



 **STREAMLINE™** | INSTRUCTION MANUAL

# **MOBI® MIDGET**

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## Why Streamline®?

### Flexibility

- Streamline™ 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 Streamline™ name
- All Streamline™ 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 Streamline™ 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.
- Streamline™ 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

**2 Responsibilities**

**Responsibilities**

**General Responsibilities**

These operating instructions allows you to use the Mobi® filtration 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 Mobi® filtration system for future consultation.

Your Mobi® filtration 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.

**Manufacturer 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)

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 Mobi® filtration equipment is designed and manufactured to be operated in industrial applications. It is important that the operator(s) of the Mobi® filtration equipment have read through these operating instructions thoroughly, and understand all safety instructions and regulations.

The Mobi® filtration equipment 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 the 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](http://www.streamline.systems)

**3 Technical Specifications**

**Technical Specifications**

**Specification data**

Description	Mobi® Midget (Battery Powered)	Mobi® Midget (Mains Powered UK)	Mobi® Midget (Mains Powered EU)
Product Code	FP-TR1200L-02-SS	FP-TR1200-03-UK	FP-TR1200-03-EU
Country of Origin	United Kingdom	United Kingdom	United Kingdom
Maximum Height	112cm	112cm	112cm
Maximum Length	41cm	41cm	41cm
Maximum Width	47cm	47cm	47cm
Dry Weight	21.7kg	26.5kg	26.5kg
Wet Weight	23.2kg	29.0kg	29.0kg
Inlet Pressure Requirement	2.8bar / 40psi	2.8bar / 40psi	2.8bar / 40 psi
Optimum Operating Pressure	8.3bar / 120psi	8.3bar / 120psi	8.3bar / 120psi
Standard Water Inlet Connection (Male hose lock)	3/4 inch	3/4 inch	3/4 inch
Waste Water Outlet Connection (Male hose lock)	3/4 inch	3/4 inch	3/4 inch
Pure Water Outlet Connection (Male hose lock)	3/4 inch	3/4 inch	3/4 inch
Electrical Power Supply	Lithium Ion Battery	12V Battery	230V mains
Power Consumption	1.2W	1.2W	56W
Optimum Water Quality	000ppm	000ppm	000ppm
Water Quality Range	000ppm - 400ppm	000ppm - 400ppm	000ppm - 400ppm
Pure Water Flow (optimum output)	3.8Lpm	3.8Lpm	3.8Lpm
Operating Time	12 Hours Run Time	Continual	Continual

**Parts and Accessories**

The Mobi® filtration system will include the following parts:

- 1x 3mtr length of black Standard Water Inlet hose with stainless steel connections
- 1x 3mtr length of red Waste Water Outlet hose with stainless steel connection
- 1x 3mtr length of blue Pure Water Outlet hose with stainless steel connections
- 12V intelligent battery charger with 230V plug (only if chosen FP-TR1200-02 model)
- SPAN3 filter spanner for changing filters
- Handheld TDS meter for accurate water readings



**4 Safety Regulations**

**Safety Regulations**

The Mobi® Midget trolley system is intended solely for the production of pure water used for cleaning windows, vehicles, solar panels and other hard washable surfaces typically through standard and optional accessories provided by Streamline™.

The water cannot be used for human consumption.

**Electrical Specifications & Safety**



**Important**

This applies to all Mobi® Midget trolley systems

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 manufacture'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 manufacture 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 mm. 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 manufacturers 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.

**Personal Safety**

Stay alert, watch what you are doing and use common sense when operating the Mobi® Midget trolley 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.

**System Safety**

The Mobi® Midget trolley system trolley is manufactured with the safety of the operator in mind, including some key features such as; result in serious personal injury.



**Over Pressure**

- If the water pressure in the Mobi® Midget trolley system is above the standard 10bar pressure, the pressure relief valve opens on the pump allowing a greater flow through the waste water outlet, reducing the pressure in the system and through the pure water outlet
- 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 Mobi® Midget trolley system an activation switch is triggered and the system will automatically switch off.



**Electrical Hazards**

- As the Mobi® Midget trolley system is powered by an electrical source, never use 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 filtration system with a damaged cable.



**Mechanical Hazards**

- To avoid all mechanical hazards, place the Mobi® Midget trolley system on an even surface only, and ensure sufficient stability.

**Important:**

Use only original accessories that come with the Mobi® Midget trolley system, offering maximum quality and security. Failure to use original accessories absolves Varitech Systems Ltd, the manufacturer from all liability.

**Operating the Mobi® Midget Filtration System**

Use only original accessories that come with the Mobi® Midget trolley system, offering maximum quality and security. Failure to use original accessories absolves Varitech Systems Ltd, the manufacturer from all liability.

**Unpacking of the Mobi® Midget Filtration System**

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

Carefully unpack your new Mobi® Midget trolley system and carry out a thorough visual check on all parts. If in doubt, do not use the system. Contact your dealer and/or manufacturer.

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 the Mobi® Midget trolley system trolley**

Short term and long term storage is an important issue. The Mobi® Midget trolley system must be protected from algae and bacteria growth in the pressure vessels caused by stagnant water. The reverse osmosis (RO) membranes and de-ionising (DI) resin must not dry out wither.

