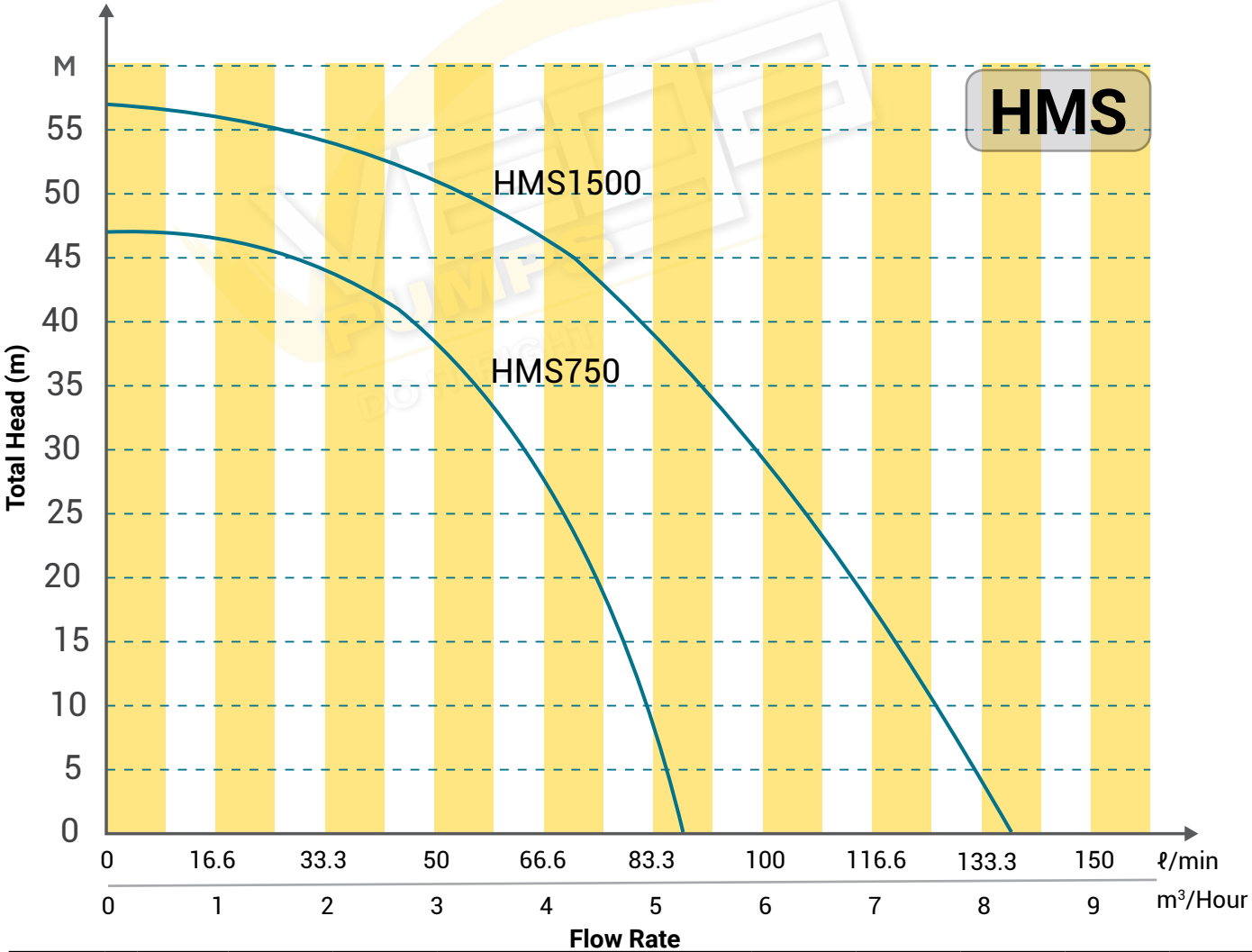
FEATURES & BENEFITS

- **Easy to operate**
- **Low noise level**
- **Automatic start/stop function**
- **Pre-wired with a 3-point plug**
- **Energy-efficient**
  Up to 80% more energy savings compared to traditional pump systems
- **Restart delay**
  An integral time delay for restart after 3 seconds protects the motor from heat build-up due to continuous on/off switching
- **Auto-rotation**
  A built-in timer will automatically start the pump within a pre-selected cycle to rotate the bearings
- **Constant pressure**
  A pressure transducer ensures that constant pressure is maintained even when multiple water outlets are used simultaneously
- **Class leading efficiency**
  The unit has the following integrated functions for protection from:
  - Dry run
  - Over-current
  - Over/under voltage
  - Overload
  - Abnormal Pressure

