vibraons： Improper installaon may cause the unit to fall, resulng in potenal injury. The installaon surface should be level and capable of supporng the unit's weight, ensuring stable operaon without excessive noise or vibraons.
	When installing the unit in a small room, ensure adequate venlaon to prevent asphyxiaon due to refrigerant leakage.
	Always use the provided or specified components for installaon: The use of faulty parts could result in injury due to potenal hazards such as fire, electric shock, or the unit falling.
	Do not remove the labels from the unit. These labels provide important warnings and reminders, and must remain intact to ensure safe operation.
	Indoor installaon is mandatory: The unit must not be installed outdoors, in areas exposed to rain, or in locaons accessible to water sources.
	It is recommended to install the unit in a locaon free from direct sunlight and other heat sources: If this is not possible, please ensure the installaon is covered to protect it.
	Ensure that there are no obstacles around the unit to allow for proper airflow and maintenance access.

7.2.2 Cautions

	Do not install the unit in areas where flammable gas leaks may occur. If gas accumulates around the unit, it could result in an explosion.
	Never clean the unit while it is powered on. Always turn off the power before cleaning or servicing the unit to avoid injury from the high-speed fan or electrical shock.
	To disconnect the appliance, either remove the plug from the socket or turn off the main switch if installed upstream of the unit.
	Never pull the power cord to remove the plug from the socket.
	Ensure the unit is powered off, unplugged, or the external switch is turned off before cleaning or servicing.
	If the unit is used without an air ejecon duct, verify that the installaon room has a minimum volume of 10m³ and adequate venlaon. Note that the expelled air temperature is 5-10°C lower than the inlet air, so uncontrolled air can significantly lower the room temperature.
	Do not operate the unit if there are abnormal sounds or smells. Shut off the power supply immediately to avoid potenal electrical shock or fire.
	The unit contains moving parts. Exercise cauon around them, even when the unit is turned off.
	Do not insert fingers or objects into the fan or evaporator.
	Be cauous when working near the compressor's head and exhaust piping, as they can reach high temperatures.
	The aluminum fins are sharp and can cause serious injuries. Handle with care.

7.3 Handling of the Unit

The unit shall be stored and handled in its original shipping packaging in an upright position and must be empty of water. During transport (if handled with care) and storage, the inclination angle should not exceed 30° (up to 45° for short periods only).
The ambient storage temperature must be between -7°C and +45°C.

7.3.1 Handling with Forklift

When using a forklift, the unit must remain securely fixed on the pallet. The lifting speed should be kept to a minimum.
Due to its top-heavy design, the unit must be properly secured to prevent tipping. To avoid damage, always place the unit on a flat and level surface.

7.3.2 Manual Handling of the Unit

For manual handling, a wooden pallet may be used. Ropes or lifting straps can also be utilized, ensuring that the unit is not lifted incorrectly or overturned.
The maximum permissible tilt angle is 45°, and the unit should preferably be kept in a vertical position at all times.
If the unit is transported in an inclined position (maximum 45° for a short duration), it must be left to stand in the upright position for at least 1 hour before being switched on.

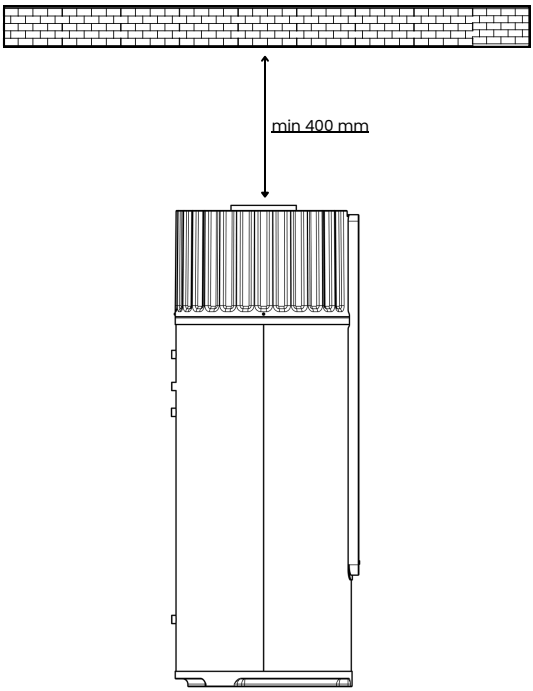
Due to its high center of gravity and low pping moment, the unit must be properly secured to prevent overturning.
The unit's cover is not designed to withstand stress and should not be used for transport.

7.4 REQUIRED SERVICE SPACE

The minimum space required for servicing and maintenance tasks on the unit is specified below. Addionally, recirculaon of exhaust air must be prevented, as neglecng this could lead to poor performance or acvaon of safety controls. For these reasons, it is essenal to observe the following clearances.

Connecng the air inlet and/or outlet pipes will reduce the airflow and capacity of the heat pump unit.
Please note that the unit's performance may be reduced if the air inlet is connected to a duct drawing air from outside, due to the low temperatures in winter and high temperatures in summer. The opmal operang ambient temperature is 20°C.

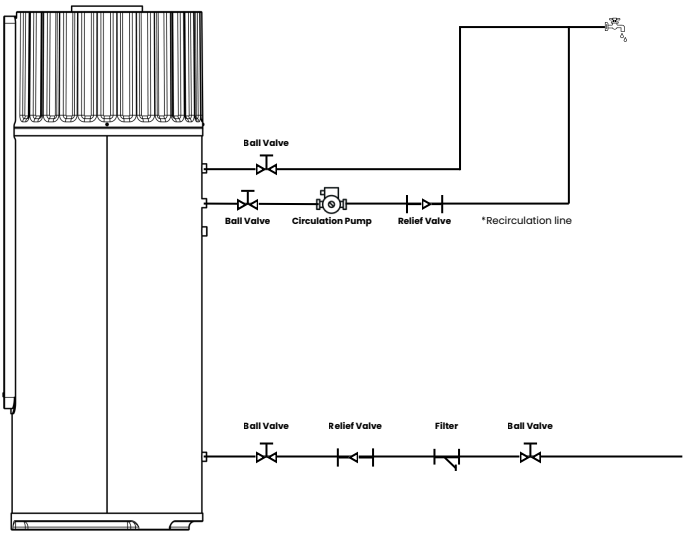
Please note that the unit is designed so that components requiring maintenance are accessible from the front. It is recommended to keep the spaces on both the le and right sides clear to facilitate the removal of the unit and ease maintenance tasks.



The maximum allowable duct length is for inlet and outlet together less than 2 m.

7.5 INSTALLATION OVERVIEW

7.5.1 Floor-Standing Heat Pump



Recirculation line is optional for convenience. It is the responsibility of the customer.

1.The inlet of this heat pump water heater must be equipped with a filter and a safety check valve (the safety valve is included in the heat pump accessory kit). Failure to do so may result in negave or excessive pressure within the water tank, leading to tank damage.
2.This water tank is designed for water pressure ≤0.85 MPa. It is recommended to manually open the check rod of the safety check valve every 1-2 months to force drainage and pressure relief, prevenng valve failure due to scaling.
3.The water tank must be securely fixed (e.g., by installing tank straps) to avoid pping.
4.If the ambient temperature falls below 2°C and the heat pump will remain unused for an extended period, drain all water from the pipelines and the tank, then disconnect the power supply.
5.Inspect the magnesium rod in the water tank every 2-3 years. Contact aer-sales personnel for replacement. Always disconnect the heat pump power supply when the tank is empty.
6.Regularly clean scale deposits inside the water tank to ensure hygienic water quality.

7.6 HYDRAULIC CONNECTIONS

The hydraulic connections must be made in accordance with all applicable national and local regulations.

The pipes may be made of multilayer pipe, polyethylene, or stainless steel, and must be suitable for a minimum operating temperature of 100°C and a minimum pressure rating of 10 bar.

Pipe selection shall be based on the required water flow rate and the hydraulic pressure losses of the system.

