

# Beta<sup>®</sup> b Series

Energy efficient and NSF approved



The **ProMinent<sup>®</sup> Beta<sup>®</sup>** is a microprocessor-based diaphragm solenoid metering pump capable of flows from **0.16 to 8.45 gph (0.59 to 32 l/h)** and pressures to **363 psi (25 bar)**. Feed rate is determined by stroke length and stroke frequency. Stroke length is adjusted from 0% to 100% with a 10:1 turndown. Stroke frequency is adjusted in 10% increments from 10-100. External contact input for pulse control with a range of 1:64-64:1.

## Features & Benefits

- Certified to NSF/ANSI 61 (acrylic or PVDF liquid ends)
- 50% less power consumption
- External control via adjustable contact pulse signal 1:64-64:1
- Auto-degassing liquid ends for off-gassing chemicals such as bleach
- Capable of handling up to 3000 cps of viscous media such as polymers
- Integral bleed valve eliminates priming issues
- Continual monitoring of chemical supply with optional dual stage level switch
- Adjustable stroke length and stroke frequency
- Fault and pacing relays optional
- External control via standard 4-20 mA signal

## Applications

- Bleach and other off-gassing fluids
- Water and wastewater treatment
- Automated processes in nearly all industries
- Cooling tower and boiler water treatment
- Low flow chemical feed

# Beta® b Series

## Technical data

| Capacity Data                   |                                   |       |      |         |            |                                       |       |      |         |            |                         |       |                    |                                            |                           |           |
|---------------------------------|-----------------------------------|-------|------|---------|------------|---------------------------------------|-------|------|---------|------------|-------------------------|-------|--------------------|--------------------------------------------|---------------------------|-----------|
| Pump Version                    | Capacity at Maximum Back Pressure |       |      |         | mL/ stroke | Capacity at 1/2 Maximum Back Pressure |       |      |         | mL/ stroke | Pre-Primed Suction Lift |       | Max. Stroking Rate | Tubing Connectors <sup>2</sup> O.D. x I.D. | Shipping Weight (approx.) |           |
|                                 | psig                              | (bar) | GPH  | (L/h)   |            | psig                                  | (bar) | GPH  | (L/h)   |            | ft.                     | (m)   |                    |                                            | spm                       | (in.)     |
| BT4b                            |                                   |       |      |         |            |                                       |       |      |         |            |                         |       |                    |                                            |                           |           |
| 1000                            | 145                               | (10)  | 0.2  | (0.74)  | 0.07       | 73                                    | (5)   | 0.22 | (0.82)  | 0.08       | 19.6                    | (6.0) | 180                | 1/4 x 3/16                                 | 6.4-7.9                   | (2.9-3.6) |
| 2001 <sup>3</sup>               | 290                               | (20)  | 0.25 | (0.96)  | 0.10       | 145                                   | (10)  | 0.4  | (1.50)  | 0.13       | 19.6                    | (6.0) | 180                | 1/4 x 3/16                                 | 6.4-7.9                   | (2.9-3.6) |
| 1601                            | 232                               | (16)  | 0.29 | (1.10)  | 0.10       | 116                                   | (8)   | 0.37 | (1.40)  | 0.13       | 19.6                    | (6.0) | 180                | 1/4 x 3/16                                 | 6.4-7.9                   | (2.9-3.6) |
| 2002 <sup>3</sup>               | 290                               | (20)  | 0.45 | (1.70)  | 0.19       | 145                                   | (10)  | 0.74 | (2.80)  | 0.24       | 19.6                    | (6.0) | 180                | 1/4 x 3/16                                 | 6.4-7.9                   | (2.9-3.6) |
| 1602                            | 232                               | (16)  | 0.58 | (2.20)  | 0.19       | 116                                   | (8)   | 0.66 | (2.50)  | 0.24       | 19.6                    | (6.0) | 180                | 1/4 x 3/16                                 | 6.4-7.9                   | (2.9-3.6) |
| 1604                            | 232                               | (16)  | 0.95 | (3.60)  | 0.33       | 116                                   | (8)   | 1.14 | (4.30)  | 0.40       | 19.6                    | (6.0) | 180                | 1/4 x 3/16                                 | 6.8-8.6                   | (3.1-3.9) |
| 0708                            | 101                               | (7)   | 1.88 | (7.10)  | 0.66       | 50.5                                  | (4)   | 2.22 | (8.40)  | 0.78       | 19.6                    | (6.0) | 180                | 1/2 x 3/8                                  | 6.8-8.6                   | (3.1-3.9) |
| 0413                            | 58                                | (4)   | 3.25 | (12.30) | 1.14       | 29                                    | (2)   | 3.75 | (14.20) | 1.31       | 9.8                     | (3.0) | 180                | 1/2 x 3/8                                  | 6.8-8.6                   | (3.1-3.9) |
| 0220                            | 29                                | (2)   | 5.02 | (19.00) | 1.76       | 14.5                                  | (1)   | 5.52 | (20.90) | 1.94       | 6.5                     | (2.0) | 180                | 1/2 x 3/8                                  | 7.3-9.7                   | (3.3-4.4) |
| BT5b                            |                                   |       |      |         |            |                                       |       |      |         |            |                         |       |                    |                                            |                           |           |
| 2504 <sup>3</sup>               | 363                               | (25)  | 0.77 | (2.90)  | 0.27       | 181                                   | (13)  | 0.98 | (3.70)  | 0.34       | 19.6                    | (6.0) | 180                | (8 x 4mm)                                  | 9.9-11.7                  | (4.5-5.3) |
| 1008                            | 145                               | (10)  | 1.80 | (6.80)  | 0.63       | 73                                    | (5)   | 2.19 | (8.30)  | 0.76       | 19.6                    | (6.0) | 180                | 1/2 x 3/8                                  | 9.9-11.7                  | (4.5-5.3) |
| 0713                            | 101                               | (7)   | 2.91 | (11.00) | 1.02       | 50.5                                  | (4)   | 3.46 | (13.10) | 1.21       | 13.1                    | (4.0) | 180                | 1/2 x 3/8                                  | 9.9-11.7                  | (4.5-5.3) |
| 0420                            | 58                                | (4)   | 4.52 | (17.10) | 1.58       | 29                                    | (2)   | 5.05 | (19.10) | 1.77       | 9.8                     | (3.0) | 180                | 1/2 x 3/8                                  | 10.4-12.8                 | (4.7-5.8) |
| 0232 <sup>1</sup>               | 29                                | (2)   | 8.45 | (32.00) | 2.96       | 14.5                                  | (1)   | 9.56 | (36.20) | 3.35       | 6.5                     | (2.0) | 180                | 1/2 x 3/8                                  | 11.2-14.6                 | (5.1-6.6) |
| With auto-degassing liquid ends |                                   |       |      |         |            |                                       |       |      |         |            |                         |       |                    |                                            |                           |           |
| BT4b                            |                                   |       |      |         |            |                                       |       |      |         |            |                         |       |                    |                                            |                           |           |
| 1601                            | 232                               | (16)  | 0.16 | (0.59)  | 0.06       | 116                                   | (8)   | 0.21 | (0.80)  | 0.07       | 5.9                     | (1.8) | 180                | 1/4 x 3/16                                 | 6.4                       | (2.9)     |
| 1602                            | 232                               | (16)  | 0.37 | (1.40)  | 0.13       | 116                                   | (8)   | 0.46 | (1.74)  | 0.174      | 6.9                     | (2.1) | 180                | 1/4 x 3/16                                 | 6.4                       | (2.9)     |
| 1604                            | 232                               | (16)  | 0.71 | (2.70)  | 0.25       | 116                                   | (8)   | 0.95 | (3.60)  | 0.33       | 8.8                     | (2.7) | 180                | 1/4 x 3/16                                 | 6.8                       | (3.1)     |
| 0708                            | 101                               | (7)   | 1.74 | (6.60)  | 0.61       | 50.8                                  | (4)   | 1.98 | (7.50)  | 0.69       | 6.5                     | (2.0) | 180                | 1/2 x 3/8                                  | 6.8                       | (3.1)     |
| 0413                            | 58                                | (4)   | 2.85 | (10.80) | 1.00       | 29                                    | (2)   | 3.33 | (12.60) | 1.17       | 6.5                     | (2.0) | 180                | 1/2 x 3/8                                  | 6.8                       | (3.1)     |
| 0220                            | 29                                | (2)   | 4.28 | (16.20) | 1.50       | 14.5                                  | (1)   | 4.76 | (18.00) | 1.67       | 6.5                     | (2.0) | 180                | 1/2 x 3/8                                  | 7.3                       | (3.3)     |
| BT5b                            |                                   |       |      |         |            |                                       |       |      |         |            |                         |       |                    |                                            |                           |           |
| 1008                            | 145                               | (10)  | 1.66 | (6.30)  | 0.58       | 73                                    | (5)   | 1.98 | (7.50)  | 0.69       | 9.8                     | (3.0) | 180                | 1/2 x 3/8                                  | 9.9                       | (4.5)     |
| 0713                            | 101                               | (7)   | 2.60 | (10.50) | 0.911      | 51                                    | (4)   | 3.25 | (12.30) | 1.14       | 8.2                     | (2.5) | 180                | 1/2 x 3/8                                  | 9.9                       | (4.5)     |
| 0420                            | 58                                | (4)   | 4.12 | (15.60) | 1.44       | 29                                    | (2)   | 4.6  | (17.40) | 1.61       | 8.2                     | (2.5) | 180                | 1/2 x 3/8                                  | 10.4                      | (4.7)     |

