Electronic Precision Metering Pumps

P300 Series

- Designed to handle a wide range of fluids from clear water to thick slurries.
- Electronic flow control increases accuracy and reliability.
- Multiple-diaphragm design provides linear, virtually pulse-less flow.
- Smaller footprint saves valuable space.
- One pump covers a wide range of flows and pressures - reducing inventory requirements with fast, simple field conversion.
- Duplexing option doubles capacity and equipment savings.
- Hydraulically-actuated, balanced diaphragms provide superior performance across entire pressure range.

Hydra-Cell Metering Solutions pumps meet or exceed API 675 performance standards for Steady-state Accuracy (±1%), Linearity (±3%), and Repeatability (±3%).
**P300 Series**

Maximum Flow Rate: 82.3 gph  
Maximum Pressure: 2500 psi for Metallic Pump Heads

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**Performance**  Maximum Flow at Designated Pressure

<table>
<thead>
<tr>
<th>100 psi</th>
<th>Metallic Pump Heads Only (gph)</th>
<th>500 psi</th>
<th>1500 psi</th>
<th>2500 psi</th>
<th>Pump rpm</th>
<th>Gear Ratio</th>
<th>Motor rpm</th>
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<tbody>
<tr>
<td>2.00</td>
<td>1.85</td>
<td>1.50</td>
<td>1.15</td>
<td></td>
<td>18</td>
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<tr>
<td>2.51</td>
<td>2.36</td>
<td>1.98</td>
<td>1.60</td>
<td></td>
<td>22.5</td>
<td>80:1</td>
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</tr>
<tr>
<td>3.37</td>
<td>3.21</td>
<td>2.79</td>
<td>2.36</td>
<td></td>
<td>30</td>
<td>60:1</td>
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<tr>
<td>4.06</td>
<td>3.88</td>
<td>3.43</td>
<td>2.97</td>
<td></td>
<td>36</td>
<td>50:1</td>
<td></td>
</tr>
<tr>
<td>5.09</td>
<td>4.89</td>
<td>4.40</td>
<td>3.88</td>
<td></td>
<td>45</td>
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<td>6.58</td>
<td>6.01</td>
<td>5.39</td>
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<td>60</td>
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<td>1800</td>
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<td>7.94</td>
<td>7.30</td>
<td>6.60</td>
<td></td>
<td>72</td>
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<td>9.23</td>
<td>8.41</td>
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<td>90</td>
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<td>13.34</td>
<td>12.46</td>
<td>11.44</td>
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<td>120</td>
<td>15:1</td>
<td></td>
</tr>
<tr>
<td>20.52</td>
<td>20.10</td>
<td>18.90</td>
<td>17.50</td>
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<td>25.35</td>
<td>23.55</td>
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<td>240</td>
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<td>38.24</td>
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<td>80.91</td>
<td>76.91</td>
<td>72.00</td>
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<td>720</td>
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**Required Motor hp**

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<th>1/2</th>
<th>3/4</th>
<th>1</th>
<th>1-1/2</th>
<th>2</th>
<th>3</th>
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</thead>
</table>
**Pump Data**

- **Diaphragms per Liquid End**: 3
- **Flow Control**: Electronic variable speed drive
- **Maximum Discharge Pressure**
  - Metallic Heads: 2500 psi (172 bar)
- **Maximum Inlet Pressure**: 500 psi (34 bar)
- **Maximum Operating Temperature**
  - Metallic Heads: 250 °F (121 °C)
- **Inlet Port**: 1/2 inch NPT or BSPT
- **Discharge Port**: 1/2 inch NPT or BSPT
- **Weight (less motor)**
  - Metallic Heads: 51 lbs (23.2 kg)
- **Dimensions (less motor)**
  - Metallic Heads: 16.02" W x 12.23" D x 9.60" (407 mm W x 311 mm D x 244 mm H)

* Consult factory for correct component selection for temperatures from 160°F (71 °C) to 250°F (121 °C).
** For 56C motor frame only. Consult factory for other motor frame sizes.

**Representative Dimensional Drawings (Inches)**

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**How to Order**

A complete pump order number contains 13 digits based on the specified pump materials listed below.

### Pump Model Size (Digits 1-4)

- **P300** For all P300 Pumps

### Pump Version (Digit 5)

- **N** NPT Ports
- **M** BSPT Ports

### Pump Head Material (Digit 6)

- **R** 304 Stainless Steel
- **S** 316L Stainless Steel

### Diaphragm & O-ring Material (Digit 7)*

- **E** EPDM
- **G** FKM
- **T** Buna-N

See price list for different actuating oils available with these materials.

### Check Valve Material (Digits 8-9)

- **SS** 316L SST / 316L SST (Valve Spring / Valve & Seat)

### Gearbox Ratio (Digits 10-12)

- **100** 100:1 (56C Motor Frame)
- **080** 80:1 (56C Motor Frame)
- **060** 60:1 (56C Motor Frame)
- **050** 50:1 (56C Motor Frame)
- **040** 40:1 (56C Motor Frame)
- **030** 30:1 (56C Motor Frame)
- **025** 25:1 (56C Motor Frame)
- **020** 20:1 (56C Motor Frame)
- **015** 15:1 (56C Motor Frame)
- **010** 10:1 (56C Motor Frame)
- **007** 7.5:1 (56C Motor Frame)
- **A07** 7.5:1 (143/145TC Motor Frame)
- **005** 5:1 (56C Motor Frame)
- **A05** 5:1 (143/145TC Motor Frame)

### Base Plate (Digit 13)

- **C** Carbon Steel (Epoxy painted)
- **S** Stainless Steel
Wanner Engineering, Inc.

World Headquarters & Manufacturing
Wanner Engineering, Inc.
1204 Chestnut Avenue,
Minneapolis, MN 55403 USA
Phone: 612-332-3681 • Fax: 612-332-6937
Toll-Free Fax (USA): 800-332-6812
Email: sales@wannereng.com
www.Hydra-Cell.com

207 US Highway 281
Wichita Falls, TX 76310 USA
Phone: 940-322-7111
Toll-Free: 800-234-1384
Email: sales@wannereng.com
www.Hydra-Cell.com

Latin American Office
R. Álvaro Anes, 150 Bairro Campestre
Santo André/São Paulo, Brazil - CEP 09070-030
Phone: (11) 4081-7098
Email: mmagoni@wannereng.com
www.Hydra-Cell.com

Wanner International Ltd.

Wanner International, Ltd.
Hampshire - United Kingdom
Phone: +44 (0) 1252 816847
Email: sales@wannerint.com
www.Hydra-Cell.eu

Wanner Pumps Ltd.

Wanner Pumps, Ltd.
Kowloon - Hong Kong
Phone: +852 3428 6534
Email: sales@wannerpumps.com
www.WannerPumps.com

Shanghai - China
Phone: +86-21-6876 3700
Email: sales@wannerpumps.com
www.WannerPumps.com

Guangzhou - China
Phone: +86-20-8920 2730
Email: sales@wannerpumps.com
www.WannerPumps.com