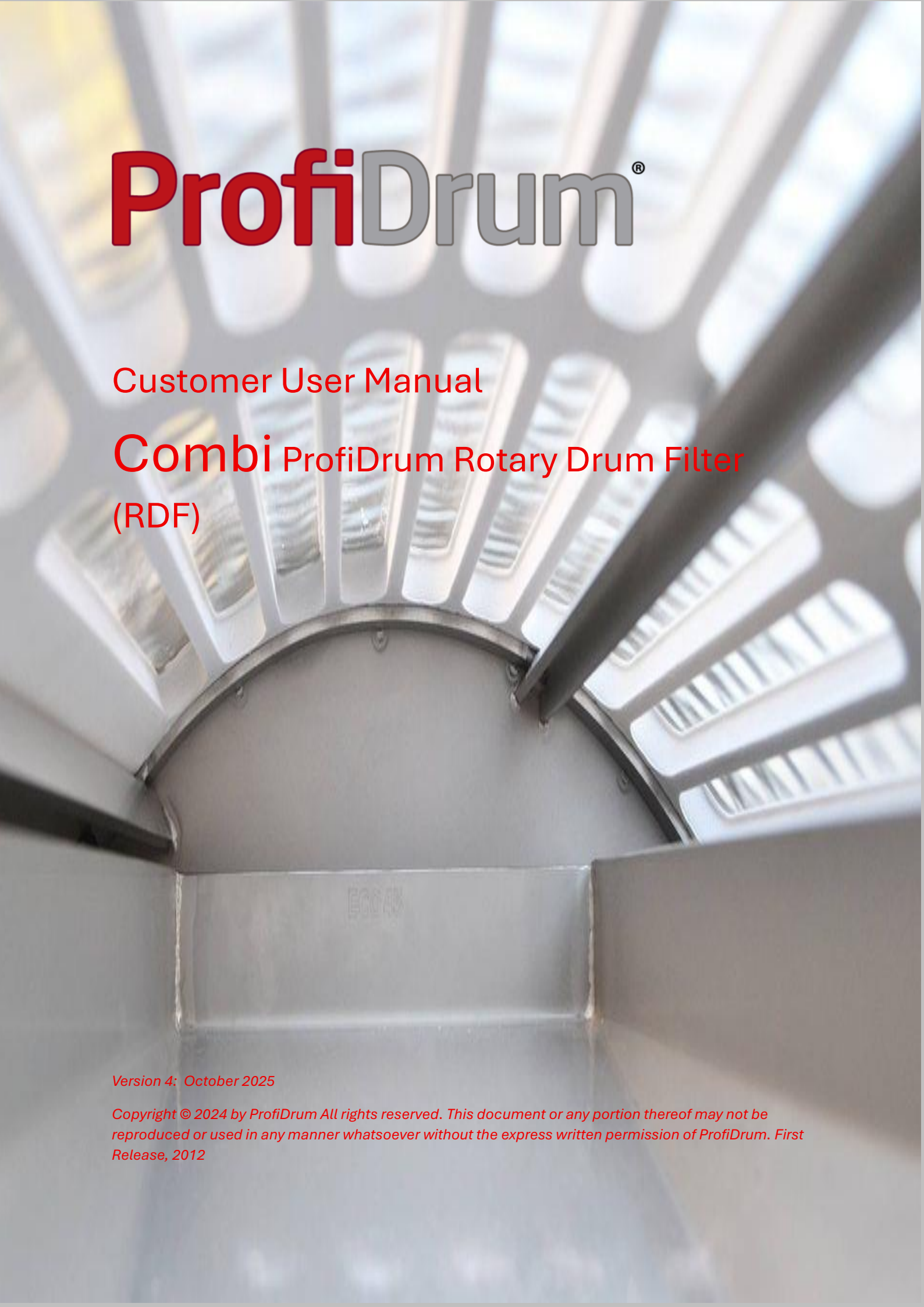

ProfiDrum®

Customer User Manual

Combi ProfiDrum Rotary Drum Filter (RDF)

Version 4: October 2025

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Introduction

Congratulations with the purchase of your ProfiDrum Combi Filter!

With the purchase of the ProfiDrum filter you now own a high-quality product which was built with the utmost care and precision.

Please read carefully and follow all instructions and tips before you install the ProfiDrum.

Rotary Drum Filter.

This manual is a simple guide to installing your ProfiDrum Combi Bio Drum Filter, if you have any questions, please do not hesitate to contact your dealer.

Please read and understand these instructions before attempting to install your ProfiDrum Combi Bio Drum Filter.

Manufacturer: ProfiDrum BV Ltd, Rockley, Nottinghamshire, England, DN22 0QW

Model Type: ProfiDrum Combi model: 15, 30, 45, 50, 100, 30 TC, 50 TC, 60 TC.

Applied CE Directives: --

New Machinery Directive (2006/42/EC)

Low Voltage Directive (2006/95/EC)

EMC Directive (2004/108/EC)

Applied standards: --

NEN-EN-ISO 12100-1

NEN-EN-IEC 60204-1

The manufacturer declares to have complied with the safety requirements which are determined from the safety requirements of the Machinery Directive. This product also overlaps with the safety requirements from the LVD and EMC directives.

