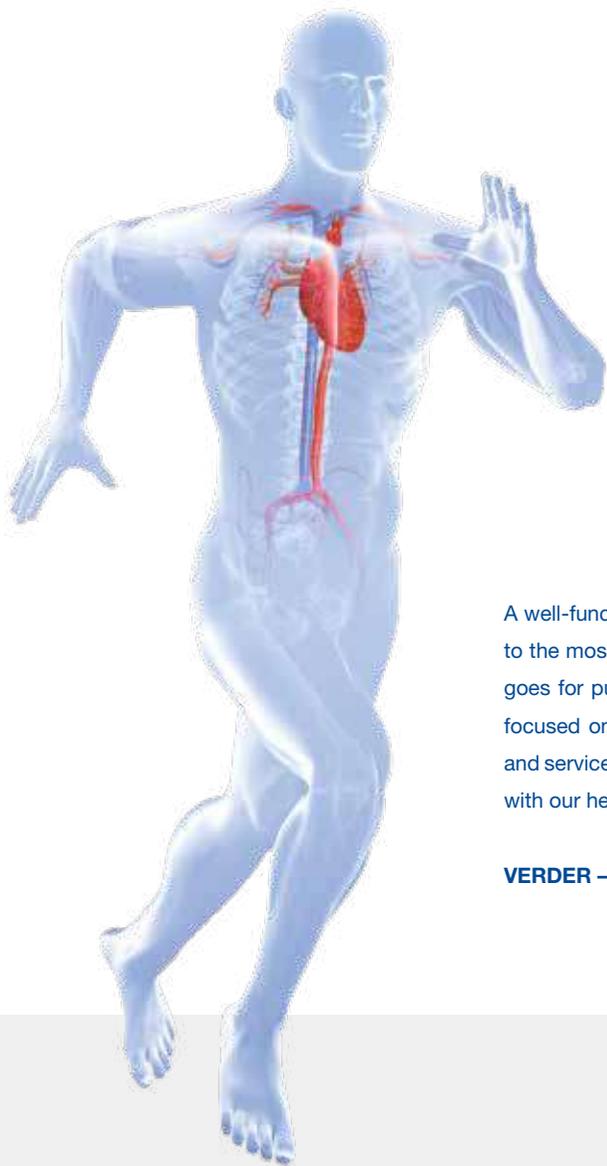


VERDERFLEX **VANTAGE 5000**

State of the art precision dosing





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 pumps and service. We do so with energy, dedication and most importantly, with our heart.

VERDER – PASSION FOR PUMPS

SIMPLE, SECURE & FLEXIBLE

The Verderflex Vantage 5000 advances the precision dosing pump by combining state-of-the-art technology with ease of use.

SIMPLE: ICON BASED, TOUCH SCREEN PROGRAMMING WITH DIRECT ENTRY OF FLOW AND DOSE RATES.

SECURE: REAL-TIME CLOCK TIME STAMPS EVENTS IN MEMORY WITH USB DATA BACKUP PORT FOR RECORD DOWNLOAD AND JOB UPLOADS.

FLEXIBLE: FOUR PUMP HEAD OPTIONS FOR LOW TO HIGH FLOWS AND PRESSURES, STORES 30 JOBS IN ONBOARD MEMORY WITH MANY REMOTE CONTROL OPTIONS.

The Verderflex Vantage 5000 peristaltic pump is ideal for dosing with precise and accurate deliveries, ability to run dry, pump off-gassing liquids and solids in suspensions. It is also a very gentle, low shear, pump, ideal for broths and cultures in an aseptic environment.



