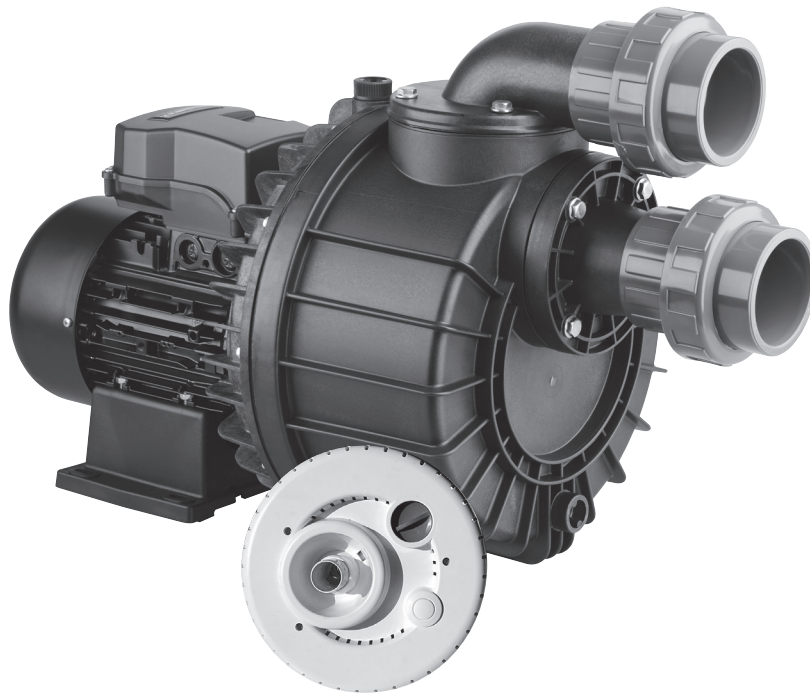


# DAVEY

**DAVEY**  
Hurricane®

**Swim Jet**

## Installation and Operating Instructions




**Note: The Hurricane Swim Jet is not intended for use by young children or infirm persons without supervision. Please ensure that young children as supervised to ensure that they do not play with the Swim Jet.**




**Please pass these instructions on to the operator of this equipment.**











# 1. SAFETY

Safety warnings.

The following set of symbols  alongside a text indicates a potential hazard if the appropriate instructions are not heeded.

-  **DANGER risk of electrocution** Failure to heed this warning involves a risk of electrocution.
-  **DANGER** Failure to heed this warning involves a risk of injury to persons.
-  **ATTENTION** Failure to heed this warning involves a risk of damage to the equipment or the installation.

## 1.1. Basic safety and damage-prevention recommendations

-  **IMPORTANT NOTE: please read the instructions carefully.** Please read the instructions (14) carefully before installing or using this equipment.
-  **DANGER risk of electrocution.** Take all precautions when working on the equipment, for it is connected to the mains and contains water (a very good conductor of electricity).  
When approaching any work on the pump, it is essential to switch off the electricity supply.
-  **DANGER power-supply cable** Place the power-supply cable in such a way that it cannot be walked upon, perforated or damaged by any object in its vicinity.
-  Carry out the installation in accordance with the safety recommendations for swimming pools and the specific instructions for the pump to be installed (not provided with the equipment).
-  Current safety regulations must be complied with when installing the equipment.
-  **FORBIDDEN to work upon or repair.** Work or repairs must be carried out only by official technical service centres. Users can only carry out the work described in this manual. The manufacturer declines responsibility for any work that may be carried out by the user.
-  **IMPORTANT NOTE: cleaning.** Always clean with a cloth moistened with a neutral soap solution. Do not use products containing solvents or acids.
-  Do not run the pump dry; the swimming pool water must cover the plate entirely.

# 2. GENERAL CONSIDERATIONS

## 2.1. Introduction

The swim-against-the-current unit is a piece of equipment for swimming pools that propels a large jet of water by means of an electric pump. It is used for practising swimming against the current.

As an option, and by using a massage hosepipe (not supplied), it can have the function of propelling, together with the water, microbubbles which in contact with the user's body provide a pleasant sensation with hydrotherapeutic effects.

It is available with a round or square plate and the possibility of fitting three different versions of wallmounted pump-control panel, depending on the power supply or the power of the electric pump to be installed.

## 2.2. Main functions

- a) Propulsion of water: with built-in manual adjustment of water-jet flow and direction.
- b) Propulsion of air bubbles: built-in control of bubbles by choking off the passage of air, which by venturi effect is propelled simultaneously with the water jet.
- c) Pump Stop/Start switch: fitted with a pneumatic push-button, which for reasons of electrical safety remotely actuates the pneumatic switch on the control panel, thus stopping or starting the electric pump.

## 2.3. Technical specifications

Maximum admissible flow	80 m <sup>3</sup> /h
Minimum recommended flow	40 m <sup>3</sup> /h
Hydraulic connections	Interior Ø 63
Electrical connections	NC_M 1 ~ 230 V
	NC_T 3 ~ 400 V
Maximum current	NC_M 16A
	NC_T1 6.3A
	NC_T2 10A

# 3. INSTALLATION (Fig. 1 & 2)

According to swimming pool construction type.

## 3.1. Panel-structure swimming pools

- a) Cutting the panel. (Fig. 3) Remove the canvas from the panel. Place the template (15) on the interior part of the swimming pool panel, such that the distance between the plane XY and the maximum height of the structure is 400 mm. The plane XY must be parallel to the maximum-height plane of the swimming pool.

Mark the 14 assembly holes and cut along the dotted-line zone of the template so as to mark the cut outline on the panel.

Cut the outline and drill the holes marked on the panel.

Take care not to damage the canvas.

- b) Pre-assembly, with the canvas removed from the panel and according to the drawing:

Clean the contact surfaces between the gaskets (2), rear body (3) and counterflange (1) and the panel of the swimming pool.

Stick a gasket (2) onto the counterflange (1). **(Fig. A)**

Stick the remaining two gaskets (2) onto the rear body (3) (according to drawing). **(Fig. B - C)**

Secure the counterflange (1) through the rear part of the swimming pool panel, fit the rear body (3) from the other side of the panel and hold it firmly in place while the two screws (13) are driven into the holes A and B. **(Fig. D)**

Ensure that the rear body (3) is in correct position.

The word "HAUT" must be at the top part. **(Fig. E)**

- c) Assembly.

After fitting the canvas, fill the swimming pool with approximately 15 cm of water so that it is well tensioned.

