WHEATON®
ROLLER APPARATUS

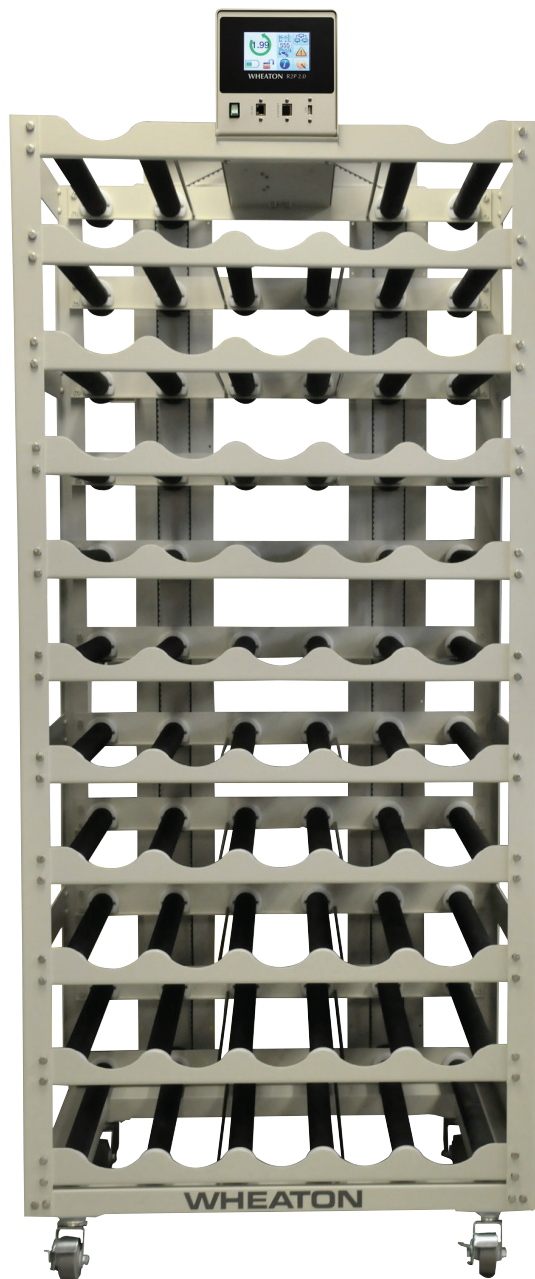Quality production scale equipment for adherent cell cultivation

WHEATON®
R2P™ 2.0 Roller Apparatus

DWK Life Sciences has a long history of designing, building and supporting cultivation equipment. The R2P 2.0 and the WHEATON Standard Roller are the next logical steps. We have updated and enhanced our process control systems for our production scale roller apparatus. We understand the importance of our culture systems to the vaccine and biologics industries; therefore, customer input was a key driver governing the upgrades. The systems utilize current technology to facilitate implementation into new production installations with networked equipment. The systems also maintain backwards compatibility for existing operations. All of these improvements will enable better control and monitoring for research or pilot roller culture installations.

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
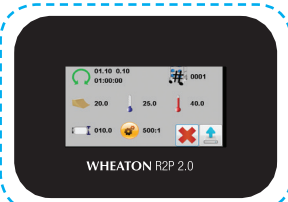
WHEATON®
R2P™ 2.0 Roller Apparatus

Available in Top or Bottom Mounted Control

- 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

Profile

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**.