Drum Contents

Your ProfiDrum Drum Filter is supplied with the following additional components: --

- Control box
- Internal High Pressure water pump
- Gearbox
- Air Pump
- Media
- UV – optional – *If purchased, this must be fitted horizontal*.

On receipt of your ProfiDrum please check for the following as we have no control over how the package is handled once it leaves the factory if transported by a third party:

- Any obvious damage to the protective packaging and contents please immediately inform us of any damage.
- All the nuts and bolts are secure
- The stainless-steel drum's rim should be resting on the two nylon wheels on the bottom of the drum

Guarantee and Alterations (see also Warranty)

Your ProfiDrum is guaranteed against any manufacturing faults on the Polypropylene or Stainless-Steel parts for a period of two years, except for the panels. Modifications to ProfiDrum RDF solutions and /or sensor solutions **void your warranty**.

Not using original spare parts will void your warranty as well.

For any alterations to your ProfiDrum a written consent from the manufacturer is mandatory to be eligible for guarantee.

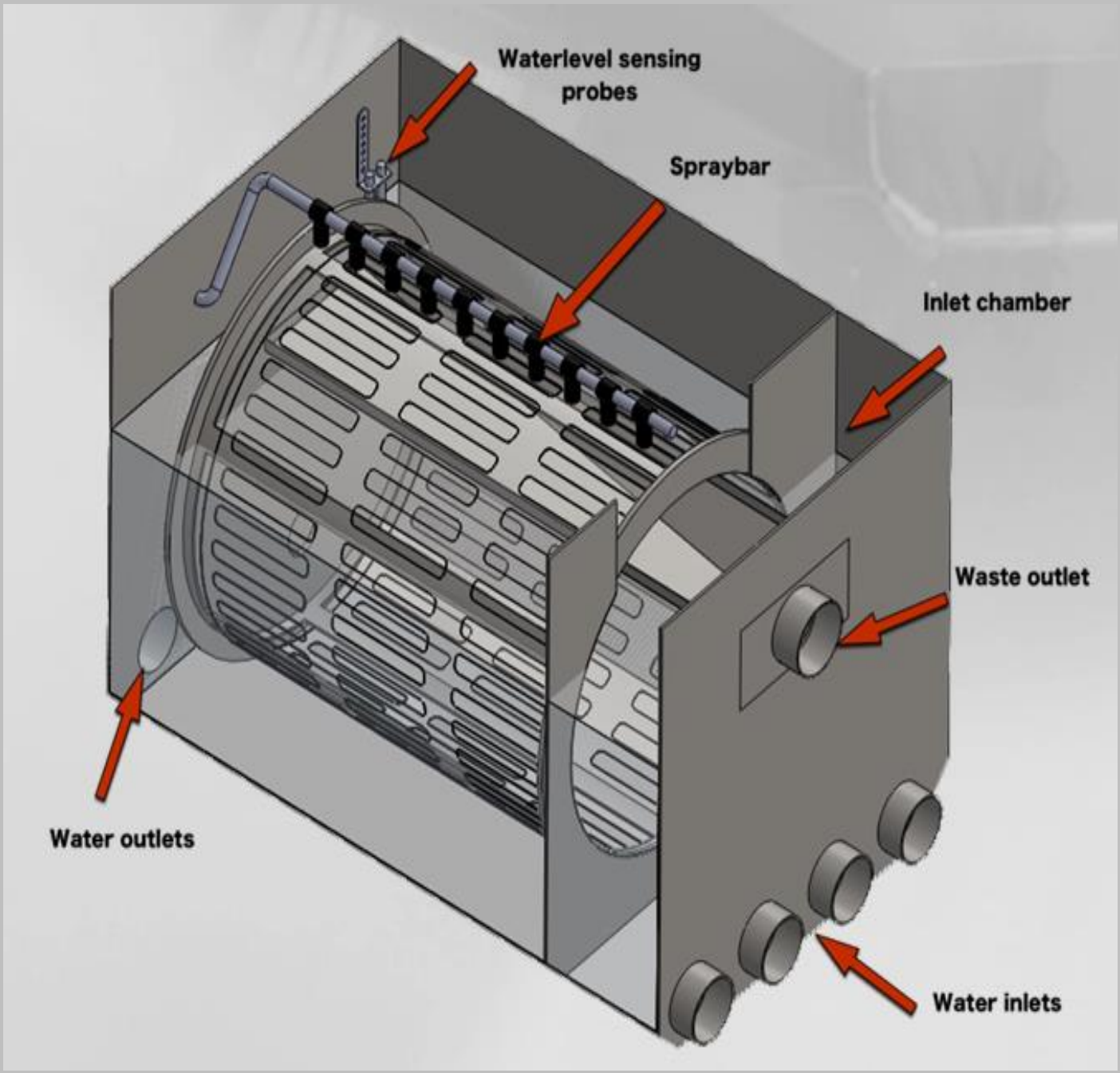
Indemnity Clause

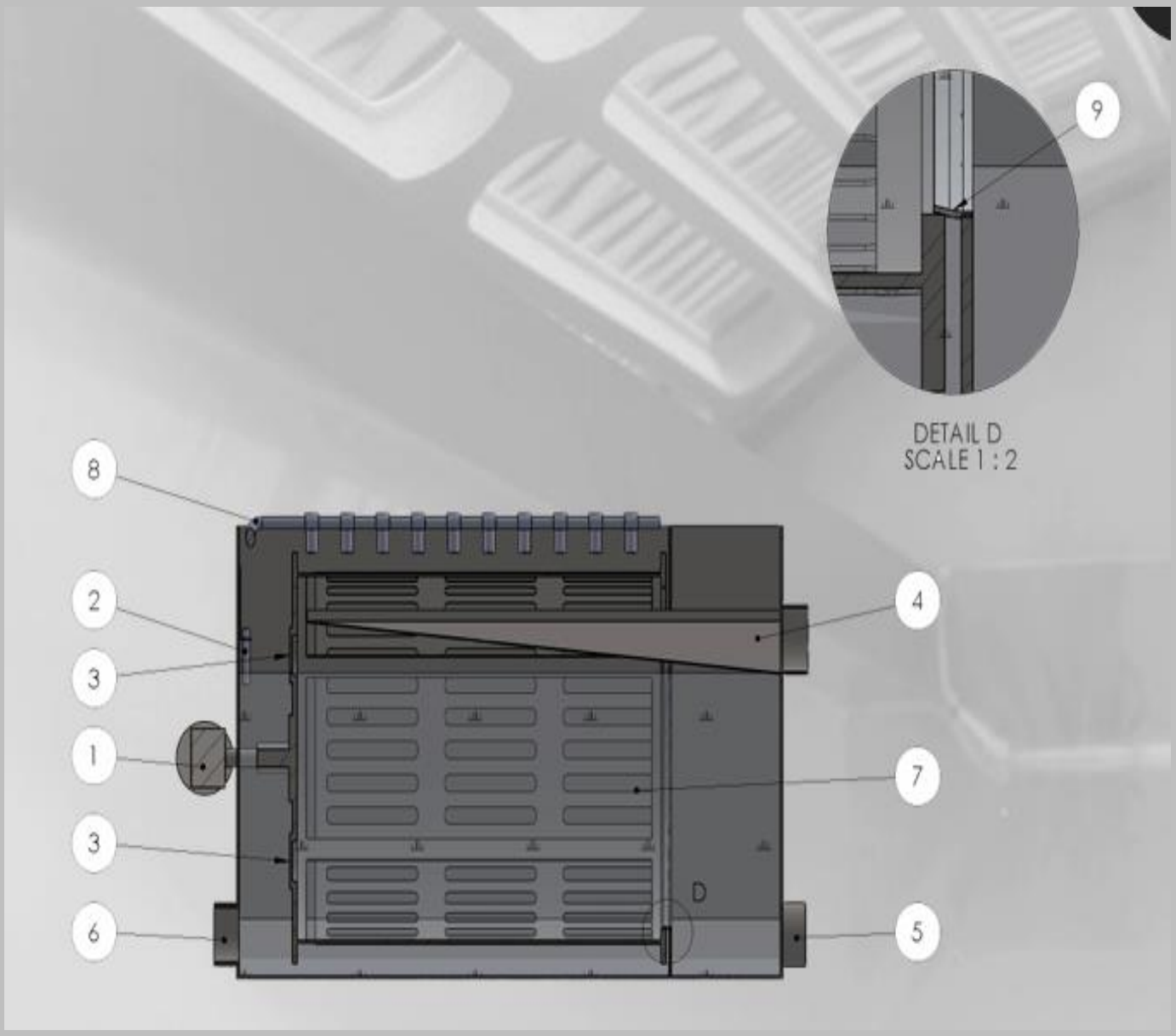
Any ProfiDrum dealer, customer, installer, contractor or end user who installs or operates a ProfiDrum system using non-standard or non-approved ProfiDrum components, including, but not limited to, the control box, high-pressure pump, gearbox, or motor, agrees to indemnify and hold harmless ProfiDrum B.V. Ltd from and against any and all claims, damages, liabilities, losses, costs, or expenses (including reasonable legal fees) arising out of or related to the use of such non-standard parts.

This indemnification includes, without limitation, any product liability, financial loss, property damage, or personal injury resulting directly or indirectly from the use, installation, or operation of the modified or non-standard system. For example, if a ProfiDrum dealer, customer, installer, contractor or end user installation causes property damage, the dealer, customer, installer, contractor or end user shall be fully responsible for covering the repair costs and any related liabilities.

Identification

Your ProfiDrum is equipped with a Polypropylene or Stainless-steel housing (depending on the model). As the RDF in running model will be filed with water, it is important that it is placed on a flat surface supporting the drum.





