



Product Manual

**PSH-23 Hand Wash Basin
with Integral Tap**

CAPE COD SYSTEMS CORPORATION
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1. Disclaimer

Every effort has been made to supply information within this manual which is correct. Wallgate Limited will not be liable for any damage or loss that arises if the person installing, operating or maintaining the unit has not read or not complied with the manual

In any event, and without prejudice to any warranties in Wallgate Limited's terms and conditions of sale, Wallgate Limited's liability for all damages and losses (including negligence) shall not in any circumstances exceed the amount paid by the customer for the basin.

Wallgate reserves the right to alter, update or improve its product specification at any time without prior notice. This manual is specific to the product that it has been supplied with at the date of supply.

Without prejudice to any warranties in Wallgate Limited's terms and conditions of sale, any warranty will be invalidated if the equipment is installed or serviced by unqualified personnel.

No part of this publication and the information contained may be reproduced, transmitted, stored in a retrieval system, used or disclosed wholly or partly without prior written permission from Wallgate Limited.

For full warranty details please see Wallgate Limited Terms and Conditions. Please ensure this manual is passed to the end user. The manual forms an integral part of the product and should be kept for its working life. Additional copies of this and other supporting documents are available by contacting Wallgate Ltd or by visiting www.wallgate.com.

2. Conventions

Certain conventions are used in this manual to make it easier to read and understand. They are given in the sections below.

2.1. Warning

A warning with white text on a red background is used to give information about hazards that can cause injury or death. Read and understand these warnings before you install and commission the basin. Failure to heed these warnings can have serious consequences.

WARNING! This is a warning!

2.2. Note

A note with black text on a yellow background is used to draw your attention to important and useful information.

NOTE: This is a note.

2.3. Numbered procedures

Steps in procedures are numbered, starting from 1.

1. This is step 1.
2. This is step 2 etc.

2.4. Bullet lists

1. A bullet list is used to give information that is not sequential.

2.5. Menu items

Menu items, submenu items and settings, where available, are given in bold.

3. Glossary

The glossary lists all words, abbreviations and technical terminology used in this manual, along with a short description of these terms.

Term	Description
Anti-Ligature	Recently we have become aware that there is some inconsistency in the market as to the exact meaning of "anti-ligature". Where we use this phrase in connection with our products it means that we have designed and tested the product to reduce any risk of that product being used as a ligature attachment point.
Piezo electric touch button	A piezoelectric touch button converts the force applied to the face of the touch button into an electrical signal. Piezoelectric touch buttons are used in the PSH-23 to operate the hand wash function.
BSP	The British Standard Pipe (BSP) thread is a family of standard screw thread types that has been adopted internationally for interconnecting and sealing pipe ends by mating an external (male) with an internal (female) thread. ¹
Push fit	Push fit type fittings are a plumbing pipe connector that pushes onto the copper tube and has an integral rubber seal to ensure a water tight connection.

¹ Description sourced from Wikipedia at http://en.wikipedia.org/wiki/British_standard_pipe_thread ¹

4. Overview

The PSH is used in police holding cells as an extremely safe in-cell hand wash solution. The PSH-23 is an anti-ligature, anti-vandal solid surface recessed basin operated with a piezoelectric touch button to provide handwashing with a cold or pre-mixed supply.

Description sourced from Wikipedia at http://en.wikipedia.org/wiki/British_standard_pipe_thread

5. Installation and Commissioning

5.1. Package Contents

Before you begin the installation, make sure that you have the following items:

- ✓ 1x Product manual
- ✓ 1x Hand basin fitted with water solenoid valve, water inlet isolation valve and waste outlet grille and pipe tail size 1 ½" (40mm)
- ✓ 2x Wall brackets
- ✓ 4x M10 Fixing studs with 4 nuts and washers
- ✓ 1x Piezo touch button, aluminum extension tube and flange nut

NOTE: A WDC-NX electronic controller is required to operate with this basin and is sold separately. Various control options are available, (Models: WDC100-NX and WDC200-NX), contact the Wallgate sales desk for more information.

