

# Heaty VAC

Degassing

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This manual has been compiled with the greatest possible care. However, UWS Technologie GmbH cannot be held liable for any inaccuracies contained herein.

# 1

## Foreword

### 1.1 About the device

This user manual describes the installation, commissioning and operation of the Heaty VAC:

Type	Article number	Description
Heaty VAC	100475-SL	Automatic vacuum degassing system with integrated refill function and direct refill connection

### 1.2 About this document

These instructions must be read before installation, commissioning and operation. Keep the instructions for future reference.

The drawings in this document show a typical installation with relevant details and are for illustrative purposes only.

Differences between the drawings and the device are possible, but do not affect the comprehensibility of this document.

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### 1.3 Symbols

The following symbols are used throughout this manual



Warning or important note



Risk of electric shock



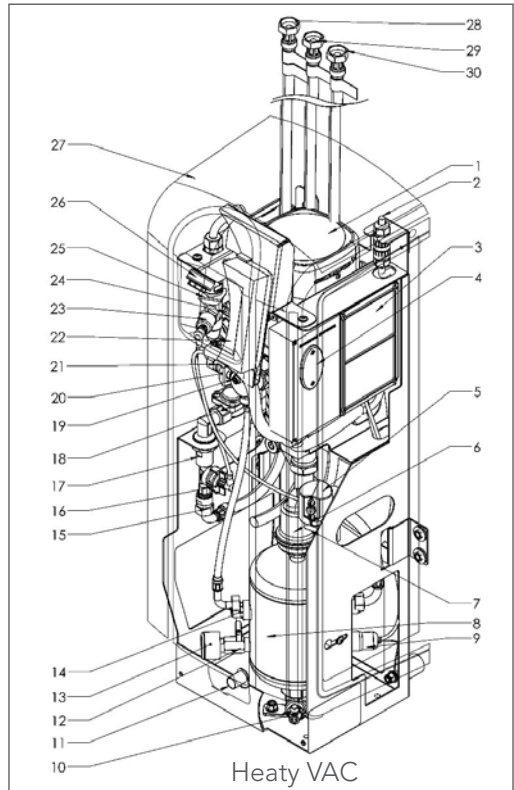
Warning



Risk of burns

# 2 Introduction

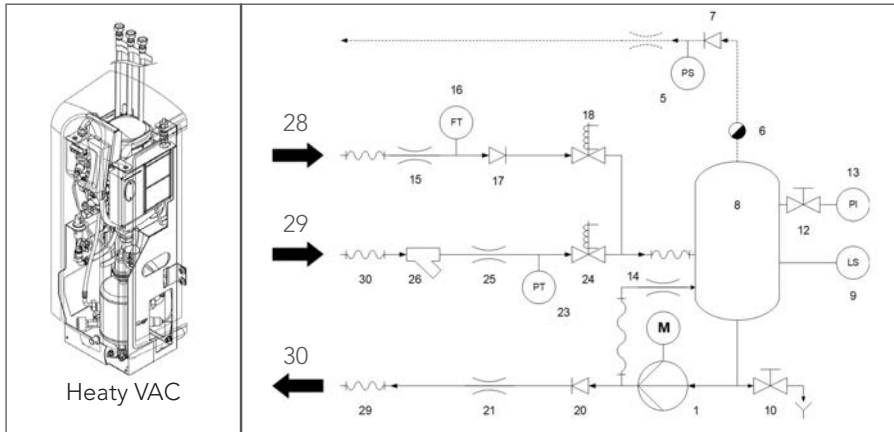
## 2.1 Overview of the unit



- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| 1 Pump                                | 16 Water meter                        |
| 2 Mains terminal                      | 17 Refill shut-off valve              |
| 3 Control unit - mains connection box | 18 Refill solenoid valve              |
| 4 Fuses                               | 19 Vent valve                         |
| 5 SmartSwitch                         | 20 Outlet shut-off valve              |
| 6 Automatic air vent                  | 21 Outlet flow limiter                |
| 7 Air vent shut-off valve             | 22 Control unit (HMI)                 |
| 8 Air vent tank                       | 23 Pressure sensor                    |
| 9 Level switch                        | 24 Solenoid valve                     |
| 10 Drain connection                   | 25 Flow limiter inlet                 |
| 11 Bolt                               | 26 Y-filter                           |
| 12 Valve behind the pressure gauge    | 27 Cover                              |
| 13 Pressure gauge                     | 28 Replenishment connection/ backfeed |
| 14 Bypass flow limiter                | 29 Outlet connection/ VAC output      |
| 15 Flow limiter refill                | 30 Inlet connection/ VAC input        |

## 2.2 Operation

The figure below shows the operation of the unit schematically. The figures correspond to those in the overview illustration on the previous page.



### 2.2.1 General information

The Heaty VAC is a fully automatic vacuum degassing system filled with heat transfer fluids for heating and cooling systems. The liquids contain dissolved and free gases. The Heaty VAC removes these gases from the system and thus prevents problems caused by gases present in the system.

### 2.2.2 Degassing

The unit starts the degassing process daily at a time set by the user. The process consists of two phases:

- 1 Purging phase: the liquid flows from the unit through the solenoid valve (24) into the tank (8). The pump (1) continuously pumps the liquid from the container into the system. Here, the liquid absorbs the gases present in the system.
- 2 Vacuum phase: The solenoid valve (24) closes regularly and thus starts a vacuum phase. The constantly operating pump (1) provides the necessary negative pressure in the container (8). The negative pressure releases the gases dissolved in the liquid and these are collected at the top of the container. At the end of the vacuum phase, the solenoid valve (24) opens again and releases the gases from the system via the automatic deaerator (6). The SmartSwitch (5) on the automatic deaerator ensures that degassing is stopped as soon as the proportion of dissolved gases has reached the minimum level.

### **2.2.3 Refilling**

The Heaty VAC has an integrated refill function and can control the system pressure. For this purpose, the unit fills additional (degassed) liquid into the system as required. Alternatively, the unit can also carry out such topping up at the request of an external system, e.g. add-on systems.

The refilling process consists of a vacuum phase in which fresh liquid is sucked into the container (8): System valve (24) closed, refill valve (18) open. This is followed by a flushing phase in which the system liquid is flushed through the container in order to degas the refill liquid.

The unit can also top up the system in the event of abnormal pressure or complete pressure loss.

