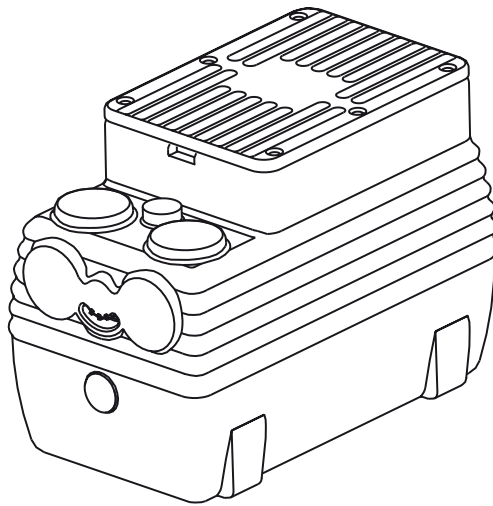




water technology

COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

BlueBOX



EN

Use and maintenance instructions





DICHIARAZIONE DI INCORPORAZIONE - DECLARATION OF INCORPORATION - DÉCLARATION D'INCORPORATION -
DECLARACIÓN DE INCORPORACIÓN - EINBAUERKLÄRUNG - 一致性声明

Zenit Italia s.r.l.
S.Cesario S.P. - Modena - Italia

Le stazioni di sollevamento BlueBOX con elettropompe monofase o trifase, con o senza il galleggiante incorporato ed il cavo di alimentazione con spina o a cui deve essere collegato un quadro elettrico ed i galleggianti, non potranno essere messi in servizio prima che le macchine/impianti nelle quali saranno incorporati vengano dichiarate/i conformi alle disposizioni delle direttive:

- Macchine 2006/42/CE
 - Bassa Tensione 2006/95/CE e successive modifiche
- e alle disposizioni nazionali di attuazione o ad altra disposizione legislativa nazionale relativa alla sicurezza.

Nota: Per l'elettropompa vedere la dichiarazione di conformità allegata al manuale d'uso.

Si dichiara inoltre che la persona autorizzata a costituire il fascicolo tecnico dell'elettropompa è:

The BlueBOX lift stations with single-phase or three-phase electric pumps, with or without built-in floatswitch and power supply cable with plug or to which an electric board and the floatswitches must be connected, may not be commissioned before the machines/systems in which they shall be incorporated are declared compliant with the provisions of directives:

- Machinery EEC/2006/42
 - Low Voltage EEC/2006/95 and subsequent amendments
- and the domestic implementation provisions or other national legislative provision relating to safety.

Note: Concerning the electric pump, refer to the declaration of conformity annex to the specific operating manual.

We hereby declare that the person in charge of the electrical pump technical sheet building is:

Les stations de relevage BlueBOX dotées d'électropompes monophasées ou triphasées, avec ou sans le flotteur incorporé et le câble d'alimentation doté de fiche ou desquelles un tableau électrique et les flotteurs doivent être connectés, ne pourront pas être mises en service avant que les machines/installations dans lesquelles elles seront incorporées, ne soient déclarées conformes aux dispositions de les directives:

- Machines 2006/42/CEE;
 - Basse tension 2006/95/CEE et modifications successives
- et aux dispositions nationales de mise en oeuvre ou autre disposition législative nationale se rapportant à la sécurité.

Note : Quant à l'électropompe voir la déclaration de conformité annexe dans le manuel d'utilisation spécifique.

Nous déclarons également que la personne autorisée à constituer le dossier technique de l'électropompe est:

Las estaciones de elevación BlueBOX con electrobombas monofásicas o trifásicas, con o sin el flotador incorporado y el cable de alimentación con enchufe o a cuyo cable debe conectarse un tablero eléctrico y los flotadores, no podrán ponerse en función antes de que las máquinas/instalaciones a las que se incorporarán sean declarada/s conformes a las disposiciones de la directiva

- Máquinas 2006/42/CEE;
 - Material eléctrico destinado a utilizarse con determinados límites de tensión 2006/95/CEE y siguientes modificaciones
- y a las disposiciones nacionales de ejecución o a otra disposición legislativa nacional referente a la seguridad.

Nota: para la electrobomba véase la declaración de conformidad anexa al manual de uso correspondiente.

Se declara además que la persona autorizada para constituir el fascículo técnico de la electrobomba es:

Die Hebestationen BlueBOX mit Ein- oder Dreiphasen-Elektropumpen mit oder ohne eingebauten Schwimmer und Netzkabel mit Stecker oder Versorgungsstecker, deren Kabel an eine elektrische Schalttafel und die Schwimmer angeschlossen werden muss, dürfen nicht in Betrieb genommen werden, bevor für die Maschinen/Anlagen, in die diese Teile eingebaut werden, eine Konformitätserklärung hinsichtlich der Vorgaben der Richtlinien

- Maschinenrichtlinie 2006/42 EWG
 - Niederspannungs-Richtlinie 2006/95/EWG und nachfolgende Änderungen
- und den nationalen Umsetzungsgesetzen oder anderer nationaler Gesetze hinsichtlich der Sicherheit ausgestellt wird.

Hinweis: für die Elektropumpe siehe Konformitätserklärung im entsprechenden Betriebshandbuch.

Ferner wird erklärt, dass die folgende Person bevollmächtigt ist, die technischen Unterlagen der Elektromotorpumpe zusammenzustellen:

BlueBOX污水提升装置可内置单相或三相潜水电泵, 泵可自带浮球和带插头电缆, 当泵不带浮球时, 浮球需和电控柜相连, 整套设备/系统中的部件只有符合以下指令后, 才可以试运行:

- 机械指令: EEC/2006/42
 - 低电压指令: EEC/2006/95, 及后续改进
- 和当地法规及其他有关安全法规。

注意: 潜水电泵, 请参阅使用说明书中的一致性声明。

特此声明, 我对此装置及电泵的技术条款负责:

Massimiliano Volta - Via dell'Industria,11 - 41018 S.Cesario S.P. MODENA - (ITALIA)

Massimiliano Volta
Zenit Italia s.r.l.



EN ENGLISH **5**



This symbol indicates instructions associated with operator and apparatus safety.



This symbol indicates instructions that concern electric types of risks.



Store this manual in a safe place for future reference.
Read this manual carefully.

N.B.: Text refers to the images on page 34 and following pages

ENGLISH

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1. GENERAL SAFETY REGULATIONS

To install the BlueBOX lifting stations correctly and ensure their safe use, read the contents of this manual with care before carrying out any procedure.