All pipes must be insulated with closed-cell insulation material of suitable thickness.
The unit should be connected to the piping system by means of flexible joints.
The following components must be included in the piping system:

- Y-type metal filter (to be installed on the inlet pipe), with a mesh size not greater than 1 mm
- Automatic filling group (3 bar recommended) if the water supply pressure exceeds 5.5 bar
- Hydraulic safety group (8 bar)
- Manual shut-off valves to isolate the unit from the hydraulic circuit
- Manual shut-off valve on the inlet pipe to allow draining of the unit if necessary
- Well thermometers for monitoring the system temperature
- Expansion tanks, safety valves, and air vents as shown in the following installation diagrams

	Perform the connecons making sure that weight of the pipes do not overload the unit.
	Check the water hardness, which should not be below 12°f. With parcularly hard water, it's recommended the use of a water soener so that the residual hardness is no more than 20°f and no less than 15°f.
	WARNING: When it's possible, connect the pipes to the hydraulic connecons always using the system buon against buon.
	WARNING: Unit water inlet pipe have to be in correspondence with the blue connecon, otherwise the unit malfuncon could occur.
	WARNING: It is compulsory to install on the WATER INLET connecon a metallic filter with a mesh not larger than 1 mm. Should the filter not be installed, the warranty will no longer be valid. The filter have to be kept clean, so make sure that it is clean aer the unit has been installed, and then check it periodically.
	Perform the drainage/piping work according to the installaon instrucon. If there is a defect in drainage /piping work, water could leak from the unit and household goods could get wet and be damaged.
	The hot water needs to mix with cold water for terminal usage, too hot water (over 50°C) in the heang unit may cause injury. It's recommended the use of an-scald valves.
	The water may drip from the discharge pipe of the pressure-relief device and that this pipe must be le open to the atmosphere.
	The pressure-relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.

	The diagrams are to be considered only for indicaon purpose. It is always required the study of the specific installaon context and the approval of the system by a qualified heang engineer designer.

7.6.1 Water Connections

Please pay aenon to the following points when connecng the water loop pipe: 1) Minimize the water loop resistance wherever possible. 2) Ensure the pipe is clear of any obstrucons, with smooth water flow. Check the pipe carefully for any leaks, and then insulate the pipe appropriately.
3) Install the hydraulic safety group on the water inlet.
4) Install an appropriately sized expansion tank to accommodate volume fluctuaons.
5) Select the nominal pipe diameter based on the available water pressure and the expected pressure drop in the piping system.
6) Flexible water pipes may be used. Ensure that all materials in the piping system are compable to prevent corrosion damage.
7) During pipe installaon, take care to prevent contaminaon of the piping system

7.6.2 Water Filling

If the unit is being used for the first me or aer the tank has been emped, ensure that the tank is filled with water before powering on the unit.
1) Thoroughly clean the system.
2) Open the cold water inlet and hot water outlet valves.
3) Begin filling the tank with water. When water flows steadily from the hot water outlet, the tank is full.
4) Close the hot water outlet valve to complete the water filling process.

	ATTENTION: Operang the unit without water in the tank may cause damage to the auxiliary electric heater.

7.6.3 Unload of Water From the Tank

If the unit requires cleaning or maintenance, the tank should be emped. This can be done through the water supply inlet connecon or via a manual shut-off valve, as recommended at the start of this secon (installaon of the manual shut-off valve is the responsibility of the user/installer).

1) Close the cold water inlet valve.
2) Open the hot water outlet valve and the manual drain valve.
3) Begin draining the water.
4) Once the tank is empty, close the manual drain valve.

7.7 ELECTRICAL CONNECTIONS

Ensure that the power supply matches the unit's nominal electrical specificaons (voltage, phases, frequency) as indicated on the technical label. The appliance is supplied with a power cord and Schuko plug; it is prohibited to alter the power cord or plug. If needed, please contact customer service for assistance. It is recommended to verify the main electrical circuit and ensure its compliance with current regulaons. Check that the electrical circuit is suitable for the unit's maximum power consumpon (refer to the nameplate data), both in terms of cable cross-secon and adherence to applicable standards.

	WARNING: The power supply must comply with the specified limits; failure to do so will void the warranty immediately. Before performing any maintenance or operaon on the unit, ensure that the power supply is disconnected.
	WARNING: Voltage fluctuaons must not exceed ±10% of the nominal value. If this tolerance is not met, please contact our technical department for assistance.
	The unit must be connected to a grounded power supply. Do not connect if it's not grounded.
	Do not use an extension cord to connect the unit to the power supply. If a suitable grounded outlet is not available, have one installed by a qualified electrician.
	Do not aempt to move or repair the unit yourself. If the power cord is damaged, it must be replaced by the manufacturer, its authorized service agent, or a qualified professional to prevent hazards. Improper handling or repair of the unit may result in water leakage, electrical shock, injury, or fire.
	The power socket should be installed at a height higher than the hydraulic connecon point of the unit to prevent any water splashing onto the unit.

Access to the Electrical Box

To access the electrical box, proceed as follows:

1.Remove the front panel of the unit by loosening the side screws. Using a suitable long screwdriver, this operation can also be carried out from the front, even in built-in installations or when the unit is positioned close to a wall.
2.Remove the metal cover of the electrical box by unscrewing the four fixing screws.
3.The unit is supplied with a pre-installed power cable connected to the electrical box. If it is necessary to disconnect it and install a longer cable, or to connect an external ON/OFF remote signal, refer to the wiring diagram.

The size of the fuse

Models	Electricity Supply	Max Current	Cable Diameter (mm^2)	Thermal-Magnetic Protection (D Curve)	Fuse Type	Fuse Rating
VARM ALL 200	220-240V ~50Hz	9.2A	H07RN-F 3G1.5mm^2	16A	T6.3H 250V	6.3A 250V
VARM ALL 300					T6.3H 250V	6.3A 250V

Before Start-Up

Before starting the unit, check the following:

- Ensure that the wiring diagram, manual, and system electrical/hydraulic diagrams are available
- Ensure all water connections are correctly installed
- Ensure the inlet water pressure is above 1.5 bar
- Ensure all hydraulic shut-off valves are open
- Ensure the hydraulic circuit is properly pressurized and vented
- Ensure water flows from the hot water outlet and that the tank is full
- Ensure condensate drainage is properly arranged
- Ensure all electrical connections are correct, compliant, and properly grounded
- Ensure the supply voltage is within ±10% of the rated value
- Ensure there are no refrigerant leaks
- Ensure all panels and covers are securely installed
- Ensure a final inspection of the unit has been completed

After Power-On

- Check that the control panel indicator light is on
- Start the unit using the wired controller
- If abnormal noise is heard, switch off the power immediately
- Monitor water temperature for abnormal fluctuations

Operating parameters set by qualified personnel must not be changed by the user. For any adjustment, contact qualified service personnel.

	WARNING: Never turn off the unit by using the main switch for a temporary stop. The main switch should only be used to disconnect the unit from the power supply during extended shutdowns or for maintenance/repair work.
	WARNING: Do not modify the internal wiring of the unit otherwise the warranty will terminate immediately.

7.8 INSTALLATION OF THE HEAT PUMP BASE

7.8.1 BASE

The unit must be installed on a concrete plinth or a stable structure capable of supporng weights exceeding 400kg. it's crucial that the supporng structure remains stable over me and does not shi, especially due to factors like water drainage. You'll need a concrete base that's at least 50mm thick or a well-seasoned hardwood slat with a minimum thickness of 25mm. If you're using concrete base parameters, make sure they have a minimum dimension of 650mm x 650mm. Make sure all four feet of the unit are supported by the base you are using to avoid any potenal warranty issues.

