



 **STREAMLINE** | INSTRUCTION MANUAL

SMARTANK[®]

Van Instructions

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1 Responsibilities

Responsibilities

General Responsibilities

These operating instructions allows you to use the Smartank® tank system safely and efficiently. The instructional booklet must be read before setting up, starting or using your Streamline® equipment. It is an integral part of the product itself.



Please read the warning and instructions contained in this booklet carefully. They provide important information on the safe use and maintenance of the equipment. Pay particular attention to general safety instructions.

Please keep this booklet in a safe place near your Smartank® tank system for future consultation. Your Smartank® tank system is constructed according to current safety standard and regulations. The latest and current edition is illustrated in this manual. The contents of this booklet should be bought to the attention of all users.

Manufacturers Responsibilities

Varitech Systems Ltd, the manufacturer of Streamline®, holds 12-months warranty on all machines and equipment from the date of purchased (see Warranty section 2) Varitech Systems Ltd, the manufacturer of Streamline®, is in no case responsible for failures or errors caused by modifications to the unit by customer or other persons.

Personnel Responsibilities

The Smartank® tank system is designed and manufactured to be operated in industrial applications. It is important that the operator(s) of the Smartank® tank system have read through these operating instructions thoroughly, and understand all safety instructions and regulations. The Smartank® tank system is not intended for use by children, adolescents, persons under the influence of alcohol / drugs or simply lacking experience and knowledge. These operating instructions are designed to educate the user, informing t he operator how to carry out the task at hand successfully, whilst avoiding potential dangers that might occur.

Important

If needed, training videos can be found on the Streamline® website: www.streamline.systems

2 Technical Specifications

Technical Specifications

Specification Data

Product Code	Smartank® 400	Smartank® 650
Country of Origin	United Kingdom	United Kingdom
Maximum Height	438mm	438mm
Maximum Length	1670mm	2100mm
Maximum Width	1220mm	1220mm
Dry Weight	85kg	95kg
Wet Weight	485kg	746kg
Min. Inlet Pressure Requirement	2.8 / 40 bar / psi	2.8 / 40 bar / psi
Optimum Operating Pressure	6.9 / 100 bar / psi	6.9 / 100 bar / psi
Standard Water Inlet Connection (Male hose lock)	3/4 inch	3/4 inch
Waste Water Outlet Connection (Male hose lock)	3/4 inch	3/4 inch
Pure Water Outlet Connection (Male hose lock)	3/4 inch	3/4 inch
Electrical Power Supply	12v Battery / 230V mains	12v Battery / 230V mains
Optimum Water Quality	000ppm	000ppm
Water Quality Range	000ppm - 1000ppm	000ppm - 1000ppm
Pure Water Flow (optimum output)	5.2 Lpm Per Pump	5.2 Lpm Per Pump
Operating Time	Approx. 10hrs	Approx. 10hrs

Safety Regulations

Electrical Specifications and Safety



This applies to all Streamline® system configurations. Electrical connections must be carried out in respect of current legislation (in compliance with the provisions of the IEC 60364-1 standard) and in accordance with the manufacturer's instructions. Please check that the installation and sockets are adequate for the maximum power of the appliance indicated on the rating plate. If in doubt, consult a qualified electrician. The correct plug should be fitted by a qualified electrician.

- Varitech Systems Ltd, the manufacturer of Streamline® declines all liability for damage to persons, animals or things caused by faulty or incorrect connection.
- Before connecting the equipment, check that the specification given on the rating plate corresponds to that of the mains electrical supply.
- If the equipment is connected via an extension, use cables with an adequate cross section, never less than 1,5 mm². The plug and socket must be watertight.
- The electrical safety of the equipment is guaranteed only when correctly and efficiently earthed as specified in current electrical safety legislation (in compliance with the provisions of the IEC 60364-1 standard). This fundamental safety requisite should be verified. If in doubt, ask a professionally qualified electrician to check the system thoroughly. It is recommended that the electric supply to this machine should include a residual current device that will interrupt the supply if the leakage current to earth exceeds 30 mA for 30ms or a device that will prove the earth circuit.

Varitech Systems Ltd, the manufacturer of Streamline®, declines all liability for damage caused by faulty earthing of the appliance.

- The equipment can be disconnected from the mains only by unplugging the plug from the mains socket.
- When using any electrical appliance, certain fundamental rules should be respected:
 - Do not touch the appliance with wet hands or feet;
 - Do not touch the appliance with bare feet or unsuitable clothing;
 - Do not pull the power cable or appliance itself to unplug the plug from the mains.

The innovative Smartank® is a vehicle mounted flat tank system designed to produce pure 000ppm water, through Reverse Osmosis and Deionising filtration, suitable for spot free cleaning.

The water tank is baffled to restrict water movement in transit. With a height of less than 450mm these tanks offer a safe, low centre of gravity tank system, while taking up minimal load space. By installing the optional secondary floor, the van load area can still be utilised for a multitude of purposes and the transport of other needed equipment.

With the equipment cabinet mounted at the front of the tank, at the door opening, operation has never been easier... pumps, controllers and filters are easily accessible, via the opening of the cabinet, maintenance and filter changes are simply and quickly achieved.




