

INSTALLATION / MAINTENANCE AND USER MANUAL

US INJECTED FILTERING PANEL - VINYL TYPE MODEL: PF.I 180 US - PF.I 180 US V3



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1 - The injected filtering panel - vinyl type

The DESJOYAUX Piscines filtration system includes all traditional system functions. Its efficiency, coupled with easy maintenance, will provide you complete satisfaction.

● Principle

The pump draws water through the skimmer opening on the front of the filtration panel. The water is immediately filtered through the filtration bag.

The water is drawn in by the pump and then is discharged into the pool.

● There are several versions of this filtration system

- ▶ PF.I 180 P18 US version with P18 US pump:
 - Single-speed pump, motor: power consumption 0.45kW / 60 cycles motor
 - Total assigned power: 450W

- ▶ PF.I 180 PBI US version with PBI US pump:
 - Dual-speed pump, motor: low-speed power: 0.3kW / high-speed power: 1.6kW / 60 cycles motor
 - Total assigned power: 2200W

● Technical description

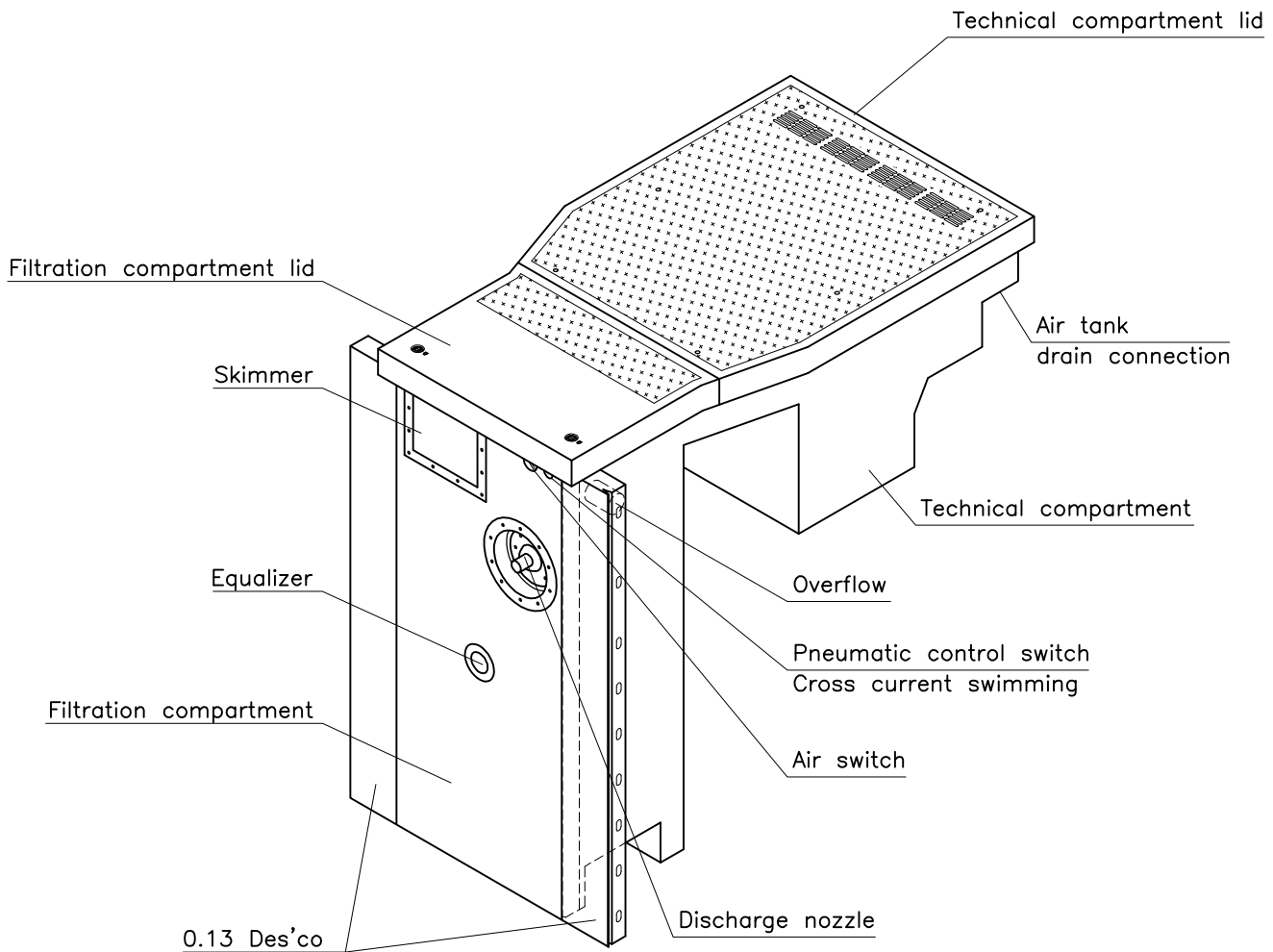
The Desjoyaux injected filtering panel incorporated with your swimming pool is fitted with the DESJOYAUX pump and incorporates the latest electrical and hydraulic technological innovations.

The electrical control panel comprises a 5mA ground fault circuit interrupteur (GFCI) provided to protect users from electrical shocks (it must be connected to the ground). The qualified electrician installing your system simply fits a 15A breaker in the electrical control panel outgoing power supply line.

Electrical control panel supplied with the injected filter panel: MODEL 90312 from FOREZ PISCINES.

The electrical control panel is inseparable from the filtration unit.

With this electrical control panel, you can decide, whenever you think necessary, to stop filtering. Artificial waves can be obtained by simply pushing the air switch located on the front of the filtration unit (with the two speed pump only).



2 - Technical specifications of the injected filtering panel - vinyl type

The injected filter panel vinyl type has features designed to optimize its installation as well as its use.

• Water tightness of the technical compartment

Total water tightness is achieved between the pool and the technical compartment thanks to the watertight pipework grommets.

Warning: the water level may reach above the pipework. The filtration pump will therefore always be on charge. Before dismantling the pipework of the pump, it is essential to close the 2 appropriate valves of the corresponding pipework. They are accessible in the technical compartment (suction piping) and in the filtration compartment (discharge piping).

• Cooling of the electrical components

The cooling of electrical components (pump) is carried out by perforations on the rear section of the technical compartment cover. The cover of the technical compartment must be secured with its four screws.

• Masonry work

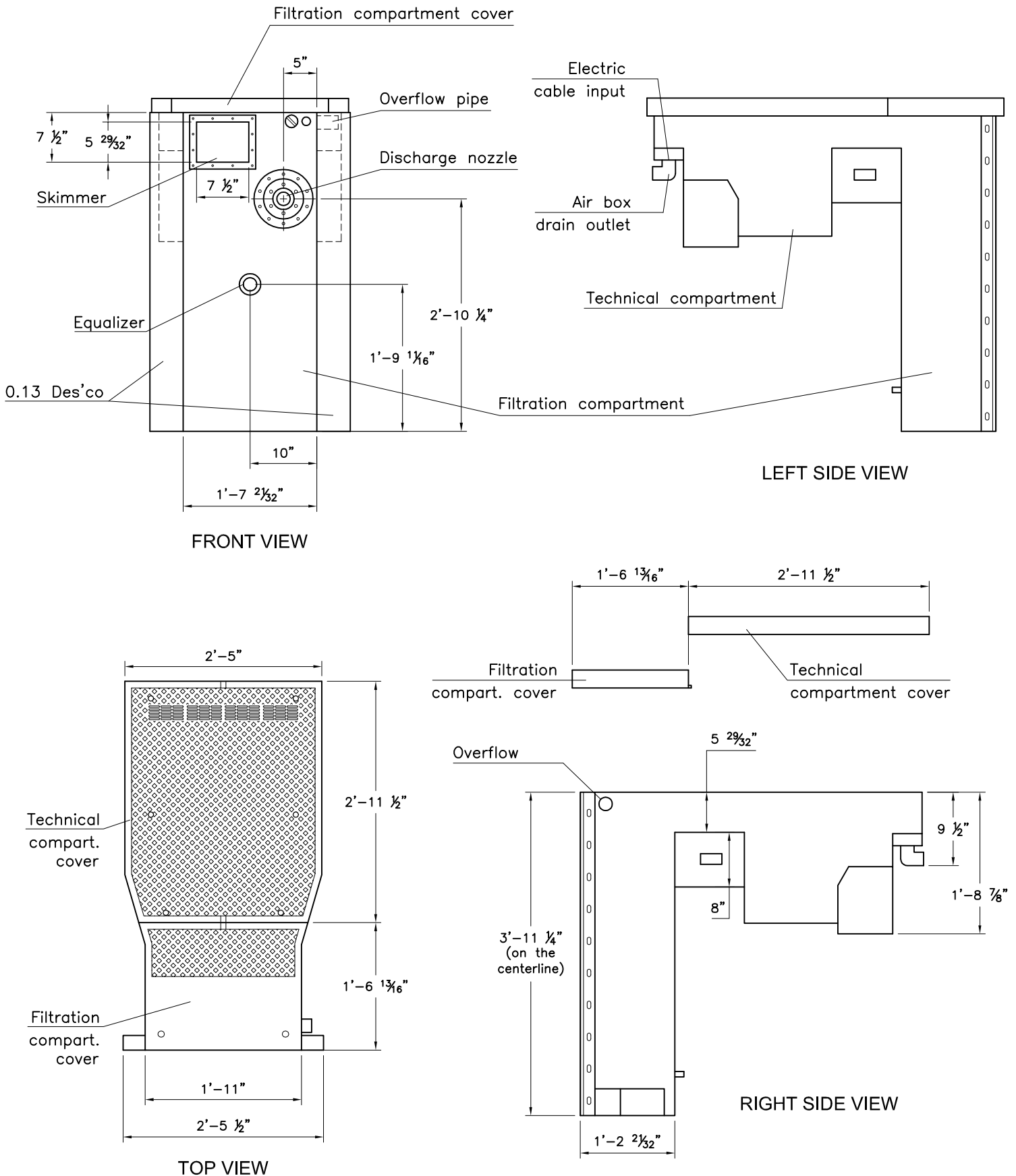
WARNING: Carefully following the installation manual instructions, page 6.

