A well-functioning pump helps you succeed. That applies certainly to the most important pump in life, the human heart, but the same goes for pumps in business. At Verder, all energy and attention is focused on improving the quality and performance of our pump and service. We do so with energy, dedication and most importantly, with our heart.

VERDER – PASSION FOR PUMPS
The Verder Group

The Verder group is a family owned business formed over 55 years ago in the Netherlands; the group consists of a worldwide network of production and distribution companies. Group companies are involved in the development and distribution of industrial pumps, pumping systems, high-tech equipment for quality control, research and development into solid material (solids sample preparation and analytical technologies). The Verder Group employs over 1600 people and has an annual turnover is in excess of 380 million Euros.

Among the most successful of Verder’s technologies is its innovative Verderflex®, peristaltic hose and tube pumps range.

Verderflex® peristaltic pumps

Verderflex® is a core Verder group product, solving pumping problems in such varied industries as: chemical manufacturing, food production, environmental remediation, water treatment, mining and general manufacturing, whilst also developing custom OEM solutions.

Verderflex® peristaltic pumps are manufactured in the EU within ISO 9001:2008, ISO 14001 and ISO 18001 accredited facilities, and the products have a range of food and similar industry specific certifications.

Verderflex® peristaltic hose and tube pumps are the ideal solution for “difficult to pump” liquids or demanding applications. These range from smaller vending machine OEM pump modules and precision metering tube pumps to the world’s largest high pressure hose pumps pumping dense, solids laden, mining thicken-ner slurries and highly abrasive, viscous or corrosive liquids.
The advantages of working with Verderflex

Single source solutions
Verderflex® offers a single source for peristaltic pumping solutions with a range of applications as diverse as OEM production partnerships to larger scale industrial projects.

Expertise
With over 55 years experience providing innovative pumping solutions, Verderflex has the expertise and knowledge to supply the most appropriate pumping technical solution.

Partnership
The Verder Group has developed a vast, complimentary network of over 25 group companies and 40 experienced distribution partners with a presence in almost every corner of the world. With such worldwide affiliations, Verder is able to support its products internationally.

What is a peristaltic pump & why use one?
1. A peristaltic pump operates by a very simple principle: peristalsis: the alternating compression and relaxation of a hose or tube drawing the contents into the pump and propelling them to the delivery point, a principle well proven in our throat and intestines but one that eliminates unnecessary complexity or high parts counts.

2. A rotating shoe or roller passes along the hose or tube’s length, totally compressing it and creating a seal between the pumps’ suction and discharge sides to eliminate product slip and remove the need for check valves and similar ancillary equipment.

3. With the benefit of enhancement from the 2 and 6 hose reinforcement layers, the high pressure hoses operate at working pressures up to 16 bar and generate higher suction lifts than non-reinforced tubing. Typical discharge pressures for tube pumps are 2 to 7 bar.

4. However, even a tube’s restitution (or recovery to round) produces a strong suction side vacuum that draws product into the pump for a powerful dry priming capability and problem-free pumping of off-gassing liquids.

5. The pumped media is totally contained within either the robust, heavy-duty hose or the precision extruded tube. As the liquid does not come into contact with any moving parts, it minimises contamination risks and after suitable sterilisation, tubes give aseptic dosing solutions.

6. With no product slip and a linear flow-speed relationship, easily controllable peristaltic pumps have accurate, predictable, proportional dosing capabilities and can be controlled by digital or analogue signals.

7. Peristaltic pumps do not require the pumped liquid to flow through the pump and can run dry eliminating downtime and maintenance costs due to accidental or process failures.

Where can you use a Verderflex® peristaltic pump?

With such advantages, Verderflex® peristaltic pumps are used in far ranging applications. In the precious and base metal mines of Africa, Australia and the Americas very abrasive slurries are pumped with minimal water content, eliminating the need for and cost of additional process water. In North America and Europe’s water treatment and desalination plants they are a key element in controlling the quality of drinking water and treating waste.

Worldwide, Verderflex®’s pumps form critical elements in chemical and pharmaceutical production plants and laboratories pumping fragile and shear sensitive broths, aggressive chemical reagents or simply emptying particle laden sumps. In food and drink processing they ensure optimum product quality.

