

WHEATON® ROLLER APPARATUSES, BOTTLES AND INCUBATORS

Quality production
scale equipment
for adherent
cell cultivation



DWK LIFE SCIENCES
DURAN WHEATON KIMBLE

THE WHEATON® ROLLER SYSTEM

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.

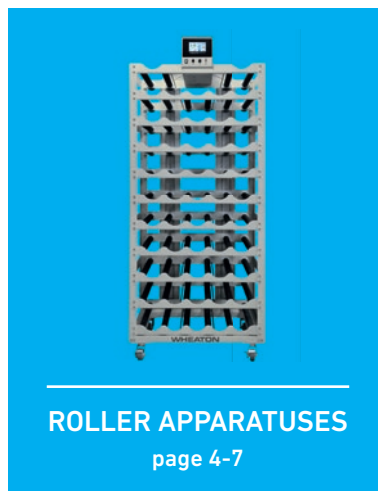
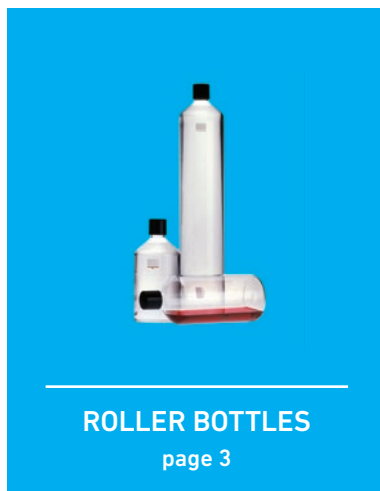
We understand that control, monitoring and documentation are vital for every cell culture application. That's why our state-of-the-art instruments are designed to support industry-standard communication protocols to facilitate integration into new production facilities. They also feature a USB downloadable system event log for accurate process documentation.

A highlight is the unique color touch screen of the R2P™ 2.0 roller apparatus - this enables intuitive operation with icon-driven interface and is easy to see even from a distance.

Our system is rounded off by an extensive range of roller bottles in various sizes and with different closure configurations, as well as incubators optimally matched to the roller apparatuses.

All this to provide you with optimum support in your daily work.

The **PERFECT** combination



WHEATON® ROLLER BOTTLES

APPLICATIONS

- Adherent cell roller culture
- Vaccine production
- To use with WHEATON® Roller Apparatus

FEATURES & BENEFITS

- Specifically designed for adherent cell roller culture
- Reusable roller bottles
- Glass is specially selected for optical clarity, interior surface smoothness, and the absence of glass imperfections
- Withstands repeated wet or dry sterilization cycles
- **Material:** Borosilicate glass 3.3 that conforms to USP Type I and ASTM E-438 Type I, Class A requirements
- Autoclavable
- Available in different sizes and with different cap configurations



WHEATON® ROLLER BOTTLES

Ordering information

Description	Diameter x flat overall length [mm]	Usable surface area [cm ²]	Surface [cm ²]	Capacity approx. [mL]	Pack Qty	Cat. No.
Roller bottle with 38 mm deep skirted, black phenolic screw cap with white styrene-butadiene rubber liner (GPI 38-415)	110 x 240	550	680	1380	4	348252
	110 x 285	700	840	1760	4	348253
	110 x 480	1320	1500	3450	4	348256
	110 x 550	1555	1680	4230	4	348258
Roller bottle with 45 mm white polypropylene screw cap with inner sealing ring and polypropylene pour ring.	110 x 240	550	680	1380	4	348272
	110 x 285	700	840	1760	4	348273
Roller bottle with 51 mm black phenolic screw cap with shallow skirt and white styrene-butadiene rubber liner (GPI 51-400)	110 x 270	700	840	1760	4	348522
	110 x 355	940	1070	2500	4	348524
	110 x 535	1555	1680	4230	4	348528

WHEATON®

STANDARD & R2P™ 2.0

ROLLER APPARATUS

APPLICATIONS

- Cell culture
- Larger R&D facilities
- Large-scale vaccine production

FEATURES & BENEFITS

- Multiple decking and capacity configurations for high process flexibility
- Smooth ramping and digitally controlled rotation accurate to 0.01 RPM
- Maintenance free precision brushless motor
- Top or bottom mount display for both roller apparatus available
- WHEATON® Standard Roller with bright LED display
- WHEATON® R2P™ 2.0 Roller with robust color touch screen

