



HM 12/24V 3_2022

The Handeman

12V and 24V for motor vehicles

Installation and operating instructions



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IMPORTANT SAFETY INSTRUCTIONS



This sink
for hand wash
only

Before using this appliance, read all instructions and familiarise yourself with the operation of the unit

1. This appliance can be used by children aged from eight (8) years and above, persons with reduced physical, sensory or mental capabilities, or persons with lack of experience and knowledge only if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Cleaning and user maintenance shall not be made by children without supervision.
2. Children should be supervised to ensure that they do not play with the appliance.
3. The unit should only be used in accordance with these instructions. Do not carry out any maintenance other than is shown in these instructions or as advised by Teal Patents service support.
4. Do not connect the electrical elements with wet hands.
5. Do not use with a damaged cable or connector. If the supply cable is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons, in order to avoid a hazard.
6. If the appliance is not working as it should, has been dropped, damaged or submerged in water do not use. Contact the seller or Teal Patents.
7. Do not dismantle the unit or attempt to repair the unit. This will invalidate the warranty.
8. This equipment is for heating water for hand washing only. It is not designed for washing of crockery or other items.
9. All Teal 12/24V Handwash sinks require a continuously charged supply of a minimum of 15 Amps. Solar Panels or similar trickle chargers will not suffice.
10. Water dispensed is not suitable for drinking.
11. Water is dispensed at a temperature of 38-43°C.
12. The appliance must be connected to a motor vehicle power supply.

13. Do not stretch the cable and beware of sharp corners which may damage the cable.
14. The unit must be mounted on the vehicle using suitable fittings.
15. The unit should be positioned where it does not obstruct access to key elements of the motor vehicle.
16. The unit must only be filled with clean cold water.
17. Do not overfill, only fill to just below the red cap.
18. The unit should not be operated without water.
19. Waste water is removed by taking out the bowl and tipping the water from the water drainage slot.
- 20. This unit must not be subjected to a high pressure water jet.**
21. Any spillages should be cleaned-up as soon as possible to avoid slipping hazards.
22. Waste water should be disposed of to a foul drain.
23. Keep unit away from direct heat sources.
24. Do not place in a hot area of more than 90°C.
25. Do not alter the unit in any way this will invalidate the warranty and may make it unsafe to operate.

Box contents

Before installing the unit check that all parts are present and undamaged.

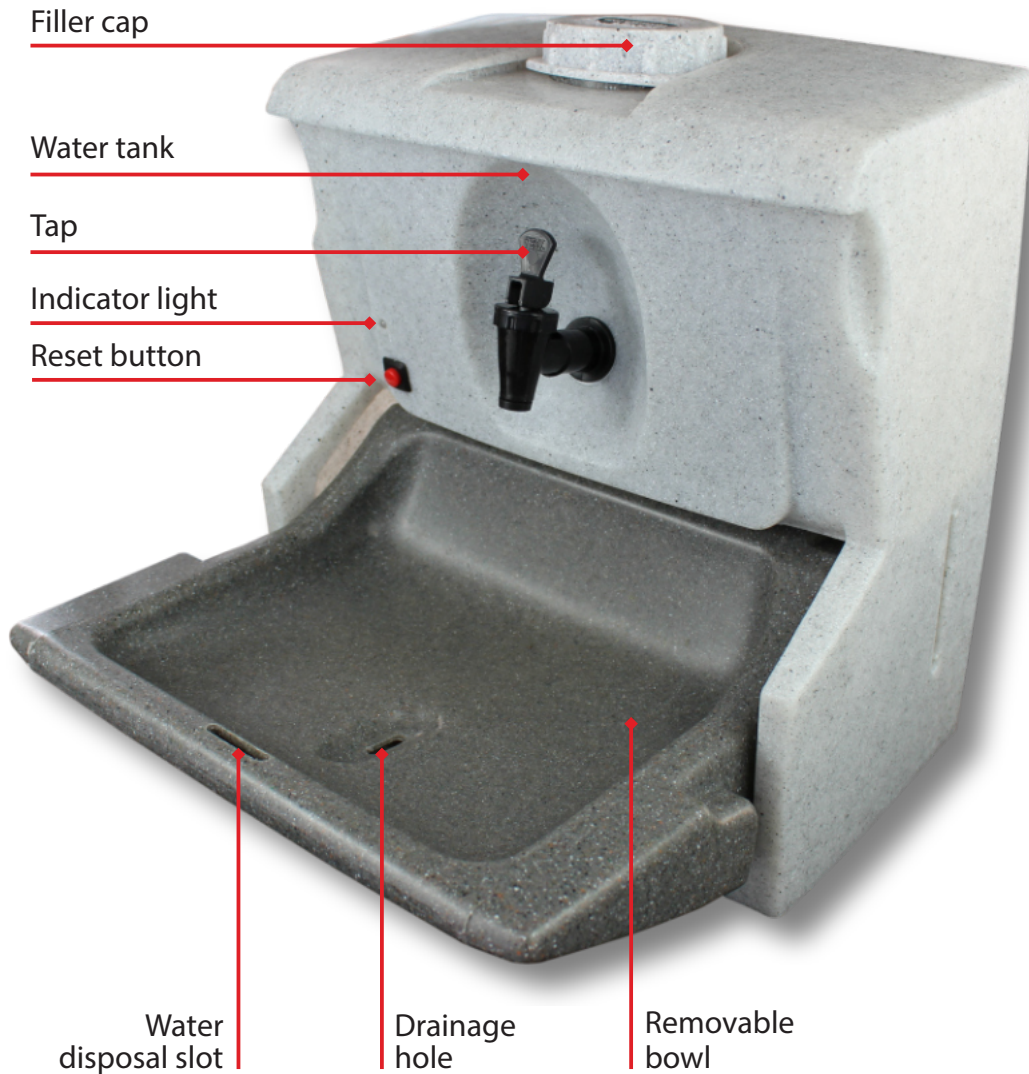
In the event of any shortages or damaged items contact the retailer.

