

# 323E/D and 323E/4D

## Metering and Transfer Pump

### Manual Control

### IP31 Wipedown Enclosure



#### Technical Information and Features

- Flow rates from 0.45 to 2000 mL/min (0.007-31.7 gph)
- Operator friendly keypad offering:
  - Start, stop, speed control, fwd/rev
  - Manual speed control from 15-400 rpm in 5 rpm increments
  - Large clear LCD display with accurate digital monitoring for clear RPM indication
- 27:1 speed control range
- 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

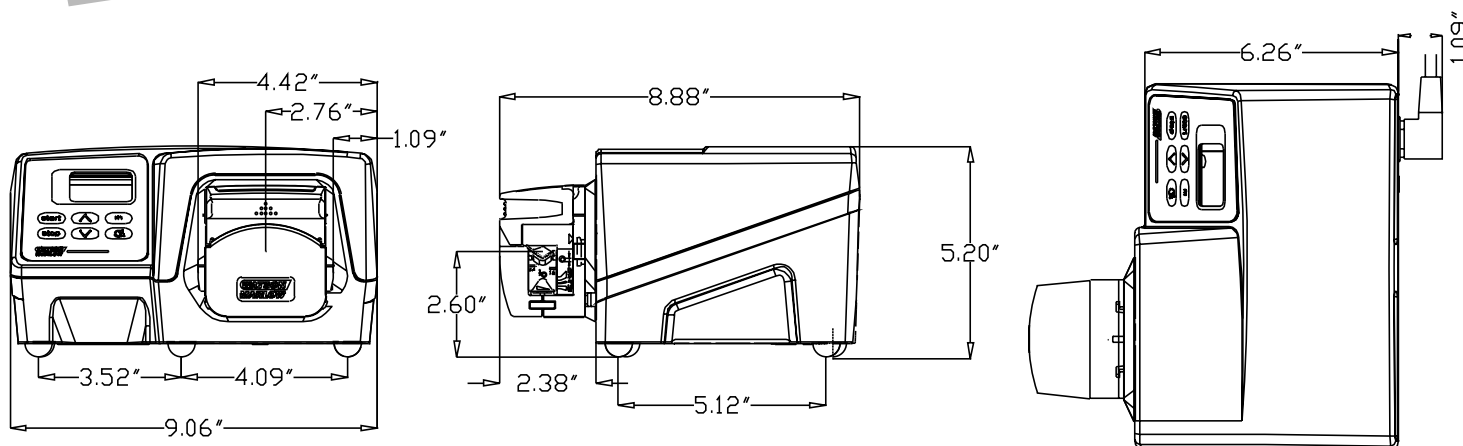
#### Flow Rate Ranges (ml/min\*)

	112	13	14	16	25	17	18
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 5/16"
313 Pumphead (3 Roller)	0.45-12	1.1-28	4.1-110	15-400	33-880	54-1400	75-2000
314 Pumphead (4 Roller)	0.45-12	0.90-24	3.8-100	13-340	29-760	45-1200	60-1600

#### 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



## 323E/D and 323E/4D Metering and Transfer Pump 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:** 27:1

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

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

### Product Codes

323E Drive, 400 rpm	036.3124.00A
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 323E/D	030.3124.3DA
Complete 323E/D2	030.3124.32A

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

### Watson-Marlow Bredel Pumps

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