Elpress

Booster unit LDC-Q

User Manual and Technical Manual

CE

Passion for Hygiene

This user manual applies to the following installations:

LDC-Q 65/20
LDC-Q 100/20
LDC-Q 130/20
LDC-Q 190/20
LDC-Q 240/20

Option
Break tank

Option
Enclosure

Option
BLOCKSAT satellite

Contents

Conditions

This user manual is intended to enable you to work safely and expertly with and on your equipment. It is therefore necessary to read and thoroughly understand every part of this document prior to operating the installation. All relevant local and national regulations must be strictly observed whenever waste water or the residue of waste water is present in the installation. This is in order to avoid injury to people and damage to the environment. This user manual must be accessible at all times.

This user manual has been compiled with the greatest care and is based on the level of technology at the time of compilation. Elpress BV accepts no liability for direct and/or indirect damage resulting from the application and/or interpretation of the information given. The attachments do not form part of this manual.

Instructions for reading

- The instructions are basically suitable for all of the installations listed on page 2.
- Exceptions for a specific type of installation are listed as follows:

Actie	DZW-HDT	DZD-HDT	SANICARE-B	SANICARE-D	SANICARE-DYSON-B	SANICARE-DYSON-B	COMBI-BB	COMBI-DD	COMBI-BD
Controleer stroom	√		√		√		√		√
Verwijder blokkade									

- Controleer:
  - aandrijving
  - elektrabekabeling

DZW-HDT / SANICARE-B /

A symbol means that it applies to the corresponding type of installation.

The above text applies to the types of installations mentioned in the dotted area.

Safety

For safety reasons, changes and modifications to the installation are not permitted without the written consent of Elpress BV. The manufacturer will not be liable for any damage arising from the failure to obtain such consent. This also applies to components that are used and possibly sealed by Elpress BV.

Safety symbols

The safety conditions, regulations and instructions described in this chapter are to be strictly complied with at all times. National safety regulations must also be adhered to in each country. The following symbols are used in this user manual:

1.	Danger: When an operating or maintenance instruction can result in danger to people and the environment when not complied with precisely or when not supervised. Please follow the instructions and proceed with extreme caution.
2.	Comment: This symbol is shown if an operation, maintenance instruction or situation requires special attention.
3.	Danger from rotating parts.
4.	Caustic (corrosive) substance.
5.	Beware: Risk of injury to hands
6.	Hazard from automatically starting installation.
7.	Danger: contact with electrical voltage.
8.	Hot surface.
9.	Safety gloves compulsory.
10.	Refer to the user manual.
11.	Eye protection compulsory.
12.	Ear protection compulsory.
13.	Face mask compulsory.
14.	Safety shoes compulsory.
15.	Smoking prohibited.
16.	Eating and drinking prohibited.
17.	Advice to protect the environment or to encourage recycling.

Safety regulations

- The operating personnel must be familiar with the contents of this manual and be able to carry out all instructions given.
- The manual must be available at all times to the personnel operating the installation.
- The electrical cabinet must be closed at all times and may be opened by authorised persons only.
- The installation is designed to operate in a frost-free environment. If the system freezes up, its functionality must be thoroughly checked.
- Safety items including safety gloves, clothing, goggles, etc., must always be available for the operating and maintenance personnel.
- It is strictly forbidden to smoke, eat or drink while operating and/or carrying out maintenance on the installation.
- Incorrect operation and use of the installation may cause damage to the system.
- Do not use the installation after it has been damaged. Have it inspected by an authorised machine engineer and repaired when necessary.

The transfer, (re)location and initial commissioning of the installation must be carefully carried out. Transfer, locating or initial commissioning that is incorrectly carried out can be dangerous for both people and the environment. Expert installation and operation are conditions for a trouble-free operation.

Each product manufactured by Elpress BV, only leaves the factory after having been tested. If the equipment is not going to be installed immediately, it should be stored in a dry and frost-free area that is suitable for its design structure.

The LDC-Q starts up automatically. The installation can start up unexpectedly.

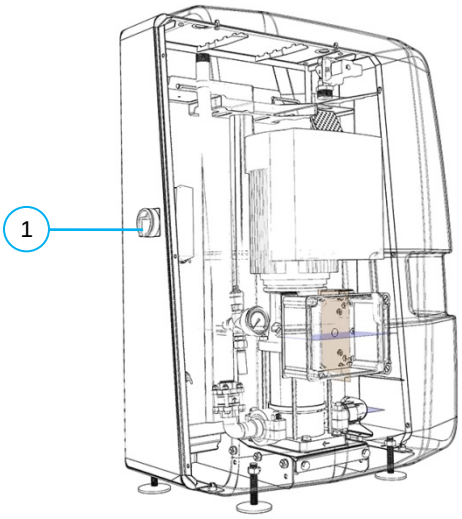
Radiated airborne noise emission

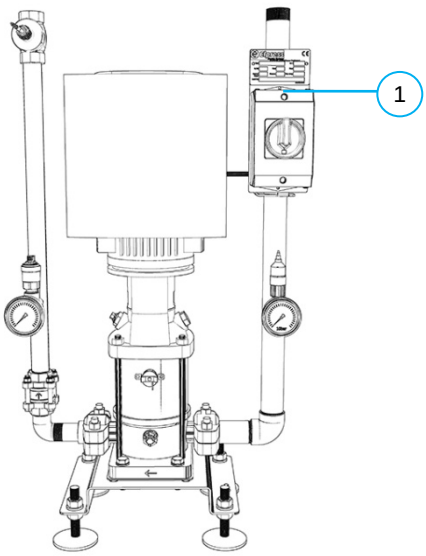
- Maximum measured noise level A - weighted to noise pressure at a distance of 1 metre from the installation: <79 dB, with 11 kW pump.
- From 80 dB(A), the employer must provide hearing protection aids.
- From 85dB(A) the employee is obliged to wear hearing protection aids.

Intended use

- The installation is solely intended to be used for performing cleaning activities with the associated components.
- The optionally integrated satellite is solely intended for providing a single satellite point for cleaning, foaming and any disinfection activities with the associated components and approved cleaning agents.

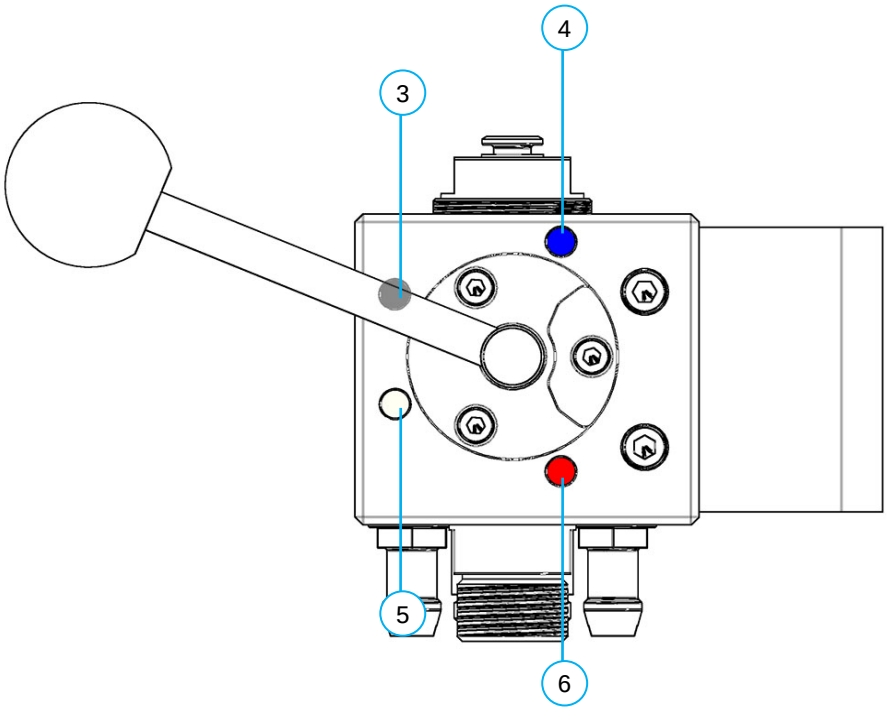
  BLOCKSAT
- The installation is switched on and off with the main switch **[1]**.
- The installation may only be used when the pressurised water connection complies with a complete cleaning set in accordance with the installation specifications. These include water lines, hose reels, cleaning hoses, spray guns, lances, nozzles, etc.
- In order to avoid slipping, the standing position should be on a solid floor. Moreover, any fluids that are released should preferably be lead off via a drain.
- High pressure water jets should not be directed at electric cabling, control panels, electrical components and breakable, vulnerable surfaces. People under the age of 18 are forbidden to spray fluids using high pressure equipment.





