



# Product Manual

## Solid Surface WC Pans

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CWC-80 & CWC-280 series  
CWC-150 & CWC-250 series  
CWC-170 & CWC-270 series  
CWC-155 & CWC-255 series

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## 1. Disclaimer

Every effort has been made to supply information within this manual which is correct. Wallgate Limited and Galvin Engineering 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

Wallgate Limited or Galvin Engineering 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.

The product must be installed in accordance with these installation instructions and in accordance with AS/NZS 3500, the PCA and your local regulatory requirements. Water and/or electrical supply conditions must also comply to the applicable national and/or state standards. Failing to comply with these provisions shall void the product warranty and may affect the performance of the product. Further installation compliance requirements are listed in document 002.90.00.00 – Installation Compliance.

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 or Galvin Engineering.

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 Galvin Engineering or by visiting [www.galvinengineering.com.au](http://www.galvinengineering.com.au).

## 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 CWC water closet. 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

## 2.4. Bullet lists

- 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 regarding our products it means that we have designed and tested the product in order to reduce any risk of that product being used as a ligature attachment point.
Flushing device	A flushing device distributes water to the flush inlet of the Water Closet to flush the pan. Such devices include cisterns with integral flush & fill valves.

Term	Description
Cistern flushing device	Cistern types include options for electrical & pneumatic operation of the flush valve.
Direct flushing device	Direct flush valves that are connected directly to a dedicated water supply that has the required pressure & flow performance to suit the application. (These devices are not suitable for domestic & some commercial installations).
Piezo-electric Touch button	A piezo-electric touch button converts the force applied to the face of the pushbutton into an electrical signal. Piezoelectric pushbuttons are used on related optional flush devices for the CWC water closets to activate the flush cycle.
IR Sensor	The infrared (IR) sensor detects infrared radiation from your hand, this creates an electrical signal. IR sensors are used on related optional flush devices for the CWC water closets to activate the flush cycle. Operate the sensor switch by holding your hand within 50mm of the sensor.
Control unit	An electronic unit with inputs & outputs & requires an electrical supply for operation (i.e. 230VAC 50Hz). Inputs allow for connection of piezo touch buttons or IR sensors for user operation of the product. Outputs provide 12VDc to operate water solenoid valves to control the water flow ON/OFF. Inputs & outputs provide control to basin, shower & WC flush.

## 4. Overview

The CWC model water closets are a range of molded product in solid surface material.

The CWC range includes models of which some are listed below, the range is not limited to the list as there are numerous variants and new models may also be added from time to time.

CWC-80 / 280*	Back to wall WC pan with M6 fixing points for hinged seat option.
CWC-80-ST / 280-ST*	Back to wall WC pan with fixed solid surface seat.
CWC-81 / 281*	Back to wall WC pan (455mm height) for use with hinged seat for disabled users.
CWC-81-EXT / 281-EXT*	Back to wall WC pan (455mm height) for use with hinged seat & supplied with rear extension to project pan out from wall, for disabled users.
CWC-88 / 288*	Back to wall WC pan with M6 fixing points for hinged seat option & with fixed extension shroud to accommodate soil connectors exiting through floor.
CWC-150 / 250*	Back to wall WC pan.
CWC-150-AST / 250-AST*	Back to wall WC pan with fixed solid surface anti-ligature seat.
CWC-151 / 251*	Back to wall WC pan (455mm height) for disabled users (seat fixings optional).
CWC-151-EXT / 251-EXT*	Back to wall WC pan (455mm height) for use with hinged seat & supplied with rear extension to project pan out from wall, for disabled users.
CWC-155	Back to wall WC pan with M6 fixing points for hinged seat option & with fixed extension shroud to accommodate soil connectors exiting through floor.
CWC-170L / 270L*	Back to wall corner fit pan left hand orientation.
CWC-170R / 270R*	Back to wall corner fit pan right hand orientation.

\*Models variant of 200 series (i.e. 280) have lower height outlet spigot.

For model identification refer to individual model drawing supplied separately & available from the Galvin Engineering website.