## **2.3 Operating conditions**

The unit is suitable for use in systems filled with clean water or mixtures consisting of water and up to 40 % glycol.

Operation in combination with other liquids can lead to irreparable damage.

## **2.4 Remote monitoring**

### **2.4.1 Building management system (GMS)**

The Heaty VAC has a number of external connections for remote monitoring and control.

The device can also be connected to building management systems via the RS485 connection for communication via one of the following bus systems:

- Profinet
- Modbus RTU
- BACnet

### **2.4.2 Internet**

The Heaty VAC control unit can be connected to the Internet either via a LAN cable or an additionally available dongle for WiFi connection. This enables remote monitoring of the system. If there is a connection to the Internet, the Heaty VAC can also be updated with new firmware (if available).

## 2.5 Scope of delivery

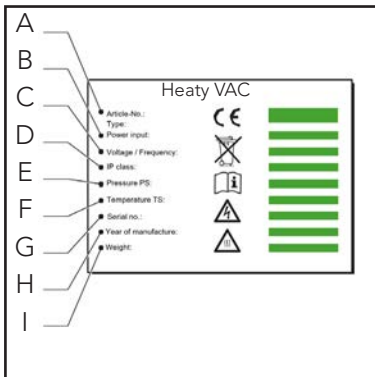
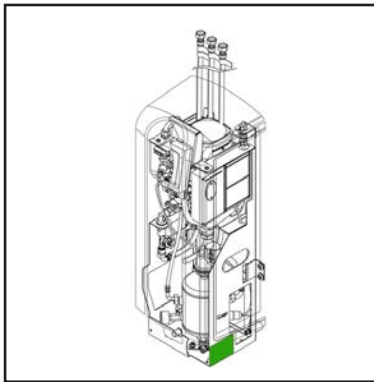
- 1x Heaty VAC
- 1x User documentation
- 1x Flashback arrestor (optional)

## 2.6 CE labelling

The unit is CE labelled. This means that it has been developed, designed and tested in accordance with current health and safety regulations.

Provided that the user manual is followed, the unit can be used and maintained safely.

## 2.7 Type plate



- A Device type
- B Power consumption
- C Mains voltage
- D Protection class
- E System pressure
- F System temperature
- G Serial number
- H Year of manufacture
- I Weight

# 3 Technical specifications

## 3.1 General specifications

Position	Heaty VAC
Unladen weight [kg] approx.	43
Operating noise [dB (A)] at 1 m	55
Liquid connections inlet/outlet	Swivel connection G3/4" female
Liquid connection Refill	Swivel connection G3/4" female

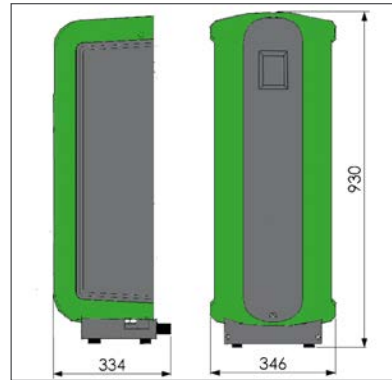
## 3.2 Operating characteristics

Position	Heaty VAC
System pressure [bar]	1 - 4
Processing capacity [l/h]	500
Max. system volume [m3]	175
System temperature [°C]	0 - 90
Ambient temperature [°C]	0 - 40
Refill pressure [bar]	0 - 10
Refill temperature [°C]	0 - 65
Effective refill flow rate [l/h]	200

## 3.3 Electrical specifications

Position	Heaty VAC
	230 V ± 10 % (50 Hz)
Required supply protection [A]	16
Nominal pump voltage [A]	max. 3
Energy consumption [W]	500
Input protection class	IP 44
External contacts: general fault	Voltage-free (NO), max. 24V 1A
External contacts: Boiler interlock	Voltage-free (NO), max. 24V 1A
External contacts: external refill voltage [V]	5
Fuse F1, electrical system [A(M)]	1
Fuse F2, valves [A(T)]	2.5
Fuse F3, pump [A(T)]	10

## 3.4 Dimensions



Height [mm]	Width [mm]	Depth [mm]
1,180	535	570

# 4 Safety

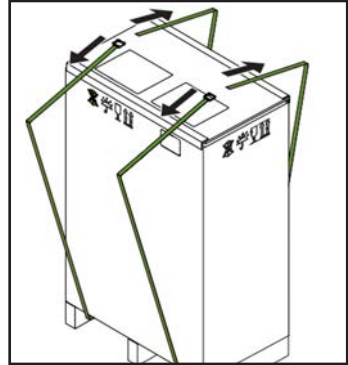
## 4.1 Safety instructions

Safety instructions and further information on safety can be found in the document Safety instructions.

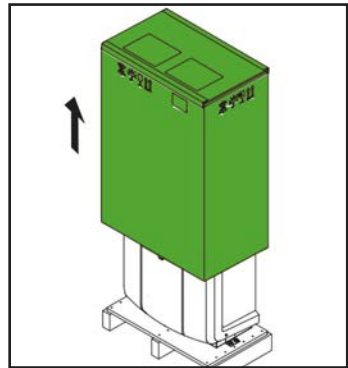
# 5 Installation and commissioning

## 5.1 Installation conditions for the Heaty VAC for fixed installation

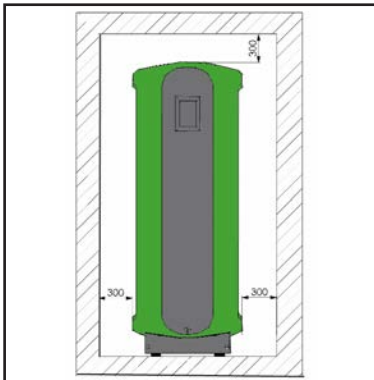
- Install the unit in a frost-free and well-ventilated location.
- The unit must be installed in compliance with local local guidelines and regulations.
- The power supply is connected to 230 V / 50-60 Hz.
- The unit is installed as a bypass on the main main line of the system.
- The unit should preferably be installed at the point in the system point of the system where the temperature is lowest. This is where most of the dissolved gases in the liquid.
- If the system fluid is heavily contaminated, a sludge separator must be installed in the main return line of the system.
- Ensure that the attachment system has the correct dimensions. The water displacement in the unit can cause pressure fluctuations in the system. An additional expansion volume of at least 2 litres must be taken into account. Ensure that the connection of the add-on system is the correct size (diameter at least 3/4"/22 mm).
- The operating unit must always be easily accessible.
- The specified minimum distance for service and repair work must be observed.