Instruction table	LDC-Q	LDC-Q RF	LDC-Q RFD
Rinsing generally • **Before commencing with cleaning activities, connect the installation according to the instructions in the section: *Installation requirements*** • When the personnel start on the cleaning activities, a pressure drop in the pipework causes the pump to start. • The installation will now start running in order to generate the set pressure within the capacity curve of the pump. • In the break tank version, the pump will stop when the two level switches at the top have not responded after a set time. A pump without a break tank stops when the flow sensor emits a no-flow signal. In both cases, the pump then switches to stand-by mode.	√	√	√
Satellite: Closed • When no cleaning activities are being performed, the lever on the Blocksat must be in the stop position (grey). **[3]**		√	√
Satellite: Rinsing • Connect the rinsing lance (blue) to the ball valve or to the spray gun. • Set the lever to the rinse position (blue). **[4]** • Start rinsing. • After rinsing, always set the lever to the stop position (grey). **[3]**		√	√
Satellite: Foaming • Insert the connection hose (white) into the jerry can containing the foam cleaning agent. • Connect the foam lance (white) to the ball valve or to the spray gun. • Set the lever to the foaming position (white). **[5]** • Start foaming. • After foaming, always set the lever to the stop position (grey). **[3]** *The foam quality should be adjusted during commissioning. To adjust the foam settings, go to the section: Changing settings.*		√	√

Satellite: Disinfecting • Insert the suction hose (red) into the jerry can containing the disinfectant. • Connect the disinfecting lance (red) to the ball valve or to the spray gun. • Set the lever to the disinfecting position (red). **[6]** • Start disinfecting. • After disinfecting, always set the lever to the stop position (grey). **[3]**			√
Satellite: After use • After each use, the injectors must be flushed through with clean water. To do this, immerse the chemical suction hose into a basin of clean water and, using the correct lance, operate the shut-off valve or the spray gun for a minimum of 2 minutes so that the water rinses the injector, thereby avoiding the formation of crystals in the injector/suction lines. • Always set the lever to the stop position (grey) after use. **[2]** • Turn the main switch of the installation to **[OFF]**.		√	√



Technical specifications

The installation is constructed from the following components:

- The booster unit consists of 1 Grundfos centrifugal pump of type CRIE. This is a normally aspirating, vertical, multi-stage centrifugal pump with an in-line design and fitted with a directly coupled 380-480V electric motor. The electric motor has an integrated frequency controller. All important components that come into contact with the medium, such as impellers, pump shaft, enclosure and separating chamber are manufactured from stainless steel. The pump bearings are lubricated by the pumped medium. The mechanical shaft seal is made of cemented carbide. The maximum operating pressure is approx. 20 bar. Further details on this pump are enclosed elsewhere in this documentation.
- A non-return valve is installed immediately downstream of the pump to ensure that the pressure is maintained in the pipework. A pressure sensor is also installed on the pressure line. The signal from the pressure sensor goes directly to the frequency controller, which controls the pump.
- A switch box with main switch.
- The centrifugal pump has a supply line on the suction side. A pressure switch is installed on this line to monitor the minimal flow pressure. A pressure gauge is also installed.
- The unit provides protection against excessively high water temperatures by means of a thermostat on the pump which switches off the installation when the water temperature exceeds 70°C.
- All components are mounted on a frame which, if necessary, should be anchored to the wall or set up level using the adjustable feed supplied (option).
- The centrifugal pump is connected to a break tank. The level in the break tank is regulated by means of three level regulators and a solenoid valve. The lowest level regulator is for the low level signal, which switches off the installation completely. A bypass line is installed at the top of the pump which constantly pumps a small quantity of water back into the break tank as a way of continually venting the pump.

  OPTION: BREAK

Type of installation*	LDC-Q 65/20	LDC-Q 65/20 + BREAK TANK	LDC-Q 100/20	LDC-Q 130/20	LDC-Q 130/20 + BREAK TANK	LDC-Q 190/20	LDC-Q 190/20 + BREAK TANK	LDC-Q 240/20	BLOCKSAT RF	BLOCKSAT RFD
Number of users (max.)	3	3	3	6	6	8	8	12	-	-
Operating pressure / bar (max.)**	20	20	20	20	20	20	20	20	20	20
Number of pumps	1	1	1	1	1	1	1	1	1	1
l / pump / minute	67	67	100	133	133	200	200	240	-	-
l / total / minute	67	67	100	133	133	200	200	240	-	-
m3 / total / hour (max.)	5	5	9,5	10	10	14	14	15	-	-
Pump brand	Grundfos								-	-
Pump type	CRIE								-	-
Total power / kW	3	4	4	5.5	7.5	7.5	11	11	-	-
Voltage / V	380-480								-	-
Frequency / Hz	50/60								-	-
Fuse / A	3 x 16	3 x 16	3 x 16	3 x 16	3 x 25	3 x 25	3 x 32	3 x 32	-	-
Max. operating temperature / °C	70									
Ambient temperature / °C	<0 - >40									
Break tank capacity / l ***	-	70	-	-	70	-	70	-	-	-

Recommended water quality	
Quality	Potable water as required by generally accepted standards EC98/83
Hardness	<12° DH (210 mg CaCO3/l)
Conductivity	> 250 and < 2000 µS/cm
Iron	< 200 ppb
Silicates	< 5 ppm
Chloride	< 50 ppm

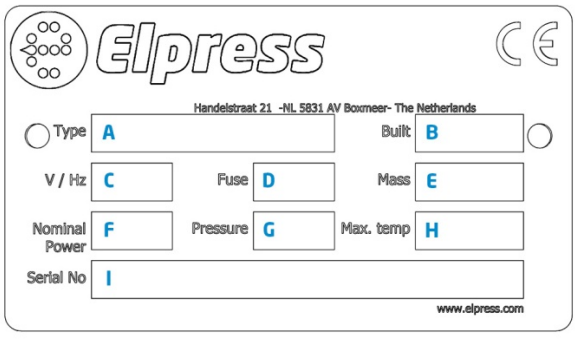
* For dimensions, weight, electricity and water supply connections, see the layout drawing in the appendix. Technical details apply for factory settings and a flow pressure of 3 bar.

** For a standard installation. Values dependant on possible options.

Name plate

The name plate is located on the assembly frame, the break tank or the main switch.

A	Type of installation
B	Construction year
C	Voltage / frequency
D	Maximum protection
E	Weight
F	Kilowatt
G	Operating pressure
H	Operating temperature
I	Serial number



Installation requirements

Elpress BV advises to always have the installation, (re)location and initial commissioning done by an Elpress BV service engineer.