Safety Precautions

- It is always recommended to professionally install the Smartank® by the manufacturer or an approved installer. Speak to Varitech Systems Ltd, for more details.
- If being installed in a vehicle or trailer, always ensure the vehicle/trailer has a suitable payload for the Smartank® to be installed
- Do not use the Smartank® with telescopic poles in the vicinity of power lines, junction boxes, power sockets – Please read Streamline® OVA8® operating instructions
- Do not attempt to modify the Smartank® as this could cause a safety hazard or system breakdown
- Never use faulty components or if there is visible damage to the pole or fittings - replace them immediately with original spare parts

Personal Safety

Stay alert, watch what you are doing and use common sense when operating the Smartank® tank system. Do not use the filtration system while you are tired or under the influence of alcohol, drugs or medication. A moment of inattention while operating the filtration trolley may result in serious personal injury.

Use personal protective equipment to avoid personal injury:

 Protective Gloves	 Safety Goggles	 Protective Footwear
Additional protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection may be required depending on the safety regulations in the operator surroundings.		

- Additional protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection may be required depending on the safety regulations in the operator surroundings.

System Safety

The Smartank® tank system is manufactured with the safety of the operator in mind, including some key features such as;



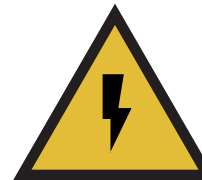
Over Pressure

- If the water pressure in the Smartank® filtration system rises above the maximum 100psi / 6bar pressure, the pressure switch valve shuts on the pump closing the system down, and not letting the pressure in the system rise any further.
- It is important to never open the filter vessels or membrane housings during operation or whilst under pressure.



Over Heating

- If the powerful booster pump overheats on the Smartank® system, an activation switch is triggered and the system will automatically switch off.



Electrical Hazards

- As the Smartank® system is powered by an electrical source, never use expose the equipment in the rain, snow or strong winds.
- Never use the filtration system to clean people and/or animals.
- Before each use, undertake a visual check on all electrical cables for damage. Never use the Smartank® system with a damaged cable.



Mechanical Hazards

- To avoid all mechanical hazards, ensure the Smartank® system is safely secured in position before filling the water tank.

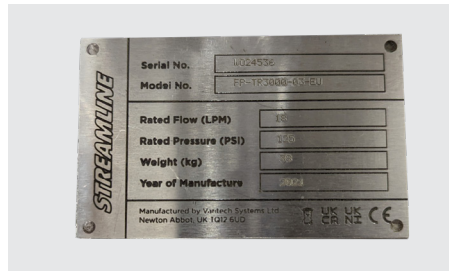
4 Operating The Smartank® System

Operating the Smartank® system

Use only original accessories that come with the Smartank® system, offering maximum quality and security. Failure to use original accessories absolves **VARITECH SYSTEMS Ltd**, the manufacturer from all liability.

When purchasing the product, make sure it has an identification plate. If this is missing, notify the distributor / manufacturer where you purchased the unit from.

Use of an appliance without an identification plate absolves the manufacturer from all liability. Products without an identification plate should be considered as anonymous and potentially dangerous.



Unpacking of the Smartank® system

Your Smartank® system has been carefully manufactured, checked through QC and packaged as a kit.

If your Smartank® is installed in a vehicle or trailer, please move to STORAGE OF Smartank® System.

Packaging (bags, boxes, nails, tape etc.) should be kept out of reach of children as they may represent a potential hazard. Packaging can be recycled according to your local legislation.

Storage of your System

Short term storage: 2-4 weeks of no use

- i. Remove the prefilter housing and pour out the excess water.
- ii. Remove the DI resin cartridge housing and pour out the excess water.
- iii. Remove the RO membrane caps for the excess water to drain from the membranes.
- iv. Ensure you reinstall the top caps on RO pressure vessels. Do not allow them to dry out.
- v. Ensure you reinstall the prefilters and DI resin cartridge. Do not allow them to dry out.

