

# 520Di/L IP31 and 520DiN/L IP66 high accuracy dispensers

# 500<sup>series</sup> Flexicon Liquid Filling

## FEATURES

- Dispensing accuracy to  $\pm 0.5\%$
- Single or twin channel flows
- Flow rates up to 4400 ml/min (69.74 USGPH)
- Full calibration by weight or by volume with choice of units
- "Suck-back" facility eliminates drips at dose end, plus ramps ensure soft start and end of dose
- Up to 50 dispensing programs including dose parameters and calibration can be stored in the memory with full file name
- 505L pumphead features low inertia stainless steel rollers and twin offset track to provide smoothed flows.
- One 505LX extension pumphead can be used to double the flow



*Flexicon...Filled with experience*

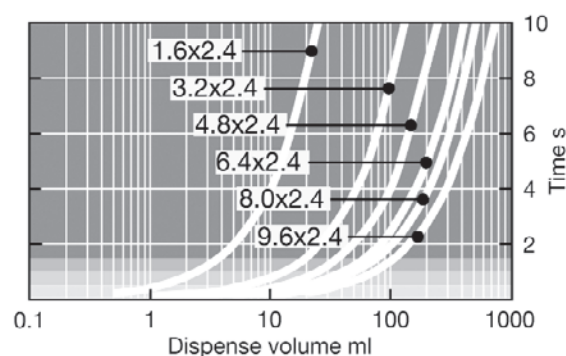
## TECHNICAL DATA

| Pump drives   | 520Di | 520DiN |
|---|-------|--------|
| <b>Enclosure</b>  |       |        |
| Ingress protection rating   | IP31  | IP66   |
| <b>Manual control</b>   |       |        |
| Digital speed control with full calibration to display flow   | •     | •      |
| Choice of flowrate or speed display   | •     | •      |
| Numerical keypad for entry of speed   | •     | •      |
| <b>Remote control</b>   |       |        |
| Run/Stop, direction change, auto/manual toggle, leak detector input (via contact closure or 5V TTL or 24V industrial logic) | •     | •      |
| Remote operation of Dosestart with instantaneous switch   | •     | •      |
| Four programmable digital status outputs through 24V, 30W relays  |       | •      |
| <b>Digital communication</b>  |       |        |
| Digital network serial control  | RS232 | RS485  |
| <b>Security</b>   |       |        |
| Security code to protect set-up, programs and dose parameters   | •     | •      |

## PERFORMANCE

| 520 Di/L flow rates (ml/min) |          |          |           |           |           |          |
|------------------------------|----------|----------|-----------|-----------|-----------|----------|
| Tube bore                    | 1.6mm    | 3.2mm    | 4.8mm     | 6.4mm     | 8.0mm     | 9.6mm    |
| 0.1 to 350rpm                | 0.04-150 | 0.23-800 | 0.42-1500 | 0.70-2500 | 0.90-3200 | 1.3-4400 |
| Marprene TL, Bioprene TL     | 0.04-130 | 0.17-500 | 0.38-1100 | 0.67-2000 | 1.1-3200  | 1.5-4500 |

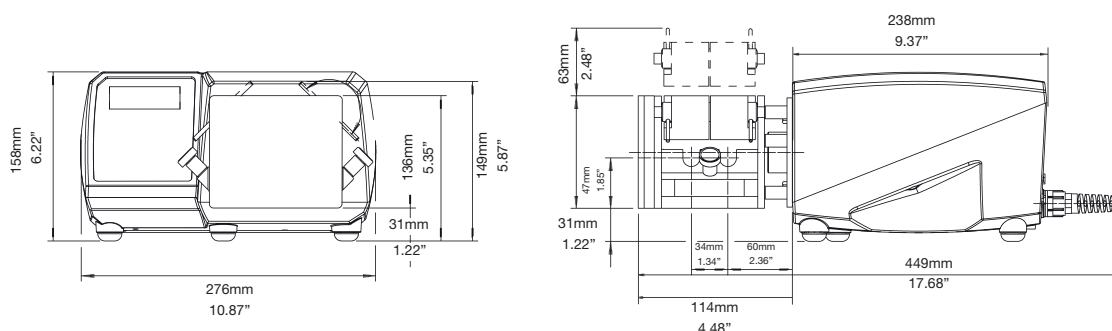
| 520 Di/L recommended dose sizes |              |       |       |       |       |       |       |
|---------------------------------|--------------|-------|-------|-------|-------|-------|-------|
|                                 | Tube bore    | 1.6mm | 3.2mm | 4.8mm | 6.4mm | 8.0mm | 9.6mm |
| maximum speed 350rpm            | Minimum dose | 0.9ml | 4.5ml | 8.5ml | 14ml  | 18ml  | 25ml  |
|                                 | Maximum dose | 15ml  | 75ml  | 150ml | 250ml | 300ml | 400ml |



Dispense volume against time for the 520Di/L pump with a selection of tubes. Dispensing accuracy is indicated by the background shade

- within  $\pm 5.0\%$
- within  $\pm 2\%$
- within  $\pm 1.0\%$
- within  $\pm 0.5\%$

