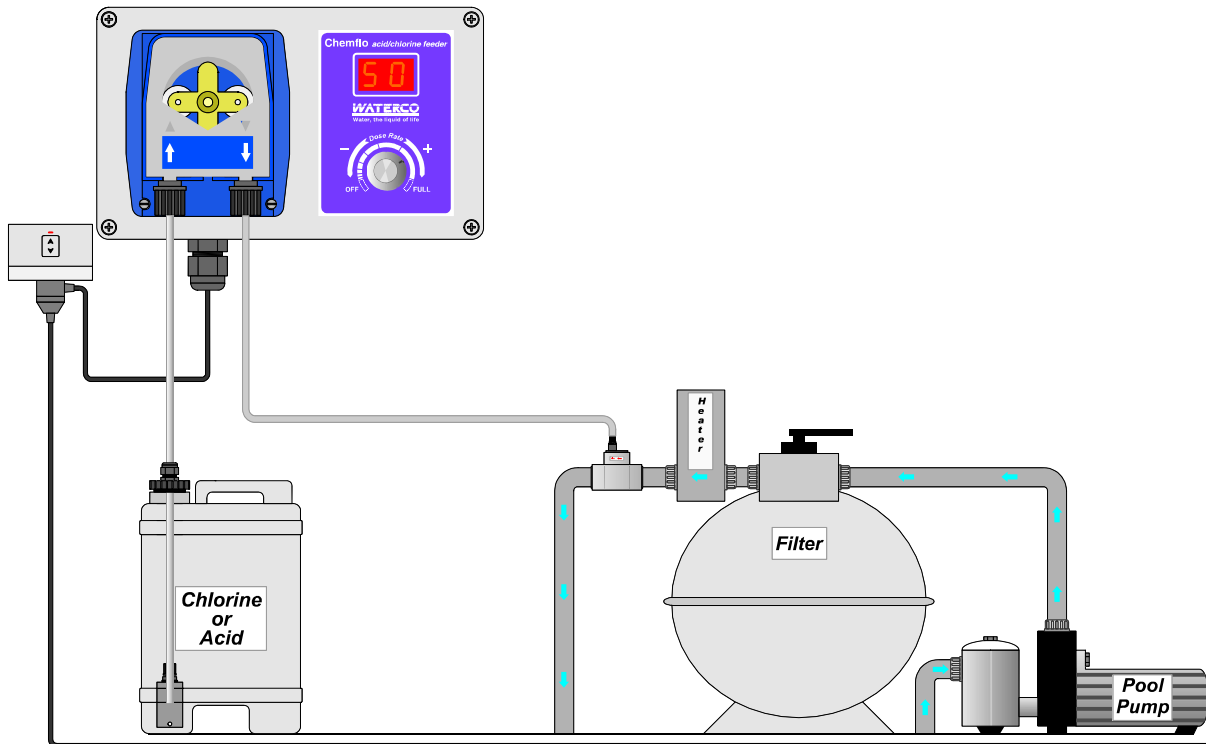


## Chemflo 25880 Chemical Feeder



*Doses same amount of Acid or Chlorine each day*



### Rainbow Pool Products

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#### Chemflo 25880 Acid or Chlorine Feeder Manual

Date : 1 Sep-2007

Version : 1.0

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## Section 1. – Introduction