Long term storage: 4 weeks plus of no use

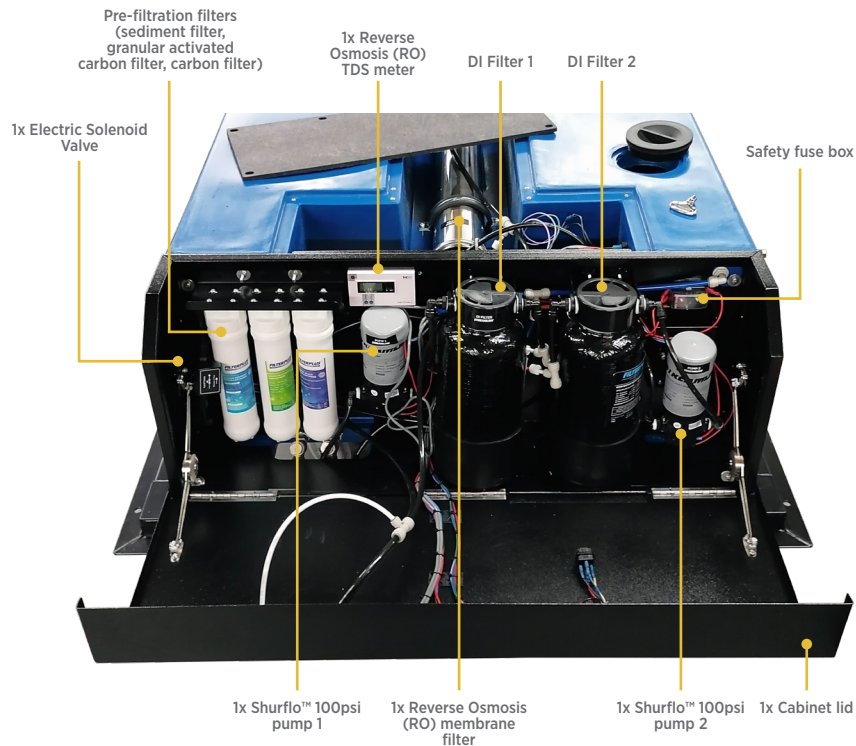
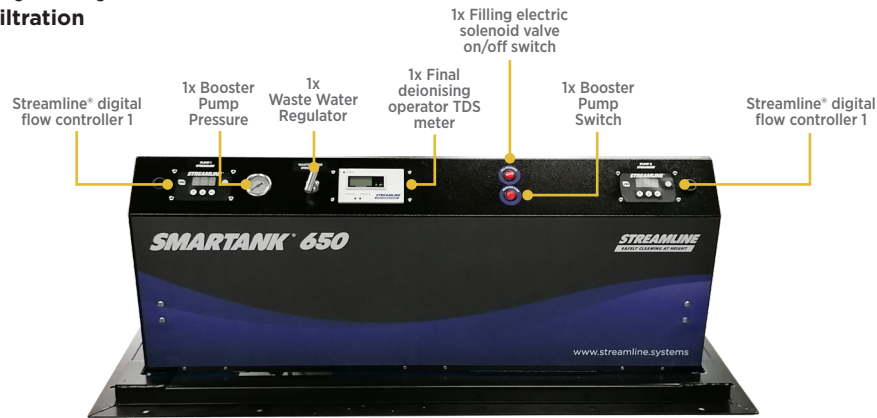
- vi. Remove the prefilter housing and pour out the excess water.
- vii. Remove the DI resin cartridge housing and pour out the excess water.
- viii. Remove the RO membrane caps for the excess water to drain from the membranes.
- ix. Remove all filters from the Smartank® system, wrap in individual plastic bags and seal.
- x. Replace all filter housings and membrane caps without any filters inside.
- xi. It is important to store the Smartank® system where it cannot freeze.
- xii. It is important for all filters to not be allowed to dry out when not in use.

Important

The unit must be protected from freezing.

The following procedures should be followed to protect the unit from bacteria fouling and damage from freezing;

**About your system
RODI Filtration**



Stay alert, watch what you are doing and use common sense when operating the Smartank® tank system. Do not use the filtration system while you are tired or under the influence of alcohol, drugs or medication. A moment of inattention while operating the filtration trolley may result in serious personal injury.

To operate the Smartank® system, the operator needs to think of a suitable filling time before commencing on the cleaning task. Filling time takes approx. 2-4hrs (See Filling of Smartank®)

The water enters the Smartank® system through the water inlet connection, and then passes through the three prefilters (Sediment, Carbon, Carbon Block) removing the largest particles in the water before the water enters the membrane.

The reverse osmosis (RO) membrane filters remove up to 98% of the impurities in the water, before it reaches the de-ionising (DI) resin filter where the water is polished and reaches a 000ppm result.

Charging your Battery

Depending on which Smartank® system you have set up and installed, there are different ways in charging the battery.

Split Charge Relay

If the Smartank® is installed in your vehicle, then you most likely have a split charge relay system connecting your battery to your vehicle battery, and taking charge from the vehicle when on and in motion.

The split charge relay should already be installed in your vehicle system, however if need assistance, please speak to the manufacturer or a Streamline® fitting centre.



Plug in Charger

If your Smartank® is in a trailer system or on a skid mount plate, it is likely your Smartank® will need to be manually charged with a mains charger.

i. Plug charger into an electrical socket



ii. Insert the charger socket into the blue charging socket and switch on the charger.



iii. ● **Red** light shows the charger is in action

● **Orange** light shows the charger is charging the battery

● **Green** light shows the battery is fully charged.



iv. A flashing light shows poor connection.



The battery charging cycle is approx. 5hours to full charge. The run time of the battery is approx. 12hours continual usage.

Important

Only use the Streamline® charger supplied with your Smartank® system. If misplaced, contact your dealer of manufacture immediately.

The charger will never over heat. This has a safety function to prevent the battery from over charging.

You can operate the system and keep the battery on charge. Pay special attention to the mains electrical supply when operating with water.

How to assemble the system

Please see the filling instructions depending on what filtration specification you have on your Smartank®

RODI Filtration

- i. Connect the **BLACK** hose from the mains water supply to the water inlet connection (do not turn water supply on yet)



- ii. Connect the **RED** hose from the waste water outlet and direct to a drain or nearby soakaway



- iii. Ensure that the 'waste water regulator valve' for the Reverse Osmosis filter is fully open (turn anti-clockwise).