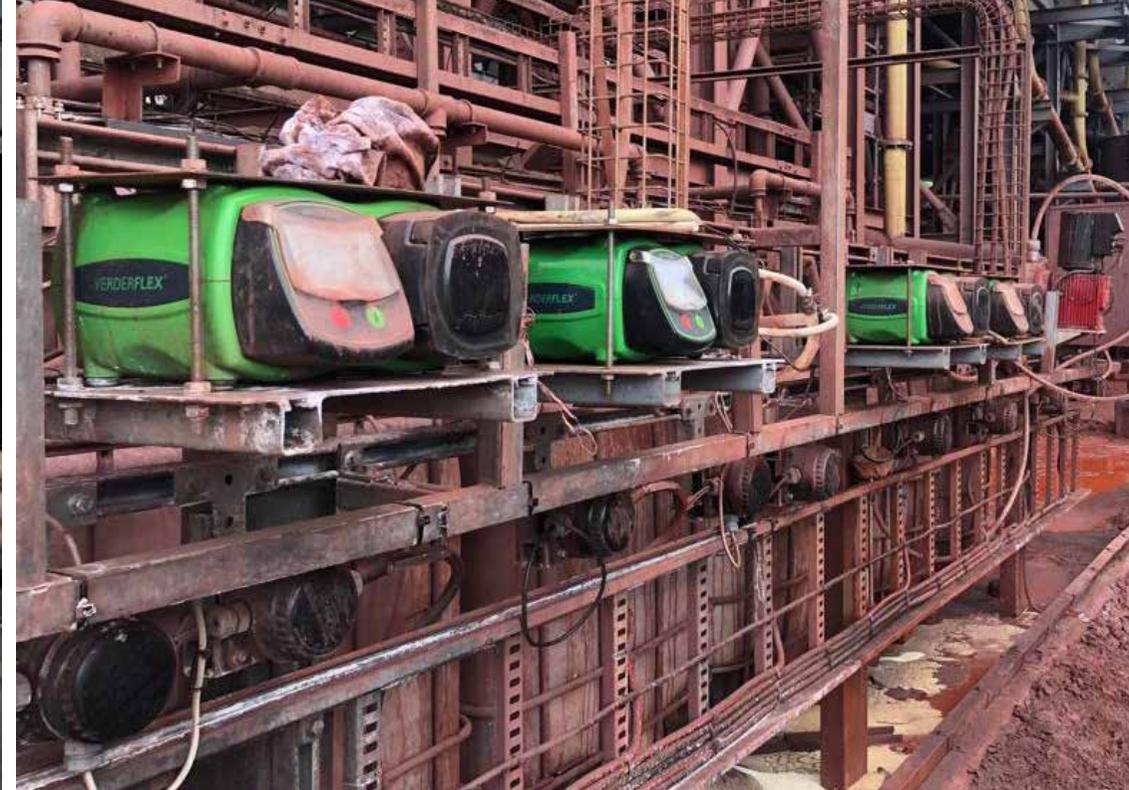
VERDERFLEX[®] VANTAGE 5000



PRODUCT VIDEOS AT
WWW.VERDERLIQUIDS.COM

SIMPLE
STATE OF THE ART DOSING
EASY TO PROGRAM





The heart of the Verderflex Vantage 5000 is its gentle, zero backflow peristaltic pumping action. This simple principle results in precise doses and accurate flows.

Vantage 5000's are widely used in many industries, pumping a huge range of liquids under varying system conditions. The Vantage 5000 solves many pumping challenges including abrasive wear, intermittent liquid feeds causing dry running, fluctuating tank levels, shear-sensitive or off-gassing fluids, widely varying flow requirements or crystallising liquids.

Icon-based menus, touch screen programming and direct entry of flow rates or dose values continue the simplicity concept.

- **Icon based touch screen programming – no bulky manuals to read**
- **Direct entry of flow rates or dose values by volume or by weight**
- **Open Door Detection – Pump stops immediately if the door is opened locking the rotor**
- **Tube Burst Detection – On ALL models, stops the pump minimising contamination concerns**
- **Pump is easily and completely cleanable without disassembly**

- ⚡ 4 digit PIN, 3 level function access codes
- ⚡ Backup pump settings to USB
- ⚡ Import jobs from other pumps or backups

SECURE HUGE ONBOARD MEMORY

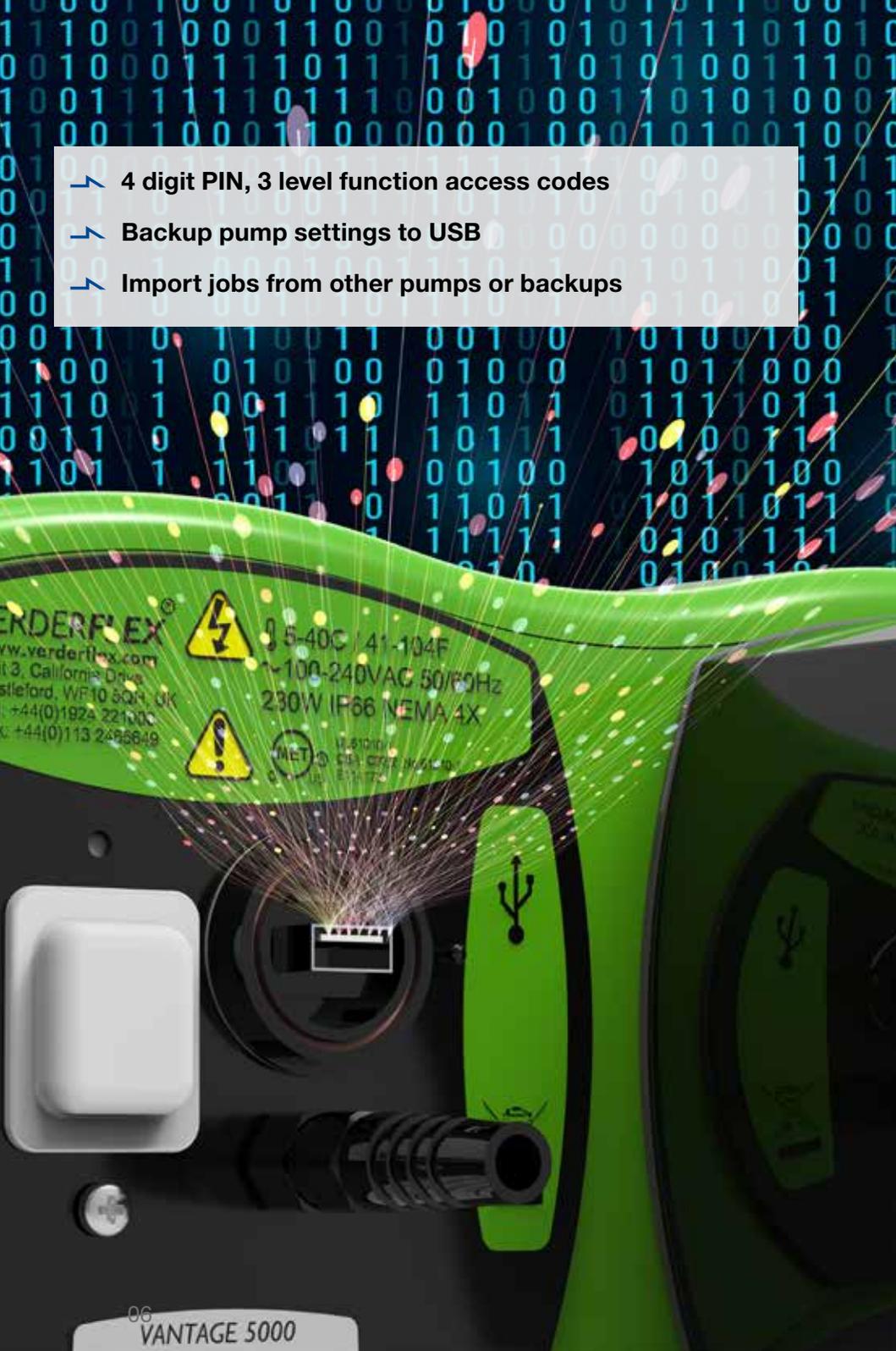
The Vantage 5000 dosing pump has a huge, 1 Gbyte onboard memory. With this capacity the pump stores operational data for more than a decade. This ensures continuity and storage of all relevant process data.