1. Remove straps



2. Remove outer packaging.

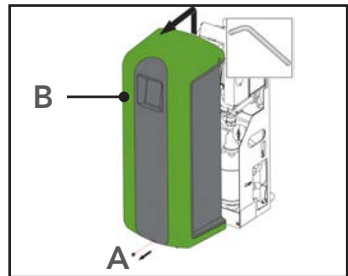


## 5.2 Remove packaging



### WARNING

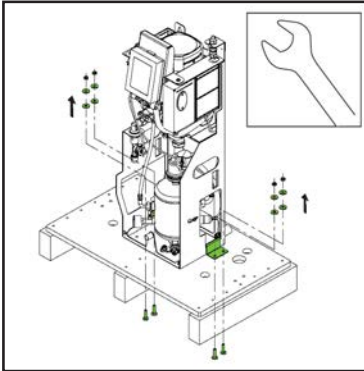
Do not lift the unit to avoid damaging it.



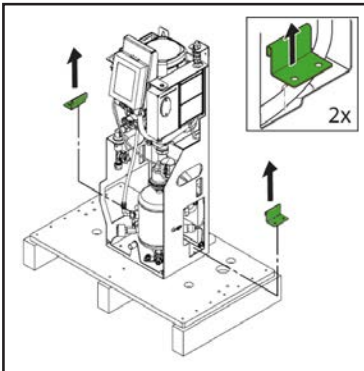
3. Remove the fastening (A).

4. Remove the cover (B) from the unit.

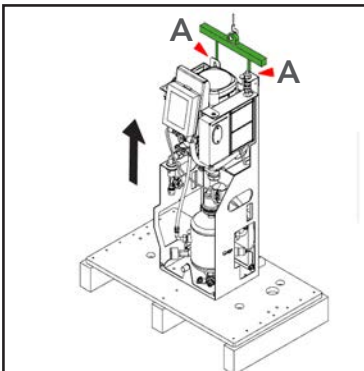




5. Remove the fastenings. Keep these for later use.



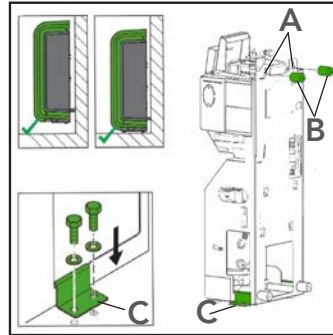
6. Remove the holders. Keep them for later use.



7. Move the unit to the installation location. Lift the unit with a hoist using the holes for wall mounting (A).

## 5.3 Assembly and Installation

### 5.3.1 Assembly

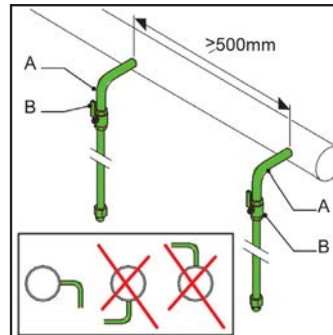


1. Wall mounting: Mount the unit on a flat, closed wall using the holes (A) and spacers (B). Make sure that the bracket can support the filled unit! (empty weight + 3 kg).

2. Floor mounting: Place the unit on a flat surface on a flat, closed wall.

3. The unit can be mounted on the floor. Use brackets and suitable fixings (C).

### 5.3.2 Installation mechanics



1. Provide two branch lines of  $\frac{3}{4}$  inch (A) each on the side of the main transport line.

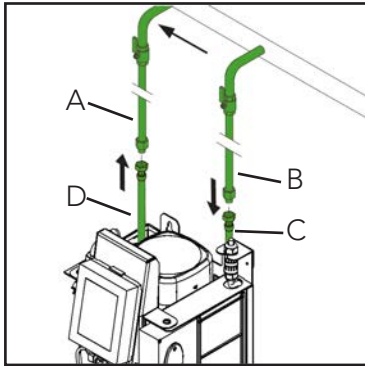
#### NOTE

he distance between these two branch pipes must be at least 500 mm. The inlet of the unit is connected to the first connection point in the direction of flow.

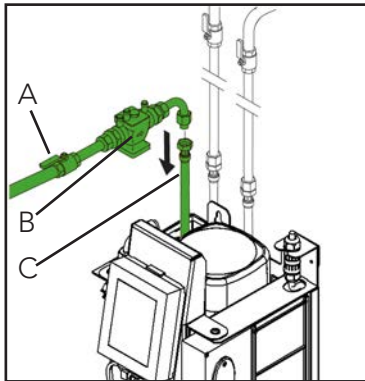
2. Insert a valve (B) into each branch.  
Lockable ball valves are preferable.

**NOTE**

These valves can be used to isolate the unit. The valves must be kept closed until the unit is installed and commissioned. See point 5.4.



3. Connect line (A) to the flexible outlet line (D).
4. Connect line (B) to the flexible inlet line (C).



1. Setzen Sie ein Absperrventil (A) und einen Rückflussschutz, Systemtrenner BA (B) in die Versorgungsleitung Nachfüllflüssigkeit ein (C).

2. Connect the supply line for the treatment water to the refill connection line (C).

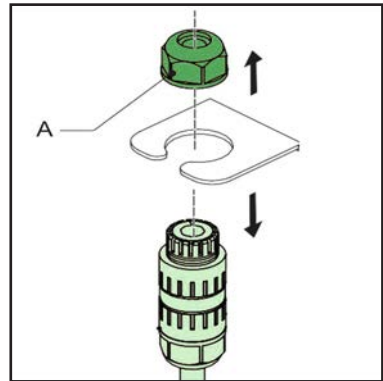
**ATTENTION**

- Use a locally approved return flow protection. This can also be supplied with the unit as an option.
- It must be ensured that the pressure of the feed water is below that of the system pressure.
- The pipes must emerge from the top of the unit. This prevents rapid wear of the hoses.
- It must be ensured that the overflow hose of the feed tank is inside the unit.

