WHEATON®
ROLLER APPARATUS
WHEATON®
R2P™ 2.0 Roller Apparatus

WHEATON Roller Bottle Culture Apparatuses have long since been appreciated for their excellent performance in laboratory, pilot plant and production cell culture installations. They have been designed with customer input in mind in order to meet even the highest expectations of the vaccine and biologics industries.

We understand that control, monitoring and documentation are vital for every cell culture application. Therefore, our state-of-the-art roller systems have been built to support industry standard networking communication protocols to facilitate integration into new production facilities. Moreover, they feature a USB Downloadable System Event Log for precise process documentation. The unique color touch screen with icon driven interface enables intuitive operation of our R2P 2.0 system and is easy to view from a distance.

Looking for something special? Check out the Roller Apparatus Configuration Matrix and Roller Options Information to learn more about customer-specific solutions or contact your DWK Life Sciences Representative for more information.

The R2P 2.0 Roller Apparatus features:

- A color touch screen or digital display
- An icon driven interface with intuitive menus
- Surface mount gold plated electrical connections for better reliability in high temperature environments
- Updated industry standard networking communications protocols and connections
- Lower power consumption for longer battery run time and a safer design
- Backwards compatibility for continuing support of existing installations
- Retrofit kits available to update older WHEATON systems or unsupported systems
- Maintenance-free brushless DC motor for years of trouble-free operation
The R2P 2.0 touch screen was designed for use directly out of the box. There are four types of screens for system navigation. The *Main Screen* displays all of the most important process conditions including bottle speed, bottle direction, alarms, unit identification number, power status, and the network status. From the main screen the user can access the general *Setup Screen*. The user can configure system parameters that are frequently accessed from the Setup Screen including speed ramp time and the event log. All parameters are changed in *Configuration Screens* that feature large numeric keypads and intuitive operation. The Setup Screen also allows access to the *Factory Screen* for system parameters that are established during factory assembly and testing. All screens can access an onboard user guide that details the function of each icon.

- Robust touch screen interface that is easy to view from a distance
- Readily recognized icons for intuitive navigation
- Digitally controlled maintenance free motor accurate to 0.01 RPM
- Capable of remote control and monitoring through SCADA systems
- Multiple decking and capacity configurations available for process flexibility
- USB Downloadable System Event Log

### Specifications

- **Capacity**: 5-88 Positions
- **Bottle Speed (110mm Diameter Bottle, other speeds available)**: 0.25-8.1 RPM
- **Accuracy**: 0.01 RPM
- **Drive**: Belt Driven
- **Motor Type**: Brushless DC
- **Rotation Direction**: Clockwise, Counter-Clockwise and Rocking
- **Belt Break Alarm**: Included
- **Options**: Temperature Monitoring and Battery Backup
- **Remote Communication**: Yes, Modbus® Protocol and WHEATON Protocol via Ethernet TCP/IP and RS422/485
- **Humidity**: 80% up to 31°C
- **Operating Temperature**: 10 to 40°C
- **Electrical**: 100-240 VAC, 50/60 Hz, 35W

### Extremely Intuitive

The R2P 2.0 touch screen was designed for use directly out of the box. There are four types of screens for system navigation. The *Main Screen* displays all of the most important process conditions including bottle speed, bottle direction, alarms, unit identification number, power status, and the network status. From the main screen the user can access the general *Setup Screen*.
**Part Numbers and Sizing Information for Most Popular Systems**

