

# Cell Culture

> Bench-Top Systems.....	57-58
> CELLLine™ Bioreactors.....	51
> Culture Flasks .....	64
> Culture Tubes .....	63
> Erlenmeyer Shake Flasks .....	52
> Homogenizers.....	55
> Hybridization Bottles .....	63
> Incubators .....	56
> Magnetic Stirrers .....	57
> Roller Apparatus .....	53-55
> Roller Bottles.....	55
> Spinner Flasks.....	65
> Staining Ware.....	59-60
> Tissue Grinders .....	61-63



## CELLine™ Bioreactors

Our CELLine flasks are designed to enhance small scale bio-production for antibody and protein generation. Conventional *in vivo* or *in vitro* cell culture methods can be laborious, may have low cell density and require significant purification. CELLine flasks address these three areas of limitation observed in static tissue culture flasks.

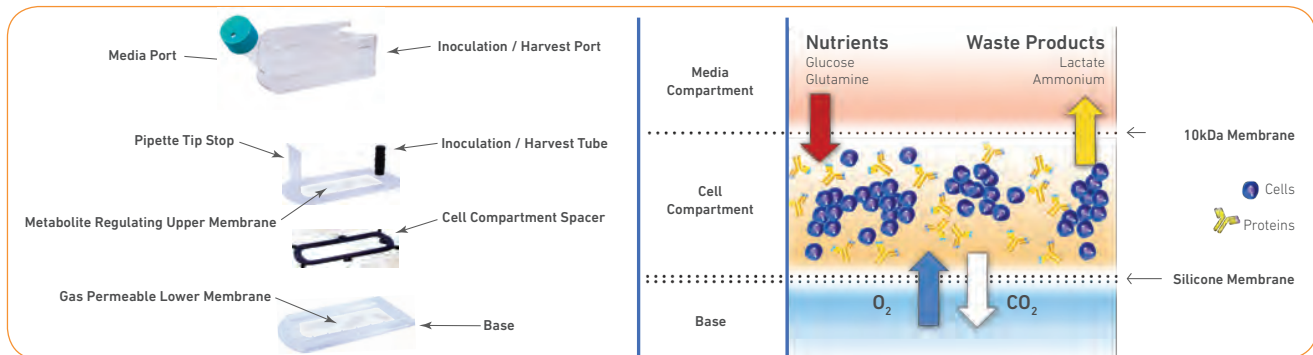
### How does the CELLine Flask Work?

**Media Compartment** – The media compartment allows for bulk storage of cell culture growth medium. This reduces the media refreshing requirement significantly as the media compartment is fifty times the size of the cell compartment.

**Metabolite Regulating Upper Membrane** – The upper dialysis membrane has a 10 kDa cut off limit. This regulates the flow of metabolites to and from the cell compartment and retains all proteins in the cell compartment.

**Cell Compartment** – The cell compartment provides the ideal area to inoculate and achieve high density cultures. The compartment concentrates cells, their products, and limits the requirement for any exogenous growth factors.

**Gas Permeable Lower Membrane** – With static cultures, gas transfer rates can be the limiting factor in high density cultures. The CELLine flask places the cells directly against the gas permeable membrane to achieve optimal levels of oxygen and carbon dioxide.



Note: Exploded view of device; unit is packaged fully assembled

Cat. No.	Flask Type	Culture Type	Media (mL) Compartment Size	Cell (mL) Compartment Size	Qty / Case
WCL1000-1	CELLine 1000	Suspension	1000	15	1
WCL1000-3	CELLine 1000	Suspension	1000	15	3
WCL1000AD-1	CELLine 1000-AD	Adherent	1000	15	1
WCL1000AD-3	CELLine 1000-AD	Adherent	1000	15	3
WCL0350-1	CELLine 350	Suspension	350	5	1
WCL0350-5	CELLine 350	Suspension	350	5	5

## Benefits of CELLine Flask

- Disposable and ready-to-use
- High cell density and high product concentration
- Reduces operation time
- Decreases use of consumables
- Cost-efficient, space saving, and stackable
- No additional equipment required for operation



### WHEATON Erlenmeyer Shake Flasks

WHEATON Erlenmeyer Flasks are manufactured with virgin, optically clear, non-leaching LEXAN resin that retains clarity after gamma irradiation. The flasks are certified pyrogen-, DNase- and RNase-free and are packaged particulate free and wrapped in an easy tear, sterile bag. WHEATON Flasks are ideal for all suspension cell cultures, including baculovirus, microbial and algae cultures, as well as media preparation, storage and all related applications. WHEATON Flasks fit all standard shaking incubator systems and can be placed on any platform. In addition, DWK Life Sciences offers Shaker Flask Clamps for use with our flasks.

### Benefits of WHEATON Erlenmeyer Flasks:

- Ideal replacement for glass and other Erlenmeyer / Shaker Flasks
- Patented DuoCAP® allows sterile air exchange or a leak resistant seal
- Minimize oxidation or pH shifts
- Perform aerobic/anaerobic culture
- Available with septum cap for pathogen containment
- Re-autoclavable, reusable
- Individually packed in easy tear bags
- Sterile to SAL 10<sup>-6</sup>
- Available with a flat or baffled base
- Baffled base flasks are ideal when increased levels of oxygenation and mixing are required

	125mL	250mL	500mL	1L (1000mL)	2L (2000mL)	3L (3000mL)
<b>Flat Base</b>	WPFPC0125S	WPFPC0250S	WPFPC0500S	WPFPC1000S	WPFPC2000S	WPFPC3000S
<b>Baffled Base</b>	WPFBC0125S	WPFBC0250S	WPFBC0500S	WPFBC1000S	WPFBC2000S	WPFBC3000S
<b>Closure Size</b>	38-430	38-430	38-430	53B	53B	69B
<b>Units/Pack</b>	24	12	12	6	6	3

### WHEATON Shaker Clamps

WHEATON Polypropylene Shaker Flasks Clamps are carefully engineered to provide both clipping elasticity and motion resistance in one product. WHEATON Shaker Clamps feature a non-scratch design and are offered in a standard blue color accompanied by stainless steel screws and washers. The Clamps fit all industry standard shaking incubators and are autoclavable for reuse.

