



WHEATON | **Roller Culture Apparatus**

Proven Tools for Life Science Research



Anchorage Dependent Cell Production

In culture, anchorage dependent cells want to be attached to a surface wall of a culture vessel or microcarrier beads suspended in culture media. Motionless methods of monolayer cell culture usually consist of T flasks which lay flat. Cells will grow on the inside flask surface only where the media covers them. Since adherent cells usually demonstrate contact inhibition, cell growth is restricted to the amount of contact surface area of the flask. This severely limits the static method being used for large scale production of cells.

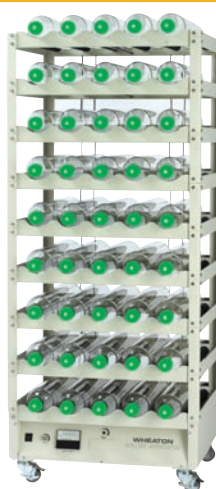
As an alternative to T flasks, Wheaton Science Products offers various roller apparatus and options to allow for maximum flexibility. The entire surface of a roller bottle is used to grow monolayer cells without filling the whole bottle with expensive media. Using the Wheaton Roller Apparatus, increases surface area which equals larger cell yields, which in turn, decreases production costs.

Cost Buster



The Original High Volume Production Roller Apparatus

Modular Line



Superior Roller Apparatus Designed to Maximize Production Spacing

R₂P™



The Technology Leader in Volume Production Roller Apparatus

	Cost Buster	Modular Line	R ₂ P™ Roller System
Number of Bottle Positions	5 or 8	5	5 or 8
Distance Between Decks	Production Spacing 6" (15.2 cm)	Modular Spacing 7 1/8" (18.1 cm)	6 in (15.24 cm) Production spaced (available in 5 or 8 positions per deck) 7 1/8 in (18.1 cm) Modular spaced (available in 5 positions per deck)
Number of Decks	11	1 to 9 (easily modified)	1 - 9 (7 1/8 in. (18.1 cm) Modular spaced-5 positions per deck) 1 - 11 (6 in (15.24 cm) Production spaced-5 positions per deck) 11 (6 in (15.24 cm) Production spaced-8 positions per deck)
Unit Height	Fixed	Adjustable based on number of decks	5 position models are adjustable based on number of decks 8 position model is fixed
Number of Bottles	52 (5 bottles/deck) } with 86 (8 bottles/deck) } 1700 cm ² bottle 104 } with 172 } 850 cm ² bottle	1 (min) } with 45 (max) } 1700 cm ² bottle 1 } with 90 } 850 cm ² bottle	1 - 55 (for 5 positions/deck-production spaced) } with 1 - 45 (for 5 positions/deck-modular spaced) } 1700 cm ² bottle 1 - 110 } with 1 - 90 } 850 cm ² bottle
Rotation Alarm	Optional	Optional	Standard
Battery Backup	Optional	Optional	Optional
Control/Operating System	Not Available	Not Available	CART ₂ software
Warranty	1 Year	1 Year	1 Year

Cost Buster Roller Apparatus



- Maximum production capacity in a minimum amount of space
- Available in 52 and 86 position models
- Drive unit mounted on top to provide easy access for maintenance and better air flow
- Soft start feature minimizes cell disruption
- Conforms to UL, CSA, and CE Standards

The Wheaton Cost Buster High Volume Production Roller Apparatus provides the maximum amount of potential cell culture growth area available in the smallest amount of space. This is accomplished by reducing the spacing between decks. Controls and drive units are located on top of the unit, providing easy access for maintenance. The open frame design allows better air flow, which minimizes top-to-bottom temperature gradients.

Wheaton Cost Busters can accommodate roller bottles from 110 to 121 mm in diameter and up to 550 mm in length. Each roller is driven by nonslip belts and pulleys for positive traction (especially important for use with lightweight plastic bottles).

The Cost Buster High Volume Production Roller Apparatus is supplied without roller bottles.