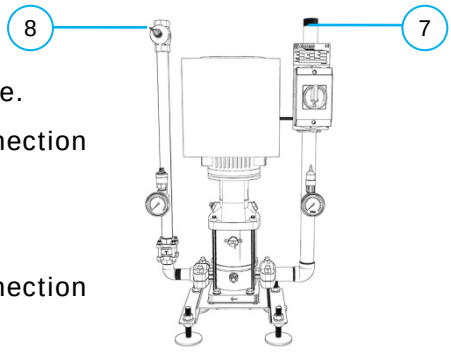
Installing

- Remove the packaging material and any protective film.
- Check that the installation is not damaged. If you find any damage, contact your supplier immediately and do not use the installation.
- **Install a non-return fitting in the water supply as prescribed by local legislation if the installation does NOT have a break tank.**
- Use any supplied fixings for tension and vibration-free operation.
- Before installation, check the screw thread and sealing rings for cracks and drying out.
- Place the installation level on a stable surface.
- Place the installation in a dry, frost-free room.
- Should the unit require installation on a wall, ensure the wall is strong enough to support the weight of the unit.
- Installations with preparations for anchoring to the floor must follow the directions for fixing them in place.

Before the unit is connected to the pipework, flush the pipework to prevent dirt from entering the unit.

Connecting

The water supply may be 70 °C maximum with a water pressure according to the supplied layout. The water supply should be at least 10% above the stated maximum water consumption.



- Inspect cables for cracks and drying out.
- Connect the water inlet **[7]** to the inlet valve/suction line.
  Please see the lay-out drawing in the annex(es) for connection values.
- Connect the water outlet **[8]** using the correct tool.
  Please see the lay-out drawing in the annex(es) for connection values.

A coupling hose should preferably be installed between the high-pressure cleaner and the supply network.

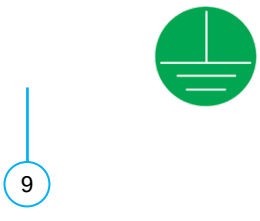
- Only connect the installation to an electrical supply using the values indicated on the name plate. Also see the layout drawing in the annex(es). Ensure that the electricity supply is properly fused with the correct safety fuses.
- Ensure that the correct main fuses are placed in the building's primary supply circuit.
- Connect the earth cable to the earthing point indicated on the installation **[9]**.
- Connect the water outlet **[10]** of the satellite according to the enclosed layout drawing.

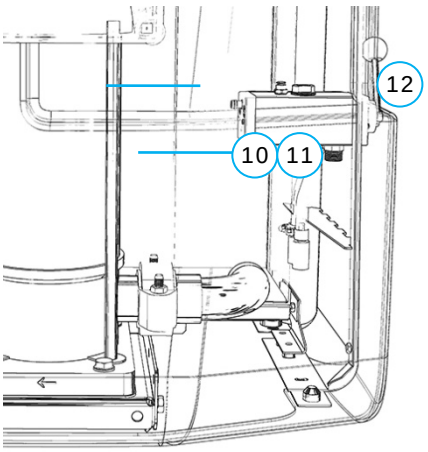
  LDC-Q RF / RFD
- Place the connection hoses **[11]** in the jerry cans. Red for disinfecting and white for foaming. Ensure that the ends of the intake hoses are immersed completely in the liquid.

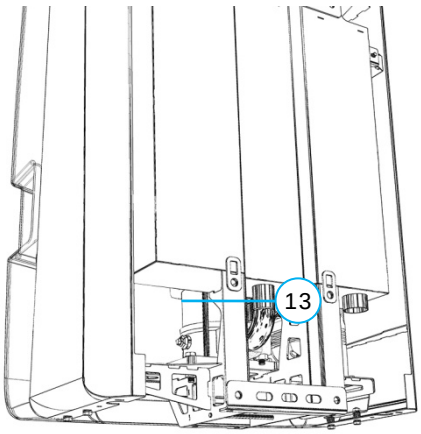
  LDC-Q RF / RFD
- Connect the compressed air supply **[12]**. The compressed air supply must have a constant pressure of between 6 and 8 bar and a capacity of min. 240 nl / min.

  LDC-Q RF / RFD
- Ensure when starting up the installation that the indicated direction of rotation on the pump is also the actual direction of rotation. This is in relation to the build-up of pressure. If the direction of rotation is incorrect, switch off the installation immediately and notify Elpress BV.
- The overflow pipe **[13]**, which is attached to the break tank, must be connected to the drains, with an open connection, or placed above a drain / gulley. This is to prevent any disasters being caused by the break tank overflowing in the machine room or the room in which the installation is installed.

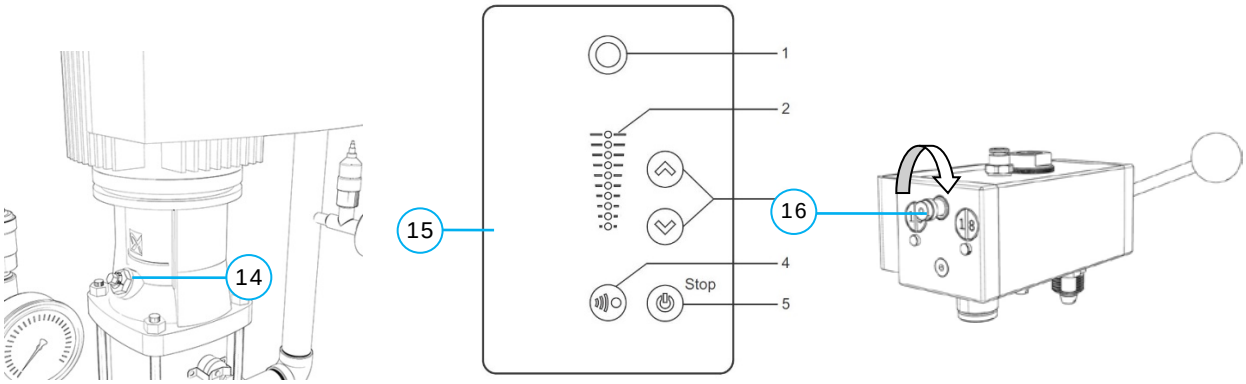
  OPTION: BREAK TANK







CAUTION: The pump must be bled the first time it is started. The bleed screw **[14]** is situated on the top of the pump. Open the bleed screw while the pump is running. Close it again when the medium flows evenly out of the vent.



CAUTION: Always set the main switch of the installation to **[OFF]** before inserting or removing the plug from the power outlet.

Changing settings

Control panel

The pumps are fitted with this control panel as standard. **[15]**

The buttons are locked by default and can be unlocked only using an iPod with Grundfos application or R-100 infrared reader.

1		Grundfos Eye Shows the operating status of the pump.
2	-	Light fields for indication of setpoint.
3		Up and down. Changes the setpoint.
4		Allows radio communication with Grundfos GO and other products of the same type. When you try to establish radio communication between the pump and Grundfos GO or another pump, the green indicator light in Grundfos Eye on the pump flashes continuously. Press on the pump control panel to allow radio communication with Grundfos GO and other products of the same type.
5		Makes the pump ready for operation or starts and stops the pump. **Start** If you press the button when the pump is stopped, the pump only starts if no other functions with higher priority have been enabled. **Stop** If you press the button when the pump is running, the pump always stops. The "Stop" text next to the button is on.

Setting the foam quality

If the foam quality is in adequate, it can be adjusted:

- Ensure that the locking nut has room and is unscrewed free from the block.
- Improve the foam quality by turning the air reducer. **[16]**
  More air = Drier foam
  Less air = Wetter foam
- Save the settings after making the adjustments by turning the locking nut tight against the block again.
- This setting only has to be applied once, as long as the type of chemical remains the same.

Instruction and training

The owner of the installation is responsible for the training and instruction of the maintenance engineers.

