

**PROTEGE
PUMPS®**



600W Macerator Sewerage Pump

User Manual
[Revision 2.0 July 2019]

RETAIN THIS MANUAL FOR FUTURE REFERENCE
PLEASE READ THIS MANUAL CAREFULLY BEFORE USE

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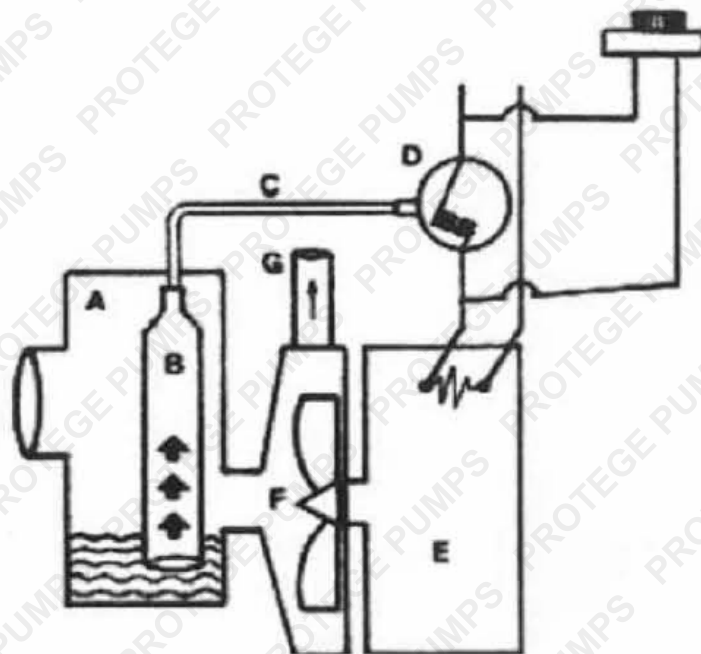
Operating Principle

The macerator pump consists of a tank that receives the waste to be discharged and an electric pump that is automatically controlled by a pressure switch.

The discharge action is triggered when the flushing mechanism is activated as with a conventional toilet.

The waste to be discharged is collected in tank (A). The Air chamber (B) pushes the air pressure flowing through the pipe (C) to the pressure switch (D). The pressure switch activates the motor (E) that drives the turbine (F).

Waste is then discharged through the outlet (G).



The mechanism is simple and manufactured from top quality components. The operating principle is based on a proven design.

Control Component

1 Pressure switch

Mechanism Components

1 Electric motor

1 Turbine

Control Components & Safety Device

1 Manual override switch

1 check valve

Installation

Electrics

Connect the pump with an earthed plug to a 2.5V (16 amp) socket in accordance with current standards.

Hydraulics

The macerator pump can only be used with a toilet with a horizontal outlet and equipped with a tank or flushing tap.

The centre of the horizontal outlet must be 18cm above the floor.

Discharging the Toilet Only

1. Introduce the horizontal bowl outlet into the rubber sleeve of the macerator pump and clamp with the pipe ring supplied (Fig. 1).



Figure 1

2. Introduce the discharge pipe into the rubber outlet. This should be 40mm or 32mm in diameter. Clamp it with the pipe ring.

Check Valve

If waste is to be expelled upwards, install the valve vertically as near as possible to the macerator pump.

Discharging Waste from the Toilet and Other Appliances

Connect the discharge pipes of the other appliances to the rubber connectors provided and clamp them with the pipe ring (Fig. 2).

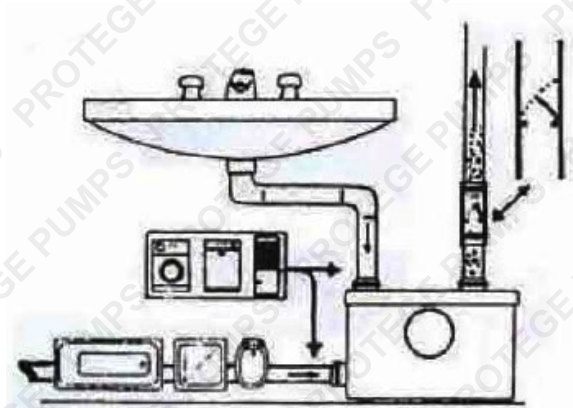


Figure 2

For waste water from the bath or shower, check that the slope from the siphon has a gradient of at least 1cm per meter so that waste will flow through gravity to the macerator pump.

If other appliances are connected along the discharge line near the macerator pump, install check valves on their discharge pipes in order to prevent waste from returning.

The slope of the horizontal parts of the discharge line must have a gradient of 1cm per meter.