Cat. No.	WPSFC2000	WPSFC1000	WPSFC0500	WPSFC0250	WPSFC0125
Size	2000mL	1000mL	500mL	250mL	125mL
Height (mm)	89.57	74.5	63.14	57.63	51.17
Diameter (mm)	169.1	143.9	111.6	90.4	74.72



## WHEATON Standard Roller



Refer to page 146 for plug styles.

- Smooth ramping digitally controlled rotation accurate to 0.01 RPM
- Maintenance free precision brushless motor
- Bright LCD display for easy operation
- Multiple decking and capacity configurations available for process flexibility
- See page 55 for additional options

## Specifications

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

## WHEATON R2P™ 2.0 Roller Apparatus



Top Mount Available

NEW touch screen functionality



- 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 interface and monitoring through SCADA systems
- Multiple decking and capacity configurations available for process flexibility
- See page 55 for additional options



Main Screen



Bottle Speed



Factory Setup



Profile



Temperature Alarm

## Specifications

Capacity: ..... 5-88 Positions  
 Bottle Speed (110mm 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  
 Rotation Alarm: ..... Included  
 Options: ..... Temperature Monitoring and Battery Backup  
 Remote Communication: ..... Yes, ..... Modbus® Protocol and WHEATON Protocol via Ethernet and RS422  
 Humidity: ..... 80% up to 31°C  
 Operating Temperature: ..... 10 to 40°C  
 Electrical: ..... 100-240 VAC, 50/60 Hz, 35W

## 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 below listing the most commonly used roller apparatus. If you have any questions about custom bottle sizes, rotation speeds or standard systems do not hesitate to 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

**Removable**  
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 installations

**Positions 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



Refer to page 56 for Roll-In Incubators.

## Part Numbers and Sizing Information for Most Common Systems

Part Number	# Positions	# Decks	Width (in / cm)	Depth (in / cm)	Height (in / cm)	Weight (lb / kg)	# of Bottle Positions	Control System
<b>Bottom Drive Production Spacing</b>								
WRBPR5010-A	5	1	31 / 79	25 / 63	14 / 35	52 / 24	5	R2P 2.0
WRBPR5030-A	5	3	31 / 79	25 / 63	26 / 65	85 / 39	15	R2P 2.0
WRBPF5110-A	5	11	31 / 79	25 / 63	74 / 187	217 / 99	55	R2P 2.0
WRBPF8110-A	8	11	47 / 120	25 / 63	74 / 187	360 / 167	88	R2P 2.0
<b>Bottom Drive Modular Spacing</b>								
WRBMR5010-A	5	1	30 / 76	25 / 63	14 / 34	70 / 32	5	R2P 2.0
WSBMR5010-A	5	1	30 / 76	25 / 63	14 / 34	70 / 32	5	Standard
WRBMR5030-A	5	3	30 / 76	25 / 63	29 / 74	112 / 51	15	R2P 2.0
WSBMR5030-A	5	3	30 / 76	25 / 63	29 / 74	112 / 51	15	Standard
WRBMR5070-A	5	7	30 / 76	25 / 63	57 / 145	196 / 89	35	R2P 2.0
WSBMR5070-A	5	7	30 / 76	25 / 63	57 / 145	196 / 89	35	Standard
WRBMR5090-A	5	9	30 / 76	25 / 63	71 / 179	238 / 108	45	R2P 2.0
WSBMR5090-A	5	9	30 / 76	25 / 63	71 / 179	238 / 108	45	Standard
<b>Top Drive Production Spacing</b>								
WRTPF5110-A	5	11	31 / 79	25 / 63	75 / 190	250 / 113	52	R2P 2.0
WSTRPF5110-A	5	11	31 / 79	25 / 63	75 / 190	250 / 113	52	Standard
WRTPF8110-A	8	11	47 / 120	25 / 63	75 / 190	350 / 159	86	R2P 2.0
WSTRPF8110-A	8	11	47 / 120	25 / 63	75 / 190	350 / 159	86	Standard

## Roller Options Information

**Rotation Alarm (Included with R2P 2.0)** – The rotation 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 12 – 24 hours. Bottom mounted control systems house larger, longer lasting batteries.

**Temperature Monitoring / Alarm Option (R2P 2.0 Only)** – This option includes two precision temperature probes for real time temperature monitoring and deviation alarms. The temperature is displayed on the touch screen, screen saver for quick confirmation of optimal operating conditions.

## WHEATON Field Installation Options Packages

Cat. No.	System
W348890V2	Standard Roller Top Drive System Options with Rotation Alarm and Battery Backup
W348891V2	Standard Roller Bottom Drive System Options with Rotation Alarm and Battery Backup
W348892V2	R2P 2.0 Roller Top Drive System Options with Battery Backup and Temperature Sensors (Rotation Alarm is already included with unit)
W348893V2	R2P 2.0 Roller Bottom Drive System Options with Battery Backup and Temperature Sensors (Rotation Alarm is already included with unit)

Please contact your DWK Life Sciences representative for information regarding retrofits, modifications, custom systems and deck kits for existing systems.

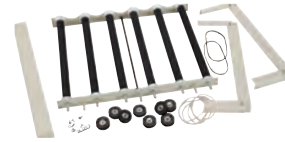
## Roller Bottles

- Specifically designed for adherent cell roller culture
- Withstands repeated wet or dry sterilization cycles
- Borosilicate glass conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- Available with different cap configurations



Cat. No.	Dia x Flat Overall Length (mm)	Usable Surface Area (cm <sup>2</sup> )	Surface (cm <sup>2</sup> )	Approx Capacity (mL)	Qty / Case
<b>Roller bottle with 38mm deep skirted, black phenolic screw cap with white styrene-butadiene rubber liner (GPI 38-415)</b>					
348252	110 x 240	550	680	1380	4
348253	110 x 285	700	840	1760	4
348256	110 x 480	1320	1500	3450	4
348258	110 x 550	1555	1680	4230	4
<b>Roller bottle with 45mm white polypropylene screw cap with inner sealing ring and polypropylene pour ring.</b>					
348272	110 x 240	550	680	1380	4
348273	110 x 285	700	840	1760	4
<b>Roller bottle with 51mm black phenolic screw cap with shallow skirt and white styrene-butadiene rubber liner (GPI 51-400)</b>					
348522	110 x 270	700	840	1760	4
348524	110 x 355	940	1070	2500	4
348528	110 x 535	1555	1680	4230	4

## Deck Kit



**Deck Kit For Modular Spaced Systems** – The deck kit is designed for modular systems with removable decks. These are kits designed for customer installation.