The outside of the terminal box can reach temperatures in excess of 70 °C when the pump is running.

Before maintenance can be performed on the installation, ensure that the installation is fully depressurised.

Safety conditions for the maintenance engineers

Safety

- All safety devices including safety switches and safety covers must be properly reinstalled and functioning normally at all times after maintenance has been carried out.
- The installation should NEVER be operated when all or even part of the safety system has been turned off.

Maintenance

- The installation may only be maintained by authorised personnel.
- The maintenance engineers must be familiar with the contents of this technical documentation and be able to carry out all the instructions given.
- The main switch must be turned off and locked during cleaning and repairing of the mach installation ine.

- The electric switchboard can be closed off. This must remain closed at all times and may only be opened by authorised persons. He/she must be familiar with the electrical switchgear and the danger it presents.
- The installations control panel must never be cleaned with a jet of liquid (e.g. garden hose or high-pressure cleaner). This could lead to irreversible damage being caused to the installation.
- Maintenance may only be carried out when the control panel's main switch is switched off. The main switch must be locked with a padlock so that it is impossible to switch on.
- It should be clearly stated when people are working on the installation.

Cleaning preparations

The switchboard of the installation must never be cleaned with a spray. This could lead to irreversible damage being caused to the installation.

The following points are important when cleaning the installation:

- Switch off the main switch and any other electrical supplies.
- The main switch must be locked using a padlock and it must have a notice stating that it is forbidden to switch it on.
- Protective equipment, such as good gloves, safety goggles and face mask are to be available to the operators at all times.

The installation starts up automatically. The installation can start up unexpectedly.

The chemicals used can be corrosive and have a caustic action on skin resulting in serious burns. Caustic substance reacts with metal (corrosive). Prevent accidents, avoid skin contact and wear safety clothing.

High pressure water jets should not be directed at electric cabling, control panels, electrical components and breakable, vulnerable surfaces. People under the age of 18 are forbidden to spray fluids using high pressure equipment.

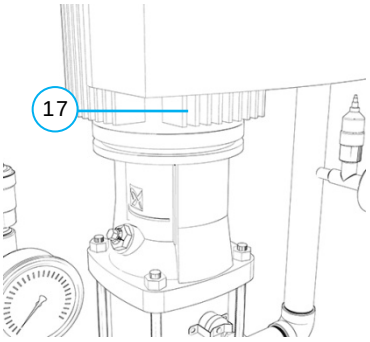
Corrosion protection

The stainless steel components have been treated optimally to withstand corrosion. Damage to the corrosion-proof covering caused by, e.g. welding, scratches, dents, etc., should be treated with a certified and approved corrosion-proof and passivating material. Depending on external influences, the layers of paint applied to pumps and pump components must be regularly repaired or renewed.

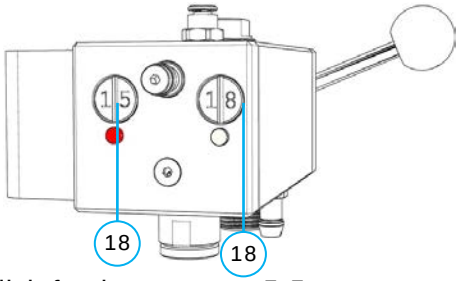
Weekly maintenance

Check the installation weekly for:

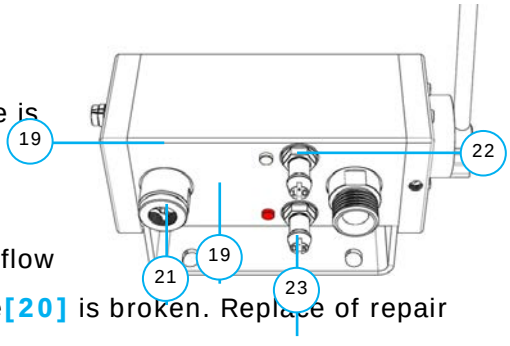
- Leaks and loose parts
- Insulation defects; visually inspect for ageing and damage
- Soiling of the supply tank
- Operation of the valves, spray guns, pulsation dampeners, electrical cabinet
- Ageing of the hose pack
- Cleaning of the motor cooling vanes **[17]**.



Maintenance of the Blocksat satellite



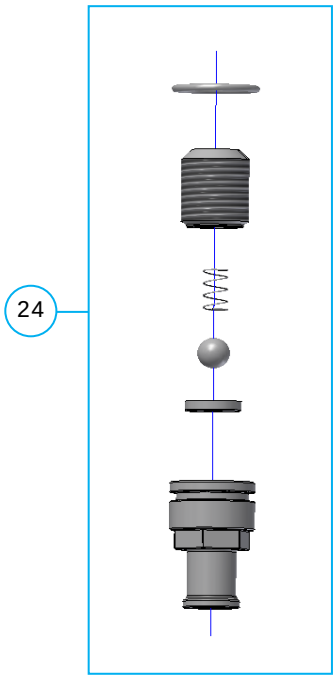
- Regularly check the chemical suction hose and the injector for contamination **[18]**. Contamination influences the operation of the Blocksat. If the venturi does not let enough litres through (when foaming approx. 8.0 litres of water per minute must flow through the venturi and when disinfecting approx. 5.5 litres per minute), it probably has an internal blockage. Stop the pump and shut off the water supply to the installation. Set the lever to the foam position (white) and depressurise the hose and any mounted reel by operating the pistol until no more liquid comes out of it. Use a screwdriver to remove the injector(s) which is/are screwed to the side. The injector(s) can now be removed from the block and cleaned. Check before reassembly that the O-rings are undamaged and free from dirt; screw the injector all the way in until it stops.
- Regularly check the non-return valves **[19]** for operation. If they are not functioning correctly, there is a risk that water will enter the air supply network.



- Water and/or compressed air flowing out of the overflow valve **[21]** is an indication that the non-return valve**[20]** is broken. Replace of repair it.
- If the venturi lets sufficient water through, but does not draw any agent, the restriction in the suction sleeve must be checked for blockage. Removal: unscrew the

coupling nut from the suction hose, then unscrew the restriction **[23]** and clean the hole. Reinstall the parts again afterwards.

- If water is leaking into the jerry can, the non-return valve **[22]** is dirty or damaged. Unscrew the non-return valve and restriction out of the block and pull them apart as shown in the drawing **[24]**. Clean the parts and check them for damage. If there is no damage evident, the non-return valve can be replaced in the block. If damage is found, install a new non-return valve.
- Regularly check the nozzles, hoses and spray guns for wear.



1500 hours / annual service

Every 1500 operating hours or once a year (is used less than 1500 hours per year), the installation should be fully inspected by an installation engineer of Elpress BV. The installation will be entirely inspected for function and quality. Based on this inspection, he will make recommendations for maintenance and repairs. The installation should undergo a repeat inspection according to VDMA 24413 at least once every 12 months.

Service life of hose pack (2000 hours)

The service life of the hose pack is dependent upon pressure, temperature and the -conditions in which it is used. The hose is not resistant to external forces, such as forces in excess of 25 kg. Therefore inspect the hose pack at least 1x per week. The high-pressure hoses should be replaced after 2000 hours. The hose packs should be connected by a professional using the proper tools.

After maintenance, all covers and taps need to be positioned or closed off before the installation is put into operation again.

Motor bearings

- The pump bearings and axle seal are maintenance-free.
- Motors without lubricating nipples are maintenance-free.
- Motors with lubricating nipples should be lubricated with a high-temperature, lithium-based grease. Consult the instructions on the protective cap of the fan.
- In the case of seasonal operation (when the motor will not be used for longer than 6 months per year), we advise lubricating the motor each time the pump is put out of use.
- Depending on the ambient temperature, the motor bearings are replaced or lubricated on the basis of the table below. The table applies to 2-pole motors. The indicated number of operating hours before replacement of the bearings is only a guideline.
- For 4-pole motors, the interval is twice as long as for 2-pole motors.
- If the ambient temperature is lower than 40 °C, the bearings must be replaced/lubricated at the moments indicated under 40 °C.