Specifications

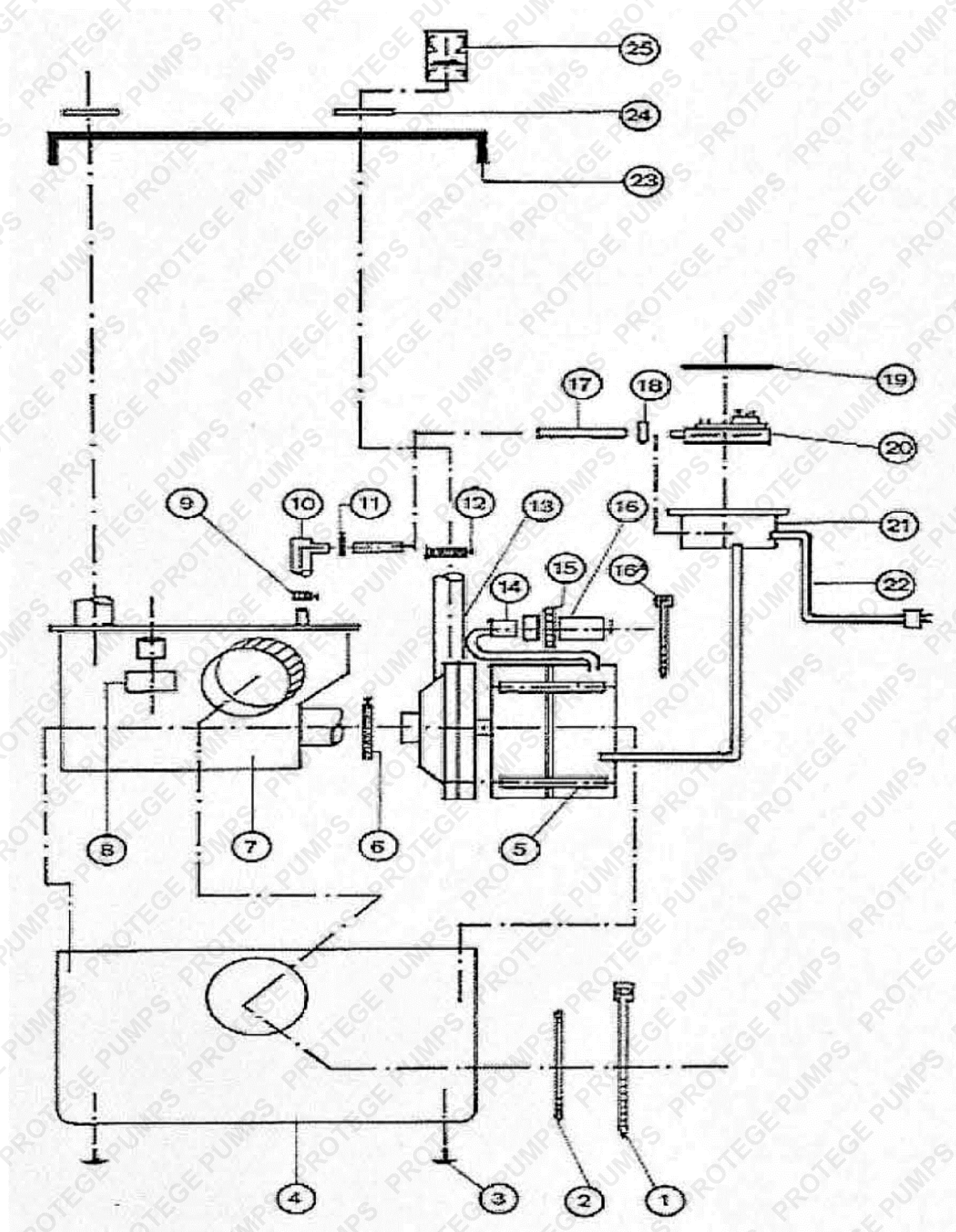
Motor	600W
Voltage	240V 50HZ
Noise Level	50-55 dB
Max. Discharge Height	7m
Max. Horizontal Length	70 - 100m (Depending on Pipe Size)
Rated Flow	240 L/Min (Peak 270L/Min)
Blade composition	SUS304 Stainless Steel
Tank size	4 litres
Min. Water Temp.	1°C
Max. Water Temp.	90°C
Non-Return Valve	Yes
Inlets	1 x 100mm, 2 x 40mm
Outlet	1 x 40mm
Security Seal	135°C
Condensation	30 \square F/250V
Product Standard En	1250-3
Product Weight	9kg



Utilisation

In order to ensure total satisfaction with your macerator pump for many years, only toilet waste, water and paper should be discharged.