• Mounting onto the structural panels

Each filter unit is fitted with two Des'co panels, on the side cheeks of the filtration compartment, for setting it flush with the structure panels using the M8 bolts provided.

3 - Overviews

EXCLUDING FILTRATION COMPARTMENT CHIMNEYS



4 - Important instructions

• Securing to the Des'co panels

When securing the filter panel to the Des'co panels, line up the filter panel liner lock with the lock of the adjacent panels. Use bolts and nuts provided.

• Filter compartment timber spacer

Only remove the existing timber spacer in the filter compartment after completing all the swimming pool blockwork.

• Waste line connection

• Make sure that the wastewater connection is properly installed:

- no high point, from the air compartment located under the cover perforations.
This compartment is designed to collect and drain away rainwater via the parts provided for this purpose.
- without high point, from the overflow located on the side of the filtration compartment.
This overflow connection is designed to prevent overflow.

IMPORTANT: these two pipes must be connected separately to the wastewater connection; provide two lines.

- Due to special equipment in the technical compartment of the filter panel (float switch), there is no need to connect the technical compartment to a wastewater line.

• Filling the pool

When filling the pool make sure that you fill the filtration compartment.
Pool and filter panel water levels shall be balanced.

• Technical compartment cover

Make sure that the cover of the technical compartment is always secured with its four M8x30 screws.

• Filtration compartment cover locking system

We also recommend that the filtration compartment cover be kept closed using the two 1/4 turn locks in order to secure access to the skimmer basket and treatment products.

5 - Installation instructions

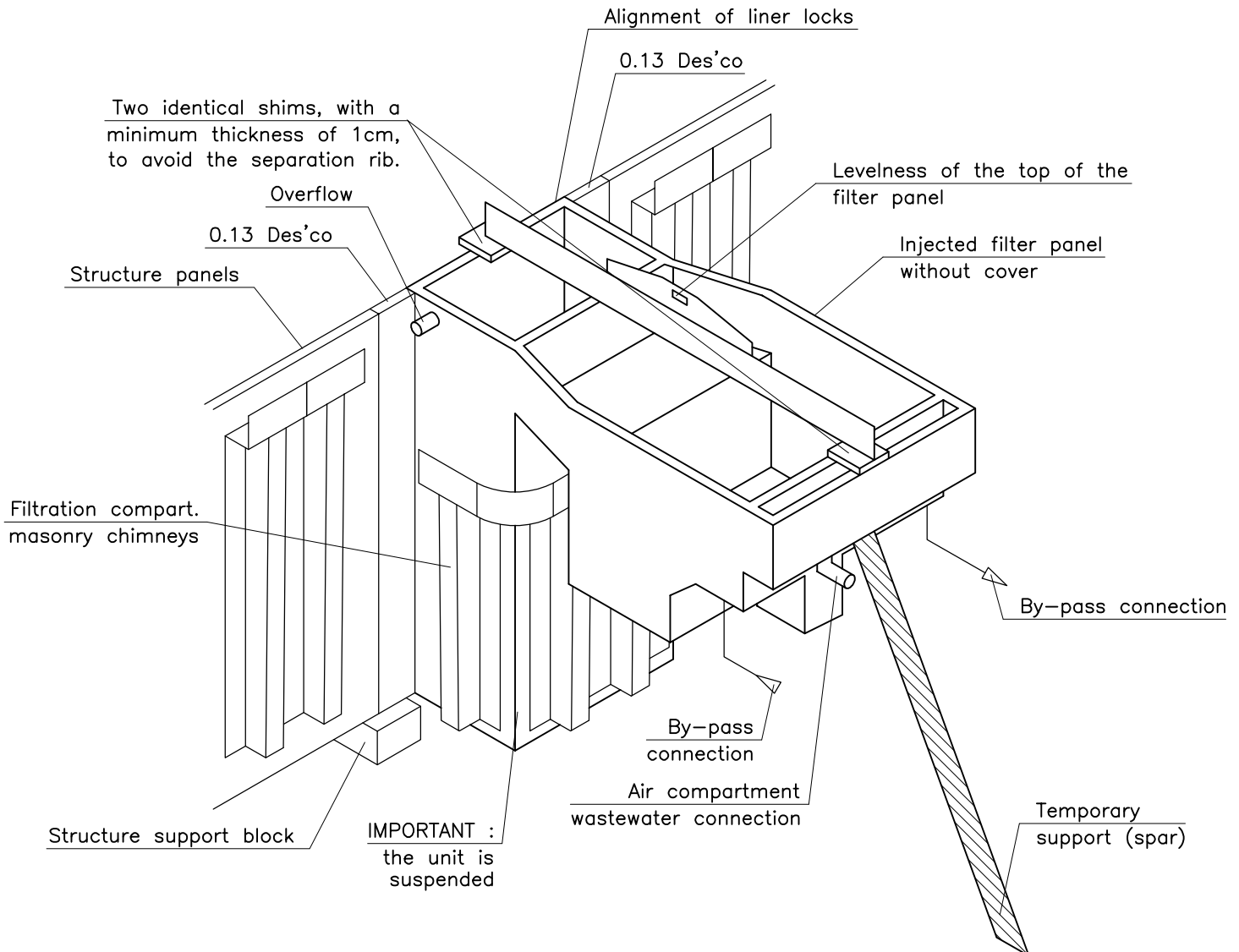
Introduction

The following procedure is designed to guide you through the installation of the injected filter panel vinyl type. It is recommended that you thoroughly read and understand this guide before beginning assembly. The dimensions indicated must be respected.

5.1 - Installation of the injected filter panel - vinyl type

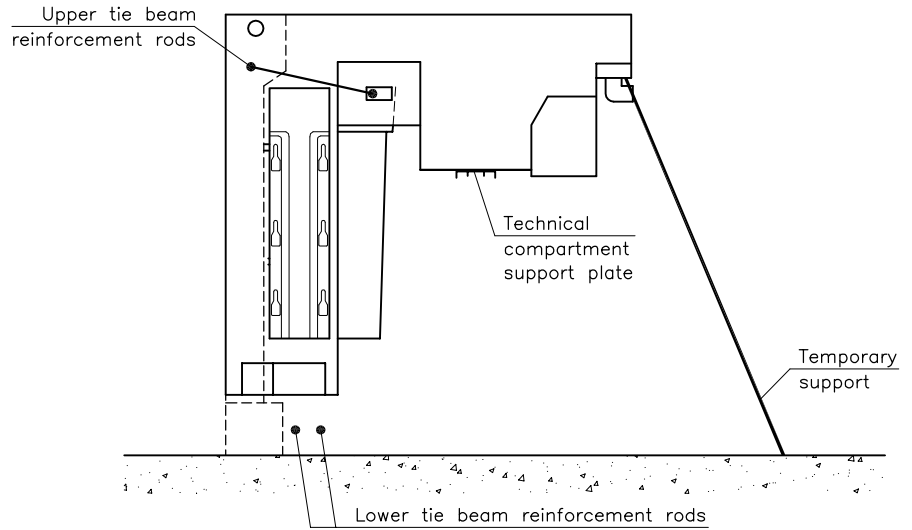
- Before installing the filter panel, remove the front and rear covers and remove all accessories from the technical compartment (rings, bags,...).
- When assembling the pool, bolt the filter panel to the structure panels. Use bolts and nuts provided.
IMPORTANT : the filtration panel is suspended and it is imperative that it not be supported.
- Make sure that the liner lock on the front of the filter panel is properly aligned with the liner lock on the adjacent Des'co panels, and the complete swimming pool panel structure.
- Check that the top of the filter panel (without the cover) is perfectly level from the front to the rear of the technical compartment. In order to hold the injected filter panel in position, it is temporarily blocked into position using a wooden plank. This temporary wedge will remain in place until pouring is completed.