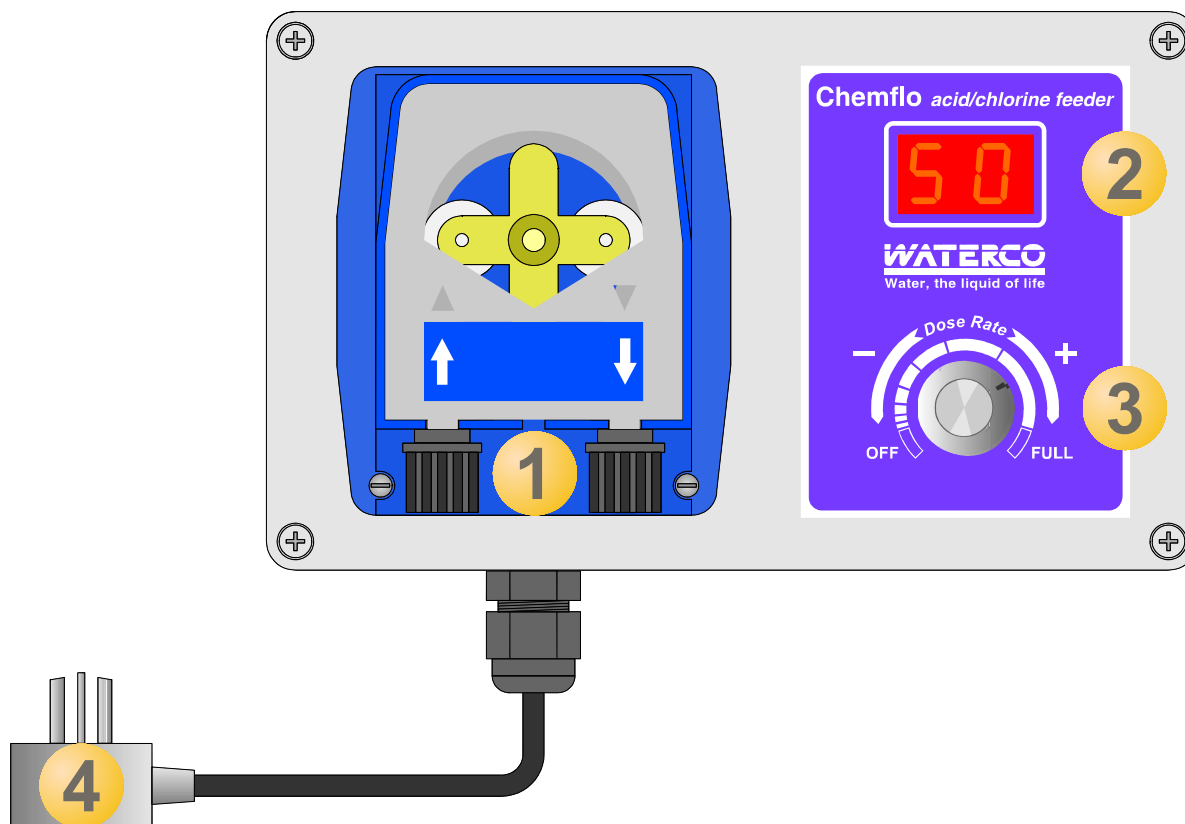
Thank you for purchasing a **Chemflo** feeder.

The **Chemflo** dosing unit is designed for maximum reliability to give you many years of service.

The **Chemflo** is easy to operate. This manual provides all the details required for correct installation and operation of the unit. If at any stage you require assistance, please contact your local dealer.

Please note that the **Chemflo** must be serviced or repaired by authorised personnel only. Opening the unit by unauthorised persons may cause an electrical shock, resulting in serious injury or death. If the power lead becomes damaged, the unit must be returned to your dealer or repaired by an authorised person only.

### 1.1 Chemflo Diagram

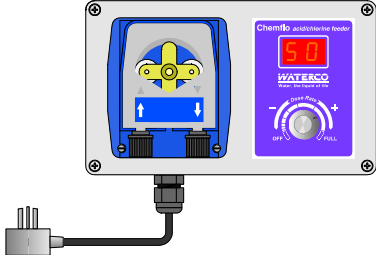
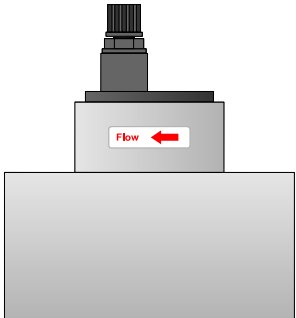
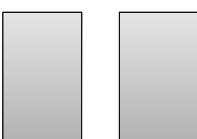

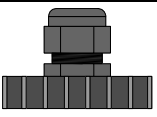
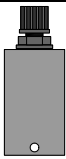



1. **Dosing Pump**..... This can be used for either Chlorine or Acid.
2. **LED Display** ..... The display provides a visual indication of the dosing rate.
3. **Dose Rate Control**..... Set the control to add more or less chemical, turn dosing OFF or allow the pump to operate continuously (eg. for pool start-up or super-chlorinating).
4. **Piggy-back power Plug** ... Plug this into a 240V AC power outlet which is controlled by a timer. The main pool pump then plugs into the piggy-back plug. This ensures that the **Chemflo** only adds chemical when the main pool pump is on.

