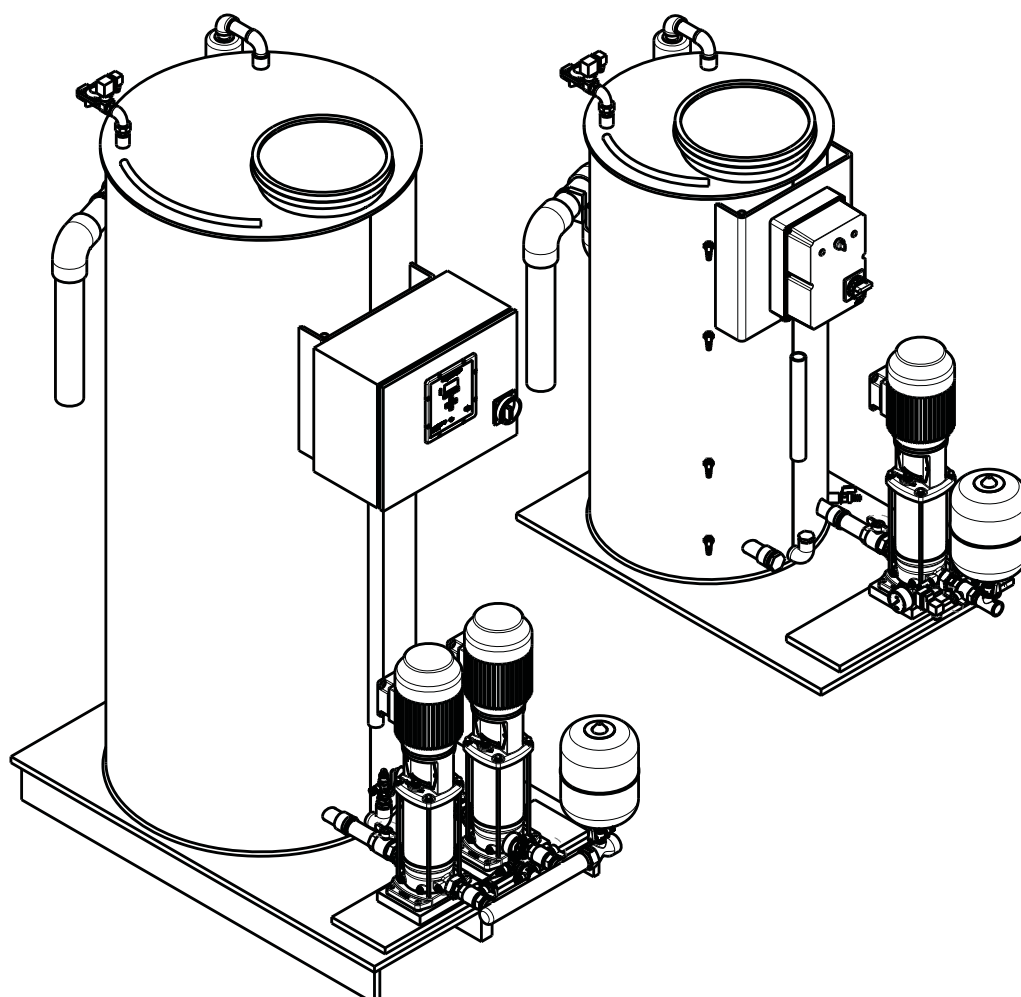


# Break units

User and operating instructions  
series: Break unit - DW



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# 1 Introduction

## 1.1 Preface

This manual contains important information for reliable, proper and efficient operation. Compliance with the operating instructions is of vital importance to ensure reliability and a long service life of the product and to avoid any risks.

The first chapters contain information about this manual and safety in general. The following chapters provide information about normal use, installation, maintenance and repairs of the product. The annex contains the declaration(s) of conformity.

- Make yourself familiar with the content.
- Accurately follow the directions and instructions.
- Never change the sequence of the operations to be carried out.
- Keep this manual or a copy of it together with the logbook in a fixed place near the product which can be accessed by all personnel.

## 1.2 Icons and symbols

In this manual and in all accompanying documentation the following icons and symbols are used.



**WARNING**  
Danger of electric tension. Safety indication for IEC 417 - 5036.



**WARNING**  
Operations or procedures that, if carried out without caution, may lead to personal injury or damage to the product. General hazard indication for ISO 7000-0434.



**ATTENTION**  
Is used to introduce safety instructions non-observance of which may lead to damage to the product and its functions.



**ENVIRONMENTAL INSTRUCTION**  
Remarks with respect to the environment.



**READ THE (SUPPLEMENTARY) DOCUMENTATION**  
Read the user and operating instructions.



**WEEE MARKING**  
Marking of electrical and electronic equipment in accordance with Article 15(2) of Directive 2012/19/EU.



**Look / recognise the product**  
**Visual inspection**  
**Point of attention**

## 2 Identification, service and technical support

### 2.1 Identification, service and technical support

The identification sticker mentions the type/size, the main operating data and the serial number. Please mention these data in all queries, repeat orders and particularly when ordering spare parts. If you need any additional information or instructions not included in this manual or in case of damage, please contact the nearest customer service centre of dp pumps.



Figure 1: Example: Identification sticker

Table 1: Explanation of the sticker

Indication		Meaning
	HUV2DPVE6/2 B	Installation type
	DPC DOL <sup>1</sup>	Type of controller and start-up method
ID	HB226807DB6Y	Item number
Prod.	11/2018 123456-01	Production week/year and number
RDP	PT	Type of run-dry protection
U	1X230V	Required power supply voltage
F	50Hz	Required power supply net frequency
I <sub>max</sub>	13.04A	Maximum absorbed current of the installation
PN	PN10 HDPE 200 I (AF)	Pressure class of the installation and construction type
IP	IP54	International Protection class
PO	1234567	Purchase number

1. RWR stands for Rainwater Harvesting.

The following address data are available for service and technical support:

Table 2: Address service department

dp pumps Kalkovenweg 13 2401 LJ Alphen a/d Rijn The Netherlands	Tel: +31 172 488388 Internet: <a href="http://www.dp-pumps.com">www.dp-pumps.com</a> E-mail: <a href="mailto:dp@dp-pumps.com">dp@dp-pumps.com</a>
--	---

### 2.2 Supplementary documentation

Apart from this manual, the documentation given below is available as well:

Table 3: Supplementary documentation

Document	Code
General terms of delivery	119 / 1998
Documentation	97013511
pump manual	BE00000377

# 3 Warranty

## 3.1 Terms of warranty

The warranty period is settled by the terms of your contract or at least by the general terms and conditions of sales.



### ATTENTION

**Modifications or alterations of the product supplied are only permitted after consultation with the manufacturer. Original spare parts and accessories authorized by the manufacturer ensure safety. The use of other parts can invalidate any liability of the manufacturer for consequential damage.**



### ATTENTION

**The warranty relating to the operating reliability and safety of the product supplied is only valid if the product is used in accordance with its designated use as described in the following sections of this manual. The limits stated in the data sheet must not be exceeded under any circumstances.**

The warranty becomes invalid if one or more of the points below occur.