<table>
<thead>
<tr>
<th>Part Number</th>
<th># Positions</th>
<th># Decks</th>
<th>Width (in / cm)</th>
<th>Depth (in / cm)</th>
<th>Height (in / cm)</th>
<th>Weight (lb / kg)</th>
<th># of Bottle Positions</th>
<th>Control System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bottom Drive Production Spacing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WRBPR5010-A</td>
<td>5</td>
<td>1</td>
<td>31 / 79</td>
<td>25 / 63</td>
<td>14 / 35</td>
<td>52 / 24</td>
<td>5</td>
<td>R2P 2.0</td>
</tr>
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<td>WRBPR5030-A</td>
<td>5</td>
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<td>31 / 79</td>
<td>25 / 63</td>
<td>26 / 65</td>
<td>85 / 39</td>
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</tr>
<tr>
<td>WRBPFS110-A</td>
<td>5</td>
<td>11</td>
<td>31 / 79</td>
<td>25 / 63</td>
<td>74 / 187</td>
<td>217 / 99</td>
<td>55</td>
<td>R2P 2.0</td>
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<tr>
<td>WRBFSP110-A</td>
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<td>11</td>
<td>47 / 120</td>
<td>25 / 63</td>
<td>74 / 187</td>
<td>360 / 167</td>
<td>88</td>
<td>R2P 2.0</td>
</tr>
<tr>
<td><strong>Bottom Drive Modular Spacing</strong></td>
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<td></td>
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<tr>
<td>WSBMR5010-A</td>
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<td>31 / 79</td>
<td>25 / 63</td>
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<td>70 / 32</td>
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<td>25 / 63</td>
<td>71 / 179</td>
<td>238 / 108</td>
<td>45</td>
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<td>WSBMR5090-A</td>
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<td>9</td>
<td>31 / 79</td>
<td>25 / 63</td>
<td>71 / 179</td>
<td>238 / 108</td>
<td>45</td>
<td>Standard</td>
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<td><strong>Top Drive Production Spacing</strong></td>
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<td>WTPFS110-A</td>
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<td>31 / 79</td>
<td>25 / 63</td>
<td>75 / 190</td>
<td>260 / 113</td>
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<td>WTPFS110-A</td>
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<td>11</td>
<td>31 / 79</td>
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<td>250 / 113</td>
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<td>47 / 120</td>
<td>25 / 63</td>
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<td>47 / 120</td>
<td>25 / 63</td>
<td>75 / 190</td>
<td>350 / 159</td>
<td>86</td>
<td>Standard</td>
</tr>
</tbody>
</table>

*Incubators sold separately. Temperature and CO₂ models available.*
### Configuration Matrix for Easy Ordering

**Ordering Information**

DWK Life Sciences specializes in standard and customized roller apparatus units. The part numbering system below allows for the configuration of a standard system. The main components that make up a unit include the control system, the size and type of roller bottle decks, and system options. There is also a table listing the most commonly manufactured roller apparatus. If you have any questions about custom bottle sizes, rotation speeds, or standard systems, please contact your DWK Life Sciences Representative.

#### Control System

<table>
<thead>
<tr>
<th>Control System Type</th>
<th>Control System Type Type</th>
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</thead>
<tbody>
<tr>
<td>R2P 2.0</td>
<td>R2P 2.0</td>
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<tr>
<td>STANDARD</td>
<td>Standard</td>
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</tbody>
</table>

#### Decks

<table>
<thead>
<tr>
<th>Spacing</th>
<th>Deck Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Production</td>
</tr>
<tr>
<td>M</td>
<td>Modular</td>
</tr>
</tbody>
</table>

#### Capacity

<table>
<thead>
<tr>
<th>Positions per Deck</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

#### Options

<table>
<thead>
<tr>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

#### Example: W R T P F 5 11 1 - A

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### Plug Styles

<table>
<thead>
<tr>
<th>Plug Style</th>
<th>Volts</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>North America - 120 VAC</td>
</tr>
<tr>
<td>B</td>
<td>Japan - 100 VAC</td>
</tr>
<tr>
<td>C</td>
<td>Continental Europe - 230 VAC</td>
</tr>
<tr>
<td>D</td>
<td>United Kingdom - 230 VAC</td>
</tr>
<tr>
<td>F</td>
<td>Australia/China - 240 VAC</td>
</tr>
<tr>
<td>G</td>
<td>Italy/Chile - 230 VAC</td>
</tr>
<tr>
<td>J</td>
<td>India - 230 VAC</td>
</tr>
</tbody>
</table>

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### Back of Unit

- Mount for Belt Guard
- Main Belt Drive

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### Roller Belts

- Mount for Belt Guard
- Main Belt Drive

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### Example: W R T P F 5 11 1 - A
Modbus® Protocol is a registered trademark of Schneider Electric S.A. or its subsidiaries in the U.S. and/or certain other countries.