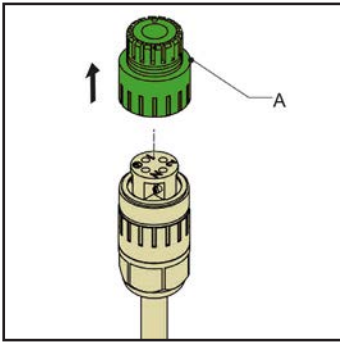
**Electrics**

**ATTENTION**

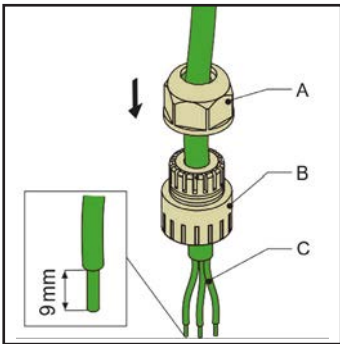
- An earthed wall connection is required to connect the unit to the mains supply. The connection must always be freely accessible.
- The unit must be connected directly to the mains supply using an all-pole main switch (contact opening  $\geq 3$  mm).
- Use supply cables with the correct dimensions.



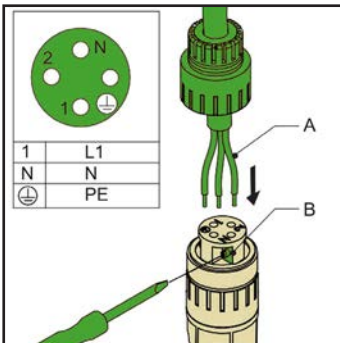
1. Loosen the cable gland (A) and remove the connection from the frame.



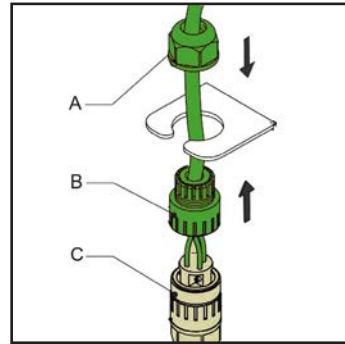
2. Loosen and remove the connection cap (A).



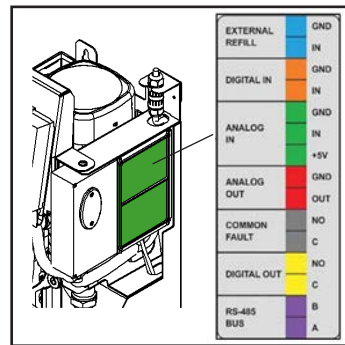
3. Feed a three-core supply cable (C) through the cable gland (A) and the connection cap (B).



4. Loosen the screws (B).
5. Guide the wires (A) into the correct openings of the connector plug.
6. Tighten the screws (B).

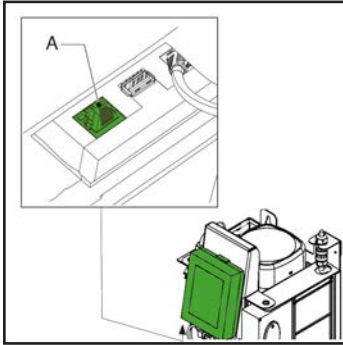


7. Attach the connection cap (B) to the connection piece (C).
8. Place the connection piece back into the frame.
9. Attach the cable gland (A).



Contact	Connector
External refill	Blue
Common error	Grey
Boiler interlock	Yellow
GMS	Purple

10. When using an external contact (external refill, common fault and/or boiler interlock) or a GMS, connect the cables of the external contact or the GMS to the correct connection in the mains connection box (A).



11. Connect the LAN cable to the LAN connection (A) for Internet access.

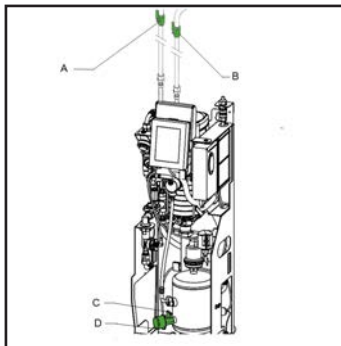


**ATTENTION**

Ensure that the LAN cable does not come into contact with warm parts.

**5.4 Commissioning**

**5.4.1 Filling the unit**



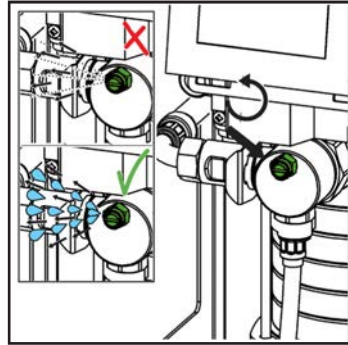
1. Open valve (C) downstream of the pressure gauge (D).
2. Open system valves (A and B).



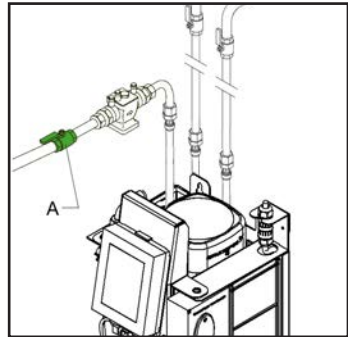
**NOTE**

The following processes start automatically:

- The unit is filled with water.
- Air is released.
- The tank pressure is equalised to the system pressure.



3. To bleed the pump, open the bleed valve.



4. Open the shut-off valve (A) in the refill line.

**5.4.2 Initial start-up**

1. Connect the unit to the mains supply connect



**NOTE**

The touchscreen display starts and guides you through the start-up procedure and all the basic settings required.

For more information on the content of the HMI (user interface), see section 6.1.

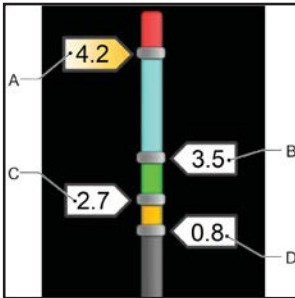
**Select language**

1. Select your preferred language. The pointer shows the selected language.
2. Select the button for the next page (>).

### Setting the date and time

1. Move the wheels of the time display (HH:MM:SS) to the correct time in hours (HH), minutes (MM) and seconds (SS).
2. Move the wheels of the date display (DD:MM:YY) to the correct date with day (DD), month (MM) and year (YY).
3. Select the button for the next page ( > ).
4. Open the valves. See point 5.4.1.
- 5 Bleed the pump. See point 5.4.1.