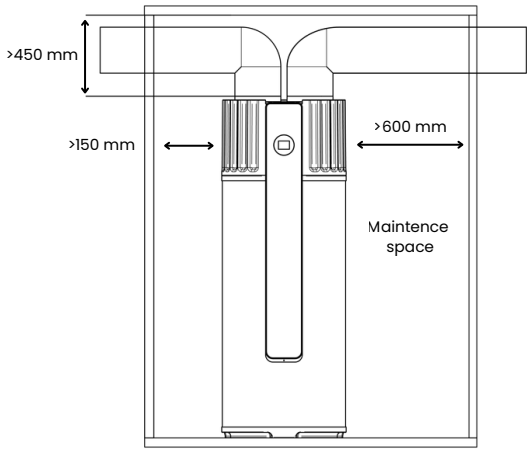
Ensure proper drainage is in place to handle any potenal overflow. During installaon, it's essenal to posion the unit completely vercally and level to facilitate proper condensate drainage. If the system is installed with a lt exceeding 3°it could void the warranty.
The fixing strap is recommended as shown as following figures:

7.8.2. AIR FLOW

- Do not install the unit in areas where there is a risk of falling debris (e.g., leaves), as this may block air vents or cause damage to the unit.
- Avoid installing the unit in locations surrounded by multiple walls or enclosed structures.

When installing the unit under fixtures or eaves, observe the following clearances:

- Minimum 300 mm clearance above the unit
- Minimum 600 mm clearance on the right side (when facing the unit)
- Minimum 150 mm clearance on the left side (when facing the unit)
- Minimum 150 mm distance from the wall to ensure proper airflow and access for servicing
- Install the unit so that the control interface is easily accessible to the user.
- Ensure clear access to the electrical panel located at the rear of the unit.
- Improper installation may void the warranty and may result in additional costs to bring the system into compliance.



7.9 MAINTENANCE

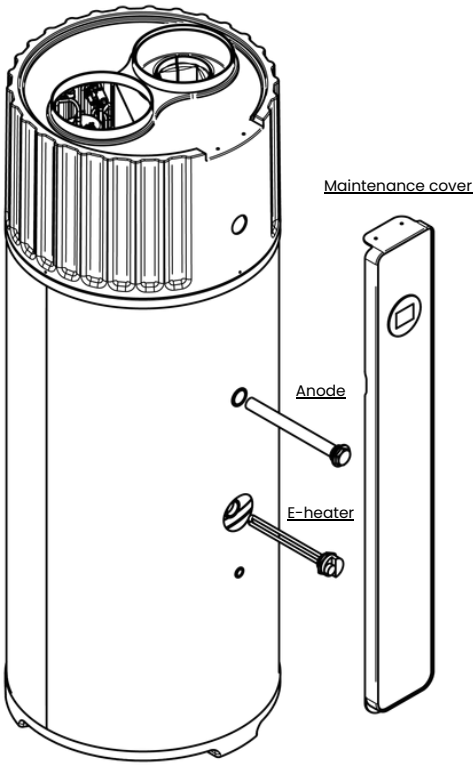
7.9.1 Checking The Anode & Replacing If Required

The anode is a crucial component that safeguards the inner lining of the hot water tank. Over time, it may degrade, reducing its protective capabilities. It is advisable to periodically inspect the anode for degradation and replace it if needed.

1.Turn off the power and shut off the cold water inlet valve.
2.Open a hot water tap to relieve pressure within the tank.
3.Locate the position of the anode.
4.Remove the anode cover by loosening the six screws.
5.Unscrew the anode.
6.Examine it for signs of degradation.
7.If it is still in good condition, re-install it to ensure an effective seal.
8.If the anode is in unsatisfactory condition, replace it with a new one.

Failing to replace the anode when necessary will void the warranty for the water tank.

1.Reopen the cold water inlet valve.
2.Open a hot water tap until hot water flows out, then turn off the tap.
3.Turn on the power to restart the unit.
4.Your unit can now be used as usual.



7.9.2 Cleaning The Inner Tank And Electric Heang Element

To keep your water heater running efficiently, it's crucial to perform regular maintenance on the inner tank and electric heang element. Follow these steps:
1.Switching off the power to the water heater.
2.Shut off the cold water inlet valve and open a hot water tap to release any built-up pressure.
3.Aach a flexible pipe to the drain outlet and connect it to a suitable sewage drain, Ensure that the drain pipe you use can withstand temperatures of at least 34°C. If the drain pipe doesn't meet this requirement, open the cold water inlet valve and hot water tap unl the water temperature is safe for the drain pipe.
4.Open the drain outlet of the water heater and allow all the water inside the inner tank to empty out. If needed, use water to rinse the inner tank mulple mes to eliminate any deposits.
5.Aer cleaning the tank, close the drain outlet.
6.Fill the inner tank with water and turn the power back on.

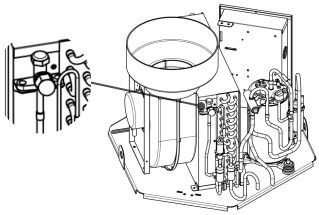
7.10 FILLING THE SYSTEM

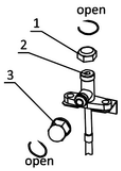
Here are the steps to follow for filling and pressuring the system aer it has been properly connected:

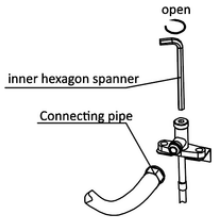
1.Once the system is correctly connected, proceed to fill and pressurize the tank.
2.To start filling the water system, first, open the non-return valve on the cold-water inlet. Simultaneously, make sure at least one hot water tap inside the property is open. As the system fills with water, you'll hear air escaping from the open hot water tap. This process, called "bleeding the system," ensures that any trapped air is removed from the system. When you consistently see water flowing from the hot water tap, it means the system is fully bled, and you can then close the tap.
3.Always ensure that the tank is completely filled with water before connecng and acvang the electricity supply.

7.11 REFRIGERANT FILLING

Check the refrigerant filling status by reading the liquid level data on the display screen, as well as the air sucon and exhaust pressure. if there is a refrigerant leakage or if components in the refrigeraon circulaon system need to be replaced, conduct an air ghtness examinaon as the first step. Preparaons:
1.Please in a well-venlated environment while charge refrigerant.
2.Keep away from open flames or potenal sources of fire.
3.Disconnect the power supply of the heat pump.
4.Carefully check the nameplate of the heat pump and charge strictly according to the labeled amount.







7.12 DETECTION OF FLAMMABLE REFRIGERANTS

Under no circumstances shall potential sources of ignition be used when searching for or detecting refrigerant leaks. A halide torch, or any other detector using a naked flame, shall not be used.

The following leak detection methods are considered acceptable for refrigerant systems:

Electronic leak detectors may be used to detect refrigerant leaks. However, in the case of flammable refrigerants, their sensitivity may not be adequate or recalibration may be required. The detection equipment shall be calibrated in a refrigerant-free area.

Make sure that the detector is not a potential source of ignition and is suitable for the refrigerant being used. Leak detection equipment shall be set at a percentage of the Lower Flammable Limit (LFL) of the refrigerant, and shall be calibrated for the refrigerant employed. The appropriate gas concentration shall be confirmed, with a maximum of 25% of the LFL.
Leak detection fluids may also be used with most refrigerants. However, detergents containing chlorine shall be avoided, as chlorine may react with the refrigerant and corrode the copper pipework.

Examples of acceptable leak detection methods:

- Bubble method
- Fluorescent agent method

If a leak is suspected, all naked flames shall be removed or extinguished immediately.