## DIMENSIONS



## SPECIFICATIONS

|                     | 520Di   | 520DiN  |
|---------------------|---|---|
| Ingress rating      | IP31 / NEMA 2   | IP66 / NEMA 4X  |
| Enclosure           | Wipedown  | Watertight, dustproof                                 |
| Suitability         | Dry industrial environments with noncorrosive atmospheres                 | Corrosion resistant for heavy industrial environments |
| Humidity            | (Non-condensing) 80% to 31C, 88F, decreasing linearly to 50% at 40C, 104F | (Condensing) 10-100% RH                               |
| Temperature         | 5C to 40C (40F to 104F)   | 5C to 40C (40F to 104F)                               |
| Pump weight         | 9.82kg (21lb 10oz)  | 10.7kg (23lb 9oz)                                     |
| Speed control ratio | 2200:1  | 2200:1  |
| Torque rating       | 2.2Nm, continuous duty  | 2.2Nm, continuous duty                                |
| Noise               | < 70dB(A) at 1m   | < 70dB(A) at 1m                                       |
| Standard            | CE, cETLus  | CE, cETLus  |

## MATERIALS OF CONSTRUCTION

| Component                | Material  |
|--------------------------|---|
| Keypad                   | Polyester   |
| Switch-plate             | Glass filled ABS plastic                                    |
| Rear blanking plate      | Stainless steel 304   |
| Drive casework           | Pressure die-cast aluminium LM24                            |
| Case work coating        | Alocrom pre-treatment, exterior grade polyester powder coat |
| Drive shaft              | Electroless nickel plated carbon steel                      |
| Pumphead track           | PPS (polyphenylene sulphide)                                |
| Guard                    | Polycarbonate   |
| Guard seal               | Neoprene  |
| Rotor hub                | Stainless steel 316   |
| Roller arms, rotor cover | PPS (polyphenylene sulphide)                                |
| Rollers – main/ guide    | Stainless steel 316   |
| Main roller bearings     | Stainless steel with PTFE seals                             |
| Drain port and nut       | PP (polypropylene)  |
| Drain plug               | Hytrel  |

## ORDER INFORMATION

| Pump and pumphead product codes                            |              |   |                |
|--|--------------|---|----------------|
| Description  | Partcode     | Description                             | Partcode       |
| 505L Low pulse twin channel pumphead                       | 053.4001.000 | 520Di (IP31) drive only                 | 056.7171.000*  |
| 505LX Low pulse twin channel extension pumphead            | 053.4011.000 | 520DiN (IP66) drive only                | 056.717N.000** |
| 505LG Low pulse twin channel pumphead for STA-PURE® tubing | 053.4010.00G | 505LTC Tube clamp set for 505L pumphead | 059.4001.000   |

\* Supplied as 2.4m mains lead without plug. To specify American, European, United Kingdom, Australian, Argentinian or Swiss 2.8m mains lead please specify A, E, U, K, R or C respectively. Replace the last zero with the mains lead code. For example - 050.7131.10A is a 520S/R pump with American mains lead. \*\* Supplied as 2.4m mains cable without a plug. To specify American mains lead please replace the last zero with A.

| Tube ordering codes                              |              |              |              |              |               |               |
|--|--------------|--------------|--------------|--------------|---------------|---------------|
| Double 'Y' tubing elements for 520Di/L dispenser |              |              |              |              |               |               |
| Bore (mm)  | Bioprene TL  | Marprene TL  | Pumpsil      | Pumpsil-D    | STA-PURE® PCS | STA-PURE® PFL |
| 1.6  | 933.E016.K24 | 902.E016.K24 | 913.AE16.K24 | 913.DE16.K24 | 960.E016.K24  | 965.E016.K24  |
| 3.2  | 933.E032.K24 | 902.E032.K24 | 913.AE32.K24 | 913.DE32.K24 | 960.E032.K24  | 965.E032.K24  |
| 4.8  | 933.E048.K24 | 902.E048.K24 | 913.AE48.K24 | 913.DE48.K24 | 960.E048.K24  | 965.E048.K24  |
| 6.4  | 933.E064.K24 | 902.E064.K24 | 913.AE64.K24 | 913.DE64.K24 | 960.E064.K24  | 965.E064.K24  |
| 8  | 933.E080.K24 | 902.E080.K24 | 913.AE80.K24 | 913.DE80.K24 | 960.E080.K24  | 965.E080.K24  |
| 9.6  | 933.E096.K24 | 902.E096.K24 | 913.AE96.K24 | 913.DE96.K24 |               |               |

All flow rates shown were obtained pumping water at 20C (68F) with zero suction and delivery heads. Watson-Marlow, Bioprene and Marprene are trademarks of Watson-Marlow Limited. Disclaimer: The information contained in this document is believed to be correct but Watson-Marlow Limited accepts no liability for any errors it contains, and reserves the right to alter specifications without notice. LoadSure is a trademark of Watson-Marlow Limited. © STA-PURE PFL and © STA-PURE PCS are registered trademarks of W.L Gore & Associates Inc. Please state the product code when ordering pumps and tubing.

**Flexicon**  
Liquid Filling

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