Place the flange (5) on the canvas, seeking out the right position and making use of the lip of the protective plate (4) to position it. Insert the screws (11) so that they pierce the canvas and then drive them fully home. Avoid excessive force when driving home the screws. **(Fig. F)**

Once all the screws are secured, cut the interior part of the canvas with a cutter. **(Fig. G)**

Remove the protective plate (4) and stow it safely. **(Fig. H)**

### 3.2. Fibreglass swimming pools

- a) Cutting the panel. **(Fig. 3)**

Place the template (15) on the interior part of the swimming pool panel, such that the distance between the plane XY and the maximum height of the structure is 400 mm. The plane XY must be parallel to the maximum-height plane of the swimming pool.

Mark the 14 assembly holes and cut along the dotted-line zone of the template so as to mark the cut outline on the panel.

Cut the outline and drill the holes marked in the panel.

- b) Pre-assembly, according to the drawing:

Clean the contact surfaces between the gaskets (2), rear body (3) and counterflange (1) and the panel of the swimming pool.

Stick a gasket (2) onto the counterflange (1). **(Fig. A)**

Stick a gasket (2) onto the rear body (3). **(Fig. C)**

Secure the counterflange (1) through the rear part of the swimming pool panel, fit the rear body (3) from the other side of the panel and

hold it firmly in place while the two screws (13) are driven into the holes A and B. **(Fig. D)**

Ensure that the rear body (3) is in correct position.

The word "HAUT" must be at the top part. **(Fig. E)**

- c) Assembly.

Stick the gasket (2) to the flange (5). **(Fig. I)**

Place the flange (5) on the rear body (3). Drive the screws (11) fully home. Avoid excessive force when driving home the screws. **(Fig. F)**

Withdraw the protective plate (4) and stow it safely. **(Fig. H)**

### 3.3. Concrete swimming pools

Please consult Davey for advice when installing this device in a concrete swimming pools.

#### 3.4. Fitting front plate

Pass the capillary pipe (7) through the hole in the rear body (3) until it emerges from the end of the hose on the side of the connections to the pump. **(Fig. K)**

Fit the capillary pipe (7) by pressing it into the pressure switch and ensuring that it is securely connected.

Offer the front plate (6) up to the rear body (3), ensuring that the rubber gasket is in place before fixing the unit with the 3 M5 screws (12).

#### 3.5. Fitting the air hose

The hose must be attached to the wall to form an air trap, or at a level above the maximum height of the swimming pool, so as to avoid emptying the pool. Alternatively, it can be attached to the wall at a height between the waterline and the maximum height of the pool. Use a securing staple (10) to ensure correct fitting.

Mount the filter (9) on the end of the hose in order to prevent dirt entering. **(Fig. L)**

#### 3.6. Fitting the pressure switch

The hose must be attached to the wall to form an air trap, or at a level above the maximum height of the swimming pool, so as to avoid emptying the pool. Use a securing staple (10) to ensure correct fitting.

Cut the hose to the right length to reach the panel (8) and mount the filter (9) on the end of the hose in order to prevent dirt entering.

The maximum length to ensure correct operation of the pressure switch is 25 metres. It is advisable to cut the capillary pipe to just the right length to reach the panel (8), ensuring that the connecting pipe is passed through again. **(Fig. M)**

Connect the capillary pipe (7) to the pressure switch, ensuring that it is firmly connected. **(Fig. N)**

### 3.7. Fitting the pump

Pump installation and assembly must be carried out by an authorised installer.

#### a) General safety warnings.



The equipment must be fitted following current safety regulations for installing swimming pools, and particularly standard IEC 60364-7-702 and the special regulations for each application.



The pump must be installed on a flat surface and attached to the floor.



To ensure the safety of persons, the pump must be installed at least 3.5 metres from the swimming pool.



The mains electricity supply must be protected by an automatic power-supply cut-out device, a residual current circuit-breaker switch ( $\Delta$  fn) not exceeding 30 mA.

#### b) Fitting the pipes. (Fig. O)



The connection pipes to the pump for distances of up to 3.5 metres must have a minimum diameter of DN63. For distances of up to 5 metres from the swimming pool piping of DN75 must be used, and DN90 piping for distances of more than 5 metres.



Flow valves must be fitted in the discharge and suction pipes, so that the pump can be removed for maintenance without draining the swimming pool.



Particular care must be paid to ensure that water cannot enter the pump motor or other electrically powered parts of the installation.



The premises in which the pump is installed must comply with the complementary technical safety instructions applicable to damp or wet premises.



The premises must be provided with a drain that allows water to be evacuated in the event of flooding of the premises that might be detrimental to electrical safety and cause injury to persons.



For optimum pump operation and reliability the premises must be provided with a ventilation inlet.



The installation pipes and accessories must be made of PVC. Under no circumstances must iron pipes or accessories be used, as they could damage the plastic components of the installation.

#### c) Electrical wiring. (Fig. P)



The wiring must be in accordance with EEC standard or of type H07 RN-F according to VDE 0250.



The electrical trunking must be watertight, and connections and their fittings must have a sufficient degree of protection against vertical fall of water drops. Connections, trunks and branch connections must always be housed in leaktight boxes.



Installation and assembly must be entrusted to an authorised installer.

### 3.8. Start-up

Once the connections have been made and before running the pump the leaktightness of joints must be checked. Switch on the water supply to the pump and eliminate any air left inside the pump by using the bleed devices on the pump.

Start up the pump. Press "Start" on the electrical panel (8) and press the pneumatic pump-start button.



The pipe valves must be fully open during pump operation and must never be closed while it is running. Shutting off or quickly reducing the passage of water can give rise to pressure surges that could lead to equipment breakage.

Leave the pump running for a few minutes and check that the equipment has been correctly installed.

## 4. INSTRUCTIONS FOR USE

### 4.1. Starting / Stopping the pump (Fig. Q)

The pump will come into operation when the pneumatic pushbutton is pressed, and will stop if it is pressed again.

### 4.2. Air regulator (Fig. R)

With the hydromassage hose connected, turn the regulating button to regulate the air bubbles.

Keep air passage closed if the massage hose is not in use.



Note: The hydromassage hose is an accessory not supplied with the equipment.

### 4.3. Flow regulator. (Fig. S)

The water flow can be adjusted by turning the discharge pipe to the right or to the left.

The direction of the water jet can also be adjusted using the discharge pipe knuckle-joint system.