1. Drum motor
2. Probes and Low Level Protection
3. Removable Bypass panels, number of panels varies per model
4. Stainless Steel waste tray 110 mm Dia
5. Water inlets from pond (110 mm Dia number varies per model
6. Water outlets to pump(s) (110 mm dia number varies per model
7. Drum with screens size varies per model
8. Nozzles, number of nozzles varies per model
9. Seal

Installing your Drum Filter In Gravity Setup

Place the drum filter on a solid surface that is completely level. Set the drum so the top of the dirt chute is level with the water level of the pond with all pumps turned off.

By setting the water level at this height you use the most surface area of the screen in the drum filter.

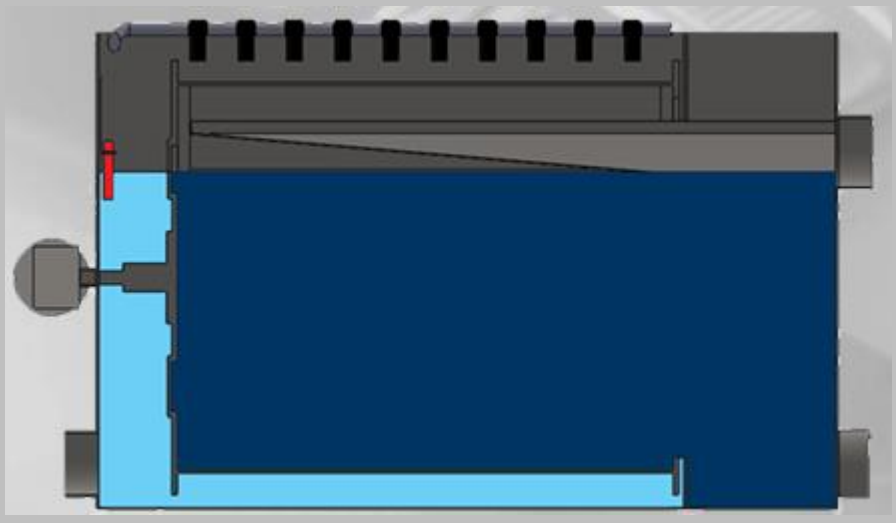
You can then connect the inlet pipes from your pond, bottom Drains, Skimmers, Mid-Water feeds, followed by the outlet pipes. The outlet pipes can be connected directly to the pump(s) or directly to a Bio-filter (i.e. moving bed). Both the inlets and outlets should be connected to your pipework with rubber couplers. The size of the required coupler to connect to the drum is 110mm/ 4 inch . It is advisable to place Ball Valves or Slide Valves on the inlet and outlet pipes.

Set the drum so that the water level is level with the top of the dirt chute. By setting the water level at this height you use the most surface area of the screen of the drum filter.

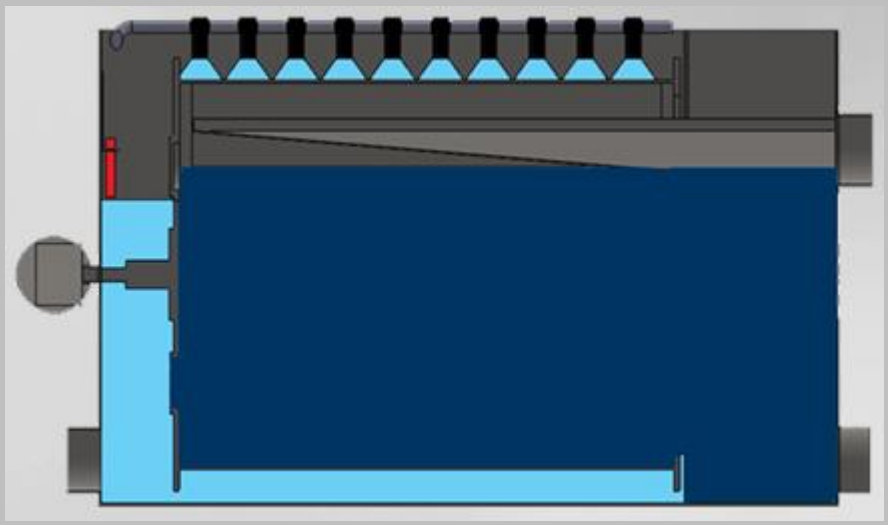
Water Level Adjustment

This may cause a loss of water when the system is shut down depending on high the water level is above the top of the waste tray. While operating, “draw down” within the filter eliminates further loss.