Above capacities and suction lift refer to pumps tested on water at 115 VAC, 60 Hz, and an ambient temperature of 70°F (21°C).

Higher specific gravity fluids will reduce suction lift. Higher viscosity fluids will reduce capacity.

Liquid ends for highly viscous media have 10-20% less metering capacity and are not self-priming. Standard connectors are 1/2" MNPT or 5/8" hose barb. Positive suction recommended.

<sup>1</sup> Not available with bleed valve.

<sup>2</sup> SS versions use 1/4" female threads except models 0220, 0420, and 0232 which use 3/8" female threads.

<sup>3</sup> Only available in SS and Acrylic liquid ends

| Liquid end materials in contact with media |                     |                          |       |             |            |
|--------------------------------------------|---------------------|--------------------------|-------|-------------|------------|
| Version                                    | Liquid End          | Suction/Discharge valves | Seals | Valve balls | Diaphragm* |
| *PVT                                       | *PVDF               | *PVDF                    | PTFE  | Ceramic     | PTFE       |
| PPT                                        | Polypropylene       | *PVDF                    | PTFE  | Ceramic     | PTFE       |
| NPT                                        | Acrylic             | *PVDF                    | PTFE  | Ceramic     | PTFE       |
| TTT                                        | PTFE with Carbon    | PTFE with Carbon         | PTFE  | Ceramic     | PTFE       |
| SST                                        | 316 Stainless Steel | 316 Stainless Steel      | PTFE  | Ceramic     | PTFE       |

\*Highly compatible material suitable for most fluids.



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