The aluminium rule is to be placed on the frame. Two shims, measuring at least 1cm thick, are to be placed between the frame and the rule to avoid the frame's central rib.



5.2 - Reinforcement and technical compartment support

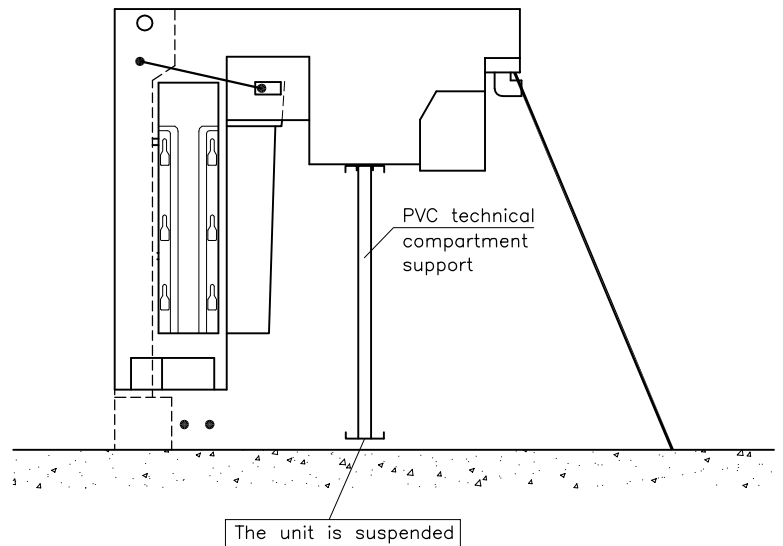
- Install the upper and lower tie beam reinforcement rods: the lower tie beam reinforcement rods pass underneath the filtration compartment, the upper tie beam reinforcement rods run around the filtration compartment and run between the filtration compartment and the technical compartment through the hole reserved for this purpose.



- To prepare the technical compartment support (supplied): mount the two tubes on the lower rail using the two screws supplied.

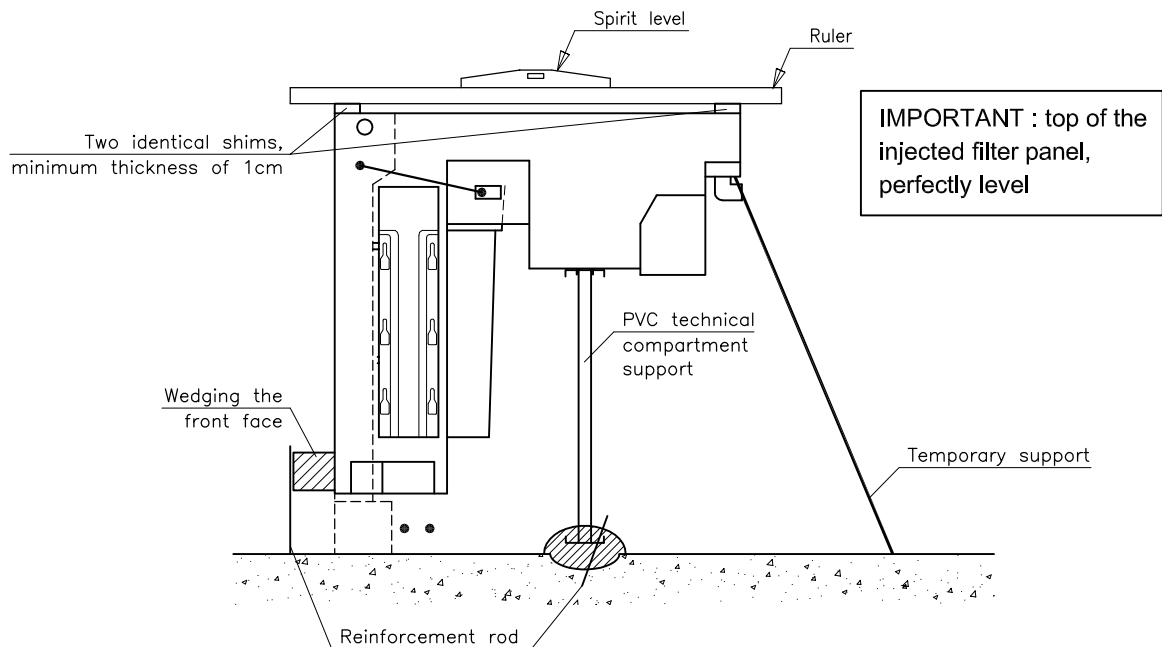
- Screw the technical compartment support in the two plates located underneath the technical compartment.

IMPORTANT: the support is suspended and does not touch the ground. It will be concreted later.



- Make a trench at the base of the technical compartment support. Anchor the base of the support with a length of reinforcement rod (length: 1').

Fill in the hole with mortar (this operation can be carried out when the struts of the swimming pool structure are poured).



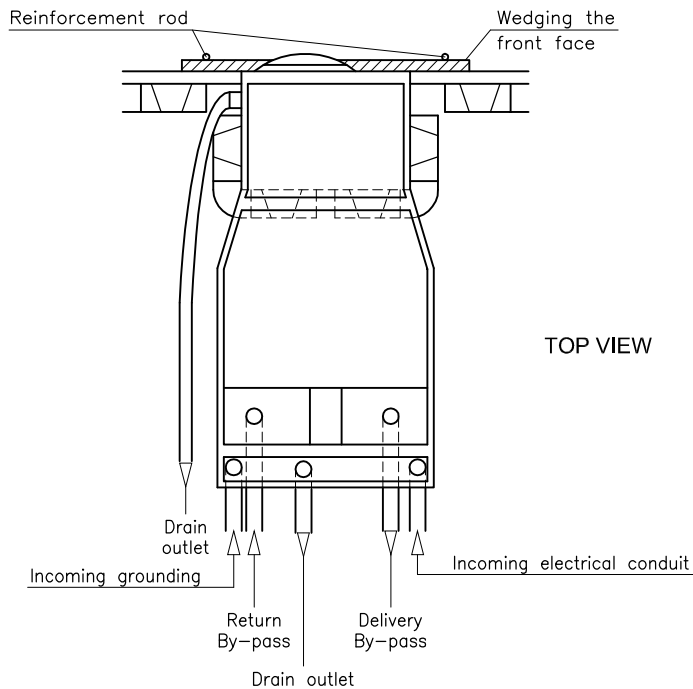
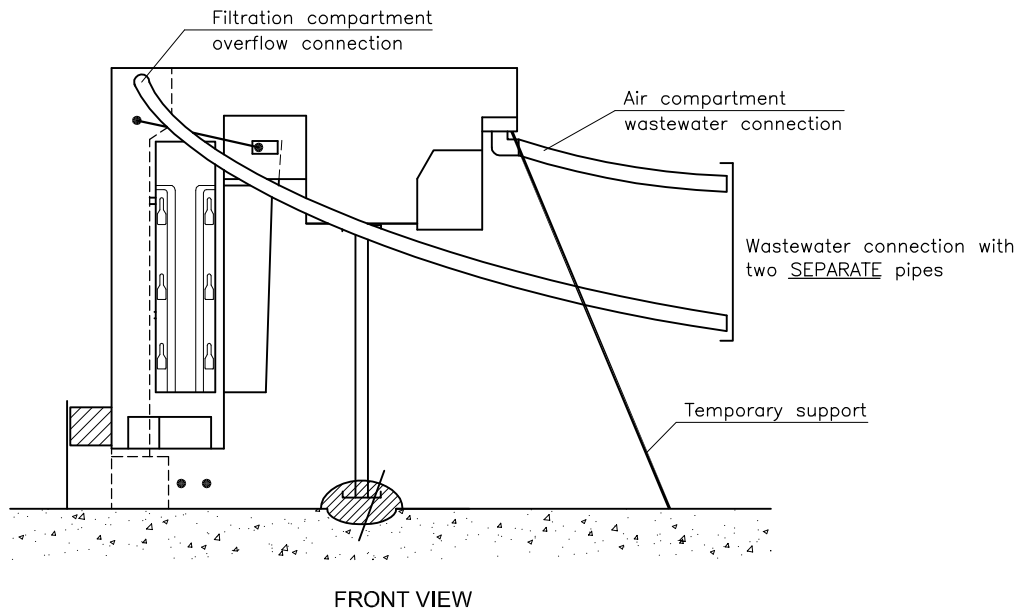
- Once again, check the level at the top of the injected filter panel vinyl type.

The aluminium rule is to be placed on the frame. Two shims, measuring at least 1cm thick, are to be placed between the frame and the rule to avoid the frame's central rib.

- If necessary, in order to hold the filter panel in place during pouring, the filter panel can be wedged at the bottom of its front face using a spar and reinforcement rod.

5.3 - Wastewater connection

- Glue the wastewater connection pieces of the air compartment and the overflow (Ø50mm / Ø2" PVC reducer).
- Make the wastewater connection, without high point and using two separate pipes laid at a minimum $\frac{1}{4}$ " / 1' slope, from the filtration compartment overflow, as well as the air compartment's wastewater connections.
- Also connect the by-pass connecting pipes.
- Install two conduits in the air compartment:
 - one for the incoming electrical conduit
 - one for grounding.
 Each conduit should enter the air compartment at least 2".