GRAVITY arrangement, not flush situation, probe touches water



GRAVITY arrangement, flush situation, probe is dry



***Dark blue is unfiltered water. ***

***Light Blue is filtered water. ***

Installing Your Filter In A Pump-Fed Setup

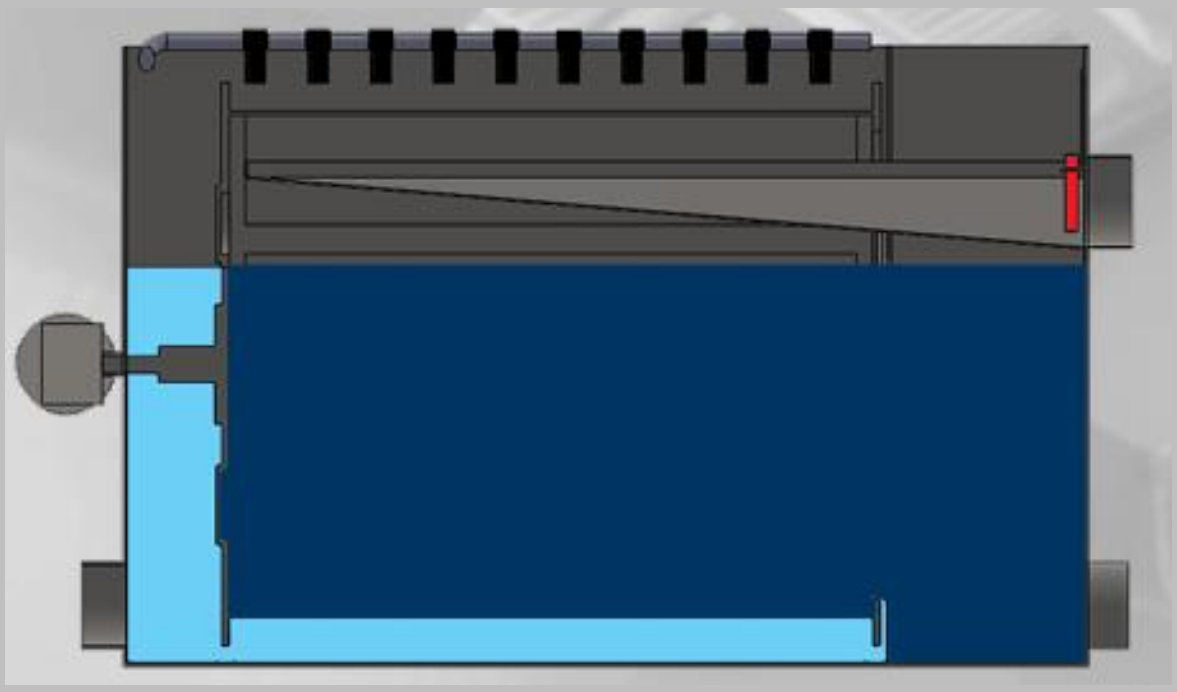
Your ProfiDrum will perform equally well in a Pump-Fed set-up with a few minor modifications. Place your drum filter on a solid surface that is completely level.

You can then connect the inlet pipe(s) from your pump(s), followed by the outlet pipes. The outlet pipe(s) will need to exit the drum filter with a 90° elbow fitting oriented to flow upward.

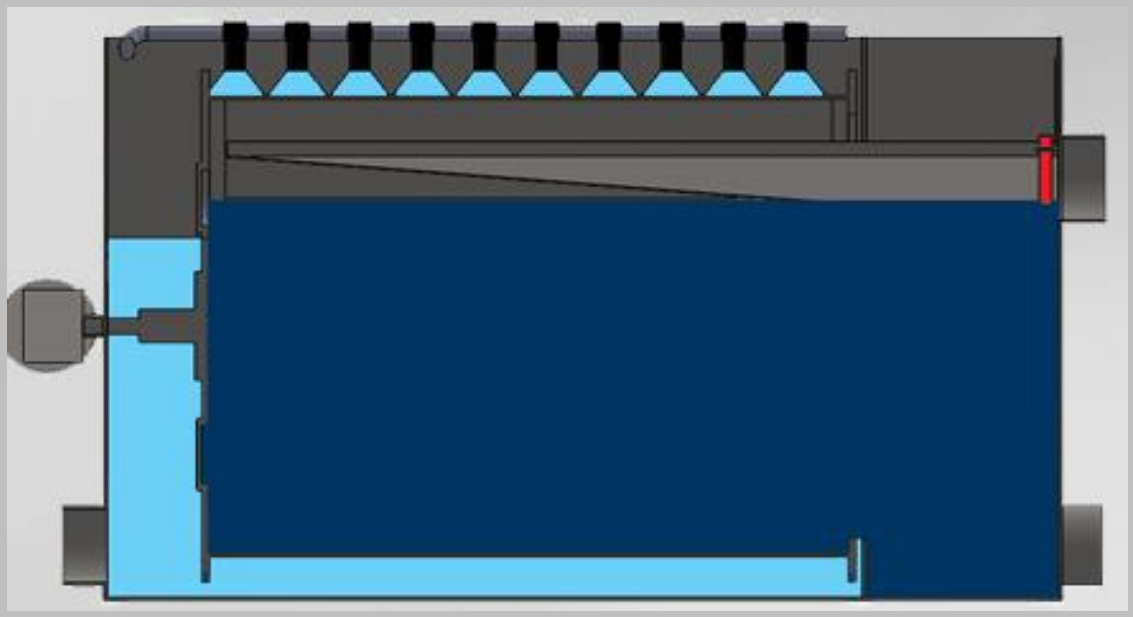
A second 90° elbow fitting is then required, bringing the outlet back to a horizontal path. The length of pipe between the two 90° elbows will be variable based on your particular flow rate and pipe sizing. Placing the top of the horizontal pipe 3” below the top edge of the waste tray is a good starting place. This configuration is needed to maintain a sufficient water level on the clean side of the drum.