Whenever a change is made to the pump's settings, a job is changed or calibrated or an alarm occurs the pump records it as a time-stamped event in the pump's memory. This can be used for internal QA records, 3rd party auditor surveillance to demonstrate compliance and provide proof of calibration.

Users can download a pump's operational histories and settings via the IP66 rated USB data port. This port, on the rear of the pump, allows users to import jobs from another Vantage 5000 pump to eliminate intra-operator set-up variations and speed up commissioning.

Unauthorised access is an increasing concern. Access to different pump menus is controlled by 4 digit PIN codes. With 3 function levels, access to the most sensitive pump parameters is securely controlled and restricted.

Whilst record keeping is important historic information, it is often critical the pumps provide instantaneous alerts. The touch screen displays real-time operational confirmation and alerts. The pump also provides continuous status information as analogue contacts, output signals or digital messages.



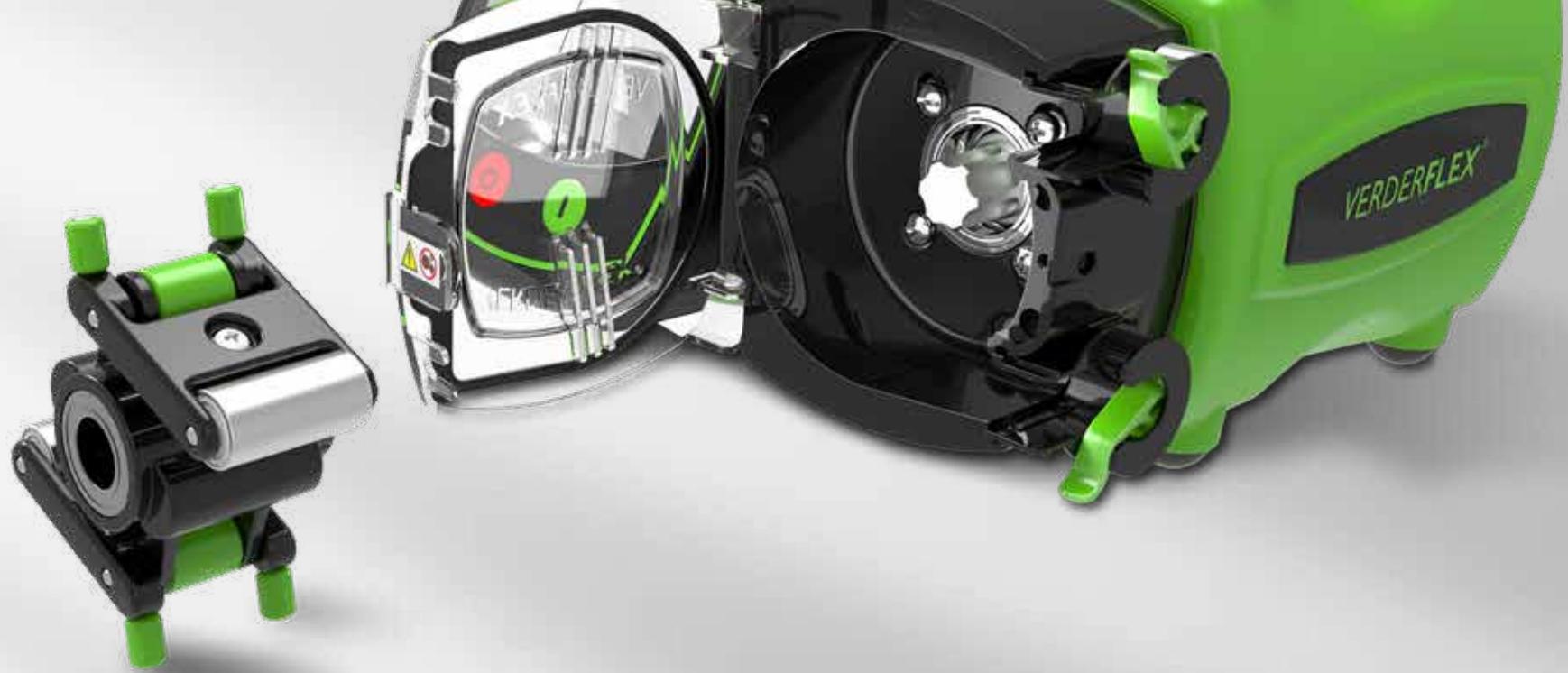
SECURE OPERATIONAL RECORDS

- Real-time operational alarm outputs
- Time stamped on board job and event records
- Demonstrable compliance
- Massive 1 Gbyte on board memory
