



## 520S/R2 & 520S/R

Metering and Transfer Pump  
Manual Control  
IP31 Wipedown Enclosure

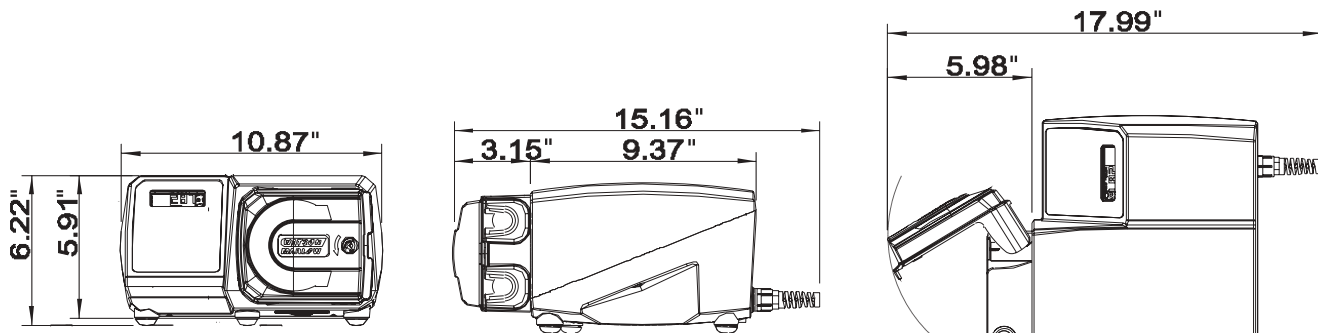
### Technical Information and Features

- Flowrates from 0.004 to 3,500ml/min (0.00006 - 55.5 gph)
- Discharge pressures up to 30psi
- Operator friendly keypad offering:
  - Start, stop, speed control, fwd/rev
  - Precise manual speed control from 0.1-220 rpm in 0.1 rpm increments
  - 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
- 2,200:1 speed control range
- Tough metal and ABS case with broad chemical resistance and IP31 enclosure
- Closed loop microprocessor controlled brushless DC motor for excellent speed control, quiet operation, no maintenance and 24Hr duty
- Fitted with easy loading 520R and 520R2 pump-head featuring:
  - Twin-sprung rollers for high accuracy and gentle pumping of shear sensitive fluids
  - Corrosion resistant PPS Rotor and Track with Stainless Steel bearings
  - 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™, Tygon®, Platinum-cured silicone	0.00-9.5	0.01-24	0.04-97	0.18-390	0.40-870	0.70-1500	1.1-2400	1.6-3500
Marprene/Bioprene 64 shore tubing	0.00-9.0	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

<b>520S Drive, 220 rpm</b>	056.7131.00A
<b>520R2 Pumphead</b>	053.1011.2L0
<b>520R Pumphead</b>	053.1011.100
<b>Complete 520S/R2</b>	050.7131.2LA
<b>Complete 520S/R</b>	050.7131.10A

### Materials of Construction

**Pumphead**  
**Track, Rotor Body, Rotor Arms:** PPS (polyphenylene sulfide) high performance engineering plastic  
**Rollers and Bearings:** Low friction Stainless Steel 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:

<b>2.4 mm thick wall for 520R2</b>	<b>1.6 mm thin wall for 520R</b>
Bioprene® (excl. 0.5 & 0.8mm)	(all excl. 9.6mm)
Marprene® (excl. 0.5 & 0.8mm)	Bioprene®
Silicone	Marprene®
Sta-Pure™ (excl. 0.5, 0.8 & 9.6mm)	Silicone
Chem-Sure™ (excl. 0.5, 0.8 & 9.6mm)	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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Tygon is a trademark of Saint-Gobain Corporation

Fluorel is a trademark of 3M Corporation

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