8. APPLIANCE OPERATION

8.1 USER INTERFACE

8.2 OPERATION

Name/Icon	Function Description
Power On/OFF	1.Press 1s to turn on/off. 2.On the query interface, press this buon to return to the main interface. 3.On the seng interface, press this buon to return to the main interface. If there is no operaon for 60s, it will automacally return to the main interface, turn off the screen, and lock. 4.Press 3s to unlock the controller.
Timer/Clock	1.On the main interface, press to enter the clock seng, and press to switch between "hour" and "minute". 2.On the main interface, press 3s to on/off timer . 3.On the mer interface, press to switch between "hour" and "minute". 4.On the mer interface, press 3s to cancel the current mer. 5. On the clock seng interface, press 3s to enable/disable the weekly timer.
Mode	1. On the main interface, press 5s to enter the parameter interface. 2. On the power-on interface, switch the working mode(STAN, HYB1, ELE). 3. On the parameter query interface, press to enter/save parameters.
Up	1. On the main interface and in the power-on state, press to set the temperature. 2. On the main interface, press 3s to enter the query interface. 3. On the query interface, press to choose the parameter no. 4. On the parameter setting interface, press it and (M) to modify parameters. 5. Modify timer and clock.
Down	1. On the main interface and in the power-on state, press to set the temperature and curve. 2. On the main interface, press 3s to enter the query and maintenance interface. 3. On the query interface, press to choose the parameter no. 4. On the parameter setting interface, press it and (M) to modify parameters. 5. Modify timing and clock values;
Power + Up	Press 5s to enter manual smart network connection.
Power + Down	Press 5s to enter manual AP network connection.

 **Mode + Up**	In the power-on interface, press 3s to turn on/off "Hybrid heating mode".
 **Mode + Down**	On the main interface in the power-on state, press 5s to turn on/off forced defrost.
 **Up + Down**	On the main interface, when the unit is powered on, press and hold for 5 seconds to turn the ventilation function on or off.
 **Switch + Timing + Down**	Press 5s to turn on/off the "Sterilization Function".
 **Switch + Mode + Up + Down**	Within 5 minutes of power-on, press 5s to restore factory settings.

8.3 LCD Icons

Symbol	Interface	Function or Meaning	Remark
	Off	Off or not in heating mode	
	On	Heating mode	
	On	ELE mode (Auxiliary heater only)	
	On	HYB1 mode(Auxiliary heater + Heat pump)	
	On	Sterilization (Auxiliary heater + Heat pump)	
	Blink	Wi-Fi pairing status	
	On	Wi-Fi connected successfully	
SET	On	Settings	
°C	On	Displays the temperature in Celsius	
MIN	On	Parameter unit (minute)	
8888	On	Displays actual temp. and setting temp	
	On	Freeze Protection Mode Activated	
AUTO	On	Maintenance Mode Activated: ON: Allows viewing of the software version and setup tool number.	
	On	On and Defrosting	
	On	Alarm is active	

	On	Screen is locked	
	On	Compressor running	
FAN	On	Fan running	
FAN	Blink	Ventilation Mode	
8888	Display	Clock, Operating Mode, and Error Code	
	On	Timer Activated	
ON	Display	Operating within the timer period	
	Blink	Set the timer start time	
OFF	Display	Set Timer Operating Period	
	Blink	Set the timer end time	
1 2 3	On/Off	When Timer 1, 2, or 3 is set, or when a time period is programmed, the icon remains on. Otherwise, it stays off.	

8.4 Hybrid Heating Mode

On the power-on interface, press M + ▲ button for 3 seconds to enter or exit hybrid heating mode.
When the electric heater is activated, " " the corresponding icon is displayed.
When the electric heater is not activated, the icon blinks at 1 Hz.

Deactivation: The hybrid heating mode can be turned off by powering on/off.

8.5 Forced Defrost Function

Operation: When the heat pump is on and not in cooling mode, press " ⏻ " + " ▼ " for 5s to enter forced defrost.
LCD Display: The defrost icon " ❄ " will be lighted.

8.6 Operation Parameters Query

To access the query: In the normal interface, press " ▲ " or " ▼ " for 3s to enter the parameter query interface. The temperature display area will show the parameter number, and the timer area will display the parameter value

Viewing and Exiting: After entering the parameter query interface, press the " ▲ " or " ▼ " to each parameter. " ⏻ " Press button or no option for 60s, it will automatically exit the parameter viewing interface.

8.6.1 Parameters Table

Description	Display Label	Notes
Refrigerant Cycle/water cycle	00	0 = Water Cycle; 1 = Refrigerant Cycle
High Pressure Switch	01	0 = Open; 1 = Closed
Reserved	02	Reserved
Reserved	03	Reserved
Electronic Expansion Valve Measured Value	04	Measured Value
Coil Temperature	05	Measured Value
Ambient Temperature	06	Measured Value
Suction Temperature	07	Measured Value
Exhaust Temperature	08	Measured Value
Inlet Water Temperature (Tank Temperature)	09	Displayed Value = Measured Value + Compensation Value
Reserved	10	Reserved
Compressor	11	0 = Stop; 1 = Run
Four-Way Valve	12	0 = Stop; 1 = Run
High-Speed Fan	13	0 = Stop; 1 = Run
Reserved	14	Reserved
Reserved	15	Reserved
Electric Heater	16	0 = Stop; 1 = Run
Pre-Defrost Compressor Running Accumulated Time	17	Measured Value
Interlock Switch	18	0=Open；1=Closed
Current Model Tool Value	19	Tool 22
Reserved	20	Reserved
Reserved	21	Reserved
Reserved	22	Reserved
Reserved	23	Reserved
Reserved	24	Reserved
Reserved	25	Reserved
Reserved	26	Reserved
Reserved	27	Reserved
Reserved	28	Reserved
Reserved	29	Reserved
Reserved	30	Reserved

8.7 Clock Setting

When the heat pump is on, press " " to set the clock, the clock icon flashing.

8.7.1 Clock Setting Operation

Once in the clock settings interface, press " " to set the hour and minute. The icon flashing.
Press " " or " " to adjust the value. Press " " or " " to save and exit , or no option for 5s, it will be automatically saved and exit.

8.7.2 Timer Setting

There are three timer groups, and each group can be set with a timer start and timer stop time.
On the home interface, press and hold the Timer button for 3 seconds to enable or disable the timer.
On the timer setting interface, press and hold the Timer button for 3 seconds to cancel the timer settings.
When the Timer icon, "1", and "ON" icons are displayed, and the hour icon flashes, it means that Timer Group 1 is active.
When the hour icon flashes, press the Up button or Down button to set the value, then press the Timer button to confirm and switch to minute setting. When the minute icon flashes, press the Up button or Down button to set the value, then press the Timer button to confirm.
Then the "1" and "OFF" icons will be displayed, and the hour icon will flash again. Press the Up button or Down button to set the time, then press the Timer button to confirm and switch to minute setting. When the minute icon flashes, press the Up button or Down button to set the value, then press the Timer button to confirm.
After confirming, Timer Group 1 will be enabled and the setting interface for Timer Group 2 will appear. The setting method for Groups 2 and 3 is the same as for Group 1.
On the timer setting interface, press the Power button, or wait 60 seconds without any operation, to cancel the timer setting and exit.
During the timer OFF period, the Timer icon and "OFF" icon will be displayed. During the timer ON period, the Timer icon, the current working group number (1 / 2 / 3), and the "ON" icon will be displayed.

8.8 Wifi Function

Press ⏻▲ for 5s to enter manual Smart network configuration. The WiFi icon flashing 1/s.

Press ⏻▼ for 5s to enter manual AP Network Configuration;.The WiFi icon flashing 2/s.

For app download and usage, please refer to the WiFi functionality manual.

8.9 Restore Factory Settings

Within 5 minutes of power-on, press " ⏻ + M + ▲ + ▼" for 5s to restore factory settings.
The buzzer beeps. The parameters are successfully restored after two beeps.

8.10 User Parameter Settings

On the main interface, press "  +  " button for 5s to enter the user parameter setting interface.