- The buyer makes modifications himself.
- The buyer carries out repairs himself or has these carried out by a third party.
- The product has been handled or maintained improperly.
- The product has non original dp pumps spare parts fitted.
- Dry running of the pump.

dp pumps repairs defects under warranty when:

- They are caused by flaws in the design, the material or the production.
- They are reported within the warranty period.

Other terms of warranty have been included in the general terms of delivery, which are available upon request.

# 4 Safety and environment

## 4.1 General

This dp pumps product has been developed using state-of-the-art technology and is manufactured with utmost care and is subject to continuous quality control.

dp pumps does not accept any liability for damage or injury caused by not following the directions and instructions in this manual or by carelessness during the installation, use or maintenance of the product.

Non-compliance with the safety instructions can jeopardize the safety of personnel, the environment and the product itself. Non-compliance with these safety instructions will also lead to forfeiture of any and all rights to claims for damages.

Non-compliance can result in:

- failure of important pump/system functions,
- failure of prescribed maintenance or service,
- injury caused by electrical, mechanical and chemical effects,
- leakage to the environment of hazardous substances,
- explosions.

Depending on the application, extra safety measures may be required. Contact dp pumps if a potential danger arises during use.



### ATTENTION

**The owner of the product is responsible for compliance with the local safety regulations and internal company guidelines.**



### ATTENTION

**Not only must the general safety instructions laid down in this chapter on "Safety" be complied with, but also the safety instructions outlined under specific headings.**



### ATTENTION

**Persons and/or children who are not qualified to do work on the product should only have access to the product under the supervision of a properly trained person.**

## 4.2 Users

All personnel involved in the operation, maintenance, inspection and installation of the product must be fully qualified to carry out the work involved and be aware of all applicable responsibilities, authorisations and supervisions. If the personnel in question is not in possession of the required know-how, appropriate training and instruction must be provided. The operator may require the manufacturer/supplier to provide sufficient training and/or instructions. The operator is responsible for ensuring that the contents of the operating instructions are fully understood by the responsible personnel.

## 4.3 Safety provisions

The product has been designed with the greatest possible care. Original parts and accessories meet the safety regulations. Modifications in the construction or the use of non-original parts may lead to a safety risk.



### ATTENTION

**Make sure that the product operates within its working range. Only then the product performance is guaranteed.**

### 4.3.1 Labels on the product

The icons, warnings and instructions applied to the product are part of the safety provisions. The labels may not be removed or covered. Labels must remain legible during the entire life of the product. Replace damaged labels immediately.

## 4.4 Safety precautions

### 4.4.1 During normal use

- For questions regarding the power supply contact the local electricity company.
- Isolate possible hot parts to avoid injury through direct contact.
- For your safety always assemble undeformed coupling guards (when applicable) before putting the pump into use.
- Always close the terminal box of the motor.
- Always close the control panel where applicable

#### 4.4.2 During installation, maintenance and repair

Only authorised personnel may install, maintain and inspect the product and repair electrical components. Observe the local safety regulations.



**WARNING**  
Before proceeding with any installation, maintenance or repair, disconnect the power supply and secure this disconnection.



**WARNING**  
Surfaces of a pump can be hot after continuous or intermittent operation.



**WARNING**  
Secure the area before starting a pump to avoid hazardous situations with rotating parts.



**WARNING**  
Take utmost care when handling dangerous liquids. Avoid danger to persons or the environment when conducting repairs, draining liquids or venting. It is strongly recommended to place a leakage tray under the pump.



**WARNING**  
Immediately after completing the work, all safety-relevant and protective devices must be re-installed and / or re-activated.



**WARNING**  
Please observe all instructions set out in the chapter "Commissioning" before returning the product to service.

#### 4.5 Return to supplier

- Drain the pressure booster system as per operating instructions.
- Always flush and clean the pressure booster system, particularly if it has been used for handling noxious, explosive, hot or other hazardous fluids.
- If the pressure booster system has handled fluids whose residues could lead to corrosion damage in the presence of atmospheric humidity or could ignite upon contact with oxygen, the pressure booster system must also be

neutralised, and anhydrous inert gas must be blown through the pressure booster system to ensure drying.

- Always complete and enclose a certificate of decontamination when returning the pressure booster system, see chapter 12.5 Certificate of Decontamination.  
Always indicate any safety and decontamination measures taken.



**ATTENTION**  
If required, a blank certificate of decontamination can be downloaded from the web site at: [www.dp-pumps.com/certificates-of-decontamination](http://www.dp-pumps.com/certificates-of-decontamination)

#### 4.6 Environmental aspects

##### 4.6.1 General

The products of dp pumps are designed to function in an environmentally friendly way during their entire lifetime. Therefore, when applicable, always use biodegradable lubricants for maintenance.



**ENVIRONMENTAL INSTRUCTION**  
Always act according to the laws, by-laws regulations and instructions with respect to health, safety and the environment.

##### 4.6.2 Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see [www.dp-pumps.com/reach](http://www.dp-pumps.com/reach).

##### 4.6.3 Dismantling

The owner is responsible for the dismantling and environmentally friendly disposal of the product.



**ENVIRONMENTAL INSTRUCTION**  
Ask at the local government about the re-use or the environmentally friendly processing of discarded materials.





**WEEE MARKING**

Electrical or electronic equipment marked with the adjacent symbol must not be disposed of in household waste at the end of its service life. Contact your local waste disposal partner for returns. If the used electrical or electronic equipment contains personal data, the operator is responsible for deleting it before the equipment is returned.