## 5. REPAIR AND MAINTENANCE

### 5.1. General considerations

Check the air-passage filter (9) and if necessary clean out any dirt or insects.

### 5.2. Overwintering

The installation must be protected in winter against the potential risk of freezing. The following operations will have to be carried out:

- Disconnect the pump from the electricity supply.
- Remove the front plate (6) and the capillary pipe (7) of the pressure switch and stow them away.
- Drain the water from inside the pump, using the drain plug. (Fig. K)
- Fit the protective cover (4).

After the overwintering period refit the components removed and, before running the pump:

- Check manually to ensure that the pump motor shaft rotates, by rotating the fan.
- Check the connections for leaktightness.

Correct operation of the installation must be checked during the first few minutes of running.



**IMPORTANT INFORMATION:** Your Davey pump is Double Insulated to Water Circuit. If equipotential bonding structure is required, then a Equipotential Bonding Point is provided. (Please refer to your local statutes and regulations for AS/NZ 3000 Wiring standards).

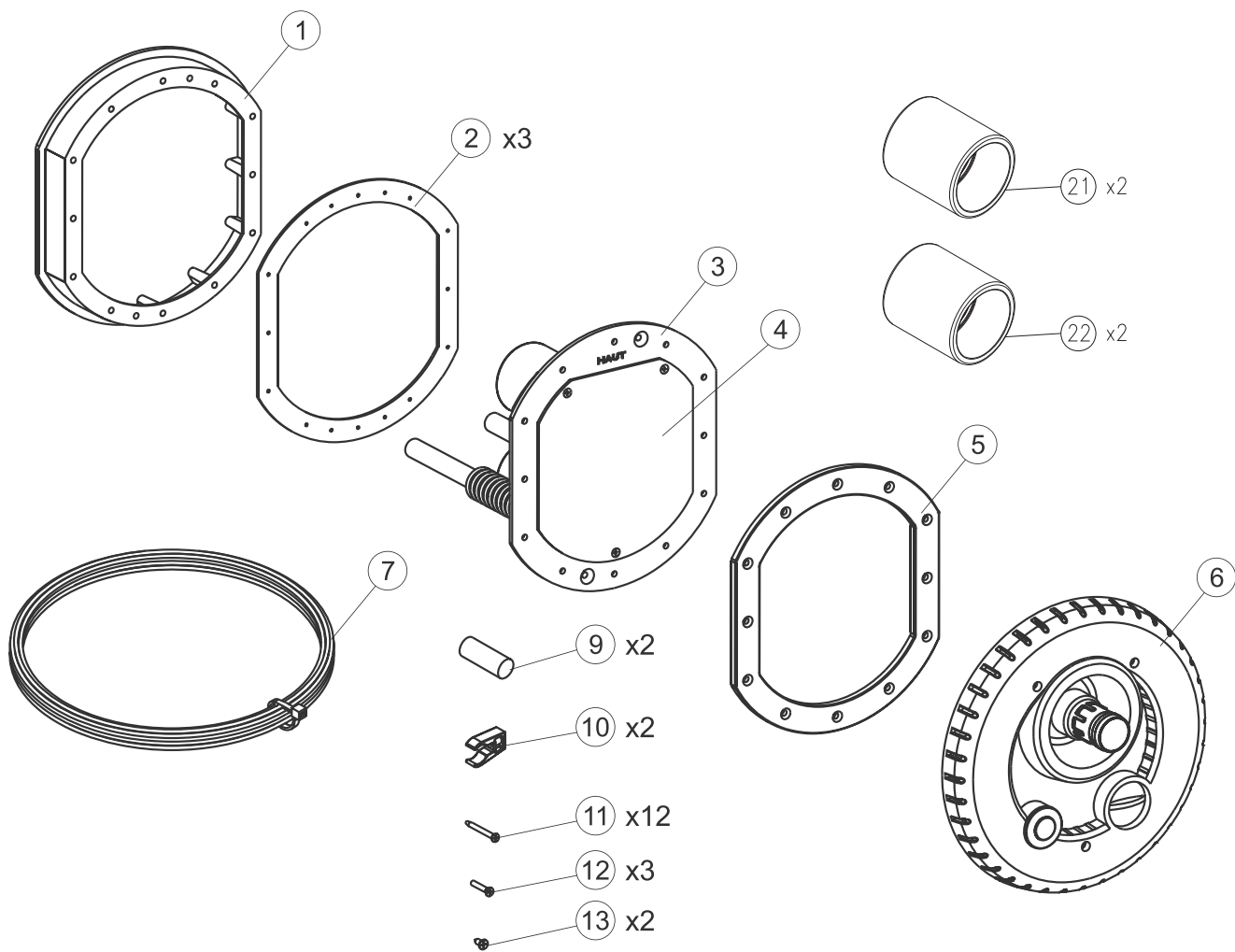
## 6. POSSIBLE PROBLEMS, CAUSES AND SOLUTIONS

