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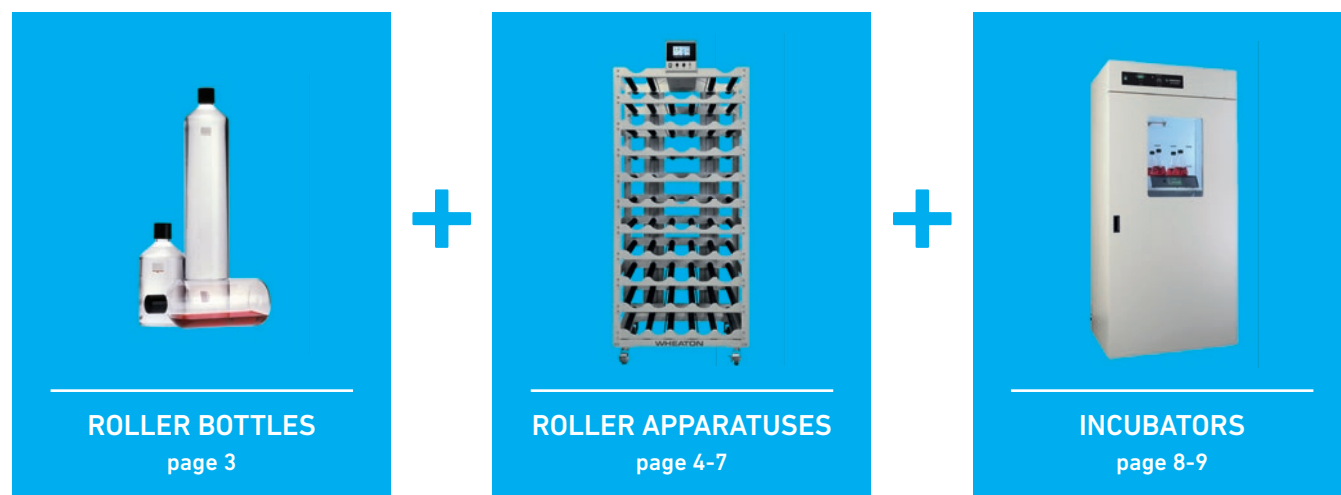
We understand that control, monitoring and documentation are vital for every cell culture application. That's why our state-of-the-art instruments are designed to support industry-standard communication protocols to facilitate integration into new production facilities. They also feature a USB downloadable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

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ROLLER APPARATUSES
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INCUBATORS
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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 [cm²]	Surface [cm²]	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 equiped 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 equiped 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

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

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
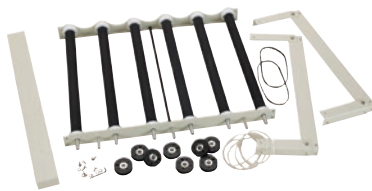type of roller bottle decks and system options.

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-** **11**	Production spaced units have a maximum of 11 decks	**0**	No options included		**Connection**
						-A	North America, 120 V
				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)	**-B**	Japan, 100 V
8	Eight placement areas is used for large scale production type installions	**01-** **09**	Modular spaced units have a maximum of 9 decks			**-C**	Europe, 230 V
						-D	UK, 230 V
						-F	Australia/China, 240 V
						-G	Italy/Chile, 230 V
						-J	India, 230 V

WHEATON®
STANDARD & CO$_2$ 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 CO$_2$ 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)

CO$_2$ INCUBATOR ONLY:

- Infrared sensor technology
  to maintain 0 to 20% CO$_2$ concentration
- Stainless steel interior

WHEATON® STANDARD & CO₂ INCUBATOR
Specifications

Specifications	WHEATON® Standard Incubator	WHEATON® CO₂ 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)
CO_2 range	–	0-20%
CO_2 sensor	–	IR
CO_2 sensor	–	< 5 min (recovery)
CO_2 connection	–	¼" (6.35 mm) hose barb
CO_2 inlet pressure	–	15-20 psi (0.1.03 - 1.378 bars)
Jacket type	–	Air
ᶜ🅄🅛 🆂🅟 CE 🗵 RoHS ②	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

bio-strategy
delivering technology

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