**Deck Kit For Production Spaced Systems** – The deck kit is designed for production systems with removable decks. These are kits designed for customer installation.

Cat. No.	Description	Qty / Case
W348887	5 position deck, 7 1/8" Deck Spacing	1
W348889	5 position deck, 6" Deck Spacing	1

## Power Homogenizer and Overhead Stirrer

- Dual purpose unit for use with tissue grinders or impellers
- Adjustable speed ranging from 300 – 5000 RPM under load
- Adjustable connector accepts stainless steel shafts up to 0.3125" (7.9mm) in diameter
- Aluminum rod and clamp included for unit mounting
- Electrical Requirements: 120 VAC, 50/60 Hz, 50 watts
- Dimensions: 4.5" x 5" x 12" (11.5 x 13 x 30cm)
- Weight: 6lbs (2.7kg)



Cat. No.	Description	Qty/Case
903475	Complete Unit	1

## Accessories

Cat. No.	Description	Qty/Case
905275	Swivel Blade Paddle, Stainless Steel	1
905462	Extension Rod, 0.25" x 6" (6.3 x 153mm), Stainless Steel	1
905465	Extension Rod, 0.25" x 12" (6.3 x 305mm), Stainless Steel	1
905475	Extension Sleeve for 0.25" (6.3mm), Stainless Steel	1

Standard Incubator



- 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
- User configurable shelving system and roller apparatus guide tracks (shelving sold separately)
- USB port and analog 4-20mA jack included for data logging temperature levels
- Designed for temperature uniformity
- Dry contact alarm port available for communicating alarm activation instances
- Large viewing window with an option for dual windows

Specifications

Capacity: ..... 39.7 Cubic ft  
 Interior Dimensions (W\*D\*H): . 34.7 x 26 x 75" (88.1 x 66.0 x 190.5 cm)  
 Exterior Dimensions(W\*D\*H): 42 x 32.4 x 88" (106.7 x 82.3 x 223.5cm)  
 Control:.....Microprocessor Controlled  $\pm 0.1^{\circ}\text{C}$   
 Temperature Range:..... $8^{\circ}\text{C}$  Above Ambient to  $70^{\circ}\text{C}$   
 Temperature Uniformity:..... Forced Air Circulation  $\pm 0.8^{\circ}\text{C}$  at  $37^{\circ}\text{C}$   
 Electrical:.....100-240 VAC, 50/60 Hz, 12A-8A  
 Shelving:..... 20 Maximum  
 Interior Electrical Outlet:..... 1 (Chamber Ceiling)  
 Net Weight:.....497 lb (225 kg)  
 Shipping Weight: ..... 657 lb (298.1kg)

Cat. No.	Plug Style	Voltage	Qty
W753681	North America	120 VAC	1
W753681-B-E	Japan	100 VAC	1
W753685-C-E	Continental Europe	230 VAC	1
W753685-D-E	United Kingdom	230 VAC	1
W753685-F-E	Australia / China	230 VAC	1
W753685-G-E	Italy / Chile	230 VAC	1
W753685-J-E	India	230 VAC	1

Refer to page 146 for plug styles.

Incubator Shelves (Not Supplied with Incubators)

Cat. No.	Description	Qty
753685	Painted Shelf for Standard	1
WI056028	Stainless Steel Shelf for CO <sub>2</sub>	1

CO<sub>2</sub> Incubator



- 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
- Infrared sensor technology to maintain 0 to 20% CO<sub>2</sub> concentration
- Stainless steel interior
- User configurable shelving system and roller apparatus guide tracks (shelving sold separately)
- USB port and analog 4-20mA jack included for data logging temperature and CO<sub>2</sub> levels
- Dry contact alarm port available for communicating alarm activation instances
- Designed for temperature uniformity
- Large viewing window with an option for dual windows

Specifications

Capacity: .....39.7 Cubic ft  
 Interior Dimensions(W\*D\*H): .... 35 x 26 x 75.5" (88.9 x 66 x 191.7 cm)  
 Exterior Dimensions(W\*D\*H): . 42.5 x 34.5 x 89" (108 x 87.6 x 226 cm)  
 Control:..... Microprocessor controlled  $\pm 0.1^{\circ}\text{C}$   
 Temperature Range:.....  $8^{\circ}\text{C}$  above Ambient to  $70^{\circ}\text{C}$   
 Temperature Uniformity:..... Forced Air Circulation  $\pm 0.5^{\circ}\text{C}$  at  $37^{\circ}\text{C}$   
 Electrical:..... 100-240 VAC, 50/60 Hz, 15A-10A  
 CO<sub>2</sub> Range:..... 0-20%  
 CO<sub>2</sub> Sensor: ..... IR  
 CO<sub>2</sub> Rate: ..... <5min (Recovery)  
 CO<sub>2</sub> Connection: ..... 1/4" (6.35mm) Hose Barb  
 CO<sub>2</sub> Inlet pressure:..... 15-20 psi (0.1.03-1.378 bars)  
 Jacket Type: ..... Air  
 Shelving:..... 30 Maximum  
 Interior Electrical Outlet:.....1 (Chamber Ceiling)  
 Net Weight:.....574lb (260.4kg)  
 Shipping Weight: .....682lb (309.4kg)

Cat. No.	Plug Style	Voltage	Qty
WI057608	North America	120 VAC	1
WI057608-C-E	Continental Europe	230 VAC	1
WI057608-D-E	United Kingdom	230 VAC	1
WI057608-F-E	Australia / China	230 VAC	1
WI057608-J-E	India	230 VAC	1

Refer to page 146 for plug styles.