Keep this manual in a clean, easily accessible place.

Installation operations must be carried out by skilled technical staff, taking care to follow the instructions provided in the "INSTALLATION" section. Improper use of the product may cause injury or damage, as well as immediate forfeiture of warranty rights.

The instructions in this manual refer to the types of installation recommended and considered standard by Zenit. In the event of different installation modes, contact Zenit.

When ordering spare parts, always state the product's serial number and exact identification, which you will find in the respective operator's manuals.

In all cases, everything described in this manual must be harmonised with the regulations in force at the place of installation.



1.1 LIST OF RESIDUAL RISKS

Even if used correctly, the product still involves this residual hazard typical of all systems connected to the electrical mains:

ELECTRIC SHOCK HAZARD



1.2 SAFETY REGULATIONS TO BE APPLIED DURING INSTALLATION AND MAINTENANCE OPERATIONS

To allow maintenance work to be performed in complete safety, always adopt the following procedure:

- Use skilled staff for operations requiring the replacement or repair of mechanical parts and/or electrical components;
- Make sure that the pump is disconnected from the electrical mains. To disconnect the pump from the power supply system, connect the phase wires first and then the yellow-green earth wire;
- Cut the tank off from the water system (shut off the intake and outlet pipes);
- Take the electric pump out of the tank;
- If the electric pump has just been in use, wait for its outside to cool to a temperature of less than 50°C;
- Replace failed or worn components with genuine parts only.

If in doubt, seek the manufacturer's advice before proceeding with any repair or replacement job.

Since septic tanks may contain poisonous GASES, ENSURE air circulation before starting work.

Keep out of the reach of children; this product is not suitable for unskilled or incompetent persons.

NEVER place your hands or objects near and/or insert them in the intake hole or strainer or the outlet strainer on the side.

Do not submerge your hands or parts of your body in the tank and do not touch the outlet pipeline (if metallic) until the pump's electricity supply has been disconnected

Do not swallow parts of the product.

Do not allow the free ends of the power supply cables to come into contact with any liquid, including the liquid in the tank.



1.3 PERSONAL PROTECTION EQUIPMENT (PPE) TO BE USED

Wear suitable clothing when handling the product, especially if it has previously been installed: safety footwear, goggles and gloves and a leather apron or similar protection.

Whenever maintenance or repair work is performed on an electric pump after installation, especially if it is submerged in a biological or hazardous liquid, clean all parts thoroughly and wash with plenty of water or specific products.

2. PRODUCT IDENTIFICATION

The tank's dataplate in the manual must be kept for future reference.

Zenit electric pumps carry a dataplate which carries all their specification data. For any information or enquiries, refer to the data on the nameplate or the paper copy of it provided in the operator's manual.

3. OPERATING CHARACTERISTICS

BlueBOX lifting stations solve the problem of discharging wastewater or rainwater into the sewage system when the latter is located above the drain outlets, and whenever the solids in wastewater have to be ground before it is discharged into the sewer.

The BlueBOX lifting station consists of one or two tanks containing, respectively, one or two electric pumps, coupling devices, gate and check valves, one or more float switches and an electrical panel. Once it has been positioned and installed and the wastewater system and electrical connections have been made, it is able to collect the water from toilets and other users and then transfer it to the sewer.

When the liquid in the tank reaches a level that trips the pump on-off float switch to ON, the pump starts and gradually empties the tank.

The pump stops when the liquid reaches the minimum level, tripping the float switch back to OFF.

When two pumps are installed, the float switches are positioned so that the second pump starts as back-up to the first if it is unable to deal with the amount of water entering the tank, or if the first pump has cut out.

An emergency float switch may be installed higher up than the others in the lifting station. This float switch warns when the liquid level in the tank becomes too high. In this case an electric control and monitoring panel must be provided to generate an alarm light and/or buzzer.

Refer to the manuals of pumps and control panels for specific information about their operating limits.

- The BlueBOX cannot be installed in environments containing corrosive or flammable substances, dust or gases, or acids.
- After installation, the ambient temperature must be between 0°C and +50°C
- The temperature of the liquid in the tank must not exceed 40°C (up to 90° for short periods, so the tank is able to handle washing machine and dishwasher wastewater).

For information about compatibility between the pumped liquid and the electric pumps installed in lifting stations, refer to the electric pump manuals.

For outdoor use, electric pumps having power supply lead at least 10 m long, in compliance with the EN 60335-2-41 standard, must be used.

3.1 VISUAL INSPECTION AND HANDLING

BlueBOX lifting stations are supplied in suitable packaging. On receipt of the goods, check that the packaging is intact and the right way up.

In the event of slight damage to the packaging, inspect the products to ensure that they are intact.

If the products are damaged, inform the shop where they were purchased, or your local Zenit dealer, at once.

- Never handle the tank or pump by taking hold of the pump or float switch electrical cables.
- During storage, protect the product from damp, heat and knocks.
- Use suitable equipment for lifting and handling.
- During storage the ambient temperature must be between -20°C and +50°C

3.2 NOISE LEVEL

When submerged, the submersible electric pump has a noise level of less than 70 dB(A).

4. INSTALLATION



Read the safety procedures detailed in points 1.2 and 1.3 before installation, and always apply them.

Always comply with the relevant legal and regulatory requirements in the country where the lifting station is installed.

BlueBOX lifting stations offer a wide choice of pipeline intake and outlet options. Be aware that local legislation may require a variety of installation modes (siphons, valves, etc.).

Units may be installed indoors (basements, cellars, under stairs) or outdoors. When installed outdoors, pumps may be placed above or below the ground.

The cover of the BlueBOX will withstand foot traffic but not vehicles.

When installing indoors, take special care to seal the pipeline connections and ensure excellent ventilation, as described in detail in the INSTALLATION section. The room where the BlueBOX is to be installed must be suitably ventilated and must have a drain outlet in the floor to dispose of any small leaks or condensation.

For above-ground outdoor installations, pay special attention to the temperature range to which the tank is to be exposed. Protect the BlueBOX from direct sunlight.



The mains power supply voltage and frequency must be compatible with the nameplate data of the electric pump(s).

Ensure that the number of electric pump start-ups per hour complies with the limits stated in the relative manual.

In all cases, do not allow the minimum liquid level to drop below the level shown in **FIG. 6**.

In the event of installation conditions different from those stated, contact the Zenit after-sales service.

The BlueBOX cannot be used with liquids intended for human consumption.