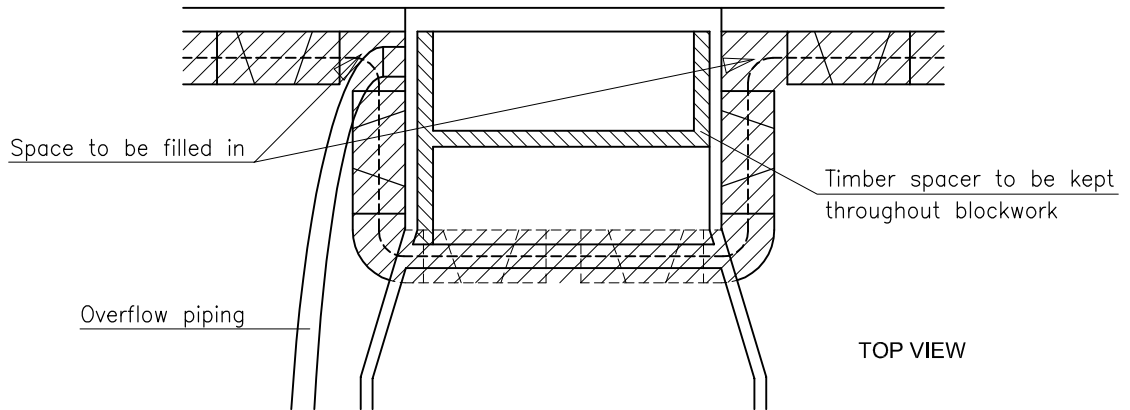
5.4 - Swimming pool concrete pouring operations

- Before pouring the pool, care should be taken to protect the upper part of the injected filter panel.
CAUTION: The timber spacer inside the filtration compartment shall be kept there while the pool stonework is built in.

- Pour the pool normally:
 - lower tie beam, pouring a generous quantity of concrete underneath and around the filtration compartment
 - bed slab
 - chimneys and upper tie beam, and the chimneys in the filtration compartment (to be poured carefully).

- Remember to fill in open spaces with concrete and particularly the play between the structure panels and the first chimneys of the filtration compartment.

- Remove the wedge from the front face after the filter panel has been poured and before pouring the pool floor.



NOTE : the front portion of the overflow piping shall also be embedded in concrete.

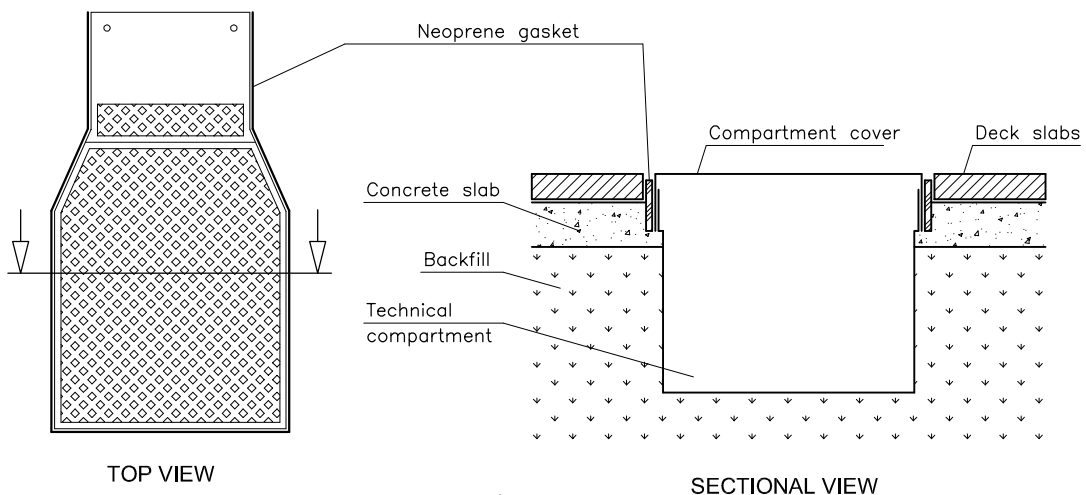
- Once the concrete has dried, the temporary support (spar) located at the rear of the filter panel can be removed.

5.5 - Pouring the pool deck

- Backfill around the pool.
- Replace the covers on both the filtration compartment and the technical compartment.
- On the outside of the front and rear covers, add a sufficient amount of neoprene gasket to create the space needed to properly handle the cover.
- Secure the technical compartment cover with its 4 screws.
- The pool deck slab can now be poured.

IMPORTANT:

- The upper level of the concrete slab of your pool deck must be such that the tiling laid on this slab is flush with the top of the technical compartment cover.
- It is imperative that the coping and the deck tiling follow the slope of both the front and rear covers to ensure proper water runoff (rainwater, overflow...).
- Once the deck tiling has been laid, the neoprene gasket around the covers can be removed.



5.6 - Liner installation

Foreword

The liner can only be installed after the following operations have been performed:

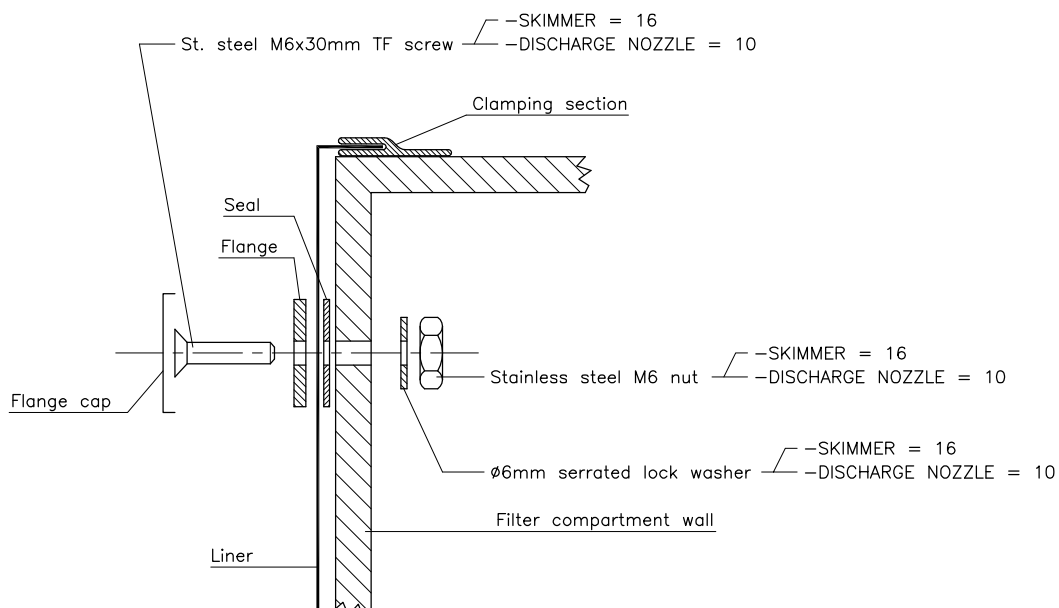
- Remove the filtration holder.
- Take the timber spacer off the filtration compartment.
- Unscrew the air switch and the pneumatic control switch. Remove the air switch's clear Ø6mm tube and the pneumatic control switch's Ø3mm tube.
- Using adhesive tape, tape off the filtration compartment's overflow opening and make sure that the two pipework valves are closed.
- Tape down the compartment's cover to block all air intake.
- Stick the adhesive seals of the skimmer, discharge and the equalizer, making sure to match up the holes properly.
- Before installing the liner, make sure that the following are clean:
 - the front of the filtration panel,
 - the entire inside surface of the swimming pool.

Attaching the liner to the front of the filtration panel

- Install your liner by hooking it onto the filtration panel's liner lock profile.
- Use a vacuum cleaner to ensure that the liner fits fully against the pool walls. Remove all folds.
- Fill the pool to 1'-4" above the bottom of the Des'co panels.
- Begin by fitting the skimmer flange. Position the rectangular flange on its location against the liner.
- Position all of the flange screws by piercing the liner (12 6x30 CS head screws).
- Using a cutter, cut a slot inside the flange in order to fit the washers and nuts inside the filtration compartment. The liner on the inside of the flange is cut away only when the liner is completely installed.

IMPORTANT: remember to secure the skimmer weir (2 screws at the bottom of the flange).

- Next fit the discharge nozzle flange.



- After having carefully cut away the liner inside the wall feedthrough, secure the grille supplied to the equalizer using the four 5x30 screws.
- Using a cutter, carefully cut the liner inside the flanges.
- Fit the flange covers onto the skimmer flange and the discharge nozzle flange.
- Carefully pierce the liner at the hole of the air switch and pneumatic control switch.
- Position and strongly screw down the air switch and pneumatic control switch into place and insert their respective clear tubes.