Other successful applications can be found transferring printing inks, metering sample or re-circulating controlled volumes, precisely dosing vending machine liquors and many more.

The green peristaltic pump
CONTENT

The Verderflex program 6

The Verderflex® industrial peristaltic pump range 8
Verderflex® RAPIDE tube pumps 8
Verderflex® ROLLIT lubricant free hose pumps 9
Verderflex® DURA hose pumps 10
Verderflex® VF series hose pumps 11

The Verderflex® cased drive peristaltic pump range 12
Verderflex® VANTAGE 5000 precision dosing pumps 12
Verderflex® VANTAGE 3000 cased drive tube pumps 14
Verderflex® ECONOMY cased drive pumps 15
Verderflex® VP cased drive dosing tube pumps 16
Verderflex® SMART cased drive pumps 17

The Verderflex® peristaltic OEM pump range 18
Verderflex® M045 19
Verderflex® M025 19
Verderflex® VP2-B and VP2-R 19
Verderflex® Mini Load 20
Verderflex® M500 20
Verderflex® M60 20
Verderflex® EZ 21
Verderflex® M2000 21
Verderflex® M1500 21
Verderflex® R3DC 22
Verderflex® S Series 22
Verderflex® Steptronic Drive 22

Consumables 23
Hoses 23
Tubing 23
Lubricants 23
Accessories 23

Applications Verderflex® pumps 24

Contact Verderflex® 26

Verderflex® 27
The Verderflex program

Verderflex® peristaltic hose pumps and tube pumps are the ideal solution for pumping abrasive, highly corrosive, viscous, high density and shear sensitive liquids, sludges and slurries. Ranging from smaller Original Equipment Manufacturer (OEM) pumps to the world’s largest hose pumps used in very heavy industrial applications, Verderflex® peristaltic hose and tube pumps are used in many industries including: water and wastewater, mining, food & beverage, chemical, pharmaceuticals, printing and packaging and many more.

Characteristics Verderflex®

- Wide range of flow rates from 1 ml/min to 90 m³/h
- Discharge pressures from 1 bar to 16 bar
- Ideal for pumping liquids that are:
  - Abrasive
  - Highly corrosive
  - Shear sensitive
  - Solids laden
  - Viscous
- Simple designs with low parts count
- Suction lifts up to 9.5 mWc

Peristaltic Industrial Hose and Tube pumps

Verderflex® Industrial peristaltic pumps are extremely robust pumps, ideal for heavy duty operations on intermittent or continuous duty cycles. They are a simple to use, easy to control, versatile and reliable way to pump liquids.
Peristaltic Cased Tube Pumps
The Verderflex® Peristaltic Cased Tube Pump range are ideal for benchtop, laboratory and process environments. Tube pumps are perfect for lower flow rates, are fully programmable, with the option of multiple heads. These types of pump provide accurate dosing and repeatability and are capable of handling viscous and chemically aggressive liquids as well as shear sensitive products.

Peristaltic OEM Pumps
The Verderflex® OEM range of tube pumps are designed for panel mounting or incorporation into 3rd party machines that need an accurate, low maintenance dosing solution that can be found in many applications such as printing, packaging, chemical dosing, vending machines, water treatment and more.

Consumables and Accessories
Typical consumables for the Verderflex® pumps are hoses, tubes, lubricants and accessories like pulsation dampers, custom base plates, quick change hoses and more. It is recommended that these consumables be used with Verderflex® pumps for better performance and low operational costs.
The Verderflex® industrial peristaltic pump range

Verderflex® industrial peristaltic pump range includes extremely robust, simple to use, easy to control, higher operating pressure Verderflex® and Verderflex® Dura hose pumps. Ideal for arduous continuous operations, the lower pressure, lubricant free Verderflex® Rollit family for viscous liquid transfer or the compact Verderflex® Rapide industrial tube pumps.

Verderflex® RAPIDE tube pumps

The Verderflex® Rapide is a range of compact, simple to operate industrial tube pumps with the optional flexibility of multiple channel operation.