## 5. Installation and Commissioning

### 5.1. Package Contents

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

- ✓ 1 Product manual
- ✓ 1 CWC Water closet
- ✓ 1 or 2 Wall fixing kits (Quantity of kits included varies by CWC model type).

Each wall fixing kit includes:

M10 Wall Fixing studs with nuts & washers (x 2 or 4 or 5)

Wall clamp bracket (x1 or 2).

CWC models with a separate extension or fixed shroud (i.e. CWC-81-EXT, CWC-155) are provided with M10 Wall fixing studs of a longer length usually 500mm.

**NOTE: An electronic control unit & flushing device (i.e. Cistern & flush valve) with cables are supplied separately as an option. Various control options are available, contact the Galvin Engineering sales desk for more information.**

### 5.2. Site Preparation

#### 5.2.1. Mounting Guidelines

- The CWC is a back to wall type pan for installations with a concealed but accessible flushing device.
- The CWC is suitable for various types of flushing device that Galvin Engineering can provide & have been tested, to ensure compliance & compatibility with the WC pans. The flushing device is to provide a max full flush volume of 6 litres. If a dual flush is required, then the reduced flush volume is to be 4 litres max. Where the flushing device is a cistern with flush valve, then the cistern should be a low level mounted type. Refer to section 6 for additional technical information. The WC pans are not compatible for use with close coupled cisterns.
- Suitable cisterns & alternative operating push buttons, sensors & flush valves are available from Galvin Engineering.
- An electrical supply of 230V 50Hz with a 2 Amp rating is required for the optional electronic control units.

- A 110mm Ø soil pipe should be provided for connection to the CWC. The soil pipe can be connected to the tail on the CWC using a suitable connector such as those made by McAlpine which Galvin Engineering can supply as an optional extra.
- A mains cold water supply should be provided and terminated with a suitable isolating tap for connection to the flushing device. Refer to the product instructions of the flushing device for details of connection sizes and water supply ratings for pressure & flow.
- Apertures or holes are required in the wall for the flush pipe & the wall fixing bolts to the WC pan. Details of their position are shown on the relevant drawing provided with the pan model type.

**NOTE: A 1:1 scale template for drilling the holes is available on request.**

### 5.3. Preparing & fitting the Water Closet

**WARNING! The CWC Water Closets weigh more than 25Kg so a two-man lift is recommended. Always use safe lifting procedures when lifting heavy loads. For large installations of several water closets, an optional lifting hook is available from Galvin Engineering.**

**WARNING! To maintain the anti-ligature & anti-vandal properties of this product it must be installed in line with the following points.**

1. Ensure product fixings are correctly fitted as detailed in the following instructions.
2. Ensure all fixings are tightened to the recommended torque as detailed in the following instructions.
3. Seal the edges of the product to the wall using anti-pick hard set mastic, examples of recommended types are:

**Sikadur 33 manufactured by SIKA Ltd ([aus.sika.com](http://aus.sika.com))**

1. Remove the CWC from its packaging and place carefully onto a protective sheet on the floor such as cardboard to avoid damage to the base edges. Under no circumstances should the CWC be knocked or dropped when placing onto the floor as damage to the bottom rim edges may result.

2. The CWC models that include a separate rear extension (i.e.; CWC-81-EXT) that is clamped between the WC pan & the wall, are provided with longer length wall fixing threaded M10 studs.
3. The CWC models that include a fixed rear shroud (i.e. CWC-155) are fitted with 4 x M10 bolts (inside the rear shroud section) fastened into the rear of the WC pan; there are two upper and two lower bolts. The two lower bolts need to be removed (viewed with the WC pan standing the correct way up) to fit the lower wall fixing studs.
4. Fit the wall fixings (M10 studs) into the threaded inserts on the back of the WC pan.
5. If model of pan or pan extension has floor fixings, position the pan & extension into place against the wall and mark the position of the floor fixing holes. Remove the pan and then drill the floor to fit the Rawl plugs supplied with the fixing kit.