Liner installation - finishing operations

- Turn off the vacuum cleaner and reattach the liner.
- Finish filling your pool making sure that the two intake and discharge valves (red handles) are properly closed.

5.7 - Starting up the filter unit

You should start up the filter unit after completing your pool and at the beginning of each season.

Foreword

- Make sure that the two valves are closed to prevent any water from entering the technical compartment.
- Fill the pool up to 1" below the top of the skimmer window.
- Before installing the pump in the technical compartment, its turbine must be operated manually via the pump inlet (19mm tubular socket wrench for PBI US pump, 17mm for P18 US pump).
- Place the filtration pump inside the technical compartment with its junction box.
- To install a PBI pump, connect the clear tube of the pump's pneumatic control switch through the small cable gland designed for this purpose, which must first of all be uncapped. For other types of pump, the clear tube should not be connected and the pipe gland cap should be left in place.
- Make the necessary pipe connections using red clamp for suction line and discharge line.
- DO NOT FORGET TO FILL THE FILTRATION PUMP WITH WATER.
- Have all electrical connections performed by a qualified electrician (see instructions regarding electrical connections).

Filtration operation

- Open both valves.
- Install the filter holder and the filtering bag (see installation of accessories).
- It is important to make sure that the filter holder is properly fixed in the filtration compartment by locking it with the red pin on the spacer.
- Initiate filtration by positioning the switch on "MANUAL" (on the electrical control panel) and allow it to operate for 2 or 3 days.
- IMPORTANT: before closing the technical compartment cover, check for leaks on all of the pipe connections.
- After 2-3 days of filtration, program the filtration period on the control timer.
- Position the switch on "CLOCK" so that filtration is carried out according to the desired programming schedule and refer to the user's manual for further information concerning filtration time adjustment and water treatment operations.

6 - Procedure for winterizing the injected filtering panel

IMPORTANT :

- THIS OPERATION MUST ONLY BE PERFORMED BY A QUALIFIED ELECTRICIAN.
- The swimming pool filter panel must be winterized as late as possible and returned to service as early as possible in order to make winterizing fully efficient.

6.1 - Pool cleaning

- Clean the water line.
- Vacuum thoroughly.

6.2 - Stop filtration

- Press "TEST" button to disable GFCI.
- Flip control panel to "OFF" position.
- We do recommend to lower the water level of about 2 feet.

6.3 - Winterizing the filter panel - Technical compartment

- Open filtration compartment, close valve on suction and return manifold (remove the filtering bowls).
- Open the technical housing.
- Using tools, remove pump pipes (suction and by-pass manifold).
- Disconnect the pump plug.
- Disconnect the ground plug.
- Remove the pump (with cable and junction box).

CAUTION: the main supply female connector must stay in the technical compartment.

- Drain the pump. Store it in a dry place, away from chlorinated products.

6.4 - Winterizing the filter panel - Filtration compartment

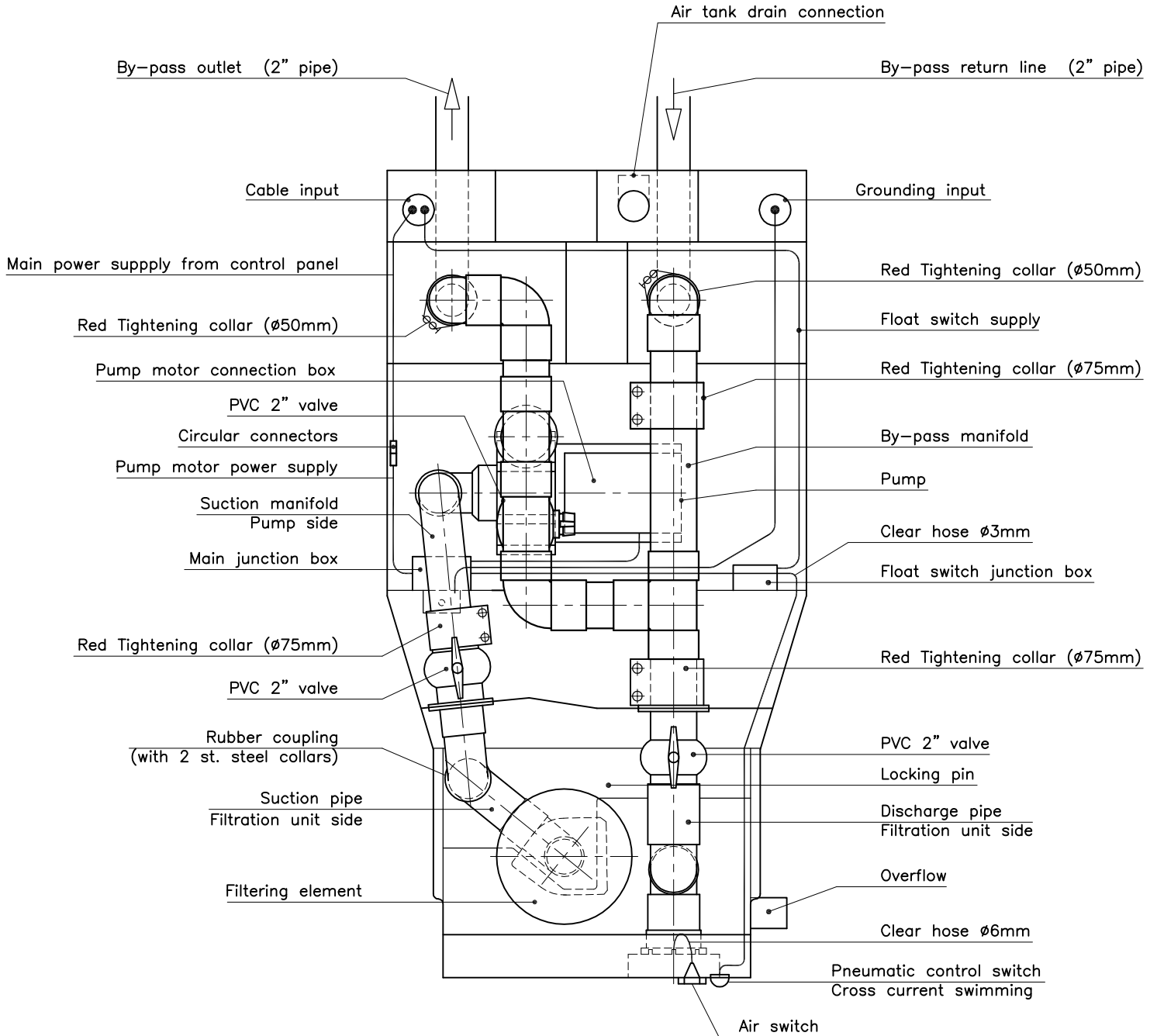
- Take out filtration bag, wash and dry.
- Remove filter holder, wash and store.
- Place two winterization floaters in lieu of the filter holder.

6.5 - Pool winterizing

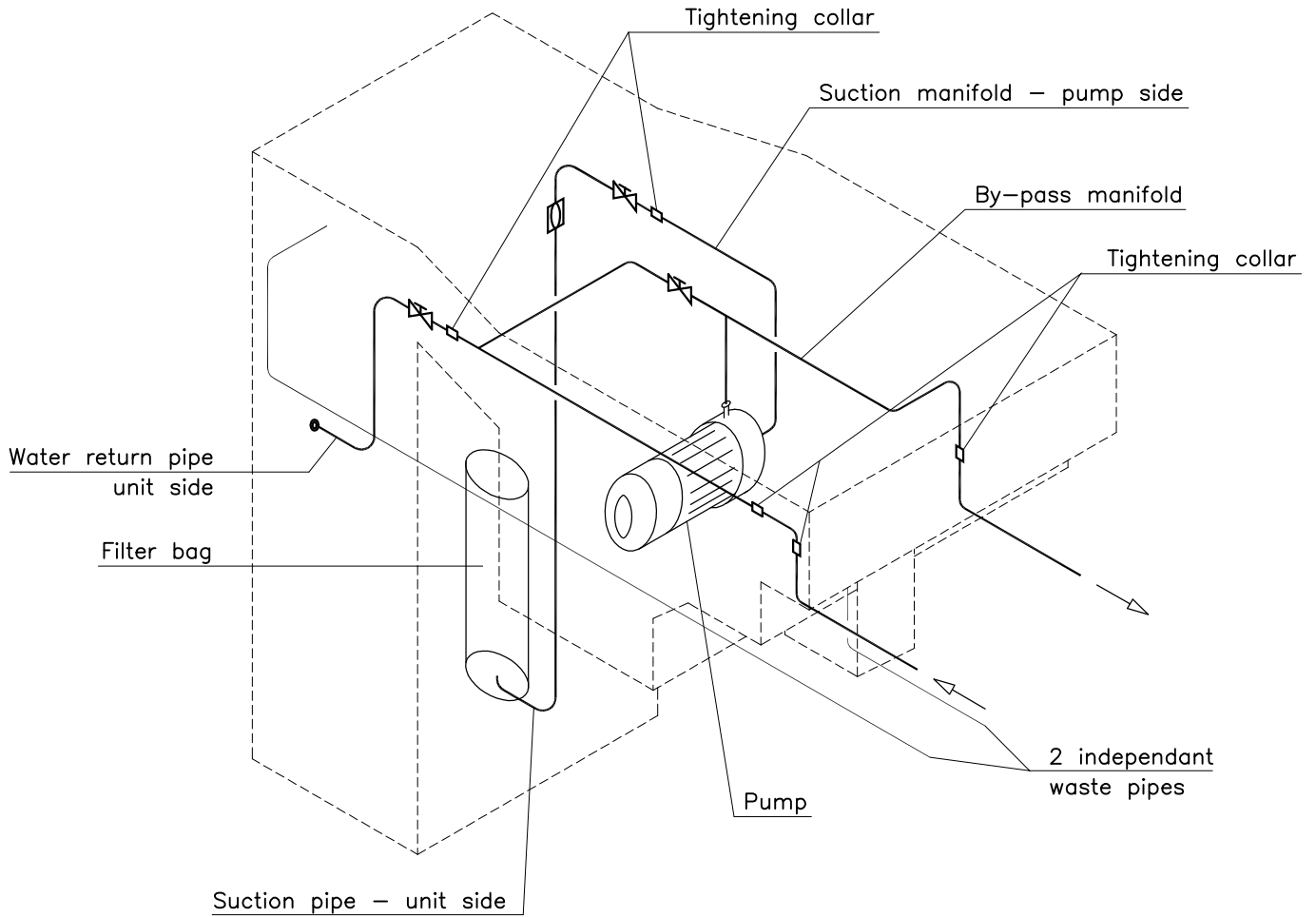
- Use a suitable winterising product in the pool.
- Spread along the pool walls.
- Place floaters diagonally across the pool.
- Cover with a pool cover suitable for winter preferably opaque and solid.