5.2. Site Preparation

1. The basin requires a wall aperture size of 375mm wide x 380mm high. The height of the aperture from floor level should be positioned to suit the user (typically 850mm gives a height of 1m to the basin opening lower edge).
2. The basin can be installed mounted in walls between 13mm and 175mm thick. Longer stud bars can be purchased for installation into thicker walls.
3. The WDC-NX electronic controller (sold as a separate option, various models are available, contact Wallgate sales office) must be permanently fixed to the wall, and positioned **above** all water pipes and fittings as shown on the drawing INS_PSH_23 (Figure 1). The control box has fixing points each side and can be fitted using round head screw fasteners (No 8 x 1 inch).
4. The WDC-NX electronic controller requires an electrical supply of 230v AC 50Hz 2Amp. The mains supply cable from the unit should be terminated into a double pole fused spur connection unit that has a contact separation of at least 3mm. This should be located alongside the unit and fitted with a 2-Amp fuse. Care must be taken in positioning all electrical fittings in relation to the

position of the water supply pipes should a leak or burst pipe occur.

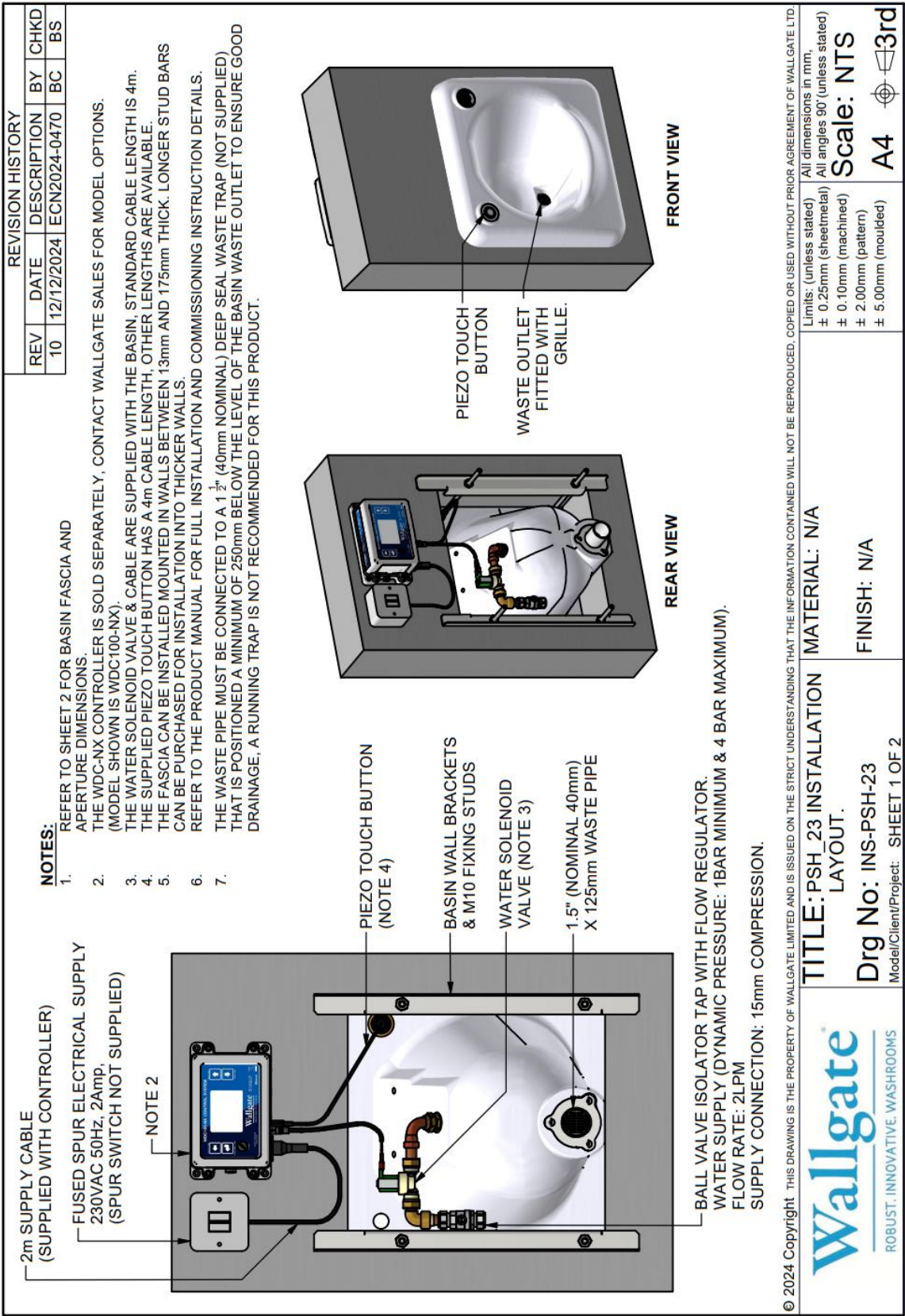
Warning! THIS APPLIANCE MUST BE EARTHED

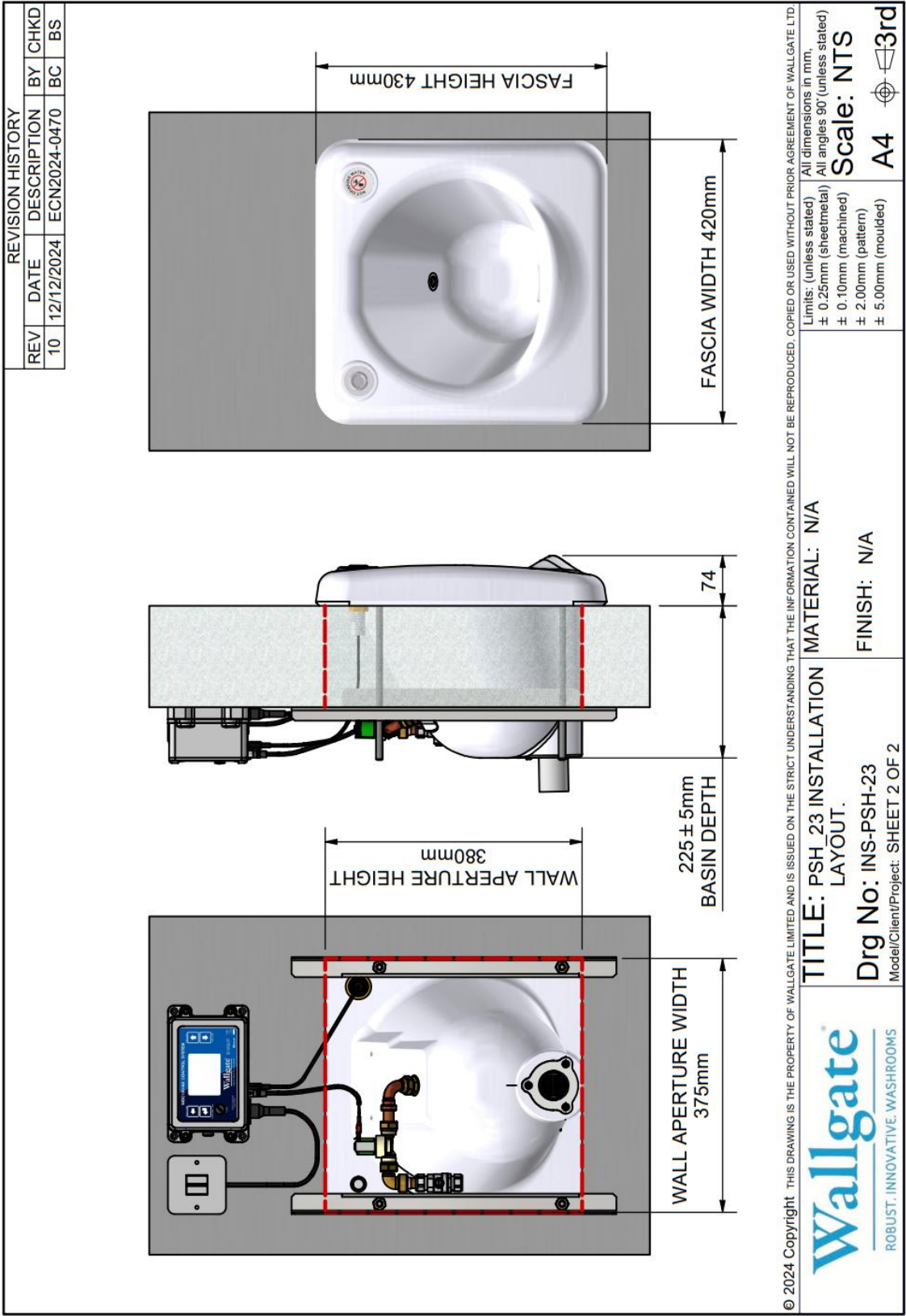
5. The basin has one water outlet nozzle which may be connected to either hot or cold water supplies as required, for which the pressure should be between 1 and 3 Bar (100kPa – 400kPa) (Dynamic). The unit is fitted with a solenoid valve for operating the water.
6. The water supply can be connected to the solenoid with 15mm copper tube and the addition of an isolation tap is recommended. The mains supply tap supplied is recommended so that the water flow can be adjusted and for ease of maintenance if the supply needs to be isolated.

