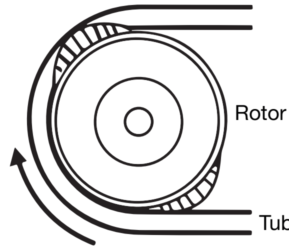
Valve free principle of a peristaltic pump

The tube is the key component of the pump. The roller or shoe comes onto a tube and squeezes it. This roller/shoe then passes along the tube effectively dragging the liquid into it (it creates a suction). A second roller/shoe will then come on to the tube and turn the filled section of the tube into a pocket or pillow of liquid, which it then pushes along the tube by moving itself along the tube. This pocket/pillow is then pushed out the other side of the tube. The tube opens up at the inlet to refill with liquid and the process continues.



There are distinct advantages because the pillow of liquid is a very specific size and the speed of rotation of the rollers/shoes can be very accurately controlled. This means that the pumped liquid can be moved through the system very accurately.

Applications areas

- Metering and dosing
- Disinfectants
- Pigments
- Acids/Alkalies
- Cleaning agents
- Sampling
- Flocculants
- Additives

Features	Ds500	Ds500+
Manual	✔	✔
Numerical flow display	✔	✔
Numerical speed display	✔	✔
Fluid level monitor	✔	✔
Max. (prime)	✔	✔
Auto restart (after power restored)	✔	✔
Fluid recovery	✔	✔
Leak detection	✔	✔
4.3" colour touchscreen	✔	✔
Fault reporting	✔	✔

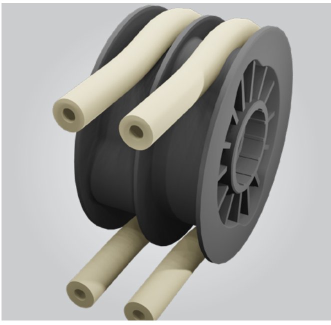
Control Methods	Ds500	Ds500+
Manual control capability	✔	✔
Input/output options		✔
4-20 mA input		✔
4-20 mA input two point calculation		✔
4-20 mA output		✔
Contact input (pulse/batch)		✔
Run stop input		✔
Alarm output		✔
Fluid recovery	✔	✔
Key pad lock	✔	✔
PIN lock to protect set up	✔	✔

IOT: Remote Assistant what can it do for you?

The Remote Assistant supports monitoring but does not allow you to control the pump. It ensures accuracy in your process and adds value because it lets you record performance, plan maintenance and prevent downtime (alerts on problems).

- **Support and service:** On hand support and online aftermarket parts and services.
- **Tube life prediction:** Machine learning can harness the 'intel' from your system of pumps to help predict tube/cartridge life before failure and allow efficient maintenance planning.
- **Operator assistance:** Operator safeguarding via RA alarms covering all critical functions, such as tube failure.
- **Operation flexibility:** Allows the user to monitor or define operating boundaries and be alerted via RA when the pump deviates or exceeds.
- **Equipment monitoring:** Real time equipment monitoring via the RA App from a simple 'is it running?' to complex data analysis and recording.
- **Maintenance planning:** Cartrigde life countdown function empowers the operator to plan maintenance around operations and reduce component changeover and plan sufficient part stocking.

Highlights Ds500

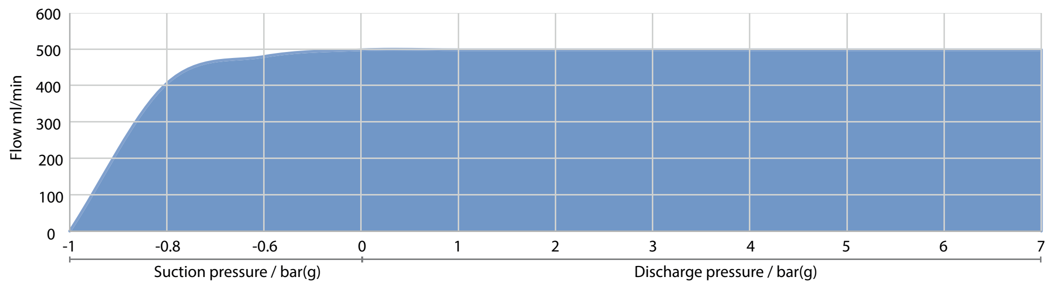


- ✔ One click, tool free cartridge change
- ✔ Peristaltic tube / greater dosing accuracy +/- 1%
- ✔ Remote Assistant (RA) monitoring only
- ✔ Touch screen control for ease of use and set up