**Important:**  
The unit must be protected from freezing.

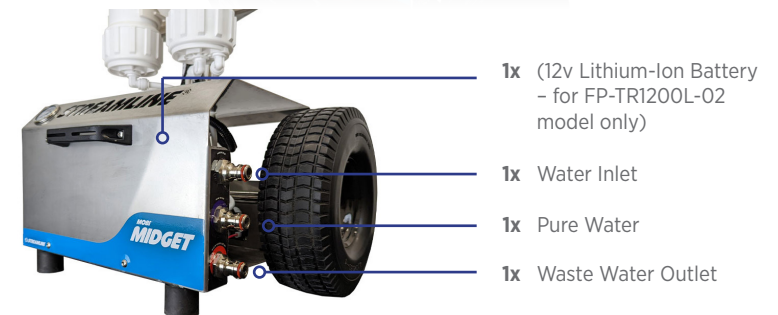
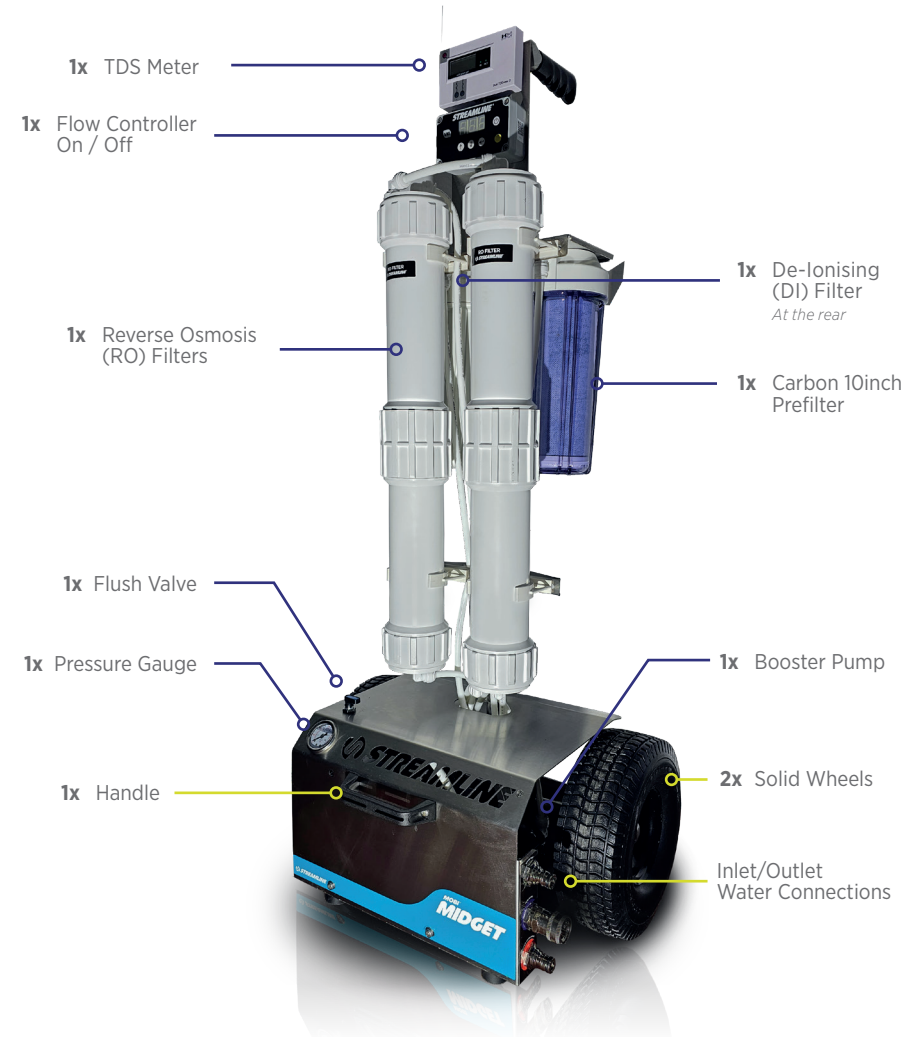
The following procedures should be followed to protect the unit from bacteria fouling and damage from freezing;

**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 and lay down the trolley unit 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 and lay down the trolley unit for the excess water to drain from the membranes.
- ix. Remove all filters from the trolley 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 trolley system where it cannot freeze.
- xii. It is important for all filters to not be allowed to dry out when not in use.



### Charging your Battery

To operate the Mobi® Midget trolley system, there needs to be access to a water supply and mains electricity (unless using the FP-TR1200-02 model with 12V battery).

The water enters the Mobi® Midget trolley system through the water inlet connection, and then passes through the carbon block pre-filter 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.

From the RO membrane filters, waste water is discharged through the waste water outlet. This water is not harmful to the environment or skin, however full of impurities therefore not suitable for cleaning.

Depending on the Mobi® Midget trolley system you have purchased, the booster pump is either powered by 230V mains electricity or the 12V battery.