Technical details

<table>
<thead>
<tr>
<th>Flow rate</th>
<th>&lt; 17 l/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
</tbody>
</table>

Options: Single phase motors, multiple channel design, lower pulsation rotor options, custom OEM specifications

Advantages of the Verderflex® RAPIDE pumps

- Compact size
- Simple control systems using variable frequency drives (VFDs) or inverters for variable flow applications
- Easy integration into third party equipment, such as printing presses
- Duplex or multiple stackable heads versions available
- Fast tube change

Applications

- Chemical processing - Activated Carbon
- Paper and pulp processing - Bleaching Agents
- Printing and packaging - Ink
- Reagent dosing - Flocculants
- Water treatment - Reagents
Verderflex® ROLLIT lubricant free hose pumps

The Verderflex® Rollit is a new generation of simple to use, dry running, compact, sealless hose pumps. Easy to maintain, without a lubricant bath, the low pulsation, energy efficient Verderflex® Rollit pumps dry self-prime up to 8 mwc and are available in single and twin channel models.

Applications
- Ceramics industry - Slip
- Chemical manufacturing - Reagents
- Water & wastewater treatment - Flocculants
- Food and beverage processing - Fruit pulps and syrups
- Laminates, Paint & Lacquer production - Resins
- Personal care - Creams and Shampoos
- Pharmaceutical Industry - Broths and Suspensions
- Plastics industry - Slurries
- Printing - Inks

Advantages of the Verderflex® ROLLIT hose pumps
- EC & FDA Food grade hoses
- Hose changeover takes seconds
- Hygienic models with low spallation
- Verderprene hoses
- No lubricant bath
- No seals, flaps and valves
- Optional ATEX versions
- Self-priming up to 8 mwc
- Small footprint
- Standard & low pulsation Twin pump head options

Technical details

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 24.5 m³/h</td>
</tr>
<tr>
<td>Pump speed</td>
<td>&lt; 165 rpm</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 4 bar</td>
</tr>
<tr>
<td>Dry Suction Lift</td>
<td>&lt; 8 mwc</td>
</tr>
<tr>
<td>Motor power</td>
<td>&lt; 4 kW</td>
</tr>
<tr>
<td>ATEX</td>
<td></td>
</tr>
</tbody>
</table>
Industrial peristaltic pumps

Applications
- Brewing - Diatomaceous Earth, Yeast
- Chemical processing - Reagents
- Mining - Flocculants (SIBX)
- Power generation - Fly ash slurry
- Water and waste water - Hypochlorite

Advantages of the Verderflex®
- DURAX 5 - 35 hose pumps
  - Vastly reduced footprint
  - Simple yet secure, taper fit flange assembly reduces hose change downtime
  - Long coupled design with close coupled advantages

Advantages of the Verderflex®
- DURAX 45 - 55 hose pumps
  - Drain channel for gearbox protection
  - Fully supported rotor shoes
  - Independently supported rotor
  - Shimmable rotor shoes optimise hose life
  - Stalled rotor protection

Verderflex® DURA hose pumps
The Verderflex® Dura is the first real advance in hose pump technology since the high pressure hose, combining the compactness of a close coupled pump with all the benefits of the traditional long coupled pump.

Technical details

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 15.3 m³/h</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 16 bar</td>
</tr>
<tr>
<td>Dry Suction Lift</td>
<td>&lt; 9.5 mwc</td>
</tr>
<tr>
<td>Hoses</td>
<td>NR, NBR, EPDM, NBRF, CSM and Verderprene</td>
</tr>
<tr>
<td>Options</td>
<td>ATEX</td>
</tr>
</tbody>
</table>

Applications
- Brewing - Diatomaceous Earth, Yeast
- Chemical processing - Reagents
- Mining - Flocculants (SIBX)
- Power generation - Fly ash slurry
- Water and waste water - Hypochlorite
Verderflex® VF hose pumps

The Verderflex® VF range of industrial hose pumps are a proven, heavy duty family of peristaltic pumping solutions. These pumps reduce downtime, minimise maintenance costs and provide easy to operate and reliable solutions in difficult pumping situations.