Code	Description	Default	Range	Note
F01	Heating set temperature	55°C	STAN: 15–65°C; HYBI: 15–75°C; ELE: 15–75°C	
F03	Water temperature differential	5°C	1–15°C	STAN: F03; HYBI: F03; ELE: F03+5°C
F10	Ambient temp. to start electric heater	2°C	-30–35°C	Disabled at -30°C
F13	Automatic Hybrid Heating Function	1	0–1	0: Disabled; 1: Enabled
F14	Water Temperature Control Hysteresis for Hybrid Heating	40	2–70°C	
F48	Linkage Switch Setting	0	0–1	0: Disabled; 1: Enabled
F65	Intelligent Reservation Function	0	0–1	0: Disabled; 1: Enabled
F66	Enable Electric Sterilization Function	1	0–1	0: Disabled; 1: Enabled
F69	Automatic Sterilization Interval	7	1–20 days	

8.11 Malfunction of the Unit and Error Codes

When the unit detects a fault, the fault code is displayed cyclically in the timer area, and the fault icon " " flashes. Once the fault has been cleared, the normal display is automatically restored.
The fault codes are described in the table below.

Error Code	Protection / Malfunction	Possible Reasons
E12	High exhaust temperature protection	The refrigerant system is blocked Lack of refrigerant or sensor T3 damaged
E05	High voltage switch protection	1. Pressure switch is damaged, wiring error CN111(HP) 2. Too much refrigerant 3. Check whether the fan works properly 4. Air intake or blockage in the fluorine system 5. Whether the water tank is masonry serious 6.The water tank temperature sensor is damaged.
E09	The communication between main board and controller failure	Check the communication connection between the wire controller and the main board CN17(COM1)
E16	The coil temperature sensor failure	1. The sensor cable is disconnected or short-circuited 2. The sensor is damaged 3. Main board port is damaged CN1(T1).
E21	The ambient temperature sensor failure	1. The sensor cable is disconnected or short-circuited 2. The sensor is damaged T2 3. Main board port is damaged CN1(T2).
E18	Exhaust sensor failure	1. The sensor cable is disconnected or short-circuited 2. Sensor T3 is damaged 3. Main board port is damaged CN1(T3).
E14	Tank sensor failure	1. The sensor cable is disconnected or short-circuited 2. Sensor T4 is damaged 3. Main board port is damaged CN2(T4).
E29	Suction sensor failure	1. The sensor cable is disconnected or short-circuited 2. The sensor T5 is damaged 3. Main board port is damaged CN1(T5).
E44	Low ambient temperature protection	1. When the ambient temperature ≤-9°C, the compressor is not allowed to run. 2. When the ambient temperature ≥-7°C, he compressor will disappear and resume operation.

9. WIFI FUNCTIONALITY MANUAL

9.1 Download APP and Registration

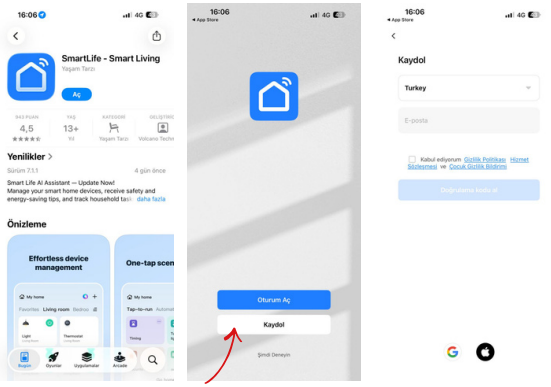
Download the Smart Life application from the App Store or Google Play Store.

9.2 Access the Application

Open the application and select the Register button.
Please provide your personal information:
Please select your country and provide your email address.

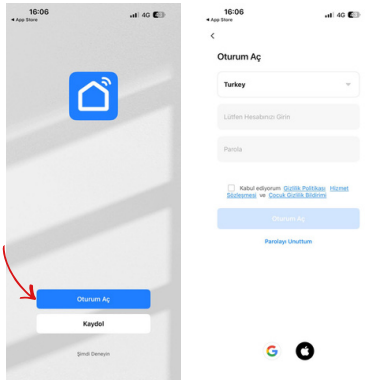
9.3 Acquire the Verification Code

To obtain the verification code dispatched to your email address, please click the Get Verification Code button.
You can effortlessly register for the Smart Life app by adhering to the following steps!

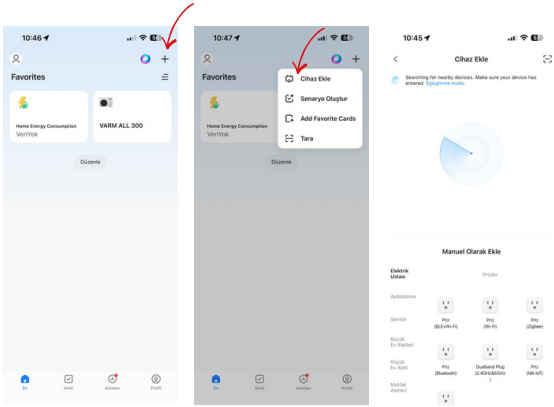


9.4 Introduction

After completing the registration process, please log in to the application and adhere to the following steps:



9.5 Integrating Devices through Smart Life



In this phase, the heat pump is identified through the Smart Life app, integrated into the application, and presented on the main screen. Upon completion of the integration process, the device is prepared for remote control.

Device Addition Process

Ensure that your mobile phone is connected to a Wi-Fi network.
Launch the Smart Life application and navigate to the home screen.
Tap the “+” icon located in the upper right corner.
From the menu that appears, choose "Add Device."

Locating the device

The application automatically searches for compatible devices in the surrounding area.
When a heat pump is detected, it is displayed on the screen.
Tap the device shown to proceed with the addition process.

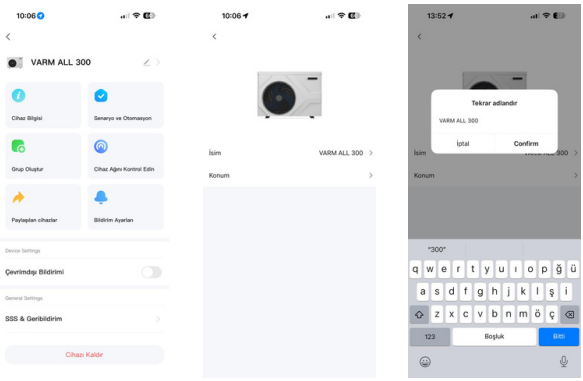
Manual Addition (If Necessary)

If the device cannot be located automatically, please utilize the "Add Manually" option.
From the list of categories:
Select the following options in sequence: Large Home Appliances, Smart Heat Pump (Wi-Fi).

Completion of the Addition Procedure

Once the device has been successfully integrated, the device card will appear on the main screen.
The default name assigned to the device may be modified at a later time.

9.6 Transaction Interface



This screen allows you to view and manage the heat pump settings through the mobile application.

Name
The device name can be changed.
Example: VARM ALL SERIES → Villa Heat Pump

Location
The device location can be added for easier management.

Device Information
Shows basic device details and connection status.

Scenario and Automation
Allows automatic operation based on selected times or conditions.

Create Group
Allows multiple devices to be controlled together.

Network Control
Enables remote control via internet connection.

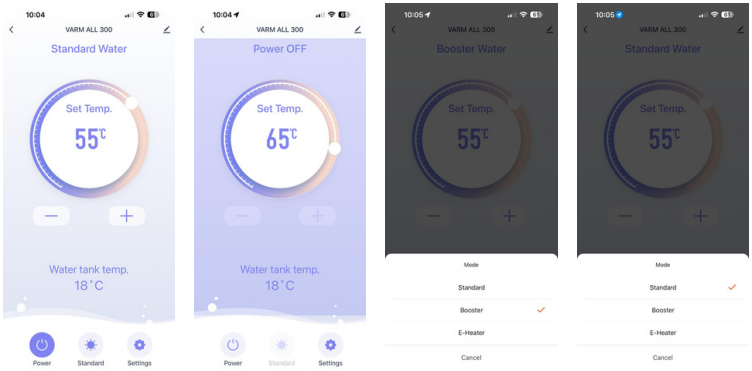
Shared Devices
Allows device control to be shared with other users.