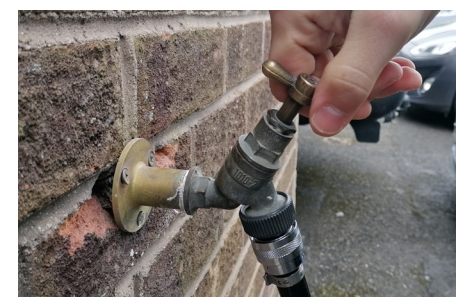
Important

If your Smartank® system has an optional extra booster pump, you can switch on to boost the fill pressure to reach 100psi / 6bar. This will reduce the filling time and have a longer life span on the membrane

- iv. Switch the solenoid valve 'on' with the solenoid switch to fill. The controller will monitor the level switch in the water tank and fill the tank by energising the solenoid filling valve. When the water level rises and operates the level switch, the controller will de-energise the solenoid filling valve and stop the filling process automatically



- v. Switch on the mains water, and allow all air to pass through the filter system



- vi. Adjust the 'waste water regulator valve', by turning it clockwise, until a 60:40 ratio of pure water to tank and waste water to drain is achieved




- vii. Once the tank is full, the solenoid switch will automatically stop and shut the water off at the ports. Disconnect the hose couplings.




Turning your Smartank® system ON

i. Connect your 'BLUE' link hose supplied to the pure water outlets marked 'Pure 1 / Pure 2' on the PURE water outlet to the hose reel or directly to waterfed pole. If you have a static hose reel mounted in the vehicle, it will already be connected ready for use.



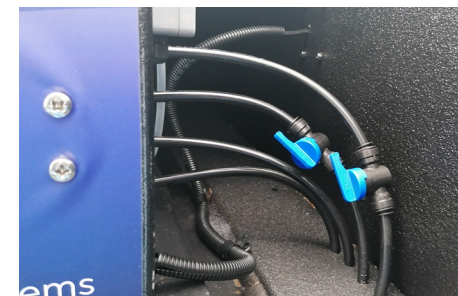
ii. Switch the flow controller on by pressing the  button.



iii. You can adjust the water flow rate by increasing/decreasing the flow rate number until a desired flow rate is achieved. The average flow rate is usually set between 40-50 on the Streamline® controllers (approx. 2.5lpm). The pump MUST run continuously. If the pump is running intermittently whilst water is flowing to the telescopic pole, decrease the speed on the flow controller by pressing the  button until the pump runs continuously.



iv. Ensure the waterflow is clear from the Smartank® system to the waterfed pole. Any taps, univalves or hose stops must be open to allow a clear flow of water for the operator to clean.



You are now able to use your Smartank® system. Please ensure you regularly check the water quality with the TDS meter provided.

Important

Different cleaning applications may require different water flow rates, i.e. large glass areas with lots of rinsing will need more water than a small window.

Operating your Smartank® system

This Smartank® system is designed for double operator use.

The water supply can sometimes be interrupted for short lengths of time i.e. when the operator moves from window to window. However if the Smartank® system is interrupted for long periods of time, it is best to switch off the pump to save overheating and/or over pressurising, and potentially damaging the system.

Check to see if your electric hose reel is working (See page) an additional hose reel can be supplied if needed. Waterfed pole instructions can be seen on page (


When cleaning windows, remember to pay special attention to the frames, especially if it is the first time this method of window cleaning is being used.

The most important part of the cleaning process is to rinse the glass thoroughly, after the window has been cleaned. To do this, lift the brush away from the glass and move the head from side to side working from top to bottom motion, allowing the water remove all particles from the glass.

If you are cleaning windows on a warm day, the rinsing procedure must be done meticulously, as warm, direct sunlight can cause spotting due to insufficient rinsing.

Turning your Smartank® system OFF

The Smartank® system is designed for a single or double operator use.

- i. Press and hold the  button on the Streamline® flow controller, switching off the Shurflo pump



- ii. Disconnect the mains power supply before disconnecting the mains water supply



- iii. Remove all hoses and safely store in storage box



Malfunctions & Troubleshooting

Please see the filling instructions depending on what filtration specification you have on your Smartank®

- i. Low water pressure or water supply at waterfed brush
 - a. Check for any blockages or kinks in hose
 - b. Disconnect all extension hose/hose reels and connect the Smartank® filtration system directly to the telescopic pole
 - c. Clean or replace the sediment filter
 - d. Contact service centre
- ii. High waste water flow and low pure water flow
 - a. Check if membrane has the plug installed – if so, replace membrane
 - b. Contact service centre
- iii. High pure water TDS
 - a. Check membrane quality – replace membrane
 - b. Check DI filter – replace resin beads in DI cartridge
 - c. Contact service centre
- iv. Booster pump will not start
 - a. Check battery charge – see '12.1 How to charge your battery'
 - b. Check fuse on battery charger
 - c. Check fuse on mains power
 - d. Contact service centre
- v. Controller stating 'DE' or 'PS' constantly
 - a. Check for any blockages in hose or telescopic pole tubing
 - b. Check for any blockages in membrane
 - c. Raise the calibration on the controller
 - d. Contact service centre
- vi. Controller flashing 'BAT' constantly
 - a. Plug in battery charger immediately before the battery is flat
 - b. Contact service centre

Controller Troubleshooting

Controller Messages



- **dE – A dead end has been detected.**
The pump has been turned off automatically by the controller, as there is a water stop somewhere in the system.
- **PS – The pressure switch has been activated.**
This means the pressure has exceeded the pressure switch rating. Check if there is no water blockage or reduce the pump speed to lower the resistance.
- **Bat (Pump still working) – Your battery voltage has dropped below 11.5V.**
Re-charge your battery as soon as possible, before your pump finally stops.
- **Bat (Flashing and pump stopped) – Your battery voltage has dropped below 11.0V.**
The pump has been stopped by the controller to prevent possible damage to the battery. Re-charge your battery as soon as possible. If you have a split charge relay fitted to your Smartank® system, start your vehicle engine which will then start the charging process.
- **FIL (Flashing) – The controller is set to a filling mode.**
The controller will monitor the level switch in the water tank and fill the tank by energising the solenoid filling valve. When the water level rises and operates the level switch, the controller will de-energise the solenoid filling valve and stop the filling process automatically.