PUMP PERFORMANCE CURVE



MODEL	FLOW	L/MIN	0	16.6	33.3	50	66.6	83.3	100	116.6	133.3	150
		m³/ HOUR	0	1	2	3	4	5	6	7	8	9
HMS750	HEAD		47	46	44	38	27	7				
HMS1500			57	56	54	51	47	38	28	17	4	

Pumps On Line - www.pumps.co.za

PUMP SPECIFICATIONS

	HMS750	HMS1500		HMS750	HMS1500
Pump Model	HMS750	HMS1500	Max. Pressure	4.7 Bar	5.7 Bar
Motor Power	0.75 kW	1.5 kW	Max. Fluid Temperature	80 ˚C	80 ˚C
Max. Flow	83.3 lt/min	133.3 lt/min	Max. Ambient Temperature	40 ˚C	40 ˚C
Hydraulic Components	304ST/ST	304ST/ST	Motor	Aluminium	Aluminium

- Variable Speed drive (VSD) defined:
  The speed at which the pump rotates varies as per the pressure requirement to ensure minimal energy is being used.

- Unit intended for clean water usage, such as drinking water, or potable water piping system, and for irrigation purposes.
- Unit suitable for use with water temperatures ranging from 2 to 80 degrees celsius.

IMPORTANT INFORMATION

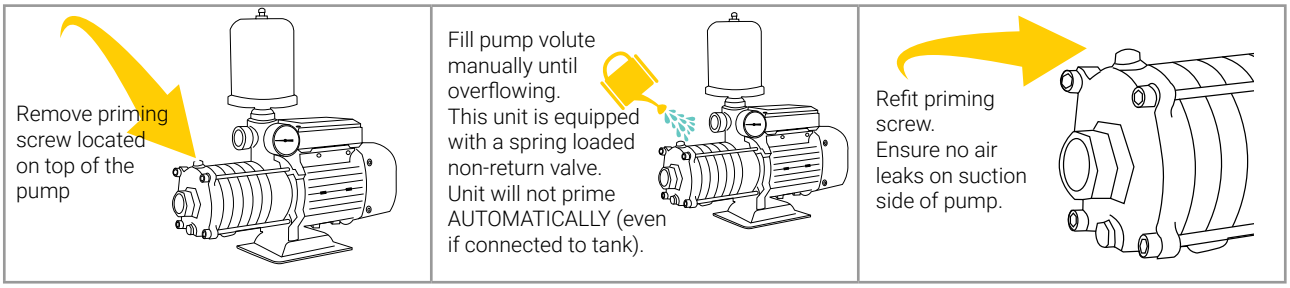
- The pump must be earthed.
- All the maintenance should be carried out with the power supply disconnected.
- Do not put any strain on the electrical cable.
- The pump is designed for water containing no solid particles.
- Do not adjust any settings without having carefully read and understanding the instructions.
- Extending the cable may affect your factory warranty. Make use of an approved extending plug adapter.
- The pump should be installed in a ventilated, undercover area to protect the unit against direct sunlight, rain and spray from an irrigation system. (JoJo pump cover recommended)
- Pumping muddy water or water containing suspended solids will severely reduce the life expectancy of the unit. Note that this type of application falls outside of the factory warranty.
- The booster pump is equipped with a draining screw at the bottom of the suction/discharge casing. It is advised to drain the unit when temperatures fall below 0°C.

OPERATING INSTRUCTIONS

1. Ensure that the power supply cable is connected correctly.
2. The suction and discharge piping should be able to withstand pressure of up to 6 bar, be air tight on the suction side and water tight on the discharge side.