- USB Record Download and Backup Port



PRODUCT VIDEOS AT
WWW.VERDERLIQUIDS.COM





FLEXIBLE EASY CHANGE FACTORY PRESET ROTORS

FLEXIBLE SCALABLE FLOW RATES

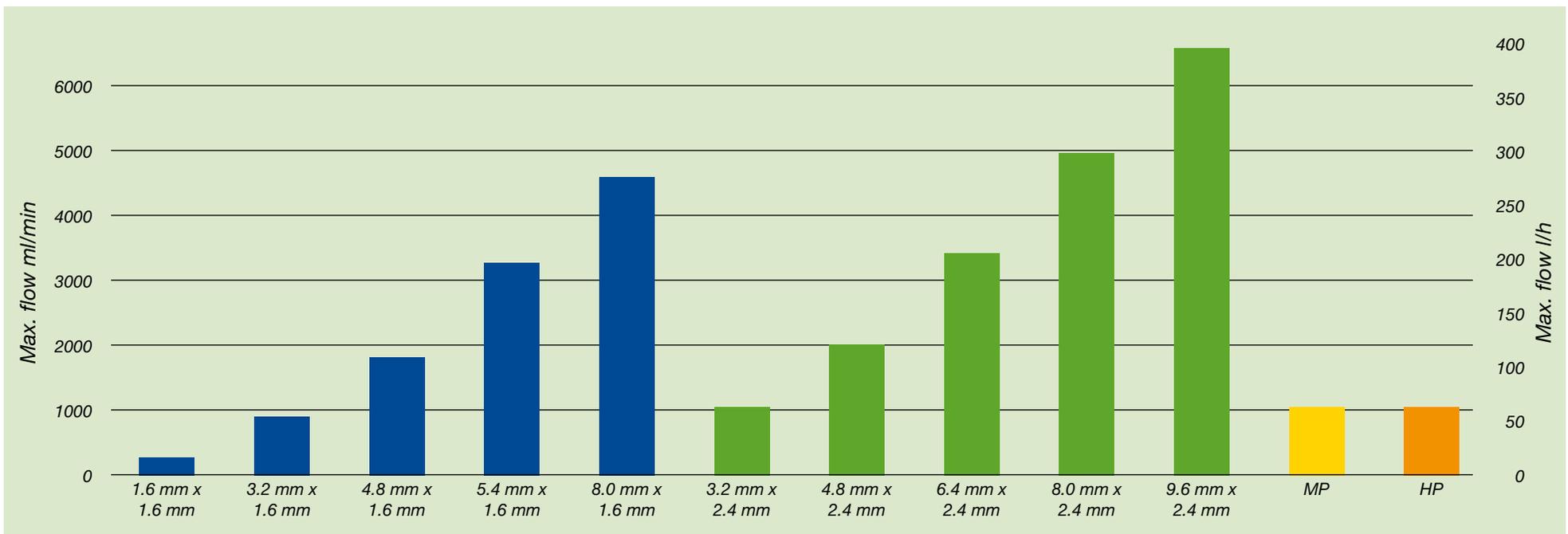
4 pump head options

Every Vantage 5000 pump can use 1 of 4 easily interchangeable rotors to vary the tube wall thickness and/or the delivery pressure. Both the low-flow 1.6mm WT and the higher flow 2.4mm WT pump can use 5 different diameter tubes to vary the flow rate at 2 bar working pressure. For mid pressure (4 bar) and high pressure (7 bar) operation a single high performance tube size is used.

Scalable

By changing the tube diameter the flow rate is changed. To change the pressure or wall thickness, swapping the rotor only takes a few seconds.

- Rotors are colour coded for easy identification
- Factory calibrated rotors eliminate risk from spring tension adjustment & can be changed in seconds
- Loose tubing or tube elements for 2 bar pumps
- Tube elements only for MP & HP pumps



Remote control options

- Analogue: 0-10VDC, 4-20mA, proportional control
- Digital: RS485, Modbus®, Profibus®

FLEXIBLE
ANALOGUE OR DIGITAL

FLEXIBLE REMOTE CONTROL

Comprehensive Remote Control Options

Verderflex Vantage 5000's offer a range of analogue and digital remote control options.