PROBLEMS	CAUSES	SOLUTIONS
<ul style="list-style-type: none"> <li>– Water flow is insufficient</li> </ul>	<ul style="list-style-type: none"> <li>– Recirculation of water.</li> <li>– Maximum flow of the pump is small.</li> </ul>	<ul style="list-style-type: none"> <li>– Test the right components assembly and especially the joint.</li> <li>– Verify the right pump sizing.</li> </ul>
<ul style="list-style-type: none"> <li>– No air bubbles emerge</li> </ul>	<ul style="list-style-type: none"> <li>– The filter (9) fitted in the hose is dirty and air does not pass.</li> <li>– Air passage at the front plate (6) is obstructed by insects or foreign bodies.</li> <li>– The air regulator is closed.</li> </ul>	<ul style="list-style-type: none"> <li>– Clean the filter (9) and remove impurities.</li> <li>– Clean and ensure that air is passing to the discharge pipe.</li> <li>– When the air regulator is opened bubbles should emerge.</li> </ul>
<ul style="list-style-type: none"> <li>– The pump does not start</li> </ul>	<ul style="list-style-type: none"> <li>– The capillary pipe (7) is disconnected or has leaks.</li> <li>– There is no electricity supply to the installation.</li> <li>– Incorrect pressure microswitch operation.</li> </ul>	<ul style="list-style-type: none"> <li>– Check that the capillary pipe (7) is correctly installed.</li> <li>– Wait for electricity supply to be restored.</li> <li>– Check electrical continuity at the pressure switch by activating and deactivating the button.</li> </ul>
<ul style="list-style-type: none"> <li>– The pump stops running</li> </ul>	<ul style="list-style-type: none"> <li>– The pump thermal cut-out switch activates.</li> <li>– The motor-protection cut-out on the panel throws.</li> <li>– The installation's differential circuitbreaker switch triggers.</li> <li>– Electrical connection failure.</li> </ul>	<ul style="list-style-type: none"> <li>– Check that the premises is correctly ventilated and that air passage of the pump fan is not obstructed.</li> <li>– Check that the pump ampere rating is less than or equal to the cut-out trigger rating.</li> <li>– Check for insulation or shunt-off faults.</li> <li>– Check that electrical connections are correct.</li> </ul>
<ul style="list-style-type: none"> <li>– The pump does not take in water</li> </ul>	<ul style="list-style-type: none"> <li>– The pump is not primed.</li> <li>– The suction pipes are not sealed and the pump takes in air.</li> <li>– The suction piping is long and the pump is higher than the swimming pool level.</li> <li>– Pool water level insufficient and air is being taken in.</li> </ul>	<ul style="list-style-type: none"> <li>– Fill the suction body up to the level of the suction connection.</li> <li>– Repair leaks.</li> <li>– Bleed air from the pump.</li> <li>– A check valve without spring pressure must be mounted in the suction pipes to prevent water draining during suction.</li> <li>– Raise the water level of the pool to at least 10 cm above the plate.</li> </ul>
<ul style="list-style-type: none"> <li>– The motor protection switch triggers</li> </ul>	<ul style="list-style-type: none"> <li>– Condenser defective.</li> <li>– Pump blocked by obstruction of the turbine.</li> </ul>	<ul style="list-style-type: none"> <li>– Check that the condenser is of the correct capacity.</li> <li>– Replace if faulty.</li> <li>– The motor shaft must rotate slightly.</li> <li>– If not, the pump must be repaired by the technical service centre.</li> </ul>
<ul style="list-style-type: none"> <li>– Noise</li> </ul>	<ul style="list-style-type: none"> <li>– Air is entering the equipment.</li> <li>– Noise from bearings.</li> <li>– Foreign bodies in the pump.</li> </ul>	<ul style="list-style-type: none"> <li>– Stop leaks.</li> <li>– The pump must be repaired by the technical service centre.</li> <li>– Remove them as explained in the pump maintenance manual.</li> </ul>