1. Plug charger into an electrical socket



2. Insert the charger socket into the battery terminal



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



**Important:**

Only use the Streamline® charger supplied with your Mobi® Midget trolley system. If misplaced, contact your dealer or manufacturer immediately.

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

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

### Assembling the System

All main parts and safety devices are assembled by the manufacture. Some other secondary parts may be supplied separately.

These parts must be assembled by the user following the assembly instructions.

If you have purchased a Mobi® Midget trolley system with a 12V battery, FP-TR1200-02, please read 'Charging Your Battery' before proceeding:

### To use your Mobi® Midget trolley system:

1. Ensure the trolley system is safely secure and stable on a level surface



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



3. Connect the **RED** hose from the waste water outlet and direct to a drain or nearby Soakaway



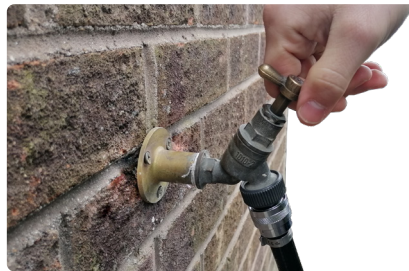
- iv. Connect the **BLUE** hose from the pure water outlet to your water-fed pole (it is possible to add a Streamline® 100mtr hose reel)



**Turning your Mobi® Midget trolley system ON**

Once the final position of the Mobi® Midget trolley system has been reached, you are now ready to switch on the water supply and power up the booster pump.

- 1. Switch on the water supply at the mains water tap and allow the Mobi® Midget trolley system to pressurised



- 2. The pressure gauge should be around 30-45 psi (2-3 bar)



**FP-TR1200L-02 / FP-TR1200-02 (Battery Powered)**

- 3. When pure water is following out from the waterfed brush, switch on the booster pump by pressing the button on the flow controller and hold for 2-seconds



- 4. The pressure gauge should now be around 80-100 psi (4-5 bar)

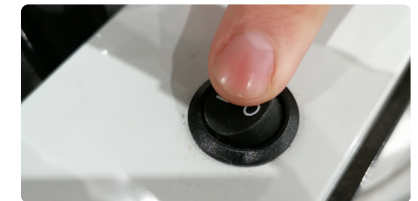


- 5. Now you can adjust the speed of the water flow through the booster pump by using the and arrows



**FP-TR1200-03 (Mains Powered)**

- 3. When pure water is following out from the waterfed brush, switch on the booster pump by pressing the button on the controller



- 4. The pressure gauge should now be around 80-100 psi (4-5 bar)



You are now good to use your Mobi® Midget trolley system. Please ensure you regularly check the water quality with the handheld TDS meter provided.



## 6 Malfunctions & Troubleshooting

### Malfunctions & Troubleshooting

During the usage of the Mobi® Midget trolley system, there may be some small troubleshooting to undertake:

#### 1. 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 Mobi® Midget trolley system directly to the telescopic pole
- c. Clean or replace the sediment filter
- d. Contact service centre

#### 2. High pure water TDS

- a. Check DI filter – replace resin beads in DI cartridge
- b. Check membrane quality – replace membrane
- c. Contact service centre

#### 3. Booster pump will not start

- a. Check battery charge – see [‘How to charge your battery’](#)
- b. Check fuse on battery charger
- c. Check fuse on mains power
- d. Contact service centre

#### 4. Controller stating ‘DE’ or ‘PS’ constantly

- a. Check for any blockages in hose or telescopic pole tubing
- b. Raise the calibration on the controller
- c. Contact service centre

#### 5. Controller flashing ‘BAT’ constantly

- a. Plug in battery charger immediately before the battery is flat
- b. Contact service centre

## 7 Maintenance & Replacing Filters

### Maintenance & Replacing Filters

Care and maintenance of your Mobi® Midget trolley 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 Mobi® Midget trolley 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 inspections

- 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 carbon pre-filter at least 1x a quarter.
- Complete a check on all membranes to ensure performance is still acceptable.

**Prefilters – usage and replacing**

The and carbon block 10inch prefilter are the first initial filters 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 carbon prefilter on FP-TR1200-02 FP-TR1200-03**

With the use of the spanner which comes with the Mobi® Midget trolley system, simply unscrew the clear prefilter housing and dispose of the used carbon prefilter.

Slide in the new CF10-F-001 Streamline® 5micron prefilter into the prefilter housing and reattach to the filtration system. Ensure you safely and securing tighten up the housing to ensure the system is safe under operating pressure.



**Replacement Code: CF10-F-001**



**WARNING**

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

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

The DI resin filter is the last polishing filter that the RO pure 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 DI resin cartridge on FP-TR1200-02 FP-TR1200-03**

With the use of the spanner which comes with the Mobi® Midget trolley system, simply unscrew the white DI housing and remove the resin cartridge. Open the cartridge and dispose of the used resin beads.

Refill the cartridge with new MB115 Tulsion resin beads from Streamline®, ensuring you reposition the sponge ends before tightening up the cap.

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



**Replacement Code: FH2CR-10**





 **STREAMLINE**  
**MOBI<sup>®</sup> MIDGET**

INSTR-FP-TR1200L-02-SS