## Micro-Stir® Magnetic Stirrer & BioStir® Magnetic Stirrers

### Micro-Stir® Magnetic Stirrer

- Ideal for low speed shear sensitive mixing
- 5-200 RPM, single and four place units
- Programmable, remote control and alarm capable



Cat. No.	Description	Qty / Case
W900700- [ ]	Single Place Micro-Stir®	1
W900701- [ ]	Four Place Micro-Stir®	1

Refer to page 146 for plug styles when ordering.

### BioStir® Magnetic Stirrer

- Ideal for general mixing and difficult to dissolve solutes
- 150-1200 RPM, single and four place units
- Programmable, remote control and alarm capable



Cat. No.	Description	Qty / Case
W900702- [ ]	Single Place BioStir®	1
W900703- [ ]	Four Place BioStir®	1

Refer to page 146 for plug styles when ordering.

### Specifications

#### Electrical:

Operating Voltage:.....100-240 VAC, 50/60 Hz  
 Power Consumption:.....15 Watts  
 Pollution Degree:.....Class 2

#### Environmental:

Operating Temperature:.....15° to 40°C  
 Humidity:.....80% up to 31°C, 50% at 40°C  
 Altitude Limit:.....2000m

#### Operating Speed:

Micro-Stir®.....5-200 RPM  
 BioStir®.....150-1200 RPM  
 Maximum Flask Size:.....3L Flask

#### Dimensions: H x W x D

Single Place:.....3.6 x 8 x 9.8" (9.2 x 20.3 x 24.9cm)  
 Four Place:.....4 x 15.5 x 17.5" (10.2 x 39.4 x 44.5cm)

#### Weight:

Single Place:.....4.5lb (1.9kg)  
 Four Place:.....10lb (4.5kg)

## Remote Control Unit

- Ideal for sensitive procedures or difficult to reach areas
- Same interface layout as Micro-Stir® and BioStir® stirrers
- Slim communication cord; no power cord required



Cat. No.	Description	Qty / Case
W900704	Remote Control	1

## Bench-Top Systems – Mini-Bottle

- Allows for serum and media bottles as well as culture tubes
- For cell cultivation or staining procedures
- Accommodates bottles 38 to 60mm in diameter and 240mm long
- Deck kits available to double or triple capacity



Shown with Additional Deck Kit



### Specifications

Capacity:.....4-12 Positions  
 Bottle Speed:.....2-45 RPM (dependent on bottle size)  
 Bottle Diameter:.....38-60mm  
 Bottle Length:.....Up to 240mm  
 Weight:.....18lb (8kg)  
 Dimensions: W x D X H.....12.25 x 12.75 x 7.125" (32 x 32.5 x 18cm)  
 Humidity:.....80% up to 31°C  
 Operating Temperature:.....10 to 40°C  
 Electrical:.....100-240 VAC, 50/60 Hz, 14W

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

Refer to page 146 for plug styles when ordering.

## Additional Deck Kit



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

### Bench-Top Systems – Small Bottle

- Allows for use with glass or plastic roller bottles
- For cell cultivation research and pilot applications
- Accommodates two bottles 75 to 121mm in diameter and 290 mm long
- Deck kits available to double or triple capacity



#### Specifications

Capacity: .....2-6 Positions  
 Bottle Speed: .....0.1-3.8 RPM (110mm diameter bottle)  
 Bottle Diameter: .....75-121mm  
 Bottle Length: .....Up to 290mm  
 Weight: .....18lb (8kg)  
 Dimensions: W x D X H.....12.25 x 12.75 x 7.125" (32 x 32.5 x 18cm)  
 Humidity: .....80% up to 31°C  
 Operating Temperature: .....10 to 40°C  
 Electrical: .....100-240 VAC, 50/60 Hz, 14W

Cat. No.	Plug Style	Voltage	Qty / Case
W348924-A	North America	120 VAC	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

Refer to page 146 for plug styles when ordering.

### Additional Deck Kit



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



### Staining Dish, 10-20 Slide Unit

- This 20-slide unit is the standard for manual staining procedures
- The removable glass slide rack has an open bottom to facilitate rapid immersion and drainage, reducing carryover
- The rack holds 10 single slides, 19 slides arranged alternately straight across and diagonally, or 20 slides back-to-back of standard size:  
3" x 1" (75 x 25mm), 3" x 1-1/2" (75 x 38mm) and 3" x 2" (75 x 51mm) sizes
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 91 L x 71 W x 60 D



Cat. No.	Description	Qty / Case
900200	Complete (Dish, Cover, Rack, Handle)	6
900201	Dish	3
900202	Cover	3
900203	Dish and Cover	3
900204	Glass Slide Rack	3
900205	Handle	6

### Staining Dish, 10-20 Slide Unit

- Designed for staining 3" x 1" (75mm x 25mm) microscope slides
- Holds 10 single slides, or 19 slides arranged alternately straight across and diagonally, or 20 slides back-to-back
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 75 L x 55 W x 35 D



Cat. No.	Description	Qty / Case
900170	Staining Dish, with Cover	6

### Staining Dish, 16-40 Slide Unit

- These mix-and-match components offer greater flexibility in meeting your requirements
- This staining dish accommodates 16, 20 and 30 slide racks
- It holds slides sizes 3" x 1" (75mm x 25mm), 3" x 1-1/2" (75mm x 38mm), and 3" x 2" (75mm x 51mm)
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 121 L x 90 W x 66 D



Cat. No.	Description	Qty / Case
900303	Dish and Cover	6
900301	Dish	3
900302	Cover	3
900234	30-Slide Rack Stainless Steel with Hinged Handle	3
900254	16-32 Slide Rack, Glass	3
900304	20-40 Slide Rack, Glass	3

### Staining Dish, 50-Slide Unit

- This slotted rack holds 50 microscope slides, sizes 3" x 1" (75mm x 25mm), 3" x 1-1/2" (75mm x 38mm), and 3" x 2" (75mm x 51mm)
- The rack is made of non-tarnishable stainless steel that is resistant to staining solutions
- The handle is permanently attached, but hinged to permit closure of the dish and easy insertion and removal of the microscope slides
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 185 L x 88 W x 78 D



