

VERDERFLEX[®] SMART

Verderflex[®] Smart S40 Series
Peristaltic Tube Pump



PUMPS Inc.

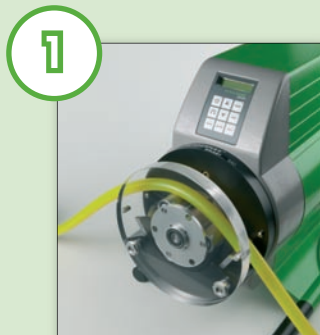


Solutions in Pumping Technology



Lightning Fast Tube Change

The easy-fit tube saddle is designed for single handed operation and is based on the design of a ski boot fastener, allowing the tube to be loaded quickly and easily from above.



Insert the tube on top of the rollers



Fit the saddle to one set of dowels



Open up the lever and fit the claw over the other set of dowels



Push the lever down to lock the saddle into place

**Tube loading in
less than 1 min!**

Verderflex® Smart - S40 Series

The Verderflex® Smart series is an excellent, low pressure dosing pump capable of handling viscous, abrasive and chemically aggressive media with total containment and leak free pumping.

The pump has a unique easy-fit top loading saddle which allows for simple and fast tube changes.

The range has three control options allowing the pumps to be programmed with different functions. This means the pump can be operated either manually, remotely or through a pre-programmed control system.

The S40 pump head provides flow rates from 0.46 - 27 l/min per channel and has the capability of expanding up to 4 channels on a single drive.

The Solution is the Verderflex® Smart Series.

Pump Head

- Easy-fit tube saddle for rapid tube changes
- Automatic tube clamp
- Manufactured from chemically resistant Polyoxymethylene (POM)
- Transparent front cover manufactured from Polymethylmethacrylate (PMMA)
- Can be expanded to a maximum of 4 pump heads
- Pressure range 0 - 4 bar (Special tubes and rotor are required for pressures above 1.5 bar)
- A choice of 3 roller, or low-pulsation 6 roller heads
- SSD Safety interlock to stop the drive whenever the saddle is opened or removed
- In-line tube arrangement, providing a kink free liquid path

Drive

- Robust powder-coated aluminium housing (IP55/NEMA 4)
- Ergonomic construction with a clear, accessible display for clockwise/anti-clockwise, On/Off and speed control
- Illuminated display which is clearly readable from every angle



Smart Technical Overview

The drives are available in **three** control options:

B model: standard on-off, left-right functions;

C model: remotely controlled operation;

L model: programmable & remote operation

| Control Options | B Model | C Model | L Model |
|------------------|------------------|------------------|------------------|
| Speed | Max. 240 rpm | Max. 240 rpm | Max. 240 rpm |
| Turndown ratio | 100:1 | 100:1 | 100:1 |
| Multi-channel | up to 4 channels | up to 4 channels | up to 4 channels |
| External control | x | 0-10V / 4 - 20mA | 0-10V / 4 - 20mA |
| Computer signal | x | x | ✓ |
| Calibration | x | x | ✓ |
| Auto reverse | x | x | ✓ |
| Protection class | IP55/NEMA 4 | IP55/NEMA 4 | IP55/NEMA 4 |
| Rapid start | x | ✓ | ✓ |
| Keypad | ✓ | ✓ | ✓ |

Capacity (l/min) per channel

| Tube ID x WALL (mm) | MIN l/min | US GPM | MAX l/min | US GPM |
|---------------------|-----------|--------|-----------|--------|
| 15.9 x 4.8 | 0.46 | 0.12 | 10.5 | 2.8 |
| 19.0 x 4.8 | 0.5 | 0.13 | 15.5 | 4.0 |
| 25.4 x 4.8 | 0.65 | 0.17 | 27 | 7.1 |