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. Don't worry we will still include the user manual; you just may never need it.
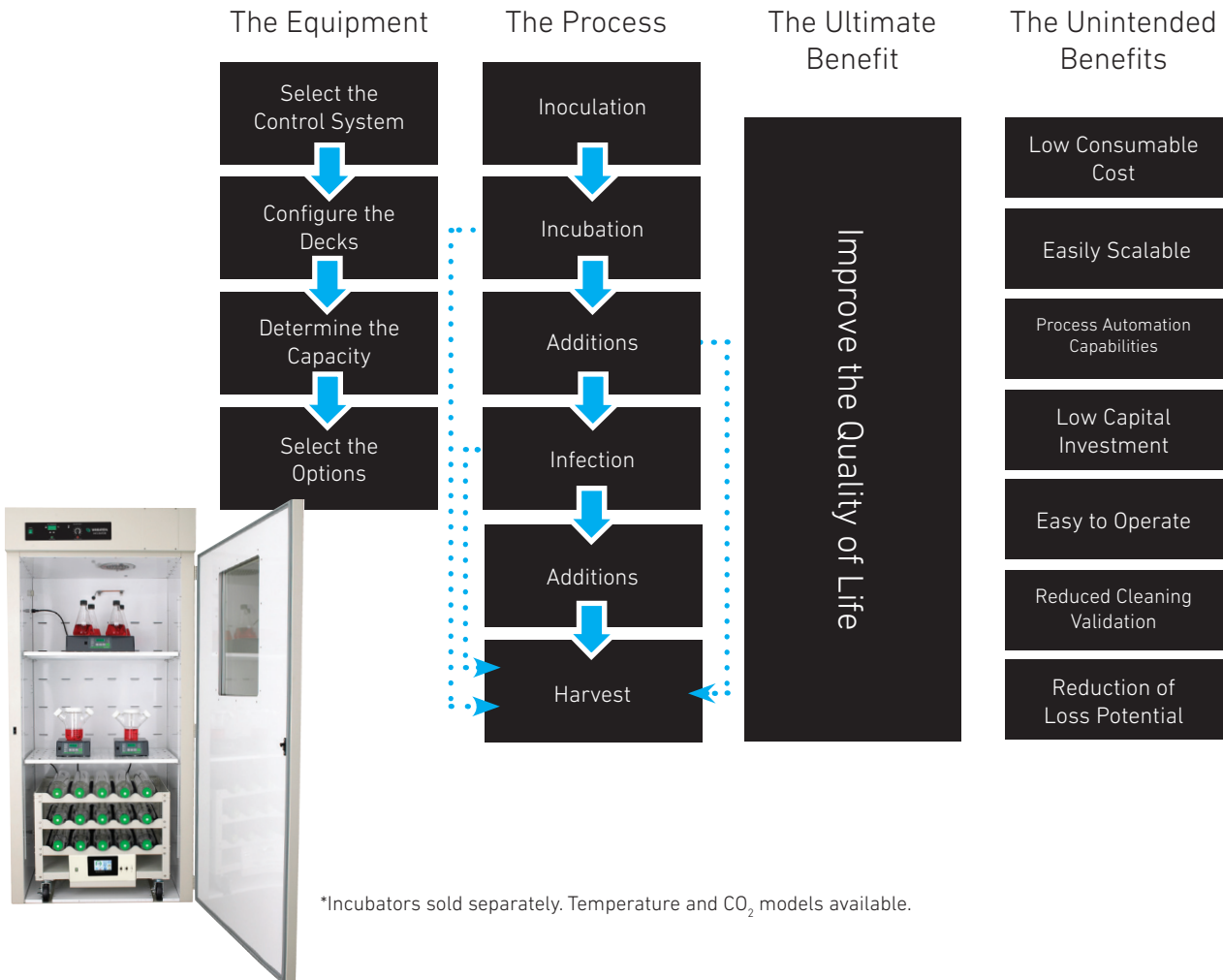
Main Screen

Temperature Alarm

Bottle Speed

Factory Setup

The Equipment

Select the Control System

↓

Configure the Decks

↓

Determine the Capacity

↓

Select the Options

The Process

Inoculation

↓

Incubation

↓

Additions

↓

Infection

↓

Additions

↓

Harvest

The Ultimate Benefit

Improve the Quality of Life

The Unintended Benefits

Low Consumable Cost

Easily Scalable

Process Automation Capabilities

Low Capital Investment

Easy to Operate

Reduced Cleaning Validation

Reduction of Loss Potential

*Incubators sold separately. Temperature and CO_2 models available.

Part Numbers and Sizing Information for Most Popular Systems

Part Number	# Positions	# Decks	Width (in / cm)	Depth (in / cm)	Height (in / cm)	Weight (lb / kg)	# of Bottle Positions	Control System
Bottom Drive Production Spacing								
02-924-936	5	1	31 / 79	25 / 63	14 / 35	52 / 24	5	R2P 2.0
02-924-938	5	3	31 / 79	25 / 63	26 / 65	85 / 39	15	R2P 2.0
02-924-948	5	11	31 / 79	25 / 63	74 / 187	217 / 99	55	R2P 2.0
02-924-950	8	11	47 / 120	25 / 63	74 / 187	360 / 167	88	R2P 2.0
Bottom Drive Modular Spacing								
02-924-952	5	1	30 / 76	25 / 63	14 /34	70 / 32	5	R2P 2.0
02-924-908	5	1	30 / 76	25 / 63	14 /34	70 / 32	5	Standard
02-924-954	5	3	30 / 76	25 / 63	29 / 74	112 / 51	15	R2P 2.0
02-924-910	5	3	30 / 76	25 / 63	29 / 74	112 / 51	15	Standard
02-924-958	5	6	30 / 76	25 / 63	48 / 122	205 / 93	30	R2P 2.0
02-924-914	5	6	30 / 76	25 / 63	48 / 122	205 / 93	30	Standard
02-924-962	5	9	30 / 76	25 / 63	71 / 179	238 / 108	45	R2P 2.0
02-924-918	5	9	30 / 76	25 / 63	71 / 179	238 / 108	45	Standard
Top Drive Production Spacing								
02-924-904	5	11	31 / 79	25 / 63	75 / 190	250 / 113	52	R2P 2.0
02-924-900	5	11	31 / 79	25 / 63	75 / 190	250 / 113	52	Standard
02-924-906	8	11	47 / 120	25 / 63	75 / 190	350 / 159	85	R2P 2.0
02-924-902	8	11	47 / 120	25 / 63	75 / 190	350 / 159	85	Standard

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.