Notification Settings
Allows users to manage status, operation, and warning notifications.

Offline Notification
Sends a notification when the device goes offline.

Remove Device
Removes the heat pump from the application.

9.7 Workspace and Controls



This screen serves as the primary control panel for the heat pump during routine operation. Users can start or stop the device, adjust the water temperature, modify the operating mode, and swiftly access the settings menu.

Power Switch
The heat pump is activated or deactivated using the Power icon.
When the device is powered down, the Power OFF status appears on the screen.
The active operation screen appears when the device is powered on.

Temperature Adjustment (Set Temp.)
The desired water temperature can be set from this screen.
Use the + / – buttons or the circular indicator to adjust the temperature.
The selected value is the target domestic hot water temperature.
The current tank water temperature, such as 18°C, is shown at the bottom of the screen.

Operating Mode Selection (Mode)
The user may ascertain the operating characteristics of the device by utilizing one of the following modes:

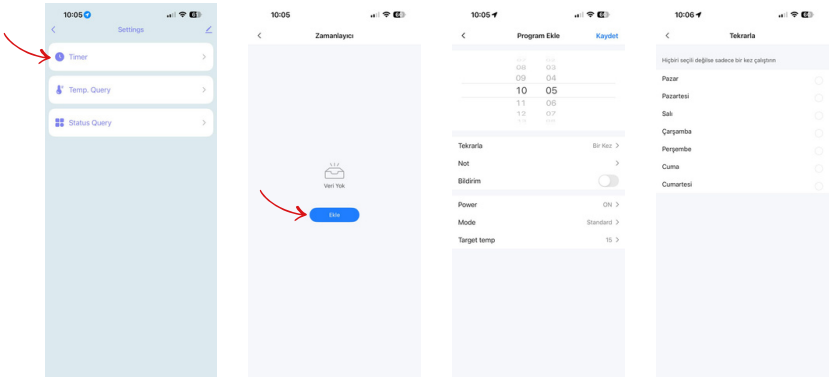
Standard: This mode is recommended for daily use due to its balanced and energy-efficient operation.

Booster: Designed for scenarios necessitating rapid water heating. Delivers exceptional performance in a brief period.

E-Heater: This operating mode is supported by an electric heater, utilized for particular requirements or as an auxiliary function.
The chosen mode is activated when it is highlighted on the screen.

Accessing the Configuration Menu
Advanced settings are accessible through the Settings icon.
Comprehensive configurations and system settings for the device can be adjusted in this section.

9.8 Timer (Scheduling) Configuration



In this section, a timer program is established for the heat pump to function automatically on designated days and times. The timer enables the device to activate at the specified settings without necessitating user intervention.

Accessing the Timer Menu
The timer is selected through the Settings menu.
The available programs are presented on the screen that appears.
If no programs have been previously defined, the message "No Data" will be displayed on the screen.

Introducing a New Program
A new timer schedule is established by selecting the Add button.
The subsequent configurations are established on the program creation interface:

Clock and Time Selection
The time and minute at which the program will execute have been established.

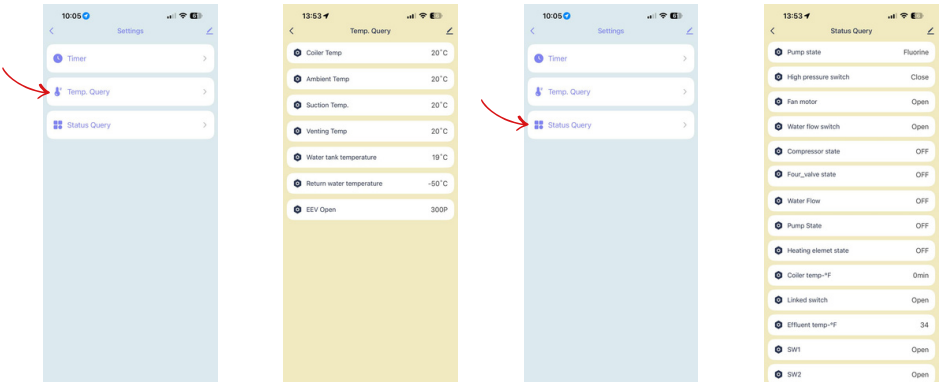
Repetition Configuration
Once: The program executes only once. Repeating: The program automatically repeats on designated days.
A weekly work plan can be established by designating specific days (Monday through Sunday).

Notification
When the notification feature is enabled, the user receives an alert upon the program's execution.

Device Configurations
This establishes the parameters within which the device will function during program execution:
Power: On / Off Mode: Standard, Booster, or E-Heater Target Temperature: Desired water temperature

Preserving the Program
Once all settings are finalized, the program is activated by selecting the Save button.
The established schedule is presented in the timer list and can be modified or removed as necessary.

9.9 Advanced System Information (Temporary Query & Status Query)



This section presents a detailed display of the heat pump's instantaneous operating status and temperature values. This information is essential for monitoring the device's performance and facilitating technical oversight.

Status Inquiry

The Status Query screen presents the operational and switching statuses of the heat pump's primary components in real time.

This screen presents the following information:

- Pump Status
- High-pressure switch
- Fan motor condition
- Water flow sensor
- Compressor condition
- Status of the four-way valve
- Heating element condition
- Connection and safety switches

Each parameter is presented as Open/Close (ON/OFF).

This display enables you to verify the device's safe and proper operation.

Temperature Inquiry

The Temp Query screen presents the real-time temperature readings of the heat pump.

The temperature values that can be monitored on this screen are as follows:

- Boiler temperature
- Ambient Temperature
- Suction line temperature (Suction Temperature)
- Air outlet temperature (Ventilation Temperature)
- Water tank temperature
- Return water temperature.
- Electronic Expansion Valve Opening Value (EEV Open)

This information is utilized to assess system performance and perform technical evaluations.

Note: These screens are intended solely for informational purposes. Users are prohibited from altering any settings.

10 MAINTENANCE AND PERIODICAL CONTROLS

	WARNING: All operations described in this chapter must be performed by qualified personnel only. Before beginning any operation or accessing the internal components of the unit, ensure that the power supply is disconnected. The compressor head and discharge piping typically operate at high temperatures. Exercise extreme caution when working in their vicinity. The aluminum coil fins are very sharp and may cause serious injury; handle them with care. After completing maintenance procedures, reattach the cover panels and secure them with screws where applicable.
	WARNING: Install the unit with adequate clearance for maintenance and repairs. The warranty does not cover costs for platforms or handling equipment required for maintenance.
	The refrigerant circuits must only be filled with the gas specified on the nameplate. Using a different refrigerant can cause severe damage to the compressor.
	Only the oils specified in this manual should be used. Using a different oil can cause serious damage to the compressor.
	If the outlet water temperature is adequate, it is recommended to set a lower temperature to reduce heat loss, prevent scaling, and save energy.

Periodic checks should be conducted to ensure the proper operation of the unit.

OPERATION	1 Month	4 Months	6 Months
Frequently check the water supply and air vent to prevent water or air shortages in the water loop. Ensure that the tank is always filled with water.	X		
Verify that safety and control devices are functioning correctly.	X		
Inspect the compressor for any oil leaks.	X		
Check for potential water leaks in the hydraulic circuit.	X		
Confirm the proper operation of the external flow switch (if installed).	X		
Clean the metallic filters in the hydraulic circuit to maintain good water quality. A lack of water or dirty water can damage the unit.	X		
Use compressed air to clean the finned coils of the heat exchanger. It is recommended to keep the unit in a dry, clean area with good ventilation.	X		
Verify the correct operation of the electric heater for the anti-Legionella cycle (*). Ensure diagnostic samples of water are taken from critical points throughout the entire hydraulic circuit.		X	
Ensure that all terminals on the electrical panel and the compressor terminals are securely fixed.		X	
Ensure all electrical components are in good condition. If any part is damaged or if there is an unusual odor, replace it promptly.		X	
Tighten all water connections as needed.		X	
Clean the unit using a soft, damp cloth.		X	
Regularly clean the tank and electric heater to maintain optimal performance.		X	
Periodically clean the external air duct grille to ensure efficient operation.		X	

Verify that the unit is operating at the correct voltage and current absorption.			✕
Inspect each component of the unit and check the system pressure.			✕
Replace any faulty parts and recharge the refrigerant if necessary.			✕
Check the operating pressure, superheat, and subcooling temperatures.			✕
Assess the efficiency of the circulation pump.			✕
If the heat pump is not used for an extended period, drain all water from the unit and seal it to preserve its condition. In winter, drain water from the lowest point of the boiler to prevent freezing. Before restarting the unit, perform a water recharge, disinfection, and a complete inspection.			✕
Check and replace the magnesium anode rod if necessary.			**every year**

(*) Checking the proper operation of the electric heater: To verify the activation of the electric heater, select the "E-heater" mode and monitor the increase in tank water temperature.