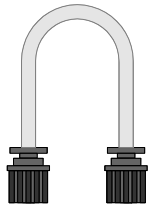
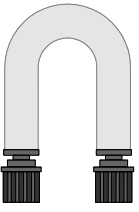

**1.2 Unpacking Information**

Please check that you have received all of the items that should have been included with your new Chemflo.

**Standard Chemflo Kit...**

 <p><b>Chemflo Pool Feeder</b> Model No : 25880</p>	 <p><b>Injection Tee, 50mm</b> Part No : 117901</p>  <p>50 to 40mm reduction bushes x 2 Part No : NPRB5040</p>	 <p><b>Peristaltic Pump Input and Output Tube, 4m</b> Part No : 116360</p>
 <p><b>Drum lid with gland fitting</b> Part No : 116362</p>	 <p><b>Tube weight for chemical drum</b> Part No : 116354</p>	 <p><b>Chemflo Handbook</b> Part No : 130050</p>

**Spare Parts, not included in standard kit...**

 <p><b>Pump tube assembly, 1.8 L/Hr</b> Part No : 116353</p>	 <p><b>Pump tube assembly, 6.1 L/Hr</b> Part No : 116352</p>	 <p><b>Pump Tube Lubricant, 3mL</b> Part No : 130103</p>
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## Section 2. – Installation

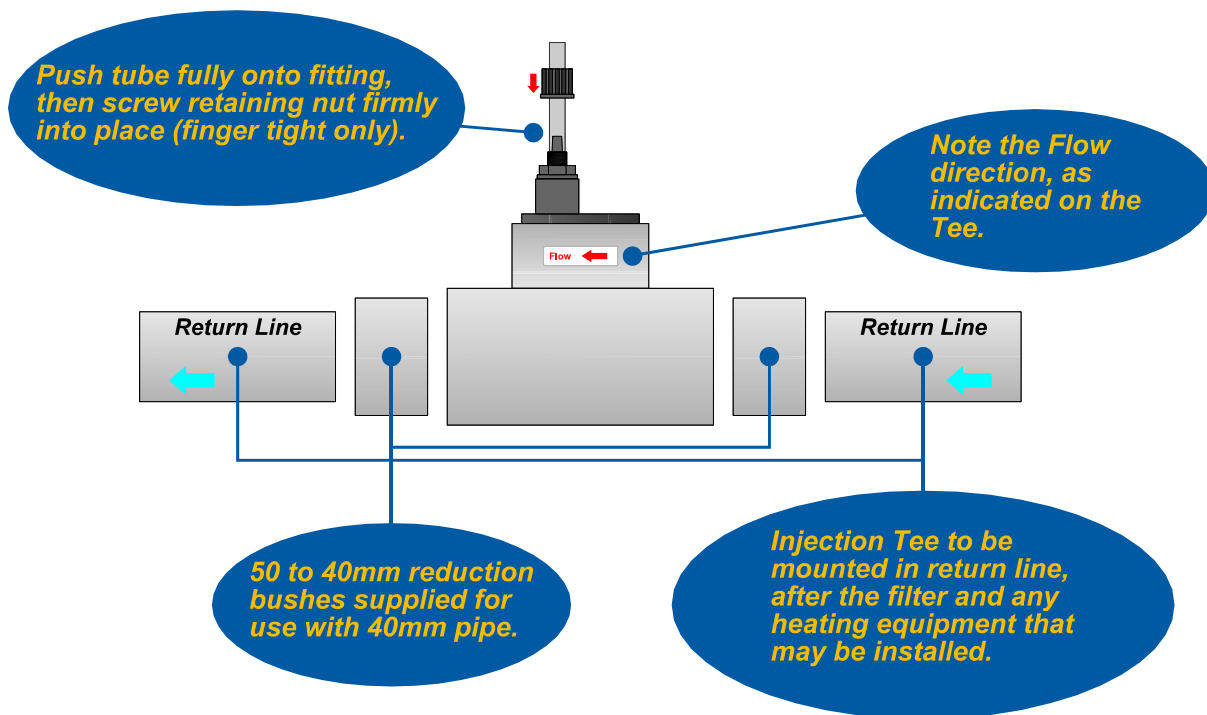
The **Chemflo** is supplied with an installation guide. Installers should also refer to this guide.