# 5 Introduction

## 5.1 General

### 5.1.1 HUV1 DW relay control DOL

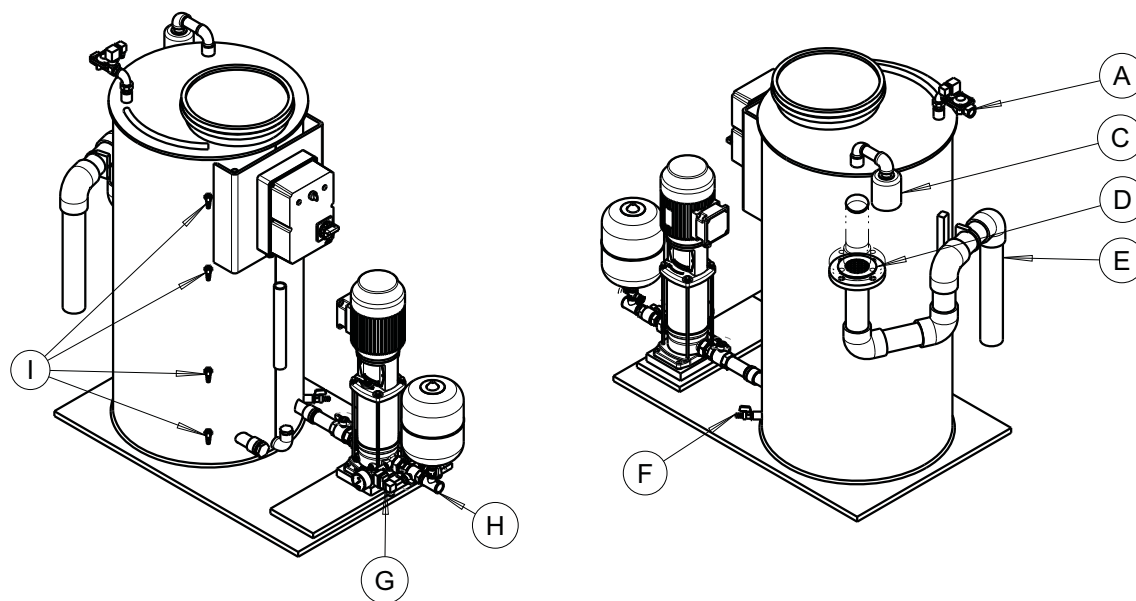


Figure 2: Installations of the type HUV1 DW relay control DOL

Table 4: Pos. numbers figure 2

Pos. no.	Description
A	Supply solenoid valve for potable water
B	-
C	Bacteriological air filter
D	Sieve pack insect gauze
E	Overflow siphon trap
F	Drain tap
G	Pressure switch head 3 m differential
H	Discharge connection G 1 BI PN10/16 AISI304
I	Level electrode

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### 5.1.2 HUV2 DW Megacontrol DOL

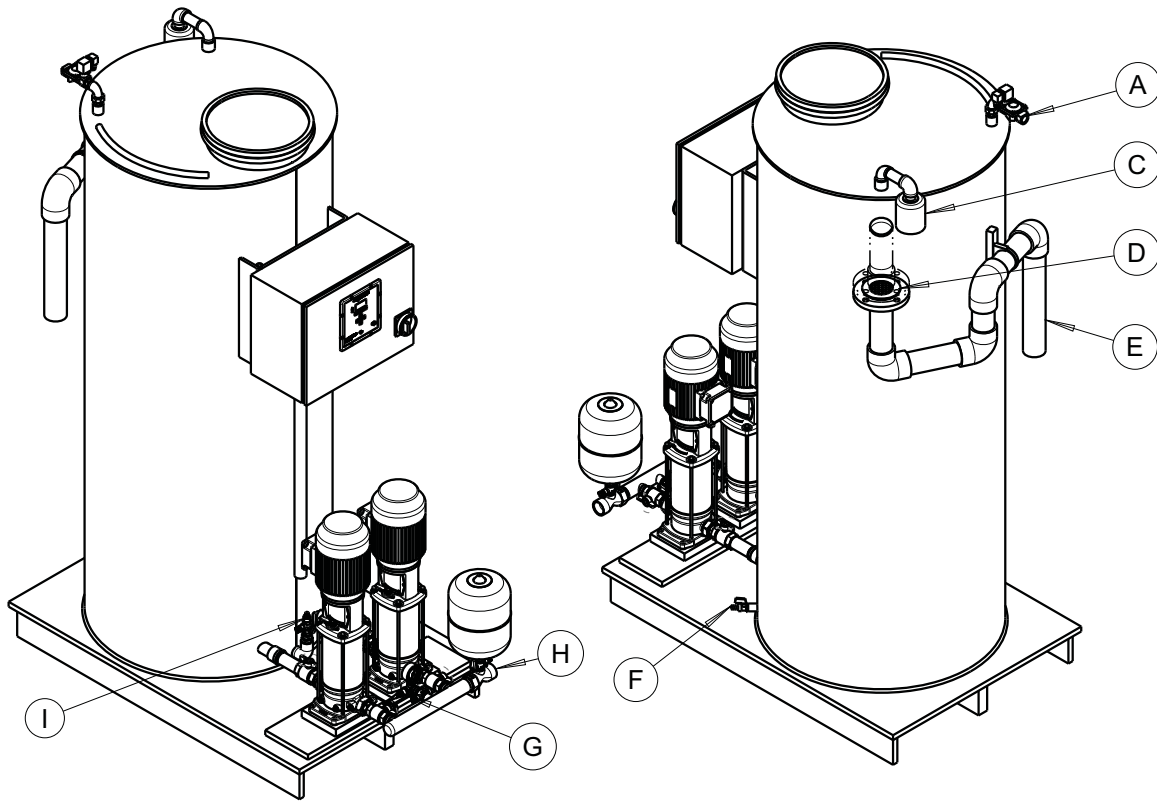


Figure 3: Installations of the type HUV 2 DPVE DW MC DOL

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Table 5: Pos. numbers figure 2

Pos. no.	Description
A	Supply solenoid valve for potable water
B	-
C	Bacteriological air filter
D	Sieve pack insect gauze
E	Overflow siphon trap
F	Drain tap
G	Pressure switch head 3 m differential
H	Discharge connection G 6/4 BI PN10/16 AISI304
I	Pressure transmitter 0 ... 0.2 Bar 4-20 mA

The installations HUVHUV1 1/2 DPVE DW are produced in dp pumps, Alphen aan den Rijn.

## 5.2 Intended use

The installation break unit is suitable for increasing the pressure in (process) water installations and for pumping liquids with a viscosity identical to the

viscosity of water, within the indicated working range. The installation break unit is set up in order to prevent water from flowing back from the system into the water mains. The waterworks makes a break unit compulsory in accordance with EN 1717 and EN 13077 (AB), if the water user works with substances that are dangerous to public health. For checking the process liquid we refer to EN 1717 and EN 13077. The constructive design requirements for the reservoir have been tested by EN 1717 and EN 13077.

Any other or further use of the installation is not in conformity with its intended use. dp pumps does not accept any liability for any damage or injury resulting from this. The installation has been produced in accordance with the actual standards and guidelines. Use the installation exclusively in a perfect technical state, in conformity with the intended use described below.

The *Intended use* as laid down in ISO 12100:2010 is the use for which the technical product is intended according to the specifications of the manufacturer.

The use of the product has been described in the available documentation and information. Always observe the instructions as given in the installation and operating instructions. When in doubt the product must be used as becomes evident from its construction, version and function.