4.1 INSTALLING THE BlueBOX ON THE GROUND

Check that the floor underneath the lifting station is horizontal, fairly smooth and strong enough to bear the weight of the station when full.

Make sure that the floor has a drain outlet connected to the sewer system to deal with any leaks during maintenance or operation.

Enough room must be left around the station for any maintenance work.

If the BlueBOX is installed indoors, it is important to ensure sufficient ventilation to prevent the formation of hazardous mixtures of gases.

4.2 INSTALLING THE BlueBOX IN THE GROUND

The lifting station must not stand on the bare earth, so a horizontal concrete plinth at least twice the area of the BlueBOX's own contact surface must be constructed. Vertical walls will then be built around the polyethylene tank. It is essential that the ground does not contain groundwater and

is not subject to flooding.

Once the water system and electric connections have been made, the lifting station should be complete surrounded with clean sand to prevent it from shifting during operation.

Once the lifting station has been installed in the ground, the cover can be walked over but will not support vehicles.

For greater safety, a manhole can be installed over the cover of the BlueBOX; its weight must not rest on the lifting station itself. In all events, enough room must be provided for any maintenance work.

4.3 VENT PIPELINE

The vent pipeline is installed to prevent the formation of explosive or toxic mixtures of gases and to prevent pressure build-ups when liquid enters the tank, or vacuums during pumping.

Local regulations may require different vent pipeline diameters.

Zenit recommends a vent pipeline of at least 75 mm, installed using the gasket provided, in one of the connections provided in the top of the BlueBOX. The tank is supplied complete with a through-wall fitting to which a vent pipeline with minimum inside diameter of 38mm (1½" can be fitted; however, whether this is used will depend on the installation type and pipeline length.

The vent pipeline must be perfectly sealed to the tank intake and the other end must be installed outdoors, at a suitable height and with a flame prevention filter if necessary.

4.4 CHECK VALVE

A check valve should be installed on the outlet pipeline connected to the sewer system to prevent flow-back into the lifting station.

Zenit is able to supply the BlueBOX fitted with a bottom coupling device with integral check valve and a patented system to vent any air which forms in the pump body during a lengthy period out of use.

4.5 STOP VALVE

Stop valves must be installed on both the intake and the outlet pipelines to allow maintenance to be carried out in safety. Gate valves or ball valves can be used for this purpose.

4.6 POSITIONING THE PUMPS

The cover, or covers in the case of a double station, are fixed to the tank by means of screws; unscrew the covers with the aid of a spanner and remove it/them.

For three phase electric pumps it is fundamental to check that the rotation is direct before fixing the pump in position (procedure explained in the electric pump operator's manual. The pump installation mode depends on the type of BlueBOX, depending on whether a bottom coupling device or direct coupling is used. When installing with direct coupling, place the pump on the bottom of the tank in the position indicated by the mounts provided on the bottom (raised projections which will hold the pump stable during operation.

Fit the pipe into the outlet hole in the top of the tank, fitting the cable clamp gasket and the plastic ring-nut onto the pipe.

Now screw the outlet pipe onto the pump outlet port. Next, tighten the ring-nut.

If the BlueBOX 90 and 150 are being used, the pump is fitted with a PVC pipe with connection which allows the pump to be separated from the outlet pipe without dismantling the pipe from the system.

For electric pumps with horizontal outlet, the lifting station can be fitted with a bottom coupling device already installed together with the outlet pipe. Ensure that the pipe clamp is firmly tightened to prevent unpleasant smells from escaping. Connect the sliding flange to the pump outlet port and then fit the pump-flange assemble on the coupling feet with the aid of the guide pipes.

4.7 EXTRACTING PUMPS FROM A BlueBOX

To extract vertical outlet pumps from the BlueBOX 90-150 proceed as follows: (FIG. 1/A-B-C-D)

- 1 Unscrew the cover fixing screws
- 2 Remove the cover
- 3 Disconnect the outlet ring-nut and release the rubber cable glands
- 4 Move the pump towards the opening at the top
- 5 Extract the pump through the opening left by the cover

To extract vertical outlet pumps from the BlueBOX 250-400 proceed as follows: (FIG. 2/A-B-C-D-E)

- 1 Unscrew the cover fixing screws
- 2 Remove the cover
- 3 Disconnect the outlet ring-nut and release the rubber cable glands
- 4 Remove the outlet gasket
- 5 Unscrew the pump outlet pipe
- 6 Extract the pump through the opening left by the cover

To extract horizontal outlet pumps installed with coupling foot, proceed as follows: (FIG. 3/A-B-C)

- 1 Unscrew the cover fixing screws
- 2 Remove the cover
- 3 Lift the pump by means of the handle until it is free of the guide pipes

4.8 HYDRAULIC CONNECTIONS

The water system connections must be made by a qualified installation engineer.

BlueBOX lifting stations offer a variety of pipeline intake and outlet options. For the outlet, Zenit can supply the station complete with a length of pipe connected to the electric pump or coupling device to simplify connection to the rest of the system.

At the sides, the station has a variety of fittings for the intake pipes. One or more holes should be made in the best position for the user's installation (FIG.4).

To install the intake pipes, a hole must be made in the tank with a drill fitted with a flared grinding tool of the appropriate diameter for the pipe.

For pipe Ø50 mm use flared grinding tool Øf = 60 mm
For pipe Ø75 mm use flared grinding tool Øf = 86 mm
For pipe Ø90 mm use flared grinding tool Øf = 100 mm
For pipe Ø110 mm use flared grinding tool Øf = 127 mm

The rubber gasket guarantees a perfect seal with no need to use additional sealants.

It is advisable to check the diameters of the pipelines and gaskets carefully before drilling the holes in the tank. Secure all the pipelines so that their weight does not rest on the lifting station.

4.9 FLOAT SWITCHES AND OVERFLOW SENSOR

The BlueBOX can be used with pumps equipped with float-switches which start and stop them in response to the liquid level. If the float switch is not installed directly on the pump, mechanical float switches are fixed to a plastic rod (**FIG. 5**); multiple contact float switches are hung from the upper lip of the tank without any additional restraints. Float switches are fixed to the top lip of the tank and the pipe by means of eye-rings supplied with the device. Zenit supplies the BlueBOX complete with any float switches preassembled inside the tank. Remember that the minimum level of the liquid must never fall below the threshold shown in **FIG 6**, regardless of the number of pumps installed in the BlueBOX.

The maximum level is set at 450 mm. The pumps' operating thresholds will be set within this range.