Specifications:

Electrical:100 - 120VAC, 50/60Hz, 35 watts
220 - 240VAC, 50/60Hz, 35 watts

Bottle Speed:0.25 – 5.3 RPM (110 mm bottle)

Operating Temp.:15 to 40°C

Humidity:80% up to 31°C

Altitude Limit:2000 meters

Dimensions W x D x H:

52-Position:30.9 x 24.3 x 74.5 (in)

52-Position:78.4 x 61.6 x 189.4 (cm)

86-Position:46.7 x 24.3 x 74.6 (in)

86-Position:118.7 x 61.6 x 189.4 (cm)

Weight:

52-Position:250 lb (113.4 kg)

86-Position:350 lb (158.8 kg)

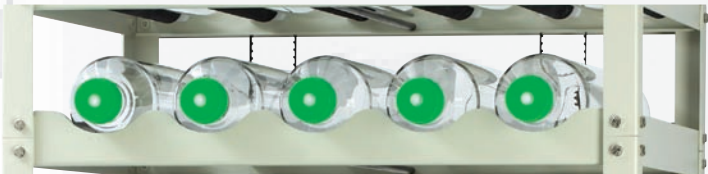
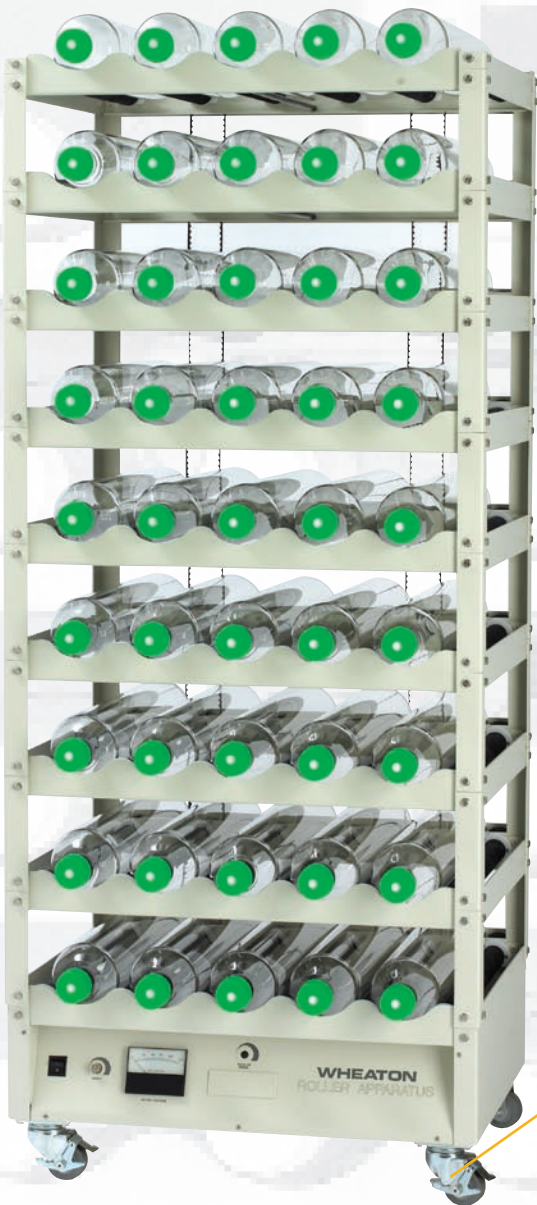
Ordering Information

Cat. No.	Plug Style	Voltage	Qty/Case
52-Position Cost Buster			
349000-A	North America	120 VAC	1
349000-B	Japan	100 VAC	1
349005-C	Continental Europe	230 VAC	1
349005-D	United Kingdom	230 VAC	1
349005-F	Australia/China	240 VAC	1
349005-G	Italy/Chile	230 VAC	1
W349005-J	India	230 VAC	1
Cat. No.	Plug Style	Voltage	Qty/Case
86-Position Cost Buster			
348990-A	North America	120 VAC	1
348990-B	Japan	100 VAC	1
348995-C	Continental Europe	230 VAC	1
348995-D	United Kingdom	230 VAC	1
348995-F	Australia/China	240 VAC	1
348995-G	Italy/Chile	230 VAC	1
W348995-J	India	230 VAC	1

Offered with 7 standard electrical plug choices. Additional configurations are available through special order.

For optional battery backup and rotation alarm system see page 4.