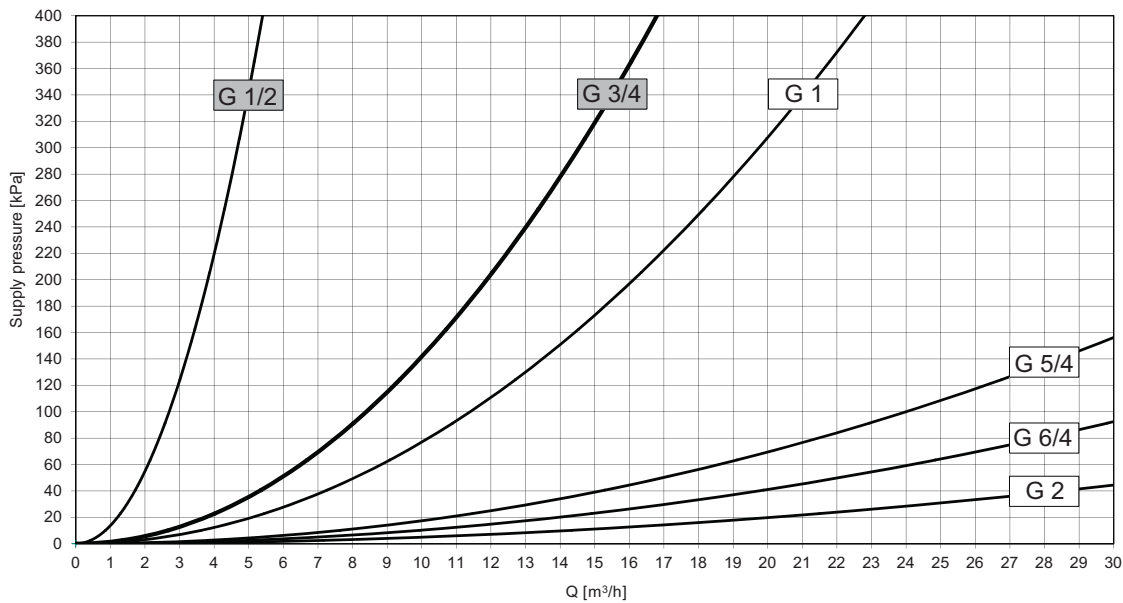
### 5.3 Working range

The working range of the installation can be summarised as follows:

Table 6: Specification of the working range

Type	break unit
Ambient temperature [°C]	+4 to 30
Liquid temperature [°C]	+4 to 40
Maximum operating pressure [kPa]	1000
Minimum supply pressure [kPa]	30 (on solenoid valve)
Maximum supply pressure [kPa]	250 (on solenoid valve) <sup>1</sup>
Pressure class	PN10
Minimum conductance of medium	100 µS
Maximum height	1000 m above sea level

1. The supply and discharge capacities of the installation have been explained for a maximum pre-pressure on the solenoid valve of 250 kPa. In case of higher pre-pressure values, the discharge capacity may be insufficient. This high pre-pressure will also cause problems with water hammer and incorrect filling of the reservoir. Also see figure: Diagram for passage of the solenoid valve. ADVICE: use a pressure reducing valve to reduce the increased pressure.



12 Figure 4: Diagram for passage of the solenoid valve / supply valve

Table 7: Specific applications

Type	application area
break unit	(Drinking) water supply systems, irrigation systems, water treatment systems, car-wash systems, sprinkler systems and discharge of condensed water.

## 5.4 Functioning

### 5.4.1 Standard operation

The required system pressure is sensed by a pressure sensor on the outlet side of the installation.

When as a result of a decreasing water volume the pressure drops below the switch-on pressure, a pump will be switched on. For fixing the pressure set point see: "Fixing the pressure set point".

When the required system pressure has been reached, the pumps are switched off one at a time. The switch-off delay is optimized constantly, which results in a considerable energy saving.

### 5.4.2 Number of operating hours per pump

The current number of operating hours of a pump determines which pump will be switched on or off next. The pump with the fewest operating hours will be switched on first and the pump with the most operating hours will be switched off first. This makes sure that all pumps have an equal number of operating hours, including the backup pump.

### 5.4.3 Test run

In order to prevent pumps from standing still for a longer period of time, an automatic test run procedure is provided as a standard.

### 5.4.4 Custom made settings

The service port provides access to the parameters of the program which can be used to optimize the functionality of the installation, (see: "manual DP-Control").



#### **WARNING**

**For access to the parameters of the program using the service port, always use the special service port cable!**

The special service port cable (Art. nr. 6147117698) can be ordered separately.

### 5.4.5 Functioning 1/2 (option)

In combination with the DPVE DW, the 1/2 can generate a failure message when, during a (adjustable) period of time, insufficient refreshment of the membrane switch vessel occurs.

The failure message is generated when:

- Insufficient refreshment occurs;
- The membrane of the membrane switch vessel is defective;
- There is no air left in the membrane switch vessel;
- The installation is not set / installed correctly.

### 5.4.6 Temperature-sensor (option)

When the DPVE DW is fitted with a temperature sensor, it can generate a temperature-dependent failure message.

# 6 Transport

## 6.1 Transport



### WARNING

Lift the installation using a hoist and suitable slings. Attach the slings to the hoisting eyes, where present. Never lift the installation from the manifolds.



### WARNING

The installation must be hoisted according to the current hoist guidelines. Only qualified personnel are allowed to hoist the installation.

Always observe the directions as indicated on the installation by means of stickers.



Figure 5: Piping label

1. Transport the installation in the position as indicated on the pallet or packaging.
2. Make sure that the installation is stable.
3. Observe the instructions on the packaging (if present).

## 6.2 Storage

### 6.2.1 Preparations for storage

1. Protect the system against the risk of frost.
2. Store the installation in a frost-free environment.
3. Place the installation in the position as indicated on the packaging.
4. When applicable: Keep the vessel under pressure (1/2 bar).

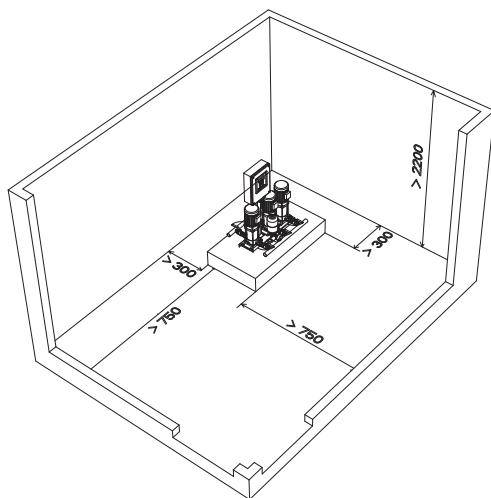
### 6.2.2 Inspection during storage

1. Turn a shaft every three months<sup>1</sup>. This protects the seals from seizure.
2. After a storage period of six months or longer, inspect the installation before using it again.

- 
1. period may vary per application or medium. Please consult your sales representative for application details.

# 7 Installation

## 7.1 Set up the system



Preferably set up the system<sup>2</sup> stand-alone in an area that has at least the following properties:

Item	Requirements
Area	<ul style="list-style-type: none"> <li>Clean, dry, frost-free, cool<sup>1</sup> and ventilated, and can be provided with light;</li> <li>The surface must be large enough for easy access to the installation.</li> <li>The height of the installation area must meet the minimum requirements.</li> <li>The layout must be such (&gt; 2200 mm), that any released water can be discharged without causing any inconvenience.</li> </ul>
Foundation	<ul style="list-style-type: none"> <li>The system must be free from the walls.</li> <li>The ground must be smooth and level.</li> <li>The foundation must be large enough to carry all.</li> </ul>

- Cool is defined as a temperature of between 4 °C and 25 °C, and preferably lower than 20 °C.

The installation area must be in conformity with EN 1717 and EN 13077 - chapter 'installation areas'.

- Connect the supply pipe to the filling device of the installation (solenoid valve)

- The model of the installation may differ from the installation in the figure



### ATTENTION

The last metre may not have a diameter larger than the connecting diameter of the supply of the installation.

- Connect the discharge pipe to the discharge pipe of the building (indicated by a sticker).