**Belt Break Alarm**

The Belt Break Alarm employs two magnetic sensors to ensure that all main pulleys are rotating on the unit. This is included on all R2P 2.0 Roller Apparatus.

**Battery Backup**

The Battery Backup protects cells during transport, processing and power outages. The unit automatically and seamlessly switches over to battery power to provide rotation for 8 – 18 hours. Bottom mounted control systems house larger, longer lasting batteries.

**Temperature Monitoring/Alarm Option**

This option includes two precision temperature probes for real time temperature monitoring and deviation alarms. The temperature is displayed in the temperature calibration screen or on the screen saver for quick confirmation of optimal operating conditions.

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**Deck Kit**

<table>
<thead>
<tr>
<th>Cat. No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W348890V2</td>
<td>WHEATON Standard Roller Top Drive System Options with Belt Break Alarm and Battery Backup</td>
</tr>
<tr>
<td>W348891V2</td>
<td>WHEATON Standard Roller Bottom Drive System Options with Belt Break Alarm and Battery Backup</td>
</tr>
<tr>
<td>W348892V2</td>
<td>R2P 2.0 Roller Top Drive System Options with Battery Backup and Temperature Sensors (Belt Break Alarm is already included with unit)</td>
</tr>
<tr>
<td>W348893V2</td>
<td>R2P 2.0 Roller Bottom Drive System Options with Battery Backup and Temperature Sensors (Belt Break Alarm is already included with unit)</td>
</tr>
<tr>
<td>W348887</td>
<td>Deck Installation Kit for Modular (7.125&quot;) Spaced System (Units have a maximum capacity of 9 decks)</td>
</tr>
<tr>
<td>W348889</td>
<td>Deck Installation Kit for Production (6&quot;) Spaced System (Units have a maximum capacity of 11 decks)</td>
</tr>
</tbody>
</table>

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**Roller Options Information**

**Belt Break Alarm**

- The Belt Break Alarm employs two magnetic sensors to ensure that all main pulleys are rotating on the unit. This is included on all R2P 2.0 Roller Apparatus.

**Battery Backup**

- The Battery Backup protects cells during transport, processing and power outages. The unit automatically and seamlessly switches over to battery power to provide rotation for 8 – 18 hours. Bottom mounted control systems house larger, longer lasting batteries.

**Temperature Monitoring/Alarm Option**

- This option includes two precision temperature probes for real time temperature monitoring and deviation alarms. The temperature is displayed in the temperature calibration screen or on the screen saver for quick confirmation of optimal operating conditions.

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**Product Specifications**

**Standard Roller**

- Smooth ramping digitally controlled rotation accurate to 0.01 RPM
- Maintenance free precision brushless motor
- Bright digital display for easy operation
- Multiple decking and capacity configurations available for process flexibility

**Specifications**

Capacity: 5-88 Positions
Bottle Speed (110mm Diameter Bottle, other speeds available): 0.25-8.1 RPM
Bottle Diameter: 108-121mm
Bottle Length: Up to 550mm
Accuracy: 0.01 RPM
Drive: Belt Driven
Motor Type: Brushless DC
Rotation Direction: Clockwise and Counter-Clockwise
Options: Belt Break Alarm and Battery Backup
Remote Communication: Dry Contact Relay Alarm
Humidity: 80% up to 31°C
Operating Temperature: 10 to 40°C
Electrical: 100-240 VAC, 50/60 Hz, 35W

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**WHEATON® Standard Roller Apparatus**

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