Adjusting the calibration on the controller

The Streamline® controller can automatically shut down the pump automatically. This is known as 'dead-end' and labelled 'dE' on the controller. The sensitivity can be adjusted and set by the operator, if the controller is turning off too early or too late.

- i. Turn on the flow controller press 




- ii. To adjust dead-end detection, press and hold  and  at the same time. Wait for 'Cal' to display and flash on the screen.



- iii. When 'Cal' displays on the screen, adjust dead-end detection up with (less sensitive, turns off at higher pressures) or down with (more sensitive, turns off at a lower pressure).



- iv. Press  button to set and save the final calibration



Warning: Do not set the calibration too high.

Setting calibration higher than necessary places extra strain on both the pump and the controller in a dead-end situation. This can result in damage to both the pump and your controller.

6 Maintenance & Replacing Filters

Maintenance & Replacing Filters

Care and maintenance of your Smartank® system will ensure it is well looked after and running smoothly every time.

It is recommended to run a weekly, monthly and quarterly examination on the Smartank® system to ensure all filters are adequate and effective for producing pure 000ppm water quality.

Weekly inspection

- Keep a check on the pure water TDS by using the handheld TDS meter. This measures in parts per million (ppm). If the output reads higher than 3ppm, it is recommended to change the de-ionising (DI) filter, and make a note in the back of the inspection booklet
- Keep a check on the battery voltage by running through the controller function until you reach 'BAT'. A good healthy battery will read between 11V and 12.4V.

Monthly inspection

- Each month it is recommended to flush through the reverse osmosis (RO) membranes and reset the ratio between pure water output and waste water output. The waste water valve should be opened 100% to allow waste water to flow out for approx. 5mins. Gradually reset to 60% pure and 40% waste water.

Quarterly inspections

- Depending on the usage, however, it is advised to change the prefilters at least once a quarter.
- Complete a check on all membranes to ensure performance is still acceptable

Warning:

Ensure the Smartank® system is not operating or under pressure when maintenance or filter replacements are being undertaken.

TDS meters

This system relies on a series of filters to produce pure 000ppm water. To ensure that your Smartank® filters operate efficiently, the filters will need to be changed in accord with your water harness.

Open the cabinet by turning the two latches on either side of the front cover, using the key supplied. Lower the front cover carefully ensuring that the external controls are not damaged.

The Smartank® is fitted with two inline TDS meters.

- 1) The first TDS meter is located inside the Smartank® cabinet, which measures the in coming mains water (in) along with the Reverse Osmosis filtered water (out). If the Reverse Osmosis (out) reading is above 40ppm, a replacement RO membrane is needed.



- 2) The second TDS meter is mounted on the front of the Smartank® cabinet, which monitors the water purity of both DI filters (operator 1/operator 2). If the final water reading is above 5ppm, a replacement DI filter is needed



Prefilters – usage and replacing

The prefilter set are the first initial filter set the feed water will pass through.

Usage

Either quarterly replacement or approx. 25,000ltrs of mains water running through, whichever comes quickest

How do I change the prefilter set?

The prefilter cartridges are quick release, and can be replaced by simply unscrewing the CLK cartridge (twist to the left) and replacing them with new CLK cartridges.

It is important to keep the prefilter set in the correct order for quality filtration.

- Sediment prefilter
- Granular Activated Carbon prefilter
- Carbon Block prefilter

Ensure you safely and securing tighten up the housing to ensure the system is safe under operating pressure.



PRODUCT CODE: KIT02310-CLK

De-ionising (DI) Resin Beads – usage and replacing

The DI filter is a vessel containing DI resin beads. The DI resin cannot be regenerated and needs replacing should the 'out' TDS reading rise above 006ppm.

To replace the DI resin filter:

- 1) Ensure the Smartank® is switched off and no water filling into the tank
- 2) Remove the inlet and outlet hose from the filter
- 3) Unscrew the DI filter head and remove both the head and riser carefully
- 4) Release the DI filter from the clamp and empty of the used resin beads into general waste
- 5) Refill the DI filter with new resin beads, ensuring that the filter is filled no more than three quarters
- 6) Reassemble the head and riser, and clamp the filter back into position before attaching the inlet and outlet hose connections



PRODUCT CODE: MB115

Ensure you safely and securing tighten up the housing to ensure the system is safe under operating pressure.

Warning:

Disposing of resin beads can create a slippery surface. Care needed to dispose of resin beads effectively. Remove all over spill immediately.

Reverse Osmosis (RO) Membrane Filters - usage and replacing

The RO membranes are the core part of the water filtration – produce up to 98% of water filtration.