Proceed as follows to minimise the noise level:

- Place the installation on a flat ground.
- Fix the supply and discharge pipes correctly using a bracket.
- Mount a pipe compensator in the supply and discharge pipes (option).
- In case of contamination, insert a filter in the supply pipe.
- Manifolds must be connected stress-freely.
- The diameter of the supply pipes must be large enough.



### ATTENTION

The installation is delivered on a pallet. Carefully slide the installation off the pallet at the place of destination.

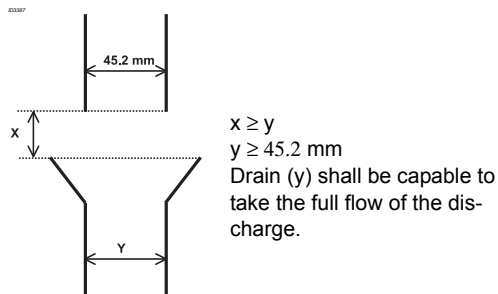


### ATTENTION

Mount a valve in the discharge line. This in order to avoid having to drain the entire pipe in case of any repair.

Overflow connection:

Connect the overflow in accordance with EN 1717. A visible and free outflow must have been provided according to the drawing.



(The size is an example)

## 7.2 Electrical installation



### WARNING

Only authorized personnel is allowed to connect the installation electrically in accordance with the local regulations.

#### Electrical connections

- Make sure that the motor specifications correspond with the power supply to which the pump motor is connected.
- connect the installation, using an interruptible connection (connector/plug)
- close the control box door, after the installation is completed.

## 7.3 Commissioning



### WARNING

Never switch on the system when it does not contain any liquid.

Before putting the system into operation:

- Flush the installation with potable water, disinfect the system if necessary.

### 7.3.1 In a closed circuit with sufficient supply pressure

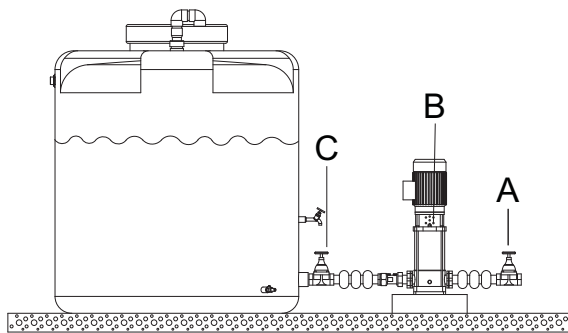


Figure 6: Closed circuit

1. Turn off the main power
2. Close the supply valve (C) and the discharge valve (A)
3. Remove the plug (B) from the motor stool
4. Gradually open the supply valve (C) until the liquid flows from the plug opening
5. Close the plug (B) opening
6. Fully open the supply (C) valve
7. Turn on the main power
8. Check the direction of rotation of the pump
9. Fully open the discharge valve (A)



### ATTENTION

Seen from the top of the motor the pump must rotate clockwise. In case of a 3-phase motor the rotating direction can be changed by switching two of the three contact wires.

### 7.3.2 Reset after a fault



### WARNING

Eliminating faults should only be done by qualified personnel after the cause has been determined.

When the reservoir is empty, the low water protection will automatically switch off the installation. As an indication, the red light 'low water' on the switch box will light up. When the reservoir is filled, the installation will automatically start to operate again.

### 7.3.3 Overload of the pump with a 1-pump installation

When the pump is overloaded, the motor protection will automatically switch off the installation. As an indication, the red fault lamp on the switch box will light up. Proceed as follows to reset the installation:

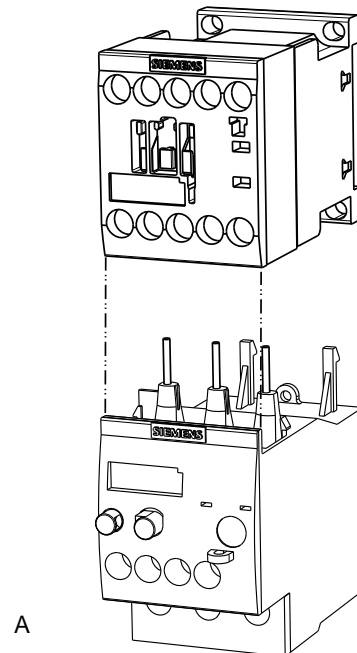


Figure 7: Motor protection relay

1. Disconnect the power supply into the central distribution box or remove the connector/plug from the power socket



2. Open the control panel
3. Selector switch (A) for manual/automatic reset and reset button: With this switch you can choose between manual and automatic reset. A device set to manual reset can be reset locally by pressing the reset button.
4. Close the control panel
5. Connect the power supply into the central distribution box or put the connector/plug back into the power socket.

### 7.3.4 Overload of the pump with a 2-pump installation

When the pump is overloaded, the motor protection will automatically switch off the installation. As an indication, the red fault lamp on the switch box will light up. Proceed as follows to reset the installation:

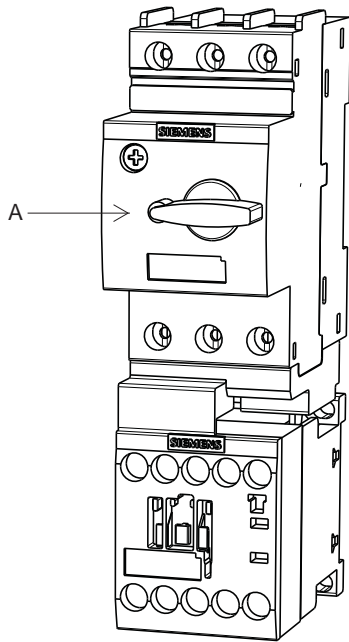


Figure 8: Motor protection switch

1. Remove the connector/plug from the socket
2. Open the control box
3. Press the reset switch (A) first on "0" then to "1" to reset the switch
4. Close the control box
5. Put the connector/plug back into the socket

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### 7.3.5 Pre-pressure

For a correct functioning of the installation, the pre-pressure in the pressure vessel must be 50 kPa lower than the switch-on pressure. Proceed as follows to determine the pre-pressure:

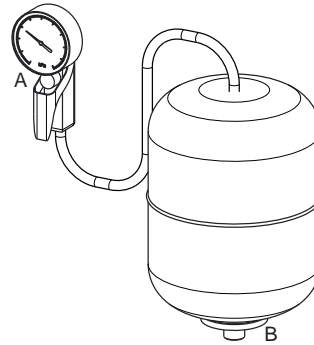


Figure 9: Pre-pressure

1. Measure the pressure (A) in the vessel when there is no pressure on the water side (B).
2. Fill the vessel with nitrogen or air. Preferably use nitrogen.



#### WARNING

Before putting the installation into use, first put the pressure vessel under pressure. Refer to the annexes for the correct setting.

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# 8 Operation

## 8.1 Operation HUV1

The installation is automatically operated.