Motor power [kW]	Time between replacement bearings (operating hours)				
	40 °C	45 °C	50 °C	55 °C	60 °C
0.37 - 0.75	18000	-	-	-	-
1.1 - 7.5	20000	15500	12500	10000	7500
Motor power [kW]	Time between lubrication (operating hours)				
	40 °C	45 °C	50 °C	55 °C	60 °C
11 - 18.5	4500	3400	2500	1700	1100
22	4000	3100	2300	1500	1000
30-55	4000	3000	2000	1500	-
75	2000	1500	1000	500	-

Dismantling and removal

The proper dismantling, removal or scrapping of the installation must always be carried out in the presence of authorised persons. Incorrect or carelessly implemented dismantling, removal or scrapping can endanger the safety of people, the environment and the installation.

Faults

Tracing and repairing faults

Repairing faults may only be done by authorised personnel. While carrying out repair activities all safety regulations, instructions and directions must be strictly adhered to.

Fault message for installations with break tank

OPTION: BREAK TANK

Colour		Report	Alarm trigger	Machine status	Necessary action
	Green steady	In use			
	Green flashing	Stand-by			
	Orange steady	Maintenance	If the pump has been active for more than 1500 hours, the maintenance message will be shown.	Machine remains active	Contact our service department
	Red steady	Low level break tank	Water is below the LLL level	Pump is switched off. Filling valve remains active	The tank will have to be filled up to HL, then the installation should be manually reset. If the fault is still active and the break tank is filled, check the level switch.
	Red 1x flashing	Pump fault	This fault become active when the thermal protection is switched off or the fault output on the pump is activated	Pump is switched off. Filling valve remains active	Thermal fault will have to be reset, or fault on the pump will have to be reset. After this, reset on the installation.
	Red 2x flashing	Fault temperature water	Thermostat on pump measures a temperature higher than 70 °C	Pump is switched off, filling valve remains active	Check the water supply temperature or pump tarts too often due to small leak in the system. Reset installation.
	Red 3x flashing	Break tank filling time-out	If the tank does not reach HL within a settable time (for stopped pump), a time-out alarm will be output.	Filling valve and pump are switched off.	Once the installation has been reset, it will start filling again. It must be checked whether the valve is opened, whether there is a water supply, and whether the HL sensor is

					working.
	Red 4x flashing	Not active for LDC-Q			
	Red 5x flashing	Fault pressure sensors	If the mA signal of the sensor falls below 3.5 mA, the fault pressure sensor is activated.	Pump is switched off. Filling valve remains active	mA signal must return within the 4-20 mA range, afterwards reset installation
	Red 6x flashing	Break tank level sensor fault	1 or more sensors defective	Filling valve and pump are switched off.	Check whether the sensors are connected properly. Check whether the sensors are still working properly. Reset installation.

General fault table

Fault	Cause	Remedy
Low pressure through nozzle	System does not start	Start the system by setting the main switch to the “I” position.
Unstable pump pressure	Insufficient water supply to the system.	Check the water supply to the system.
The system does not start.	Supply voltage interrupted	The supply must be inspected by a qualified electrician.
	Fuse blown.	Replace fuse.
	Thermal relay in motor is switched off.	Set main switch to “0” and remove the plug from the power outlet for at least 1 minute. Repeat this reset a maximum of 2 times and then call Elpress.
The system does not suction any agent.	Control lever is not in position “foaming / disinfecting”.	Set control lever to position “foaming / disinfecting”.
	Dosing or non-return valve blocked by chemical residue.	Clean dosing or non-return valve.
	Is the right lance being used?	White lance for foaming, red lance for disinfecting.
	Strainer in suction hose blocked.	Clean strainer.
	(Chemical) detergent - reservoir empty or strainer above level of liquid.	Change to a new (full) detergent reservoir or place the strainer in the liquid.
Quality of foam inadequate.	Type of chemical substance (agent) is a non-foaming product.	Change to a chemical substance of the correct sort.
	Incorrect foam nozzle mounted.	Mount original foam nozzle.
	Incorrect air pressure or incorrect air setting.	Min. air pressure: 6 bar; 240 nl/min required.

RF / RFD fault table

Fault	Cause	Action
The satellite does not foam or disinfect.	Is the lever in the correct position?	Foaming: position for foaming (white) Rinsing: position for water (blue) Disinfection: position for disinfection (red, only for RFD)
	Is there sufficient agent in the jerry can?	Check jerry can.
	Is the suction hose immersed far enough into the liquid?	Check position of the hose.
	Is compressed air present when foaming?	Check the compressed air line.
	Is the correct lance and nozzle mounted?	Rinsing: Blue lance Foaming: White lance Disinfecting: Red lance (only for RFD)
The satellite foams or disinfects poorly	Is the water supply pressure constant and sufficiently high?	Check water supply/pumps
	Are the correct nozzle, lance & gun being used?	Check the setup
	Is the air pressure sufficient?	Adjust the air reducer setting, if necessary. This applies to foam only
	The injector draws insufficient agent during foaming/disinfection.	Check the suction lance, restriction and injector for contamination.
	Are water and/or compressed air coming out of the overflow valve?	Replace/repair the non-return valve in the Blocksat.

Resolving any faults

Pump suffers thermal failure

Check that there are no leaks in the supply network which frequently switch the pump on and off, and that the thermal protection is properly set. If the pump motor is thermally switched off. In order to switch the installation on again, the switch must be in the **[OFF]** position and then switched to the **[ON]** position again.

Pump makes a lot of noise and pressure is too low

Clean the float tank and check whether the suction line is completely free of any soiling. If the pump does not receive enough water, it will start to cavitate, which causes excessive wear to the seal. Ensure that the water temperature is not too high and the pump does not become blocked with scale due to hard water. The water supply pressure should be checked and must be at least 1.5 bar in the event of the total failure of the pump.

Installation does not start

Check whether voltage is present or whether any fuses are broken, both main current fuses and control current fuses (glass fuses), or whether no safeguards are in operation.

Pump capacity not constant

Insufficient water supply. Suction line partially blocked. Pump draws air.

Optimisation of the pressure booster unit

To ensure that the installation works properly, it is extremely important for all accessories to be free from leaks, including the supply network and ball valves. Furthermore, accessories such as nozzles (spray head) must be matched to the installation in order to guarantee proper operation.