### 2.1 Plan the installation

Ensure that...

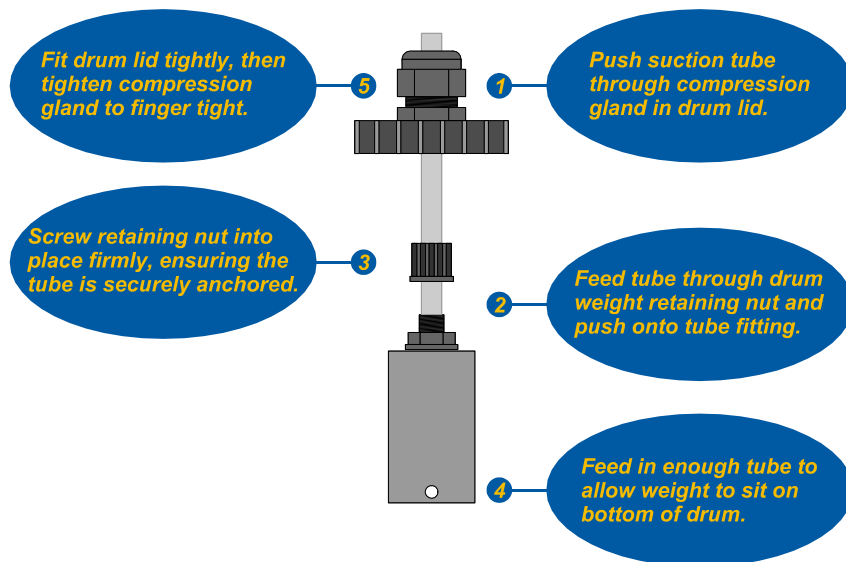
1. The **Chemflo** feeder is installed in a sheltered location.
2. The **Chemflo** controller is close enough to the expected location of the Injection Tee for the pump output tubing to reach without straining.
3. The maximum suction height from the bottom of the chemical drums to the dosing pump is 2 metres.
4. The mains power leads from the **Chemflo** and the Pool Pump reach a mains power outlet. If the controller is mounted in a wet area, a weatherproof power outlet must be used. It is recommended that you use an earth leakage circuit breaker with this power outlet. Please consult a qualified electrician if you are not sure if this is fitted.
5. Install the Injection Tee

Install the Injection Tee as per the diagrams below. Use a suitable PVC joining compound. The Tee is installed in the return line to the pool, as the pressure is lower.



## 2.2 Fit Tubing into Chemical Drums

Insert the suction tubing through the chemical drum lid supplied and fit the drum weight, as per the diagram below. Be sure to use the correct type of chemical resistant drum. A pool professional can advise on this. For installations where the lid provided is not compatible with the container, drill a 1/2" or 13mm hole into the lid of the container and fit the compression fitting. Drill a second 2mm diameter vent hole to avoid suction build-up.



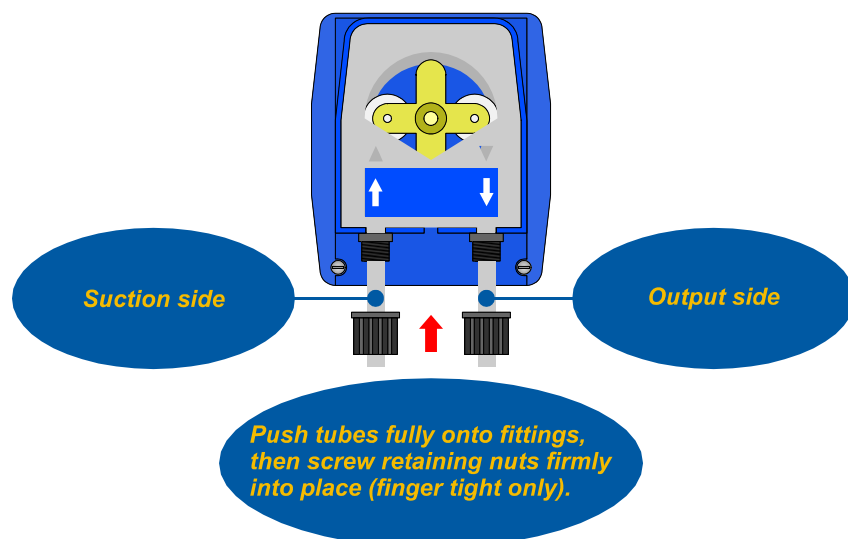
### IMPORTANT INFORMATION REGARDING ACID