In springtime, to start up, proceed as above, in the reverse order.
It is imperative when you plug the pump to connect the N°6 solid copper wire first.

7 - Injected filtering panel - Vinyl type - Top view



8 - By-pass hydraulic installation



By-pass hydraulic installation

9 - IMPORTANT SAFETY INSTRUCTIONS

READ AND FOLLOW ALL INSTRUCTIONS:

- The installation of the filtration unit has to be done by a qualified swimming pool installer.
- All electrical installations must be carried out by a qualified electrician in compliance with existing standards and codes.
- **WARNING:** To reduce the risk of shock, connect only to supply circuit protected by a ground fault circuit interrupter (GFCI). The ground fault circuit interrupter is only efficient if the ground is properly connected.
- The ground fault circuit interrupter (GFCI) must be tested once a month by pressing the test button located on the remote control panel as shown in the diagram while the system is powered, and the GFCI set.
Note. When testing the GFCI, the circuit will be disconnected when the test button is pressed. If this is not the case, turn off the power to the remote control panel and call a qualified electrician to make the necessary repairs.
- If there is a need to replace the 12A or 4A time delay fuse type incorporated in the remote control panel (Minetec model only), replace with the same type fuse to maintain the same motor protection. When replacing the fuse, turn off the power from the electrical panel.
- The filtration unit is designed to work in conjunction with the remote electrical control panel. No other control panel should be used, otherwise safety will be compromised.
- The electrical control panel provided shall be installed at least 3.5 meters away from the swimming pool.
- **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all time.
- **Caution.** This filtration unit is for use with permanently installed in ground pools. Do not use with storable pools. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassemble for storage. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original integrity.
- Do not attempt to repair the equipment, repairs should be performed by a qualified person. Warranty is voided in case of tampering and safety of the equipment could be compromised.

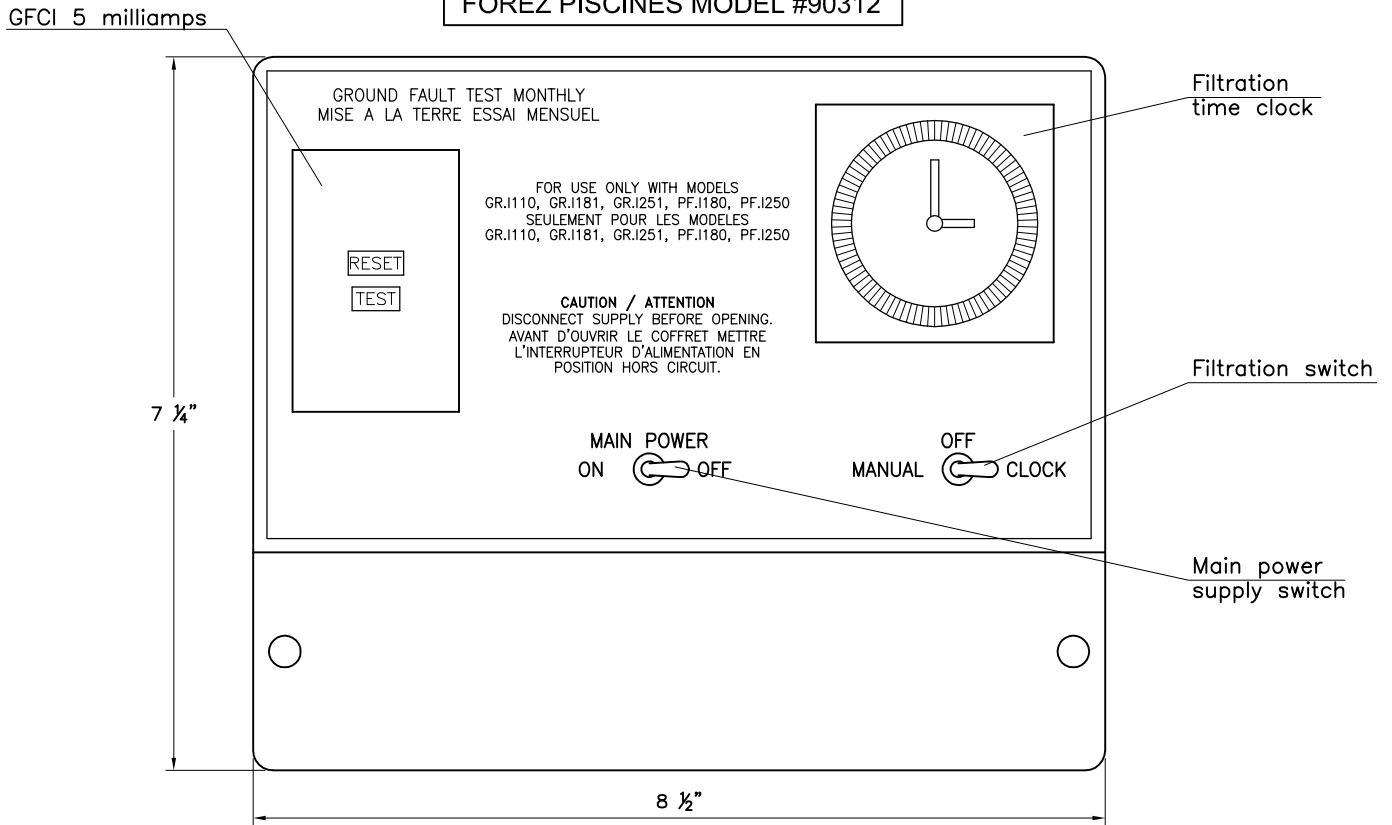
SAVE THESE INSTRUCTIONS.

10 - Electrical installation procedure

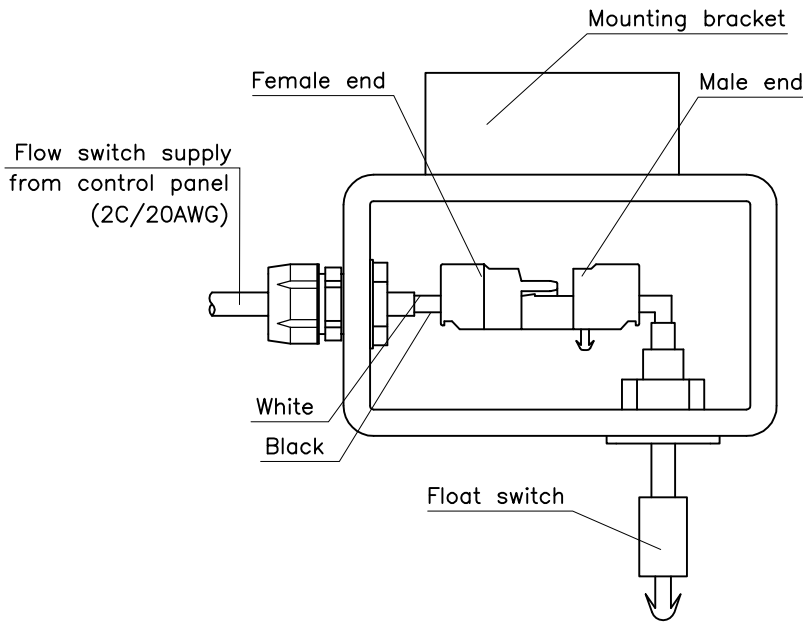
All electrical installations must be carried out by a qualified electrician, in compliance with existing standards and codes.

