

SOLIMPEKS

CIRCULATION PUMP WATER HEAT PUMP USER MANUAL

(SOLIHP03-BCP-3KW)



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2021

SOLIMPEKS SOLAR CORP.

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1. HOW CAN I KEEP THIS MANUAL

The manual should always be kept with the unit to which it refers. It should be stored in a safe place away from dust and moisture.

The company reserves the right to change its products and related manuals without necessarily updating previous versions of the reference material. It takes no responsibility for any inaccuracies in the manual due to printing or transcription.

The customer keeps an updated copy of the manual or the parts delivered by the manufacturer as an addition to this manual. The company can be used to provide detailed information about this manual and to provide information on the use and maintenance of its units.

2. GRAPHIC SYMBOLS USED IN THE MANUAL



| | |
|---|--|
|  | <i>Indicates operations that may be dangerous to humans and / or impairs the correct operation of the equipment.</i> |
|  | <i>Shows prohibited transactions.</i> |
|  | <i>It indicates important information that the operator must follow to ensure the correct operation of the equipment in complete safety. It also shows the overall grades.</i> |

2.1. RESTRICTED USE

- The company excludes any contractual and contractual liability for damage caused by persons, animals or objects by improper installation, adjustment and maintenance, improper use, or partial or superficial reading of the information contained in this manual.
- These units are designed for water heating. Unless explicitly authorized by the manufacturer, a different application should be considered incorrect and therefore not allowed.
- The location of the hydraulic and electrical plant should be determined by the system designer and fully technical needs should be taken into account as applicable local legislation and special powers.
- The execution of all studies should be carried out by qualified and experienced personnel who are authorized by the existing rules in different countries.



3. GENERAL SAFETY RULES

Before starting work on SOLIHP03-BCP-3KW units, each user must have a thorough knowledge of the functions of the equipment and its controls, and must read and understand the information listed in this manual.

| | |
|---|---|
|  | <i>It is strictly forbidden to lift and / or tamper with any safety device.</i> |
| | <i>The use of children and uninformed persons is prohibited.</i> |
| | <i>Do not touch the device with bare feet, wet or damp parts of the body.</i> |
| | <i>Do not pull, disconnect, or twist the electrical cables coming from the unit, even if they are disconnected from the mains supply.</i> |
| | <i>Do not stand on the device with your feet, sit down and / or lean against any type of object.</i> |
| | <i>Do not spray or pour water directly on the device.</i> |
|  | <i>Store packaging materials (cardboard, staples, plastic bags, etc.) out of reach of children. do not remove, abandon or quit.). Because it can be a potential source of danger.</i> |
| | <i>Any routine maintenance operations, when equipment is turned off, disconnected from electrical sources must be carried out.</i> |
| | <i>The outer sheet can only be removed by qualified operators.</i> |
| | <i>Do not hold the screwdriver, spanner, or other tools against moving parts of the equipment. do not sting.</i> |
| | <i>The equipment supervisor and maintenance worker should receive appropriate training to perform their duties safely.</i> |
| <i>Operators should know how to use personal protective devices; know the accident prevention guidelines contained in national-international laws and norms</i> | |




3.1. WORKER HEALTHY AND SAFETY

The European Community has adopted a number of directives on workplace health and safety, including 89/391 / CEE, 89/686 / CEE, 2009/104 / CE, 86/188 / CEE and 77/576 / CEE directives. Each employer will enforce these provisions and ensure that workers respect them.





| | |
|---|--|
|  | <i>Do not tamper with or alter parts of the equipment without the manufacturer's specific permission. In the event of unauthorized operations, the manufacturer will have no responsibility.</i> |
|  | <i>Using components, expendable materials, or spare parts that do not comply with those recommended by the manufacturer and / or listed in this manual may be dangerous for operators and / or damage equipment.</i> |
| | <i>The operator's work area should be clean, tidy and free of objects that might prevent free movement. Proper lighting of the workplace will be provided in a way that enables the operator to perform the necessary operations safely. Weak or too strong lighting can cause risks.</i> |
| | <i>Always make sure that workplaces are adequately ventilated and that extractors are in good condition and comply with the requirements of applicable laws.</i> |

3.2. PERSONAL SAFETY EQUIPMENTS

When operating and maintaining the SOLIHP03-BCP-3KW units, use the following personal protective equipment.

| | |
|---|---|
|  | <i>Protective clothing: Caregivers and operators must wear protective clothing that complies with the basic safety requirements currently in force. In case of slippery floors, users can use safety with non-slip soles. must wear shoes.</i> |
|  | <i>Gloves: Protective gloves should be used during the maintenance or cleaning process.</i> |
|  | <i>Mask and goggles: Respiratory protection (mask) and eye protection (goggles) should be used during cleaning and maintenance procedures.</i> |

3.3. SECURITY SYMBOLS

| | |
|---|--|
|  | <i>General Hazards</i> |
|  | <i>Electric Shock Hazard</i> |
|  | <i>Presence of Moving Parts</i> |
|  | <i>The Presence of Surfaces That May Cause Injury</i> |