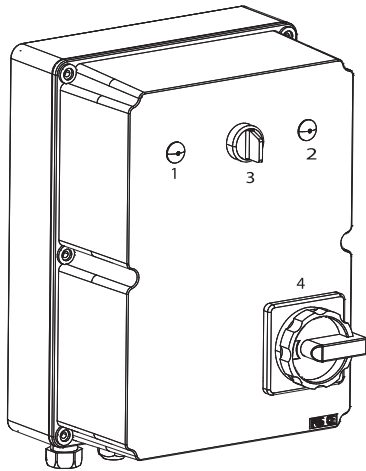


Figure 10: Switch box

Table 8: Operation

No.:	Explanation
1	Alarm lamp, the motor protection switch has switched off the pump.
2	Alarm lamp, no water present The reservoir is empty, switch off the installation.
3	H-0-A switch for the pump. H = Pump in manual operation 0 = Pump has been switched off A = Pump in automatic operation
4	Main switch of the installation

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shows important information for pump system operation. Data can be displayed in plain text and parameters can be set.

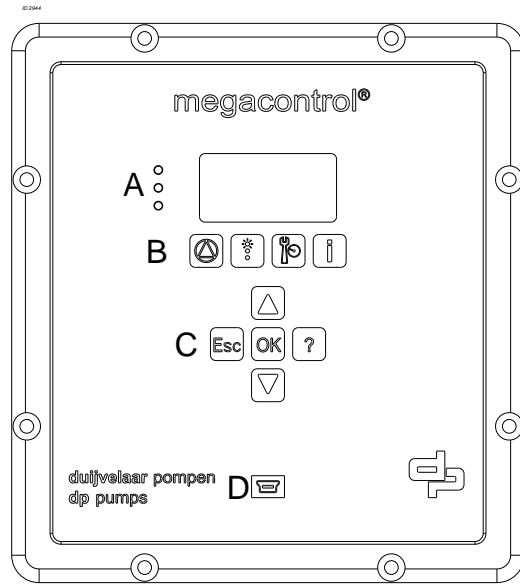


Figure 11: Front Megacontrol

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Table 9: Traffic lights

A: LED's
The "traffic light" signals provide information about the pump system's operating status. LED's:
<ul style="list-style-type: none"> <li>• Red: Alert / urgent alarm is active.</li> <li>• Amber: Warning / non-urgent alarm is active.</li> <li>• Green: O.K. / trouble-free operation.</li> </ul>

## 8.2 Control panel (HMI)

The control panel comprises a back-lit display, function, navigation, and operating keys, LED's, and 2 access points for the service interface. The display

Table 10: Function keys










B: Function keys	
You can use the function keys to access the elements at the first menu level directly: Operation, Diagnosis, Settings and Information.	
	<b>Operation</b>
	<b>Diagnosis</b>
	<b>Settings</b>
	<b>Information</b>

Table 11: Navigation keys

C: Navigation keys	
The navigation keys are used for navigating in the menu and for confirming settings.	
	<b>Up or Down</b> <ul style="list-style-type: none"> <li>Move up / down through the root menu (displays the measured values of the system input);</li> <li>Move up / down through the menu options or;</li> <li>Increase / decrease a value when you are entering numerals.</li> </ul>
	
	<b>Escape key</b> <ul style="list-style-type: none"> <li>Delete / reset entry (the entry is not saved);</li> <li>Return to the previous menu level.</li> </ul>
	<b>OK key</b> <ul style="list-style-type: none"> <li>Access to the quick menu;</li> <li>Confirm a setting;</li> <li>Confirm a menu selection.</li> <li>Go to the next number when you are entering numerals.</li> </ul>
	<b>Help key</b> <ul style="list-style-type: none"> <li>Displays a help text for each selected menu option.</li> </ul>

#### D: Service interface RS232

The service interface allows a PC / Notebook to be connected with use of the special service port cable. The Megacontrol PC software can be used to configure and parameterize the pump system if you do not have access to a control panel. The Megacontrol software can also be updated via this interface. A second service interface is located on the back side of the controller.

#### 8.2.1 Display

The 7-row display contains the following information:



1	4
2	
3	
....	
....	
....	
5	00:00

Table 12: Display rows

	Display	Meaning
1	1-1-1	Displays the selected parameter no.
2	Parameter / Function	Parameter name, Function key: <ul style="list-style-type: none"> <li>Operation</li> <li>Diagnosis</li> <li>Settings</li> <li>Info</li> </ul>
3	Parameter name	List of selectable parameters
4	Level	Operating level: <ul style="list-style-type: none"> <li>All</li> <li>User</li> <li>Service</li> <li>Factory</li> </ul>
		"Scroll bar" within the list of selectable parameters
5	MM-YY 00:00	Current date and time

The number of the current menu or parameter is displayed in the top left of the screen. This number indicates the path through the menu levels and, therefore, allows you to quickly locate parameters (see "Parameter list").

The date and time is displayed in the bottom right of the screen. If a fault occurs, this is displayed in the bottom line and alternating with the date and time.

### 8.2.2 Continuous display

When in operation the most common values, like the system pressure are shown on the display continuously. By pushing the navigation buttons Up and Down all selected values are passing by. In Parameter setting 3-10 "Root menu" these values can be selected as preset value. The selected values are marked with a "√"

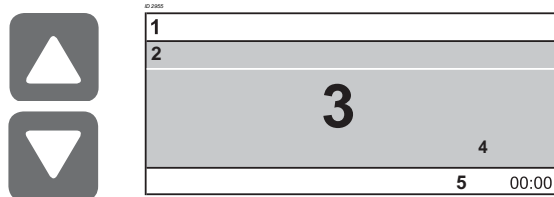


Table 13: Display example

	Display
1	1-1-1
2	System pressure
3	525
4	kPa
5	MM-JJ 00:00

#### 8.2.2.1 Quick menu

Having access to the most used parameters a Quick menu can be entered by pressing the OK key.



### 8.2.3 Access levels

To prevent accidental or unauthorized access to the Megacontrol parameters, various access levels have been defined.

Table 14: Access levels

Access levels:	Explanation:
<b>Standard</b>	Unless users log on to one of the access levels, they will only have limited access to parameters.
<b>User</b>	Access level for expert users. It enables access to all the parameters required for commissioning. You have to enter a password under 3-2-1 "Log in". The standard password for users is <b>7353</b> .
<b>Service</b>	Access level for service technicians. You have to enter a password under 3-2-1 Log in.
<b>Factory</b>	Access level for the manufacturer only.



#### ATTENTION

If no keys are pressed for ten minutes, the system automatically returns to the default access level.

### 8.2.4 Displaying and changing parameters

The parameter numbers contain the navigation path, which helps you find a particular parameter quickly and easily. The first digit of the parameter number indicates the first menu level, which can be called up directly via the four function keys. Subsequent steps are carried out via the navigation keys.



1--Operation    2--Diagnosis    3--Settings    4--Info

#### Example: Parameter 3-5-10 Delta p correction:

First digit of parameter number: **3-5-10**

**3 Settings**    5 Pressure    10 Delta p correction



Press the third function key for Settings. **3-1** appears in the top left of the screen.

Second digit of parameter number: **3-5-10**

**3 Settings**    **5 Pressure**    10 Delta p correction



Change the display **3-1** on the screen (top left) to **3-5** by pressing the navigation keys.