Technical details

Max. flow (ml/min)	*0.1 - 500*	*Operating temperature °C*	*4 - 45*
Supply voltage	*80 - 240V - 50/60Hz AC*	*Max. temperature °C*	*70 (pumped fluid)*
Max. pump speed	*75 rpm*	*Noise (dB-A)*	*<70*
Max. discharge pressure (bar)	*7*	*IP rating*	*IP66, NEMA Type 4x*
Speed control ratio	*4096:1*	*Humidity (% RH)*	*5-95% RH (non-condensing)*
Weight (incl. pump head)	*7.3 kg*	*Casing*	*20% GF Polyphenylene Ether + PS*
Display	*High definition 110 mm (4.33") TFT touchscreen*	*Pump head*	*20% GF Polyphenylene Ether + PS*
Drive shaft	*PA6*	*Screen guard*	*Polycarbonate*
Screen enclosure	*20% GF Polyphenylene Ether + PS*		

Performance curve



Flows are typical and were measured with water at 20°C. Actual flows will vary according to suction conditions, discharge pressure and normal component production tolerances.

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VERDER
passion for pumps

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VERDERFLEX DS500 PERISTALTIC DOSING AND METERING PUMP

VERDER
passion for pumps

NEW

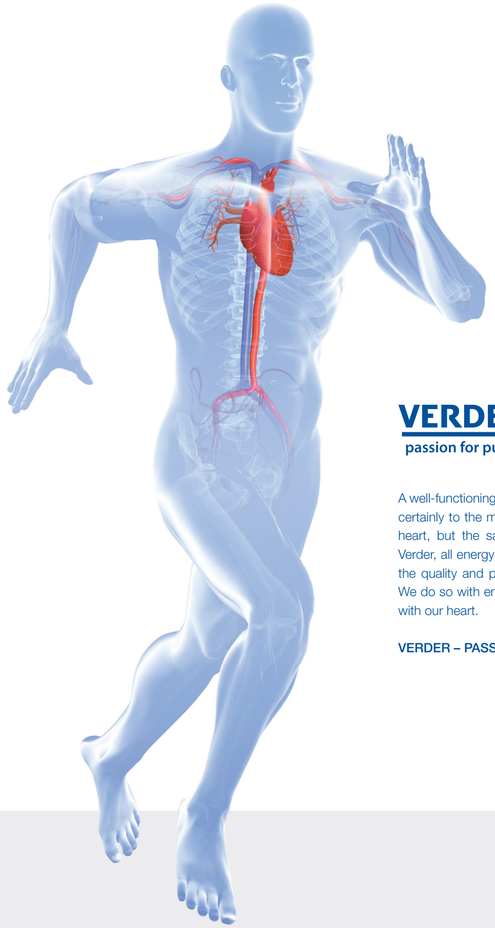
VERDERFLEX Ds500

Peristaltic dosing and metering pump

Your benefits

- ✔ Click and go - Tool free maintenance
- ✔ Touchscreen for easy control
- ✔ Less chemical usage (+/- 1% accuracy)
- ✔ IOT enabled: Remote Assistant Monitoring

VERDER is manufacturer of VERDERFLEX® pumps



VERDER
passion for pumps

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

Verderflex Ds500: Where peristaltic technology makes the difference

The Ds500 metering and dosing pump has been designed specifically for challenging traditional technological solutions to certain pumping applications. The principle behind this technology is to improve the accuracy and save the end user money with both direct costs in terms of chemical usage and indirect costs by minimal tool free maintenance and servicing.

Benefits of the Verderflex Ds500
- High accuracy for metering and dosing - saves chemical consumption
- Tool free cartridge change for service - quick and easy
- Touchscreen contol panel for easy set up and use

Key features:
- No valves - no clogging or gassing issues, abrasion resistance
- True self priming/dry running pump
- For abrasives & products with soft and/or hard solid content
- Tool free cartridge change in minutes
- Can handle viscous and abrasive liquids
- Easy set up ‘use’ and adjustment with touchscreen control
- Accurate flow performance from 0.1 to 500 ml/min and pressures of up to 7 bar
- Minimal fluid ‘live’ containment ensures user safety and reduced clean up requirement
- Remote Assistant to support monitoring and ensure accuracy in process and value

Application areas:
- Low flow capacity range
- Dosing mode or continuous flow
- Abrasive and viscous fluids

Benefits at a glance

1. *Click and go cartridge*
2. *Smoothed flow for improved dosing*
3. *Touchscreen for easy control*
4. *Connections for remote control*
5. *Small footprint with secure mounting*
6. *IOT: Remote monitoring with RA*