11. ENVIRONMENTAL PROTECTION

Because R290 is flammable, it must not be released into the atmosphere without proper control. If R290 accumulates in a local area and reaches its explosive limit, contact with an ignition source may cause an explosion.

At the end of the unit's service life, the refrigerant must be properly recovered and disposed of by qualified personnel or handed over to an authorized recycling company to ensure safe handling.

	This equipment contains R290 refrigerant in the quantity specified in the technical specifications. Do not vent R290 into the atmosphere. R290 is flammable and can form an explosive mixture when mixed with air, which may cause serious safety hazards such as combustion or explosion if handled improperly. Repair and disassembly must only be performed by trained personnel.

12. TROUBLESHOOTING

This section provides helpful guidance for diagnosing and resolving common issues that may arise. Before beginning the troubleshooting process, perform a thorough visual inspection of the unit to check for any obvious defects, such as loose connections or faulty wiring.
Please review this chapter carefully before contacting your local dealer, as it may save both time and money.

	When inspecting the electrical box, ensure that the main power switch is turned to the "off" position before proceeding.

The guidelines below may help resolve the issue. If the problem continues, consult your installer or local dealer.
•Blank controller display: Check that the main power supply is connected.
•Error code displayed: Contact your local dealer for assistance.
•Timer issue: If actions run too early or too late, check and adjust the time and day settings.

13. DISPOSAL REQUIREMENTS

When the unit reaches the end of its life cycle and needs to be decommissioned or replaced, the following steps are recommended:
•Recover the refrigerant through trained personnel and send it to an authorized collection center.
•Collect the compressor lubricating oil and dispose of it at an authorized facility.
•Dismantle and separate the casing and other components by material type, especially copper and aluminum.

These procedures support material recovery and recycling, reducing environmental impact.

The user is responsible for ensuring proper disposal in accordance with the national regulations of the destination country. For more information, contact the installation company or the relevant local authority.

	Improper decommissioning of the appliance may cause significant environmental damage and pose serious risks to personal safety. Therefore, the unit must be disposed of only by authorized personnel who have completed technical training recognized by the relevant competent authorities.
	It is mandatory to adhere to the same safety precautions outlined in the preceding sections.
	Exercise extreme caution during the disposal of refrigerant gas to ensure safety and environmental compliance.
	Illegal disposal of the product by the end user will result in penalties as per the laws of the country where the disposal occurs.
	Illegal disposal of the product by the end user will result in penalties as per the laws of the country where the disposal occurs.
	This marking indicates that this product should not be disposed of with other household waste throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmentally safe recycling.