The Vantage 5000R model supports footswitch dosing and industry standard analogue control using a single, dedicated 25 way rear mounted connector. Digital communication pumps use protocol specific industry standard M12 or Profibus interfaces.

Footswitch Dosing Activation

Footswitches or remote sensors e.g. container presence indicators can initiate batch dosing or trigger pump start-up. Footswitch style is selected during pump set-up : either a simple latching signal or a continuously maintained signal.

Analogue Remote Control

Vantage 5000 models from R version and above include 0-10V DC, 4 to 20mA & proportional flow inputs and outputs modes. Speed control type is defined in pump set-up, is easily scaled or inverted easing system integration.

Pumps have 7 volt-free control inputs, such as External Feed Tank Empty and Destination Tank Full sensors. Should an input cause a remote stop, the pumps' screen shows the identity speeding up fault finding. Many supervisory systems, such as PLCs, use operational confirmation signals. The pump's 4 volt-free outputs can be individually assigned, easing system integration. Any remotely controlled pumps display their remote-control settings, the current input value and flow rate, easing system commissioning.



Optional 24V DC or 115V AC relay modules isolate remote control pumps from external systems.

Digital Protocols

There are 2 Vantage 5000 digital communication models. The Vantage 5000 M's rear M12 connector supports ASCII over an RS485 and Modbus® RTU. The Vantage 5000P supports Profibus® DP0 with a dedicated front mounted connector.



SECURE RESILIENT DATA

Event Time Stamping

The Vantage 5000 has a user's time zone configurable motherboard battery backed up real-time clock. Every time an operational parameter is changed, a new job is loaded, a product batch is calibrated, an alarm is triggered, a new user signs in, the event is time stamped in the pump's 1 Gbyte memory.

Operational histories can be downloaded using the pump's USB port for process record keeping, as part of PAT procedures or simply as a data backup.

Data Resilience

The Vantage 5000's USB data port is a powerful 2 way data highway.

Pump backup - A pump's settings including all programmed jobs can be backed up as part of a facility's disaster recovery program

Data import - Jobs can be imported from another pump eliminating intra operator set-up variations and speeding up system commissioning.

Secure PIN code access levels

- Every Vantage 5000 has a user selectable passcode option
- Secure access is via 4 digit PIN codes
- 3 assignable access levels for up to 5 users when enabled