Usage

Either yearly replacement or approx. 250,000ltrs of pure water running through, whichever comes quickest

How do I change the RO membranes?

The RO membrane filter is hidden below the centre cover in the water tank..

Please pay special attention to the flow direction on the membrane housings and on the membranes themselves.

- 1) Ensure the Smartank® is switched off and no water filling into the tank
- 2) Remove the inlet, outlet and waste water hose connections from the stainless steel membrane housing
- 3) Release the stainless steel membrane housing from the clamps and remove the used RO membrane filter into general waste
- 4) Reinsert the new RO membrane filter in the housing, ensuring the membrane seal is located on the inlet of the stainless steel membrane housing
- 5) Reassemble the stainless steel membrane housing, and clamp back into position before attaching the inlet, outlet and waste water hose connections



PRODUCT CODE: S-MRO-4040-F

After you have replaced a new RO membrane filter, ensure you complete a backwash before the membrane is put under pressure.

Warning:

Don't lose the RO membrane plugs! Carefully insert in the water inlet side. If in doubt speak to your Streamline® technician.

The Pump

The pump fitted to the Smartank® systems are protected by an in-line strainer filter, with a clear top allowing for visual inspection. If any debris accumulates in the strainers, unscrew the top and flush out with clean water.

The pump has a built in pressure switch. When switched on it will pump until it has reached the maximum pressure setting before cutting out. This is a safety feature. However, the pressure switch may burn out if the pump is allowed to run intermittently.

To avoid this happening, make sure that the pump speed is correctly set on the flow controller. The pump must not be stored under pressure as this will invalidate the warranty.



PRODUCT CODE: 8000-946-238

7 Disposing Of Filters & Machine

Disposing Of Filters & Machine

The Smartank® system is classified as special waste. It must be taken apart and divided into uniform sections which should be disposed of according to current legislation.

Do not use the components removed as spare parts.

All filters are disposable as unarmful general waste.

Safety Instructions For Power Drive Reel

Follow these instructions carefully to ensure safe operation of this unit



1. Appropriate Personal Protection Equipment must be worn when operating this unit, eg goggles and gloves.
2. Warning cones or signs must be used to alert the public to potential danger.
3. If the push button operator cannot see the far end of the hose, then another operator must be present to keep an eye on the hose as it rewinds.
4. Release the push button control immediately if the hose snags or the reel stops.
5. Release the push button control immediately if the hose presents a danger to any person or animal.
6. Do not exceed the maximum safe speed of operation.
7. Do not override or change the factory settings.
8. The reel rewinder unit must be serviced every 12 months.

Do not set the speed of the reel rewind higher than you are comfortable with using

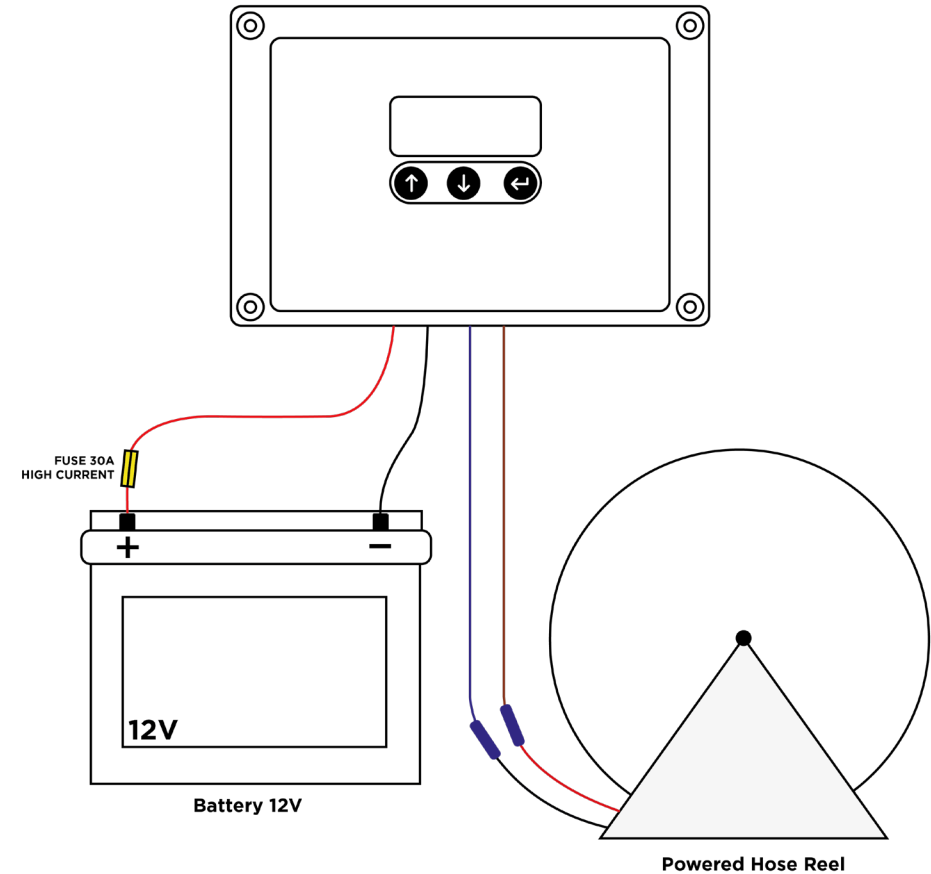
Specification	Value
Supply Voltage	11 - 15 VDC
Maximum Current	40A (Fuse @ 30A)
Typical Drive Current	20-35A
Voltmeter Accuracy	+/- 100mV
Water Resistance & material	IP65, ABS
Dimensions	171 x 120 x 55(mm)
Working Temperature	0 to 40 Deg C