Modular Cell Production Roller Apparatus



- 1 five position base unit and up to 8 additional five position decks
- Distance between decks 7 1/8" (18.1 cm)
- Provides up to 75,000 cm² total surface area for cell growth
- All-position drive is standard allowing the use of glass or plastic roller bottles
- Conforms to UL, CSA and CE Standards

The Wheaton Modular Cell Production Roller Culture Apparatus allows flexibility for scale-up and production of monolayer cell cultures in standard roller bottles. It accepts bottles from 108 to 121 mm in diameter and up to 550 mm in length. The system consists of a base drive unit and five-position roller deck to which additional roller decks can be added. A powerful DC motor, with soft-start speed control, drives the bottles through a series of durable nonslip belts.

The all-position drive model is a positive traction drive system for light-weight plastic bottles in which each roller is individually driven. Also included is a locking speed control knob that prevents accidental change in rotation rates.

This unit is available with one of seven standard electrical plugs shown. Additional configurations are available through special ordering. Contact Wheaton for more information. The Modular Cell Production Apparatus is supplied without roller vessels.

Shipping Unit: One per case



Locking wheels prevent unwanted movement

Specifications:

Electrical: 100 - 120VAC, 50/60Hz, 35 watts
..... 220 - 240VAC, 50/60Hz, 35 watts
Bottle Speed: 0.25 – 5.3 RPM (110 mm bottle)
Operating Temperature: 15 to 40°C
Humidity: 80% up to 31°C
Altitude Limit: 2000 meters

Dimensions W x D x H:

Base with 1 Deck: 29.75 x 24.375 x 13.5 (in)
..... 75.7 x 63.0 x 34.3 (cm)
Base with 9 Decks: 29.75 x 24.375 x 70.5 (in)
..... 75.6 x 63 x 179 (cm)

Weight:

Base with 1 Deck: 70 lb (31.8 kg)
Base with 9 Decks: 238 lb (108 kg)
Additional Decks: 21 lb (19.5 kg)



Additional 5-Position Deck

The 5-Position Deck allows you to add one 5-position deck to your Modular Cell Production system.

Specifications:

Weight: 21 lb (9.5 kg)
Dimensions W x D x H: 29 3/4 x 24 3/8 x 7 1/8 in (75.6 x 62.9 x 18.1 cm)

Cat. No.	Description	Qty/Case
348969	5-Position Deck	1

Ordering Information

Cat. No.	Plug Style	Voltage
Base with 1 Deck - 5 Bottle Positions		
348960-A	North America	120 VAC
348960-B	Japan	100 VAC
348970-C	Continental Europe	230 VAC
348970-D	United Kingdom	230 VAC
348970-F	Australia/China	240 VAC
348970-G	Italy/Chile	230 VAC
W348970-J	India	230 VAC

Base with 2 Decks - 10 Bottle Positions		
348961-A	North America	120 VAC
348961-B	Japan	100 VAC
348971-C	Continental Europe	230 VAC
348971-D	United Kingdom	230 VAC
348971-F	Australia/China	240 VAC
348971-G	Italy/Chile	230 VAC
W348971-J	India	230 VAC

Base with 3 Decks - 15 Bottle Positions		
348962-A	North America	120 VAC
348962-B	Japan	100 VAC
348972-C	Continental Europe	230 VAC
348972-D	United Kingdom	230 VAC
348972-F	Australia/China	240 VAC
348972-G	Italy/Chile	230 VAC
W348972-J	India	230 VAC

Cat. No.	Plug Style	Voltage
Base with 4 Decks - 20 Bottle Positions		
348963-A	North America	120 VAC
348963-B	Japan	100 VAC
348973-C	Continental Europe	230 VAC
348973-D	United Kingdom	230 VAC
348973-F	Australia/China	240 VAC
348973-G	Italy/Chile	230 VAC
W348973-J	India	230 VAC

Base with 5 Decks - 25 Bottle Positions		
348964-A	North America	120 VAC
348964-B	Japan	100 VAC
348974-C	Continental Europe	230 VAC
348974-D	United Kingdom	230 VAC
348974-F	Australia/China	240 VAC
348974-G	Italy/Chile	230 VAC
W348974-J	India	230 VAC

Base with 6 Decks - 30 Bottle Positions		
348965-A	North America	120 VAC
348965-B	Japan	100 VAC
348975-C	Continental Europe	230 VAC
348975-D	United Kingdom	230 VAC
348975-F	Australia/China	240 VAC
348975-G	Italy/Chile	230 VAC
W348975-J	India	230 VAC