**NOTE: Do not drill into the floor through the holes in the WC pan or extension as there is a risk that it may result in damage to the products.**

6. Fit the flush pipe seal provided with the flushing device into the top hole on the back of the WC pan.
7. Locate the CWC outlet spigot into the soil pipe connector and position the WC into place (with the extension if applicable).
8. Assemble the wall bracket nuts and washers onto the M10 wall studs. Check that the back of the wc pan has fitted to the wall without any gaps due to an uneven wall finish prior to tightening each fixing to a torque of 17Nm. Gradually tighten all fixing nuts evenly in a rotational method so each one gradually tightens to the stated torque.

**NOTE: The wall fixing threaded studs can be cut down in length if required should they protrude through the wall excessively.**

9. Tighten the floor fixings (if used) ensuring that they are not overtightened as that may result in damage to the pan, the recommended max torque is 6Nm. It is vital that the floor surface is level as an uneven floor surface may also result in damage to the pan when the fixings are tightened. Fit the floor fixing screw covers.

**WARNING! Fitting the water closet to an uneven floor surface or overtightening the floor fixings may result in damage to the product.**

10. Apply an anti-pick, hard set mastic, such as Sikadur 33 around the back and bottom edges of the pan (& extension if appropriate) to seal it to the wall & floor.

11. Install the flushing device in accordance with the instructions provided with it.  
Note that for a cistern type device it must be mounted at the correct height to its base from floor level as shown on the installation drawing provided to ensure the flush performance is not impaired.
12. An external overflow pipe for a cistern type flushing device may be required if the flush valve type being used does not provide internal overflow into the WC pan.
13. Hinged type WC seats can be fitted to the appropriate model WC pan that provides for seat fixing points (i.e.; CWC-80, CWC-81, CWC-151-SF). Fitting the seat must be done in accordance with the instructions provided with the WC seat.

## 5.4. Commissioning for use

To commission the CWC Water Closet:

1. Turn ON the water supply & check all around for leaks on the flushing device & the pan water inlet & outlet connectors.
2. Depending upon which type of flushing device has been fitted; you will need to refer to the instructions provided with it to ensure it is set correctly to give the correct operation & performance.
3. Operate the flush and check that the toilet flush's satisfactorily.
4. Check again for any leaks as detailed in (a) above.
5. Ensure that on completion these instructions & those for the flushing device & associated controls are passed onto the customer.

## 5.5. Technical Specifications

<b>Weight</b>	50 - 70Kg (Dependent on CWC model).
<b>Dimensions</b>	Refer to CWC model drawing supplied separate to these instructions.
<b>Water Supply</b>	Refer to the applicable product manual for the WC flush device.
<b>Soil pipe connection</b>	105/108mm external diameter male spigot.
<b>Flush pipe inlet</b>	55mm internal diameter female for 1.5" size pipe & pipe seal. (as supplied with flushing device).
<b>Flushing device flow requirements</b>	Cistern flush: 1.85 – 2 Litres per second. Direct flush: 1.5 Litres per second (nominally).  Refer to flushing device product information for full details.
<b>Optional Control Unit Specifications</b>	
<b>Power supply</b>	220-240V AC 50Hz 2 Amp single phase
<b>Power rating</b>	Maximum power rating 60 W
<b>Weight</b>	1.0 Kg
<b>Dimensions</b>	200mm (W) x 150mm (H) x 80mm (D)
<b>Enclosure IP Rating</b>	IP53
<b>Regulatory compliance</b>	Complies with RoHS, LVD 2006/95/EC and EMC 2004/108/EC directives.

## **6. User and Maintenance Instructions**

### **6.1. Operation**

The CWC can be used in conjunction with various types of flushing devices and/or controls. Refer to the instructions provided with those products for full details regarding operation & set up.

### **6.2. Maintenance**

The CWC is manufactured from a cast solid surface composite that is very durable. A planned on-going care & maintenance routine will ensure that the product will last for many years.

Refer to the 'Solid Surface Care and Maintenance Kit' available from Galvin Engineering ([www.galvinengineering.com.au](http://www.galvinengineering.com.au)).