*Your battery is at risk of permanent damage if you disable low battery cutoff and continue to use your controller for long periods when the battery voltage has fallen below +10.5V

DISCLAIMER
 THE MANUFACTURER RESERVES THE RIGHT TO MAKE CHANGES TO ANY PROOUCT HEREIN TO IMPROVE RELIABILITY, FUNCTION OR OESIGN. THE MANUFACTURER OOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT OESCRIBEO HEREIN.

Wireing

Your Reelmaster should come pre-wired. However if not for any reason connect the reel controller following this diagram. NOTE only fit the fuse once all connections are made.



WARNING

Make sure correct fuse is fitted inline. Failure to do so will result in damage to the unit. Observe correct battery polarity. Failure to do so will result in damage to the unit.

10 Operating The Reel

Operating The Reel

Power Up

Check that it is safe to rewind your hose and that it is free from obstructions and presents no danger to others. **Read the safety instructions and follow them carefully ..**

Turn on the controller by applying power and if necessary press and hold either the up or down button.

The value on the display indicates the speed of reel rewind from 0-99, where 99 is the maximum speed. Set to a speed that you are comfortable with using up and down buttons e.g. 70

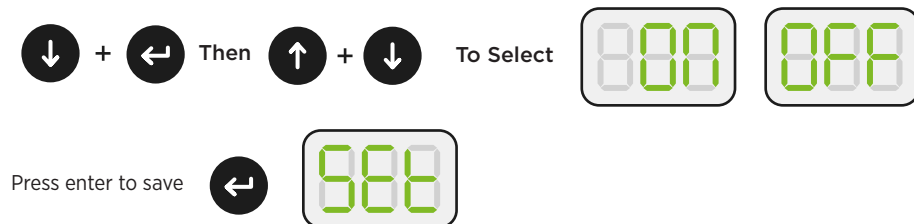


For your safety a maximum speed of 60 is recommended.

To start the reel rewind press the enable push button on the flying lead. Observe all safety instructions. You may need to guide the hose onto the reel carefully.

To stop the reel release the push button.

1. Appropriate Personal Protection Equipment must be worn when operating this unit, eg goggles and gloves.
2. Warning cones or signs must be used to alert the public to potential danger.
3. If the push button operator cannot see the far end of the hose, then another operator must be present to keep an eye on the hose as it rewinds.
4. Release the push button control immediately if the hose snags or the reel stops.
5. Release the push button control immediately if the hose presents a danger to any person or animal.
6. Do not exceed the maximum safe speed of operation



Use

Press up or down to set a suitable rewind speed.



Press enter to display the current battery voltage.



Press enter again to return to the current rewind speed.



To turn the controller off, press and hold enter.

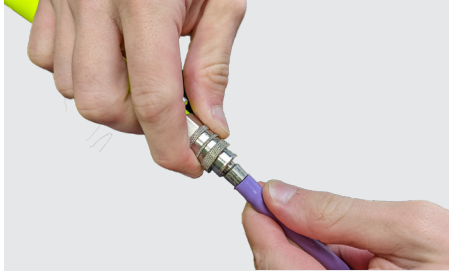
Controller Messages

Message	Description
	An over current situation has occurred, most likely because the hose has been snagged. The reel has been stopped for safety reasons. Remove the obstruction, then press the push button to restart
	An obstruction has been detected during a rewind. The reel has been stopped for safety reasons, release the operator push button. Remove the obstruction, then press the push button to restart.
	This message will start to flash when the battery is low (<11.0V). If battery is below 10.5V the reel will be disabled to protect the battery. (Unless low battery cutoff is disabled*)

11 Connecting OVA8® Pole

Connecting The OVA8® Pole

i. Connect the hose lock connector on the end of the hose to the rectus connector on end of your pole tubing on the Streamline® OVA8® pole.



ii. Open up either your fan or pencil jets from the package or blister pack. In the pack there should be a tee-piece with a push fitting already attached. Using the tee-piece, make sure you push each one of the jets accessory into the John Guest tee-piece.



iii. It is important to make sure there is a firm seal around the hose to help protect leakage. To make sure the hose is attached correctly when you push the hose into the tee-piece you should hear a click sound and then push it in a second time to make sure its fully secure. You can check by trying to pull the hose out the tee-piece.



iv. With the option of a 26cm or 36cm brush 26cm having four jet placements and the 36cm having an option of six.



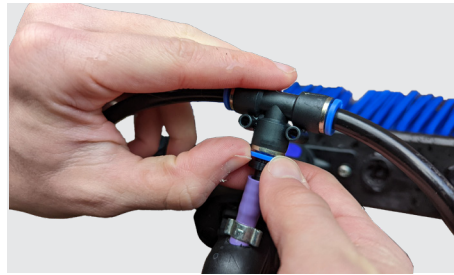
v. You can choose where you want your jets to be, which we place on the edge of the brush which you push your jet nozzles in and you simply twist and lock using the twist mechanism, turning clockwise.



vi. Disconnect the extra hose from the pole tubing.