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

Control System

R2P 2.0 Advanced touch screen with remote communications and alarms **STANDARD** Digital display	**Control System Type** **R** - R2P 2.0 **S** - Standard

Top Mounted Ideal design for rigorous cleaning and ceiling mounted connections **Bottom Mounted** Ideal design for easy access and floor mounted connections	**Control System Location** **T** - Top Mounted **B** - Bottom Mounted

Decks

Production (6"/152mm) Smaller spacing between decks to allow for more bottles per area **Modular** (7.125"/181mm) Larger spacing between decks to allow easier removal and replacement of bottles	**Spacing** **P** - Production **M** - Modular

Fixed Fixed size with a single piece uprights used for production and lighter weight due to less hardware **Removale** Removable decks for flexible design	**Deck Type** **F** - Fixed **R** - Removable

Plug Style
A - North America - 120 VAC
B - Japan - 100 VAC
C - Continental Europe - 230 VAC
D - United Kingdom - 230 VAC
F - Australia/China - 240 VAC
G - Italy/Chile - 230 VAC
J - India - 230 VAC

Capacity

5 Five placement areas per deck allows for use with an upright incubator **8** Eight placement areas is used for large scale production type installions	**Postions per Deck** 5 8

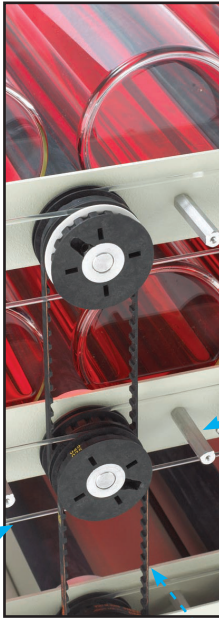|	
01-11: Number of Decks Modular spaced units have a maximum of 9 decks, production spaced units have a maximum of 11 decks	**No. of Decks** 01-11

Options

0 No options included **1** Options Included Standard Roller options include belt break alarm and battery backup R2P 2.0 options include temperature monitoring and alarms (2 probes) and battery backup (Belt break alarm included in base offering)	**Options** 0 1

Back of Unit

Mount for Belt Guard

Roller Belts

Main Belt Drive

WHEATON® Standard Roller Apparatus

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

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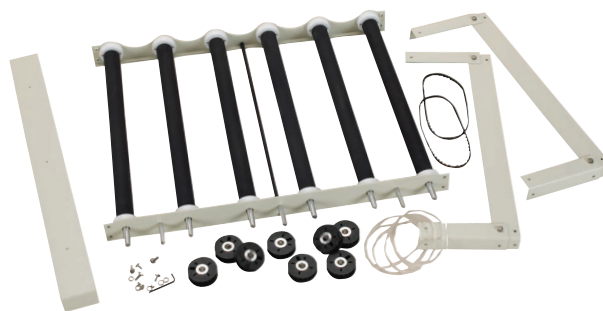
Battery Backup
The **Battery Backup protects cells during transport,** processing and power outages. The unit automatically and seamlessly switches over to battery power to provide rotation for 8 – 18 hours. Bottom mounted control systems house larger, longer lasting batteries.

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.

Cat. No.	Description
02-924-964	WHEATON Standard Roller Top Drive System Options with Belt Break Alarm and Battery Backup
02-924-966	WHEATON Standard Roller Bottom Drive System Options with Belt Break Alarm and Battery Backup
02-924-965	R2P 2.0 Roller Top Drive System Options with Battery Backup and Temperature Sensors (Belt Break Alarm is already included with unit)
02-924-967	R2P 2.0 Roller Bottom Drive System Options with Battery Backup and Temperature Sensors (Belt Break Alarm is already included with unit)
02-912-629	Deck Installation Kit for Modular (7.125") Spaced System (Units have a maximum capacity of 9 decks)
02-912-630	Deck Installation Kit for Production (6") Spaced System (Units have a maximum capacity of 11 decks)

Deck Kit

DURAN WHEATON KIMBLE

In the United States:
For customer service, call 1-800-766-7000
To fax an order, use 1-800-926-1166
To order online: fishersci.com

In Canada:
For customer service, call 1-800-234-7437
To fax an order, use 1-800-463-2996
To order online: fishersci.ca

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