Both the inlets and outlets should be connected to your pipework with rubber couplers. The size of the required coupler to connect to the drum is 4 inch.

Pump-fed arrangement, not flush situation, probe is dry



Pump-fed arrangement, not flush situation, probe touches water



***Dark blue is unfiltered water. ***

***Light Blue is filtered water. ***

Connecting the waste tray

A 4 inch rubber coupler is also used to connect the waste tray to the drain. The sewer can be an actual sewer pipe, or other proper drainage pipe. It is not recommended using a French Drain Line as debris will clog the piping. A small sump and submersible pump are also a possibility. If reducing the size of the waste line do not do so until the pipework is below the bottom of the waste tray. Not doing so can create a small dam that will trap a small amount of debris in the waste tray leading to unsatisfactory conditions.

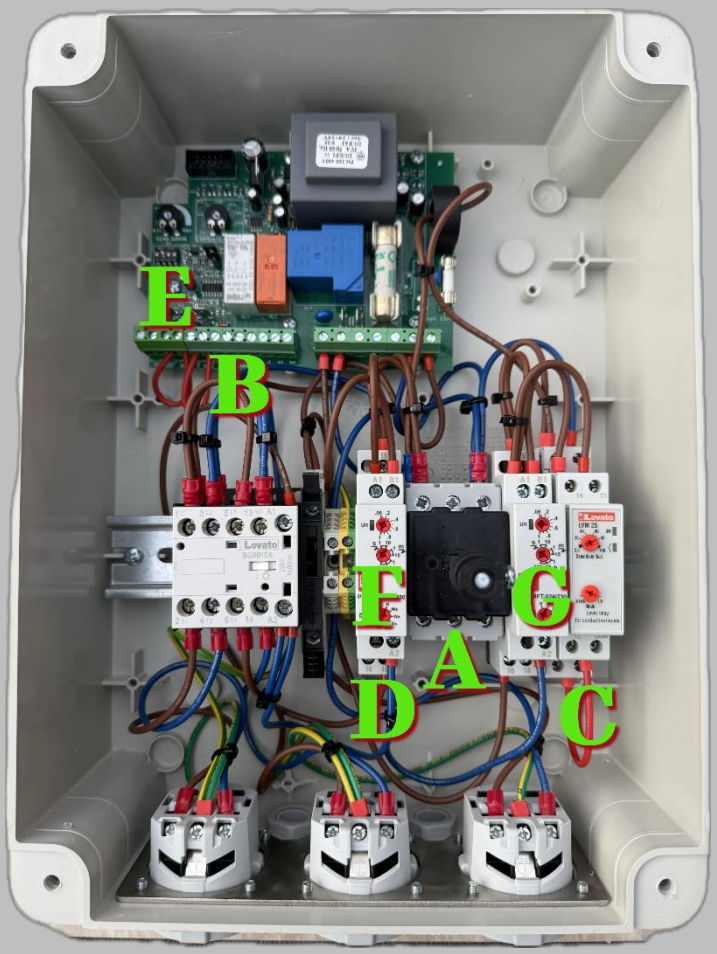
Inside The Control Unit

Your ProfiDrum RDF is equipped with a control box that controls your filtration process:

At the front of the control box are:

- Main Power switch
- Automatic button for automatic cleaning (DEFAULT)
- Stop/reset Switch
- Manual/test Switch for manual cleaning

The filter will not clean automatically without the “Automatic” light on.



The internals of your control unit might look different, as components have been removed for demonstration purposes.

Connecting The Wires To The Control Unit

A: Connect main power here

B: Connect probes here, one probe to terminal 7 and one probe to terminal 9.

C: Low Level protection, (green and white cable) connect the Float switch after testing the system. *

D: Ground block, green and yellow (earth cable)

E: Dip switch setting:

Gravity Set-Up: 1 = down. 2 = up. 3 and 4 = down

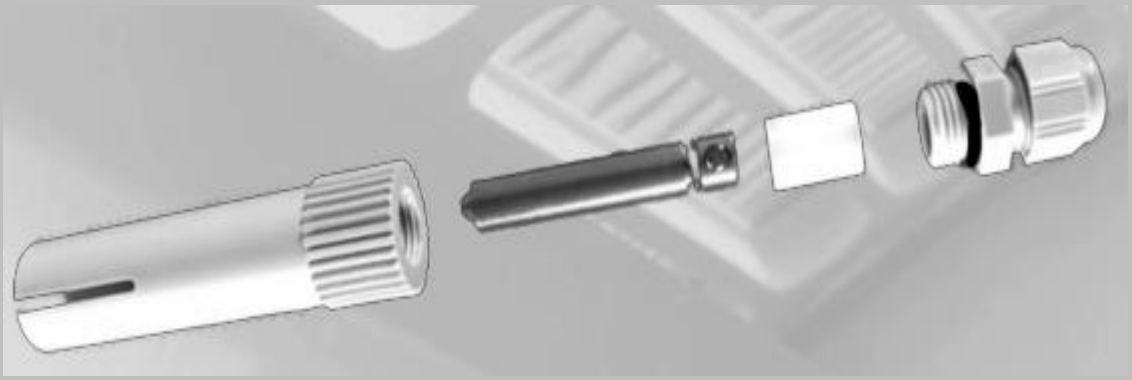
Pump Fed Set-Up: 1 = up, 2, 3 and 4 = down