Further advice on this & other Galvin Engineering products may be obtained by contacting the Galvin Engineering

## 7. Related Documentation

The CWC can be used with any of the following control units & flushing devices, product manuals & drawings listed below are available from the Galvin Engineering website:

- WDC100 control unit.  
For more information on this control unit, refer to the WDC100 product manual.
- WDC200 control unit.  
For more information on this control unit, refer to the WDC200 product manual.
- WDC400 control unit.  
For more information on this control unit, refer to the WDC400 product manual.
- CIST19-ELEC Cistern, electronic flush control.  
For more information on this flushing device, refer to the CIST19-ELEC product manual.
- CIST19-PNEU Cistern, pneumatic flush control.

For more information on this flushing device, refer to the CIST19-PNEU product manual.

Drawings of CWC pan models & typical installation layout drawings:

- CWC-80, CWC-80-EXT, CWC-80ST, CWC-80ST-EXT
- CWC-81, CWC-81-EXT, CWC-81ST, CWC-81ST-EXT
- CWC-280, CWC-280-EXT, CWC-280ST, CWC-280ST-EXT
- CWC-281, CWC-281-EXT, CWC-281ST, CWC-281ST-EXT
- CWC-150, CWC-150-SF, CWC-150-AST
- CWC-151, CWC-151-SF, CWC-151-AST
- CWC-155, CWC-155-SF, CWC-155-AST
- CWC-156, CWC-156-SF, CWC-156-AST
- CWC-250, CWC-250-SF, CWC-250-AST
- CWC-251, CWC-251-SF, CWC-251-AST
- CWC-170L & CWC-170R & CWC-270L & CWC-270R
- INS-SCPK01-PB(CIST19-E), INS-SCPK02-PB(CIST19-E), INS-SCPK03(CIST19-E)-PB, INS-SCPK04(CIST19-E)-PB
- INS-SCPK01-IR(CIST19-E), INS-SCPK02-IR(CIST19-E), INS-SCPK03-IR(CIST19-E), INS-SCPK04-IR(CIST19-E)
- INS-CWC-80-CIST19-ELEC, INS-CWC-81-CIST19-ELEC
- INS-CWC-80-CIST19-PNEU, INS-CWC-81-CIST19-PNEU
- INS-CWC-150-CIST19-ELEC, INS-CWC-151-CIST19-ELEC
- INS-CWC-150-CIST19-PNEU, INS-CWC-151-CIST19-PNEU

## 8. Warranty

The warranty set forth herein is given expressly and is the only warranty given by the Galvin Engineering Pty Ltd. With respect to the product, Galvin Engineering Pty Ltd makes no other warranties, express or implied. Galvin Engineering Pty. Ltd. hereby specifically disclaims all other warranties, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Galvin Engineering Pty Ltd products are covered under our manufacturer's warranty available for download from [www.galvinengineering.com.au](http://www.galvinengineering.com.au). Galvin Engineering Pty Ltd expressly warrants that the product is free from operational defects in workmanship and materials for the warranty period as shown on the schedule in the manufacturer's warranty. During the warranty period, Galvin engineering will replace or repair any defective products manufactured by Galvin Engineering without charge, so long as the terms of the Manufacturer's warranty are complied with.

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and Galvin Engineering Pty Ltd shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labour charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, electrical or any other circumstances over which Galvin Engineering has no control. This warranty shall be invalidated by an abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

## **Galvin Engineering Pty Ltd.**

410 Victoria Road,  
Malaga, Western Australia  
6090, Australia

tel: +61 8 9338 2344

fax: +61 8 9338 2340

email: [sales@galvinengineering.com.au](mailto:sales@galvinengineering.com.au)

web: [www.galvinengineering.com.au](http://www.galvinengineering.com.au)



[wallgate.com](http://wallgate.com)

## **Wallgate Ltd.**

Crow Lane, Wilton,  
Salisbury, Wiltshire,  
SP2 0HB, England

tel: +44 (0) 1722 744594

fax: +44 (0) 1722 742096

email: [service@wallgate.com](mailto:service@wallgate.com)

web: [www.wallgate.com](http://www.wallgate.com)

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