- ii. To remove your brush from your pole, pull back on the blue collar to release the jet tubing from the John Guest fitting.



- iii. Simply push in the purple button on the brush to release it from the angle adapter at the top of the pole.



Using The OVA8® Pole

Extending the pole

- i. Ensure the clamp lever is fully open before extending each section, extend the pole by beginning with the thinnest section first.



- ii. Secure the extended section by closing the clamp lever fully. Continue to lengthen the pole by extending each section, one at a time, until the desired height is achieved.



Although the pole sections have stopper tape fitted, be careful not to over-extend each section.

Collapsing the pole

- i. Ensure the clamp lever is fully open before collapsing each section in order to avoid premature wear to the sections.



Open the clamp lever and carefully control the speed at which the sections descend, so as not to jar the clamps as the pole closes.

Collapse the sections carefully in order to avoid pinching fingers when the clamps come together.

If the pole has become wet during use, e.g., underwater used or in inclement weather conditions, dry each section prior to collapsing and storing the pole.



Important points to remember

- Always operate the pole with both feet on the ground to maintain proper balance and control of the pole (care should be taken if using the pole on an uneven surface).
- Use both hands when extending and collapsing the pole.
- To improve the pole's rigidity, and if full extent is not required, leave the thinnest section collapsed and extend the pole from the second section down. Alternatively, increase the overlap of each section, by not extending them completely.
- It is recommended that the pole is collapsed prior to moving or repositioning it.

Pole Maintenance

- Make sure that the pole is dry after use and before storing it.
- A dry PTFE spray can be used on the sections to ensure a smooth operation, if required.
- Ensure the clamp tensions are maintained sufficiently in order to prevent premature wear to the pole sections.
- Tension the clamp screws if the sections become loose.
- If the base cap of the pole becomes worn, replace it as soon as possible to avoid sections from becoming damaged and / or splitting.

Caution

- Never remove the base section of any carbon fibre pole as these are manufactured from glass fibre to insulate the pole – danger of electrocution, should the pole touch an overhead wire or electrical source.
- Never use the telescopic pole if damage has occurred to any of the sections.
- Be aware of overhead obstacles and electrical cables prior to extending the pole.
- It's advised that when deploying the pole, to use the height of the pole plus an additional 10% as an horizontal safe distance from any overhead electrical wires, telephone wires, people or animals.



13 Why Streamline®?

Why Streamline®?

Flexibility

- Steamline® systems can be built according to customers' exact requirements
- For non-standard systems, the user's needs or specifications are listened to and turned into reality.

Quality

- Whilst price is important, quality is remembered long after price is forgotten
- We insist on sourcing brand name products from around the world, only of a reputable quality, and bring them together under the Steamline® name
- All Steamline® products carry a full one year's warranty, according to the manufacturers' standard terms and conditions of sale.

Service

- We have an in-house technical helpline able to answer most of your questions relating to the capabilities and functionalities of all Steamline® products
- If we get it wrong, we will put it right. If you are sent a wrong item, we will immediately attend to sending you the correct item and arrange a collection of the wrong item without any quibbles
- Steamline® is backed by a comprehensive range with massive stocks providing you with a 'one stop shop' for all your requirements.



Manufactured In
The United Kingdom



Checked & Tested
By Quality Control

14 Streamline® Warranty

Streamline® Warranty

The warranty on all Machines and Equipment is for 1 year (12-months) from RECORDED DATE OF PURCHASE.

THIS WARRANTY EXCLUDES NORMAL MAINTENANCE ITEMS, including but not limited to HOSES, FILTERS, O-RINGS, DIAPHRAGMS, VALVES, GASKETS, CARBON BRUSHES and damage to motors and other components as a result of failure to replace normal maintenance items. THIS LIST IS NOT EXHAUSTIVE.

If Steamline® receives notice of such defects during the warranty period, Steamline® will either, at its opinion, repair or replace components which prove to be defective.

Replacement parts will only be supplied under warranty, upon the inspection and approval of the defective parts by Steamline®.

Should it be necessary to supply replacement parts before the opportunity to inspect, these will be charged at current prices and credit will only be issued upon subsequent inspection and warranty approval by Steamline®.

The customer is responsible for the cost of return of the defective part. If warranty is approved, Steamline® will pay for the cost of the repaired or replacement part.

This warranty excludes the following conditions and circumstances which are at the discretion of Steamline®.

Wear and tear, misuse, abuse improper maintenance, frost damage, the use of chemicals other than those supplied or approved by Steamline®, improper installation or repair, unauthorised modification, incidental or consequential costs, loss or damage, service, labour or third party charges, the cost of returning defective parts to Steamline®.

This warranty constitutes the exclusive remedy of any purchaser of a Steamline® unit and is in lieu of all other warranties, express or implied, including without limitation any implied warranty of merchantability or fitness for use, to the fullest extent permitted by law. In no event shall any implied warranty of merchantability or fitness for use exceed the term of the applicable warranty stated above and Steamline® shall have no other obligation or liability.

Important

Unfortunately these rights cannot be transferred to a third party.



 **STREAMLINE**[®]
SMARTNAK[®]
Van Instructions

INSTR-SMT-VAN-KIT