Engineering and Technical Data

205S/CA
Multi-Channel Cartridge Pump

- Flow rates from 0.0003 to 21.0 mL/min
- PWM, microprocessor controlled closed loop speed regulation
- Manual speed control via membrane keypad
- Manual control of stop/start, direction and priming via membrane keypad
- Instant stop, and reverse
- LCD display of pump speed
- “Auto restart”, and “Keypad lock” functions
- Fitted with 205CA 8-roller low pulse pump head
- Accepts manifold tube elements, 0.13 mm to 2.79 mm bore
- Versions from 4 to 32 channels available

### Flow rate ranges (ml/min)

<table>
<thead>
<tr>
<th>Tube Code</th>
<th>Black</th>
<th>Red</th>
<th>Blue</th>
<th>Green</th>
<th>Yellow</th>
<th>White</th>
<th>Black</th>
<th>Orange</th>
<th>White</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bore mm</td>
<td>0.13</td>
<td>0.19</td>
<td>0.25</td>
<td>0.38</td>
<td>0.50</td>
<td>0.63</td>
<td>0.76</td>
<td>0.88</td>
<td>1.02</td>
<td>1.14</td>
</tr>
<tr>
<td>Bore in</td>
<td>0.005</td>
<td>0.007</td>
<td>0.010</td>
<td>0.015</td>
<td>0.020</td>
<td>0.025</td>
<td>0.030</td>
<td>0.035</td>
<td>0.040</td>
<td>0.045</td>
</tr>
<tr>
<td>0.5 rpm</td>
<td>0.0006</td>
<td>0.0009</td>
<td>0.0013</td>
<td>0.0036</td>
<td>0.0056</td>
<td>0.0083</td>
<td>0.011</td>
<td>0.016</td>
<td>0.012</td>
<td>0.026</td>
</tr>
<tr>
<td>90 rpm</td>
<td>0.099</td>
<td>0.15</td>
<td>0.23</td>
<td>0.65</td>
<td>1.01</td>
<td>1.49</td>
<td>2.02</td>
<td>2.92</td>
<td>3.76</td>
<td>4.68</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tube Code</th>
<th>Grey</th>
<th>Yellow</th>
<th>Blue</th>
<th>Blue</th>
<th>Green</th>
<th>Purple</th>
<th>Purple</th>
<th>Purple</th>
<th>Purple</th>
<th>Purple</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bore mm</td>
<td>1.29</td>
<td>1.42</td>
<td>1.52</td>
<td>1.65</td>
<td>1.85</td>
<td>2.05</td>
<td>2.38</td>
<td>2.54</td>
<td>2.79</td>
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<tr>
<td>Bore in</td>
<td>0.050</td>
<td>0.055</td>
<td>0.060</td>
<td>0.065</td>
<td>0.070</td>
<td>0.080</td>
<td>0.095</td>
<td>0.100</td>
<td>0.110</td>
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<tr>
<td>0.5 rpm</td>
<td>0.033</td>
<td>0.040</td>
<td>0.043</td>
<td>0.051</td>
<td>0.063</td>
<td>0.076</td>
<td>0.092</td>
<td>0.11</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>90 rpm</td>
<td>5.94</td>
<td>7.20</td>
<td>7.69</td>
<td>9.12</td>
<td>11.3</td>
<td>13.8</td>
<td>16.5</td>
<td>19.3</td>
<td>22.0</td>
<td></td>
</tr>
</tbody>
</table>
**205S/CA Multi-Channel Cartridge Pump**

### Specifications
- **Shipping Weight:** 18 lbs plus 2 lbs for each additional 4 channels
- **Maximum Power Consumption:** 100 VA
- **Supply:** 100-120/220-240 V, 50/60 Hz
- **Maximum Rotor Speeds:** 90 rpm
- **Minimum Rotor Speeds:** 0.5 rpm
- **Enclosure:** IP31
- **Operational Temperature Range:** 5 to 40° C
- **Control Ratio:** 180:1
- **Noise:** < 70 dBA at 1 meter
- **Standards:** CE, BSO800, IEC 335-1, EN60529(IP31)

### Materials of Construction
- **Cassettes:** Delrin
- **Rotor:** Aluminum endplates, stainless steel rollers
- **Pumphead Body:** Aluminum chassis, brass sun gear, acetal planetary gears
- **Drive:** Aluminum case upper, painted steel base, polyester keypad

### Product Codes:
- 4 channels: 020.3704.00A
- 8 channels: 020.3708.00A
- 12 channels: 020.3712.00A
- 16 channels: 020.3716.00A
- 20 channels: 020.3720.00A
- 28 channels: 020.3728.00A
- 32 channels: 020.3732.00A

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*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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