Cat. No.	Plug Style	Voltage
Base with 7 Decks - 35 Bottle Positions		
348966-A	North America	120 VAC
348966-B	Japan	100 VAC
348976-C	Continental Europe	230 VAC
348976-D	United Kingdom	230 VAC
348976-F	Australia/China	240 VAC
348976-G	Italy/Chile	230 VAC
W348976-J	India	230 VAC

Base with 8 Decks - 40 Bottle Positions		
348967-A	North America	120 VAC
348967-B	Japan	100 VAC
348977-C	Continental Europe	230 VAC
348977-D	United Kingdom	230 VAC
348977-F	Australia/China	240 VAC
348977-G	Italy/Chile	230 VAC
W348977-J	India	230 VAC

Base with 9 Decks - 45 Bottle Positions		
348968-A	North America	120 VAC
348968-B	Japan	100 VAC
348978-C	Continental Europe	230 VAC
348978-D	United Kingdom	230 VAC
348978-F	Australia/China	240 VAC
348978-G	Italy/Chile	230 VAC
W348978-J	India	230 VAC

Optional Accessories for the Cost Buster and Modular Roller Apparatus

Battery Backup System

- Protects cells during power outages
- Provides a minimum of 24 hours of auxiliary power
- Can be used to rotate vessels during transport to harvest area

Protects your cells and process! The Wheaton Battery Backup System is designed to be installed in either the Modular or Cost Buster Roller Culture Apparatus. The system monitors the AC power and automatically switches between battery power and AC power as needed. The system will provide 24 hours of auxiliary power to the motor. This system can be used to rotate the roller vessels during transport to and from the warm room or incubator. The system consists of two long-life sealed batteries, an automatic charger system, and an independent speed control which can be preset to maintain a bottle speed of approximately 25% of full speed during the lose of the primary voltage.

Charger Specifications:

Recharge time is 8 hours for discharged batteries, shorter for partially discharged batteries. Charger automatically monitors temperature and adjusts charge voltage for correct charging levels at elevated incubator temperatures.

Cat. No.	Description	Qty/Case
Factory Installed (Must be ordered with Roller Culture Apparatus)		
349017	Battery Backup System for Modular Cell & Cost Buster Roller Apparatus	1
Field Retrofittable Battery Backup System		
Same as above except packaged for field installation on Wheaton Modular and Cost Buster Production Roller Culture Apparatus which conforms to UL, CSA & CE standards.		
349018	Battery Backup System for Modular Cell & Cost Buster Roller Apparatus	1

Rotation Alarm System

- Monitors drive system
- Alarm sound if any failure is detected
- Alarm is visual & audible

The Wheaton Rotation Alarm System is designed to monitor the drive system on the Modular and Cost Buster Production Roller Culture Apparatus. When the system detects a failure it alarms. The alarm is visual (flashing LEDs), audible (loud buzzer), and can be tied into an existing equipment monitoring system through the external jack. The alarm system is installed in the Roller Culture Apparatus.

Alarm Indicator Specifications:

Visual: 3 LED indicators flash on and off
Audible: Loud buzzer
Remote signal: 4 pin panel mount mic jack
Alarm outputs: Pulsating +12VDC (25ma), Dry contact closure .5A at 24VDC

Cat. No.	Description	Qty/Case
Factory Installed (Must be ordered with Roller Culture Apparatus)		
349011	Rotation Alarm System Modular Cell Production Roller Apparatus	1
349013	Rotation Alarm System for Cost Buster Production Roller Apparatus	1
Field Retrofittable Rotation Alarm System		
Same as above except packaged for field installation on Wheaton Modular & Cost Buster Production Roller Culture Apparatus which conforms to UL, CSA & CE standards.		
349014	Rotation Alarm System for Modular Roller Culture Apparatus	1
349016	Rotation Alarm system for Cost Buster Production Roller Culture Apparatus	1