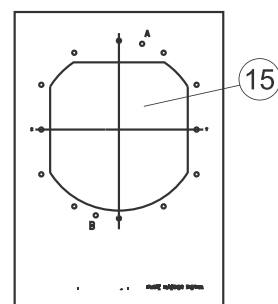


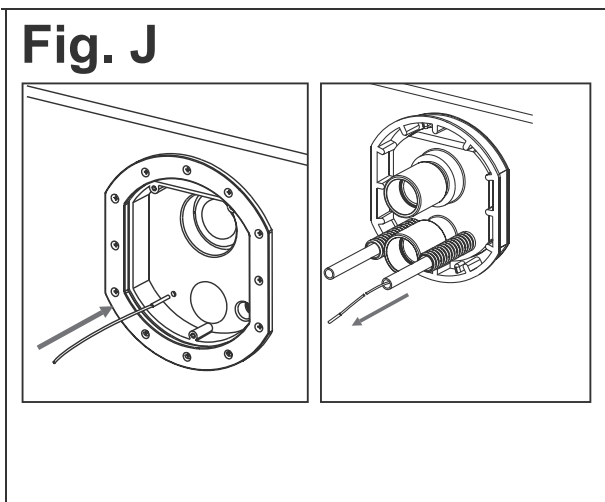
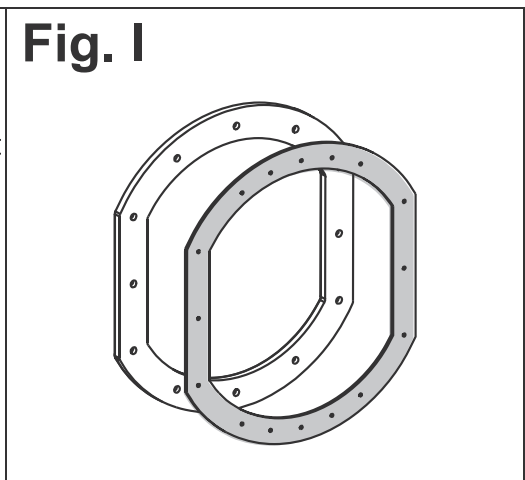
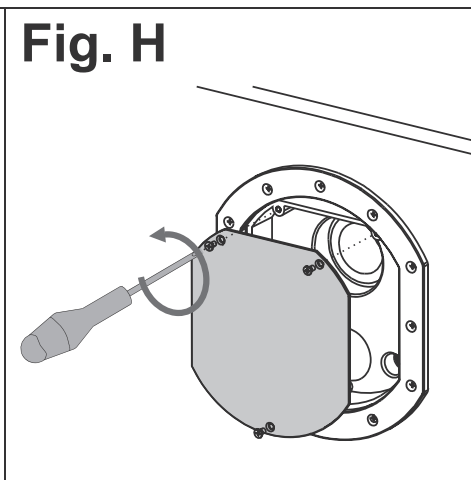
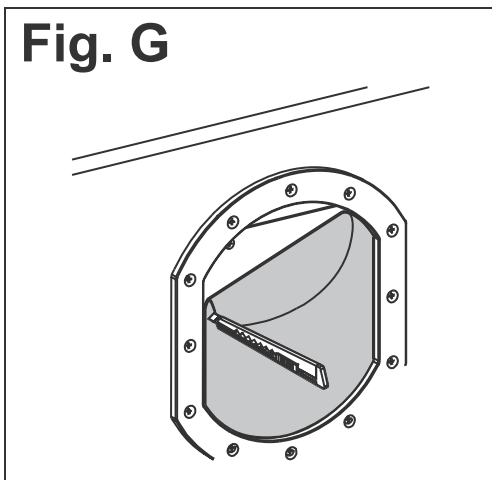
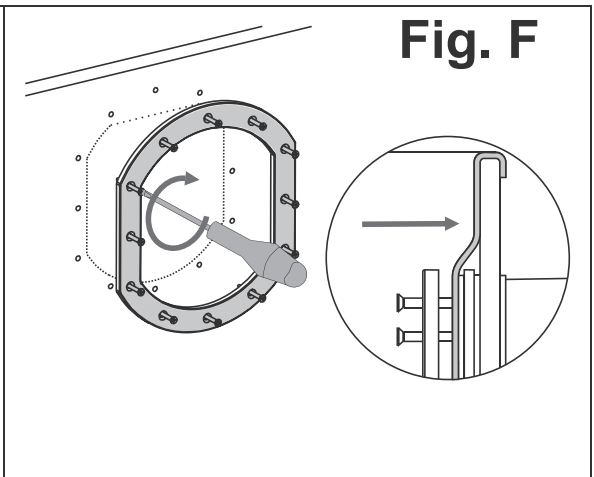
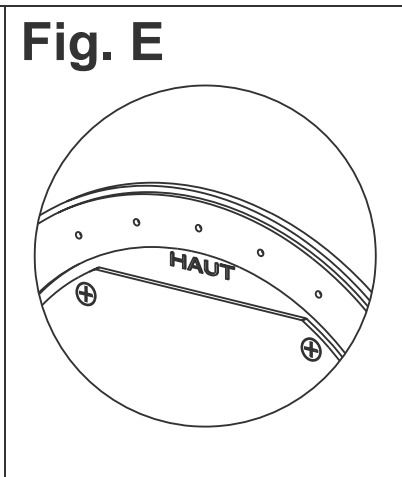
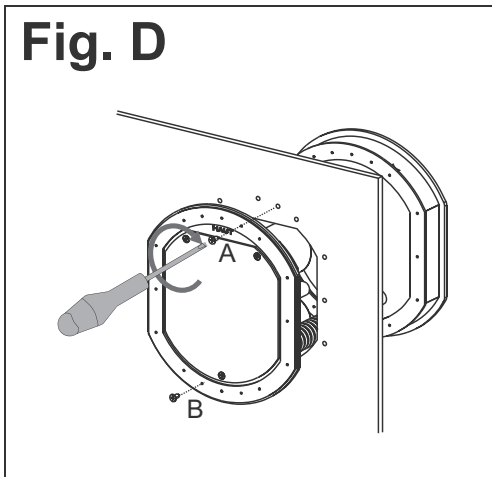
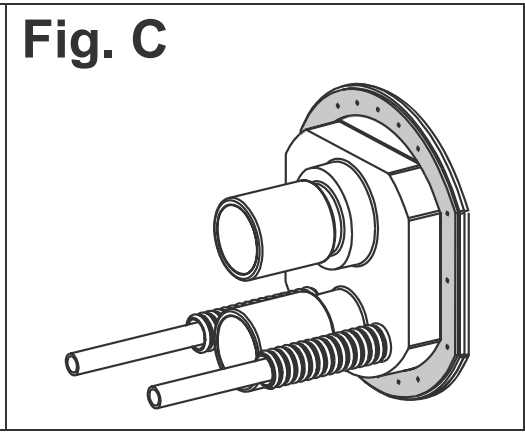
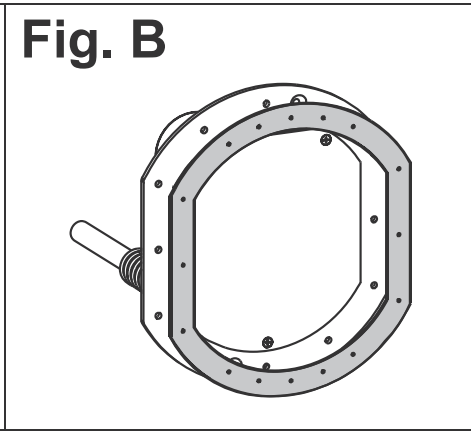
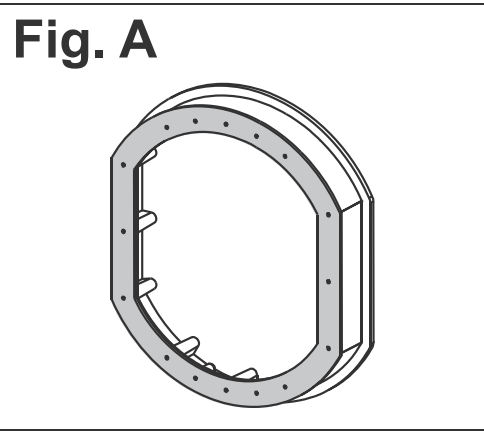