To confirm the selection, press OK. **3-5** appears in the top left of the screen.

Third digit of parameter number: **3-5-10**

**3 Settings**    **5 Pressure**    **10 Delta p correction**



Change the display **3-5-1** on the screen (top left) to **3-5-10** by pressing the navigation keys.



To confirm the selection, press OK. **3-5-10** appears in the top left of the screen.

### 8.3 Manual operation of the pumps

By pressing the Quick access key “**Operation**”, information like system pressure and pump load can be retrieved. Also, the pump operating mode like **Automatic**, **Manual** and **Disabled** can be alternated / selected. Subsequent steps are carried out by using the navigation keys.

#### Example: Parameter 1-2-1 (Pumps) Operation mode:

First digit of parameter number: **1-2-1**

**1 Operation**    **2 Pumps**    **1 Operation mode**



Press the first function key for Operation. **1-1** appears in the top left of the screen.

Second digit of parameter number: **1-2-1**

**1 Operation**    **2 Pumps**    **1 Operation mode**



Change the display **1-1** on the screen (top left) to **1-2** by pressing the navigation keys.



To confirm the selection, press OK. **1-2** appears in the top left of the screen.

Third digit of parameter number: **1-2-1**

**1 Operation**    **2 Pumps**    **1 Operation mode**



To confirm the selection, press OK. **1-2-1** appears in the top left of the screen.



Select the **pump number** by pressing the navigation keys.



To confirm the selection, press OK.



Select the operation mode **manual (on (10 s))**.



To confirm the selection, press OK.

The selected pump will run for a period of 10 seconds and stops. The pump operation mode is changed to **Disabled (off)** This is to avoid that the pump runs unprotected.

#### 8.3.1 Putting the pump into automatic operation again

The pump has to be put in operation again by selecting the **Automatic mode**.



Stay in the selected parameter **1-2-1 Operation mode** and press OK.



Select the **pump number** again by pressing the navigation keys.



To confirm the selection, press OK.



Select the operation mode **Automatic**.



To confirm the selection, press OK.

# 9 Maintenance

## 9.1 Introduction



### WARNING

Observe the general safety precautions for installation, maintenance and repair.

Regular maintenance is necessary for correct operation of the installation. For maintenance of the installation, please contact your supplier. A draft maintenance contract is available upon request.

## 9.2 Lubrication

Standard motors are provided with maintenance free sealed bearings.

## 9.3 Putting the pump out of operation for an extended period

Turn a shaft every three months. This prevents the seals from getting stuck.

Protect an installation against freezing when there is a risk of frost. For this purpose take the measures given below:

1. Close all pump valves.
2. Drain each pump and/or the system.
3. Remove all plugs from a pump.
4. Open the shut-off and drain valve, if present.

## 9.4 Overflow

Inspection insect screen module and cleaning the insect screen.

The insect screen should be cleaned once a month.

- Loosen the flange connection;
- Open the clamp;
- Disconnect the complete overflow;
- Clean the filter and anti syphon trap;
- Re-assemble the parts after cleaning.

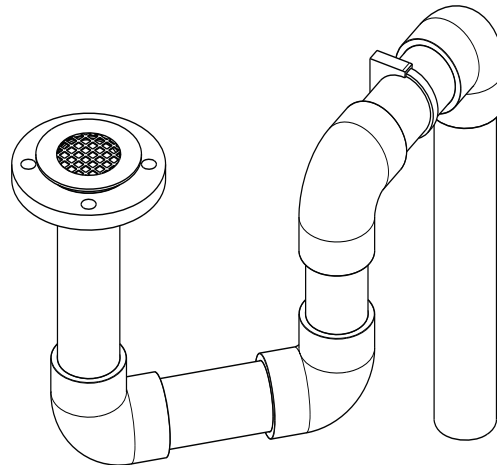


Figure 12: Overflow with syphon provided with anti-germ gauze

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# 10 Parameter MC

## 10.1 Parameter list

The parameters of the main menu are related to the standard (default) settings of the installation. The standard (default) settings can be adjusted where necessary and may also be reset whenever required. On the basis of the standard set parameters, an installation will operate as it should. Additional, extra parameters may be used, e.g. those under 'advanced', 'pressure', 'delays' and 'clock'. In order to use these additional parameters, you should activate the corresponding sub menus.



### ATTENTION

For unit-specific values see: 'Factory settings'.



### ATTENTION

Certain parameters are not visible, depending on the configuration.

Table 15: Access level parameter list

Access level	Read	Write
Everybody	e	e
User	c	c
Service	s	s
Factory	f	f
Nobody		n
Development	d	d

### 10.1.1 Parameter list

For the parameter list: See BE00000508 Control units chapter 10

# 11 Faults

## 11.1 Fault table



### WARNING

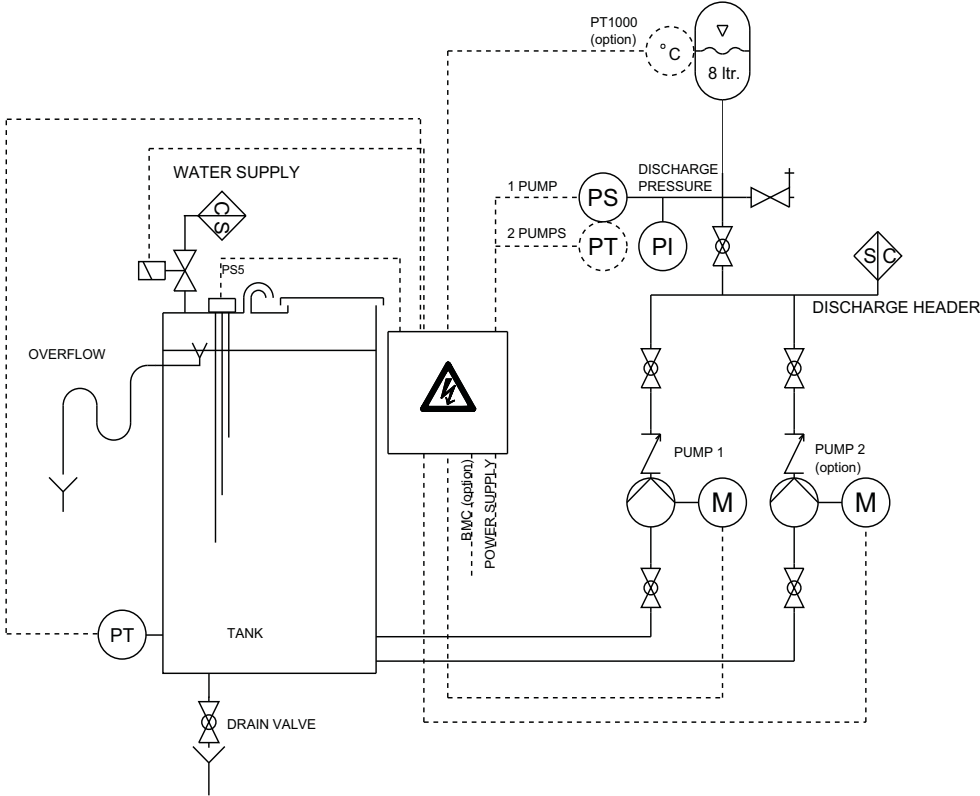
Observe the general safety precautions for installation, maintenance and repair.