Cat. No.	Description	Qty / Case
900400	Complete (Dish, Cover, and Rack)	6
900401	Dish	3
900402	Cover	3
900403	Dish and Cover	3
900404	50-Slide Stainless Steel Rack, with Handle Attached	3

### Staining Dish, 8-16 Slide Unit

- It holds 8 individual 3" x 1" (75mm x 25mm) slides or, if necessary, 16 slides back-to-back
- Includes glass lid
- This Hellendahl-type dish can be used for staining or as a TLC developing chamber
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 76 L x 25 W x 75 D



Cat. No.	Description	Qty / Case
900630	Staining Dish	6

### Columbia Jar for Cover Slips

- These staining jars hold up to 4 cover slips 17-23mm wide, and up to 30mm long
- Longer cover slips can be accommodated if the cap is removed
- The jar includes a 43-400 white polypropylene screw cap with a PTFE coated polyethylene liner
- Manufactured from soda-lime glass
- In addition to staining applications, Columbia Jars can be used for cleaning cover slips, as well as coating them with materials such as poly-lysine or silane



Cat. No.	Description	Qty / Case
W900180	Columbia Jar & Cap	1
W900180-6	Columbia Jar & Cap	6

### Coplin Staining Jar, 5-10 Slide Unit

- This unit holds ten 3" x 1" (75mm x 25mm) slides, back-to-back that extend above the opening so you can manipulate them without using forceps
- Polypropylene screw cap
- The screw cap is made of linerless white polypropylene to reduce solvent evaporation and spills during storage
- Cap is not intended for use with slides in jar
- The unit has a rectangular base and holds approximately 55mL
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 26 L x 26 W x 70 D



Cat. No.	Description	Qty / Case
900520	Coplin Jar with PP Screw Cap	6
900522	Replacement Cap, 58-400	6

### Coplin Staining Jar, 5-10 Slide Unit, with Screw Cap

- It holds five single 3" x 1" (75mm x 25mm) slides vertically, or 10 slides back-to-back
- This unit is used for staining slides, or as a developing chamber for thin-layer chromatography
- The screw cap is made of linerless white polypropylene to reduce solvent evaporation
- The unit has a rectangular base and holds approximately 60mL
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 26 L x 26 W x 90 D



Cat. No.	Description	Qty / Case
900570	Complete	6
900522	Replacement Cap, 58-400	6

### Coplin Staining Jar, 5-10 Slide Unit

- It holds five single 3" x 1" (75mm x 25mm) slides vertically, or 10 slides back to back, and holds approximately 65mL
- This popular staining jar has heavy glass walls and a broad base for increased stability
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 28 L x 26 W x 92 D



Cat. No.	Description	Qty / Case
900470	Coplin Jar with Glass Cover	6

### Coplin Staining Jar, 5-10 Slide Unit

- The chamber is designed with an extra tall lid to accept 5 single 25mm x 75mm and 25mm x 100mm slides or 10 slides back-to-back
- Extra tall lid accommodates 100mm slides
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 28 L x 26 W x 92 D



Cat. No.	Description	Qty / Case
276840	Staining Jar with Lid	6

### Staining Jar, 8-10 Slide Unit

- The jar holds 8 single 3" x 1" (75mm x 25mm) slides vertically or 16 slides back-to-back
- This jar's wide top is designed for convenience in transferring slides, making it especially suitable for staining slides that are inscribed on one end
- Manufactured from soda-lime glass
- Approximate inside bottom dimensions (mm): 47 L x 26 W x 85 D



Cat. No.	Description	Qty / Case
900620	Staining Jar with Cover	6

### Slide Grip

- Polypropylene grip allows for easy and safe transfer of five slides to other containers for staining
- Fits into WHEATON Coplin staining jars (900570, 900470, 276840)



Cat. No.	Description	Qty / Case
900575	Slide Grip	2

### Boerner Micro Test Slide

- Ideal for Boerner-Jones-Lukens microflocculation test
- This slide is used for procedures involving 0.01 to 0.15mL of fluid
- The slide has 10 cells in two rows of five each
- Each cell is 2.5mm deep and is designed to produce flattened drops of uniform depth
- Manufactured from soda-lime glass



Cat. No.	Description	Dimensions L x W (mm)	Qty / Case
798550	Boerner Micro Test Slide	109 x 58	12

### Mounting Media / Balsam Bottle

- This bottle, manufactured from soda-lime glass, is ideal for applying mounting media
- It comes with a glass applicator rod and a glass cap, which is ground to the shoulder of the bottle to form a seal



Cat. No.	Size (mL)	Dia. x H (mm)	Qty / Case
208890	100	75 x 100	6

### Alcohol Burner

- Glass cap is used to reduce evaporation of alcohol when not in use
- This burner, manufactured from soda-lime glass, is designed for use with isopropyl or denatured ethyl alcohol
- Its low-heat flame is well suited for microscopy purposes
- The unit is supplied with a ground glass cap
- The reservoir holds 100mL of alcohol



Cat. No.	Description	Dia. x H (mm)	Qty / Case
237070	Alcohol Burner	75 x 100	6

### Replacement Parts

237071	Wick, 0.25" Dia x 6" L	—	25
237072	Cork Stopper Assembly	—	10

## Dounce Tissue Grinder

- Retains high percentage of cell nuclei and mitochondria in soft tissues or from cell cultures
- Made from WHEATON 33 low extractable borosilicate glass
- Mortar has large reservoir and pouring lip making decanting easy
- Pestle ball encircled in liquid avoids heat build-up by reducing friction
- Contains both loose and tight pestles
- Loose pestle clearance range: 0.089-0.14mm
- Tight pestle clearance range: 0.025-0.076mm
- Unit can be autoclaved / sterilized to prevent cross contamination between samples



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357538	1	11 x 48	125	2
357542	7	13 x 82	175	2
357544	15	22 x 94	210	2
357546	40	32 x 140	285	2

\* measurement in mm

## Tenbroeck Tissue Grinder

- Ideal for grinding liver, intestine and heart tissue
- Hollow pestle can be packed with ice and mortar contains expanded reservoir and pouring lip for easy decanting
- Made from WHEATON 33 low extractable borosilicate glass
- Components are interchangeably ground eliminating need to keep parts matched during cleaning
- Unit can be autoclaved / sterilized to prevent cross contamination between samples
- Pestle clearance range: 0.09 – 0.16mm