Technical details

<p>| | |</p>
<table>
<thead>
<tr>
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<tr>
<td>Flow rate</td>
<td>&lt; 90 m³/h</td>
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<tr>
<td>Discharge pressure</td>
<td>&lt; 16 bar</td>
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<tr>
<td>Dry Suction Lift</td>
<td>&lt; 9.5 mwc</td>
</tr>
<tr>
<td>Hoses</td>
<td>NR, NBR, EPDM, NBRF and CSM hoses</td>
</tr>
<tr>
<td>Options</td>
<td>ATEX &amp; EHEDG standards for food, sanitary and pharmaceutical industries</td>
</tr>
</tbody>
</table>

Applications

• Anaerobic digestion & biogas - Food waste
• Brewing - Yeast
• Chemical processing - Reagents and additives
• Food - Waste sludge
• Mining - Thickened Slurry
• Water and waste water - Lime, Sludge

Advantages of Verderflex® VF hose pumps

• Compact, close coupled drive design
• Polypropylene and PVDF insert options for aggressive chemicals.
• Pump Sizes up to 125 mm
• Rigid pump housing design for heat dissipation and strength
• Specially designed hose construction minimises fatigue, optimising hose life
• Totally enclosed hose connection keeps pumped liquid inside the pump
The Verderflex® cased drive peristaltic pump range

Verderflex® range of cased driven peristaltic or tube pumps provide accurate dosing and repeatability in several styles from intermittent duty manually controlled pumps to fully programmable versions with multiple head options. They are capable of handling viscous and chemically aggressive liquids as well as shear sensitive products, making them an ideal hygienic pumping solution for dosing chemicals, inks, food and drinks.
The Verderflex® VANTAGE 5000 precision dosing pump series
The Verderflex® Vantage 5000 is the next generation of highly advanced, easy programming, precision dosing peristaltic cased drive pumps. Easy to operate, extremely user-friendly, every Verderflex® Vantage 5000 uses touch-screen technology and a simple menu structure along with an intuitive operating system. Each pump has highly visible, colour coded menu, on-screen status alerts and alarms. Every pump has 4 tube wall thickness rotor options for maximum flow flexibility and optional tube elements are available with Hose Barb or Tri-Clamp connections.

Technical details

<table>
<thead>
<tr>
<th>Flow rate</th>
<th>&lt; 6600 ml/min</th>
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</thead>
<tbody>
<tr>
<td>Discharge pressure</td>
<td>&lt; 7 bar</td>
</tr>
<tr>
<td>Tube options</td>
<td></td>
</tr>
<tr>
<td>2 bar</td>
<td>1.6 mm Wall Thickness, 1.6 mm to 8.0 mm ID</td>
</tr>
<tr>
<td>2 bar</td>
<td>2.4 mm Wall Thickness, 3.2 mm to 9.6 mm ID</td>
</tr>
<tr>
<td>4 bar</td>
<td>2.4 mm WT (Medium pressure)</td>
</tr>
<tr>
<td>7 bar</td>
<td>2.4 mm WT (High pressure)</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 66 / NEMA 4X</td>
</tr>
<tr>
<td>Options</td>
<td>Control, Remote, SCADA and Fieldbus including Modbus®</td>
</tr>
</tbody>
</table>

Advantages of the Verderflex® VANTAGE 5000 precision dosing pumps
- Advanced touch screen technology
- Downloadable job and pump histories
- Eliminates additional ancillary equipment like check valves and strainers
- Intuitive, icon based menus
- Onboard storage for up to 30 dosing programs
- Precision metering with 4000:1 turndown
- Up to double the flow of other leading brands (High flow per revolution enhances tube life)
- Secure Access with Multi Level Passwords
- USB Interface for “pump back-up” and “job transfer”
- User selectable languages
- Wide range of remote control options including 4 to 20mA, SCADA and digital protocols including MODBUS®

Applications
- Biotechnology & Pharmaceuticals
  - Cell Solution, Transfer of fermentation feeds, filtration feeds, nutrient metering
  - Waste water treatment
- Ferric Chloride, Sodium Hypochlorite, Potassium Permanganate,
- Industrial - Dosing of flavours into oils, yeast, hypo in power generation, reagent dosing
- Water Treatment
  - Calcium Hypochlorite, Aluminium Sulphate, Sodium Bisulphite, Fluorosilicic Acid, Poly Aluminium Chloride