# Fig. 2

Main components of the panel or fibreglass structure.



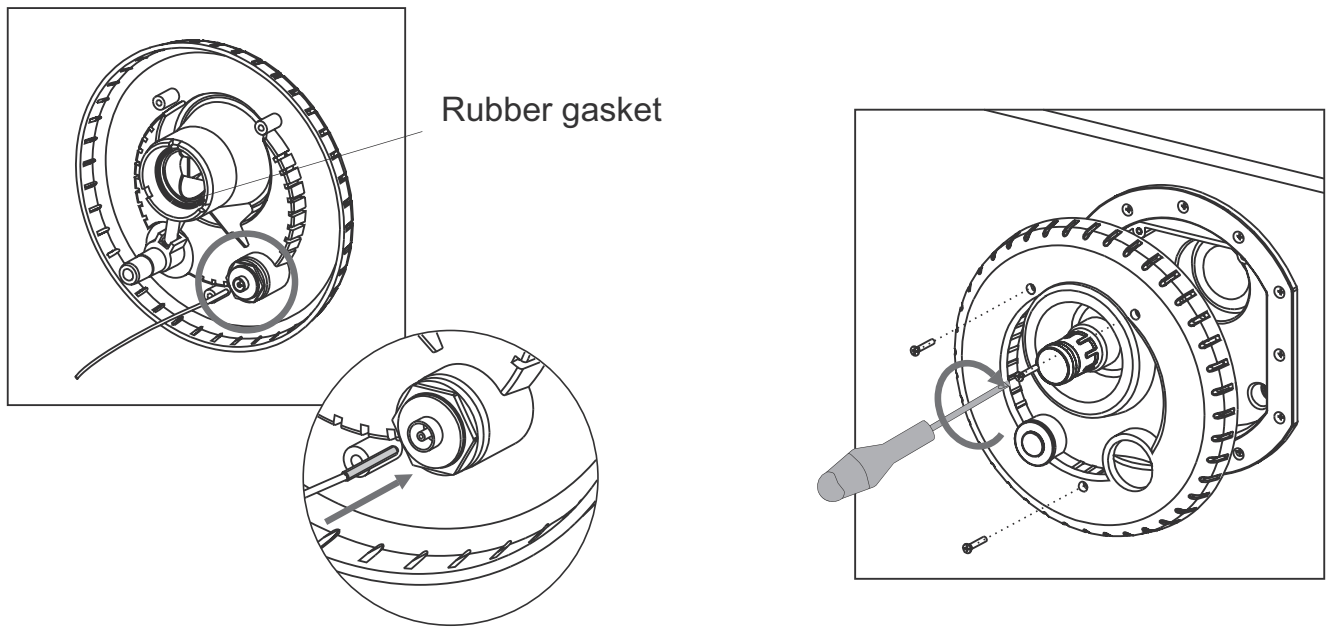
Part	Description
1	Securgin counterflange
2	Foam gasket
3	Rear body
4	Protective plate
5	Securing flange
6	Front plate
7	Capillary tube
9	Foam filter
10	Securing staple
11	Screw <b>DIN 7982 Ø4,8x45</b>
12	Screw <b>DIN 965 M5x30</b>
13	Screw <b>DIN 7982 Ø5,5x16</b>
14	Instruction manual
15	Template
21	Sockets : <b>Ø63-Ø63</b>
22	Sockets : <b>Ø63-2"</b>