Declarations

EC DECLARATION OF CONFORMITY WITH RESPECT TO MACHINERY

Elpress BV, Handelstraat 21, NL-5831 AV, Boxmeer, Netherlands

Original declaration of conformity (in accordance with Appendix II-1-A of the Machinery Directive 2006/42/EG)

We, Elpress BV,
Hereby declare under our own responsibility that the products:

LDC-Q 65/20 | 3 kW – Article number: 83301008
LDC-Q 65/20 | 3 kW + Enclosure – Article number: 83301008-A
LDC-Q 65/20 | 4 kW + Break tank – Article number: 83301031-A
LDC-Q 65/20 | 4 kW + Break tank + Enclosure – Article number: 83301031-A
LDC-Q 100/20 | 4 kW – Article number: 83301009
LDC-Q 100/20 | 4 kW + Enclosure – Article number: 83301009-A
LDC-Q 130/20 | 5.5 kW – Article number: 83301108
LDC-Q 130/20 | 5.5 kW + Enclosure – Article number: 83301108-A
LDC-Q 130/20 | 7.5 kW + Break tank – Article number: 83301132-A
LDC-Q 130/20 | 7.5 kW + Break tank + Enclosure – Article number: 83301132-A
LDC-Q 190/20 | 7.5 kW – Article number: 83301109
LDC-Q 190/20 | 7.5 kW + Enclosure – Article number: 83301109-A
LDC-Q 190/20 | 11 kW + Break tank – Article number: 83303004-A
LDC-Q 240/20 | 11 kW – Article number: 83303004

to which this declaration refers, are in accordance with the following:

- Machinery Directive (2006/42/EG)
- Electromagnetic Compatibility Directive (20014/30/EG)

Meets the harmonised European Standards:

- EN ISO 12100:2010 - Safety of machinery - General principles for design - Risk assessment and risk reduction
- EN 60204-1 - Safety of machinery - Electromagnetic Compatibility Directive
  - NEN-EN 547-1:1997+A1:2008 - Safety of machinery - Human physical measurements - Part 1
  - NEN-EN 547-2:1997+A1:2008 - Machine Safety - Human physical measurements - Part 2
  - NEN-EN 547-3:1997+A1:2008 - Safety of machinery - Human physical measurements - Part 3

Done in Boxmeer, the Netherlands, 13-10-2017

J. Voss

Chemicals

LDC-Q RF / RFD

The following brands and types of chemicals may be used.

Brand	Type	Concentration
Sanigel	VG 4	Max. 5%
Supergel	VG 3	Max. 5%
Acigel	VG 7	Max. 5%
Enduro Super	VE 3	Max. 5%
Divosan Extra	VT55L	Max. 2%
Delladet	VS2L	Max. 2%
Betelene Espuma	-	Max. 5%
Desenfort	-	Max. 5%
Pinaran Espuma	-	Max. 5%
Quacide	MC7	Max. 2%
Dexacide	B10	Max. 2%
Dectocide	A30	Max. 2%
Galorox	JR	Max. 5%
Galorox	JW	Max. 5%
Galorox	AG	Max. 5%
Alcanios	SF 20	Max. 5%
Aniosticil	DS 30	Max. 5%
Quiecid	F60	Max. 5%
Auicstieul Contact	-	Max. 5%

- When changing chemical, the entire installation must first be rinsed with clean water for a period of approx. 0.5 hour.
- If other chemicals are to be used, the prior written consent of Elpress BV must be obtained first, otherwise the warranty will be rendered null and void.
- The installation contains chemicals. At no time shall these chemicals be handled in ways other than those provided for by (local) legislation.
- Protective equipment, such as good gloves, safety goggles and face mask are to be available to the operators at all times.

Spare parts

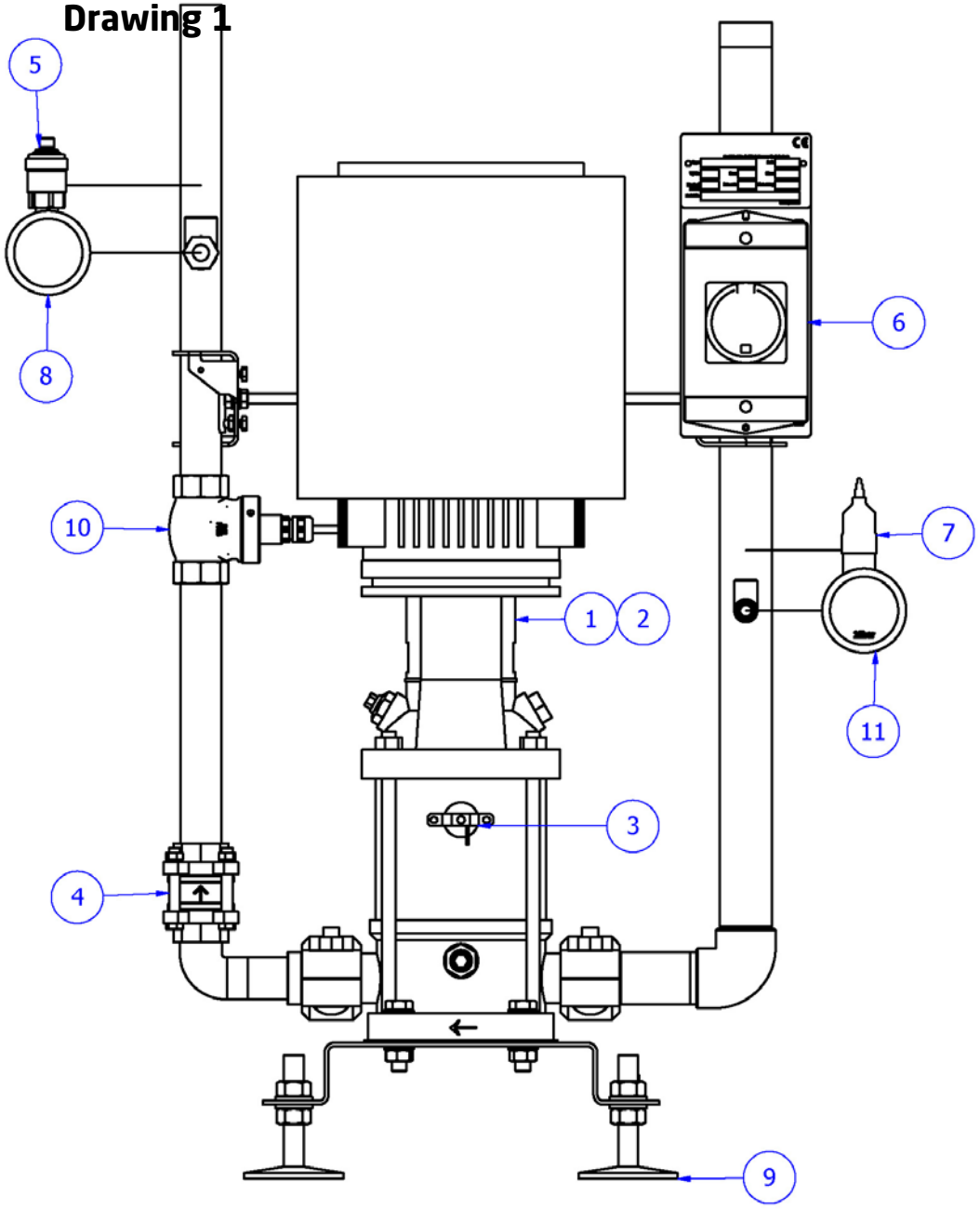
The spare parts drawings are clearly subdivided.

Consult the table below to see which drawings belong to your installation.

The drawings can be found at the rear of this user manual.