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357421	1	11 x 48	140	2
357422	2	11 x 50	140	2
357424	7	16 x 82	190	2
357426	15	22 x 94	250	2
357428	40	32 x 140	320	2

\* measurement in mm

## Dounce Dura-Grind™ Tissue Grinder

- Precision machined from number 316 stainless steel provides a rugged alternative to glass Dounce tissue grinders
- Single pestle and mortar are supplied as a matched set to exacting tolerance of 0.013mm
- Smooth pestle action requires less effort than glass tissue grinders
- Mortar has a flat bottom allowing it to stand upright
- Unit cannot be autoclaved / sterilized



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357572	7	35 x 114	171	1
357574	15	35 x 114	171	1
357576	40	44 x 114	171	1

\* measurement in mm

## Potter-Elvehjem Tissue Grinder

- PTFE pestle tip with 6.3mm diameter stainless steel rod can be used with power homogenization for soft tissue such as brain or liver
- Mortar made from WHEATON 33 low extractable borosilicate glass
- Components are interchangeable eliminating need to keep parts matched during cleaning
- Unit can be autoclaved / sterilized to prevent cross contamination between samples
- For added safety during power homogenization use safety coated tissue grinders
- Pestle clearance range: 0.1 – 0.15mm



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
358029	2	11 x 45	203	2
358034	5	13 x 66	219	2
358039	10	16 x 74	219	2
358044	15	19 x 84	219	2
358049	30	24 x 118	266	2
358054	55	30 x 130	266	2

### Replacement Parts

358028	2mL Mortar	2
358033	5mL Mortar	2
358038	10mL Mortar	2
358043	15mL Mortar	2
358048	30mL Mortar	2
358053	55mL Mortar	2
358026	2mL Pestle	2
358031	5mL Pestle	2
358036	10mL Pestle	2
358041	15mL Pestle	2
358046	30mL Pestle	2
358051	55mL Pestle	2

\* measurement in mm

## Potter-Elvehjem Safe-Grind® Tissue Grinder

- Exterior plastic coated glass mortar provides greater safety during power homogenization
- PTFE pestle tip with 6.3mm diameter stainless steel rod can be used with power homogenization for soft tissue such as brain or liver
- Mortar made from WHEATON 33 low extractable borosilicate glass
- Components are interchangeable eliminating need to keep parts matched during cleaning
- Unit can be autoclaved / sterilized to prevent cross contamination between samples
- Pestle clearance range: 0.1 – 0.15mm



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
358003	2	11 x 45	203	2
358005	5	13 x 66	219	2
358007	10	16 x 74	219	2
358009	15	19 x 84	219	2
358011	30	24 x 118	266	2
358013	55	30 x 130	266	2

### Replacement Parts

358004	2mL Mortar	2
358006	5mL Mortar	2
358008	10mL Mortar	2
358010	15mL Mortar	2
358012	30mL Mortar	2
358014	55mL Mortar	2

\* measurement in mm

## Potter-Elvehjem Tissue Grinder with Radial Serrations

- Serrated PTFE pestle tip design to disperse homogenate into the mortar cylinder more efficiently
- 6.3mm diameter stainless steel rod with PTFE pestle can be used with power homogenization for soft tissue such as brain or liver
- Mortar made from WHEATON 33 low extractable borosilicate glass
- Components are interchangeable eliminating need to keep parts matched during cleaning
- Unit can be autoclaved / sterilized to prevent cross contamination between samples
- Pestle clearance range: 0.1 – 0.15mm



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357969	2	11 x 45	203	2
357974	5	13 x 66	219	2
357979	10	16 x 74	219	2
357984	15	19 x 84	219	2
357989	30	24 x 118	266	2
357994	55	30 x 130	266	2

### Replacement Parts

358028	2mL Mortar	2
358033	5mL Mortar	2
358038	10mL Mortar	2
358043	15mL Mortar	2
358048	30mL Mortar	2
358053	55mL Mortar	2
357966	2mL Serrated Pestle	2
357971	5mL Serrated Pestle	2
357976	10mL Serrated Pestle	2
357981	15mL Serrated Pestle	2
357986	30mL Serrated Pestle	2
357991	55mL Serrated Pestle	2

\* measurement in mm

## Potter-Elvehjem Micro Tissue Grinder

- Micro size for extremely precise work when delicate hand operation is required
- Made from WHEATON 33 low extractable borosilicate glass
- Reservoir and pouring lip provide easy decanting of micro sample
- Unit can be autoclaved / sterilized to prevent cross contamination between samples
- Pestle clearance range: 0.1 – 0.15mm

Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357844	0.1	4 x 65	110	2

**Replacement Parts**

357841	0.1mL Pestle	2
357843	0.1mL Mortar	2

\* measurement in mm

## Tapered Tissue Grinder

- Tapered ground glass surface on mortar and pestle homogenizes connective tissue including heart, muscle, lung, skin and plant tissue
- Grinding efficiency is improved and less time is required as compared to the Tenbroeck and Potter-Elvehjem designs
- Made from WHEATON 33 low extractable borosilicate glass
- Components are interchangeably ground eliminating need to keep parts matched during cleaning
- Unit can be autoclaved / sterilized to prevent cross contamination between samples
- Pestle clearance range: 0.1 – 0.15mm



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
358103	1	11 x 49	130	1
358107	3	11 x 86	220	1
358111	5	13 x 93	220	1
358115	15	18 x 114	240	1

### Replacement Parts

358102	1mL Mortar	2
358106	3mL Mortar	2
358110	5mL Mortar	2
358114	15mL Mortar	2
358101	1mL Pestle	2
358105	3mL Pestle	2
358109	5mL Pestle	2
358113	15mL Pestle	2

\* measurement in mm

## Tapered Tissue Grinder with Steel Rod

- Tapered PTFE pestle tip with 6.3mm diameter stainless steel rod can be used with power homogenization for soft tissue such as brain or liver
- Mortar made from WHEATON 33 low extractable borosilicate glass
- Components are interchangeable eliminating need to keep parts matched during cleaning
- Unit can be autoclaved / sterilized to prevent cross contamination between samples