3.2mm tubes available as a special order option

Measured with water at 20°C without suction or delivery pressure

| Physical Properties | S40 |
|---------------------|-----------|
| Weight | 23kg |
| Voltage | 115V/230V |
| Frequency | 50/60Hz |
| Power Consumption | 250W |

| Description | Material S40 |
|--|---|
| Backplate / Clampbase / Saddle | POM (Black) |
| Rotor | Machined Aluminium EN AW-6082 T6 |
| Skiboot Handle & Catch | Machined Aluminium EN AW-6082 T6 (Extruded/Anodised) (RAL 6018 Green) |
| Clamp / Block / Adjustment Screw / Nut | Machined Aluminium EN AW-6082 T6 (Clear Anodised) |
| Drive Shaft / Coupling / Tiebar | Stainless Steel Grade EN1.4301 (304) |
| Saddle / Handle / Roller Pins | Stainless Steel Grade EN1.4571 (316) |
| Roller | Stainless Steel Grade EN1.4571 (316) |
| Frontplate | PMMA (Clear) |
| Magnet | Neodymium |
| Clamp Spring | BS 5216:1991 Spring Steel |
| Bearings | Stainless Steel EN1.4125 (440c) |

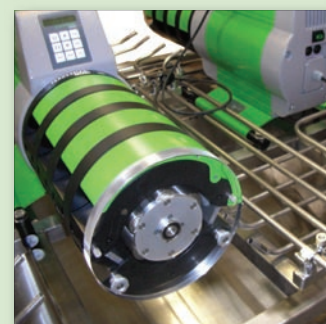
Unique features

- The illuminated central display is easy to read from all angles and the menu has been designed so that it is simple and logical to navigate.
- As there is no pump head restricting access to the keypad it can be easily operated by left and right handed people and the buttons are large enough to be operated even whilst wearing gloves.



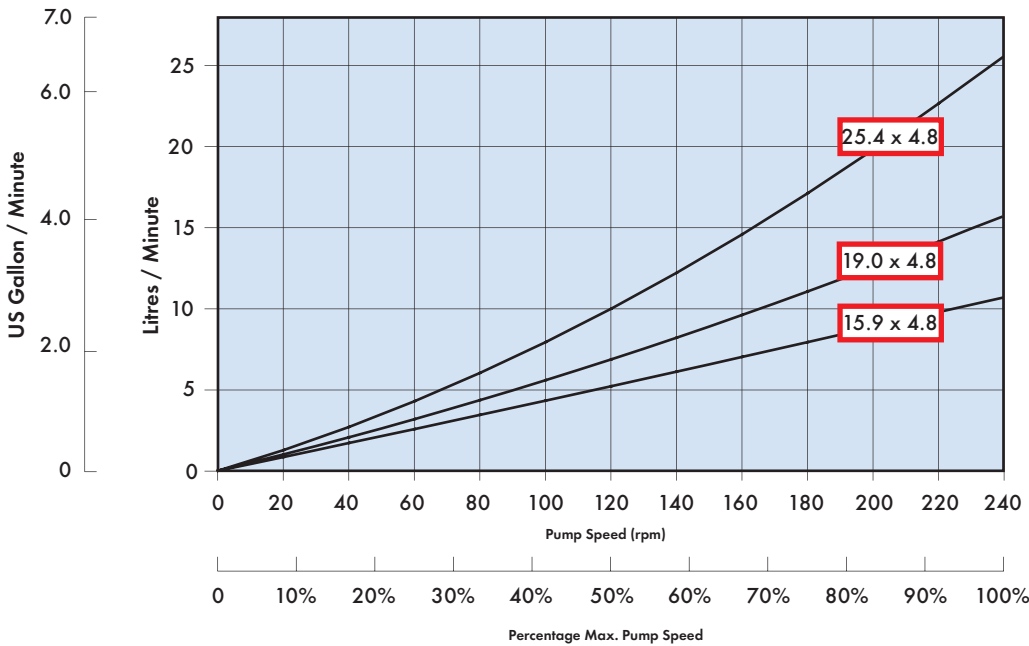
Multi-channel expandability

- The Smart series offers the flexibility to add further pump heads, up to a maximum of four, which allows the user to operate several lines from the same pump, whilst the extended feet keep the pump stable.
- If pulse-free operation is required, the flow can be split between two channels. This will significantly reduce the pulsation.



