Multistage Automatic Pressure Control Pumps
TREVOLI Models: CM2-40, CM2-50, CM2-60, CM4-50, CM4-60
Instruction manual

1. General Information
These instructions are designed to ensure the correct installation and best use of our automatic constant water pressure assemblies.
The assemblies are quiet and are designed to provide an automatic supply of clean water to one dwelling.
If water consumption is greater than 3 l/min the pump will operate continuously.

By strictly following the instructions for installation and use of the pump, and paying careful attention to the wiring diagrams, you will avoid the possibility of overloading the control circuit or of any other problems associated with misuse, for which we can accept no responsibility.

When the pump reaches maximum pressure, the unit automatically switches the pump off. Unit selection must take into account the fact that the differential must be over 140 kPa.

TREVOLI Pumps are not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure they do not play with the pump.

2. Gravity Fed installation
The TREVOLI Multistage CM pumps are designed for Gravity Fed or positive pressure water supply installations (see image below) the CM pump is not designed for suction lift.

The Pump should be protected from the risk of flooding and installed in a sheltered but well ventilated place. If the pump to which the Auto controller is connected is then directly connected to the mains water supply, it must be remembered that the incoming pressure must be added to that provided by the pump. Total pressure may not exceed 6 bar. It can be fitted to any installation that has sufficient water supply.

3. Suction pipe work assembly
The suction pipe should be a minimum diameter of 25mm, maximum diameter of 32mm. A foot valve is recommended on the end of the suction line. Suction lengths greater than 10m in distance require a non-return valve to be fitted at the pump inlet.

4. Discharge pipework assembly
The discharge pipework diameter should be equal to or larger than that of the pump discharge. The discharge pump should not be supported by the pressure unit and should be checked for water tightness. We recommend the use of a flexible anti vibration hose on the discharge as direct connection to rigid pipework can transmit sound.

5. Electrical connection
Nominal pump current should be no higher than 10 A and the maximum motor power (P1) should never exceed 1.8 kW.
Ensure that all the connections between the electronic circuit and the power and motor cables are properly made.
Protection of the system should include a 30mA RCD residual current device. The supply cable should comply with EEC standards (2) or be of type H07 RN-F as per VIDE 0620.
6. Controls prior to start-up
Before starting the pump ensure:
The Pump head and intake pipework is fully primed with all air removed and is air tight.
That the grid voltage and frequency match those featured on the specification plate.
That the pump shaft turns freely.

THE PUMP SHOULD NEVER BE OPERATED DRY.

7. Start-up
Open all valves in the intake and discharge lines.
Switch on the power and the pump will start automatically. While doing so, leave the discharge tap open to bleed any air that may be in the system. Then close the tap, the pump will shut down when it reaches maximum pump pressure.
Verify the motor is rotating clockwise, checked from the fan cover.
If the pump is not properly primed or there is no water supply, it will shut down after 30 seconds.
Once the water level is recovered and the pump has been properly primed, repeat the startup operation, this time holding in the red reset button for a few seconds. If the pump does not operate, does not produce pressure or does not shut down, try to discover the cause of the problem consulting the troubleshooting guide provided.

8. Maintenance
The TREVOLI Automatic Pressure pumps require no specific maintenance. Notwithstanding, we recommend that they be emptied when temperatures are low and there is a risk of freezing or if the unit is not to be used for a long period, of time.
If the unit is not to be used for a very long period it should be cleaned and stored in a dry, well ventilated place.

<table>
<thead>
<tr>
<th>Faults, Causes and Remedies</th>
<th>Causes</th>
<th>Remedies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pump does not run</td>
<td>Interruption of the current, short circuit insulation fault in the motor coil</td>
<td>Check power supply, call a qualified electrician to check cable and motor</td>
</tr>
<tr>
<td></td>
<td>Pump is blocked with foreign matter</td>
<td>Switch off the pump voltage and secure against re-operation, close the shut of fittings at the back and front of the pump, remove the foreign from the pump</td>
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<tr>
<td></td>
<td>Protective motor switch activated</td>
<td>Let the pump/motor cool</td>
</tr>
<tr>
<td>Motor overheats</td>
<td>Too low voltage</td>
<td>Check the voltage on terminals of the motor it should be within +/- 10% (50Hz) of the rated voltage</td>
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<tr>
<td></td>
<td>Pump is blocked with foreign matter</td>
<td>see above</td>
</tr>
<tr>
<td></td>
<td>Ambient temperature above 45deg</td>
<td>Operate at below 45 degrees</td>
</tr>
<tr>
<td></td>
<td>Altitude above 1000m</td>
<td>Operate below altitude of 1000m</td>
</tr>
<tr>
<td>Thermal relay</td>
<td>Voltage is too low</td>
<td>Check the adequate cross section of the electrical cable conductors</td>
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<tr>
<td></td>
<td>A phase is cut</td>
<td>Check and change the electrical cable if necessary</td>
</tr>
<tr>
<td></td>
<td>Thermal relay of the circuit-breaker is defective</td>
<td>Replace it</td>
</tr>
<tr>
<td></td>
<td>Motor is defective</td>
<td>Replace it</td>
</tr>
<tr>
<td>Pump runs but delivers little or no water</td>
<td>Pump is blocked with foreign matter</td>
<td>see above</td>
</tr>
<tr>
<td></td>
<td>Pump is empty</td>
<td>Fill the pump</td>
</tr>
<tr>
<td></td>
<td>Suction pipe is obstructed</td>
<td>Clean all the pipes</td>
</tr>
<tr>
<td></td>
<td>Air in the suction pipes</td>
<td>Check tightness of the whole pipe up to the pump</td>
</tr>
<tr>
<td>Pump vibrates</td>
<td>loose on foundations</td>
<td>Check and completely tighten the nuts of the stud bolts</td>
</tr>
<tr>
<td></td>
<td>Pump is blocked with foreign matter</td>
<td>see above</td>
</tr>
<tr>
<td></td>
<td>Bad electrical connection</td>
<td>Check the connections to the pump</td>
</tr>
</tbody>
</table>

Disposal: do not dispose of electrical appliance as unsorted municipal waste, use separate facilities.
TERMS & CONDITIONS
(Subject to the provisions of the Consumers Guarantee Act)

1) Pumps Online Ltd warrants that the TREVOLI pumps that we distribute are free from defects in workmanship and materials, for 2 YEARS from the date of purchase. Subject to the conditions of the warranty Pumps Online will repair any defective products free of charge at the premises of Pumps Online Ltd or our authorised service agents throughout New Zealand.

2) This warranty excludes transportation costs to and from Pumps Online Ltd or its appointed service agents and excludes defects due to non-compliance with installation instructions, neglect or misuse, inadequate protection against freezing, low voltage or use or operation for purposes other than those for which they were designed. For further information regarding the suitability of your intended application contact us.

3) The 2 YEAR warranty refers only to TREVOLI pumps sold after the 1st July 2006, and is not transferable to another TREVOLI pump and only applies to the original owner, purchaser or end user, and is subject to the Consumers Guarantee Act.
4) Our warranty commences from the date of purchase of the above mentioned pumps.

Proof of purchase is required before consideration under warranty is given. Record your date of purchase in the space below and retain this copy for your records.

Date of Purchase:

Model Purchased:

Pumps Online Ltd
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