Any change to the positions of the float switches changes the way the levels inside the tank are controlled. Zenit accepts no responsibility for malfunctions, injury or damage if the original positions of the float switches are altered.

An overflow sensor can be supplied (as an optional) to indicate when the liquid level is too high (an electrical panel must be used).

4.10 FLOAT SWITCH STROKE LIMITER

A special accessory can be used to modify the stroke length of the pump's float switch. This accessory should be used to ensure that the pump's start-up level is not too close to the overflow level.

To install it, proceed as follows: (**FIG. 7/A-B-C-D-E**)

1. Separate the float switch cable from the handle cable retainer ring (**FIG. 7/A**)
2. Fit the stroke limiter on the pump as shown (**FIG. 7/B**)
3. Fix the float switch cable into the stroke limiter cable retainer ring, taking care to leave 100 mm of cable free (**FIG. 7/C**)
4. Fit the stroke limiter into the handle cable retainer ring as shown (**FIG. 7/D**)
5. Close the top of the stroke limiter using the band clamp provided (**FIG. 7/E**)
6. Secure the float switch cable to the stroke limiter using a band clamp, fitting it into the slots provided (**FIG. 7/F**)

4.11 EMERGENCY PUMP-OUT SYSTEM

BlueBOX lifting stations are designed to allow an emergency submersible electric pump to be inserted through the large opening in the top if necessary. The through-wall accessory can be used to connect a drainage tap, and a hand pump if necessary (not supplied).

CAUTION: the through-wall accessory for the hand pump or drainage tap must be installed, if required, by the fitter before the system is put into operation. (see **FIG. 8**)

4.12 THROUGH-WALL FITTING FOR DRAINAGE HOLE AND BALL TAP

The bottom of the BlueBOX is fitted to take an emergency emptying system.

With the tank empty, drill a hole with a flared grinding tool $\varnothing 50$ in the chosen point and fit the through-wall joint supplied as standard (**FIG. 8/A-B-C-D**)

A plug (supplied as standard) or a tap (recommended) can be fitted to the through-wall fitting.

4.13 CABLE GLAND SYSTEM

Once the pump and any float switches have been positioned, the cables have to be passed through the PATENTED modular system of rubber cable glands.

The BlueBOX 90, 150 and 250 have 4 modular cable glands and the BlueBOX 400 has 8 of them.

The cable glands are fitted ready to take the cables but they are still sealed to prevent unpleasant smells from escaping. Simply cut the inside of the cable gland to perforate the rubber diaphragm and insert the cable. If the pump cable has a moulded plug, a longitudinal cut can be made along one side of the rubber cable gland to allow it to be opened and then closed again to fit it snugly around the cable (**FIG. 9**).

The lengths of the cables inside the lifting station then have to be adjusted so that they are not slack.

They must move around as little as possible and must not interfere with float switch travel.



4.14 ELECTRICAL CONNECTION

The electrical connections must be made by qualified staff.

For the electrical connection of the electric pumps and control panels, follow the instructions provided in the relative manuals. In three-phase pumps it is fundamental to check that the rotation direction is correct.

The power supply socket, or the electrical panel if installed, must be placed in a dry, protected position at least 1.5 metres above the ground.

5. FIRST START-UP

When the system is started up for the first time, the cover must be left open to allow the levels to be monitored. The first step is to fill the lifting station with clean water. While this is done, the intake gate valve must be closed. Check that there are no leaks in the station and the pumps are operating correctly. To assess the levels more precisely, the outlet gate valve should be 3/4 closed.

CAUTION: make sure that the submersible electric pump inside the BlueBOX is primed; in some cases an air lock may form in the top of the pump body, preventing liquid from being pumped. Check that the levels set are correct by simulating a pair of duty cycles with clean water.

Once it is certain that the lifting station is operating correctly and there are no leaks, the cover can be closed and the intake pipeline gate valve can be opened.

6. MAINTENANCE

Maintenance work must be carried out by skilled staff, who must wear suitable safety equipment and use suitable lifting gear when handling heavy items.

Follow the rules below if work has to be done on the product.

- First, check that all electrical components have been disconnected from the power supply.
- Read the operator's manuals of the electric pumps and control panels with care.
- Open the cover periodically and check the condition of the insides of the tank walls.
- Clean the insides of the tank walls at least once a year, especially the area around the float switches and the switches themselves.

If components are repaired or replaced, use genuine parts only. The use of non-genuine parts might generate the risk of injury or damage, or lead to the forfeiture of warranty cover.



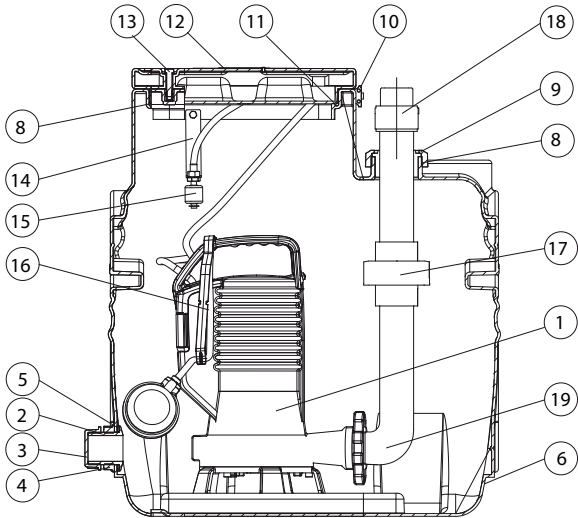
7. TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
The pump is running but no water is being pumped	The pump is not primed	Prime the pump by lifting it and then putting it back in place, filling the pump body with liquid
When I flush the toilet air bubbles rise up inside it	Vent pipe not fitted or insufficient	Install a vent pipe or check the one fitted
The tank tends to sag when liquid enters it	Incoming liquid too hot	Lower the temperature of the liquid by mixing it with cold water
The level in the toilet drops when the pumps are in operation	Vent pipe not fitted or insufficient	Install a vent pipe or check the one fitted
Leaks at the pipe entrance/exit points	Gaskets not fitted correctly	Find the leak, check that the seal is fitted correctly and replace it if necessary
After installation in the ground the tank shifts or sinks	No plinth underneath tank or ground not firm enough	Remove the tank and install it correctly
The system is noisy and vibrates	Pipelines not secured to the walls or pump unbalanced by a foreign body. Pump operating with cavitation	Secure the pipelines to the walls with vibration damping mounts and check that the pump is not blocked by solids and is not working off its characteristic curve