### Einstellen der Druckniveaus



1. Pull the display for the maximum pressure (A) to the desired maximum pressure.
2. Drag the display for the operating pressure (B) to the desired operating pressure.
3. Drag the display for the refill pressure (C) to the desired refill pressure.

### NOTE

The minimum operating pressure (D) cannot be changed.

4. Select the Confirm button (↵).

### Start the degassing process

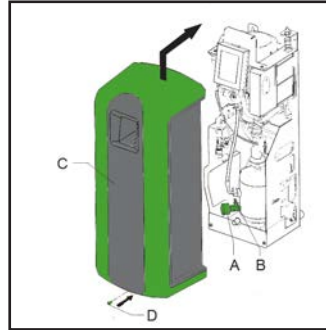
1. Select the degassing button.  
The indicator light for the button switches on.

### NOTE

If the unit is not filled to the minimum operating pressure, the degassing process will not be initiated and you will receive an error message. See point 7.5.

2. Select the Home button to go to the start screen.

### 5.4.3 Check operation



1. Check the pressure gauge display (B). This should alternately display overpressure and underpressure.
2. Close valve (A) behind the pressure gauge.
3. Reattach the cover (C) to the unit and secure it with the screw (D).

### NOTE

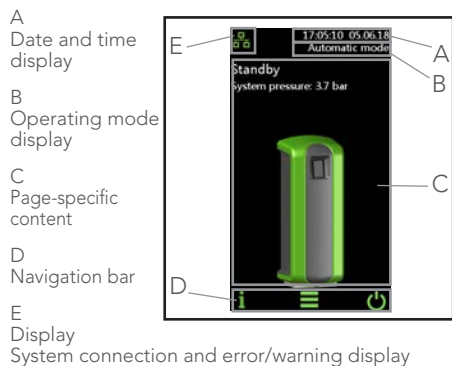
The SmartSwitch switches the unit off automatically when the concentration of dissolved gases has reached the minimum level.

## 6 Operation














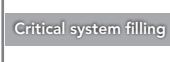
### 6.1 HMI description (user interface)


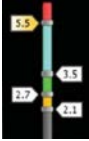
This section provides an overview of the contents of the display.

#### 6.1.1 Screen layout



### 6.1.2 Buttons and displays

Button/Display	Description
	PageOn/Off button
	Menu button
	Information button
	Home button
	Confirm button
	Next page button
	System connection display
	WiFi display
	Error display
	Warning display
	Radio button (not selected)
	Radio button (selected)
	Action button (available)
	Action button (not available)

Button/Display	Description
	Selection wheel
	Range display with movable markings

### 6.1.3 Overview of the pages

Page	Table of contents
Commissioning	On/Off button
Home page	<ul style="list-style-type: none"> <li>- Actual status of the unit, see point 6.1.4</li> <li>- Actual pressure of the system</li> <li>- Drawing of the unit</li> </ul>
Language	Selection of many languages for the display text
Date and time	Selection wheels that display the time (HH:MM:SS) and date (DD:MM:YY)
Desired system pressure [bar]	Range display with labelling: <ul style="list-style-type: none"> <li>- Maximum pressure</li> <li>- Desired operating pressure</li> <li>- Refill pressure (only for units with refill function)</li> <li>- Minimum pressure</li> </ul>
Main menu	Navigation buttons to go to other pages: <ul style="list-style-type: none"> <li>- Language</li> <li>- Operating history</li> <li>- Error history</li> <li>- Operating mode</li> <li>- Operating mode Settings</li> <li>- Software upgrade</li> <li>- Network settings</li> <li>- Manufacturer menu</li> <li>- Help menu</li> <li>- Contact Us</li> </ul>

Page	Table of contents
Work history	<ul style="list-style-type: none"> <li>- Last degassing event</li> <li>- Total degassing time</li> <li>- Last refill event</li> <li>- Total refill time</li> <li>- Volume (in litres)</li> </ul> Older data can be found on the next page.
Fault history	List of errors and warnings that have occurred
Operating mode	<ul style="list-style-type: none"> <li>- Operating mode selection</li> <li>- Automatic mode</li> <li>- Manual operation</li> <li>- Start degassing button</li> <li>- Stop button</li> <li>- Refill (without degassing)</li> <li>- Critical system filling button</li> <li>- Manual stop button</li> </ul>
Operating settings	For settings, see point 6.1.5.
Software upgrade	Only accessible for UWS Technologie GmbH
Network Settings	Network type: DHCP/static
Manufacturer menu	Only accessible for UWS Technologie GmbH
Help menu	<ul style="list-style-type: none"> <li>- Help directory</li> <li>- Unit type</li> <li>- Serial number</li> <li>- Software version</li> </ul>
Contact Us	Contact details

#### 6.1.4 Zustand der Einheit

Page	Table of contents
Switch-off	The unit is switched off
Standby	The unit is in standby mode and is awaiting a start command
Pump test	The pump is working. The system valve remains open
Venting	The unit is degassing
Refilling	The unit is topping up
Manual refill	Top up the unit manually
Stop	System valve opens
Error	Unit has been stopped because a critical error has occurred

#### 6.1.5 Einstellungen

Parameters	Description
Date/time	Current date and time
Automatic venting time 1	Time setting for the daily start and stop of the degassing process.
Automatic venting time 2	Second time setting for the daily start and stop of the degassing process.
Blocking time	Time for stopping the degassing process.
Boiler interlock	External connections/interfaces can be programmed to open in the event of a pressure drop or rise above the critical boiler calorific value. These limits can be set after selecting the „Boiler interlock“ option.
Max. Operating pressure	Pressure at which the unit stops and triggers an alarm. The pressure should be lower than the setting for the system safety valve.
Desired operating pressure	The preferred system pressure.
Refill pressure	The preferred system pressure at which refilling starts. Set this pressure as low as possible if refilling is controlled by an external refilling system.
Refill volume alarm	Maximal zulässige Nachfüllmenge Maximum permitted refill quantity per refill. An alarm is issued if a refill exceeds this threshold. (0 - 2500 litres; 0 = switched off).
Refill time alarm	Maximum, continuous refill duration (0 - 255 min.; 0 = switched off).
Refill frequency alarm	Maximum permitted refills per day (0 - 10 times; 0 = switched off).

## 6.2 Switching on the unit

1. Connect the unit to the mains supply.
2. Touch the touchscreen display.



### NOTE

The start page is shown on the display.