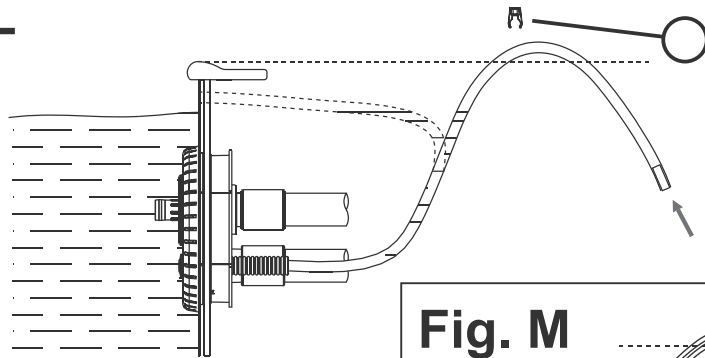




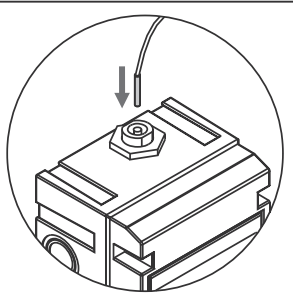
**Fig. K**



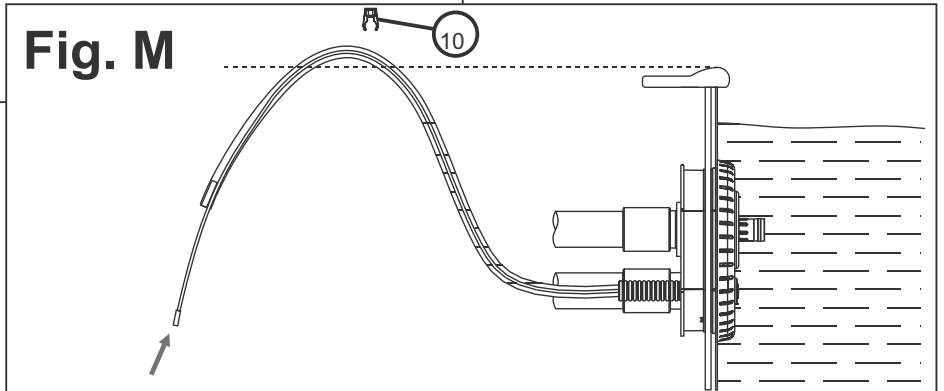
**Fig. L**



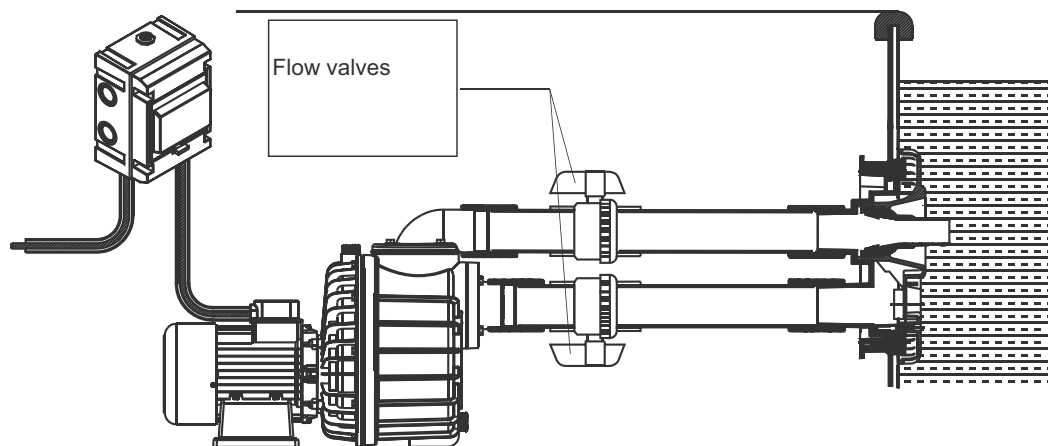
**Fig. N**



**Fig. M**

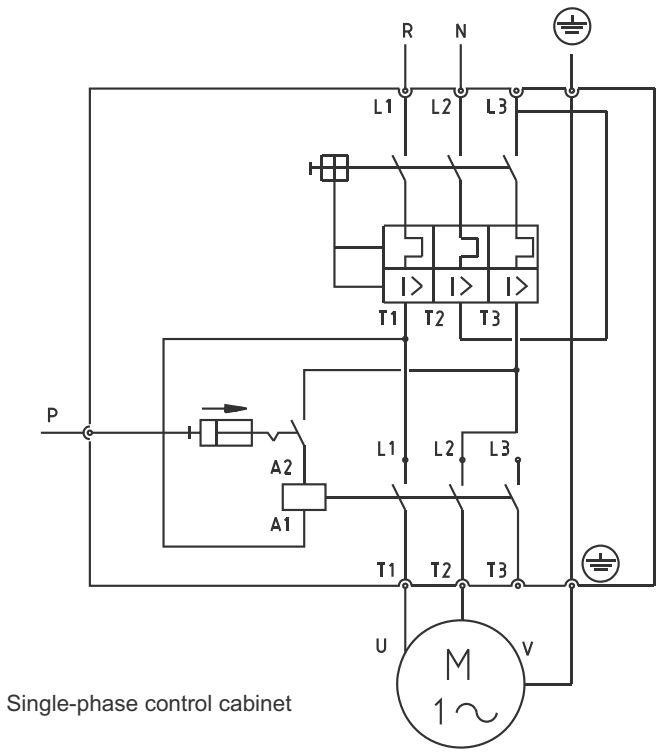


**Fig. O**

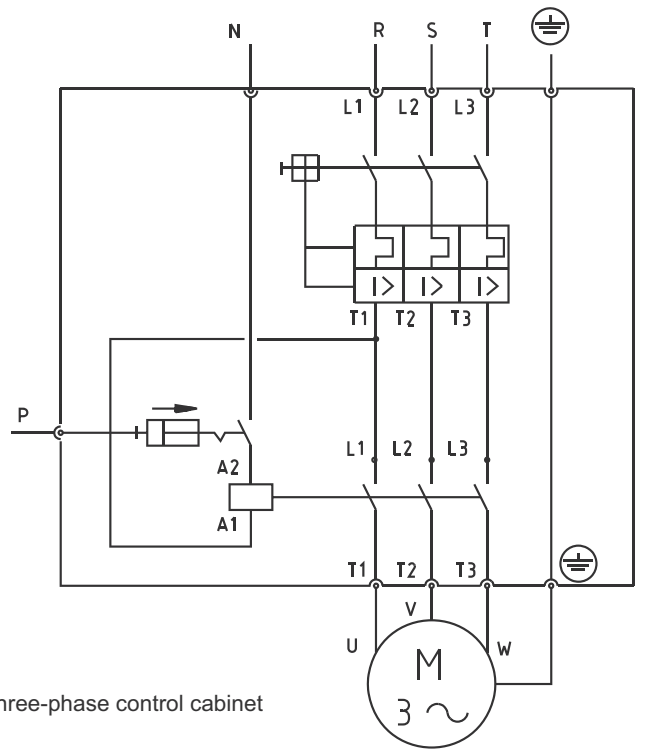


**Fig. P**

**Wiring diagram**

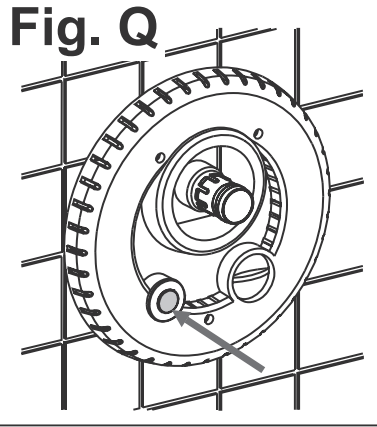


Single-phase control cabinet

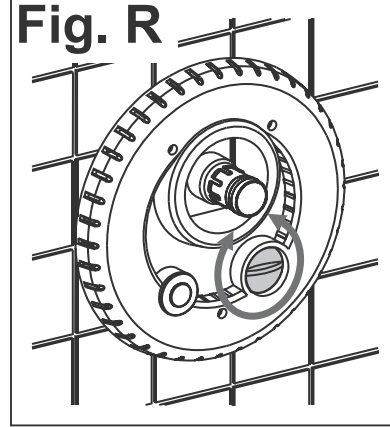


Three-phase control cabinet

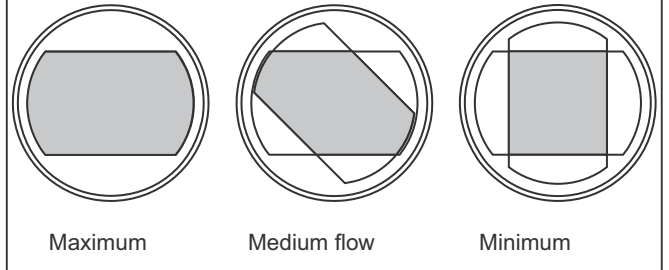
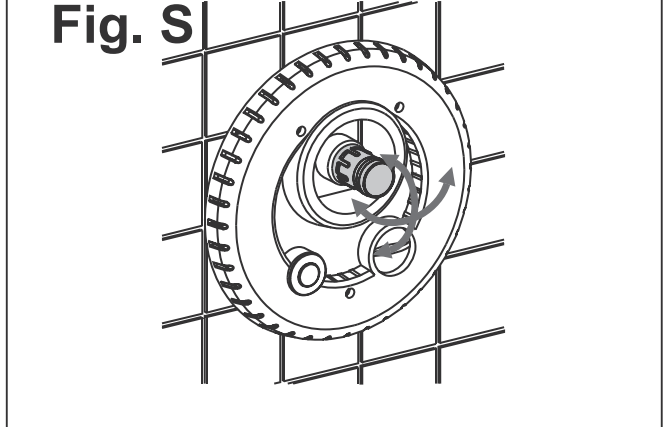
**Fig. Q**