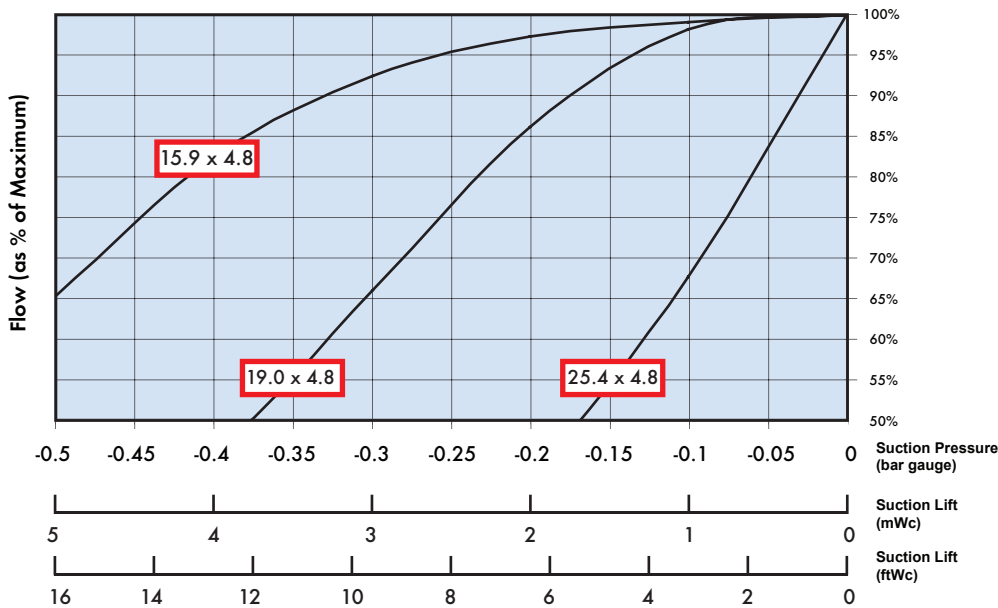
Smart Smart S40 3 Roller Free Flow Curve For 4.8mm Walled Tube

The S40 Pump Head is supplied with a saddle for a 4.8mm wall thickness tube as standard

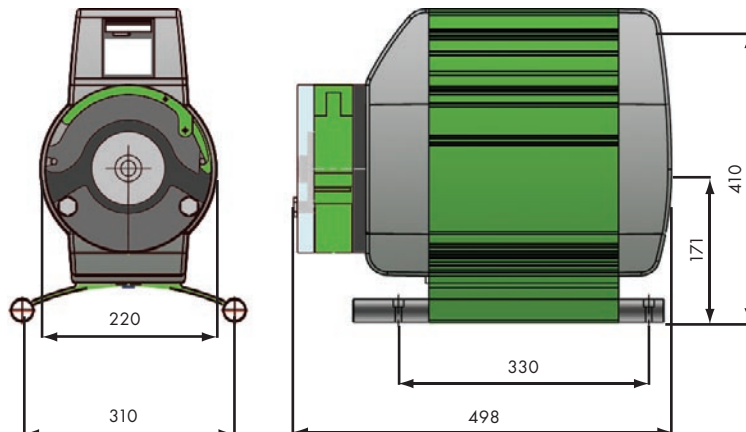


Correction graphs for suction

Capacity loss depending on suction head



General Arrangement Layout



Smart tube selection

VERDER has a wide variety of tubes which offer the ideal choice for every application. In our range we offer several standard materials with various diameters and thicknesses. Special tubes are available on request.

Not all tubes are suitable for use in a peristaltic pump. The following criteria are important when selecting a tube:

- Chemical resistance
- Food grade quality
- Tube life
- Physical compatibility
- Sterilisation capability

The following tube materials are available:

- Verderprene - General purpose
- Verderfuel - Process fluids
- Silicone - High temperature fluids
- Fluran - Aggressive chemicals

For more information on our range of tubing please refer to our tube selection guide or visit:

www.verderflex.com