4. MAIN FEATURES

- ✓ **It provides easy and fast access thanks to its monoblock design and internal circulation pump.**
- ✓ **High energy efficiency thanks to quality products.**
- ✓ **High security thanks to pressure and temperature safety.**
- ✓ **It has automatic defrosting feature in the evaporator.**
- ✓ **No assembly required thanks to the internal circulation pump.**
- ✓ **It can be easily placed on the used boiler.**



5. MAIN COMPONENTS

- **High efficiency rotation compressor optimized for domestic hot water pumps.**
- **BLAUBERG radial fan.**
- **Evaporator with a special surface that improves defrosting and limits dirt accumulation.**
- **FARHIGH circulation pump.**
- **Solimpeks On-Off Controls.**
- **Condenser- MIT plate heat exchanger.**
- **Quality plastic body.**
- **Foot for floor mounting.**

6. BASIC TECHNICAL SPECIFICATIONS

| Domain | | |
|--|--------------------|-------------------------|
| Outside Temperature | °C | min: +5 /max 43 |
| Hot Water Temperature with Heat Pump | °C | max 55 |
| Minimum Installation Space | m ² | 1 |
| Heat Transfer Fluid | - | Water/ propylene glycol |
| Electrical Parameters | | |
| Electric Power Supply | | 1/N/PE 220-240V/50Hz |
| Recommended Security | | C6 |
| Maximum Absorbed Amps | A | 7 |
| Suction Power | Fan | W |
| | Recirculation pump | W |
| Energy Consumption for 20 °C Inlet Temperature | kW | 0,722 |
| Performance | | |
| Energy Efficiency Class | - | A++ |
| Profile Upload | - | L |
| Sound Power Level | dB(A) | 60 |
| Heating Capacity at 20 °C Ambient Temperature | kW | 3,000 |
| Average Heating Capacity for Air Temperature | kW | 3,000 |
| Water Heating between 20 °C and 13 to 55 °C | kW | 3,000 |
| COP, Water Heating 13-40 °C | W/W | 4,48 |
| COP, Water Heating 13-45 °C | W/W | 4,23 |
| COP, Water Heating 13-50 °C | W/W | 4,00 |
| COP, Water Heating 13-55 °C | W/W | 3,62 |
| Heating Capacity at 13-40 °C | kW | 2,910 |
| Heating Capacity at 13-45 °C | kW | 2,877 |
| Heating Capacity at 13-50 °C | kW | 2,818 |
| Heating Capacity at 13-55 °C | kW | 2,651 |
| Working Factor | | |
| Compressor Type | | Scroll |
| Refrigerant / Amount | | R410a / 500 gr. |
| Maximum Allowable Pressure (low pressure) | bar | 0,15 |
| Maximum Allowable Pressure (high pressure) | bar | 42 |
| Dimensions | | |
| Diameter | mm | 668 |
| Height | mm | 528 |
| Weight | kg | 45 |
| Heating Circuit Parameters | | |
| Minimum pipe inner diameter | mm | DN25 |
| Flow | m ³ /h | 0,8 |
| Heat transfer fluid | - | Water/propylene glycol |



7. DISPLAY ICON DESCRIPTIONS

| | | | |
|--|---|--|--|
| | Continuously lit when the compressor is active. | | Lights up when the system is turned off. |
| | Continuously lit when in defrost mode. | | Lights if the temperature measurement unit celsius is selected. |
| | Constantly lit when the fan is active. | | Lights if the temperature measurement unit fahrenheit is selected. |
| | Lights up when the circulation pump is active. | | Lights up when negative value occurs. |
| | Continuously lit in case of alarm. | | Lights if decimal notation is active. |
| | Lights up when in the settings menu. | | |

8. KEYBOARD DESCRIPTION

SET - By pressing and releasing the button, the machine status menu is accessed and by holding it down, the programmable parameter menu is accessed. It is used as a confirmation button by touching and releasing it while in any menu.

- In any menu, it is used for upward navigation between parameters and to increase the parameter value.

- Used for downstream navigation between parameters and decreasing the parameter value while in any menu.

- The device can be turned OFF by holding it down while it is on the main screen, and ON when it is OFF. It is used as a menu exit button by touching and releasing it while in any menu.

9. MACHINE STATUS MENU

- By touching the **SET** button on the main screen, the **SET** parameter, which is the first level of the machine status menu, is displayed.

DISPLAYING AND CHANGING THE SET VALUE

- While the **SET** value, which is the first level of the machine status menu, is displayed, the temperature set value is displayed by touching the **SET** button.

(Example: 4.1)

- By using or buttons, desired temperature set value is set. Press the **SET** button to save the changes and return to the machine status menu, and touch the button to return without saving.