SPECIALS OF THE R2P™ 2.0 SYSTEM:

- Rotation alarm and temperature alarm ensures process conformity
- Capable of remote interface and monitoring through SCADA systems
- USB downloadable system event log for process documentation
- Robust color touch screen
- Readily recognized icons for intuitive navigation

The WHEATON® Standard Roller is equipped with a bright LED display (top or bottom mounted)



Both roller apparatus are available in different sizes and with top or bottom mounted display



EXTREMELY INTUITIVE! THE R2P™ 2.0 COLOR TOUCH SCREEN

The R2P™ 2.0 touchscreen is designed for use right out of the box. The main screen displays all important process conditions, including bottle speed, bottle direction, alarms, device identification number, power status, and network status.

All parameters are changed in configuration screens that feature large numeric keys and intuitive operation. 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



The WHEATON® R2P™ 2.0 Roller is equipped with a robust color touch screen (top or bottom mounted)

Specifications

Specifications	WHEATON® Standard Roller Apparatus	WHEATON® R2P™ 2.0 Roller Apparatus
Capacity	5-88 positions	5-88 positions
Bottle speed	0.25-8.1 RPM (110 mm bottle, other speeds available)	0.25-8.1 RPM (110 mm bottle, other speeds available)
Bottle diameter	108-121 mm	108-121 mm
Bottle length	up to 550 mm	up to 550 mm
Accuracy	0.01 RPM	0.01 RPM
Drive	Belt driven	Belt driven
Motor type	Brushless DC	Brushless DC
Rotation direction	Clockwise and counter-clockwise	Clockwise, counter-clockwise and rocking
Rotation alarm	Optional	Included
Options	Rotation alarm and battery backup	Temperature monitoring and battery backup
Remote communication	Dry contact relay	Yes, Modbus® Protocol and WHEATON® Protocol via Ethernet TCP/IP and RS422/485
Operating temperature	10 °C to 40 °C	10 °C to 40 °C
Humidity	80% up to 31 °C	80% up to 31 °C
Electrical	100-240 VAC, 50/60 Hz, 35 W	100-240 VAC, 50/60 Hz, 35 W
 Complies with industry standards including UL, CSA, CE, WEEE and RoHs compliant		

WHEATON® STANDARD & R2P™ 2.0 ROLLER APPARATUS

Ordering information for most commonly used roller apparatus

Control system	# positions	# decks	# of bottle positions	Width [inch / cm]	Depth [inch / cm]	Height [inch / cm]	Weight [lb / kg]	Cat. No.
Bottom drive – Production spacing								
R2P™ 2.0	5	1	5	31 / 79	25 / 63	14 / 35	52 / 24	WRBPR5010-[*]
R2P™ 2.0	5	3	15	31 / 79	25 / 63	26 / 65	85 / 39	WRBPR5030-[*]
R2P™ 2.0	5	11	55	31 / 79	25 / 63	74 / 187	217 / 99	WRBPF5110-[*]
Bottom drive – Modular spacing								
R2P™ 2.0	5	3	15	30 / 76	25 / 63	29 / 74	112 / 51	WRBMR5030-[*]
Standard	5	3	15	30 / 76	25 / 63	29 / 74	112 / 51	WSBMR5030-[*]
R2P™ 2.0	5	7	35	30 / 76	25 / 63	57 / 145	196 / 89	WRBMR5070-[*]
Standard	5	7	35	30 / 76	25 / 63	57 / 145	196 / 89	WSBMR5070-[*]
R2P™ 2.0	5	9	45	30 / 76	25 / 63	71 / 179	238 / 108	WRBMR5090-[*]
Standard	5	9	45	30 / 76	25 / 63	71 / 179	238 / 108	WSBMR5090-[*]
Top drive – Production spacing								
R2P™ 2.0	5	11	52	31 / 79	25 / 63	75 / 190	250 / 113	WRTPF5110-[*]
Standard	5	11	52	31 / 79	25 / 63	75 / 190	250 / 113	WSTPF5110-[*]

[*] Plug style specification see table below



WHEATON® STANDARD & R2P™ 2.0 ROLLER APPARATUS

Part numbering system for further roller apparatus configurations

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.