Do not attempt to use substitute parts except as stated in these instructions.

Contents consist of:

- 1 Handeman unit with electrical connecting cable
- 1 fittings pack consisting of:
 - 4 mounting screws
 - 1 drilling template.
 - Fuse holder & fuse.

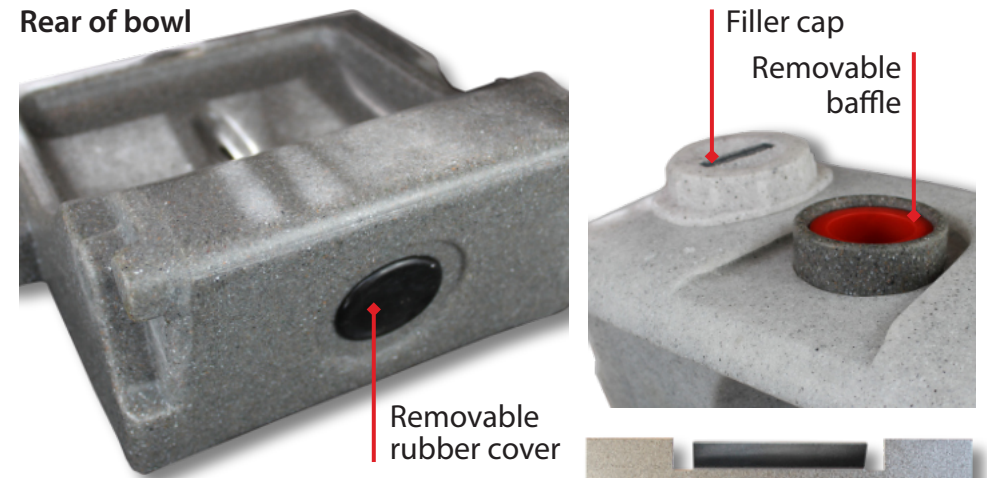
Parts identification



Disclaimer

Teal Patents Ltd has a policy of continual improvement in product quality and design.
 The company reserves the right to change the specification of its models at any time.

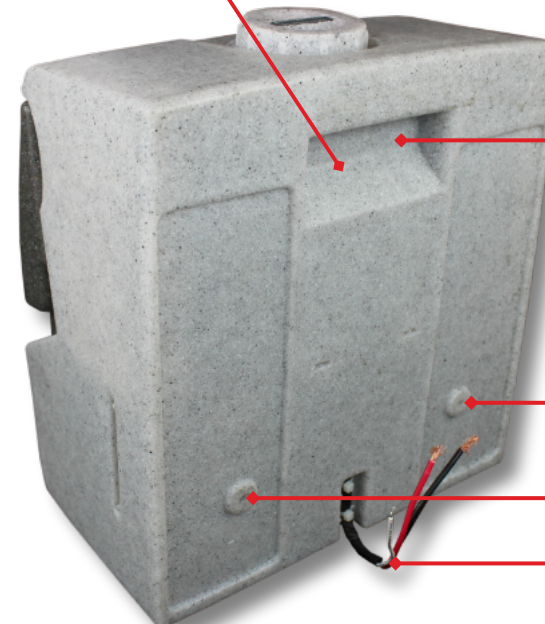
Rear of bowl



Fixing bracket (1)
 (supplied) - can be used to fix Handeman to vehicle



Fixing plate (2)
 (optional extra) - can be used to fix Handeman to vehicle



Rear of Handeman 12/24V

Specifications



The Handeman 12/24V

12V/220W (red label), 24V/250W (blue label) and 12V/90W (purple label)