DEVICE OPERATING MODE SELECTION

- While the SET value, which is the first level of the machine status menu, is displayed, it is displayed with the help of \blacktriangle or \blacktriangledown buttons, then the parameter value is displayed by touching the **SET** button.
- Using the \blacktriangle or \blacktriangledown buttons, the desired operating mode is set (hEt or LoL). Press the **SET** button to save the changes and return to the machine status menu, and touch the LoL button to return without saving.

*** Note:** When the machine is in any place in the status menu and waited for 20 seconds without touching any button, the device will automatically return to the main screen without making any changes.

10. ACCESS TO THE PROGRAMMABLE PARAMETER MENU

- While on the main screen, press the **SET** button for 3 seconds and the first level of the service parameter menu PFS is displayed.
- While it is displayed on the screen, the previously set service password (42) value is set with the help of \blacktriangle or \blacktriangledown buttons and access is provided to the parameters menu by touching the **SET** button.

11. CHANGING PARAMETERS

- Access to the service parameter menu as described above.
- When the desired parameter is displayed using the \blacktriangle or \blacktriangledown buttons (Example: set value SEt), the parameter value is displayed by touching the **SET** button (Example: 0. 0)
- Parameter value is adjusted using \blacktriangle or \blacktriangledown buttons (Example: 2. 3)
- Press the **SET** button to save the changes and return to the parameter menu, or press the LoL button to return without saving.
- These steps can be repeated for all parameter values. All parameters are shown in the table.

***Note:** When waiting for 20 seconds without touching any button anywhere in the parameters menu, the device will automatically return to the main screen without making any changes.



***Note:** After changing the parameters, the device must be restarted.

12. TURNING THE KEY LOCK ON OR OFF

- To lock the keys, press the LoL and \blacktriangledown keys simultaneously for 3 seconds. It is necessary to press. When the keys are locked, LoL is displayed on the screen.
- To unlock the keys, press the LoL and \blacktriangledown keys simultaneously for 3 seconds. It is necessary to press. When the key lock is unlocked, LoL is displayed on the screen.

13. ALARM STATUS

| | |
|-----|--|
| P01 | Probe1 (Outdoor Probe) no connection or short circuit. |
| P02 | Probe2 (Compressor Pressure Probe) missing or short circuit. |
| P03 | Probe3 (Evaporator Probe) connection missing or short circuit. |
| P04 | Probe4 (Water Inlet Probe) no connection or short circuit. |
| P05 | Probe5 (Compressor Return Probe) missing or short circuit. |
| RLP | Low Pressure Alarm.(Serious Alarm. Requires reset.) |
| RhP | High Pressure Alarm. |
| RSS | No Water Circulation. |
| Rot | Outdoor Temperature Alarm. |
| RPE | Compressor Pressure Line Over Hot. |

- If more than one alarm has occurred, it will be displayed on the screen sequentially. It is enough to touch the  button to turn off the alarm sound. To hear the alarm sound again, press the  button.