- Always use dilute Hydrochloric Acid.
- Add 5 Litres of Acid to 20 to 25 Litres of water.
- NEVER ADD WATER TO ACID
- Using concentrated acid may damage your equipment and void the warranty

## 2.3 Fit Tubing to Dosing Pump

Insert the suction tubing from the chemical drum to the left hand side compression fitting of the dosing pump. Screw the retaining nut into place firmly, ensuring the tube is securely anchored.

Repeat for the supply tubing on the right hand side of the pump.



#### 2.4 Mount Feeder and Connect to Electrical Supply

Mount the **Chemflo** controller on a sturdy wall or post using minimum 3mm or 1/8" stainless steel bolts, screws or masonry anchors.

The **Chemflo** controller MUST be installed in a sheltered location.

Connect the **Chemflo** into a suitable power outlet and the Pool Pump into the piggy-back power plug.

The power outlet should be fitted with an electronic Timer, which will switch the **Chemflo** and the main Pool Pump on for the correct amount of time each day.

## Section 3. – Operating Instructions

### 3.1 Setting the Correct Dose Rate

The Dose Rate can be set from 1 to 99, where 99 is 100% of the unit's dosing capacity. The Litres per Hour of this dosing capacity is shown in the table at the end of this section.

**Note: The flow rate of the Chemflo is controlled by changing its duty cycle, not by changing the actual speed of the motor, so for most of the time the pump does not operate. Please see section 3.4 for a more detailed explanation.**

1. For Chlorine dosing on a domestic swimming pool (50,000 litres), we recommend that you start with a setting of 50 to 80 (small pump tube).

For Acid dosing on a domestic swimming pool (50,000 litres), we recommend that you start with a setting of 20 (small pump tube).

2. Monitor the Chlorine or pH levels daily for the first week to check the results of the dosing.

For Chlorine Dosing : If the Chlorine level is too high, reduce the Dose Rate setting.

If the Chlorine level is too low, increase the Dose Rate setting.

For Acid Dosing : If the pH is too high, increase the Dose Rate setting.

If the pH is too low, decrease the Dose Rate setting.

3. Continue to monitor the Chlorine and pH levels on a weekly basis to ensure that the water balance is correct.

It is recommended that you take a sample of your pool water to a pool shop every month for a complete analysis. Maintaining all chemical levels at optimum levels will result in a sparkling clear, fresh pool.

### 3.2 Setting the Chemflo to OFF

The OFF setting is provided when no dosing is required. This allows the chemical drum to be changed without stopping the main Pool Pump.

1. To set the **Chemflo** to OFF and stop all dosing, turn the control fully counter clockwise. The display will show the setting “00”
2. ***This mode should not be selected for normal operation. The OFF mode should only be used to stop the dosing pump operating, such as when refilling chemical drums. Long term use of this mode will make your pool unfit for swimming.***

### 3.3 Setting the Chemflo to FULL

The FULL setting operates the dosing pump continuously at full speed. The litres per hour of the FULL dose setting are shown in the table at the end of this section.

To set the **Chemflo** to FULL dose continuously at full speed, turn the control fully clockwise. The display will show the setting “00”.