5.3. Mounting The Control Unit and Basin

1. Mark the fixing points on the wall taking care to maintain a minimum distance between the unit and the basin so that the touch button cable will reach. Drill holes, plug and mount the unit with the cables positioned at the bottom.
2. Assemble the M10 threaded wall fixings to the four threaded inserts on the rear face of the basin ensuring they are fully inserted a minimum of 33mm and then tighten each stud to a torque of 6Nm.
3. Position the basin into the wall aperture and fit the two wall brackets to the M10 studs ensuring correct orientation of each bracket as shown on drawings (pages 9 and 10).
4. Fit a washer and nut to each threaded stud hand tight only so that the position of the basin can be checked to ensure it is level horizontally and vertically. It is also vitally important to ensure the basin is flat to the wall face which must be checked to ensure it is vertically level as this may severely affect the water retention in the basin bowl and the basin drainage if the basin is not retained in a vertical position.
5. Tighten the wall fixings in a circular pattern to ensure the basin is clamped evenly to the wall and to a torque of 15Nm.
6. Apply a suitable hard set no pick mastic. The chamfer around the basin where it meets the wall is provided for application of the mastic which should be fully filled and shaped to give a ligature resistant profile.

NOTE: It is important to tighten the wall fixings correctly using a torque wrench to avoid distorting the metal brackets through excessive tightening.





5.4. Water Supply Connection

NOTE: Prior to proceeding with the following instructions, the water supply pipes must be flushed through, to remove any debris and air locks that may result in blockages and product failure.

1. The hand wash requires a water supply connection to the inlet. $\varnothing 15\text{mm}$ male connection is required. The supply should be a pre-mixed water supply suitable for handwashing at a temperature of 38°C (Max).
2. The solenoid valve controls the flow of water to the outlet.
3. The ball isolator valve and is fitted with a flow regulator (2lpm).
4. The required water supply dynamic pressure must be between 1 and 3 Bar (200 and 300kPa). A pressure regulator valve (PRV) may need to be fitted to the supply feeds if the pressure exceeds the max recommended. If the water supply pressure does not meet the minimum recommended pressure, then a booster pump may be required to meet requirements.
5. Cables (4m) are provided with the solenoid valve for connection to the electronic control unit.
6. It is advisable to fit a Y strainer in the feed pipes prior to the unit connection, especially on older installations where loose particles from the ageing pipes may cause a blockage on the solenoid valves.
7. Isolating taps fitted on the supply feeds local to the basin are recommended for ease of maintenance when required.

Warning! If any form of pipe sealing compound is to be used, then care must be taken to avoid applying excessive amounts which may cause a blockage on the solenoid valves.

8. Ensure the water supply pipes have been flushed out to remove any debris before connection to the basin inlet valves.

5.5. Waste outlet connection

- The basin includes a waste outlet connection which is a 40mm (1 ½") size pipe tail which should be terminated to a suitable deep seal waste trap.
- The waste trap must be positioned 300mm (Min) below the center line of the basin waste pipe outlet to ensure the drainage flow rate is achieved at an optimum level.

5.6. Electrical supply connection

NOTE: The electrical connections must be carried out by a qualified electrical engineer in accordance with nationally approved IEE Regulations.

1. Complete all electrical testing of the installation before proceeding any further.
2. Refer to the product manual for the WDC-NX electronic controller model being installed for full installation and operating instructions. Terminate the supply cable from the control unit into the spur connection outlet and fit a 2-amp fuse. The fused spur must be a 13Amp, double pole connection point that is local to the Control Module (the contact separation of the fused spur switch should be at least 3mm). Earth bonding for this type of unit must comply with the nationally approved regulations.
3. Ensure that the basin touch button and water solenoid valve is plugged into the basin hot or cold sockets on the base of the WDC-NX electronic controller. Refer to the appropriate WDC100-NX or WDC200-NX product manual for more details.
4. The WDC-NX electronic controller is factory set for water run time durations and lock out settings which deter misuse of the basin. The factory settings can be adjusted by the customer or installer if required. The unit is supplied as standard with the lockout function DISABLED to allow commissioning to be completed and for the end client to select it if required. Refer to the appropriate WDC100-NX or WDC200-NX product manual for instructions to set lockouts to ENABLED.