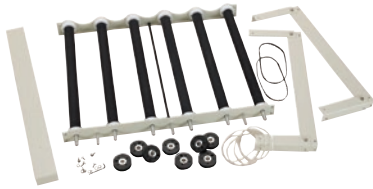
If you have any questions about custom bottle sizes, rotation speeds or standard systems do not hesitate to contact your DWK Life Sciences representative.

[1] Control system type	[2] Control system location	[3] Deck spacing	[4] Deck type
R R2P™ 2.0: Advanced touch screen with remote communications and alarms	T Top mounted: Ideal design for rigorous cleaning and ceiling mounted connections	P Production (6"/152mm): Smaller spacing between decks to allow for more bottles per area	F Fixed size with a single piece uprights used for production and lighter weight due to less hardware
S STANDARD: LED display	B Bottom mounted: Ideal design for easy access and floor mounted connections	M Modular (7.125"/181mm): Larger spacing between decks to allow easier removal and replacement of bottles	R Removable decks for flexible design

SINGLE COMPONENTS AND REPLACEMENT PARTS

Ordering information

Description	Cat.no.
WHEATON® Standard Roller Top Drive System Options with Belt Break Alarm and Battery Backup	W348890V2
WHEATON® Standard Roller Bottom Drive System Options with Belt Break Alarm and Battery Backup	W348891V2
WHEATON® R2P™ 2.0 Roller Top Drive System Options with Battery Backup and Temperature Sensors (Belt Break Alarm is already included with unit)	W348892V2
WHEATON® R2P™ 2.0 Roller Bottom Drive System Options with Battery Backup and Temperature Sensors (Belt Break Alarm is already included with unit)	W348893V2
Deck Installation Kit for Modular (7.125") Spaced System (Units have a maximum capacity of 9 decks)	W348887
Deck Installation Kit for Production (6") Spaced System (Units have a maximum capacity of 11 decks)	W348889



Deck Installation Kit

ROLLER OPTIONS INFORMATION [7]

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.

Creating a part number:

W + [1] + [2] + [3] + [4] + [5] + [6] + [7] + - [*]

Example: WRBPF5110-C

WHEATON® R2P™ 2.0, bottom mount, production, fixed, 5-areas, 11-decks, no-options, plug style Europe

[5] Capacity	[6] Number of decks	[7] Options	[*] Plug style
5 Five placement areas per deck allows for use with an upright incubator	01- Production spaced 11 units have a maximum of 11 decks	0 No options included	Connection
8 Eight placement areas is used for large scale production type installations	01- Modular spaced 09 units have a maximum of 9 decks	1 Options included Standard Roller: Belt break alarm and battery backup R2P™ 2.0: Temperature monitoring and alarms (2 probes) and battery backup (belt break alarm is already included)	-A North America, 120 V
			-B Japan, 100 V
			-C Europe, 230 V
			-D UK, 230 V
			-F Australia/China, 240 V
			-G Italy/Chile, 230 V
			-J India, 230 V

WHEATON® STANDARD & CO₂ INCUBATOR

APPLICATIONS

- Cell cultivation
- Temperature dependent studies
- Larger R&D facilities
- Large-scale production
- To use with WHEATON® Roller Apparatus

FEATURES & BENEFITS

- Available as Standard or CO₂ Incubator
- Designed specifically for use with WHEATON® Roller Culture Apparatus
- **Compatible with:**
 - Production-spaced R2P™ 2.0 and Standard rollers with up to 11 decks
 - Modular-spaced R2P™ 2.0 and Standard rollers with up to 9 decks
- Independent over-temperature safety protection
- Designed for temperature uniformity
- Large viewing window in the door (with an option for dual windows)
- Conforms to UL, CSA, and CE Standards
- Dry contact alarm port available for communicating alarm activation instances
- Internal electrical outlet for accessories
- USB port and analog 4-20 mA jack included for data logging temperature levels
- User configurable shelving system and roller apparatus guide tracks (shelving sold separately)

CO₂ INCUBATOR ONLY:


- Infrared sensor technology to maintain 0 to 20% CO₂ concentration
- Stainless steel interior