Parts List



1. Plastic pipe ring to join the macerator to the toilet
2. 110mm chromium-plated flange
3. Rubber foot
4. Macerator housing
5. 230V electric motor
6. Steel pipe ring to join the turbine to the tank
7. Rubber tank
8. Decompressor float
9. Steel pipe ring
10. Plastic elbow
11. Steel pipe ring
12. 145mm diameter steel pipe ring
13. Rubber discharge pipe
14. Capacitor
15. Capacitor
16. Capacitor
- 16A. Plastic pipe ring
17. Transparent pressure switch air pipe
18. Plastic pipe ring
19. Cover of rubber housing containing the pressure switch
20. Pressure switch
21. Rubber housing to contain the pressure switch
22. Pressure switch electric cable
23. Macerator housing cover
24. Chromium-plated flange
25. Check valve
26. Manual override switch

Maintenance

The macerator pump is designed to discharge faecal matter and toilet paper only.

Some small items may however pass through the pump. But larger items can block the pump.

Pressure Switch Inspection

Plug the pressure tap chamber located in the rubber tank. Press it down to create pressure and listen to hear if there is a clicking sound, indicating that the motor has switched on. If there is no clicking sound, check also that the air chamber of the pressure switch pipe nozzle does not leak.

If the macerator pump is switched on, the motor should start running.

Before performing this operation, check that the opening or the inside of the pressure tap chamber are not blocked.

Troubleshooting

Problems	Causes	Possible Solutions
Pump is not powerful enough or too slow to discharge waste.	<ul style="list-style-type: none"> Discharge pipes are too long. Diameter of the discharge pipe is too small. Partial blockage. 	<ul style="list-style-type: none"> Recalibrate the pipes. Activate the pump with the manual override switch. If the problem still persists, the pump must be blocked; check the pump.
Pump emits a humming noise but does not discharge waste.	<ul style="list-style-type: none"> Pump is blocked Check valve is installed in the wrong position. 	<ul style="list-style-type: none"> Check the pump. Re-install the check valve in the right position.
Pump starts running and discharging on its own.	<ul style="list-style-type: none"> Check valve is defective. There is a leak in the flushing tank that causes water to flow in to the macerator pump and sets it running intermittently. 	<ul style="list-style-type: none"> Check the valve. Repair the leak.
Pump runs continually.	<ul style="list-style-type: none"> Vertical discharge without the check valve installed. Check valve is defective. Pressure switch is defective. 	<ul style="list-style-type: none"> Install the check valve. Check the valve. Check the pressure switch.
Pump does not emit any humming noise.	<ul style="list-style-type: none"> Electrical connection defect. Pressure switch defect. Motor defect. 	<ul style="list-style-type: none"> Check the connection. Press the manual override switch several times. If the macerator pump starts running, check the electrical connection of the pressure switch and the pressure switch line. If pressing the manual override switch has no effect, check the motor.

Proper Disposal



When the macerator pump has reached the end of its service life, it cannot be treated as an ordinary household waste. It must be taken to a waste recovery centre or returned to the distributor when purchasing a new replacement macerator pump.





Some experts believe that the incorrect or prolonged use of almost any product may cause serious injury or death. To help reduce your risk of serious injury or death, refer to the information below. For more information, see www.datastreamserver.com/safety

- Consult all documentation, packaging and product labelling before use. Note that some products feature documentation available online. It is recommended to print and retain the documentation.
- Before each use, check the product for loose/broken/damaged/missing parts, wear or leaks (if applicable). Never use a product with loose/broken/damaged/missing parts, wear or leaks.
- Products must be inspected and serviced (if applicable) by a qualified technician every 6 months. This is based on average residential use by persons of average size and strength, and on a property of average metropolitan size. Use beyond these recommendations may require more frequent inspections/servicing.
- Ensure that all users of the product have completed a suitable industry recognised training course before being allowed access to the product.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or description of application. Be sure to attain third-party approval from a qualified specialist for your application before use, regardless of any assurances from the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (for example, automobile, computer, toaster), there is the possibility of technical issues that may require the repair or replacement of parts, or the product itself. If the possibility of such failure and the associated time it may take to rectify could in any way inconvenience the user, business or employee, or financially affect the user, business or employee, then the product is not suitable for your requirements. This product is not intended for use where incorrect operation or a failure of any kind, including but not limited to, a condition requiring product return, replacement, parts replacement or service by a technician may cause financial loss, loss of employee time or an inconvenience requiring compensation.
- If this product has been purchased in error when considering the information presented here, contact the retailer directly for details of their returns policy, if required.

