**Alarm Valve Booster Pump O & M**

SEP
Sale Engineering Products

## Includes

- Inlet Valve
- Bleed Valve
- Test valve
- Outlet valve
- 5mm flow restrictor
- Check valve
- 2mm flow restrictor (test)
- Pump/motor
- Starter, overload & on delay timer
- 1381 V 11 BAR Pressure switch
- No loss connector
- 0-10 BAR glycerine gauge
- Unistrut -direct wall mounting (4x M10)
- 18 Litre Accumulator


## Description

The unit comprises of a peripheral pump, which is directly driven by a standard electric motor. The unit is mounted on a polypropylene panel with automatic controls. The unit is fitted with an adjustable differential pressure switch to enable automatic "stop/ start" incorporating time delay & thermal overload.

## Installation

Take care to install & operate the unit in a cool, clean and dry location (ambient temp below +40℃). This will provide enhanced performance, reliability and prolonged life. The unit should be wall mounted (4 x M10 mounting holes) the unistrut must be securely bolted to the wall to which the panel is being mounted. The inlet/ test/ outlet valves should be linked with the system pipe work as per enclosed sketch.

## Electrical Connections

Dangerous, potentially lethal voltages are present within this equipment, therefore care should be taken to ensure that all electrical connections remain firm and that cables do not wear. A competent person to the wiring diagram enclosed with the unit should carry out installation.

## Safety

It is required that users employ safe working practices when using this equipment and Your attention is drawn to the Health and Safety at Work Act 1974, the electrical Engineer's regulation and any other current, pending or future safety requirement.

**DO NOT** operate the unit until you have read and fully understood the contents of these operation & maintenance instructions, particularly with regard to stopping, starting and safety.

**To Start the Pump:**

1. Check & ensure that all valves are installed and the pipe work is connected.
2. Close outlet/ test valve
3. Open inlet valve fully
4. Open bleed valve until no more air is expelled, close valve
5. Press start button on starter
6. Check for correct direction of rotation of pump

**On Delay Timer**

The units are fitted with an on delay timer set to 10 seconds. This device will only allow the pump to start after the time delay specified, thus reducing the risk of the pump hunting and overheating therefore prolonging the life of the pump. The unit will also be able to be more accurately as stop/start pulsations will be almost eradicated. (On initial set up the pressure may rise and fall several times)

**N.B.** Once on line, the pump will not start until the time has elapsed after the cut in pressure has been reached. Refer to wiring diagram for further details.

**TO Stop the Pump**

Press stop button on starter

**DO NOT switch machine ON or OFF using the mains switch.**

**Maintenance Warning:**

Before carrying out any maintenance it is required that the following points be observed:

1. Isolate the pump from the mains supply.
2. Check that all pressure has been released from the unit by isolating from the pipe work system using valves provided (shut inlet, shut outlet, open drain)
3. Attach **" DO NOT OPERATE"** signs to the unit and power supply.
4. After use some components on the pump are hot and therefore could cause burns. Ensure that the pump is fully cooled before handling or attempting any maintenance.

**Regular Maintenance**

To ensure continued reliability and efficiency, it is important that maintenance checks are made. The condition and general cleanliness of the unit, and the prevention of the ingress of dirt into the working components of the pump are important factors. Electrical connections should be checked for security and damage.

The pump itself is continually rated and should require little attention, however the windings should be protected against continual stop start operation by ensuring that the pipe work system, unit and connections in-between will hold pressure for a period of at least 30 mins. Continual stop start will result in the electrical insulation breaking down & eventual failure of the pump. It is recommended that like most electrical motors less than 10 starts should take place every hour. (See fault finding section to assess problems or call the number provided)

**Pressure Switch Adjustment**

The delivered water pressure form the pump should be adjusted in accordance with Bailey & Mackey instructions (supplied with the unit)

1. Isolate from electrical supply
2. Remove pressure switch cover.
3. Increase pressure setting by adjusting the switch
4. Reconnect to electrical supply, press start button & close outlet & test valve, pressure should now be held within the panel
5. Isolate from supply

6. Reduce pressure in panel slowly using the test valve, close valve at required cut off pressure & adjust switch setting until the micro switch operates at desired setting.
7. Replace pressure switch cover, reconnect to power supply and press start button
8. Pump should cut in / out at desired settings, repeat procedure if necessary.
9. Test for correct pressure by starting and operating in the normal manner.

***WARNING***

**DO NOT** attempt to increase the pressure beyond the specified maximum. (4 BAR in addition to the lowest standing pressure of towns mains supply). The pump will not switch off and will result in motor / pump failure. Install a max / min / actual gauge if necessary over a period of at least one week to determine the pressures.

**Warranty**

The manufacturer specifies conditions of warranty.

**Spare Parts**

Only use genuine spare parts, the use of non-genuine spare parts will invalidate the warranty and effect the reliability and service life of the pump. Genuine spare parts & service kits are available from your supplier.

N.B. In the event of difficulties understanding these instructions or operating the pump contact your supplier immediately or Sale Engineering on 01925 810889

**Fault Finding**

| **Problem** | **Possible Cause** | **Remedy** |
|---|---|---|
| **The motor will not start** | *No power to motor* | *Check mains supply* |
| | **Fuse blown** | **Replace fuse** |
| | *Circuit breaker tripped* | *Re set and check rating* |
| | **Wiring worked loose** | **Check electrical connections** |
| | *Capacitor (240V only) is not functioning* | *Check & replace if necessary* |
| | **Pressure in panel above cut in pressure** | **Reduce pressure by opening test valve** |
| **Protection devices trip i.e. thermal overload or circuit breaker** | *The voltage is to high* | *Call electric board* |
| | **Earthed cable** | **Check / Repair / Replace** |
| | *The winding is earthed* | *Return to supplier* |
| | **Loose cables** | **Tighten & check for excessive vibration** |
| | *The pump is jammed* | *Dismantle & free obstruction* |
| | **Pump runs for excessive period of time** | **Reduce pressure switch setting** |
| **Zero or little pressure from pump** | *Pump not purged* | *Open & close bleed valve* |
| | **Inlet valve closed** | **Open inlet, check main** |
| | *Impeller worn jammed* | *Check & renew* |
| | **Pipe work leak** | **Isolate / check / repair** |
| | *Gauge faulty* | *Check elsewhere / replace* |
| **Pump fails to switch off** | *Pressure switch set to high* | *Low mains pressure reading incorrect* and/or switch *incorrectly set* |
| | **Pressure switch faulty** | **Check/ replace** |