- The ground fault circuit interrupter installed in the electrical control panel is only efficient if the ground is connected. Connection of the ground must mandatorily be checked and confirmed in compliance.
- It is recommended that the installer advise the user of the need to test the ground fault circuit interrupter once a month by pressing the test button when the panel is powered and the GFCI set.
- The installation of the control panel provided requires a 120/240V, 60Hz, 15A supply protected by 5mA ground fault circuit interrupter (GFCI).
- If connected to a circuit protected by fuses, use with 20A Branch Circuit type fuses with this unit.
- See attached diagrams for hook-ups.
- A solid n°8 AWG ground wire has to be hooked up between the main distribution panel and the filtration unit to provide adequate protection as required per the electrical codes.
- Use suitable type cables as per required.
- Three bonding screw are provided with the filter unit to facilitate the bonding of non-electrical or electrical equipment associated with the pool (all metal parts of the swimming pool, metal conduit and metal piping, within 5 feet (1.5m) of the inside walls of a swimming pool). Use a solid n°8 AWG minimum ground conductor.
- Prior to all electrical servicing, the power must be switched off by pressing the test button on the GFCI.
- If the GFCI does not trip off, cut the electrical power supply up line.
- The electrical power supply is automatically shut off if there is water in the bottom of the filtration unit's technical compartment.
- The electrical control panel can only be reset after the technical compartment has been totally drained.
- The electrical control panel is reset by pressing the central button on the remote control switch.
- Turn installation power back on by resetting the GFCI.

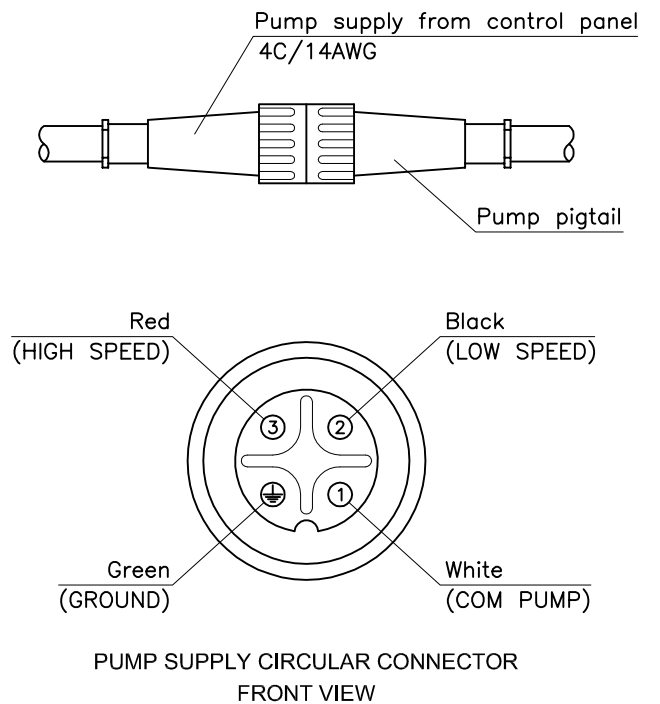
**FILTRATION ELECTRICAL BOX
FOREZ PISCINES MODEL #90312**