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
358133	1	11 x 49	130	1
358137	3	11 x 86	220	1
358141	5	13 x 93	220	1
358145	15	18 x 114	240	1

### Replacement Parts

358132	1mL Mortar	2
358136	3mL Mortar	2
358140	5mL Mortar	2
358144	15mL Mortar	2
358131	1mL Pestle	2
358135	3mL Pestle	2
358139	5mL Pestle	2
358143	15mL Pestle	2

\* measurement in mm

## Micro Tissue Grinder Kit

- Made from WHEATON 33 low extractable borosilicate glass
- Complete kit includes 7 micro tissue grinders
- Packaged in polyethylene case with foam inserts.
- Replacement parts available separately
- Autoclavable Tissue Grinders



Cat. No.	Description	Qty / Kit	Qty / Case
358204	Complete Kit	1	1
<b>Replacement Parts</b>			
357421	1mL Tenbroeck Tissue Grinder	1	2
357535	0.5mL Tissue Grinder, G.P.I. 13-425 cap	1	2
357538	1mL Dounce Tissue Grinder	1	2
357844	0.1mL Tissue Grinder	1	2
357848	0.2mL Tissue Grinder	1	2
358029	2mL Potter-Elvehjem Tissue Grinder	1	2
358133	1mL Tapered Tissue Grinder	1	1

## Disposable Micro Tissue Grinder

- Disposable to eliminate cross contamination and useful for radioactive samples
- Small grinder area allows for high sample recovery
- Made from WHEATON 33 low extractable borosilicate glass



Cat. No.	Size (mL)	ID x Length*	Overall Length*	Qty / Case
357860	0.75	8 x 44	88	25

\* measurement in mm

## Micro Tissue Grinder with PTFE Spacer

- PTFE spacer aligns the pestle and reduces aerosoling of the product
- Includes a finely ground glass pestle and tube
- Made from WHEATON 33 low extractable borosilicate glass
- Autoclavable



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357848	0.2	7 x 33	115	2

\* measurement in mm

## Micro Tissue Grinder with Cap

- With PTFE Pestle and Screw Cap
- 13-425 open top screw cap and PTFE faced silicone rubber liner
- Made from WHEATON 33 low extractable borosilicate glass
- Autoclavable
- Pestle clearance range: 0.002-0.006" (0.05-0.15mm)



Cat. No.	Size (mL)	Mortar, OD x Length*	Overall Length*	Qty / Case
357535	0.5	13 x 37	115	2
<b>Replacement Parts</b>				
357537		Pestle		2

\* measurement in mm

## Culture Tube with Screw Cap

- Culture tube for use with slant, shake and drum roller cultures
- Autoclavable and reusable
- Round-bottom design with screw on cap
- Manufactured from borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class B requirements



Cat. No.	Capacity (mL)	Dia. x H (mm)	Cap Size	Qty / Case
<b>With White 14B Rubber Lined Cap</b>				
358606	11	16 x 100	15-415	144
358607	14	16 x 125	15-415	144
358610	27	20 x 150	18-415	144
<b>With PTFE Faced 14B Rubber Lined Caps</b>				
358646	11	16 x 100	15-415	144
358647	14	16 x 125	15-415	144
358650	27	20 x 150	18-415	144

## Hybridization Bottle

- Nucleic acid and protein blotting procedures
- Designed to fit most hybridization ovens and membranes
- Bottles, seals and caps resistant to hybridization reagents
- Heavy 3.2mm sidewall construction for added safety
- Borosilicate glass conforms to USP Type I requirements



Cat. No.	Size ID x L (mm)	Cap Size (mm)	Qty
805000	35 x 75	45	1
805001	35 x 100	45	1
805003	35 x 150	45	1
805007	35 x 300	45	1
805011	70 x 300	70-400	1

## Safety Coated Hybridization Bottle

- Slip resistant plastisol coating reduces breakage hazards
- Nucleic acid and protein blotting procedures
- Designed to fit most hybridization ovens and membranes
- Bottles, seals and caps resistant to hybridization reagents
- Borosilicate glass conforms to USP Type I requirements



Cat. No.	Size ID x L (mm)	Cap Size (mm)	Qty
805020	35 x 75	45	1
805021	35 x 100	45	1
805023	35 x 150	45	1
805027	35 x 300	45	1
805031	70 x 300	70-400	1

## Hybridization Bottle Storage Rack

- Works with 35mm ID hybridization bottles
- Ideal for transportation and storage
- Acrylic construction holds up to 6 bottles



Cat. No.	Description	Qty
805015	Acrylic Storage Rack	1

## Erlenmeyer Flask

- Ideal for media storage, water storage or buffer preparation
- Autoclavable with screw cap
- Constructed of borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- Cap supplied with silicone rubber liner



Cat. No.	Capacity (mL)	Cap Size	Qty
635165	1000	38-430	1
635134	25	20-400	1



## Nephelo Culture Flask

- For use with turbidity meter or nephelometer
- Scratch and striation free side tube
- Available with or without cleanout port
- Autoclavable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- 38-430 top cap and 20-415 sidearm cap have white styrene butadiene rubber liner

Cat. No.	Capacity (mL)	Vol. (mL)	Sidearm Size (mm)	Cleanout Port	Qty
351454	300	200	14 x 140	Yes	1
351456	300	200	19 x 140	Yes	1
351054	500	350	14 x 130	No	1
351486	500	250	19 x 140	Yes	1
351514	1000	600	14 x 140	Yes	1

## Trypsinizing Flask

- For forming cell suspensions through trypsin digestion of connective proteins
- Fluted design improves homogenization
- Autoclavable with screw cap
- Constructed of borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- Caps have white styrene butadiene rubber liner



Cat. No.	Capacity (mL)	Cap Size (mm)	Flask Size	Graduated	Qty
355392	35	24-430	50	No	1
355442	35	24-430	50	Yes	1
355394	150	38-430	250	No	1
355444	150	38-430	250	Yes	1
355395	300	38-430	500	No	1
355445	300	38-430	500	Yes	1
355397	700	51-400	1000	No	1

