

## 323Du/D and 323Du/4D

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



### Technical Information and Features

- Flow rates from 0.09 to 2000 mL/min (0.001-31.7 gph)
- Operator friendly keypad offering:
  - Start, stop, speed control, fwd/rev, control mode
  - Precise manual speed control from 3-400 rpm in 1 rpm increments
  - Large clear LCD display with accurate digital monitoring for clear RPM indication
  - “Auto-restart” and “keypad lock” functions
  - Memo Dose feature allows manually actuated repetitive discrete volume dispensing
- 133:1 speed control range
- Remote speed control via 0-10VDC or 4-20mA analog speed input when in Analog mode
- Remote start/stop capability via dry contact closure or TTL switching
- Remote direction control capability via dry contact closure or TTL switching
- RS232 signal interface capability
- Tough metal and ABS case with broad chemical resistance and IP31 wipedown enclosure
- Brushless DC motor for excellent speed control, quiet operation, and no maintenance
- Fitted easy loading flip-top three roller 313D or four roller 314D pumpheads
- Optional three roller 313X and four roller 314X extension pumpheads for up to 6 channels of flow
- 313D and 314D and extension heads accept tube sizes # 112, 13, 14, 16, 25, 17, and 18 (0.5-8.0 mm bore & 1.6 mm wall)
- 313D2 and 314D2 accept thick wall tube sizes # 105, 108, 119, 120, 15, 24 (0.5-6.4 mm bore & 2.4 mm thick wall)
- May be fitted with optional four roller 314MC or eight roller 318MC five-channel microcassette pumpheads – stackable for up to ten channels of flow with manifold tubing

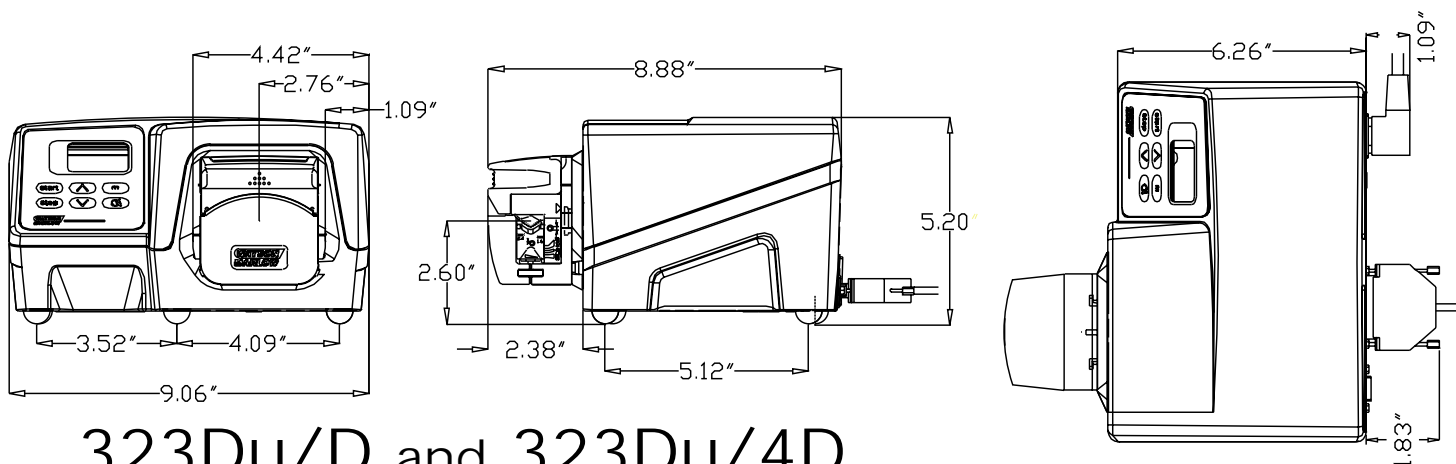
### Flow Rate Ranges (ml/min\*)

1.6 mm Wall Tube #	112	13	14	16	25	17	18
2.4 mm Wall Tube #	105	108	119	120	15	24	N/A
Tube Bore	0.5mm 1/50"	0.8mm 1/32"	1.6mm 1/16"	3.2mm 1/8"	4.8mm 3/16"	6.4mm 1/4"	8.0mm 5/110
313 Pumphead (3 Roller)	0.09-12	0.21-28	0.81-108	3.0-400	6.6-880	11-1440	15-2000
314 Pumphead (4 Roller)	0.09-12	0.18-24	0.75-100	2.6-340	5.7-760	9.0-1200	12-1600

### Maximum Number of Channels with 1.6mm Wall Tubing with 313 or 314 Extension Pumpheads, up to 30 psi

Tube Bore	0.5mm	0.8mm	1.6mm	3.2mm	4.8mm	6.4mm	8.0mm
Silicone	6	6	5	3	2	1	1
Other Materials	6	6	4	2	2	1	1

\* 1 gal = 3785.4 ml



## 323Du/D and 323Du/4D

### Metering and Transfer Pump

### Digital/Auto/Manual Control - IP31 Wipedown Enclosure

#### Specifications

**Shipping Weight:** 9.9lbs

**Maximum Power Consumption:** 100VA

**Supply:** 100-120/220-240V 50-60Hz (voltage selectable)

**Maximum Rotor Speeds:** 400 rpm

**Enclosure:** IP31 wipedown

**Operational Temperature Range:** 4°C to 40°C (40°F to 104°F)

**Control Range:** 133:1

**Noise:** <70dBA at 1 meter

**Standards:** Equipment complies with all applicable CE directives

#### Product Codes

323Du Drive, 400 rpm	036.3154.00A
313D 3 roller pumphead for 1.6 mm wall	033.3411.000
313X 3 roller extension pumphead for 1.6 mm wall	033.3431.000
314D 4 roller pumphead for 1.6 mm wall	033.4411.000
314X 4 roller extension pumphead for 1.6 mm wall	033.4431.000
313D2 3 roller pumphead for 2.4 mm wall	033.3511.000
314D2 4 roller pumphead for 2.4 mm wall	033.4511.000
Complete 323Du/D	030.3154.3DA
Complete 323Du/D2	030.3154.32A

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. Sta-Pure and Chem-Sure are trademarks of W.L. Gore & Associates, Inc. Tygon is a trademark of the Saint-Gobain Corporation. Fluorel is a trademark of 3M Corporation.

#### Materials of Construction

Pumphead

**Pump Track & Lever:** IXEF

**Rollers:** Nylatron

**Spindles:** Electroless nickel plated hardened steel

**Bearings:** Bronze bush

Drive

**Drive Base:** Powder coated aluminum casting

**Drive Top:** ABS Plastic

**Bayonet Mounting Plate:** IXEF

#### Available Tubing Materials

##### 1.6 mm wall for 313D & 314D

Bioprene®

Marpren®

Silicone

Neoprene (excl. 0.5 mm)

Butyl (excl. 0.5&0.8mm)

Tygon® (excl. 0.5&0.8)

Fluorel™ (excl. 0.5&0.8mm)

Sta-Pure™ (excl. 0.5&0.8mm)

Chem-Sure™ (excl. 0.5&0.8mm)

##### 2.4 mm wall for 313D2 & 314D2

Bioprene® (excl. 0.5&0.8mm)

Marpren® (excl. 0.5&0.8mm)

Silicone

Sta-Pure™ (excl. 0.5&0.8mm)

Chem-Sure™ (excl. 0.5&0.8mm)

#### 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-323dud-us-01