FLOAT SWITCH CONNECTIONS



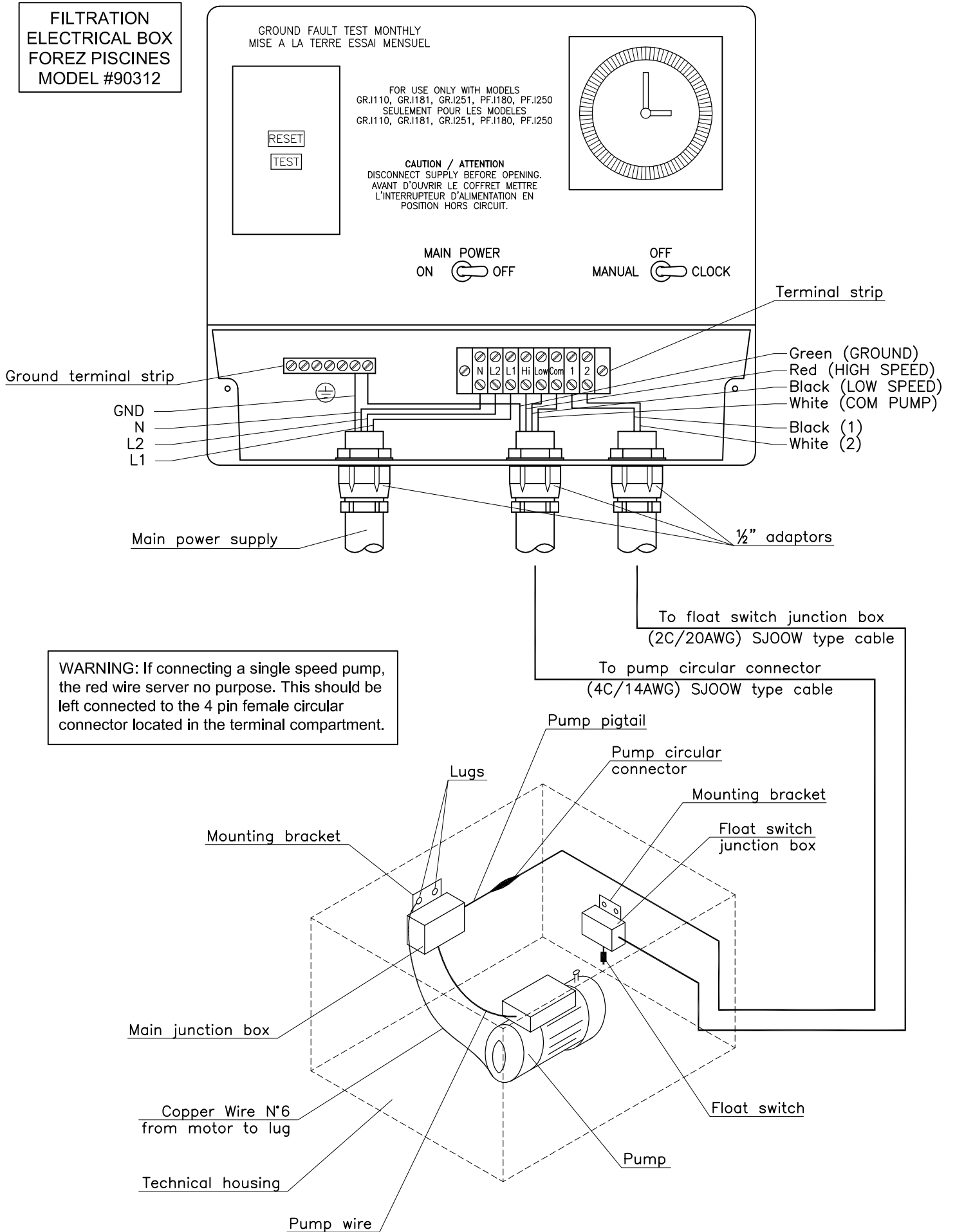
PUMP CONNECTIONS



CAUTION:
COVER CLOSING SCREW TIGHTENING TORQUE: 1.2Nm
TOP CAP CABLE GLAND TIGHTENING TORQUE: 2Nm

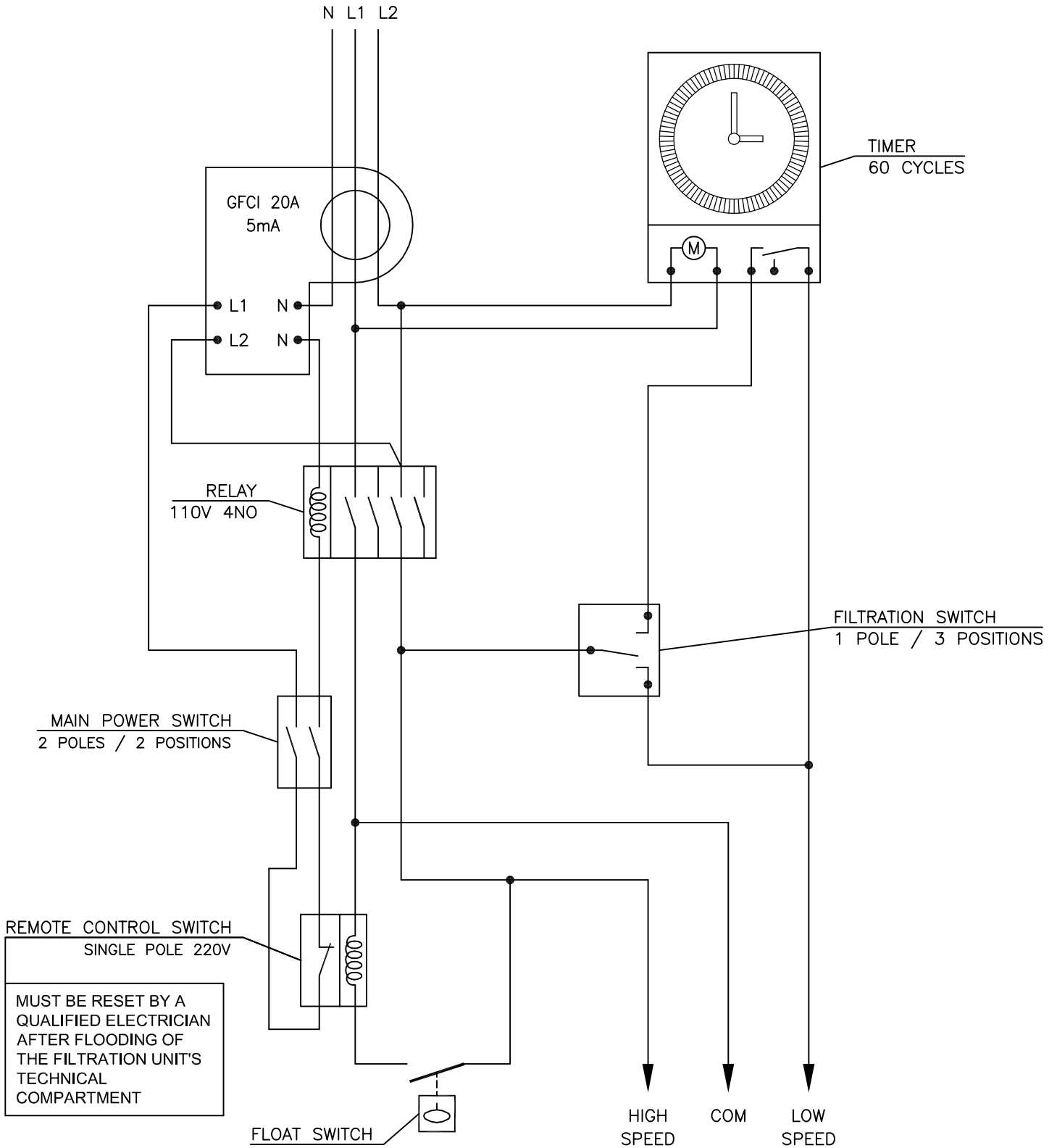
WARNING: If connecting a single speed pump, the red wire server no purpose. This should be left connected to the 4 pin female circular connector located in the terminal compartment.

FILTRATION BOX CONNECTION DIAGRAM



INTERNAL WIRING

FILTRATION ELECTRICAL BOX
FOREZ PISCINES MODEL #90312

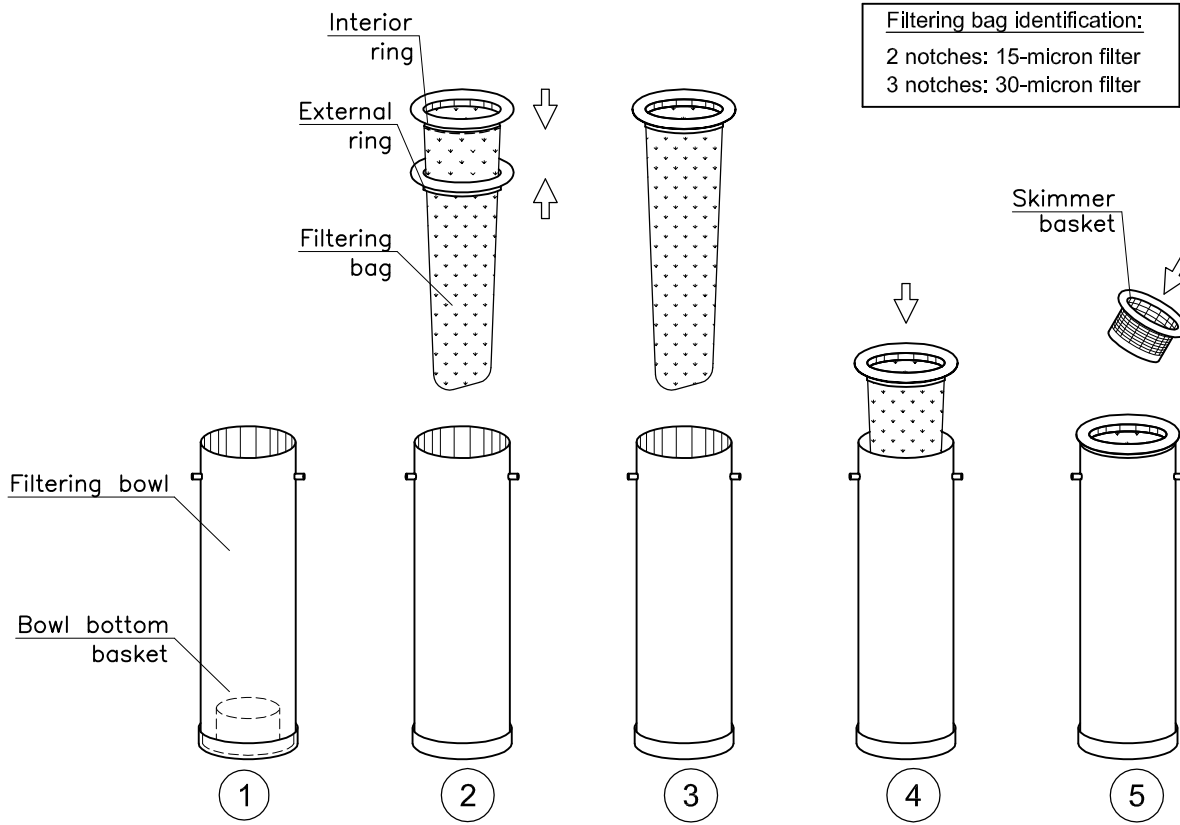


REMOTE CONTROL SWITCH
SINGLE POLE 220V

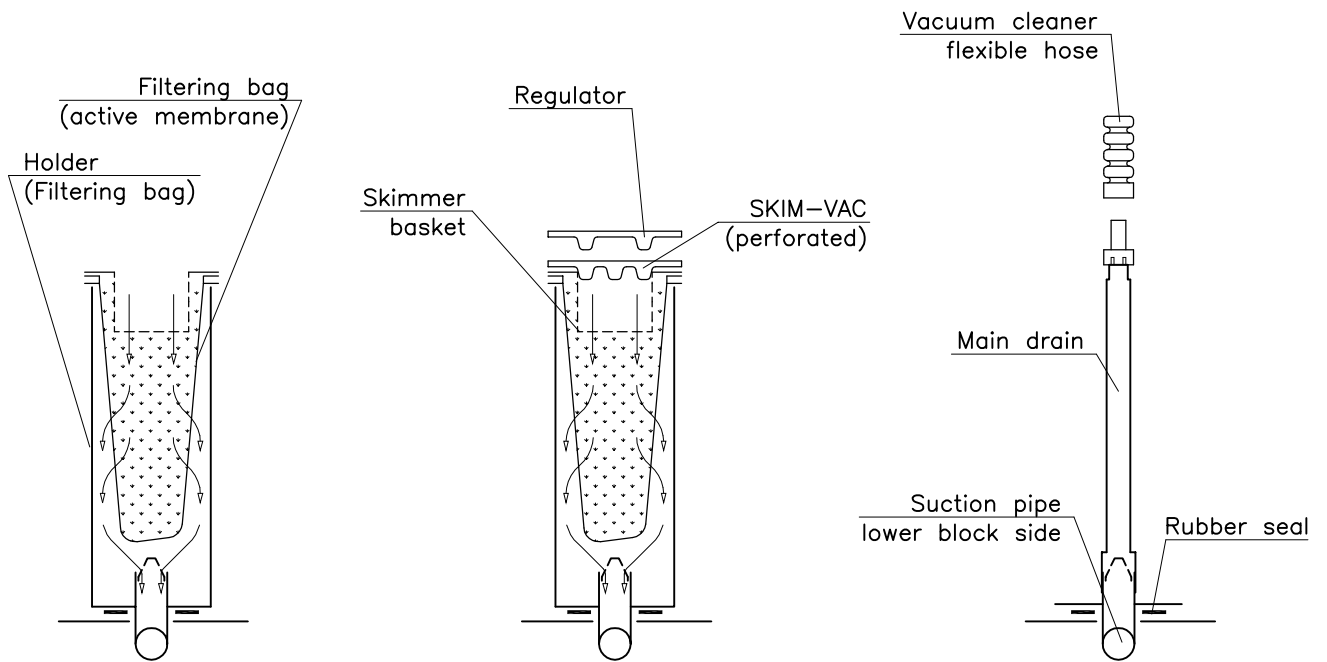
MUST BE RESET BY A
QUALIFIED ELECTRICIAN
AFTER FLOODING OF
THE FILTRATION UNIT'S
TECHNICAL
COMPARTMENT

WARNING: If connecting a single speed pump, the red wire server no purpose. This should be left connected to the 4 pin female circular connector located in the terminal compartment.

11. INSTALLATION OF ACCESSORIES



INSTALLATION



OPERATION