Recommended types of suction piping	Recommended types of discharge piping
HDPE - minimum 1” class 6	HDPE - minimum 1” class 6
Helical Coil reinforced flexible hose 1”	
Pump to tank connector kit	

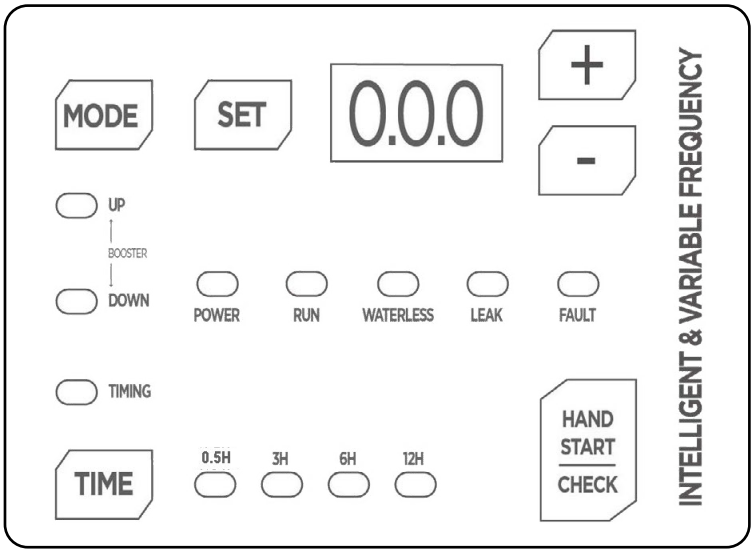
3. **Follow the priming instructions as per diagrams.**



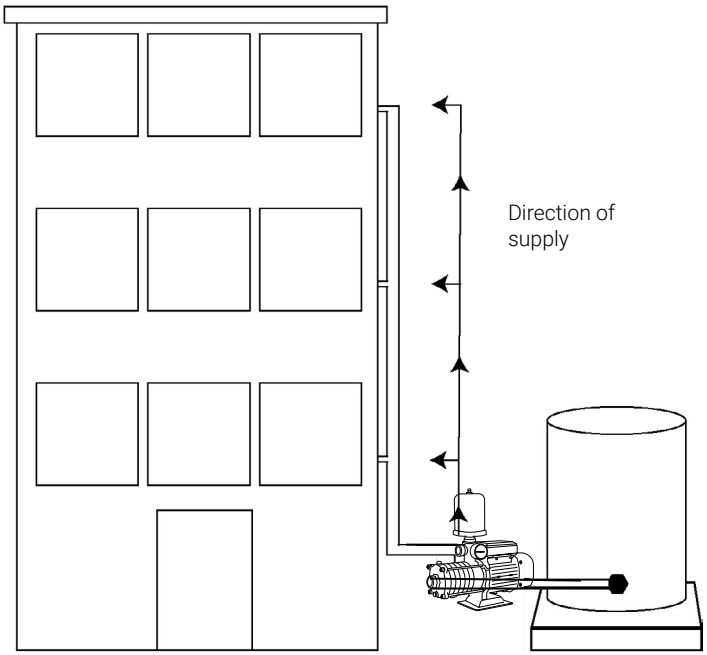
4. The booster pump is designed to operate with a 230V single-phase power supply. Voltage variance is maximum 10% up or down.

SETTINGS

NOTE:
IT IS NOT RECOMMENDED TO CHANGE THE DEFAULT SETTINGS AS IT ENABLES THE UNIT TO OPTIMALLY RESPOND TO POTENTIALLY HARMFUL SYSTEM CONDITIONS. THIS BOOSTER PUMP SYSTEM MAY OPERATE SAFELY FOR 1 TO 2 MINUTES AFTER DRY RUN CONDITIONS ARE LOGGED.