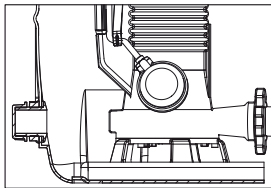
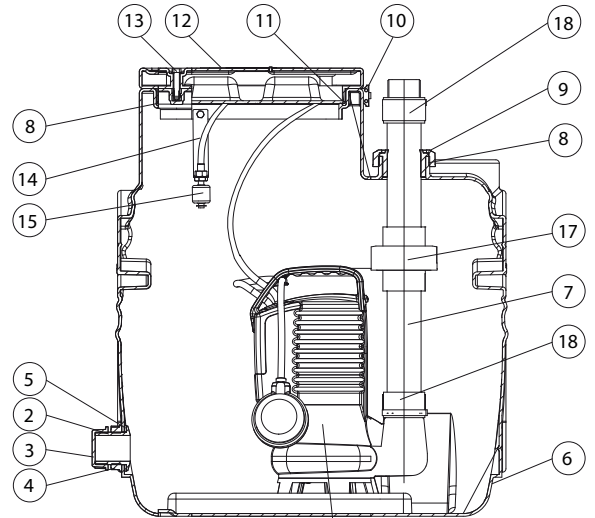
N.B. also check the guidelines provided in the electric pump manual

BlueBOX 90/150 with pump with horizontal outlet

BlueBOX 90/150 with pump with vertical outlet



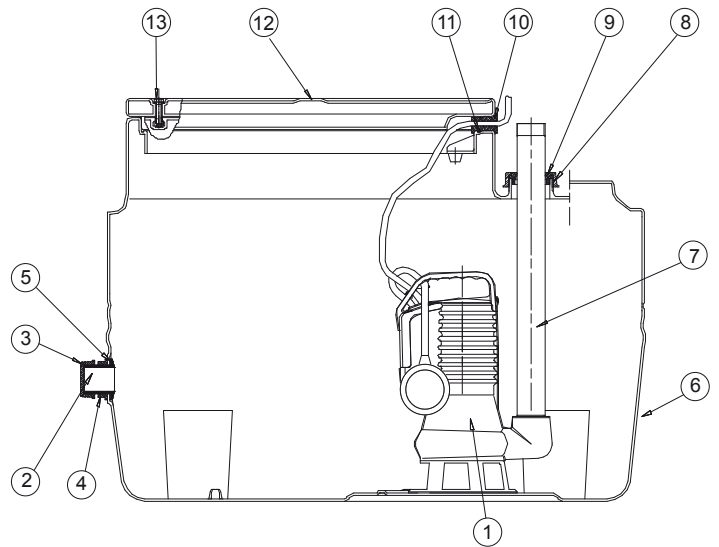
BlueBOX 150, 250, 400



BlueBOX 90

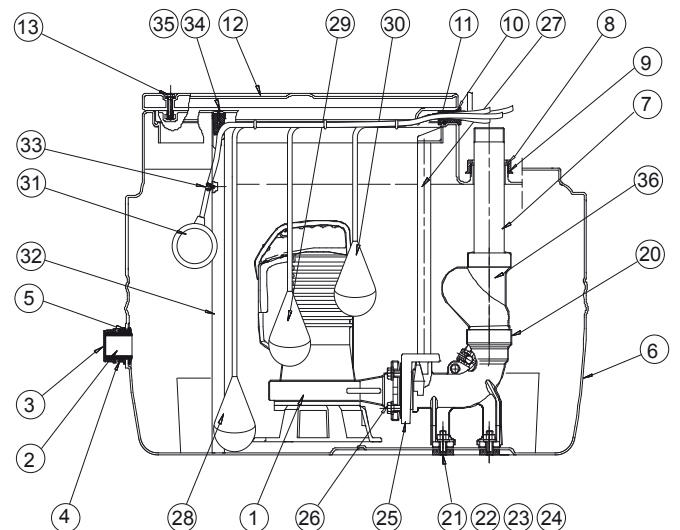
BlueBOX 250

with pump with vertical outlet and float switch on cover



BlueBOX 400

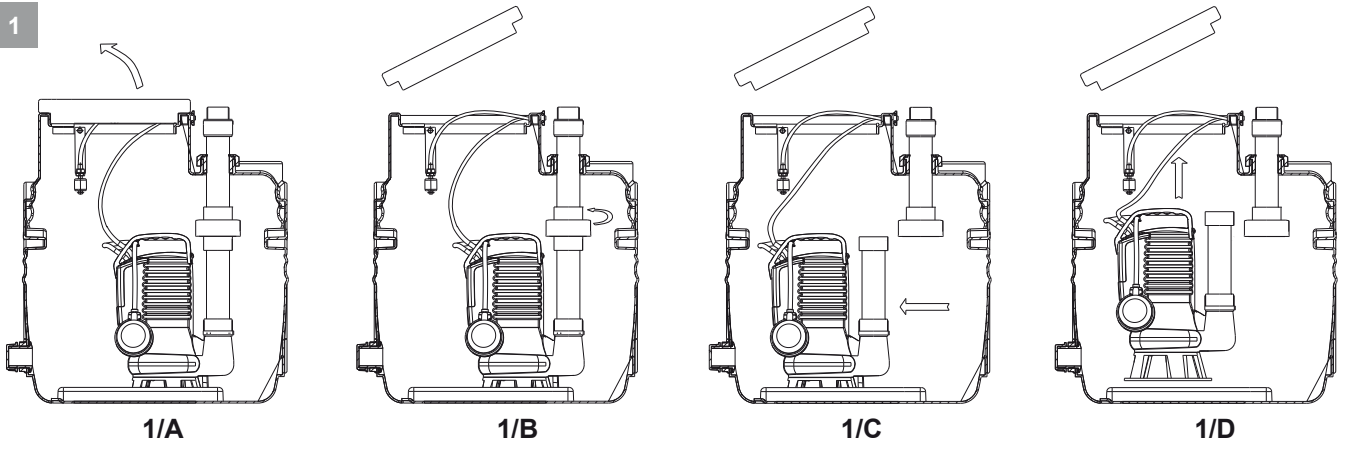
with pump with horizontal outlet installed with coupling foot (DAC), ball valve (VAP) and LEVEL float switch KIT