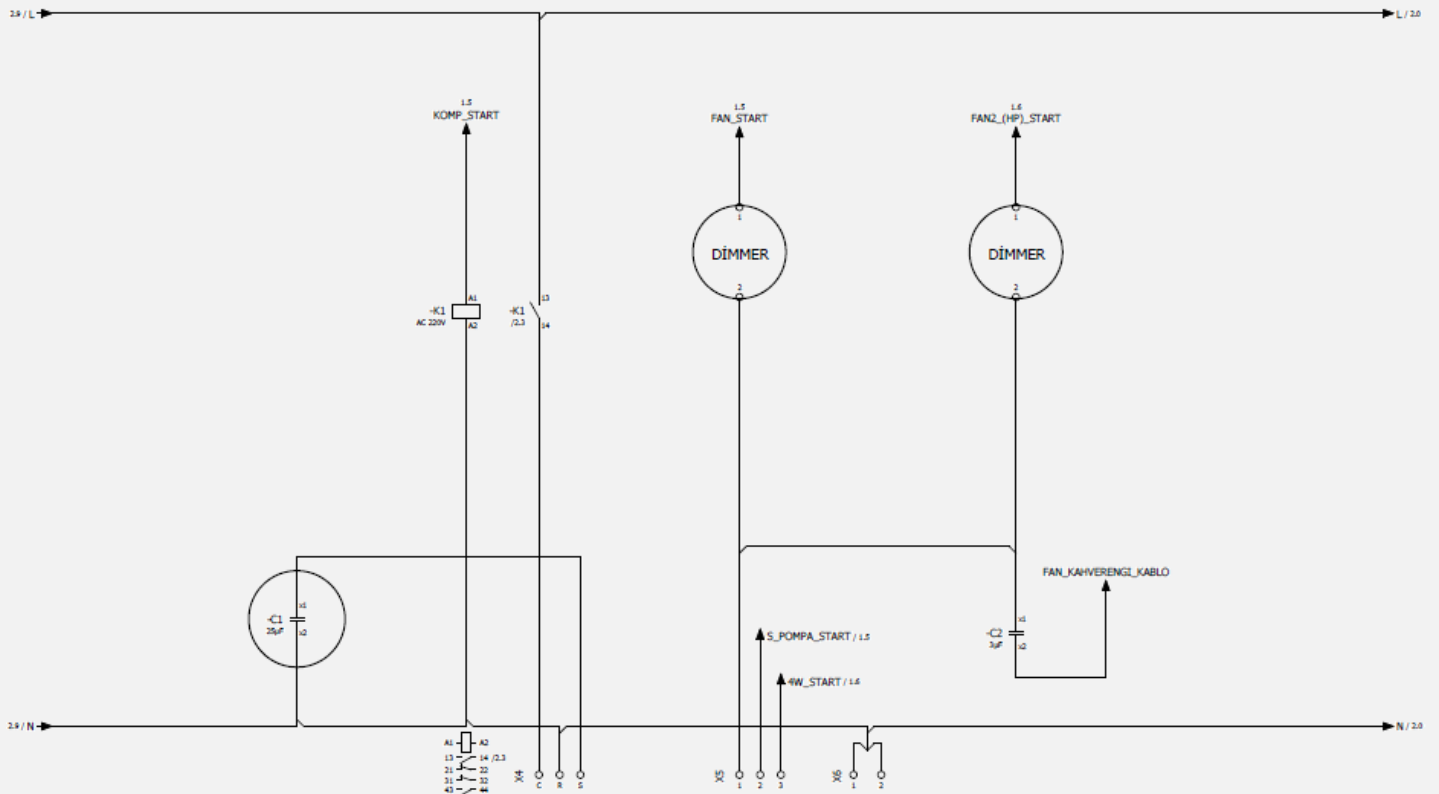
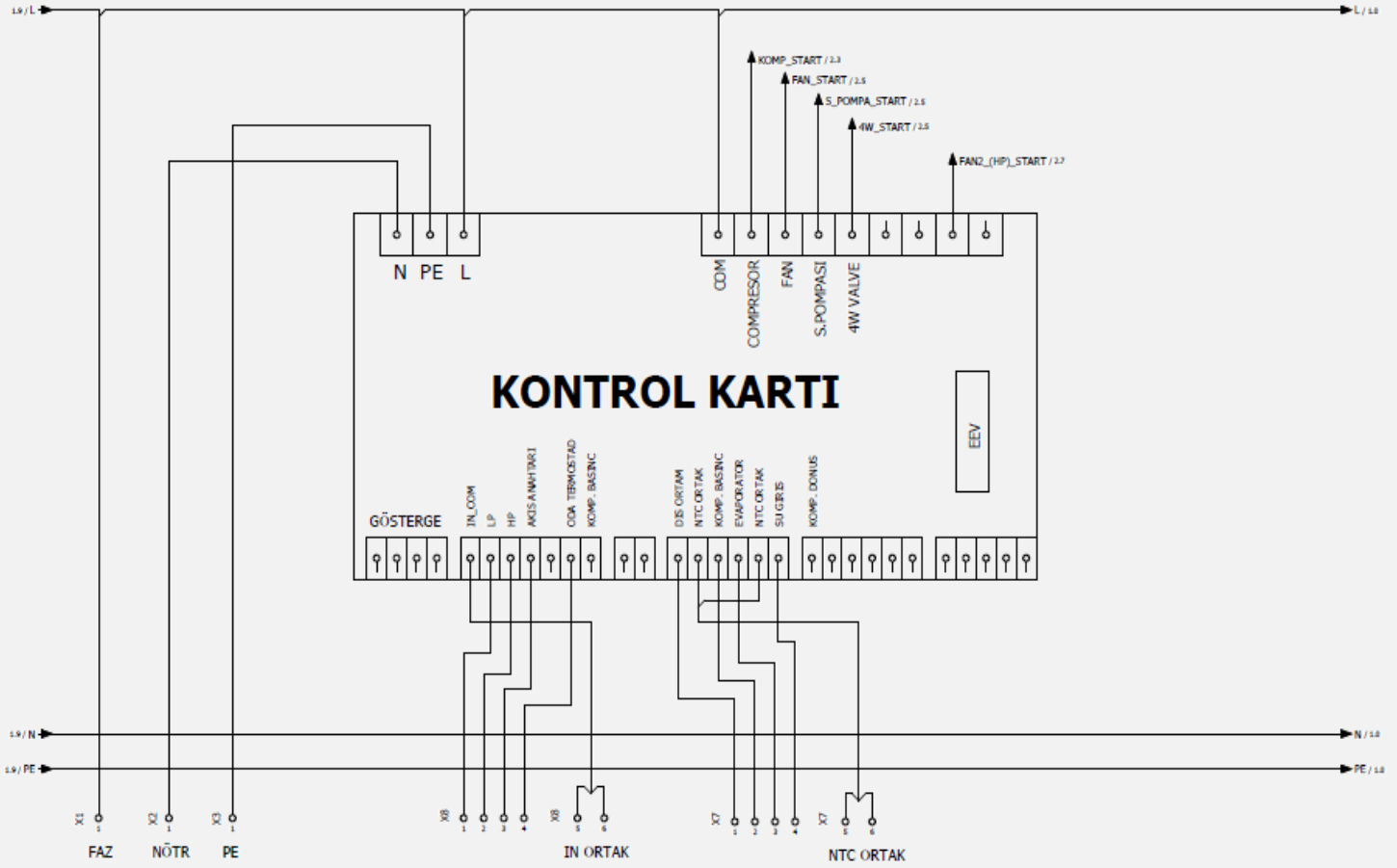
14. PARAMETER TABLE