R₂P™ Roller Culture Apparatus

- Utilize from research to production
- Modular; add capacity and options as your requirements change
- From 1 to 55 positions per unit (holds 10 to 110 of the 850 cm₂ vessels)
- Wide speed range brushless DC motor, 0.25 to 8.0 RPM
- Programmable rotation direction, fixed or reversed
- CART₂ ready! Optional software for monitoring controlling, & recording up to 255 units
- Multi-language display prompts. Choice of English, French, German, Italian, Portuguese, or Spanish
- Conforms to UL, CSA and CE Laboratory Standards

The Wheaton R₂P Roller Culture Apparatus is designed to allow for the development and growth of cell culture from research to production quantities without having to change equipment and revalidate protocols. This is achieved by giving you more flexible controls and the ability to easily add options at any time. All R₂P Roller culture units share the same motor, software, controls and controllers, which makes moving culture conditions between units fast and easy.

All-Position Drive System

Each roller is driven to allow for either glass or lighter-weight plastic roller culture vessels to be used.

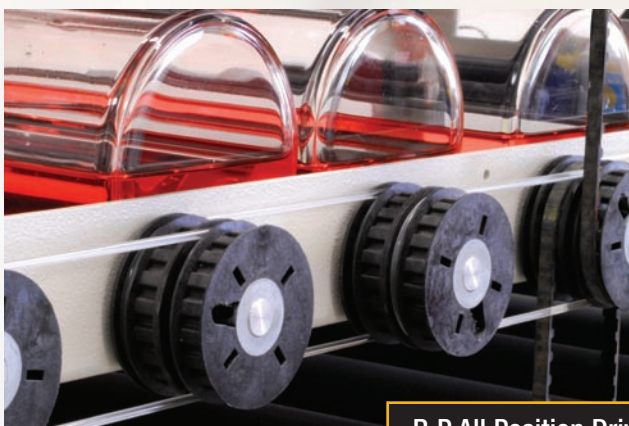
Built-in Monitoring and Alarms

The unit continuously monitors both the rotational speed and the drive train (the motor and belts). If the speed falls out of the entered tolerance or if the unit detects a loss of rotation, the unit displays an alarm, and sounds a loud buzzer. These alarms can also be tied to an existing monitoring system through an external jack. Optional features can be added at any time, including CART₂ and battery backup. For more information on accessories see page 8.



User-Friendly Control Panel

The large digital display and keypad allow for easy input and monitoring of the settings. The unit continually displays the bottle RPM setting and the actual bottle RPM. The display remains accurate with any size bottle (110 to 121 mm diameter) by entering the bottle diameter. The unit can be programmed to rotate in either direction, and can reverse direction automatically at the time interval entered (better for roller bottles fluted along the longitudinal axis). The programmable soft start and stop feature avoids premature cell detachment. The settings can be saved in one of the ten memory locations for easy recall later.



R₂P All Position Drive

Specifications:

Electrical: 100 - 240 VAC, 50/60Hz, 20 watts

Bottle Dimensions Dia/L: 110 to 121 mm / up to 550 mm

Bottle Speed: 0.25 – 8.0 RPM (110 mm bottle)

Deck Spacing: inches (cm)

All Position Drive R₂P 6 in (15.24 cm)

Modular R₂P 7 1/8 in (18.1 cm)

Operating Temperature: 15 to 40°C

Humidity: 80% up to 31°C; 50% at 40°C

Altitude Limit: 2000 meters

Dimensions W x D x H:

Base with 1 Deck: 31 x 24.5 x 13.5 (in)

78.8 x 62.25 x 34.3 (cm)

Base with 3 Decks: 31 x 24.5 x 25.5 (in)

78.8 x 62.25 x 64.8 (cm)

Base with 11 Decks: 31 x 24.5 x 73.5 (in)

78.8 x 62.25 x 186.7 (cm)

Extra Deck: 31 x 24.5 x 6 (in)

78.8 x 62.25 x 15.24 (cm)

Weight:

Base with 1 Deck: 52 lb (23.6 kg)

Base with 3 Decks: 85 lb (38.6 kg)

Base with 11 Decks: 217 lb (98.4 kg)

Additional Deck: 16.5 lb (7.5 kg)

Built-in Drive Monitoring System Alarm

Visual: Flashing display with fault displayed

Audible: Buzzer (with On/Off control)

External output: NO or NC (programmable) dry contact (0.5A@ 24 VDC) through RJ-45 jack on the control housing front panel.