Problem	Possible cause	Possible solution	Checkpoints
Leakage along the pump shaft of the pump	The shaft seal is worn.	Replace the shaft seal.	Check the pump for dirt.
	The pump has run without water.	Replace the shaft seal.	
The pump is vibrating and makes a lot of noise.	The bearings of the pump/motor are defective.	Have the bearings replaced by a certified company.	
	Hydraulic system defective.	Replace the hydraulic system.	
The installation/pump does not start.	There is no power on the terminal clamps.	Check the power supply.	<ul style="list-style-type: none"> <li>• Circuit</li> <li>• Main switch</li> <li>• Fuses</li> </ul>
	Run-dry protection triggered.	Restore the water supply. Reset the installation.	
	The pressure switch has been set incorrectly.	Have the supplier re-adjust the installation.	
The installation/pump supplies insufficient capacity and/or pressure.	There is air in the pump.	Vent the pump.	
	The pump rotates in the wrong direction.	Change the two phase wires on the main switch.	
	The water meter in the supply pipe is too small.	Install a larger water meter.	
	The outlet and/or inlet valve is closed.	Open both valves.	
The pumps continuously start and stop.	The membrane switch vessel(s) have a leak or an incorrect pressure value.	Have the supplier re-adjust the installation.	
The green LED on the installation is not lit.	There is no power on the terminal clamps.	Connect the power.	
	One or more pumps are not in the automatic position.	Put the pump(s) in the automatic position.	
The red LED in the reset key is lit.	The water supply has been interrupted.	Restore the water supply. Press the reset key.	<ul style="list-style-type: none"> <li>• Supply pressure</li> <li>• solenoid valve</li> </ul>
The red pump LED is lit.	The pump has a thermal fault.	Remedy the fault. Reset the motor protection switch.	



# 12 Annexes

## 12.1 P & ID diagram



LEGEND					
	S= SUPPLIER BOUNDARY C= CUSTOMER BOUNDARY		VALVE		NON-RETURN VALVE
	PUMP		DRAIN VALVE		SOLENOID VALVE
	AIR INTAKE / OUTLET		BALL VALVE		PRESSURE SWITCH
	DRAIN TO SEWER		MEMBRANE SWITCH VESSEL		PRESSURE INDICATOR
	AIR INTAKE WITH FILTER		MOTOR		PRESSURE TRANSMITTER

Figure 13: P&ID diagram HUV1/2 DW with overflow with syphon

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## 12.2 Electrical connections



### ATTENTION

For specific instructions about connecting the motor, refer to the documentation of the motor concerned!



### WARNING

Before starting to perform any activities on the pump, make sure that the power to the pump has been switched off and cannot be switched on accidentally.



### WARNING

Only qualified personnel may make the electrical connections to the motor in accordance with the local guidelines and regulations.



### WARNING

The pump must be grounded and it must be connected to an external main switch.

## 12.3 EU declaration of conformity

Undersigned:

D.P. Industries B.V.  
Kalkovenweg 13  
2401 LJ Alphen aan den Rijn, The Netherlands  
Tel: +31 (0)172 - 48 83 88

Declares as manufacturer entirely on his own responsibility that the product:

Product: **Break units**  
Type: **HUV1 DW relay control DOL**

Serial number: 15/2020 10000000-01 [...] 52/2021 99999999-99

to which this declaration refers, have been constructed in compliance with the following harmonised international standards:

- **ISO 12100:2010**
- **EN 809+A1/C1:2010**
- **EN 1717:2000**
- **EN 14622:2005**
- **IEC 60204-1:2006**

according to the stipulations of:

- **Machine directive 2006/42/EC**
- **RoHS 2011/65/EU<sup>1</sup>**

If the installation is used as a stand-alone product, it is subject to this declaration of conformity.

If the installation is built in into an appliance or assembled with other equipment in certain systems, it shall not be put into operation until a declaration has been issued for the appliance concerned that this complies with the directives listed above.



2019-05-15

Authorized representative  
Menno Schaap  
Manager Competence Centre Products

D.P. Industries B.V.  
Kalkovenweg 13  
2401 LJ Alphen aan den Rijn, The Netherlands

1. Where applicable

## 12.4 EU declaration of conformity

Undersigned:

D.P. Industries B.V.  
Kalkovenweg 13  
2401 LJ Alphen aan den Rijn, The Netherlands  
Tel: (+31)(0)-172-48 83 88

Declares as manufacturer entirely on his own responsibility that the product:

Product: **Break units**

Type: **HUV2 DW Megacontrol DOL**

Serial number: 15/2020 10000000-01 [...] 52/2021 99999999-99

to which this declaration refers, comply with the following standards:

- **EN 809+A1/C1:2010**
- **EN ISO 12100:2010**
- **IEC 60204-1:2006**
- **EN 1717**
- **IEC-61000-6-1**
- **IEC 61000-6-3**

according to the stipulations of:

- **Machine directive 2006/42/EC**
- **EMC directive 2014/30/EU**
- **RoHS 2011/65/EU<sup>1</sup>**

If the installation is used as a stand-alone product, it is subject to this declaration of conformity.

If the installation is built into an appliance or assembled with other equipment in certain systems, it shall not be put into operation until a declaration has been issued for the appliance concerned that this complies with the directives listed above.



2019-05-15

Authorized representative  
Menno Schaap  
Manager Competence Centre Products

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D.P. Industries B.V.  
Kalkovenweg 13  
2401 LJ Alphen aan den Rijn, The Netherlands

1. Where applicable

## 12.5 Certificate of Decontamination

Type: \_\_\_\_\_  
Order number: \_\_\_\_\_  
Delivery date: \_\_\_\_\_  
Applications: \_\_\_\_\_  
Fluid handled: \_\_\_\_\_

Please tick where applicable:



Corrosive



Oxidising



Flammable



Explosive



Hazardous to health



Seriously hazardous  
to health



Toxic



Radioactive



Bio-hazardous



Safe

Reason(s) for return: \_\_\_\_\_

Comments: \_\_\_\_\_

The product/accessories have been carefully drained, cleaned and decontaminated inside and outside prior to dispatch/placing at your disposal.

We herewith declare that this product is free from hazardous chemicals, biological and radioactive substances.

- No special safety precautions are required for further handling.
- The following safety precautions are required for flushing fluids, residual fluids and disposal:

\_\_\_\_\_

We confirm that the above data and information are correct and complete and that dispatch is effected in accordance with the relevant legal provisions.

\_\_\_\_\_

Place, date and signature

\_\_\_\_\_

Address

\_\_\_\_\_

Company stamp





## **dp pumps**

**dp pumps**  
P.O. Box 28  
2400 AA Alphen aan den Rijn (NL)

**t** (+31-172) 48 83 88

[dp@dp-pumps.com](mailto:dp@dp-pumps.com)  
[www.dp-pumps.com](http://www.dp-pumps.com)

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Original instructions

Can be changed without prior notice