| alignm ent | Grup | Par. | Explanation | Range | Unit | Factory settings |
|---------------|-------------|------|--|---------------|---------|---------------------|
| 1 | Control | SEt | Water Inlet Set Value | hEt 55.0/21.0 | °C-°F | hEt 55 |
| 2 | Control | hYS | Temperature Hysteresis Value | 6/2 | °C-°F | 2 |
| 3 | Compressor | CFt | Compressor Activation Time at First Run | 60/ FFt +1 | Minute | 1 |
| 4 | Compressor | CSt | Waiting Time Between Two Compressors | 10/1 | Minute | 2 |
| 7 | Circulation | Sbt | Waiting Time After The Circulation Pump Stops | 60/1 | Minute | 5 |
| 8 | Circulation | SCt | Circulation Pump Working Time After Reaching Set Value | 60/1 | Minute | 15 |
| 9 | Circulation | Sdt | Circulation Pump Stop Time When The Device Is Stopped | 60/1 | Minute | 3 |
| 11 | Defrost | dSS | Defrost Start Temperature | -5.0/-20.0 | °C-°F | 1.5 |
| 12 | Defrost | dSt | Defrost Entry Time After Defrost Start Temperature | 60/10 | Minute | 10 |
| 13 | Defrost | dES | Defrost End Temperature | 70.0/1.0 | °C-°F | 55.0 |
| 14 | Defrost | dEt | Defrost End Time | 15/1 | Minute | 2 |
| 15 | Defrost | dFC | Fan Operating Temperature While Defrosting | 65.0/45.0 | °C-°F | 55.0 |
| 16 | Alarm | Ad I | Delay Time When Alarm Occurs | 60/1 | Second | 10 |
| 17 | Alarm | AA I | Min. Outdoor Temperature Value | -5.0/-25.0 | °C - °F | 0 |
| 18 | Alarm | AAA | Max. Outdoor Temperature Value | 100.0/80.0 | °C - °F | 50.0 |
| 19 | Alarm | ACt | Compressor Pressure Line Max. Temperature Value | 100.0/80.0 | °C-°F | 100.0 |
| 20 | Control | bEP | Buzzer volume (0 none, 1 low, 2 loud) | 2/0 | - | 1 |