Ordering Information

R₂P All Position Drive 6" (15.24 cm) Deck Spacing

Cat. No.	Plug Style	Voltage	Qty/Case
Base with 1 Deck - 5 Bottle Positions			
W348880-A	North America	120 VAC	1
W348880-B	Japan	100 VAC	1
W348880-C	Continental Europe	230 VAC	1
W348880-D	United Kingdom	230 VAC	1
W348880-F	Australia/China	240 VAC	1
W348880-G	Italy/Chile	230 VAC	1
W348880-J	India	230 VAC	1
Base with 3 Decks - 15 Bottle Positions			
W348881-A	North America	120 VAC	1
W348881-B	Japan	100 VAC	1
W348881-C	Continental Europe	230 VAC	1
W348881-D	United Kingdom	230 VAC	1
W348881-F	Australia/China	240 VAC	1
W348881-G	Italy/Chile	230 VAC	1
W348881-J	India	230 VAC	1
Base with 11 Decks - 55 Bottle Positions			
W348882-A	North America	120 VAC	1
W348882-B	Japan	100 VAC	1
W348882-C	Continental Europe	230 VAC	1
W348882-D	United Kingdom	230 VAC	1
W348882-F	Australia/China	240 VAC	1
W348882-G	Italy/Chile	230 VAC	1
W348882-J	India	230 VAC	1

Additional Deck for R₂P All Position Drive

W348888	R ₂ P 5-Position Deck, Factory-Installed (must be ordered with unit)	1
W348889	R ₂ P 5-Position Deck, for Customer Installation	1

Modular R₂P System 7 1/8" (18.1 cm) Deck Spacing

Cat. No.	Plug Style	Voltage	Qty/Case
Base with 3 Decks - 15 Bottle Positions			
W348884-A	North America	120 VAC	1
W348884-B	Japan	100 VAC	1
W348884-C	Continental Europe	230 VAC	1
W348884-D	United Kingdom	230 VAC	1
W348884-F	Australia/China	240 VAC	1
W348884-G	Italy/Chile	230 VAC	1
W348884-J	India	230 VAC	1
Base with 9 Decks - 45 Bottle Positions			
W348885-A	North America	120 VAC	1
W348885-B	Japan	100 VAC	1
W348885-C	Continental Europe	230 VAC	1
W348885-D	United Kingdom	230 VAC	1
W348885-F	Australia/China	240 VAC	1
W348885-G	Italy/Chile	230 VAC	1
W348885-J	India	230 VAC	1
Additional Deck for Modular R ₂ P			
W348886	R ₂ P 5-Position Deck, Factory-Installed (must be ordered with unit)		1
W348887	R ₂ P 5-Position Deck, for Customer Installation		1



See pages 7-8 for 88 Position R₂P and for CART₂ software.



88-Position R₂P

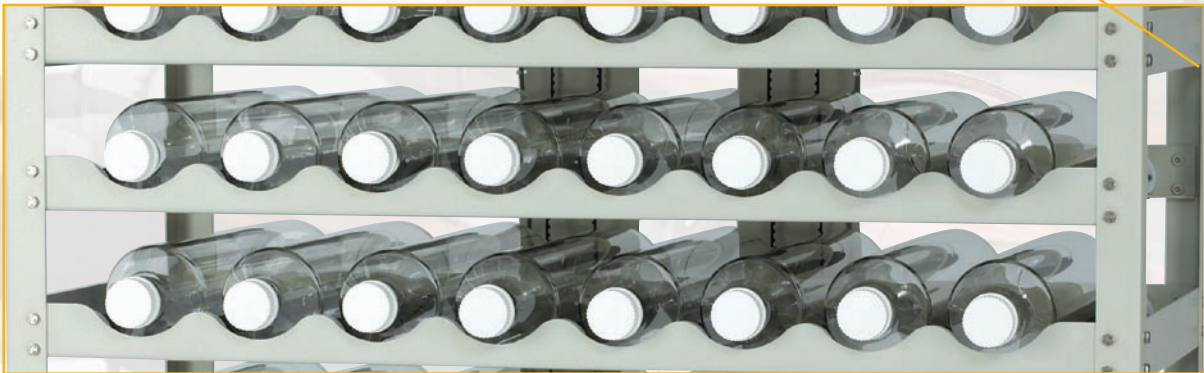
- 6" (15.24 cm) Deck Spacing
- Highest capacity roller rack
- 88 all position drive