3. Select the Menu button.
4. Select the Settings button
5. Check that the settings are correct.  
Change them if necessary.
6. Select the Home button
7. Select the On/Off button.



### NOTE

The unit is in standby mode.

## 6.3 Changing a setting

1. If you are not on the Settings page, go there.
2. Select the setting you want to change.
3. Change the setting.
4. Select the Confirm button (↵)



### NOTE

The new setting parameter is shown on the display.

## 6.4 Switching off the unit

1. Select the On/Off button.



### NOTE

The unit stops

## 6.5 Operating mode

### 6.5.1 Manual operation

1. Go to the Operating mode page
2. Select Manual operation.
3. Select the Start degassing button.



### NOTE

Each degassing run starts in pump test mode, which is the flushing phase. After 15 seconds, the degassing operating mode appears and the degassing run begins (vacuum phase).



### ATTENTION

Manually started degassing is not controlled by the SmartSwitch or the blocking times.

4. Select the Manual cancellation button, to stop degassing.

## 6.5.2 Automatic mode

1. Go to the page Operating mode
2. Select Automatic Mode.



### NOTE

Der Entgasungsprozess wird jetzt durch den SmartSwitch gesteuert und startet bei der nächsten eingestellten automatischen Entgasungszeit (Auto degass time) erneut. Eine neue Entgasung beginnt immer mit einem Pumpentest, der Teil des Entgasungslaufs ist.

Der Nachfüllprozess hat immer Priorität vor dem Entgasungsprozess. Sobald der Anlagendruck unter die Einstellung für den „Nachfülldruck“ sinkt, beginnt der Nachfüllprozess.

## 6.6 Refilling

The refilling process is automatically controlled by the pressure limit values defined in the settings. The net refill flow rate depends on the pressure of the water supply and the system pressure.

## 6.7 Manual refilling

If the system pressure drops to a value that is below the minimum operating pressure (1 bar), a low pressure warning is issued and the unit asks whether a special refill procedure should be started to bring the system back up to the required refill pressure. During this manual refill run, the pump is switched on and off and the refill valve remains open.

## 6.8 Miscellaneous

- When the unit is connected to the mains supply, the display is shown automatically after touching the screen.
- The display switches off automatically if it has not been touched for 5 minutes.
- The degassing or refilling process is stopped by a stop procedure that ensures that the unit stops in a safe position (overpressure). This stop procedure can take some time (max. 20 sec.).
- If a pump has not been in operation for 96 hours, an automatic pump test is carried out at the start of the next automatic degassing (auto degass time).



# 7

## Error

### 7.1 Troubleshooting



#### WARNING

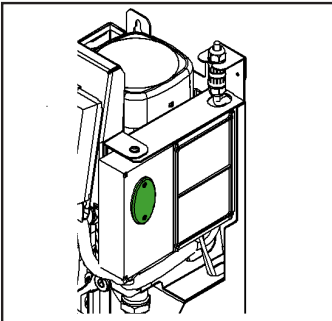
- Always inform the fitter in the event of a fault.
- Before starting repairs, disconnect the unit from the power supply and depressurise it. Information on how to decommission the unit can be found in section 7.3.
- After reopening the isolating valves, always check the system for possible leaks.



- There are hot parts underneath the cover. Allow the unit to cool down before repairing it.

1. Use the troubleshooting table under point 7.5 to find the cause.
2. If necessary, take the unit out of operation. See point 7.3.
3. Rectify the fault.
4. Reset the unit, see point 7.4, or recommission the unit, see point 6.2

### 7.2 Replacing the fuse



#### NOTE

- The electrical specifications can be found under point 3.3.
- Fault codes indicate if fuses F2 and F3 are defective, see point 7.5.

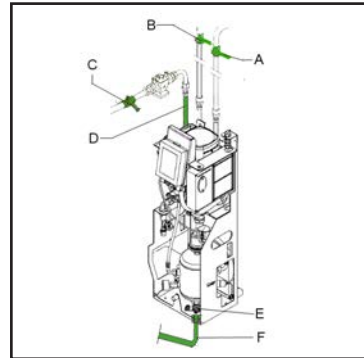
1. Open cover (A).
2. Replace defective fuse.
3. Close the cover.
4. Check whether the fault has been rectified.

### 7.3 Decommissioning



#### WARNING

Ensure that it is not possible to supply the system with power unintentionally.



1. If the unit is switched on, select the on/off button and then „Switch off“ to switch the unit off.
2. Remove the plug from the wall socket.
3. Close the valve on the inlet pipe (A) and the valve on the outlet pipe (B).
4. Close the valve (C) in the refill supply line (D).
5. Connect the drain line (F) to the drain connection (E).
6. Empty the unit via the drain connection.
7. Open the bleed screw on the main pump to drain the unit completely. See illustration under point 5.4.1

### 7.4 Resetting the unit

1. When the error or warning message is displayed, select the CLEAR FAULT button.



#### NOTE

The CLEAR FAULT button can only be selected if it lights up yellow. If the button is grey, the fault must first be rectified.

## 7.5 Fault table

The figures correspond to the main illustrations under points 2.1 and 2.2. An overview of the spare parts can be found under point 8.2.



### NOTE

If the Heaty VAC continues to run for only 10 minutes per event, please check the hose connection of the SmartSwitch.



### NOTE

Errors and warnings are shown on the unit's display as Exx or Wxx, where xx stands for a problem (abnormal behaviour). The following tables contain an overview of problems, possible causes and possible solutions. Some problems (warnings) disappear automatically as soon as the cause is eliminated. In some problems, the unit is completely blocked. In some situations, degassing is blocked, but refilling is still active. In other situations, refilling is blocked, but degassing is still active.

### Allgemein - Heaty VAC

Problem	Possible cause	Correction
W1 Pressure too low	Error during installation	Make sure that the system pressure is above 2.5 bar.
	Leak in the system	Repair the leak.
	Inlet valve is closed	Open the valve.
	Pressure sensor (12) is defective	Replace pressure sensor.
W2 Pressure is too high	Error in the installation	Ensure that the system pressure is below the maximum pressure setting.
	Maximum pressure setting is too low	Increase maximum pressure setting.
	Pressure sensor (12) is defective	Replace pressure sensor.
W7 / E7 Level in tank too low (too little liquid)	Inlet valve is closed	Open the valve.
	Automatic air vent (4) is defective	Replace automatic air vent.
	Liquid is not conductive.	Contact your fluid supplier.
E19 Pressure sensor out of range	Faulty connection	Repair the connection.
	Pressure sensor (12) is defective	Replace pressure sensor.
E20 Fuse 2 defective	The fuse is defective	Replace fuse.
E21 Fuse 3 defective	The fuse is defective	Replace fuse.
W31 / E31 Filling time too long	Inlet valve is closed	Open the valve.
	Inlet pipe is (partially) blocked	Remove blockage.
	The filter (13) is clogged	Clean filter element.