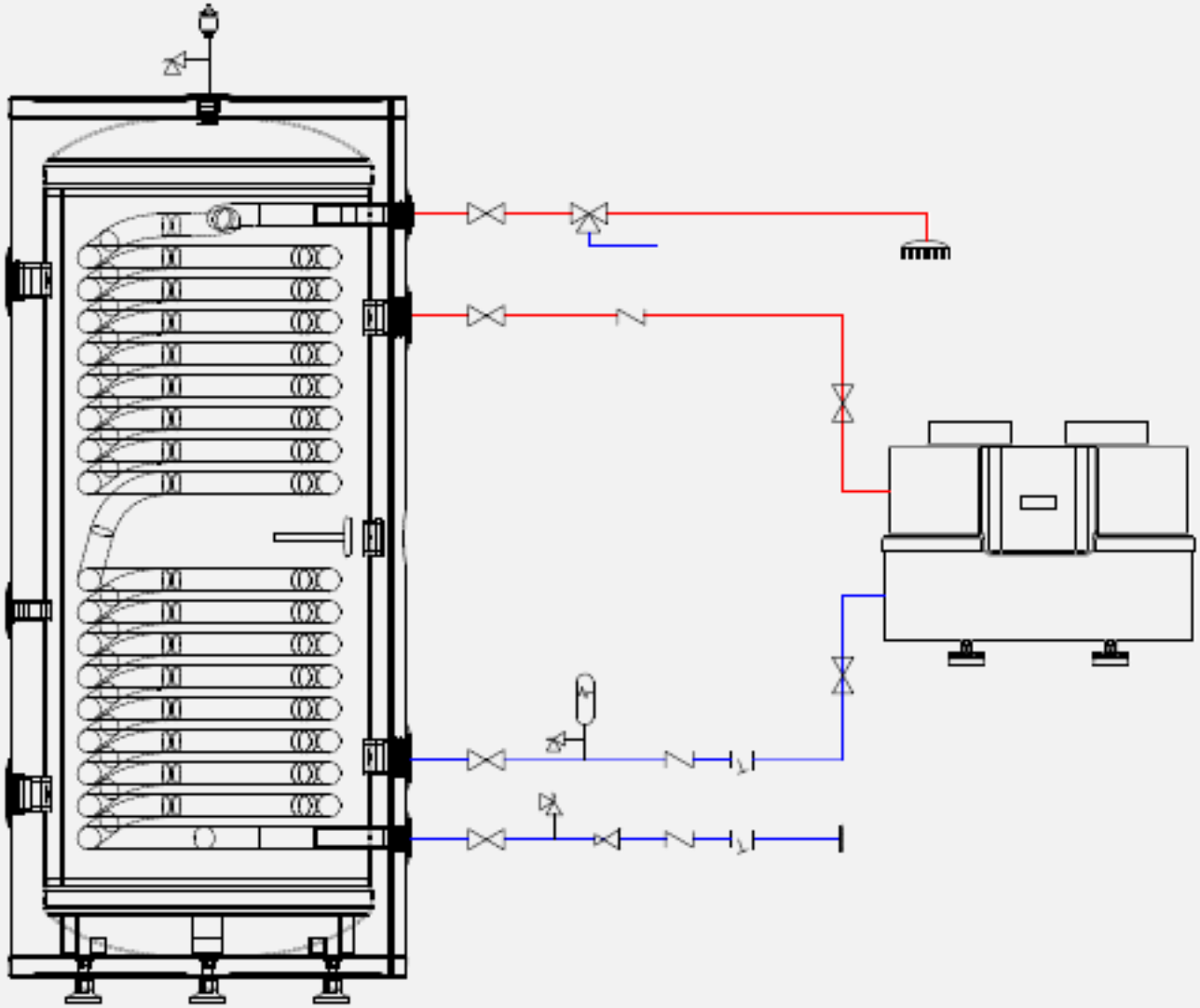
15. TERMINAL TABLE

| | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|----|--------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X1 | FAZ |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X2 | NÖTR |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X3 | TOPRAK |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X4 | KOMPRESÖR C R S |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X5 | SİRK POMPA |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X6 | FAN |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X6 | NÖTR |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X7 | DIS ÖRTAN |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X7 | KOMP BASINÇ |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X7 | EVAPORATÖR |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X7 | SU GİRİŞİ |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X7 | NTC ÖRTAN |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X8 | ALÇAK BASINÇ SWİC |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X8 | YÜKSEK BASINÇ SWİC |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X8 | AKDŞ ANAHTARI |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X8 | ODA TERMOSTADI |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | X8 | İN ÖRTAN |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |

16. ELECTRIC PANEL DIAGRAM



17. SOLIHP03-BCP-3KW INSTALLATION SCHEME



⊕ Sirkülasyon Pompası

Genleşme Tankı

Basınç Düşürücü

Çekvalf

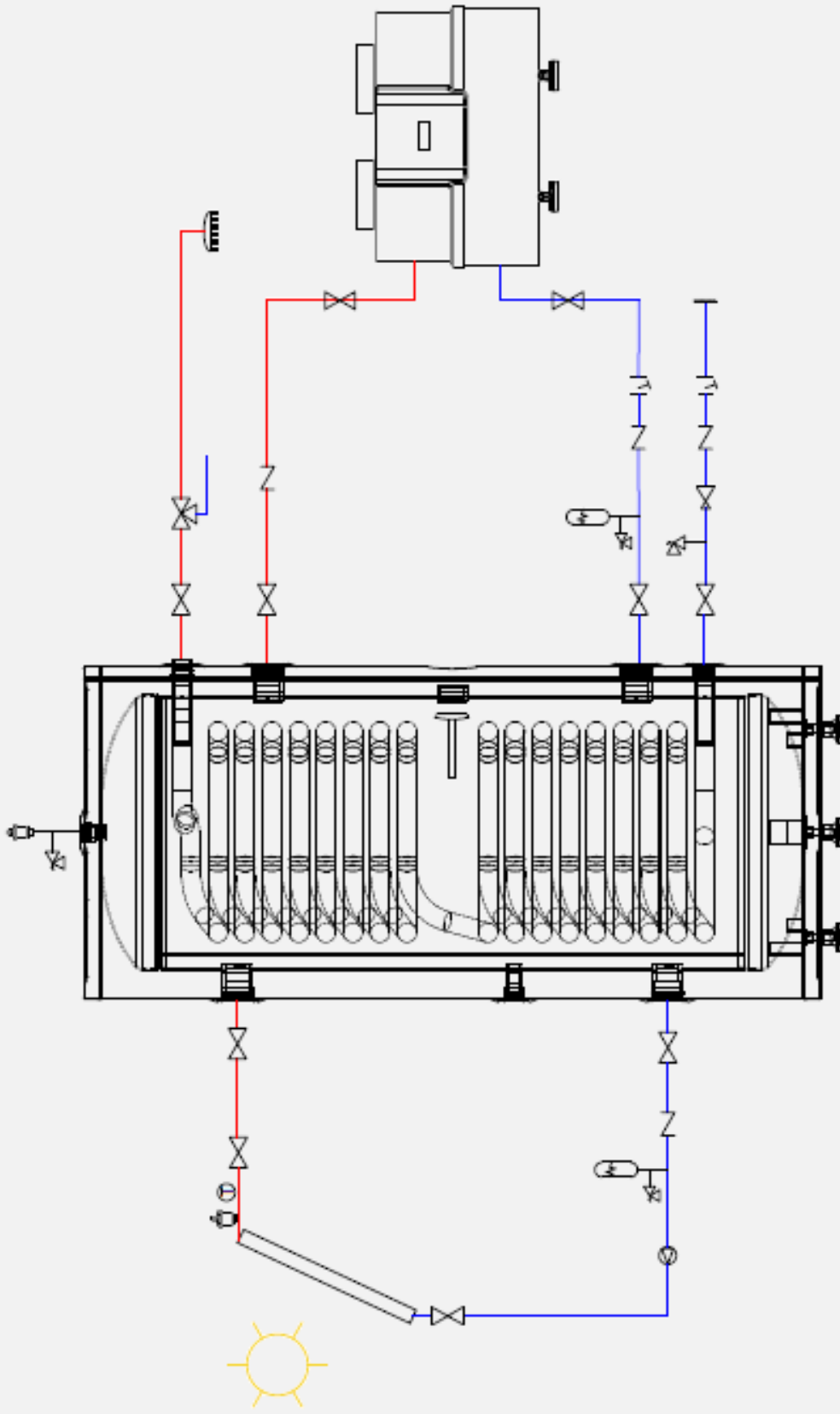
Filtre Dryer

Harici Elektrikli Isıtıcı

Emniyet Valfi

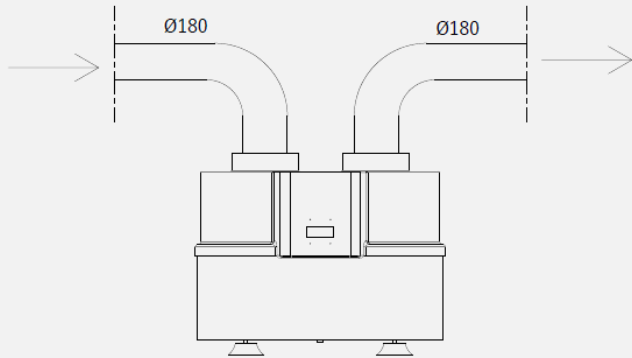
Karışım Valfi

Vana

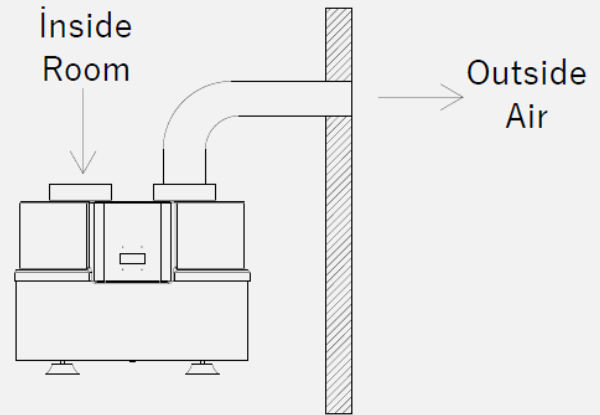


- ☀️ Hava Purjörü
- ⊗ Sirkülasyon Pompası
- ⊗ Sıcaklık Sensörü
- ⊗ Vana
- ⊗ Çekvalf
- ⊗ Filtre Dryer
- ⊗ Emniyet Valfi
- ⊗ Karışım Vanası
- ⊗ Basiş Düşürücü
- ⊗ Harici Elektrikli Isıtıcı

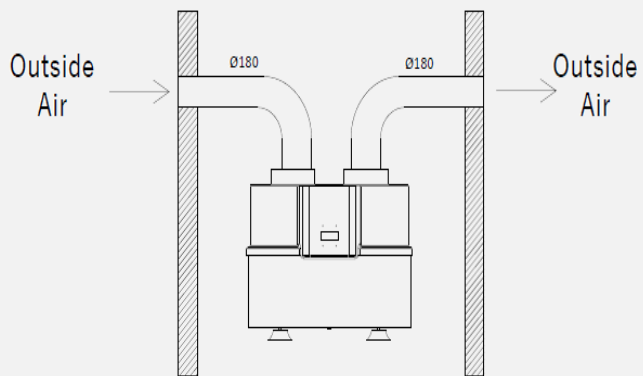
Air taken out of one room and expelled into another room;