FLEXIBLE STATE OF THE ART PRECISION DOSING

❶ BATCH MODE

Dispense a user defined number of fixed volumes

❷ 30 PROGRAM MEMORY

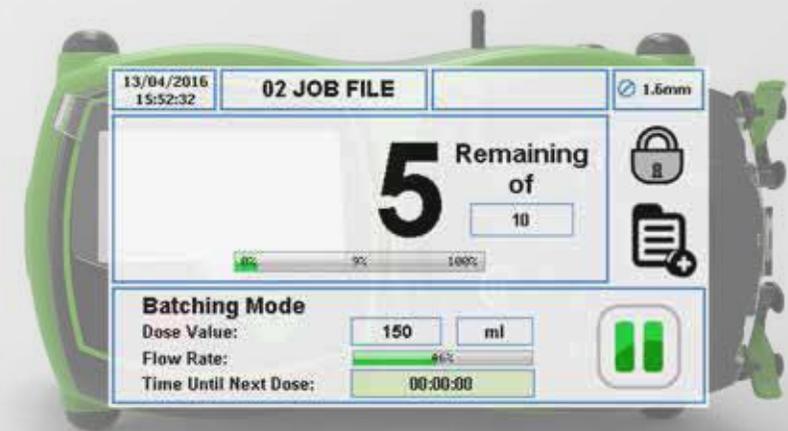
Save previous jobs

❸ DOSE MODE

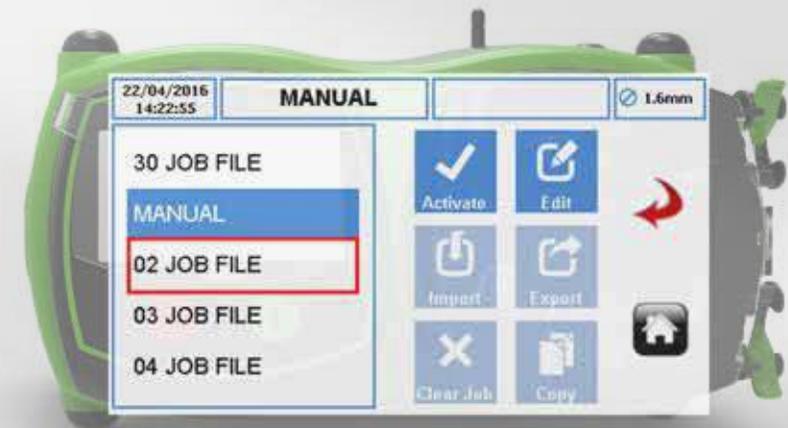
Dispense multiple single shots



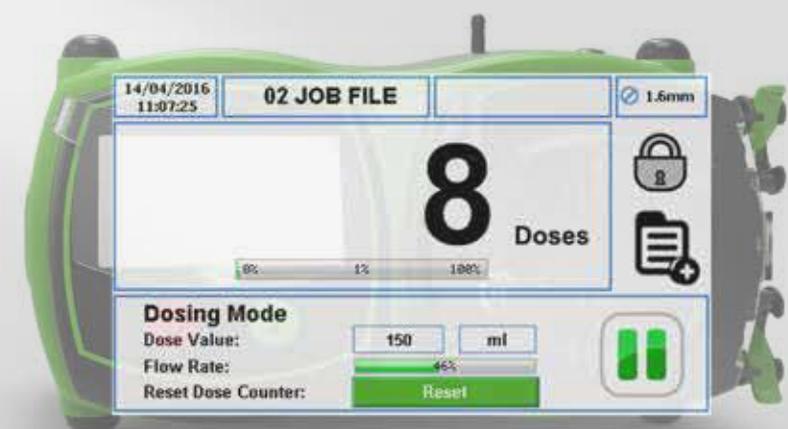
❶



❷



❸



FLEXIBLE CHOICE OF TUBING

Verderflex Tubing

The tube is the heart of a peristaltic pump: it is the only pumped media contact part, is sterilisable and changed in seconds and eliminates cross contamination risks in aseptic pumping. Verderflex has two standard materials in varying diameters, wall thicknesses, pressure ratings.

Verderprene

This opaque, cream coloured tube is the most popular choice for general use pumps. Depending on the working pressure tubing Verderprene complies with FDA CFR21 or NSF 61.

Maximum pressure	2 bar		4 bar	7 bar
Wall thickness	1.6 mm	2.4 mm	2.4 mm MP	3.2 mm HP
Material colour	Beige - white			
Product temperature	+5°C to +85°C			
FDA CFR-21	✓	✓	-	-
NSF-61	-	-	✓	✓
USP Class VI	-	-	-	-
Vantage 5000 rotor colour code	blue	green	yellow	orange

Platinum Cured Silicone

Verderflex's high purity Silicone USP class VI tubing is platinum cured for minimal residuals.

Maximum pressure	2 bar	
Wall thickness	1.6 mm	2.4 mm
Material colour	Translucent	
Product temperature	+5°C to +85°C	
FDA CFR-21	-	-
NSF-61	-	-
USP Class VI	✓	✓
Sterilization methods	EtO, γ & Autoclave	
Vantage 5000 rotor colour code	blue	green

All our tubing material is supplied in ultra-violet light-protected packaging to minimise tube degradation. Each pack has a batch specific certificate of conformity and bar coded traceability label.

ACCESSORIES TO MAXIMIZE FLEXIBILITY

The Vantage 5000 is a powerful pump and to maximize its benefits there are a range of optional accessories.

❶ Footswitches

- Footswitches can be used to initiate batch dosing, trigger pump start-up or maintain pump operation by requiring continuous pressure.
- IP44 & IP65 versions for different environmental conditions.

❷ Cables

Pre-wired 5m remote control cables eliminate wiring confusion, speed up commissioning or remove connection uncertainties. Cables can be supplied with connectors or tinned ends for connecting into terminal boxes and specific functionalities.

❸ SCADA POD

Many utilities require relay isolation between the pump and the external network. Two easy fit SCADA PODs versions fit onto the rear of the pump. Options are rated at 24V DC or 115VAC.

❹ Skid Mounting Feet

Many dosing stations are built as “drop-in” skids. Vantage 5000 skid mounting feet support quick release “from above” or secure “from below” mounting.

❺ Network Connectors

Industry standard data communications network connectors assure system integrity and compliance.

❶



❷



❸



❹



❺





BIOTECH & PHARMA

Secure, precision yet gentle pumping
with advanced record keeping

Ideal for

- Off-line and on-line aseptic pumping
- Bioreactors, buffer & media preparation, fermentation, harvesting, purification and tablet coatings

Minimal Media Damage

- Gentle, low shear peristaltic pumping action
- Minimal cell damage

Eliminate cross contamination risks

- Only 1 media contact part - the tubing
- Use existing tubing sterilisation processes – no new validation

PAT Friendly pump

Powerful PAT assistance tools for stringent record keeping, measuring critical process parameters (CPP) and assessing critical quality attributes (CQA).

- 30 Program Job memory
- Download records from pump's 1Gb storage, import & save centrally

Compliant traceable tubing

Each roll of Verderflex tubing or tube assembly can be supplied with:

- Ultra violet light protected packaging
- Optional platinum cured USP VI silicone tube validation package



FOOD & **BEVERAGE**

Accurate dosing and
traceable batches

Ideal for

- Flavour & essence dosing
- Precise enzyme addition
- Filling batches consistently

Reduce production downtime and costs

- Faster job changeovers - 30 jobs stored in pump memory
- Reversible pump clears blocked feed lines
- Recover valuable flavours or essences on job changeover

Stop costly overdosing

- 0.1 rpm speed steps - precisely add high value additives
- Ultra flexible 4000:1 flow resolution
- Accurately dose quality critical, shear sensitive, fragile essences or flavours