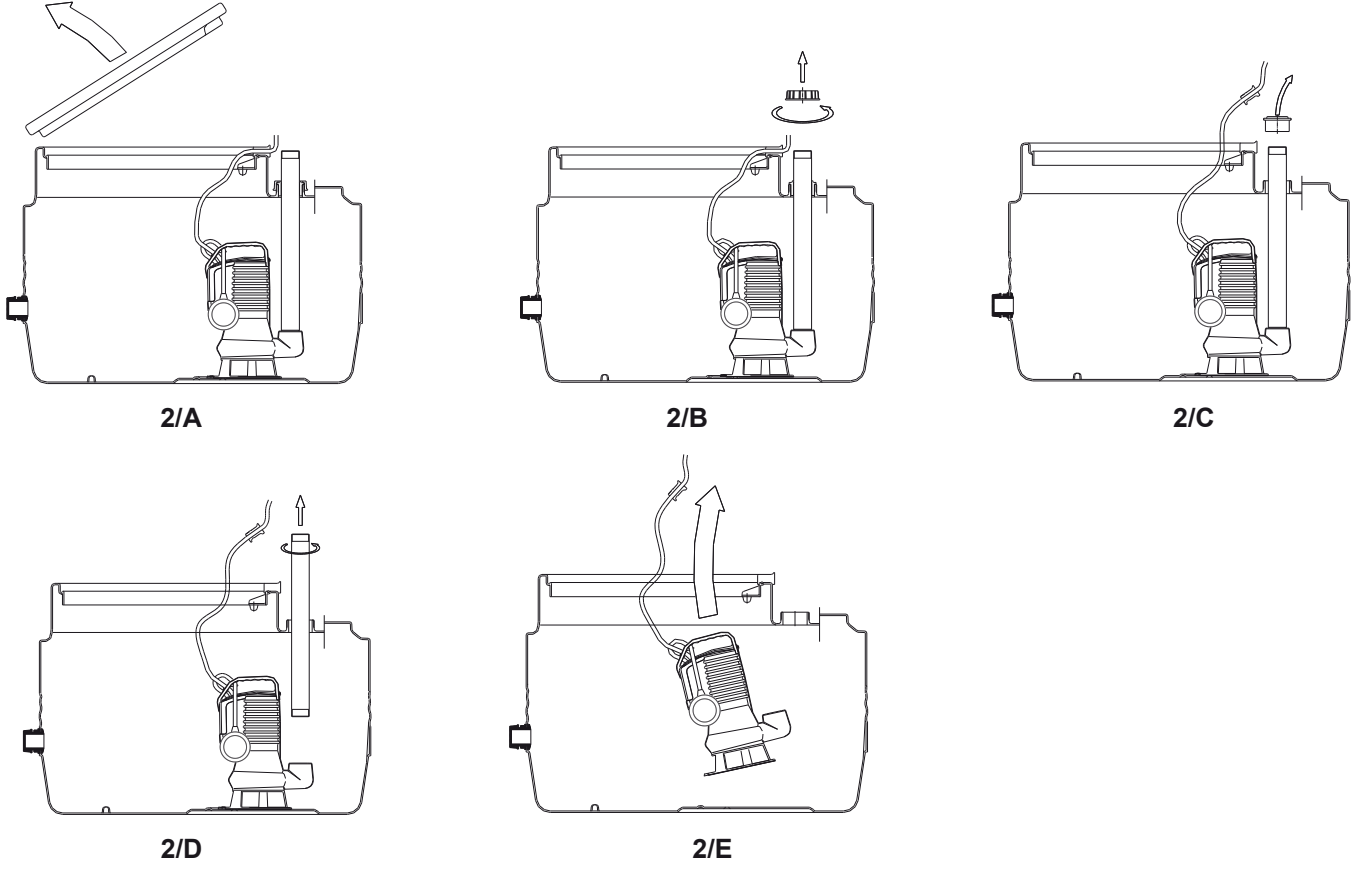
EN

1	Electric pump	21	Fixing screw
2	Drain port	22	Rubber washer
3	Emergency drain port cap (a tap may be fitted)	23	Nut and washer
4	Threaded ring-nut for through-wall fitting	24	Special DAC fixing washer
5	Gaskets for through-wall fitting	25	Sliding flange
6	BLUEBOX tank	26	Screw for fixing pump to sliding flange
7	Outlet pipeline	27	Guide pipes
8	Gasket retainer ring-nut	28	Pump STOP float switch
9	Outlet gasket (varies depending on pipe diameter)	29	Pump START float switch
10	Modular rubber cable glands	30	Emergency pump Start float switch
11	Cover gasket	31	Maximum level ALARM float switch
12	Cover	32	Alarm float switch support
13	Cover screws and washers	33	Float switch cable adjuster eye- ring
14	Steel mount for overflow sensor	34	Rubber float switch rod mount
15	Overflow sensor	35	Self-tapping screw for float switch rod
16	Float switch stroke limiter	36	Integral check valve (optional)
17	Ring-nut		
18	Threaded union		
19	Outlet pipeline with bend		
20	Vertical outlet DAC bottom cou- pling device		