		LDC-Q without break tank	LDC-Q with break tank	LDC-Q RF	LDC-Q RFD
Drawing 1	Spare parts LDC-Q without break tank	√		√	√
Drawing 2	Spare parts LDC-Q with break tank		√	√	√
Drawing 3	Spare parts BLOCKSAT RF			√	
Drawing 4	Spare parts BLOCKSAT RFD				√

Drawing 1



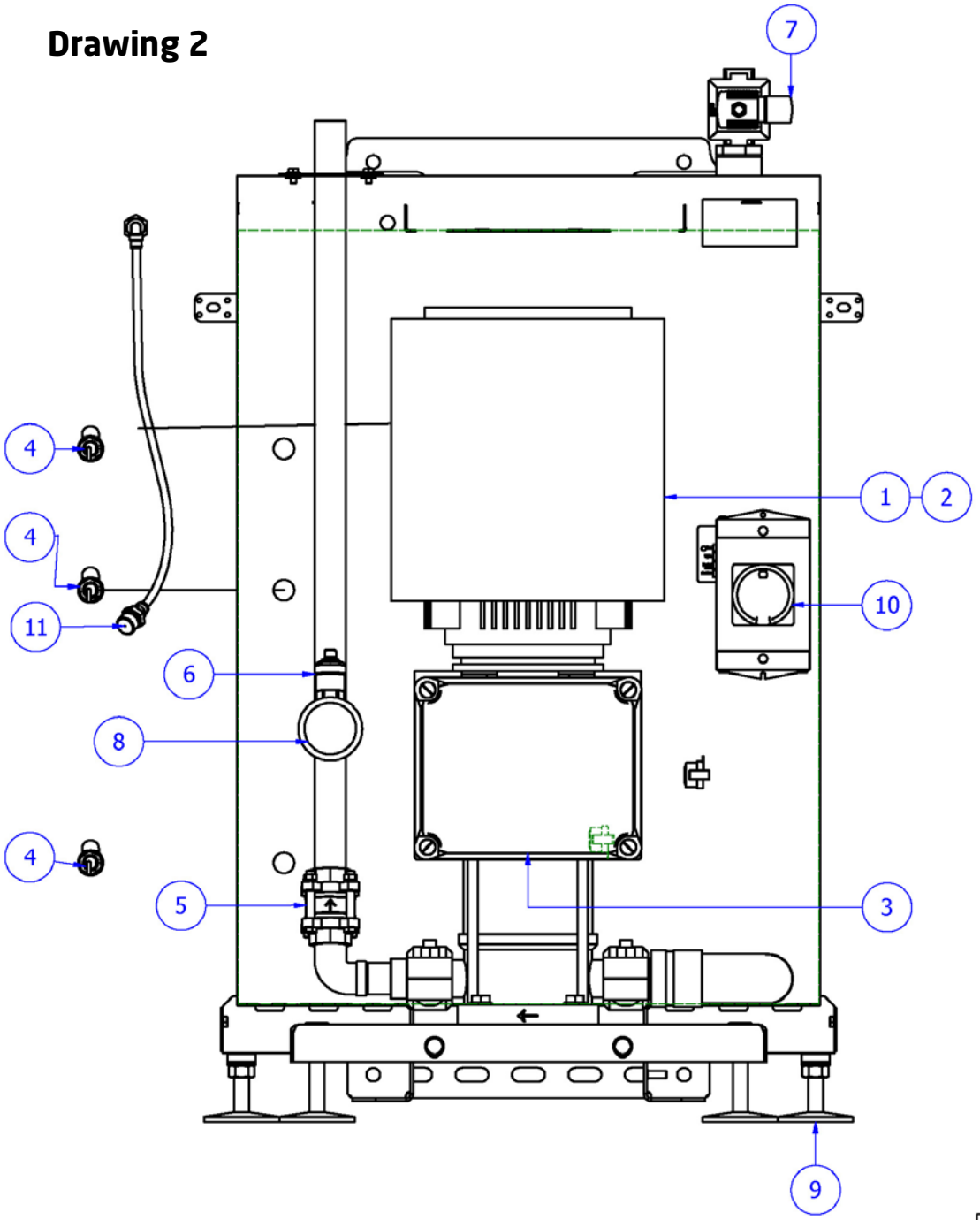
Spare parts			
POS.	ARTICLE NUMBER	DESCRIPTION	QTY
1	71500204	Pump CRIE 3-8 | 3 kW	1
	71500201	Pump CRIE 3-9 | 4 kW	1
	71500212	Pump CRIE 3-9 | 5,5 kW	1
	71500202	Pump CRIE 10-9 | 7,5 kW	1
	71500210	Pump CRIE 10-09 | 11 kW	1
2	71500091	Cartridge Seal for Pump | 3 / 4 / 5,5 kW	1
	71500092	Cartridge Seal for Pump | 7,5 / 11 kW	1
3	77005506	Elpress thermostat	1
4*	290921	Non-return valve 1''	1
	290923	Non-return valve 1 1/2''	1
5	77005743	Pressure sensor 0-40 Bar	1
6	74712203	Main switch	1
7	77005754	Pressure sensor 0-5 bar	1
8	77002040	Manometer 0-40 bar	1
9	78000124	Adjustable foot	4
10	76000021	Flowsensor 1''	1
	76000020	Flowsensor 1 1/2''	1
11	77002010	Manometer 0-10 bar	1

** The size of the non-return valve is depending on the water out dimensions noted on the lay-out drawing.*

*** The size of the flowsensor is depending on the water out dimensions noted on the lay-out drawing.*

Title:	Revision:	Date:
Spare parts LDC-Q without breaktank	1.1	05-02-2018

Drawing 2



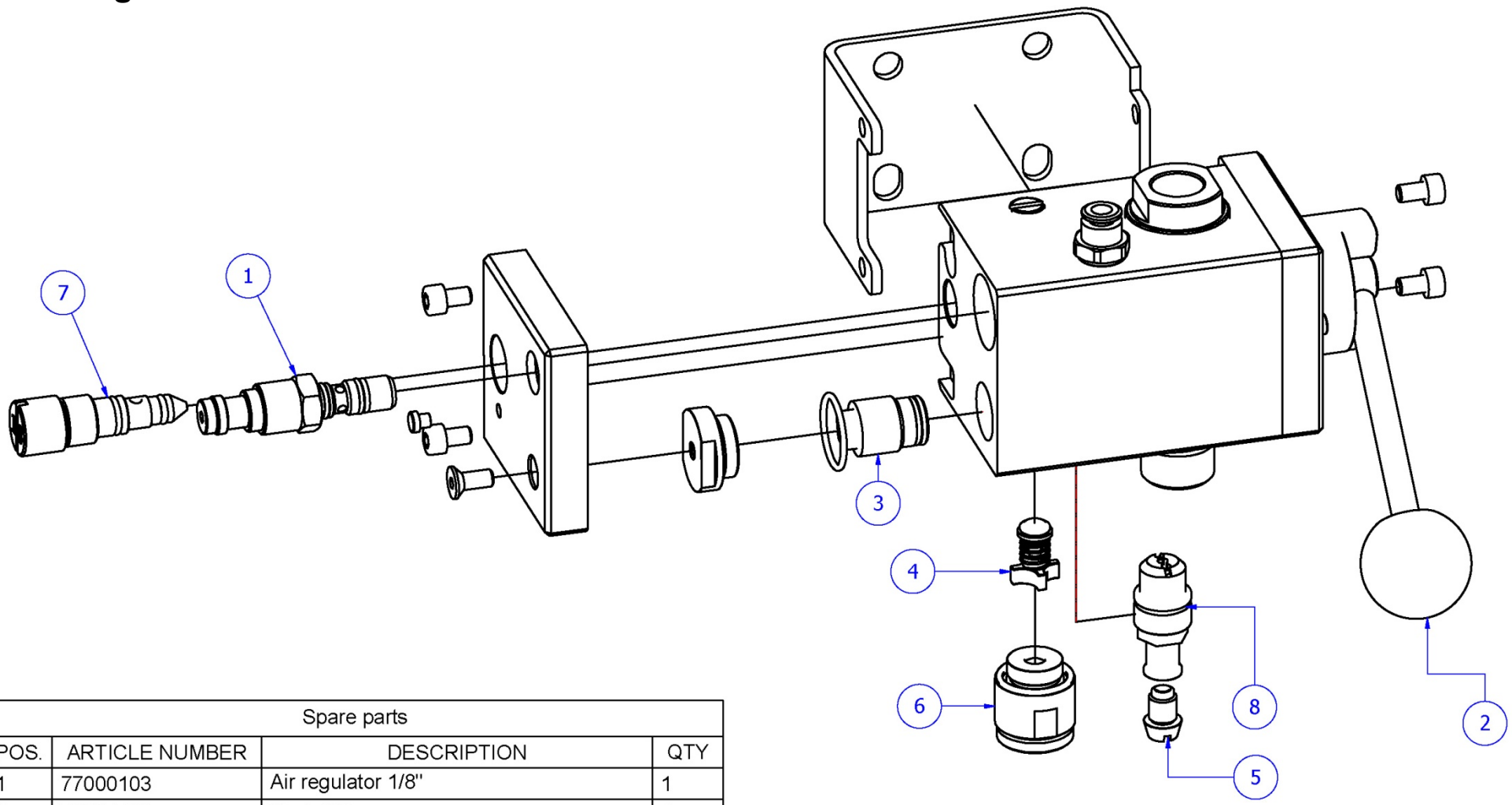
Spare parts			
POS.	ARTICLE NUMBER	DESCRIPTION	QTY
1	71500204	Pump CRIE 3-8 | 3 kW	1
	71500201	Pump CRIE 3-9 | 4 kW	1
	71500212	Pump CRIE 3-9 | 5,5 kW	1
	71500202	Pump CRIE 10-9 | 7,5 kW	1
	71500210	Pump CRIE 10-09 | 11 kW	1
2	71500091	Cartridge Seal for Pump | 3 / 4 / 5,5 kW	1
	71500092	Cartridge Seal for Pump | 7,5 / 11 kW	1
3	77005506	Elpress thermostat	1
4	77005691-1	Level switch M16	3
5*	290921	Non-return valve 1"	1
	290923	Non-return valve 1 1/2"	1
6	77005743	Pressure sensor 0-40 Bar	1
7**	77006158	Solenoid valve 3/4"	1
	77006161	Solenoid valve 1 1/4"	1
8	77002040	Manometer 0-40 Bar	1
9	78000124	Adjustable foot	4
10	74712203	Main switch	1
11	1601003035	Pump bypass	1