Consistent liquid delivery

- Powerful high vacuum tube recovery
- Dispense multi-phase liquids or offgassing reagents or additives

Flexible operation possibilities

- Continuous flow, metered volume or batch dosing options
- Start dosing from the Vantage 5000's front screen, a footswitch or a remote input
- Automate filling - Link container presence sensors to start a dosing cycle
- Automatic record keeping with real time clock & date stamping



MANUFACTURING

Precision dosing and batch dispensing

Ideal for

- Variable flow reagent dosing
- 4 to 20mA feedback controlled flows
- Metering variable viscosity liquids

Reduce reagent and raw material costs

- Eliminate over-dosing - precision 0.1 rpm speed increments
- Reduce Chemical Use - Low shear pumping action minimises flocculant damage

Kill Dry Running Downtime and Clogging Costs

- “Operator proofing” - zero damage when feed tanks run empty
- Reverse pump to clear blocked lines or clogged heads

Minimal Downtime and Fast Changeovers

- Tube is the only contact part: change in seconds
- Dry self priming pump - no manual priming
- Faster changeovers - Recall previous jobs from pump memory
- Scalable - Change the maximum flow by changing the tube size
- Flexible - 4000:1 turndown easily accommodates minor production changes

Extensive Systems Support

- Directly connect feed and delivery tank level and bund overfill sensors
- Remote control from external PLCs or networks : 4 to 20mA, Modbus and Profibus protocols
- Real time job status and alarms on the pump’s screen
- Continuous system feedback outputs



WATER TREATMENT

Carefree precision chemical metering

Ideal for

- Accurate Hypo, Ferric, Bisulphite, PAA dosing
- Wear free Carbon & Lime slurry pumping

Eliminate Hypo vapour locks, over-dosing and crystallisation problems

- No dosing head gas locks or crystallisation
- Precision 0.1rpm step reduced dosing overshoot
- Optimal pH control reduces secondary treatment

Wear Free Abrasive Pumping = Reduced abrasion costs

- No wear on precision stator – rotor clearances
- No worn diaphragms, balls or seals
- Reduce downtime and service costs
- Less ancillary parts to fail and maintain

Eliminate dry running damage and clogging downtime

- No burn-ups when feed tanks run empty - Pump runs dry without any damage
- Gentle pumping action minimises flocculant damage, reducing chemical usage
- Reverse pump to clear blocked lines or clogged heads

All Seasons Performance

- Powerful priming action eliminates negative head issues
- No feed tank level or seasonal viscosity variations
- No costly dilution or day tanks or duplicate or low and high-flow pumps
- Flexible 4000:1 dosing resolution on each tube size

VANTAGE 5000 SERIES

TECHNOLOGY ON THE SPOT

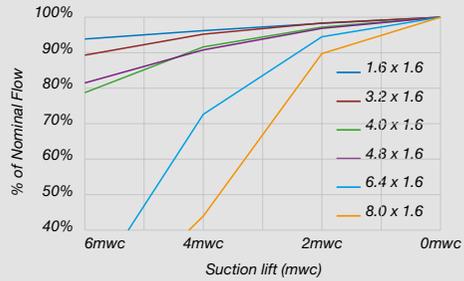


	Pump models					
	C - Control	R- Remote	D - Low Voltage SCADA	S - High Voltage SCADA	M - Modbus	P - Profibus
Manual Speed Control	✓	✓	✓	✓	✓	✓
Dose & Batch Programs	✓	✓	✓	✓	✓	✓
4 Languages (EN/DE/FR & ES)	✓	✓	✓	✓	✓	✓
USB Data Transfer Port	✓	✓	✓	✓	✓	✓
3 Level 4 Digit PIN Security	✓	✓	✓	✓	✓	✓
Tube burst detection	✓	✓	✓	✓	✓	✓
Environmental rating	IP66 NEMA 4X	IP66 NEMA 4X	IP66 NEMA 4X	IP66 NEMA 4X	IP66 NEMA 4X	IP66 NEMA 4X
Analogue Remote Control						
0-10V DC Remote Speed Control Input & Output		✓	✓	✓	✓	✓
4 -20mA Remote Speed Control Input & Output		✓	✓	✓	✓	✓
Frequency Remote Speed Control Input & Output		✓	✓	✓	✓	✓
24V DC Relay Isolation			✓			
115V AC Relay Isolation				✓		
Remote Stop / Start Input		✓	✓	✓		
Digital Communications						
RS 485 ASCII Control					✓	
Modbus® RTU Protocol					✓	
Profibus® DP0 Protocol						✓

VANTAGE 5000 FLOW RATES AT A GLANCE

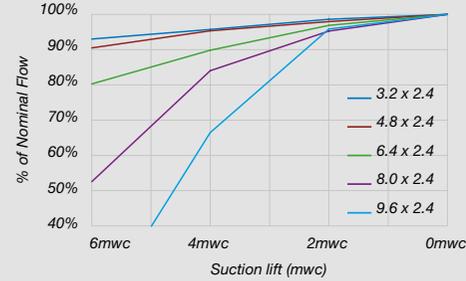
1.6 mm wall thickness @ 2 bar (30 psi)