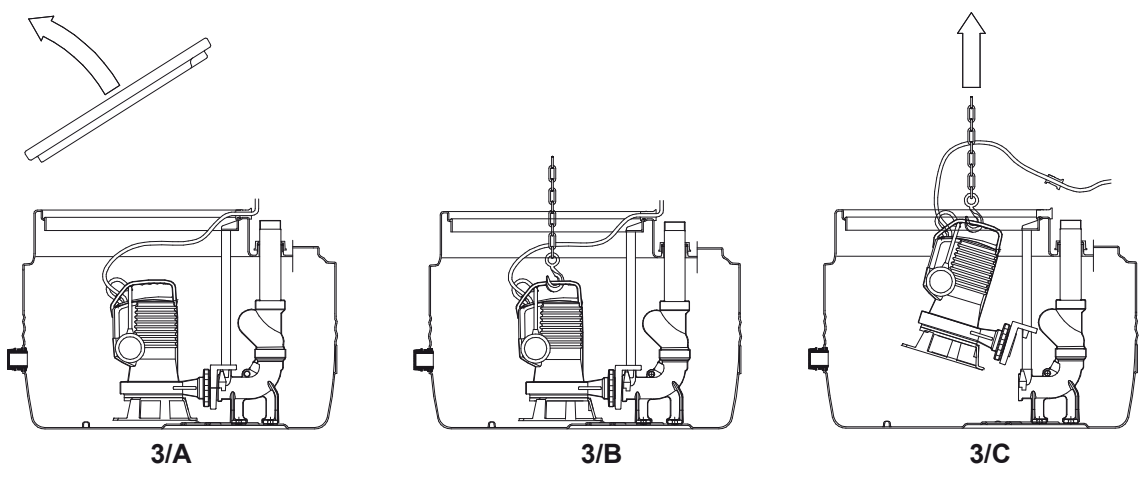
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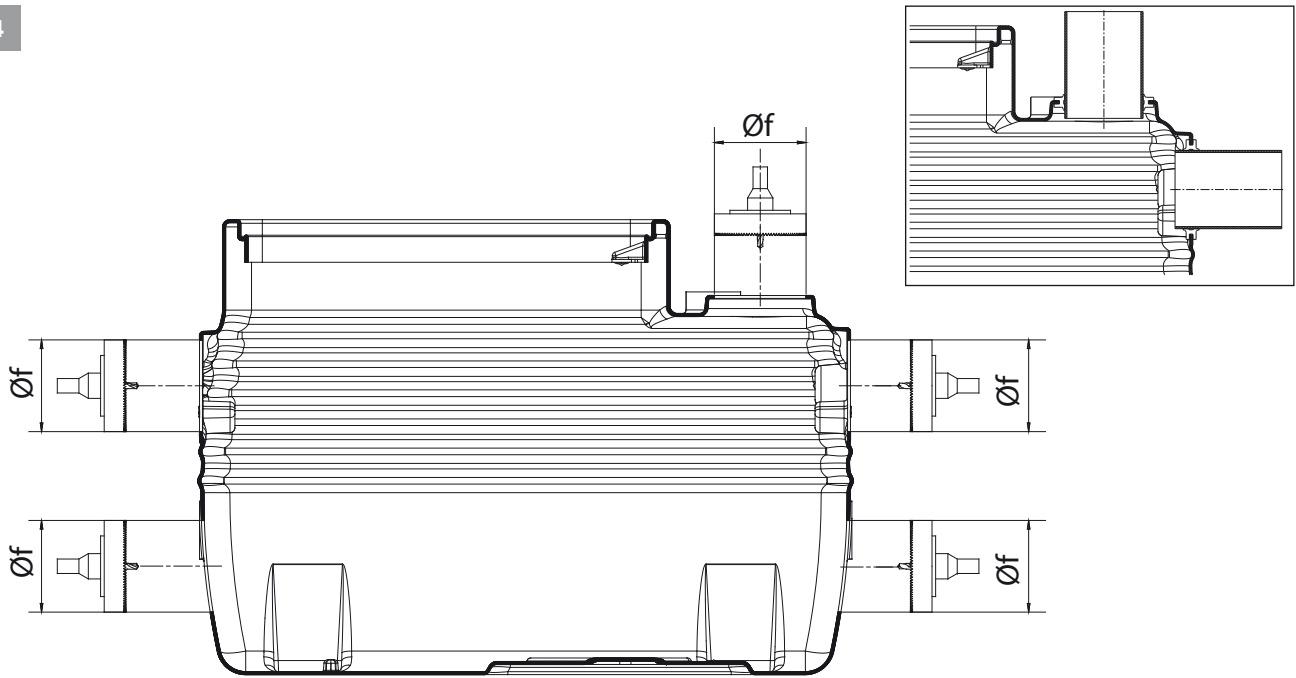
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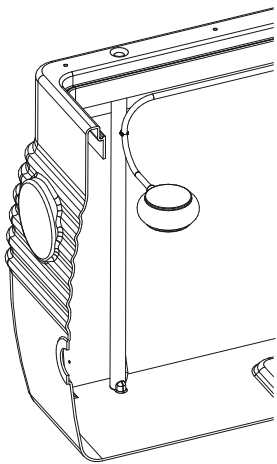
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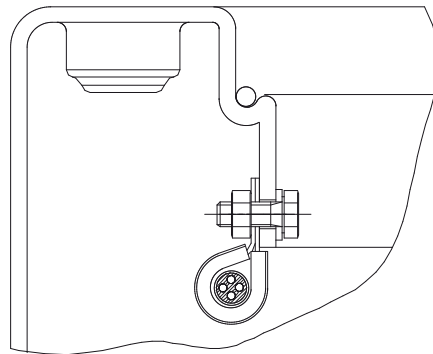
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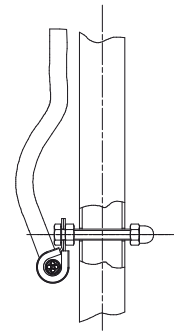
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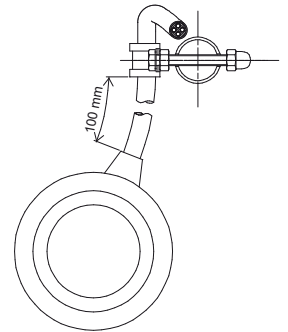
5/A



