



# Celsius S<sup>3</sup> System

Freeze-Thaw Systems



### Key Features

- Scale-up
- Scale-down
- Stability studies
- Development studies

### Ease of Use

The CryoPilot Control Unit provides automated operation and data collection. The Celsius S<sup>3</sup> System freezes and thaws from 1 to 10 product samples per run. Celsius-Paks are available in 30 mL and 100 mL with different filling port and thermowell configurations.

### Improved Process Validation

Celsius S<sup>3</sup> System offers excellent batch to batch reproducibility and consistent product stability after freezing, thawing and storing. The Celsius S<sup>3</sup> System provides documented and reproducible freeze-thaw processes, thus facilitating validation of your freeze-thaw operations.

The Celsius S<sup>3</sup> is the only small-volume Controlled Freeze-Thaw System in disposable containers that is scalable to production volume. This system is a tool to execute freeze-thaw process development and stability studies using a minimal amount of product.

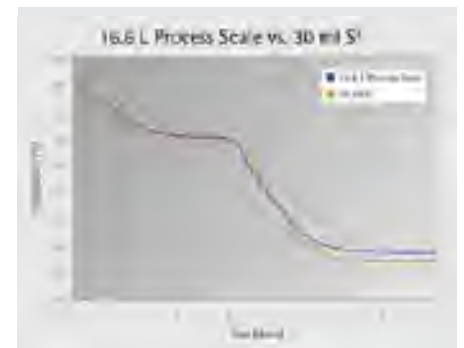
### Scalability

The Celsius S<sup>3</sup> System models a 16.6 L pilot-scale and 100 L production system with a minimal amount of product. Using the same freeze and thaw pathlength and identical materials of construction in all Celsius-Pak containers, the Celsius S<sup>3</sup> System ensures unmatched scalability between all scale systems.

Specifications	Celsius S <sup>3</sup> Freeze-Thaw	Unit CryoMixer Jr.
Dimensions	With mounting base 16.75" x 14" x 21" (42.5 cm x 35.6 cm x 53.3 cm)	19.75" x 23" x 3.5" (50.2 cm x 58.4 cm x 8.9 cm)
Weight	40 lb (18 Kg)	52 lb (24 Kg)
Electrical	N/A	EU: 230 V, 50 Hz, 5 A, 1 Phase USA: 110 V, 60 Hz, 5 A, 1 Phase
Exterior Material	302/304 Stainless Steel Shell; Clear	PVC Enclosure Hood

Specifications	CryoPilot	Control Unit
Dimensions	18.5" x 16.75" x 28.5"	(470 mm x 426 mm x 724 mm)
Weight	205 lb (93 Kg)	
Exterior Material	304 Stainless Steel and PVC	
Heat Transfer Fluid (HTF)	Dow Syltherm HF	
Temperature Range	CryoPilot nominal: +40°C to -70°C	
Power Requirements	EU: 230 V, 50 Hz, 16 A breaker minimum, 1 Phase USA: 230 V, 60 Hz, 20 A breaker minimum, 1 Phase	

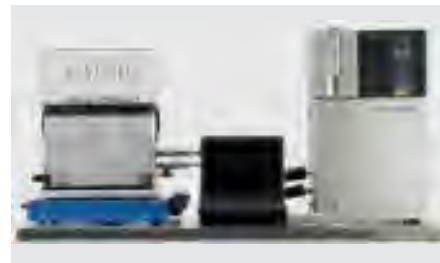
### Typical Celsius Freeze Profile



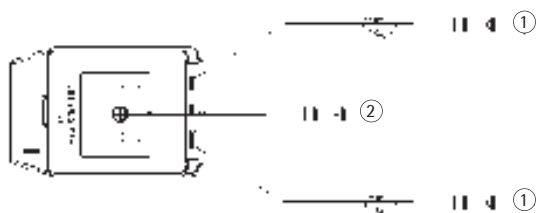
Specifications	30 mL Celsius-Pak	100 mL Celsius-Pak
Film	S71	S71
Product Contact Layer	EVAM <sup>®1</sup>	EVAM <sup>®1</sup>
Gas Et Moisture Barrier Layer	EVA/EVOH/EVA <sup>2</sup>	EVA/EVOH/EVA <sup>2</sup>
External Robust, Handling Layer	EVA	EVA

1. Ethylene Vinyl Acetate Monomaterial
2. EVA-Ethylene Vinyl Acetate, EVOH-Ethylene Vinyl Alcohol. A type III DMF is on records with the FDA.

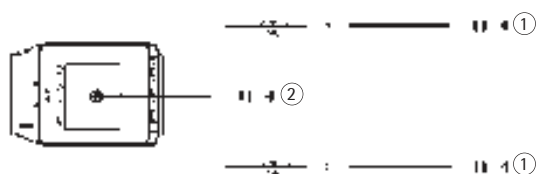
### Celsius S<sup>3</sup> System



### Ordering information



Part Number	Old Part Number	Description	Tubing	Port 1	Port 2	Port 3	Qty/Box
FZB103484	DB-00030-4	Celsius-Pak 30 mL with Thermowell	EVA	1/4" × 5/16" × 10 cm (4") Female LL + plug, pinch clamp	3/16" × 1/4" × 10 cm (4") Female LL + plug	Thermowell sealed end tube	10
FZB103494	DB-00100-8	Celsius-Pak 100 mL with Thermowell	EVA	1/4" × 5/16" × 10 cm (4") Female LL + plug, pinch clamp	3/16" × 1/4" × 10 cm (4") Female LL + plug	Thermowell sealed end tube	10



Part Number	Old Part Number	Description	Tubing	Port 1	Port 2	Port 3	Qty/Box
FZB103492	DB-00030-6	Celsius-Pak 30 mL with Thermowell and C-Flex	EVA + Clear C-Flex 374	1/8" × 1/4" × 15 cm (6") + Female LL + plug, pinch clamp	3/16" × 1/4" × 10 cm (4") Female LL + plug	Thermowell sealed end tube	10
FZB103498	DB-00100-3	Celsius-Pak 100 mL with Thermowell and C-Flex	EVA + Clear C-Flex 374	1/8" × 1/4" × 15 cm (6") + Female LL + plug, pinch clamp	3/16" × 1/4" × 10 cm (4") Female LL + plug	Thermowell sealed end tube	10

Some configurations are made to order. Specifications and material are subject to change.

Sartorius Stedim Biotech GmbH  
 August-Spindler-Strasse 11  
 37079 Goettingen, Germany  
 Phone +49.551.308.0  
 Fax +49.551.308.3289  
 www.sartorius-stedim.com

USA Toll-Free +1.800.368.7178  
 UK +44.1372.737159  
 France +33.442.845600  
 Italy +39.055.63.40.41  
 Spain +34.91.3586102  
 Japan +81.3.3740.5407

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