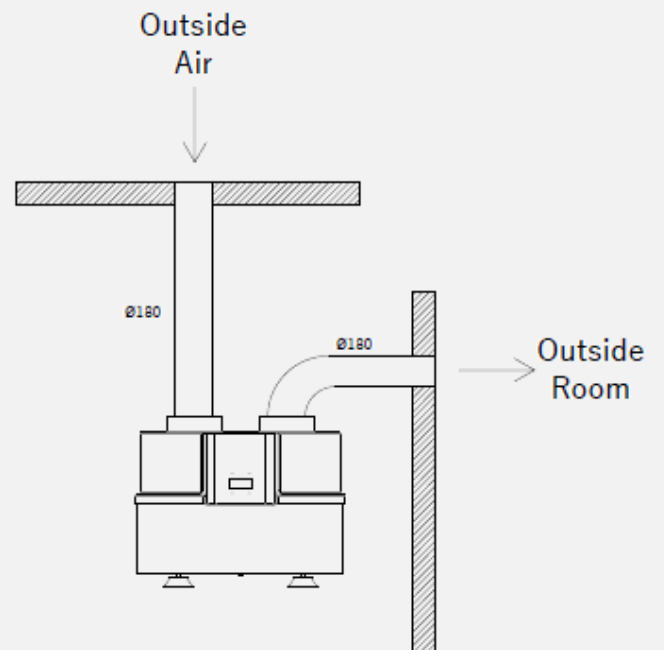
Air extracted from one room and exhausted through the wall into another room;



The air from the wall and the air from the wall;

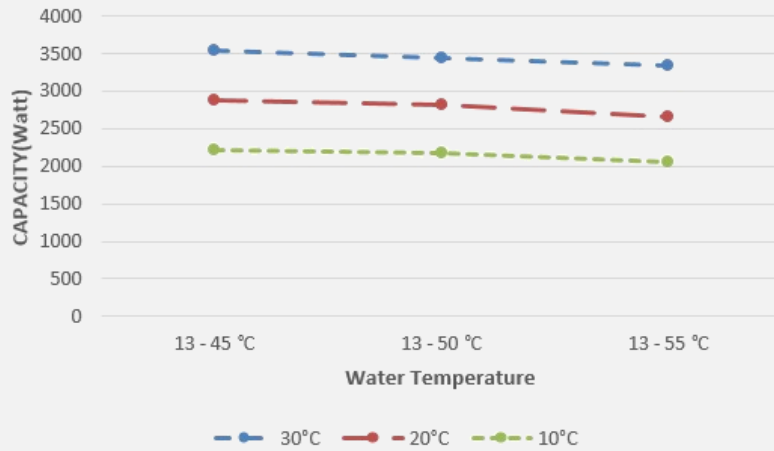


The air taken from the outside through the wall and the air ejected from the roof;

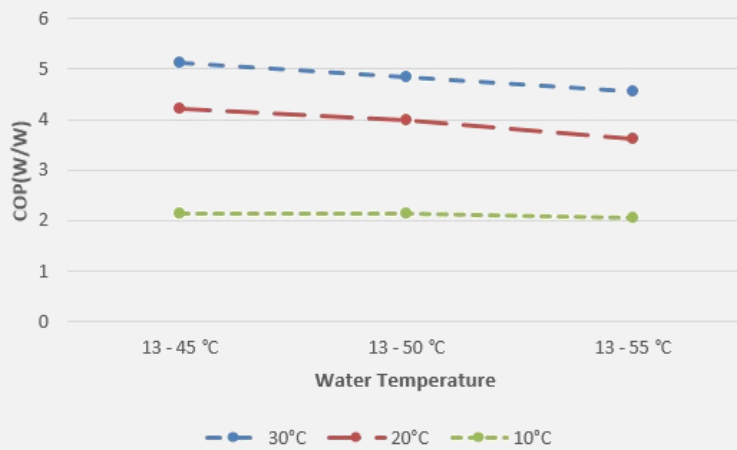


18. SOLIHP03-BCP-3KW WATER TEMPERATURE GRAPHICS

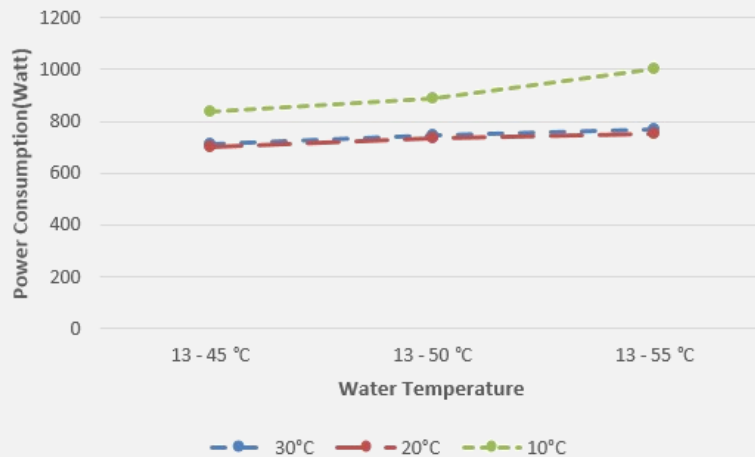
➤ Below is the graph of capacity (Watt) - water temperature.



➤ Below is the graph of COP - water temperature.



➤ Below is the graph of power consumption (Watt) - water temperature.



NOTES