Specifications:

Dimensions W x D x H:47 x 24.5 x 73.5 in (119.4 x 62.25 x 189.2 cm)
Weight:360 lb (163.6 kg)

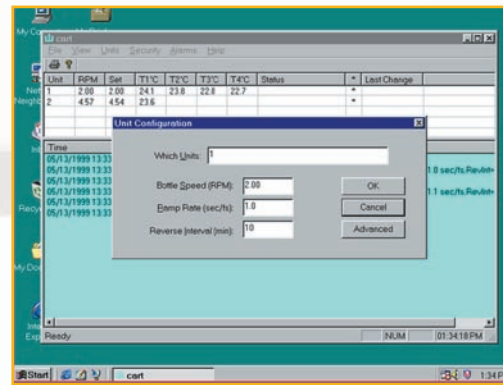
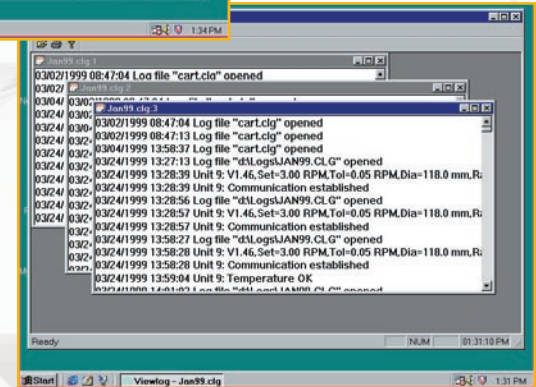
Ordering Information

Cat. No.	Plug Style	Voltage	Qty/Case
Base with 11 Decks - 88 Bottle Positions			
W349020-A	North America	120 VAC	1
W349020-B	Japan	100 VAC	1
W349020-C	Continental Europe	230 VAC	1
W349020-D	United Kingdom	230 VAC	1
W349020-F	Australia/China	240 VAC	1
W349020-G	Italy/Chile	230 VAC	1
W349020-J	India	230 VAC	1



This unit features 6 in (15.24 cm) production spacing between the decks and holds 8 bottles/per deck. A total of 88 positions. It will not fit in standard incubators, but it will pass through standard doorways for warm rooms.

6" Desk Space for Maximized Production Spacing


CART₂ Screen

CART₂ Screen

CART₂ Control Monitor and Recording Software

- Remotely monitors and controls up to 255 R₂P units
- Records all settings, changes, alarms, and communication loss
- Password-protected user levels maintain security
- Can be easily added to R₂P at any time
- Works with Windows® based software
- Computer Requirements: IBM Pentium PC or compatible
- Conforms to UL, CSA and CE Laboratory Standards

The Wheaton CART₂ System precisely controls rotating speeds of up to 255 separate roller units. Each unit is monitored for rotation, speed deviation and communication. This system provides the perfect solution for GMP or FDA requirements.

Computer Requirements

- IBM Pentium PC or compatible
- 32 MB of RAM, minimum
- Microsoft Windows® 2000, XP
- One free serial port
- 10 MB of free hard drive space, minimum

CART₂ and View Log Software with the Network Interface

Network Interface is a single-line network adapter for up to 255 R₂P units.

Ordering Information

Cat. No.	Plug Style	Voltage	Qty/Case
W348902-A	North America	120 VAC	1
W348902-B	Japan	100 VAC	1
W348902-C	Continental Europe	230 VAC	1
W348902-D	United Kingdom	230 VAC	1
W348902-F	Australia/China	240 VAC	1
W348902-G	Italy/Chile	230 VAC	1
W348902-J	India	230 VAC	1

Accessories for R₂P

Battery Backup Option

- Protects cells during power outages
- Provides a minimum of 18 hours of auxiliary power
- Can be used to rotate vessels during transport to harvest area

The system monitors the AC power and automatically switches to battery if AC power fails. Provides auxiliary power to maintain complete functionality of the R₂P unit for a minimum of 18 hours at full capacity. The audible alarm and display backlight will not function during battery power mode.