Product	Handeman 12V (Red label)	Handeman 24V (Blue label)	Handeman 12V (Purple label) Low Wattage
Height	335 mm	335 mm	335 mm
Width	300 mm	300 mm	300 mm
D (closed)	175 mm	175 mm	175 mm
D (open)	315 mm	315 mm	315 mm
Litres	2.5	2.5	2.5
Fuse	20A	15A	15A
No. of 10 second hand washes	10	10	10
Weight (empty)	3 kg	3 kg	3 kg
Weight (full)	5 kg	5 kg	5 kg
Wattage	180W	250W	90W
Amperage	15A	12A	8A

12V Voltage sensing

For Euro 5 and older vehicles

In these systems the alternator will charge the battery whenever the engine is running.

Your Teal Handeman sink will have 3 wires connected.

- **12V + Red.** To vehicle battery or auxiliary battery.
- **0V - Black.** To vehicle battery negative.
- **Remove white wire.**

The unit will switch on when it detects a Voltage above 12 volts and switch off below 11.5 volts.

Fit switch or relay in circuit to override automatic heating if required.

Consult the vehicle handbook as to how to connect the Red/Black wires to the battery as direct connection to the battery terminals can defeat the 'battery management system' – if fitted.

All Euro 5 Vehicles and prior are advised to fit a relay or switch to prevent battery failure.

12V Non Voltage sensing

For use when an auxiliary battery is utilised i.e. trailers

These power sources must be capable of sustaining an output of above 8 amps up to 18 amps depending on teal model chosen.

- **12V + Red.** To battery positive.
- **0V - Black.** To battery negative.
- **Remove white wire.**

The unit will switch on when the power is detected and run continuously cutting in and out on thermostat.

Fit switch or relay to avoid draining battery.

12V Euro 6 compliant and electric vehicles

For use when an auxiliary battery is utilised i.e. trailers

- **12V + Red.** To battery plus +
- **Black.** To battery negative -
- **White wire.** To ignition loom to detect vehicle activation.

The unit will switch on when it detects a Voltage <11.9 Volts and switch off at >11.3 Volts.

24V Voltage sensing

In these systems the alternator will charge the battery whenever the engine is running.

Your Teal sink will have 2 wires connected.

- **24V + Red.** To vehicle battery or auxiliary battery.
- **0V - Black.** To vehicle battery negative.

The unit will switch on when it detects a Voltage above 25.6 volts and switch off below 25.1 volts.

Consult the vehicle handbook as to how to connect the Red/Black wires to the battery as direct connection to the battery terminals can defeat the 'battery management system' – if fitted.

24 Volt non voltage sensing - for use when an auxiliary battery is utilised, i.e. trailers.

These power sources must be capable of sustaining an output of above 8 Amps up to 18 Amps depending on teal model chosen.

- **24V + Red.** To battery positive.
- **0V - Black.** To battery negative.
- **Remove white wire.**

The unit will switch on when the power is detected and run continuously cutting in and out on thermostat. Fit a switch or relay to avoid draining the battery.

Mounting the Handeman 12/24V

**FAILURE TO FOLLOW THESE INSTRUCTIONS MAY INVALIDATE YOUR WARRANTY.
NO LIABILITY CAN BE ACCEPTED FOR PERSONAL OR EQUIPMENT DAMAGE.**

Vehicle Mounting

This unit has been designed for fixing to a motor vehicle only. It must not be used in any other application.

Before installation check that you have all the parts listed.

Please ensure that you use appropriate fittings before commencing.

Before commencing installation check that you have appropriate tools and a suitable workspace.

Failure to follow these instructions may result in personal injury, damage to the product or damage to property.

Check that you will not need to access the area or elements within it in the position where you intend to fix the Handeman.

If you are unsure consult a suitable qualified installer.

Ensure that the position of the unit allows sufficient space for the opening of the lid and the safe opening of the bowl.

Using the supplied template identify the locations for the 4 mounting points.

Fit suitable fasteners in each hole.