Ideal for low flow applications from 7 μ l/min up to 4500ml/min

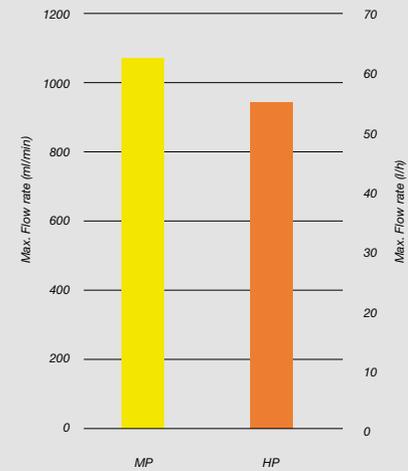
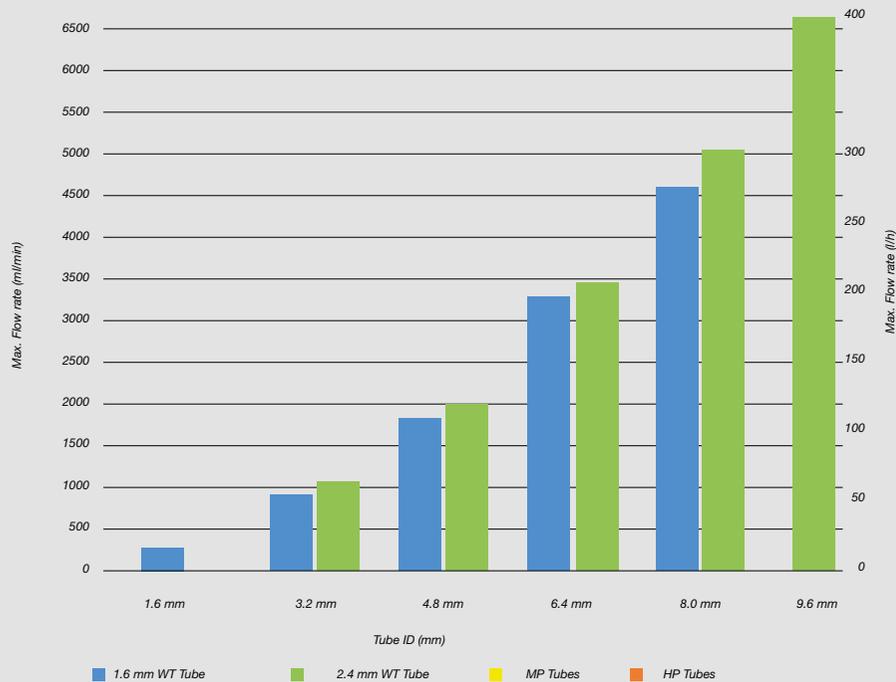
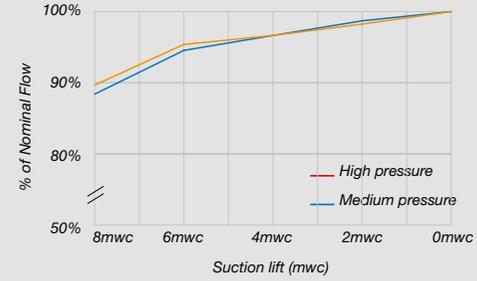


2.4 mm wall thickness @ 2 bar (30 psi)

medium flow applications up to 6600ml/min



MP 4 bar (60 psi) and HP 7 bar (105 psi) tubing



THE VERDER GROUP

The story of the Verder Group began in 1959 when André Verder established a business in supplying pumps. André listened to his customer's needs and provided well-made and innovative product technology that worked for their process.

The Verder Group experienced rapid growth with its customer-led approach. In the subsequent 30 years, André and his son Andries took the Verder Group worldwide to the USA, Japan, China, India and South Africa with a far-reaching network of distributors.

Today, Verder finds itself as an established supplier to many of the world's blue chip organizations for fluid handling and sample preparation of solids as well as analyzing technologies.

Verder Liquids

The Verder Group comprises two divisions, Verder Liquids and Verder Scientific.

The Verder Liquids division manufactures pumps, mixers and systems.

These pumps are distributed through 28 Verder offices, completed with a worldwide network of local distributors. Verder is offering local presence, local service and fast delivery times.

As a manufacturer, Verder is able to maintain the highest standards for the design, build and testing procedures, which reduces risk and costs to the customer.

As a manufacturer, Verder is also able to translate requirements from the market into new products.

Our staff are skilled to know not only about pumps but also about your specific application. We listen to you, our customer, and we are experienced in finding the best pump solution for every application!

Verderflex® is a registered trademark of the Verder Group.

- ↪ Family owned
- ↪ > 1850 Employees
- ↪ Verder pumps sold in > 50 countries
- ↪ 11 Verder house brands
- ↪ Verder affiliated offices in 28 countries



MINING



MUNICIPAL
WASTE WATER



PRINTING



BIOTECHNOLOGY



FOOD AND DRINK



MANUFACTURING



WATER
PURIFICATION



PHARMACEUTICAL



RESEARCH &
DEVELOPMENT

VERDER



passion for pumps

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