Additional benefits
- Automatic stop when pump head cover is opened
- Standard Pressure Versions available in Loose Tubing or tube element
- Quick Release or Tri Clamp Tube Elements for Low, Medium & High Pressure Options
- Tube Burst Detection as standard

The green peristaltic pump
Advantages of the Verderflex® VANTAGE 3000 pumps

- Brushless D.C. motor for 24 hour continuous applications
- Gentle self priming pumping action, ideal for pumping shear sensitive cultures and broths
- High flow, large WT versions for viscous liquids
- High repeatability - accuracy is ± 0.5 - 2%
- Stackable heads for easy expansion on 1.6 mm WT pumps
- Zero contamination

Verderflex® VANTAGE 3000 cased drive tube pumps

The flexible low to medium flow Verderflex® Vantage 3000 cased drive tube pump can be supplied with 3 different head designs allowing different wall thickness (WT) tubing to be used and on smaller wall thicknesses, multiple heads can be fitted. The pump can be user calibrated to ensure high accuracy and has a run back option to prevent spillages of hazardous liquids.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 3.25 l/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Head Options</td>
<td>EZ Head (1.6 mm WT), S10 (2.4mm WT), R3i (3.2 mm WT)</td>
</tr>
<tr>
<td>Control Options</td>
<td>Footswitch, 0-10V, 4-20mA, RS-232</td>
</tr>
<tr>
<td>Pump Options</td>
<td>Manual control, remote control and dispensing</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP41 / IP66</td>
</tr>
</tbody>
</table>

Applications

- Bench-top laboratory processing
- Chemical
- Food flavouring
- Pharmaceutical
Verderflex® ECONOMY cased drive pumps
The Verderflex® Economy range of peristaltic tube pumps are simple to use, manual control, cost effective cased drive tube pumps. Ideal for intermittent, bench top use in laboratories and process environments, this compact range is ideal for transferring, harsh, abrasive, shear sensitive or viscous fluids. The family has 5 pump head options for a wide range of maximum flow rates.

Technical details

| Flow rate   | < 8 l/min | Discharge pressure | < 2 bar |

Applications
- Bench-top laboratory processing
- Chemical seed treatment
- Dairy CIP systems
- Paper and pulp

The green peristaltic pump

VERDERFLEX®
Flow rate < 20 l/h
Pump speed < 160 rpm
Discharge pressures < 3 bar
Supply voltage 230 V

Applications
- Chemicals dosing
- Dishwashing and other washing equipment
- Small scale water treatment
- Swimming pool water treatment

Verderflex® VP cased drive dosing tube pumps
The Verderflex® VP dosing systems are self contained IP 55 rated constant or variable flow dosing systems for pH, REDOX or Chlorine control. Systems include an overdosing alarm, remote On-Off switching, and supply tank fluid-level switches make them ideal for small scale water purification based applications.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value 1</th>
<th>Value 2</th>
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</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 20 l/h</td>
<td></td>
</tr>
<tr>
<td>Pump speed</td>
<td></td>
<td>&lt; 160 rpm</td>
</tr>
<tr>
<td>Discharge pressures</td>
<td>&lt; 3 bar</td>
<td></td>
</tr>
<tr>
<td>Supply voltage</td>
<td></td>
<td>230 V</td>
</tr>
</tbody>
</table>

Features of the Verderflex®

VP dosing system
- Constant flow or external input
- “Variable flow” (Remote On/Off switch)
- Out of range measurement
- Overdosing alarm
- Supply tank fluid level switch input
**Verderflex® SMART cased drive pumps**

The Verderflex® Smart cased drive pumps have a unique, latching ski boot style tube pump head for quick and easy tube changes with a safety cut out when the head is not correctly fitted or accidentally opened. Pumps can be supplied with up to 4 heads for multiple channel dosing.