F: Cleaning cycle timer relay 1 = hour. 2 = percentage **

G: Low level protection timer off the control box 1 = hour. 2 = percentage. ***

Connecting And Installing The Probe(s)

Depending on our system, it is supplied with one or two probes. The installation position of the Probes will be determined by your set-up, either pump or gravity.



Wiring The Probe

From new all ProfiDrum control boxes are pre wired. However if you need to change the probe or cable. Begin by removing the cable gland from the top of the Probe, remove the spacer and Stainless-Steel Probe from the housing. Using a minimum 18AWG wire, strip approximately ½ inch insulation from the end. Thread the wire through the cable gland and spacer then insert into the end of the Stainless-Steel Probe and tighten the two set screws on each side of the probe. Insert the Stainless-Steel Probe back into the housing, being careful the rubber O-ring stays in position, next the spacer, then the gable gland.

Secure the cable gland tightly into the housing followed by tightening the top, securing the wire in place.

Installing The Probe

When your filter is installed in a gravity set-up the Probes will be installed in the clean (outgoing) side of the filter. During normal operation the Probes will be submerged approximately 2” in the water. As debris is captured inside the drum, draw down within the clean side of the filter will cause the water level to drop. Once the water level drops below the bottom of the Probes a cleaning cycle will begin.

When your filter is installed in a pump fed set-up the Probes will be installed in the dirty (incoming) side of the filter. During normal operation the Probes are elevated in the

mounting bracket with the bottom of the Probes approximately 2” above the water. As debris is collected inside the drum, the flow through the screen will be reduced causing the water level on the dirty side to rise. When the water level rises enough to make contact with both Probes the cleaning cycle will be initiated. Care must be taken when establishing the height of the Probes when using your filter in a pump fed set-up. The bottom of both Probes must be below the LLP float switch.

Typical Probe Installation In A Gravity Setup

Understanding The Cleaning Timer

The Cleaning Timer (F) controls the length of time the drum cleans, this includes how long the drum rotates and how long the High-Pressure Pump sprays. There are two controls on the timer to set the cleaning time. The upper dial is a “macro” setting, and the lower, red dial is the “micro” setting. The upper (macro) dial indicates either, 2s (2 seconds), 20s (20 seconds), 2m (2 minutes), 20m (20 minutes), 2h (2 hours), 24h (24 hours). The lower red dial (micro) has a range from 1 to 2 (these numbers are arbitrary) and indicate the amount of time within the macro range.

For example: With the upper dial in the “20s” position, the lower red dial will adjust the time from 1 second to 20 seconds. If the upper dial is in the “20s” position, the lower red set to 10 seconds, the gearbox and high oresasure pump will power uop for 10 seconds.

Filters are typically shipped with the Cleaning Timer set for 10 to 12 seconds. This allows for a complete rotation of the drum.

Understanding The Low-Level Protection

The LLP Timer is located to the right of the main (on/off) switch (G) in the Control Box. The LLP Timer is set identically as the Cleaning Timer previously described. The LLP system protects your filter and circulation pump in a gravity fed set-up by shutting down the system in the event of a low water situation within the filter. In a pump fed set up the LLP works in reverse and keep the system from overflowing the waste tray

How The Low-Level Protection System Works

With a gravity set-up, in the event of a low water level situation the system will be shut down when the float of the switch drops. As the correct water level is reestablished and the float rises to its proper position the LLP Timer will start. In the event that the water level does not correct itself the system will remain off, and the timer will not start.

Benefits Of The LLP System

For your filter to operate correctly a proper water level must be maintained. Occasionally it may be required to perform a major water change within your system. If changing enough water to allow the float switch to drop the system will shut off. As you re-fill your system, the float will rise and trigger the LLP Timer. There is a difference of approximately 1.5” between the float being in the upper (closed) position and the Probes. The LLP Timer should be set for a long enough time to refill your system, so the Probes are in the water. This will depend on the rate of refill for your system. At the end of the time set on the LLP Timer the system starts up again automatically.

LLP System In A Pump Fed Set Up

In a pump fed system the LLP will protect the system from overflowing the waste tray by shutting down the system in the event the filter does not clean properly.