1. ***This mode should not be selected for normal operation. The FULL mode should only be used for short-term operations such as Super-Chlorinating. Long term use of this mode will make your pool unfit for swimming, and could present a serious threat to health or equipment.***



### 3.4 Chemflo Flow Rates

The flow rate of the **Chemflo** is varied using a duty cycle, so for most of the time the pump does not operate. For example, the pump will be ON for 2.5 minutes per 15 minute cycle when it is set to 99. When the unit is set to 50, the pump will be ON for half the time, i.e. 1.25 minutes per 15 minute cycle. Refer to the table below.

**The only time that the pump operates continuously is when the control is set to FULL.**

<b>Flow Rates of Dosing Pump when control set to 99</b>			
<b>Tube Size</b>	Rate per Hour	Rate per Day 8 hrs*	Duty Cycle
Small Tube	300 mL/Hr	2400 mL/Day	2.5 mins ON per 15 mins
Large Tube	1000 mL/Hr	8000 mL/Day	2.5 mins ON per 15 mins

\* Based on 8 hour pump operation for each day.

<b>Flow Rates of Dosing Pump when control set to FULL</b>	
Small Tube	1.8 L/hr
Large Tube	6.1 L/Hr

Flow rates were measured pumping into a pool line at 50 kPa.

## Section 4. – Peristaltic Dosing Pump

### 4.1 Lubricating the Pump Tubing

The **Chemflo** is shipped with the correct lubrication on the peristaltic pump tubing. If this lubrication needs to be re-applied, suitable Silicon lubricant is available from your dealer in a 3mL syringe (part no 130103).

To lubricate the pump tubing...

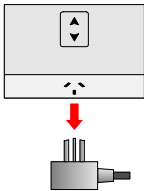
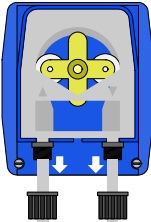
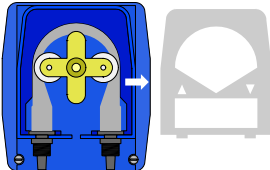
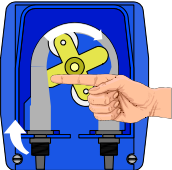
1. Remove the pump tubing, as per the details in section 4.2, below.
2. Smear a small quantity of Silicon grease all around the tube. A thin film is all that is required.

**DO NOT** use petroleum based oil or lubricants, as these will cause the Santoprene rubber to perish. Use only Silicon based lubricant.


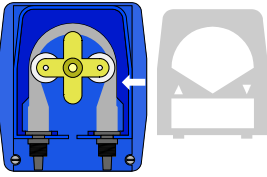
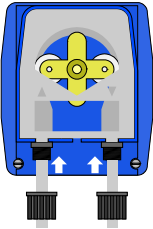
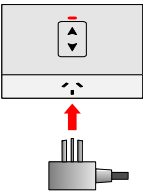
### 4.2 Replacing the Pump Tubing

Replace the Pump Tubing if it gets worn, begins to leak, or pumping volume is reduced. The Pump Tubing is available from your dealer: part No. 116353 for the Small Tube or part No. 116352 for the Large Tube.

**To remove the old Pump Tube...**

<p style="text-align: center;"><b>1</b></p> <p style="text-align: center;"><b><u>IMPORTANT</u></b></p> <p>Place the pump suction tubing into a bucket of fresh water. Prime the pump by setting the Dose Rate to <b>FULL</b>. This may take up to 2 minutes. This ensures that there are no dangerous chemicals in the tubes when they are disconnected.</p>	<p style="text-align: center;"><b>2</b></p>  <p>Switch off the power and disconnect the power cord from the mains power outlet.</p>	<p style="text-align: center;"><b>3</b></p>  <p>Remove the Input and Output tubing from the compression fittings. This is simply a reversal of the procedure detailed in section 2.3.</p>	<p style="text-align: center;"><b>4</b></p>  <p>Remove the see-through cover on the front of the pump.</p>
<p style="text-align: center;"><b>5</b></p> 	<p>Turn the roller holder so that the rollers are in a horizontal line. Pull the left hand side compression fitting from its seat. Begin turning the roller holder clockwise, so that the roller holder acts as a lever which pulls the pump tube out as it turns. After approximately 3/4 of a turn, the right hand side compression fitting can be pulled out.</p> <p>The old pump tube has now been removed.</p>		