Ordering Information

Cat. No.	Description	Qty/Case
W348899	Customer Installed	1
W348898	Factory Installed (Must be ordered with R ₂ P Roller Culture Apparatus)	1

Temperature Monitor

Ordering Information

Cat. No.	Description	Qty/Case
W348891	Customer Installed	1
W348890	Factory Installed (Must be ordered with R ₂ P Roller Culture Apparatus)	1



Mini Bottle Bench-Top Roller Culture System

- Allows precise rotation speed
- Small scale mixing and agitation
- Small footprint
- Conforms to UL, CSA, and CE Standards
- 1 year warranty

Perfect for Wheaton 30 mL or larger serum bottles, 100-125 mL media bottles or 38 x 200 mm culture tubes for the growth and observation of various cell cultures such as, single chicken or rat embryos. The Wheaton Mini Bottle Roller Culture Apparatus accommodates bottles 38 to 60 mm in diameter, up to 240 mm long, with bottle speeds of 3 to 45 RPM (38 mm bottle) and 2 to 30 RPM (60 mm bottle). Additional decks available separately. See information on Deck Kit below.

Specifications:

Electrical Requirements:.....100-240 VAC, 50/60 Hz, 14 watts

Bottle Size Accepted:.....38-60 mm x 240 mm (maximum)

Bottle Speed:

38 mm Diameter Bottle3 to 45 RPM

60 mm Diameter Bottle 2 to 30 RPM

Dimensions: W x D x H.....12 1/4" x 12 3/4" x 7 1/8"

..... (32 x 32.5 x 18 cm)

Weight: 18 lb (8 kg)

Maximum temperature for use: 40°C

Warning: Use in a CO₂ environment may reduce motor brush life.



Pictured with one additional deck

Single-Deck Mini Bench-Top Roller Culture System

Ordering Information

Cat. No.	Plug Style	Voltage	Qty/Case
W348923-A	North America	120 VAC	1
W348923-B	Japan	100 VAC	1
W348923-C	Continental Europe	230 VAC	1
W348923-D	United Kingdom	230 VAC	1
W348923-F	Australia/China	240 VAC	1
W348923-G	Italy/Chile	230 VAC	1
W348923-J	India	230 VAC	1

Deck Kit

Mini Bottle Deck Kit can be added to Mini Bottle Roller Culture Apparatus to accommodate two additional decks. Add up to a maximum of 2 kits per unit. Weight: 9 lb (4.1 kg)

Ordering Information

Cat. No.	Description	Qty/Case
W348920-CH	Deck Kit for Mini Bottle Bench-Top Roller Rack	1



Mini Bottle Deck Kit



Small Bottle Bench-Top Roller Culture System

- This conventional type roller culture rack is designed to roll vessels 108 to 121 mm in diameter and up to 290 mm long. The two outside rollers can be moved inward to accommodate bottles as small as 75 mm in diameter. Each deck has capacity for two vessels. Additional decks available separately. See information on Deck Kit below.

Electrical Requirements: 100-240 VAC, 50/60 Hz, 14 watts
Bottle Size Accepted:..... 108 to 121 mm (maximum)
Bottle Speed: 110 mm Diameter Bottle..... 0.1 to 3.8 RPM
Dimensions: W x D x H..... 12 1/4" x 12 3/4" x 7 1/8"
 (32 x 32.5 x 18 cm)
Weight:..... 18 lb (8 kg)
Maximum temperature for use: 40°C

Single-Deck Small Bench-Top Roller Culture System

Cat. No.	Plug Style	Voltage	Qty/Case
W348924-A	North America	120VAC	1
W348924-B	Japan	100 VAC	1
W348924-C	Continental Europe	230 VAC	1
W348924-D	United Kingdom	230 VAC	1
W348924-F	Australia/China	240 VAC	1
W348924-G	Italy/Chile	230 VAC	1
W348924-J	India	230 VAC	1

Small Bottle Deck Kit can be added to Small Bottle Roller Culture Apparatus to accommodate an additional two bottles per deck. Add up to a maximum of 2 kits per unit. Weight: 9 lb (4.1 kg)

Cat. No.	Description	Qty /Case
W348930-CH	Deck Kit for Small Bottle Bench-Top Roller Rack	1





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