



## 520Du/R2 & 520Du/R

### Metering and Transfer Pump Digital/Auto/Manual Control IP31 Wipedown Enclosure

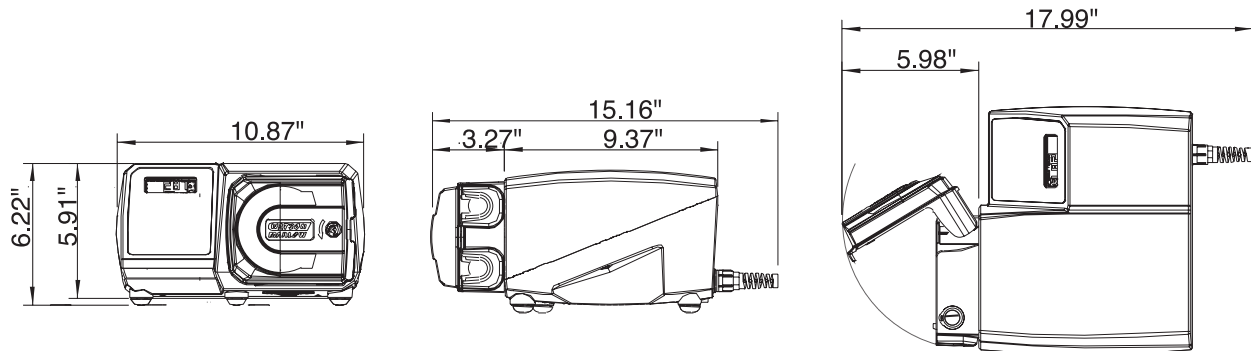
#### Technical Information and Features

- Flowrates from 0.004 to 3,500 ml/min (0.00006 - 55.5 gph)
- Discharge pressures up to 30 psi
- Operator friendly keypad offering:
  - Start, stop, speed control, fwd/rev
  - Large clear LCD display with accurate digital monitoring for clear RPM and flowrate indication
  - Auto-restart, keypad lock and rapid prime functions
  - MemoDose feature for manually actuated repetitive discrete volume dispensing
- Precise 2200:1 speed control range from 0.1-220 rpm in 0.1 rpm increments
- Remote speed control via scalable 0-10VDC or 4-20mA analog speed input when in auto mode. Second analog input via 0-10VDC or 4-20mA available for scaling of primary analog input
- Analog speed output via 0-10VDC, 4-20mA or 5V square wave
- 4 configurable NO or NC relay contacts for outputs of run/stop, direction, auto/manual status and choice of alarm conditions
- Accepts 24V Industrial logic, 5VTTL or dry contact for run/stop, direction, leak detected, auto/manual toggle and MemoDose footswitch
- Digital RS232 signal interface capability.
- Tough IP31 enclosure with excellent chemical resistance
- Closed loop microprocessor controlled brushless DC motor for excellent speed control, quiet operation, no maintenance and 24Hr duty
- Fitted with easy loading 520R or 520R2 pumpheads featuring:
  - Twin-sprung rollers for high accuracy and gentle pumping of shear sensitive fluids
  - Corrosion resistant PPS rotor and track with 316 Stainless Steel rollers
  - Impact resistant clear guard with tool unlockable safety latch
  - Ergonomic handgrip hub with shaft disengaging clutch for effortless tube loading
  - 520R2 accepts tube sizes #105, 108, 119, 120, 15, 24, 121 and 122 (0.5-9.6mm bore & 2.4mm thick wall)
  - Optional 520R for low pressure applications accepts tube sizes #112, 13, 14, 16, 25, 17, 18 (0.5-8.0mm bore & 1.6mm thin wall)
- Optional Pumpheads include 313/314 easy loading flip top, 505L low pulse and 505CA low flow multi-channel

#### Flow Rate Ranges with 520R2 or 520R head (ml/min\*)

2.4 mm Thick Wall Tube #	105	108	119	120	15	24	121	122
1.6 mm Thin Wall Tube #	112	13	14	16	25	17	18	N/A
Tube Bore	0.5mm	0.8mm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm	9.6mm
Speed Range (0.1 to 220rpm)	1/50"	1/32"	1/16"	1/8"	3/16"	1/4"	5/16"	3/8"
Neoprene, Sta-Pure™, Chem-Sure™, Tygón®, Platinum-cured silicone	0.004-9.5	0.01-24	0.04-97	0.18-390	0.40-870	0.70-1500	1.1-2400	1.6-3500
Marpene/Bioprene	0.004-9.0	0.01-23	0.04-92	0.17-370	0.38-830	0.67-1500	1.1-2300	1.5-3300
Fluorel™			0.03-70	0.13-280	0.29-630	0.51-1100	0.80-1800	

\*1 gal = 3785.4ml



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#### Technical Specifications

Shipping Weight: 21 lbs  
 Maximum Power Consumption: 135 VA  
 Supply: 100-120/200-240V, 50-60Hz (voltage selectable)  
 Maximum Rotor Speed: 220 RPM  
 Enclosure: IP31  
 Operational Temperature Range: 5°C to 40°C  
 Noise: max 70dBA at 1 meter

**Standards**  
 Meets all applicable CE and American ETL Standards UL610101A-1

#### Product Codes

520Du Drive, 220 rpm	056.7151.00A
520R2 Pumphead	053.1011.2L0
520R Pumphead	053.1011.100
Complete 520Du/R2	050.7151.2LA
Complete 520Du/R	050.7151.10A

#### Materials of Construction

##### Pumphead

Track, Rotor Body, Rotor Arms: PPS (polyphenylene sulfide) high performance engineering plastic

Rollers and Bearings: 316 SS rollers, low friction stainless steel bearings with PTFE seals

##### Drive

Casework: Pressure die-cast Aluminum LM24

Coating: Alocrom Pre-treatment, exterior grade polyester powder coat

Keypad: Polyester

Feet: Santoprene

Switch Plate: Glass filled ABS plastic

Rear Blanking Plate: Stainless steel 304

Gearbox nose: Aluminum LM24M

Drive Shaft: Electroless nickel plated carbon steel

##### Available Tubing Materials:

##### 2.4 mm thick wall for 520R2

Bioprene® (excl. 0.5 & 0.8mm)  
 Marprene® (excl. 0.5 & 0.8mm)  
 Silicone  
 Sta-Pure™ (excl. 0.5, 0.8 & 9.6mm)  
 Chem-Sure™ (excl. 0.5, 0.8 & 9.6mm)

##### 1.6 mm thin wall for 520R

(all excl. 9.6mm)  
 Bioprene®  
 Marprene®  
 Silicone  
 Neoprene (excl. 0.5mm)  
 Tygon® (excl. 0.5 & 0.8mm)  
 Fluorel™ (excl. 0.5 & 0.8mm)  
 Sta-Pure™ (excl. 0.5 & 0.8mm)  
 Chem-Sure™ (excl. 0.5 & 0.8mm)

The information contained in this document is believed to be correct, but Watson-Marlow Bredel Pumps accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

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#### Watson-Marlow Bredel Pumps

37 UPTON TECHNOLOGY PARK, WILMINGTON, MA 01887-1018

TEL: 978-658-6168 / FAX: 978-658-0041

www.watson-marlow.com

support@wmbpumps.com

wd-520du-us-01