1. Press MODE button until you reach the desired category.
   Mode UP:
   must always be selected for installations where the pump is installed on ground level and supplying pressure parallel to or vertically up into a system.
   - The screen will display the working pressure (bar).
   - Pressing + will increase the set pressure.
   - Pressing - will reduce the set pressure.
   - The new set point will flash five (5) times before saving the value.
   - The recommended operating range is between 2 bar and 3.5 bar. Do not exceed 4 bar for residential use



2. Press SET for skipping between functions "**B01**" to "**B05**".

2.1 B01: START UP PRESSURE

• When "**B01**" is displayed and "**SET**" is pressed, the start-up pressure can be adjusted as a percentage of the working pressure. The default ratio is set at 70%. + or - will increase or decrease this ratio.

For example, working pressure set at 3.0 bar and ratio set at 70%:

3.0 bar x 0.7 = 2.1 bar

Once water usage has stopped, the pump will allow system pressure to drop to 2.1 bar before start up.

2.2. B02: DIRECTION OF ROTATION

• Must **ALWAYS** be set to "00", this will ensure the correct direction of rotation.

2.3. B03: DRY RUN PROTECTION

• When "**B03**" is displayed and "**SET**" is pressed, the screen will display a value between **0** and **1.5** bar. The default is set at 0.15 bar and is the pressure at which the pump will switch off in the case of running dry or against low back pressure as in the event of a burst discharge pipe. + or - will increase or decrease this value.

2.4. B04 and B05:

"**180"** Dry run - DO NOT CHANGE THIS SETTING

B06: PRESSURE AND FREQUENCY

• When **B06** is shown on the screen and you press the "**SET**" button, the display will indicate a value of **00**. This represents the default setting, which reflects the system's pressure. If you wish to switch it to show the frequency of the AC power supplied to the motor, you can achieve this by pressing the + button to change it to **01** and then pressing "**SET**" to save the new configuration. After a brief delay, the VSD will return to the home screen and display the updated frequency value. You can easily switch between the pressure and frequency readings at any time by using the + or - buttons and then pressing "**SET**" to save your preferred choice.

B07: SHUT-OFF STABILITY

• The default setting is 30. Please be aware that altering this default setting is not advisable, as it directly affects the shut-off pressure sensitivity in an inverse manner. Lowering this value will make the unit less sensitive to pressure, leading to a quicker response to halt the pump once it attains the desired pressure.

3. Indicator lights and fault codes:

3.1. Mode "🖵 **UP**":

- The "🖵 **POWER**" light will be illuminated.
- The "🖵 **RUN**" light will illuminate when the pump is operating.
- The "🖵 **RUN**" light will flash when the pump is operating but unable to reach the set pressure.
  This is not unusual, as the application for household supply and irrigation supply vary vastly in flow demand.
- The "🖵 **LEAK**" light will illuminate in cases of a pressure leak in the line.
- Error codes will appear on the screen and are as follows:
  - **E01**: Low voltage from supply (below 130V).
  - **E02**: High voltage from supply (above 280V).
  - **E03**: Pressure transducer disconnected / faulty
  - **E04**: Motor temperature exceeding operating limits. Check for insufficient ventilation.
  - **E05**: Not in use.
  - **E06**: Not in use.
  - **E07**: Not in use.
  - **E08**: Locked rotor.
  - **E09**: Variable speed drive PC board fault condition.
  - **E10**: Not in use.
  - **E11**: Not in use.
- Pressing the "**MANUAL/AUTO**" (HAND START/CHECK) button will reset all fault codes. Press again to resume automatic operation.
- Operating under the "🖵 **UP**" mode will disable the "🖵 **TIMING**" light and function.

3.2. Mode TIME:

- TIME retains all settings of "🖵 **UP"** mode, but allows for the selection of a restart time. For example; "3H" will start the pump every 3 hours without the system demanding an automatic start. This function is important for applications where the unit may not be required to operate for extended periods of time (holiday home, weekend retreat, etc.)
- Daily starts keep the rotating equipment in good condition and prevents damage to bearings.

3.2. MODE 🖵 DOWN:

Must ONLY be selected for installations where the pump is installed on the upper level and supplying pressure parallel or vertically down into a system. Selecting this option will reduce the overall pressure delivered by the pump to protect against over pressurizing lower lying systems