5/B

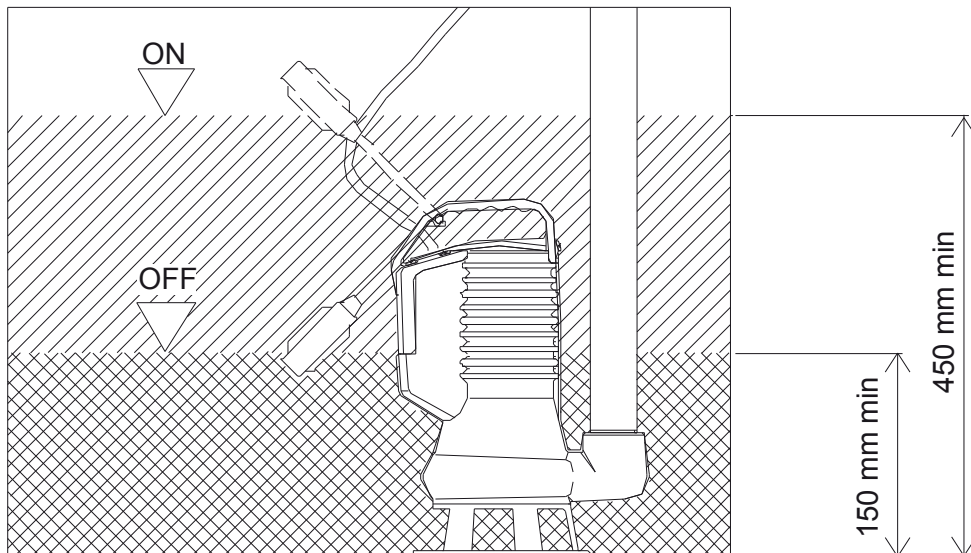


5/C

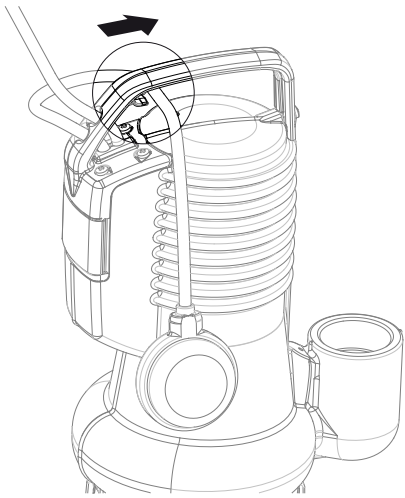


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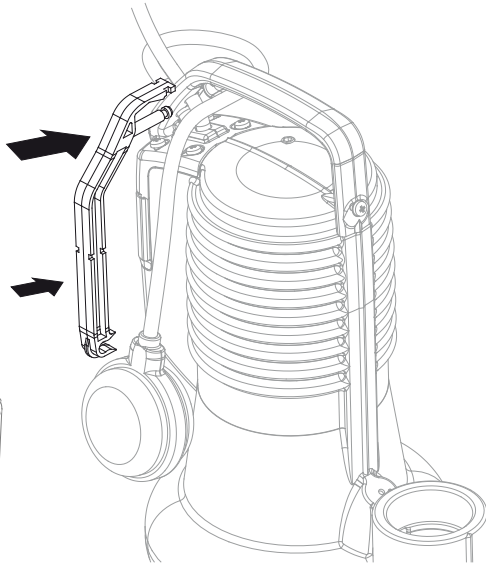
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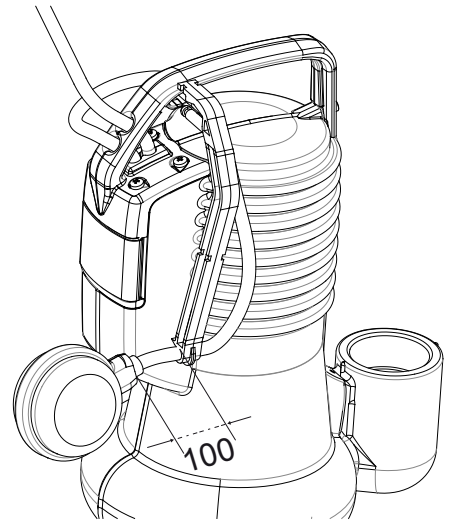
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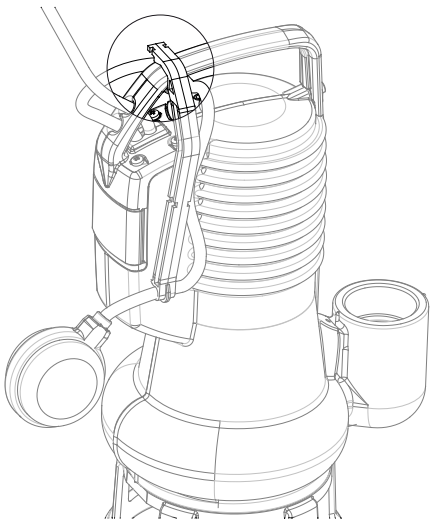
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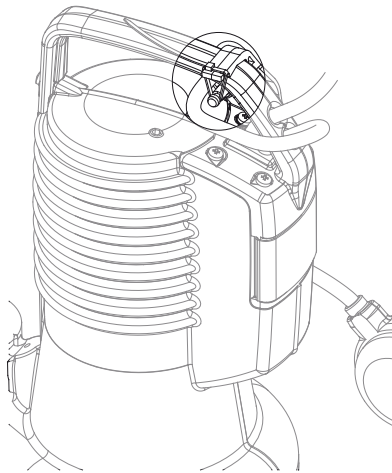
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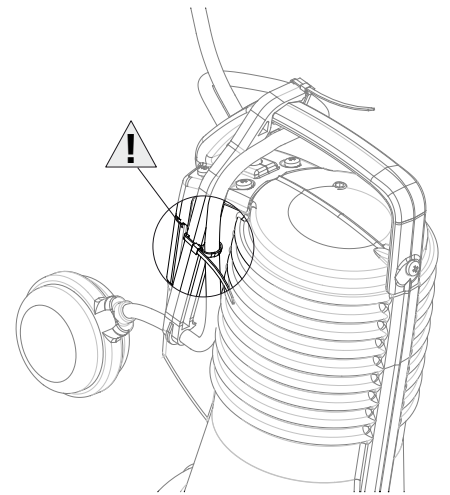
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7/D

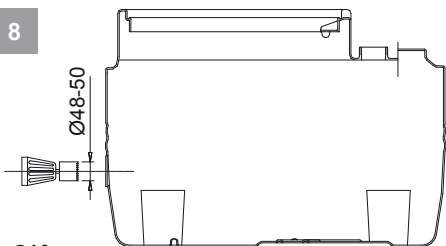


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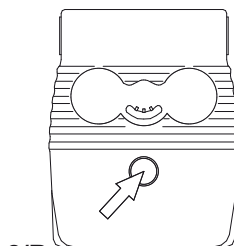


7/F

8

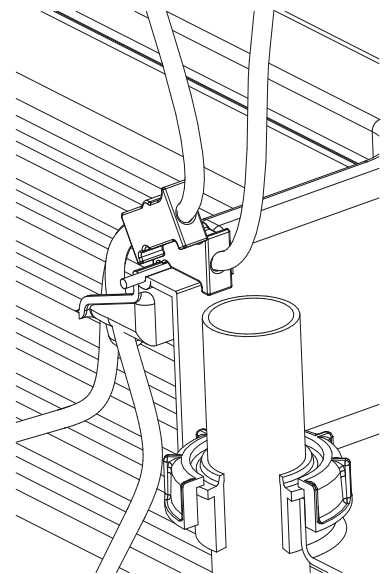


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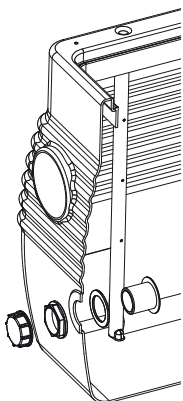


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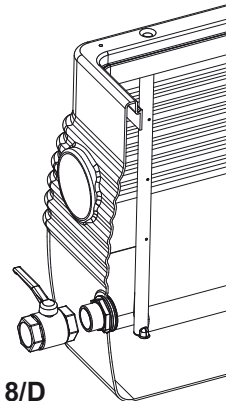
9



8/C



8/D





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