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All Subroto pumps are suitable for installation in boreholes of 100mm diameter or larger. Stabilisers are supplied oversize to be trimmed on-site to fit borehole.

- Level Controller
- Single phase control box
- D.O.L. starter for three phase supply
- Flow inducer tube
- Electric power cable
- Cable jointing kits
- Stainless steel suspension wire
- Level probes

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**Subroto**

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Registered in England No 300721
The Real Alternative

The Mono Subrotor pump offers the first real alternative to multi-stage centrifugal borehole pumps.

Unlike the conventional borehole pump which uses centrifugal force as the energy to move the water, the Mono Subrotor uses the Progressing Cavity Rotor/Stator principle to draw water up through it.

When the hard chrome plated rotor fits inside the rubber stator the two components touch and form a seal bead, behind which a sealed capsule is formed, which moves from the suction side to the discharge of the pump as the rotor rotates inside the stator. The liquid within the capsule is delivered so positively that the pump is capable of very high pressure.

The Mono pumping principle was invented in the 1930’s, and has continued to be developed and refined to meet the increasing needs of the world’s pumping industries. The progressing cavity principle is one of the most efficient and reliable methods of pumping water ever. The design principle ensures that the pumps are also extremely reliable and can usually be expected to outlast multi-stage pumps, particularly on borehole water with a silt or iron oxide content.

Subrotor

- Ideal for pumping bores containing iron oxides
- Lower running costs
- High head, less horsepower
- Stainless steel
- Abrasion resistance
- Simple construction
- Just one moving part does all the pumping
- Easy to maintain
- Rotor/Stator self cleaning and ensures no algae or oxide deposits i.e. no clogged pump impellers

Applications

- Suitable for 4" minimum bores
- Can pump from rivers where surface pumps cannot be used
- Waste water weir cleaning
A User Friendly Forgiving Pump

Foot Valve
Designed specifically to prevent leakage and loss of pipeline water, with minimum restriction to the pump outlet. Includes an anti-rotation pin to eliminate spindle wear.

Rotor/Stator
The Mono Pump rotor and stator optimises abrasion resistance through in-house manufacturing and stringent quality control procedures.

The rotor form and low interference results in excellent hydraulic performance and reduced breakout torque.

Flexishaft®
The Flexishaft is manufactured from toughened materials using a specific Mono process and is covered by chemically inert, abrasion resistant coating.

Stabilisers
A unique Mono development to centralise the pump element while eliminating vibration.

Motor Coupling
Seals Flexishaft connection whilst allowing easy removal from motor during maintenance.

Motor
Standard 2 pole 100mm (4") fully submersible motor. Available in single or three phase power.

More Flow at Higher Heads
The Mono system does not just spin water along. It pushes encapsulated water with positive force, so that ample volume is maintained at high heads.

More Water, Lower Energy Bills
Mono Subrotor pumps waste the least possible energy on internal friction, especially compared to multi-stage and jet pumps.

Easy Maintenance
Unlike centrifugal pumps, the Subrotor has only one moving pump part - the rotor. Its companion, the rubber stator is also very resistant to wear and can easily be replaced with just a wrench.

Self Cleaning
The rotor sweeps the full surface of the rubber stator every turn. It is impossible for growth or iron oxide deposits etc. to develop on the surface. “No clogged pump impellers”.

Chrome Plated Rotor
Mono chrome plated, stainless rotors are up to 4 times harder than the stainless you find in centrifugal pumps.
**Performance and Coding Table**

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>DESCRIPTION</th>
<th>BASIC SYSTEM CODING</th>
<th>FIELD VAR</th>
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<tr>
<td>SYSTEM RANGE</td>
<td>Submersible Mono</td>
<td>S M</td>
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<tr>
<td>PUMP SIZE</td>
<td>1.2 m³/h</td>
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<tr>
<td></td>
<td>2.4 m³/h</td>
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<td>NOM CAPACITY</td>
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<td>AT 3000 RPM</td>
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<td></td>
<td>9.0 m³/h</td>
<td>1 5</td>
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<tr>
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<td></td>
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<tr>
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<td>Model 061-1.5HP</td>
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<td>Model 042/101-2.0HP</td>
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<td></td>
<td>240 / 1 / 50 - standard</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>220 / 1 / 50</td>
<td>2 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>415 / 3 / 50</td>
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<td>TYPICAL CODE</td>
<td>60 litres/min 2 stage Mk 2</td>
<td>S M 0 6 2 2 3 0 1</td>
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<td></td>
<td>fitted with 3.0 hp 240V</td>
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</tr>
<tr>
<td></td>
<td>single phase motor</td>
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</table>

**Performance Data**

![Graph showing performance data](image)
To ensure optimum performance, the following operating conditions should be observed:

- Maximum water temperature 30°C
- Maximum ambient temperature for control box/starter 50°C

All Subrotor pumps are suitable for installation in boreholes of 100mm diameter or larger. Stabilisers are supplied over size to be trimmed on-site to fit borehole.

## Accessories Available

- Level Controller
- Single phase control box
- D.O.L. starter for three phase supply
- Flow inducer tube
- Electric power cable
- Cable jointing kits
- Stainless steel suspension wire
- Level probes

**Operating Conditions**

Maximum permisssable length of drop cable (metres) from control box to pump

### Technical Data

<table>
<thead>
<tr>
<th>SERIES NO.</th>
<th>POWER</th>
<th>VOLT</th>
<th>AMPS</th>
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<th>B</th>
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<td>6.1</td>
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<td>850</td>
<td>1220</td>
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<td>SM1022303</td>
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<td>5.3</td>
<td>26.5</td>
<td>480</td>
<td>900</td>
<td>1380</td>
</tr>
</tbody>
</table>

Typical Motor weight 13.5kg. Typical wet end weight: 7.90kg.
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