To configure the LLP System in a Pump Fed Set Up begin by removing the small white disk at the top of the post that the float rides up and down on, remove the float from the post, flip it over and replace it on the post, then reinstall the white disk. This allows the float switch to operate in a “normally open” position. Install the float switch in the dirty side (incoming) of the filter with the additional bracket provided by your Dealer.

Position the float switch so the small white disk is approximately 1/4” below the top of the waste tray. Once your system is up and running this initial height can be adjusted to compliment your specific configuration.

Initial Startup

Regardless of how you've installed your filter, begin by filling the filter with water and checking for leaks. Turn on the Control Box by rotating the switch on the front of the box to the "ON" position. Ensure that the "Power" light is on along with the "Automatic" light. Initiate a cleaning cycle by pressing the "Manual" button to check for proper operation.

By turning the red safety button on the front control box to the ON position to set the drum filter in operation

The filter will not clean automatically without the "Automatic" light on.

Intervals Between The Rinses

It is normal that the drum filter in the early stage of turning the system on will frequently clean. The intervals between the rinse cycles are largely determined by factors such as, particules, waste in the pond and floating debris. Also the water level in the pond and drum in combination with the fineness of the drum screen mesh, these all have a direct influence on the intervals between the flushing times. The intervals between the rinsing times may also vary due to the time of year, pump setting, algae etc.

Maintenance

It is advisable to periodically clean the screen with Drum Filter Screen Cleaner, which can be found on our website. This maintenance should be done two to three times per year but is strongly dependent on the situation. In general, if the intervals between the rinsing times become shorter, the screen has to be cleaned.

Warranty

This product is guaranteed against defects in material and workmanship for 2 years from the date of purchase, under normal usage.

The guarantee **DOES NOT APPLY** in case of improper use, negligence, lack of maintenance or accidental damage to the ProfiDrum.

If the ProfiDrum fails due to a manufacturing fault within this period it will be either repaired or replaced free of charge.

Liability is limited to replacement of the faulty product only; no other costs will be reimbursed.

This guarantee is not transferable and does not affect your statutory rights. This guarantee does not confer any rights other than those expressly set out above.

DO NOT attempt to tamper with the ProfiDrum components, other than as directed by a ProfiDrum BV Ltd, as doing so will invalidate the warranty.

The manufacturer or supplier shall not be responsible or held liable for any damages caused by defective components or materials of this product; or loss incurred by interruption of service; or any consequential/incidental damages and expenses arising from the production, sale use or misuse of this product of any other consequential loss.

Any warranty claim must be accompanied by a valid, dated proof of purchase.

ProfiDrum BV Ltd and its dealers shall not be held liable for any loss of fish, plants or other livestock as a result of any failure or defect of this product.

The installation and use of your product outside of our recommendations may also void the warranty.

Indemnity Clause

Any ProfiDrum dealer, customer, installer, contractor or end user who installs or operates a ProfiDrum system using non-standard or non-approved ProfiDrum components, including, but not limited to, the control box, high-pressure pump, gearbox, or motor, agrees to indemnify and hold harmless ProfiDrum B.V. Ltd from and against any and all claims, damages, liabilities, losses, costs, or expenses (including reasonable legal fees) arising out of or related to the use of such non-standard parts.

This indemnification includes, without limitation, any product liability, financial loss, property damage, or personal injury resulting directly or indirectly from the use, installation, or operation of the modified or non-standard system. For example, if a dealer, customer, installer, contractor or end user installation causes property damage, the ProfiDrum dealer, customer, installer, contractor or end user shall be fully responsible for covering the repair costs and any related liabilities. For the avoidance of doubt, ProfiDrum shall bear no responsibility or liability whatsoever for any damages or losses resulting from the installation or operation of its products with components not supplied or approved in writing by ProfiDrum.

ProfiDrum BV Ltd reserve the right to change this product specification without prior notice.

ProfiDrum BV Ltd., Great North Road, Rockley, Nottinghamshire, England, DN22 0QW

Tel: 01777 819740

Email: info@profidrum.com Website: www.profidrum.com

Warranty Card

Or register online at www.profidrum.com

Name: _____

Address: _____

Country: _____

Postcode: _____

Telephone number: _____

Email: _____

Purchased From: _____

Address where Purchased: _____

Country: _____

Postcode: _____

Telephone Number: _____

Date Of Purchase: _____

Model: _____

Serial Number: _____

I have read and accept the terms and conditions listed in the warranty card and understand the obligations of the Customer under this warranty.

Signature: _____

Date: _____

Returning this registration form will amount to your consent for us to disclose your details and other personal information to other companies within the ProfiDrum group including any subsidiary company or subcontractor of Profidrum for the purposes of performing our obligations under the warranty.

Telephone: 01777 819740

ProfiDrum BV Ltd, Great North Road, Rockley, Notts, England, DN22 0QW

Disclaimer

This document has been prepared with the utmost care. However, ProfiDrum accepts no liability for any inaccuracies within this document. Please contact ProfiDrum or your dealer for any needed explanation or clarification of these instructions. ProfiDrum is not liable for damages or injuries that occur as a result of not correctly following and/or neglect of the directions that are presented here in this manual.

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