### Technical details

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flow rate</strong></td>
<td>&lt; 17 l/min</td>
</tr>
<tr>
<td><strong>Discharge pressure</strong></td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td><strong>Control models</strong></td>
<td></td>
</tr>
<tr>
<td>B : simple manual speed control</td>
<td></td>
</tr>
<tr>
<td>C : remote stop/start &amp; 4-20mA input</td>
<td></td>
</tr>
<tr>
<td>L : Dispensing program &amp; RS 232</td>
<td></td>
</tr>
<tr>
<td>SCADA : 4-20mA input &amp; output, 4 volt free inputs &amp; 4 volt free outputs</td>
<td></td>
</tr>
</tbody>
</table>

### Applications

- Biotechnology - Cellular broths
- Chemical processing - Reagents
- Water Treatment - Flocculants
The Verderflex® peristaltic OEM Pump range

Verderflex’s range of OEM peristaltic pump assemblies offer both design engineers and their production teams cost effective performance and reliability matched to their specific requirements. Our OEM Product Range offers a selection of custom pump designs, motor options and tubing. The Verderflex OEM range can be configured into an optimal solution for any OEM pump requirement.

Applications
- Air conditioning
- Cleaning
- Chemical dosing
- Condensate removal
- Sampling systems
- Industrial lapping
- Laboratories and analysis
- Laundries
- Medical equipment
- Pools
- Refrigeration
**Verderflex® M045**  
The Verderflex® M045 is a proven 2 roller, low flow rate OEM pump with a range of AC or DC motor power and speed options. It is ideal for applications with options for speed and flow rate variations.

**Technical details**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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<tr>
<td>Flow rate</td>
<td>&lt; 60 ml/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 4.0 mm</td>
</tr>
<tr>
<td>Motor Power Options</td>
<td>12V DC, 24V AC or DC, 230V AC</td>
</tr>
</tbody>
</table>

**Verderflex® M025**  
The Verderflex® M025 pump head has a flip top front cover for ease of tube loading and is supplied with DC motors for application requiring a higher flow rate than the M045.

**Technical details**

<table>
<thead>
<tr>
<th>Parameter</th>
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<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 260 ml/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 4.8 mm</td>
</tr>
<tr>
<td>Motor Power Options</td>
<td>12V or 24V DC</td>
</tr>
</tbody>
</table>

**Verderflex® VP2-B and VP2-R**  
The Verderflex® VP2-B is an entry level fixed flow tube pump with Santoprene or Silicon tube options. The Verderflex VP-2R has manual flow rate regulation via an adjustable trimmer.

**Technical details**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 333 ml/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 1 bar (Verderprene) 3 bar (Silicone)</td>
</tr>
<tr>
<td>Speeds</td>
<td>10 - 40 rpm</td>
</tr>
<tr>
<td>Motor power</td>
<td>230V, 50-60 Hz</td>
</tr>
</tbody>
</table>
Verderflex® Mini Load
The “Flip Top” Verderflex® Mini-Load pump head uses a patented ‘snap-in’ tube clamp technology to match OEM assembly requirements and eliminate user confusion. Available in standard and double head options.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 356 ml/min</td>
</tr>
<tr>
<td>Tube WT</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 4.8 mm</td>
</tr>
<tr>
<td>Motor power options</td>
<td>24V DC brushed or brushless, optionally Steptronic precision drive</td>
</tr>
<tr>
<td>Features</td>
<td>Compact design with quick release tube head</td>
</tr>
</tbody>
</table>

Verderflex® M500
The Verderflex® M500 is a widely used classic OEM pump module with DC or AC motor options that provides speed and flow rate variations.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 730 ml/min</td>
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<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 4.8 mm</td>
</tr>
<tr>
<td>Motor power options</td>
<td>12V DC, 24V DC, 24 V AC, 230V AC</td>
</tr>
</tbody>
</table>

Verderflex® M60
The Verderflex® M60 is an OEM pump module with a snap on tube cartridge with DC or AC motor options designed for high volume OEM requirements.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 990 ml/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 6.4 mm</td>
</tr>
<tr>
<td>Motor power options</td>
<td>24V DC brushed or brushless, optionally Steptronic precision drive</td>
</tr>
</tbody>
</table>
**Verderflex® EZ**
The Verderflex® EZ head is a higher flow “flip top” pump head with an easy tube change system and can be stackable for multi head options. Available in permanent and brushless D.C. motor options or the Steptronic precision drive for speed/flow rate variations.

### Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 1.26 l/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>1.6 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 8.0 mm</td>
</tr>
<tr>
<td>Motor Power Options</td>
<td>12/24V DC brushed or brushless, optionally Steptronic precision drive</td>
</tr>
<tr>
<td>Features</td>
<td>Quick release tube head</td>
</tr>
<tr>
<td></td>
<td>Optional 2 channel stacked heads version</td>
</tr>
</tbody>
</table>

**Verderflex® M2000**
Higher flow rate version of the original patented M1000 cartridge pump for easy tube changeover using auto-clavable cartridges.

### Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 1.9 l/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Motor power</td>
<td>24V DC</td>
</tr>
<tr>
<td>Standard speeds</td>
<td>85rpm, 125rpm and 176rpm</td>
</tr>
</tbody>
</table>

**Verderflex® M1500**
The Verderflex® M1500 is a high flow OEM pump with a robust polycarbonate ABS blend casing and normally uses a DC motor option for speed and flow rate variations.

### Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 2.2 l/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>2.4 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 8.0 mm</td>
</tr>
<tr>
<td>Motor power options</td>
<td>12 &amp; 24V DC &amp; 230V 50Hz</td>
</tr>
</tbody>
</table>
Verderflex® R3DC
The Verderflex® R3DC peristaltic pump head combines high flow with heavy duty performance for applications requiring reliability, accuracy and high suction lift capacity.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 17 l/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>3.2 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>6.4 mm, 8.0 mm &amp; 9.6 mm</td>
</tr>
<tr>
<td>Motor power</td>
<td>24V D.C.</td>
</tr>
</tbody>
</table>

Verderflex® S Series
The Verderflex® S series provides the unique, latching ski boot style tube pump head in a pump head format for OEM customers. There are 4 models, the S10, S20, S30 & S40, for a wide range of flow rates. Special lower pulsation versions are available for the larger head sizes.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>&lt; 17 l/min</td>
</tr>
<tr>
<td>Discharge pressure</td>
<td>&lt; 2 bar</td>
</tr>
<tr>
<td>Tube WT</td>
<td>2.4 mm, 3.2 mm &amp; 4.8 mm</td>
</tr>
<tr>
<td>Tube ID</td>
<td>≤ 25.4 mm</td>
</tr>
<tr>
<td>Motor power</td>
<td>48V D.C.</td>
</tr>
<tr>
<td>Features</td>
<td>tube changeover in seconds</td>
</tr>
</tbody>
</table>

Verderflex® Steptronic Drive
The Verderflex® Steptronic is a precision stepper motor drive that provides a cost effective, configurable OEM pump development platform for engineers. It gives design specification flexibility to eliminate early stage project uncertainties due to pumps, drives and control system changes. Speed control can be provided using either a 4-20mA or 0-10V input. Head options include the new VF “Mini-Load”, the higher flow rate Verderflex® “EZ” pump heads or the snap on cartridge M60 pump. Options include dual stackable pump heads, IP66 rated special cases and configurable speed range. Verderflex® Steptronic is ideal for higher volume large OEM manufacturing as it provides a precision high resolution drive.

Technical details

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
<td>&lt; 400 rpm</td>
</tr>
<tr>
<td>Speed Accuracy</td>
<td>0.1%</td>
</tr>
<tr>
<td>Turn down ratio</td>
<td>4000:1</td>
</tr>
<tr>
<td>Control resolution</td>
<td>12 bits</td>
</tr>
</tbody>
</table>
Consumables

Typical consumables for the Verderflex® pumps are hoses, tubes, lubricants and accessories like pulsation dampers, custom base plates, quick change hoses and more. It is recommended to always use genuine Verderflex® consumables with Verderflex® pumps to ensure the best performance and lower operational costs.

Hoses
Verderflex® hoses are specially designed and manufactured to minimise fatigue in industrial applications for reliable service and long life. Whilst not over stressing components due to excessive radial loads, genuine Verderflex® hoses can be fitted in many peristaltic pumps where they have been proven to increase service intervals from their superior design.