Mount the unit using the 4 bolts provided. Use either the fixing bracket supplied (1) or the optional fixing plate (2) to fasten the Handeman to the vehicle.

Do not over-tighten fixings as this may damage the unit. Take care not to drop tools or fixings into the unit.

Check that the unit is upright and level before filling.

Electrical Connection

This unit must be connected to a vehicle's electrical power supply using cable provided. Do not attempt to replace this.

Vehicle wiring to be 4mm/30Amp.

Waste water

All Handeman models have a removable bowl that retains all the dirty water. There is no need for a separate waste pipe or waste water storage container.

Operating instructions

All Handeman models have a removable bowl that retains all the dirty water. There is no need for a separate waste pipe or waste water storage container. Fill the unit with cold water until water can be seen below the removable red baffle.

Do not use pre-heated water as this may damage the unit.

Do not overfill – if there is water above the neck of the tank, use the tap to reduce the water level before operating.

Replace the cap and tighten.

Connect to the vehicle's power supply to switch on the unit.

A green LED indicates that the power is connected. Allow to heat up for approximately 15 minutes.

Use tap to discharge water to wash hands.

If a continuous flow of water is required fully depress the tap lever.

Waste water will drain through the drain hole and will be held in the hollow bowl.

To empty the waste water, carefully detach the bowl from the main body of the Handeman and pour the waste water through the water disposal slot into a foul water drain.

When the water tank is empty of water, the red LED will begin flashing.

Disconnect the unit and allow to cool before refilling.

LED display

The unit has an LED display to indicate the status.

FLASHING GREEN - unit on standby. Waiting for higher battery Voltage.

SOLID GREEN - unit at operating temperature.

SOLID RED – no water / tilt fault.

FLASHING RED - hardware fault.

Cleaning instructions

Empty the detachable bowl to a foul water drain and rinse with clean water.

If unit is left unused for an extended period it is recommended that it is emptied of water and replenished with fresh water.

Clean all surfaces with an anti-bacterial wipe or disinfectant paying particular attention to frequent contact points. To clean the inside of the bowl, first take off the removable rubber cover.

Do not use abrasive cleaners which may scratch the external surfaces.

This unit must not be subjected to a high pressure water jet.

It is recommended that the unit is cleaned with a cleaning solution such as Milton according to the instructions on a weekly basis.

Troubleshooting guide

No water dispensed. Check water level in tank

Water cold. Check green LED is on. If not, check the power supply. If LED is on, leave the unit for 15 minutes to fully heat the water. Check wiring and voltage to unit. If the water is still cold, unplug the unit and return to supplier.

Red LED solid. Unit cut-out activated.

- Low water - check the water level. Refill if required and press and hold the reset button for 2 seconds before releasing.
- Unit tilted - return the unit to its upright position. Refill if required and press the reset button and hold for 2 seconds before releasing.

Red LED flashing. Hardware fault.

- Unplug unit. Check water level and refill if required. Disconnect unit from 12v/24v supply for 10 minutes, Reconnect and press the Reset button. If the fault persists, contact Teal or the retailer.

Water around unit. Clean up any spillage from filling unit.

Check that the bowl is not full.

If further water is seen, switch off unit and contact the supplier for advice.

Optional extras

Towel holder ref GENTWLHDR

Soap bottle and bracket ref GENSOAPDISP/BRKT

Guarantee

All Teal Patents products are tested before leaving the factory.

The unit is covered by a two year return to manufacturer warranty from date of purchase – please ensure that you retain proof of purchase.

Any faulty items will be repaired or replaced, and the repairs guaranteed for the remainder of the original warranty period.

Exclusions

Teal Patents will not be liable to repair or replace goods where:

- The fault has been caused through misuse, accidental damage, use contrary to the manufacturer's instructions, damage in transit or power surges.
- The appliance has been used on a Voltage supply other than that specified on the product
- Repairs have been attempted by someone other than Teal Patents or an authorised dealer
- The appliance is second hand
- The warranty does not cover any claims for consequential loss or damage.

This guarantee does not affect your statutory rights as a consumer.

Disposal

At the end of its useful life, the handwash unit should not be disposed of in general household waste.

Units should be taken to a recycling facility for electrical and electronic items.

Please see WEEE regulations.



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Certification

VCA registration number:
VCS377871

E11 Approval No:
10R-055528, Extension No: 01

General Products Safety Directive:
EN-60335-1:2013+A13:2017 and
EN 6035-2-62:2003

End of Life Directive:
EC Directive 2000/53/EC



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