**To fit a new Pump Tube...**

<p style="text-align: center;"><b>1</b></p>  <p>Turn the roller holder so that the rollers are in a horizontal line. Push the left hand side compression fitting into its seat, round side facing in. Begin turning the roller holder clockwise, so that the roller holder acts as a lever which pulls the pump tube in as it turns. After approximately 3/4 of a turn, the right hand side compression fitting can be pushed in, round side facing in.</p> <p>The new pump tube has now been fitted.</p>	<p style="text-align: center;"><b>2</b></p>  <p>Replace the see-through cover on the front of the pump. This is essential to protect the rollers and tube from dirt and moisture.</p>	<p style="text-align: center;"><b>3</b></p>  <p>Re-fit the Input and Output tubing to the compression fittings. See the procedure detailed in section 2.3.</p>	<p style="text-align: center;"><b>4</b></p>  <p>The power to the <b>Chemflo</b> can now be re-connected and switched on.</p>
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**Section 5. – Troubleshooting**

Symptom	Possible Causes	Remedy
<b>Main Pool Pump does not operate when plugged into Chemflo piggy-back plug</b>	<ol style="list-style-type: none"> <li>1. Pool Pump power lead not fully inserted into piggy-back plug.</li> <li>2. Chemflo or Pool Pump power plug faulty.</li> <li>3. Pool Pump Faulty</li> </ol>	<p>Ensure that the Pool Pump's power plug is firmly pushed into the piggy-back plug.</p> <p>Have a qualified electrician check the Chemflo and/or Pool Pump power plugs.</p> <p>Contact supplier of Pool Pump for service or replacement.</p>
<b>Display does not light up when power is connected</b>	<ol style="list-style-type: none"> <li>1. Power plug is not fully inserted into mains power outlet, or outlet is switched off.</li> <li>2. Chemflo is faulty.</li> </ol>	<p>Ensure that the power plug is firmly pushed into the power outlet and that the outlet is switched on.</p> <p>Return to Dealer for repair.</p>
<b>Unit appears to be operating correctly, but chemical is not being dosed into pool</b>	<ol style="list-style-type: none"> <li>1. Peristaltic pump tubing is worn.</li> </ol>	<p>Replace pump tubing as per details in section 4.2.</p>

## Section 6. – Warranty

### Warranty Terms and Conditions

#### PLEASE READ

1. These terms and conditions carefully, as failure to comply may affect your legal rights under this warranty; and

Any installation and operation instructions carefully before commencing use of any product manufactured by Waterco Limited ("Waterco").

2. Waterco manufactures quality pool and spa products to the highest standards using the most advanced technology and production procedures available.

#### WARRANTY COVER

If a defect occurs in any Waterco product, Waterco will at its discretion, repair the product or replace and install the defective part, free of charge provided that the defect results solely from poor workmanship or materials and subject to these terms and conditions.

Labour is covered by this warranty for a period of 12 months from the date of purchase or installation, within a 25 km radius of an authorized Waterco Service Agent.

The purchaser is responsible for any freight incurred.

#### WARRANTY PERIOD

All products sold by Waterco are covered by a one year warranty. The exceptions to this are the products listed in the schedule (which also specifies relevant warranty periods). All warranty periods commence on the date of purchase by the end user.

The provisions of this warranty are not transferable and are in addition to and not in modification of or subtraction from any applicable statutory warranties, rights or remedies.

#### CONDITIONS OF WARRANTY

*This warranty only applies where:*

1. The products have been installed and operated in accordance with written instructions supplied by Waterco;
2. The purchaser is able to provide proof of purchase that specifies the date of purchase;
3. The product has been serviced or maintained regularly. (at least once a month).