Tubing
Verderflex® has a wide variety of tubes which offer the ideal choice for every application. Within the wide range of Verderflex® tubes are several standard materials with various diameters, thicknesses and chemical compatibility and compliance with various standards worldwide.

Lubricants
Peristaltic hose pumps require lubrication to keep performing at the highest level. Verderlube and Verdersil are especially designed to work with Verderflex® peristaltic pumps with lubricant baths, acting as a lubricant and coolant for efficient pumping and prolonged hose life. Verderflex® also provides standard and Silicone free lubricant grease for dry running pumps including the Verderflex® Rollit.

Accessories
Verderflex® supplies many accessories including pulsation dampers, custom base plates, quick change hoses, variable frequency drives, pH and Redox probes and Chlorine concentration cells.
Verderflex® offers a wide range pumping solutions suitable for a variety of industrial & OEM high-tech, complex applications. Our experts at Verderflex®, not only offer innovative pumping solutions but also excellent after-sales support and customer services. Amongst numerous industries and applications, below are few examples where Verderflex pumps have proved to be efficient and cost-effective solutions for customer’s processes:

### Anaerobic Digestion Sludge Transfer
Verderflex® pumps transfer high solid content biofuel sludge to digestion tanks requiring a high suction lift.

### Aseptic Pharmaceutical Dosing
With a smooth liquid passage and no valves or moving parts in the liquid stream and only the sterilized tube in contact with the media, this VF Vantage 3000 precisely doses clinical trial products into bags.

### Dosing and Transfer of Refuse Leachate to Incinerators
A Chinese Waste Incineration Plant uses 12 Verderflex® peristaltic pumps dose solids laden, abrasive leachate to a collection reservoir, through an automatic cleaning filter and collected in a draining reservoir.
Pumping Kieselguhr
Dura 25 pumps dose and transfer Kieselguhr, or Diatomaceous Earth, in a Bavarian brewery’s beer filtration process, filtering 1200 hl of beer every 8-10 hours filtration cycle.

Metering Abrasive Coatings
Verderflex® Rollit lubricant free pumps gently meter viscous laminate coating resins containing abrasive carborundum eliminating seal wear, eliminate air bubbles and reduce job changeover times.

Dosing Alum
Rapide 17S dose Aluminium Sulphate to purify drinking water, replacing existing solenoid operated pumps reducing maintenance costs and giving more consistent dosing performance.

Dosing Flocculent
Verderflex® Dura 10 pumps dose interruptible flow, emulsion flocculent, replacing dry running progressing cavity pumps with burnt stators & high maintenance costs.

Dosing Sterilising Solutions
M500 OEM pumps dose flow-rate-critical detergent to clean milk transfer tanks and lines, maintaining equipment sterility.
Contact Verderflex

If you would like to know more about Verderflex® peristaltic pumps then please visit our website www.verderflex.com where you will find the full breakdown of our pump range as well as application stories, latest news and technical datasheets and more.

Verderflex, Verder Ltd
Unit 3 California Drive
Castleford
WF10 5QH
United Kingdom
Tel: +44 (0)1924 221 020
Email: info@verderflex.com

To provide you with the best possible service Verderflex® are supported by a distribution network that covers all five continents and is continuing to expand. Our group of distributors includes members of the Verder Group and experienced independent companies. Our worldwide distribution network also help to provide our customers local support and spares availability.
Verderflex

Verderflex® has a global network of Verder sister companies and experienced independent national distribution partners. Network that covers all five continents and is continuing to expand. You can find your local distributor on our website at: www.verderflex.com/contact-us.

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- Belgium Aartselaar/Diksmuide/Zedelgem
- Bulgaria Sofia
- China Shanghai
- Czech Republic Prague
- Denmark København
- France Eragny s/Oise
- Germany Haan/Kassel
- Hungary Budapest
- India Pune
- Italy Vazia
- The Netherlands Groningen/Vleuten
- Poland Katowice
- Romania Bucharest
- Slovenia Bratislava
- South Africa Northriding
- Thailand Bangkok
- United Kingdom Castleford
- USA Macon (GA)
If you would like to know more about Verderflex® peristaltic pumps then please visit our website www.verderflex.com where you will find the full breakdown of our pump range as well as application stories, latest news and technical datasheets.