6. Commissioning for Use

1. Open fully the water supply isolating tap. Check the system carefully for any possible leaks.
2. Switch ON the electrical supply.
3. The touch button does not have any moving parts as it is a “PIEZO” type switch. Light finger pressure on the centre of the button face will activate each water cycle. Press the button to operate the water, repeat the cycle two or three times to allow air to clear from the water pipes. The cycle is set for 6 seconds after which it automatically stops, this can be adjusted if required.

Note: The lockout function to prevent misuse of the basin when ENABLED only allows one operation of the water in a 15-minute period and then prevents

further operations for a period of 15 minutes.

7. Technical Specifications

Table 1. Technical specifications

Weight	25 Kg
Dimensions	420mm (W) x 430mm (H) x 300mm (D)
Water Supply	Water pressure: 1 - 3 Bar (Dynamic) recommended. Flow rate hand wash: 2LPM Supply pipe size 15mm copper
Waste connection	40mm (1.5" pipe)
Optional Control Unit Specifications	
Power supply	230V AC 50/60Hz 2 Amp single phase
Power rating	Maximum power rating 60W
Weight	1.2 Kg
Dimensions	200mm (W) x 150mm (H) x 80mm (D)
Enclosure IP Rating	IP53
Regulatory compliance	Complies with RoHS, LVD 2014/35/EU and EMC 2014/30/EU directives.

8. Use and Maintenance Instructions

The PSH-23 water dispenser has been designed and manufactured from quality materials. If these instructions are followed, the unit will give reliable efficient service. The installer must pass these instructions to the customer.

8.1. Operation

1. The unit is switched ON and OFF by the main isolation switch provided by the installer and positioned in the maintenance duct adjacent to the electronic control box. If a fault occurs with the unit then it must be switched OFF until the fault is repaired by a qualified engineer.

Warning! Unqualified personnel must not remove the cover of the electronic control box due to the risk of electric shock.

2. To use the basin, press the piezo touch buttons located on the front of the basin that operate the flow of water. The button switch's do not have any moving parts and is activated by lightly pressing on the centre of the button with your finger tip. Once the cycle is activated it will run for 6 seconds and stop.
3. If the time cycle of 6 seconds requires to be adjusted, then this can be done by referring to the product manual for the electronic control unit model that is installed. Note that the electronic control includes a function called "LOCKOUT" which is to prevent misuse of the wash basin. The "LOCKOUT" function permits one operation of water in a 15-minute period and locks out the unit for a 15-minute period after the last operation of water. The setting for this function can be adjusted as required or it can be disabled. Further assistance with this can be supplied by contacting Wallgate at the telephone number stated above.
4. The electronic control unit only activates the water ON or OFF and does not have any affect with the water temperature which would be controlled before this product as a part of the plumbing installation.

8.2. Maintenance

- Wallgate operates a comprehensive service package, details of which can be obtained from our "After Sales Service Department". A full spare parts facility is also available.
- General wear will mainly affect the components in contact with the water dispensing and the basin waste outlet. If the unit is installed in a hard water area, then lime scale removers should be used on the basin and water nozzle components.
- The water nozzle can be dismantled and immersed in a de-scaling solution for cleaning. The basin waste is fitted with a grille which shall require regular cleaning to remove build-up of soap residue, hairs, lime scale etc.
- A cleaning brush is provided to assist in cleaning between the grille vanes which must be done on a regular basis depending upon product usage. Spare parts can be obtained as shown in the spares list table (page 15).
- Any service or repair work must be carried out by a qualified engineer, which during the warranty period must be a Wallgate engineer or appointed service agent. Contact Wallgate to report any warranty breakdowns.

Table 2 Spare Parts List

Part Number	Description.
ES6803	Piezo touch button.
WF3099	Water nozzle.
WW4004	Waste grille.
BRUSH01	Waste grille cleaning brush.

9. Related Documentation

The PSH-23 can be used with any of the following control units:

- WDC100-NX. For more information on this control unit, refer to the WDC100-NX product manual.
- WDC200-NX. For more information on this control unit, refer to the WDC200-NX product manual.
- WDC400. For more information on this control unit, refer to the WDC400 product manual.



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