

### **Bypass operation:** (where fitted)

A bypass pump may be used in an application that would otherwise cause frequent start/stops of a pressure switch demand pump. **Caution:** Care should be taken not to run the pump continuously or for long periods at a pressure which causes the motor to overheat and the thermal cut-out to operate. Models fitted with a bypass only **will continue to run until the power is removed.**

### **Mounting:**

The DP series pumps are self priming, the ability for the pump to prime will be affected by the fluid viscosity.

The pump should be located in an area that is dry and provides adequate ventilation. If mounted within an enclosure care should be taken to allow adequate cooling of the motor.

**Do Not** subject the pump to extreme temperatures high or low while in operation or freezing while filled with fluid. Operating ambient temperature range is 0 to 46°C. Fluid freezing in the pump will cause valve damage which will void warranty.

**Do Not** mount near low temperature plastics or combustible materials. The pump may be mounted in any position but if mounted vertically the pump head should be below the motor so that in the unlikely event of a leak the fluid does not enter the motor.

Secure the pump with suitable screws through the rubber feet making sure that the feet are not overly compressed as this will lessen the noise and vibration dampening.

### **Plumbing:**

Use flexible tubing with suitable pressure rating. We do not recommend the use of rigid or metal tubing. Allow for the shortest possible tubing route avoiding sharp bends that may kink over time. An inlet strainer (50 mesh) should be fitted before the pump to prevent foreign debris from entering the system. Damage caused by foreign debris is not covered under warranty. **Caution:** Using sealers or PTFE tape should be avoided as they can enter the pump and damage the valves. **Do not** over tighten fittings as this can crack housings or strip threads.

If there is positive pressure on the inlet of the pump (max 50 PSI) the fluid will continue to flow even with the motor off, ensure there is another means of shutting off the fluid supply.

### **Trouble shooting:**

#### **Pump will not start.**

Check fuse or breaker.

Check correct voltage & connections.

Check pressure switch operation and correct voltage at switch or motor wires (as fitted).

Check for open circuit or grounded circuit.

Check for lock drive assembly.

#### **Pump will not prime. (runs but no flow)**

Has the product run out?

Check the strainer and inlet /outlet hoses are not blocked or kinked.

Check there are no air leaks on inlet side of the pump.

Check there is no debris in the pump inlet/outlet valves.

Check the correct voltage is available to the pump.

### **Spare parts:**

#### **Leaks from pump head.**

Check for loose screws.

Check for punctured diaphragm.

#### **Pump Will not shut-off. (units fitted with pressure switch only)**

Check for leaks when outlet is closed.

Air trapped in outlet line or pump head.

Check inlet outlet valves for debris or swelling.

Check pressure switch operation / adjustment.

#### **Noisy or Rough operation.**

Are the mounting feet compressed to much?

Check loose pump head screws.

Does the mounting surface increase the noise (is it flexible)?

Is the pump plumbed using rigid pipe causing sound and vibration transmission?

### Industrial product limited warranty

Williamson Manufacturing Co Ltd (the "Company") provides the following warranty as applicable to the products sold to all customers. The Company warrants that the products are free from defects in material and workmanship for a period of one (1) year from the date of shipment (this "Warranty"). This Warranty applies only to the replacement or repair of such parts when returned to the Company, freight prepaid and found to be defective upon factory inspection. All Returns will be tested as per the company's factory criteria. Product found not defective (under the terms of this warranty) are subject to charges paid by the returnee for the testing and packaging of "tested goods" non-warranty returns. This Warranty does not extend to free or subsidised cost samples or to the products which have been subjected to misuse, abuse or neglect, or have been improperly stored or maintained or modified without authorization. In case a customer uses the product with any parts that the Company does not adopt or provide officially, such product is considered modified without authorization, and Warranty does not cover the product so modified, nor shall all certifications including CE Marking and Underwriters Laboratories (UL) be considered valid with respect to such modified product. This Warranty does not cover any consequential damages resulting from a defect of the products or any liability resulting from the performance of the products.

### Returns Policy

All pumps and pump products **must** be flushed of **any** chemical and hazardous chemicals must be labelled before being shipped to Williamson Manufacturing for service or warranty consideration. The company reserve the right to request a material safety data sheet for any pump/product it deems necessary. The company reserve the right to "disposition as scrap" pumps or products returned which contain unknown fluids and to charge the returnee for any and all costs incurred for chemical testing and proper disposal of such items. The company request this in order to protect both personnel and the environment from the hazards of unknown fluids.

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## Williamson Manufacturing Co Ltd

## Industrial pump DP

### Installation and Operation manual

Williamson Manufacturing offer several pump models for different applications. The information within this manual is general to all DP5 series industrial pumps and is not model specific. It is essential that the materials used in the pump are compatible with the fluids being pumped, the list of materials used within the pump can be found on the pump specific data sheets. The pumps are intended for intermittent use. Information regarding thermal limits, flow data, pressure and load current can found on the pump specific data

**Warning:** Intermittent duty is defined as operated and/or frequently started within a period of time that does not cause the motor to reach its thermal limit. If the pump reaches the thermal limit it will need to cool before re-starting. Once cooled the motor will restart without warning. **Do not** allow the fluid supply to run out while leaving the pump powered as the pump will run continuously causing excessive brush wear and possibly over- heating.

**Warning: DO NOT use to pump flammable liquids.** Never operate the pump in an explosive environment. Arcing from the switch or motor brushes and heat from the motor may cause an explosion.

**Warning:** Do not assume fluid compatibility, incompatibility with the pump materials may cause leaks.

**Caution:** For mains electrical models wiring should be performed by a qualified electrician in accordance with local regulations. The pump is supplied with 2 black wires which can be connected either way round on the supply. The pumps must be earthed and fitted with suitable circuit protection. To prevent electrical shock, disconnect power before carrying out any maintenance. In case of pump failure, the motor housing and/or the fluid may carry high voltage to components normally considered safe.

### Pressure switch operation: (where fitted)

The pressure switch reacts to the outlet pressure and interrupts the power to the motor when the pressure reaches a preset limit. Once the pressure drops below an allowable range of the preset limit the pump will re-start and run until the preset limit is reached again. **Caution:** If the flow capability of the pump is higher than the outlet flow the pump may pressurise the system whilst the outlet is still open causing the switch to rapidly cycle (on/off more than 6 times per minute). If this occurs it will greatly reduce the life of the pressure switch and potentially cause overheating leading to pump failures. To avoid rapid switch cycling, reduce outlet restrictions, fit an accumulator to the system or consider a "bypass" operation pump. Switch failures due to rapid cycling are not covered under warranty.

**Adjusting the pressure switch:** The pressure switch may be adjusted for optimal performance. Turn the set screw cw to increase the "off" pressure setting, ccw to decrease. **Caution:** setting the pressure switch too low can cause rapid on/off cycling and the switch must not be set above the recommended maximum as damage may occur.