**Fig. R**



**Fig. S**

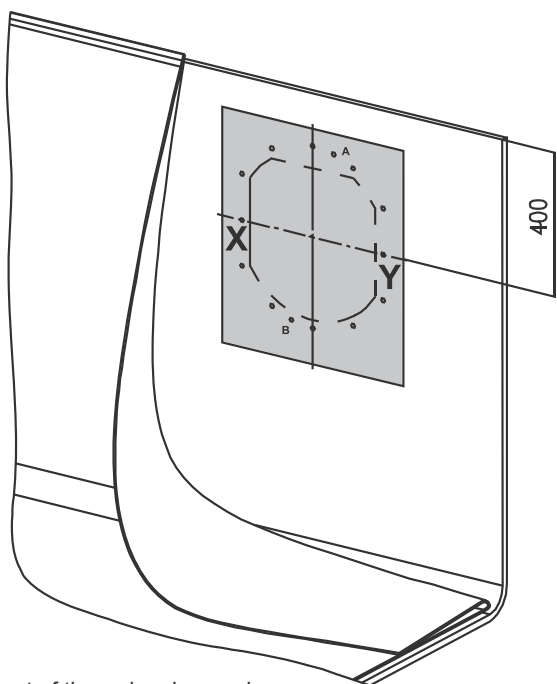


Maximum

Medium flow

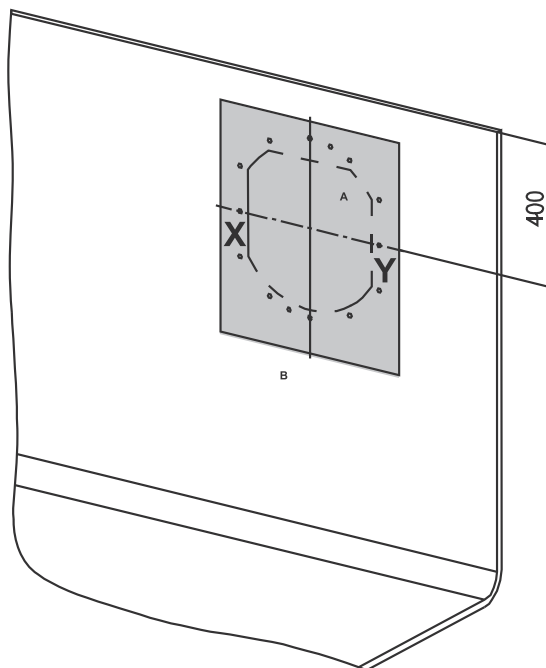
Minimum

**Fig. 3**



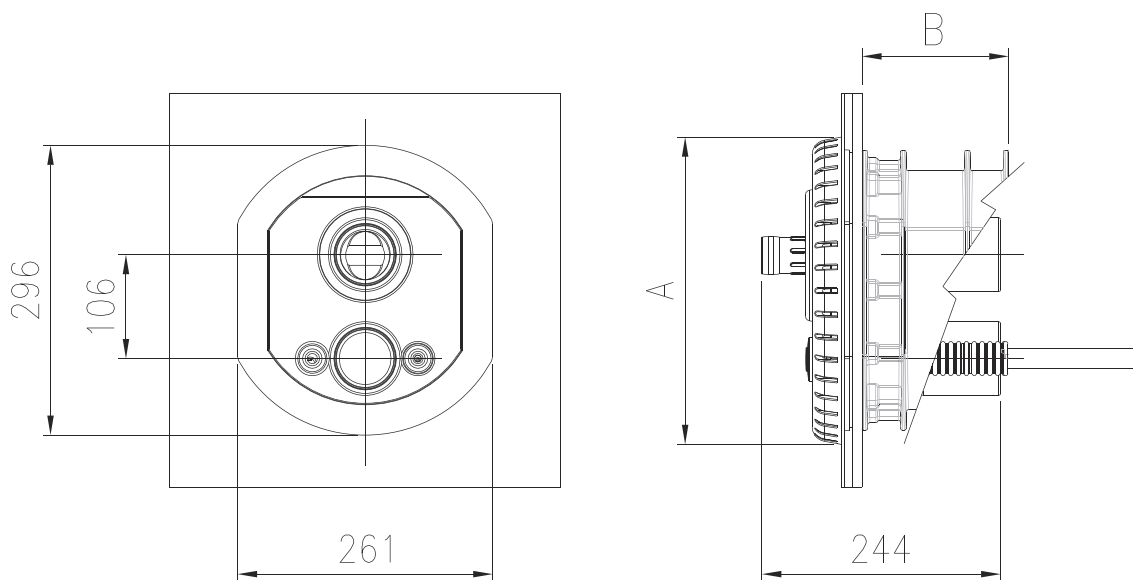
Interior part of the swimming pool

**Fig. 4**



Interior part of the swimming pool

**7. DIMENSIONS AND WEIGHTS**



MODEL	A	B	WEIGHT (kg)
Kit NCRL	314	40	4

# Davey Warranty

Davey Water Products Pty Ltd (Davey) warrants all products sold will be (under normal use and service) free of defects in material and workmanship for a minimum period of one (1) year from the date of original purchase by the customer as marked on the invoice, for specific warranty periods for all Davey products visit [daveywater.com](http://daveywater.com).

This warranty does not cover normal wear and tear or apply to a product that has:

- been subject to misuse, neglect, negligence, damage or accident
- been used, operated or maintained other than in accordance with Davey's instructions
- not been installed in accordance with the Installation Instructions or by suitably qualified personnel
- been modified or altered from original specifications or in any way not approved by Davey
- had repairs attempted or made by other than Davey or its authorised dealers
- been subject to abnormal conditions such as incorrect voltage supply, lightning or high voltage spikes, or damages from electrolytic action, cavitation, sand, corrosive, saline or abrasive liquids,

The Davey warranty does not cover replacement of any product consumables or defects in products and components that have been supplied to Davey by third parties (however Davey will provide reasonable assistance to obtain the benefit of any third-party warranty).

To make a warranty claim:

- If the product is suspected of being defective, stop using it and contact the original place of purchase. Alternatively, phone Davey Customer Service or send a letter to Davey as per the contact details below
- Provide evidence or proof of date of original purchase
- If requested, return the product and/or provide further information with respect to the claim. Returning the product to the place of purchase is at your cost and is your responsibility.
- The warranty claim will be assessed by Davey on the basis of their product knowledge and reasonable judgement and will be accepted if:
  - o a relevant defect is found
  - o the warranty claim is made during the relevant warranty period; and
  - o none of the excluded conditions listed above apply
- The customer will be notified of the warranty decision in writing and if found to be invalid the customer must organise collection of the product at their expense or authorise its disposal.

If the claim is found to be valid Davey will, at its option, repair or replace the product free of charge.

The Davey warranty is in addition to rights provided by local consumer law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

For any internet connected products the consumer is responsible for ensuring a stable internet connection. In the event of a network failure the consumer will need to address the concern with the service provider. Use of an App is not a substitute for the User's own vigilance in ensuring the product is working to expectation. Use of a Smart Product App is at the User's own risk. To the fullest extent permitted by law Davey disclaims any warranties regarding the accuracy, completeness or reliability of App data. Davey is not responsible for any direct or indirect loss, damage or costs to the User arising from its reliance on internet connectivity. The User indemnifies Davey against any claims or legal actions from them or others relying on internet connectivity or App data may bring in this regard.

Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the products. The repair of your products may result in the loss of any user-generated data. Please ensure that you have made a copy of any data saved on your products.

To the fullest extent permitted by law or statute, Davey shall not be liable for any loss of profits or any consequential, indirect or special loss, damage or injury of any kind whatsoever arising directly or indirectly from Davey products. This limitation does not apply to any liability of Davey for failure to comply with a consumer guarantee applicable to your Davey product under local laws and does not affect any rights or remedies that may be available to you under local laws.

For a complete list of Davey Dealers visit our website ([daveywater.com](http://daveywater.com)) or call:

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## DAVEY

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