## Trypsinizing Flask with Pourout

- For forming cell suspensions through trypsin digestion of connective proteins
- Fluted design improves homogenization
- Autoclavable with screw cap and pourout for easy decanting
- Constructed of borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements
- 20-415 sidearm cap and top cap have white styrene butadiene rubber liner



Cat. No.	Capacity (mL)	Cap Size (mm)	Flask Size	Graduated	Qty
355752	35	24-430	50	No	1
355753	75	33-430	125	No	1
355803	75	33-430	125	Yes	1
355754	150	38-430	250	No	1
355804	150	38-430	250	Yes	1
355755	300	38-430	500	No	1
355757	700	51-400	1000	No	1
355807	700	51-400	1000	Yes	1

## Shake Flask



Three baffle flask



Four baffle flask

- For use with orbital or reciprocating shakers
- Baffles improve aeration and mixing for microbial and bacterial cultures
- Break resistant lip for use with stopper, cotton plug or film cover
- Pinched neck design to reduce splashing on flasks with 4 baffles
- Autoclavable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements

Cat. No.	Capacity (mL)	Qty
<b>With Three Baffles</b>		
353255	50	1
353257	125	1
353259	250	1
353262	500	1
353264	1000	1
353266	2000	1
<b>With Four Baffles</b>		
354235	50	1
354237	125	1
354239	250	1
354242	500	1
354244	1000	1

## Double Sidearm Celstir® Spinner Flask

- For suspension cell culture with a magnetic stirrer
- Adjustable paddle impeller and sterile design as stirrer shaft does not protrude through cap
- 1:1 headspace ratio for ideal gas exchange
- Bottom dimple to reduce cell aggregation (dimple on 125mL and larger flasks)
- Autoclavable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements



Cat. No.	Volume (mL)	Dia. x H (mm)	Cap Size, Top	Sidearm Size	Qty
356873	25	38 x 122	38-430	15-415	1
356875	50	38 x 141	38-430	15-415	1
356876	125	65 x 155	51-400	33-430	1
356879	250	85 x 175	51-400	33-430	1
356882	500	110 x 190	100-400	45mm	1
356884	1000	130 x 250	100-400	45mm	1
356887	3000	178 x 341	100-400	45mm	1
356889	6000	258 x 404	100-400	45mm	1
356890	8000	293 x 445	100-400	45mm	1

## Jacketed Double Sidearm Celstir® Spinner Flask

- For suspension cell culture with a magnetic stirrer
- 360° water jacket for precise temperature control
- Inlet and outlet hose barb connections for 0.25" (6.35mm) ID tubing
- Autoclavable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements



Cat. No.	Volume (mL)	Dia. x H (mm)	Cap Size, Top	Sidearm Size	Qty
356943	25	54 x 134	38-430	15-415	1
356945	50	54 x 147	38-430	15-415	1
356946	125	80 x 162	51-400	33-430	1
356949	250	100 x 182	51-400	33-430	1
356952	500	130 x 195	100-400	45mm	1
356954	1000	150 x 260	100-400	45mm	1

## Magna Flex™ Microcarrier Spinner Flask

- Designed for microcarrier cultures with a magnetic stirrer
- Gentle stirring action provided by a bulb-shaped glass impeller
- 1:1 headspace ratio for ideal gas exchange
- Autoclavable borosilicate glass that conforms to USP Type I and ASTM E 438 Type I, Class A requirements



Cat. No.	Volume (mL)	Dia. x H (mm)	Cap Size, Top	Sidearm Size	Qty
356830	125	65 x 155	51-400	33-430	1
356831	250	85 x 175	51-400	33-430	1
356832	500	110 x 190	100-400	45mm	1
356834	1000	130 x 250	100-400	45mm	1
356837	3000	178 x 341	100-400	45mm	1
356839	6000	258 x 404	100-400	45mm	1

## Replacement Parts

### Stainless Steel Shaft Assembly Kit

Cat. No.	For Flask Size (mL)	Qty
356874	25	1
356877	50	1
356878	125	1
356880	250	1
356883	500	1
356885	1000	1
356886	3000	1
356888	6000	1
356891	8000	1

### Replacement Impellers

Cat. No.	For Flask Size (mL)	Qty
<b>Celstir®</b>		
356893	25	1
356895	50	1
356896	125	1
356899	250	1
356902	500	1
356904	1000	1
356907	3000	1
356909	6000	1
356910	8000	1
<b>Magna-Flex™</b>		
356841	125	1
356842	250	1
356843	500	1
356844	1000	1
356847	3000	1
356848	6000	1
356849	8000	1

### Replacement Flasks

Cat. No.	For Flask Size (mL)	Qty
<b>Celstir® Only</b>		
356913	25 – Celstir® Flask Only	1
356915	50 – Celstir® Flask Only	1
356930	8000 – Celstir® Flask Only	1
<b>Celstir® &amp; Magna-Flex™</b>		
356916	125 – Celstir® / Magna Flex™ Flask Only	1
356919	250 – Celstir® / Magna Flex™ Flask Only	1
356922	500 – Celstir® / Magna Flex™ Flask Only	1
356924	1000 – Celstir® / Magna Flex™ Flask Only	1
356927	3000 – Celstir® / Magna Flex™ Flask Only	1
356929	6000 – Celstir® / Magna Flex™ Flask Only	1

### Jacketed Celstir® Flask

356963	25 – Jacketed Celstir® Flask Only	1
356965	50 – Jacketed Celstir® Flask Only	1
356966	125 – Jacketed Celstir® Flask Only	1
356969	250 – Jacketed Celstir® Flask Only	1
356972	500 – Jacketed Celstir® Flask Only	1
356974	1000 – Jacketed Celstir® Flask Only	1

### Replacement Sidearm Caps

Cat. No.	Cap Size	Cap Material	Liner	Qty / Case
W356870	15-415	Black Phenolic	PTFE / 14B Rubber	2
W356871	33-430	Black Phenolic	PTFE / 14B Rubber	2
W356872*	45mm	White PBT	PTFE / Silicone	2

\*Autoclavable