WHEATON® STANDARD & CO₂ INCUBATOR

Specifications

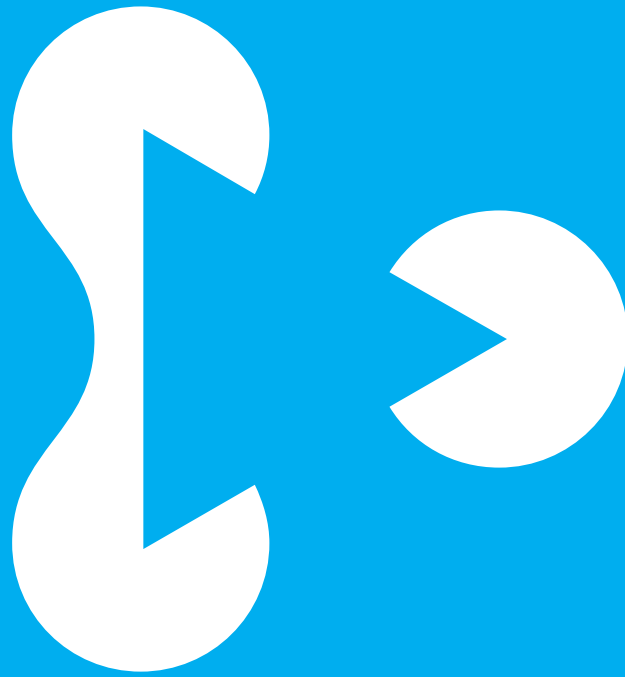
Specifications	WHEATON® Standard Incubator	WHEATON® CO ₂ Incubator
Capacity	39.7 Cubic ft	39.7 Cubic ft
Interior dimensions [W x D x H]	34.7 x 26 x 75" (88.1 x 66.0 x 190.5 cm)	35 x 26 x 75.5" (88.9 x 66 x 191.7 cm)
Exterior dimensions [W x D x H]	42 x 32.4 x 88" (106.7 x 82.3 x 223.5 cm)	42.5 x 34.5 x 89" (108 x 87.6 x 226 cm)
Control	Microprocessor controlled ± 0.1 °C	Microprocessor controlled ± 0.1 °C
Temperature range	8 °C above ambient to 70 °C	8 °C above ambient to 70 °C
Temperature uniformity	Forced air circulation ± 0.5 °C at 37 °C	Forced air circulation ± 0.5 °C at 37 °C
Shelving	20 maximum	30 maximum
Electrical	100-240 VAC, 50/60 Hz, 12A-8 A	100-240 VAC, 50/60 Hz, 15 A-10 A
Interior electrical outlet	1 (chamber ceiling)	1 (chamber ceiling)
Net weight	497 lb (225 kg)	574 lb (260.4 kg)
Shipping weight	657 lb (298.1 kg)	682 lb (309.4 kg)
CO₂ range	–	0-20%
CO₂ sensor	–	IR
CO₂ sensor	–	< 5 min (recovery)
CO₂ connection	–	¼" (6.35 mm) hose barb
CO₂ inlet pressure	–	15-20 psi (0.103 - 1.378 bars)
Jacket type	–	Air


 Complies with industry standards including UL, CSA, CE, WEEE and RoHs compliant

WHEATON® STANDARD & CO₂ INCUBATOR

Ordering information

Plug style	Voltage	Pack Qty	Cat. No.
WHEATON® Standard Incubator			
North America	120 VAC	1	W753681
Japan	100 VAC	1	W753681-B-E
Continental Europe	230 VAC	1	W753685-C-E
United Kingdom	230 VAC	1	W753685-D-E
Australia/China	230 VAC	1	W753685-F-E
Italy/Chile	230 VAC	1	W753685-G-E
India	230 VAC	1	W753685-J-E
Switzerland	230 VAC	1	W753685-L-E
Painted Shelf for Standard Incubator (Not supplied with incubators)		1	753685
WHEATON® CO₂ Incubator			
North America	120 VAC	1	WI057608
Continental Europe	230 VAC	1	WI057608-C-E
United Kingdom	230 VAC	1	WI057608-D-E
Australia/China	230 VAC	1	WI057608-F-E
India	230 VAC	1	WI057608-J-E
Stainless Steel Shelf for CO₂ Incubator (Not supplied with incubators)		1	WI056028



Excellence in your hands

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