** The size of the non-return valve is depending on the water out dimensions noted on the lay-out drawing.*

*** The size of the solenoid valve is depending on the water in dimensions noted on the lay-out drawing.*

Title:	Revision:	Date:
Spare parts LDC-Q with breaktank	1.1	05-02-2018

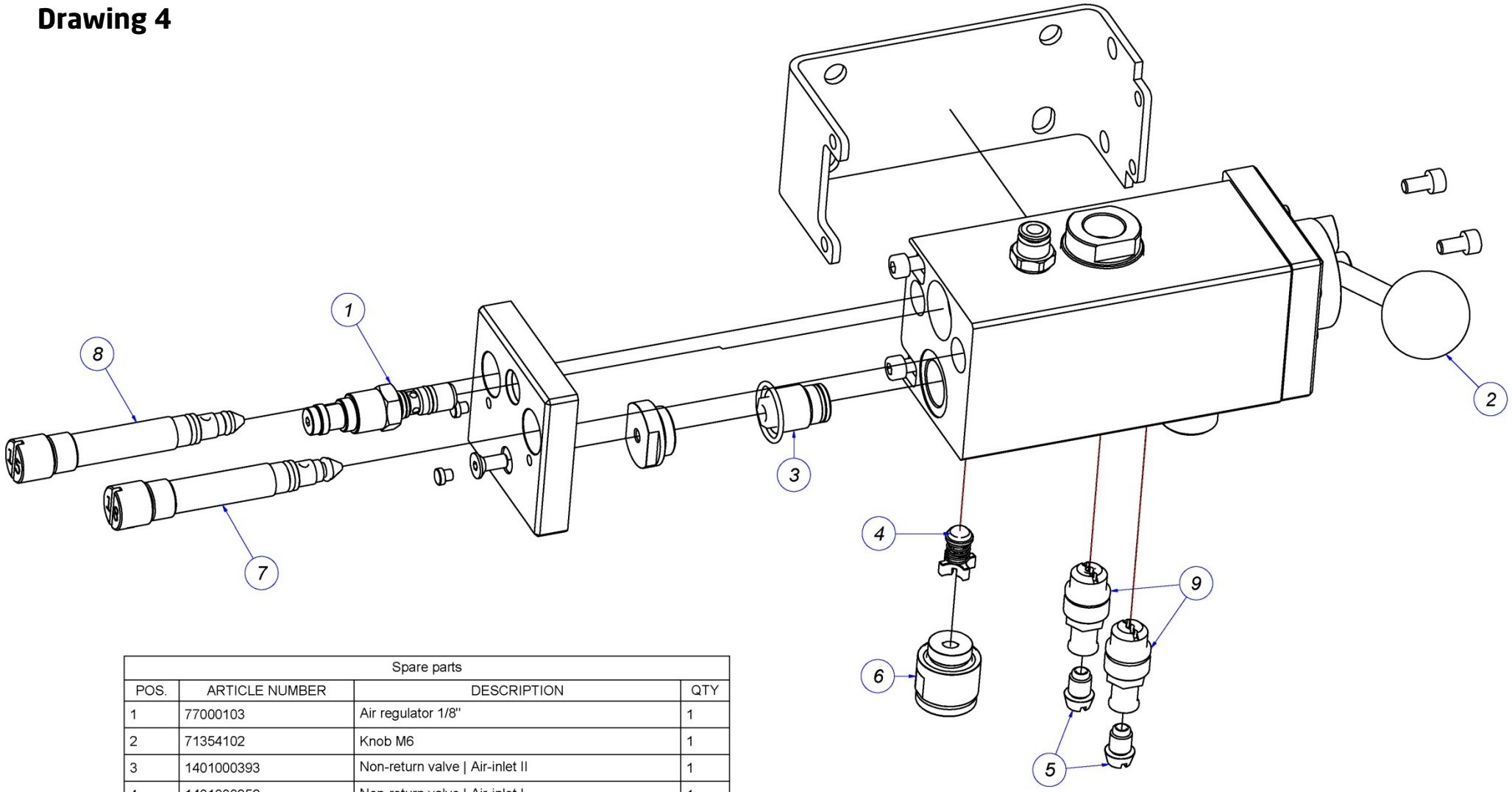
Drawing 3



Spare parts			
POS.	ARTICLE NUMBER	DESCRIPTION	QTY
1	77000103	Air regulator 1/8"	1
2	71354102	Knob M6	1
3	1401000393	Non-return valve | Air-inlet II	1
4	1401000356	Non-return valve | Air-inlet I	1
5	See: Drawing 3	Restriction chemical PP	1
6	1401000358	Drain-valve (14 bar)	1
7	See: Drawing 4	Injector foam + O-rings	1
8	1401000354	Non-return valve chemical injector	2
-	75910509	Hose 9 x 15 mm | White	1,5 M
-	75900265	Chemical filter scution sleeve	2

Title:	*Revision:*	*Date:*
Spare parts Blocksat RF	1.0	3-4-2015

Drawing 4



Spare parts			
POS.	ARTICLE NUMBER	DESCRIPTION	QTY
1	77000103	Air regulator 1/8"	1
2	71354102	Knob M6	1
3	1401000393	Non-return valve | Air-inlet II	1
4	1401000356	Non-return valve | Air-inlet I	1
5	See: Drawing 3	Restriction chemical PP	2
6	1401000358	Drain-valve (14 bar)	1
7	See: Drawing 4	Injector foam + O-rings	1
8	See: Drawing 4	Injector disinfection + O-rings	1
9	1401000354	Non-return valve chemical injector	2
-	75911210	Hose 10 x 16 mm | Red	1,5 M
-	75910509	Hose 9 x 15 mm | White	1,5 M
-	75900265	Chemical filter suction sleeve	2

Title:	Revision:	Date:
Spare parts Blocksat RFD	1.0	2-2-2015

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