**Allgemein - Heaty VAC**

Problem	Possible cause	Correction
W32 Pressure drop at inlet too high	Inlet valve is closed	Open the valve.
	Inlet is (partially) blocked	Remove the blockage.
	The filter (13) is clogged	Clean the filter element.
	The fine filter on the back is clogged	Replace filter element.
W33 / E33 Pressure drop at inlet too low	Outlet valve is closed	Open the valve.
	Outlet pipe is (partially) blocked	Remove the blockage.
	Solenoid valve (11) does not open	Replace (part of) the solenoid valve.
	Pump is not working	Check pump and pump fuse. Replace if necessary. See point 7.2.
W34 Problem with the SmartSwitch	The SmartSwitch (3) is defective	Replace SmartSwitch.
E36 Problem with the shut-off valve	Check the valve at the air outlet (5)	Replace valve if necessary.
E37 Pressure repeatedly too high	System incompressible	Check attachment system.
W38 Pressure rise too high	System incompressible	Check the attachment system.
W10 / E10 Refill flow too low	A valve in the refill inlet line is closed	Open valve.
	Solenoid valve (24) does not open	Replace (part of) the solenoid valve.
	Refill line is blocked	Remove blockage.
	Flowmeter (26) is defective	Replace flowmeter.
W11 / E11 Refill valve open	Solenoid valve (24) for refilling remains open	Replace or clean solenoid valve (or part of it).
W13 Refill: too frequent	Leak in the system	Repair leak.
	Interaction with some attachment systems	Check settings (max. freq. / max. dp).
W14 Refill: too long	Leak in the system	Repair leak.
	Large installation	Check settings Max. refill time.
W15 Refill: too much	Leak in the system	Repair leak.
	Large installation	Check settings Max. refill volume.
W24 Low level in the inlet tank	Inlet valve is closed	Open valve.
	Inlet is blocked	Check and clean inlet.
	Float valve is defective	Check or replace float valve.



## Maintenance



### NOTE

Ordnungsgemäße und regelmäßige Wartung stellt die korrekte Funktionsweise sicher und maximiert die Lebenserwartung sowie den fehlerfreien Betrieb der Einheit und der Anlage.

### 8.1 Regular maintenance

1. Inspect and clean the filter element (26) regularly.
2. Replace the automatic air vent (6) every two years.
3. Replace the inside of the solenoid valve (24) every year.
4. Replace the fine filter from the rear every 6 months.

### 8.2 Flushing the Heaty VAC

To flush a Heaty VAC, proceed as follows:

- Connect the system separator to the drinking water tap and set to 2 bar pressure
- Connect the system separator outlet to the VAC inlet (30)
- Connect the second hose to the VAC outlet (29) and close the outlet tap
- Make the pressure settings as follows:
  1. Max. system pressure 3 bar
  2. Required system pressure 2 bar
  3. Replenishment from 0.9 bar
- Pressurise the Heaty VAC
- Switch to manual mode in the menu and start the process
- As soon as the pump starts, open the outlet tap slightly, the pressure in the display should not fall below 1.3 bar
- The rinsing process should run for at least 25 minutes

After rinsing the appliance, the make-up connection must be rinsed for at least 10 minutes.

- Connect the system separator to the drinking water tap and set to 2 bar pressure
- Connect the system separator outlet to the VAC replenishment (28)
- Connect the second hose to the VAC outlet (29)
- Select and start „Fill system“ in the menu

### 8.3 Spare parts

The figures correspond to the main illustrations under point 2.1.

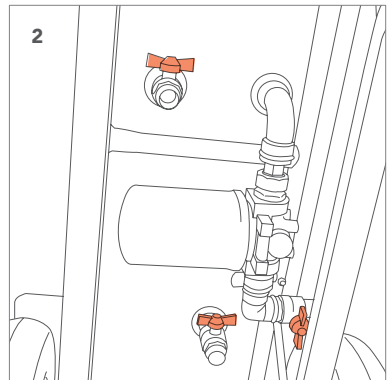
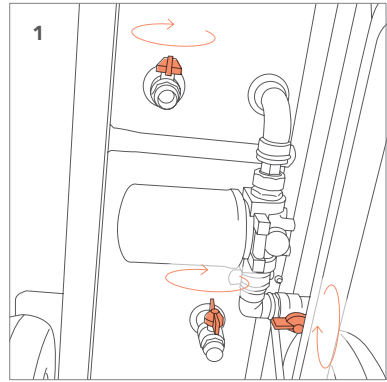
Main item		Spare part
Pump	1	Pump, 50 Hz
	1	Condenser, 50 Hz
	1	Gasket set
Frame and cover	27	S400 cover
Control unit	3	HV box
	22	Brain
	-	Connection for HV Box
	-	WiFi dongle (USB)
	-	Fuse set
Pump	1	Pump, 50 Hz

Main item		Spare part
Cable	-	Cable set - simple wiring harness
	-	Cable harness - additional cable harness Refilling
Inlet tank	-	Feed tank assembly
	-	Float valve
	-	Float switch
Automatic deaerator	6	Automatic air vent
	7	Shut-off valve including O-ring, air vent
	5	SmartSwitch
Inlet	26	Filter element
	25	Inlet flow limiter
	23	Pressure sensor
	23	Pressure sensor Spacer
	24	Solenoid valve - internal parts
		Solenoid valve - coil
Outlet	20	Shut-off valve including O-ring, outlet
	20	Flow limiter
	20	House limit switch
Refill line	16	Flow sensor
	15	Flow limiter Refill
	17	Non-return valve
	18	Solenoid valve - internal parts
	18	Solenoid valve - coil
Fill level sensor	9	Fill level sensor
Hoses	30	Inlet hose (system to unit)
	29	Outlet hose (unit to system)
	28	Inlet tank Refill inlet hose (B versions)
	28	Refill inlet hose Main connection (R versions)
	-	Hose inlet to tank
	-	Hose inlet to tank - refilling
	-	Hose outlet on container
	-	Hose inlet for refilling
Miscellaneous	-	- O-ring EPDM 17 x 1.5 - O-ring EPDM Ø13 x 1 - O-ring EPDM Ø33 x 22
		- Seal 3/8 inch - Seal 3/4 inch - Seal 1/2 inch