*Any pool and spa equipment has been used in water:*

1. With a temperature not exceeding 40 degrees Celsius;
2. With a pH range maintained between 7.2 – 7.6;
3. That has been chemically balanced in accordance with the Langelier saturation index within a range of - 0.2 to + 0.2 to ensure that it is not corrosive or scale forming;
4. That is not salt water (other than mild saline water conditions which are compatible with swimming pool salt water chlorination systems) – unless otherwise stated by Waterco in both the respective product labels and brochures that it is suitable for seawater applications; and
5. That has been regularly treated with a sanitizing system using bromine, chlorine in one of its compound forms, or generated in-situ, in concentrations (doses) recommended by the relative state or territory health departments. (In areas outside of Australia please refer to the local health department recommendations before use);

Pressure gauges have not been exposed to frosting and freezing conditions and due care has been exercised when attaching them to any Waterco products;

Electrical equipment has been adequately protected from salt air environments and from salt water; and

Any pump used on a filter does not have a shut-off head that exceeds the pressure rating of the filter installed.

All repairs and replacements shall be carried out by Waterco or its authorized service dealer, unless otherwise authorized in writing by Waterco.

If an authorized service dealer is not available within 25 km of the purchaser's area:

- The purchaser must contact the place of purchase or Waterco for further instructions and;
- The purchaser is responsible for any freight or infield labour costs.

### **EXCLUSIONS**

This warranty does not cover, and Waterco will not be responsible for, any defect or damage caused or contributed to by:

- (a) installation or use of the product other than in accordance with Waterco's written instructions, any statutory requirements and these terms and conditions;
- (b) use of the product for a purpose other than for which it was designed or sold;
- (c) abuse, misuse, corrosion, internal and external, or normal wear and tear;
- (d) any repairs or modifications whatsoever carried out by any person, other than a Waterco authorized service dealer;
- (e) exposure to water not caused by a defect in the product; and
- (f) transit of the product over which Waterco has no control.
- (g) inadequate ventilation
- (h) cement, pebbles, render or other pool surface finishes blocking the pump's impeller
- (i) insect infestation

Some three phase pumps are not supplied with thermal overload protection. It is the purchaser's responsibility to have this provision installed by appropriately licensed electricians prior to the initial installation of the pump. All electrical work must comply with any appropriate statutory requirements. Warranty for installation of thermal overload protection is the sole responsibility of the licensed electrical contractor and not Waterco.

Waterco excludes all liability it may have to the purchaser for indirect, special or consequential loss arising from or related to any defect in any Waterco product, or any act or omission of Waterco, including, but not limited to, loss of business, loss of profit, loss of revenue, lost opportunity, inconvenience, and damage to any property other than the Waterco product.

Waterco excludes all other conditions, warranties, liabilities or representations which might, but for these terms and conditions, be implied by law or otherwise. These terms and conditions do not exclude or modify any implied condition or warranty, or any liability imposed on Waterco by any law (including the Trade Practices Act), if to do so would contravene that law or make any part of these terms and conditions void.

To the extent permitted by law, Waterco excludes all conditions and warranties implied into these terms and conditions and limits its liability for breach of any such condition or warranty that it cannot exclude to the greater of (at Waterco's option);

(a) for goods:

- Repairing or replacing those goods; or
- Paying the cost of having those goods repaired or replaced; and

(b) for services:

- Resupplying the services; or
- Paying the cost of having those services resupplied.

**GENERAL**

The chemical balance of the water is a relationship between total alkalinity, pH, Calcium hardness and temperature. Waterco recommends that you have your water tested regularly by your local pool professional. A record of testing should always be kept for reference.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so any such limitation may not apply.

This warranty gives specific legal rights. The purchaser may have other rights depending on the jurisdiction in which the Waterco product was purchased or the purchaser is located.

**SCHEDULE WARRANTY PERIODS**

**Residential Applications:**

Controller / Feeder	2 years
Sensor	18 months
Labour	1 year

**Commercial Applications:**

Controller / Feeder	1 year
Sensor	1 year
Labour	1 year

**WARRANTY LIMITATIONS:**

The provisions of this warranty are not transferable from the original purchaser and are in addition to and not in modification of or subtraction from any applicable statutory warranties, rights or remedies.

Labour is covered by this warranty for a period of 12 months from the date of purchase or installation, within a 25 km radius of an authorized Waterco Service Agent.

Spare parts used in the repair of products are covered by a 12 month warranty and are not covered by the original warranty from date of purchase or installation.

The purchaser is responsible for any freight incurred.



**Rainbow Pool Products**

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