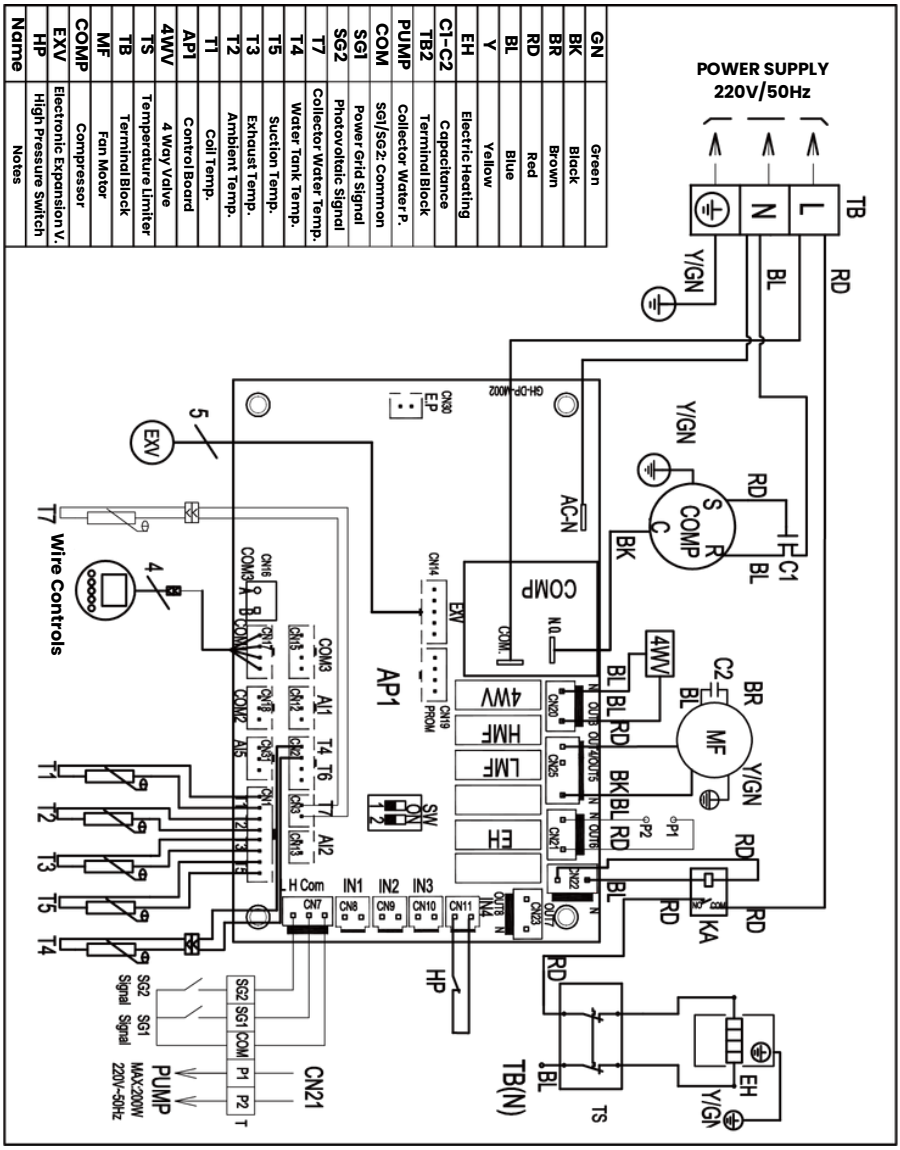
14. TECHNICAL DATA

VARM ALL SERIES TECHNICAL DATA			
Parameter	**Unit**	**200 L**	**300 L**
Installation Type	-	Floor Standing	Floor Standing
Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50
Water Tank Volume	L	200	300
Tapping Cycle	-	L	XL
Nominal Heating Capacity	kW	1,6	1,6
Energy Class	-	A+	A+
Heating Capacity (7/6°C)	kW	1,23	1,3
Heating Input	kW	0,82	0,84
COP (7/6°C)	W/W	2,93	3,15
Heating Capacity (14/13°C)	kW	1,41	1,43
COP (14/13°C)	W/W	3,42	3,53
Heating Capacity (20/15°C)	kW	1,48	1,50
COP (20/15°C)	W/W	3,65	3,75
Refrigerant Charge	-	R290/150g	R290/150g
Electric Heater	kW	2	2
Sound Power Level	dB(A)	55	55
Max. Water Outlet Temp.	°C	65	65
Max. Using Backup Heater	°C	75	75
Operation Range	°C	-7~45	-7~45
Temp. Setting Range	°C	15~75	15~75
Rated Power	W	900+2000	900+2000
Rated Current	A	3.9+9.3	3.9+9.3
Rated Water Yield	L/H	39	34,4
Air Flow	m^3/h	450	450
Protection Indoor Unit	-	IPX1	IPX1
Max Allowed Pressure of Tank	bar	6	6
Inner Tank Material	-	S235JR (Enamel coated) or Stainless Steel	S235JR (Enamel coated) or Stainless Steel
inner Tank Thickness	mm	2,5	2,5
Insulation Material	-	Polyurethane	Polyurethane
Insulation Thickness	mm	40	40
Outer Cylinder Material	-	Static painted galvanized sheet	Static painted galvanized sheet
Hot Water Outlet	inch	G 3/4	G 3/4
Cold Water Inlet	inch	G 3/4	G 3/4
Size of Water Drain	inch	G 3/4	G 3/4
Condensed Water Outlet	inch	G 1/2	G 1/2
Net Dimensions (LWH)	mm	Ø677 × 1520	Ø677 × 1920
Packing Dimensions (LWH)	mm	720 × 720 × 1700	720 × 720 × 2070
Net Weight	kg	93	117
Gross Weight	kg	109	137

*Technical data are nominal values under standard test conditions. Actual performance may vary. Varmela reserves the right to change specifications without notice.

15. ELECTRICAL CIRCUIT DIAGRAM

Please refer to the wiring diagram stuck on the electric box.



Name	Notes
GN	Green
BK	Black
BR	Brown
RD	Red
BL	Blue
Y	Yellow
EH	Electric Heating
C1-C2	Capacitance
TB2	Terminal Block
PUMP	Collector Water P.
COM	SG1/SG2: Common
SG1	Power Grid Signal
SG2	Photovoltaic Signal
T7	Collector Water Temp.
T4	Water Tank Temp.
T5	Suction Temp.
T3	Exhaust Temp.
T2	Ambient Temp.
T1	Coil Temp.
AP1	Control Board
4WV	4 Way Valve
TS	Temperature Limiter
TB	Terminal Block
MF	Fan Motor
COMP	Compressor
EXV	Electronic Expansion V.
HP	High Pressure Switch

Exclusions from Warranty Coverage

The following situations are not covered by the warranty and do not entitle the manufacturer, importer, or seller to provide free repair or replacement:

1. Damage occurring after delivery: Malfunctions caused by external factors such as transportation, impact, collision, falling, breakage, scratching, or exposure to chemicals.
• The delivery form is filled out to record the physical condition of the product at the time of delivery. If visible damage detected during delivery is not noted on the form, it is assumed that such external physical damage occurred after delivery.

2. Improper storage and unsuitable environmental conditions: Storage or failure to protect the device in unsuitable temperature, humidity, dust, or environmental conditions.

3. Electrical faults: Damage caused by high or low voltage, sudden fluctuations, incorrect wiring connections, and lack of grounding.
4. Water-related problems: Blockages and malfunctions caused by the water used in the device being excessively calcareous, sedimentary, or dirty.

5. Incorrect use: Pouring cold water into the device while it is hot or operating the device without water; also, malfunctions caused by use contrary to the user manual.

6. Installation deficiencies: Malfunctions caused by the absence of fuses or grounding in the electrical installation or the use of non-standard installations.

7. External factors: Natural disasters (earthquakes, floods, flash floods, lightning strikes), fire, or other force majeure events.

8. Unauthorized intervention: Malfunctions caused by repairs, gas refills, electrical connection changes, removal/installation, or interventions performed by unauthorized personnel.

9. Non-original parts: Damage caused by the use of spare parts, accessories, refrigerants, or chemicals not approved by the manufacturer.

10. Installation errors: Malfunctions caused by installation contrary to the manufacturer's instructions (incorrect piping, lack of insulation, drainage errors, incorrect positioning of the outdoor unit, etc.).

11. Failure to perform periodic maintenance: Performance decline or malfunctions resulting from failure to perform regular maintenance and cleaning as recommended by the manufacturer.

12. Unauthorized setting changes: Malfunctions resulting from changes to the control panel, mode, parameters, or software settings by persons other than authorized service personnel.

13. Use outside of limits: Operating the device outside of its design limits (heating at very low outdoor temperatures, cooling at excessively high temperatures, incorrect water flow or pressure).

14. Freezing-related malfunctions: Freezing and related damage resulting from shutting down the device during winter months or failing to drain the water circuit.

Important Points for Customers to Note Regarding Warranty

Please pay attention to the following points:
1. During installation and use of the device, ensure that you follow the instructions in the installation and user manual.

2. If you encounter any malfunction or problem, do not attempt to fix it yourself; contact our authorized service center directly.

3. Keep your warranty certificate, along with the service form issued by the service center when the device was first put into operation, and a copy of the device invoice in a safe place.

WARRANTY CERTIFICATE

Manufacturer's	**Seller Company**
Name:	Name:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
Email:	Email:
Authorized Signature:	Invoice Date and Number:
Company Seal:	Delivery Date and Location:
	Authorized Signature:
	Company Seal:

The Product

Type:	Warranty Period:
Brand:	Maximum Repair Period:
Model:	Label and Serial Number:

Warranty Terms

1. The warranty period begins on the date the goods are delivered to the consumer and applies for 2 years. The warranty certificate may be issued on paper or via a durable data storage medium. Upon the consumer's request, the certificate must be provided in writing on paper.
2. All parts of the goods are covered by the warranty without any distinction.
3. If the goods are found to be defective, the consumer may exercise one of the following options under Article 11 of Law No. 6502 on the Protection of Consumers:
A) Withdrawal from the contract,
B) Requesting a reduction in the sale price,
C) Free repair,
D) Replacement of the goods with non-defective goods.
4. When the consumer exercises their right to free repair, the seller is obligated to repair or have the goods repaired without charging for labor, parts, or any other fees. The consumer may exercise this right against the seller, manufacturer, or importer. These parties are jointly liable to the consumer and cannot transfer their liability to each other.
5. Even if the consumer exercises their right to free repair:
• If the product malfunctions again within the warranty period,
• The maximum time specified for repair is exceeded,
• The authorized service center, seller, manufacturer, or importer reports that the product cannot be repaired, the consumer may request a refund, a price reduction proportional to the defect, or replacement of the product with a defect-free equivalent. The seller cannot refuse this request; the seller, manufacturer, and importer are responsible for fulfilling the request.
6. The maximum repair period for the goods is 20 business days. This period begins:
• During the warranty period, on the date the defect is reported to the authorized service center or seller,
• Outside the warranty period, on the date the goods are delivered to the authorized service center.
If the defect cannot be repaired within 10 business days, the manufacturer or importer must provide the consumer with a similar product free of charge until the repair process is completed. For goods that malfunction within the warranty period, the repair period is added to the warranty period.
7. Defects resulting from use of the product contrary to the user manual are excluded from the warranty.
8. Products or parts replaced under warranty are covered only for the remaining warranty period of the purchased product.
9. Whether the defect is due to misuse is determined by an authorized service station or, if no authorized service station is available, by the seller, importer, or manufacturer, in that order, within the maximum repair period, based on a report. A copy of this report is provided to the consumer.
10. Consumers may submit their complaints and objections to consumer arbitration boards or consumer courts.

VARMEKS
HEAT PUMPS

444 0 602
info@varmeks.com
www.varmeks.com.tr
Büyükkayacık OSB, 103. Cadde No: 8, 42250 Selçuklu/Konya, Türkiye

The information, technical specifications, and illustrations contained in this user manual are subject to change without prior notice. Varmeks reserves the right to make improvements or technical changes to its products and documentation at any time. The content of this manual is provided for informational purposes only and does not constitute any commitment. (Rev. 2026/01)