## 8.4 Filter change for the Heaty VAC

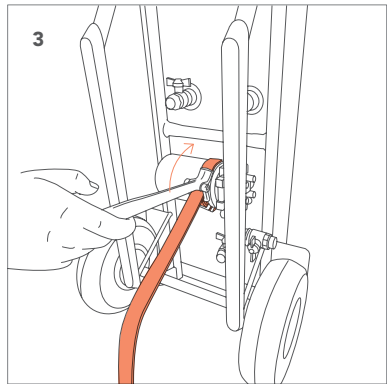
**Fig. 1+2**

Close all three red taps  
(picture 1 taps open, picture 2 taps closed).



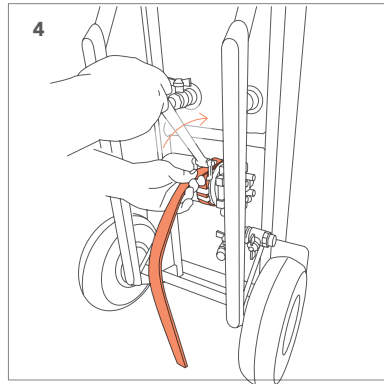
**Fig. 3**

Place the spanner around the filter.



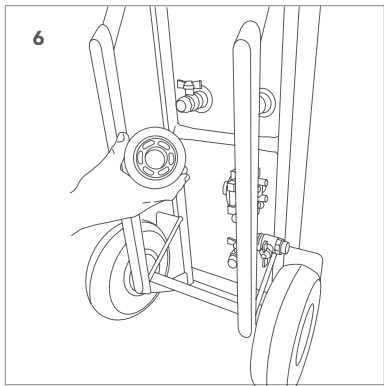
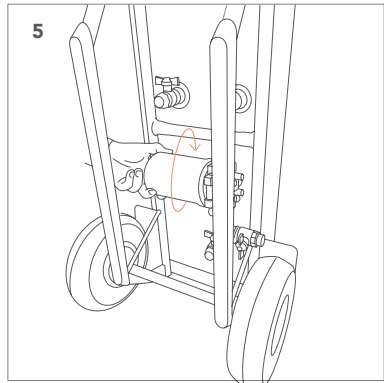
**Fig. 4**

Turn the spanner anti-clockwise.



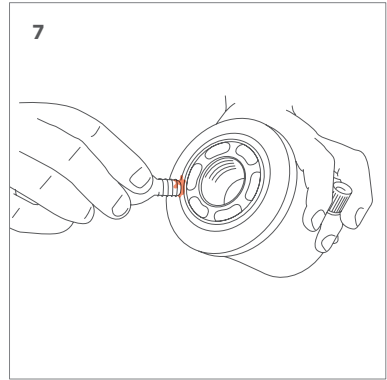
**Fig. 5+6**

Unscrew the filter by hand.



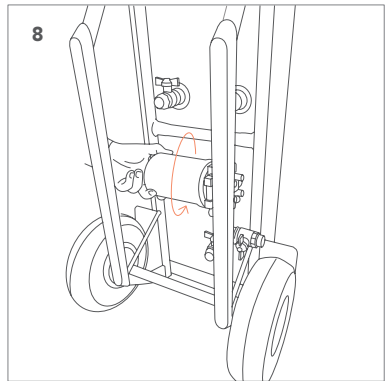
**Fig. 7**

Grease the new filter before fitting.



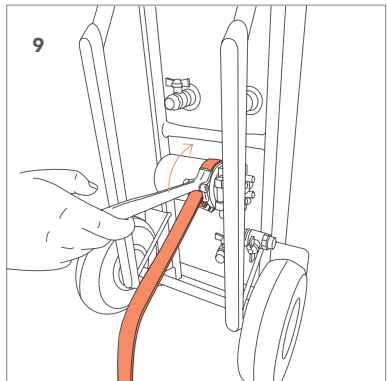
**Fig. 8**

Tighten the new filter hand-tight by hand.



**Fig. 9**

If it drips, tighten the filter more firmly with the spanner







## 8.5 Maintenance card

Type:

Serial number:

Date of installation:

Installed by (company):

Installed by (technician):

Inspection date:	Technician	Initials
Type of maintenance:		

Inspection date:	Technician	Initials
Type of maintenance:		

Inspection date:	Technician	Initials
Type of maintenance:		

Inspection date:	Technician	Initials
Type of maintenance:		

Inspection date:	Technician	Initials
Type of maintenance:		

Inspection date:	Technician	Initials
Type of maintenance:		

# 9 Warranty

## 9.1 Warranty conditions

- The statutory warranty provisions apply.
- The warranty is void in the event of incorrect installation, improper use and/or repair attempts by unauthorised personnel.
- Consequential damage is not covered by this guarantee.

# 10 CE Declaration



## CE Declaration of Conformity

Company: UWS Technologie GmbH  
Address: Sudetenstraße 6  
D - 91610 Insing

technically represented by the managing director Steffen Breitmoser, declares that the vacuum de-gasser Heaty VAC complies with all relevant requirements of the following European Directives:

Machinery Directive 2006/42/EG  
Low Voltage Directive - 2014/35/EC EMC Directive - 2014/30/EU  
Pressure Equipment Directive - PED 2014/68/EU  
RoHS Directive 2011/65/EU

The following harmonised and national standards have been applied :

EN 12100: 2010  
EN 60730-1: 2012  
EN 60204-1: 2006  
EN 60335-1: 2012  
EN 61000-3-2: 2014  
EN 61000-3-3: 2013  
EN 61000-6-2: 2005  
EN 61000-6-3: 2007

A handwritten signature in black ink, appearing to read 'Steffen Breitmoser', is written over a horizontal dotted line.

Steffen Breitmoser  
Managing Director UWS Technologie GmbH

Insing, December 2020

# OUR WATER. SAFE.

Your contact:

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Version 2.0, Edition 03/2024

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