



Celsius[®] S³ System

Benchtop System for
Controlled Freeze and Thaw

Benefits

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



Product Information

The Celsius[®] S³ 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[®] S³ 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[®] S³ System ensures unmatched scalability between all scale systems.

Ease of Use

The CryoPilot Control Unit provides automated operation and data collection. The Celsius[®] S³ System freezes and thaws from 1 to 10 product samples per run. Celsius[®]-Pak is available in 30 mL and 100 mL with different filling port and thermowell configurations.

Improved Process Validation

Celsius[®] S³ System offers excellent batch to batch reproducibility and consistent product stability after freezing, thawing and storing. The Celsius[®] S³ System provides documented and reproducible freeze-thaw processes, thus facilitating validation of your freeze-thaw operations.

Technical Data

Specifications

| | Celsius® S ³ Freeze-Thaw | CryoMixer Jr. |
|-------------------|---|---|
| Dimensions | With mounting base 16.75" × 14" × 21" (42.5 cm × 35.6 cm × 53.3 cm) | 19.75" × 23" × 3.5" (50.2 cm × 58.4 cm × 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 |

Cryopilot Control Unit

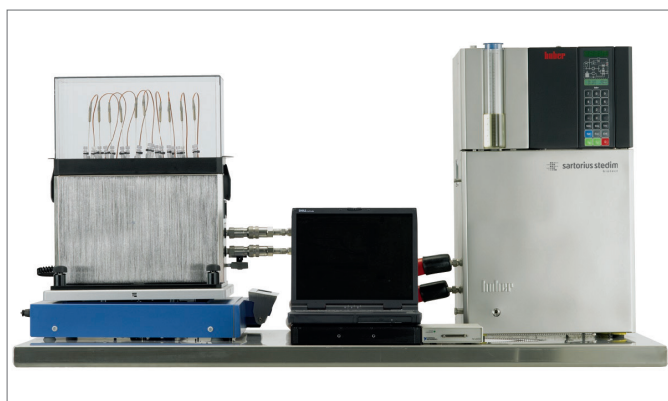
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|---------------------------|---|
| Dimensions | 18.5" × 16.75" × 28.5" (470 mm × 426 mm × 724 mm) |
| Weight | 205 lb (93 Kg) |
| Exterior Material | 304 Stainless Steel and PVC |
| Heat Transfer Fluid (HTF) | Dow Syltherm HF |
| Temperature Range | 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 |

| | 30 mL Celsius® -Pak | 100 mL Celsius® -Pak |
|---------------------------------|---------------------------|---------------------------|
| Film | S71 | S71 |
| Product Contact Layer | EVAM ¹ | EVAM ¹ |
| Gas & Moisture Barrier Layer | EVA/EVOH/EVA ² | EVA/EVOH/EVA ² |
| External Robust, Handling Layer | EVA | EVA |

¹ Ethylene Vinyl Acetate Monomaterial

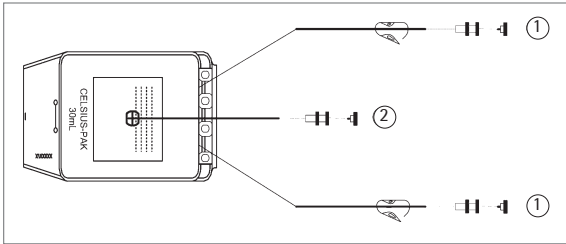
² EVA-Ethylene Vinyl Acetate, EVOH-Ethylene Vinyl Alcohol. A type III DMF is on records with the FDA.

Celsius® S³ System

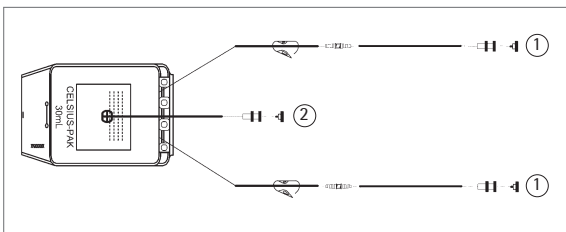


Ordering Information

Celsius® -Pak

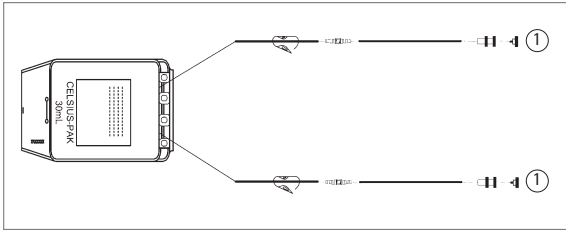


| Part Number | Description | Tubing | Port 1 | Port 2 | Qty./Box |
|-------------|-----------------------------------|--------|--|---|----------|
| FZB114804 | Celsius® -Pak, 30 mL, Thermowell | EVA | 1/4" × 5/16" × 10 cm (4") Female LL + plug, pinch clamp | | 10 |
| FZB114839 | Celsius® -Pak, 100 mL, Thermowell | EVA | 1/4" × 5/16" × 10 cm (4") Female LL + plug, pinch clamp | Thermowell sealed end tube 3/16" × 1/4" × 10 cm (4") Female LL + plug | 10 |



| Part Number | Description | Tubing | Port 1 | Port 2 | Qty./Box |
|-------------|--|----------------------------|---|---|----------|
| FZB114866 | Celsius® -Pak, 30 mL, Thermowell, TPE | EVA + Clear C-Flex® 374 | 1/8" × 1/4" × 15 cm (6") + Female LL + plug, pinch clamp | Thermowell sealed end tube 3/16" × 4" × 10 cm (4") Female LL + plug | 10 |
| FZB114908 | Celsius® -Pak, 100 mL, Thermowell, TPE | EVA + Clear C-Flex® 374 | 1/8" × 1/4" × 15 cm (6") + Female LL + plug, pinch clamp | Thermowell sealed end tube 3/16" × 4" × 10 cm (4") Female LL + plug | 10 |
| FZB129264 | Celsius® -Pak, 30 mL, Thermowell, Sil | EVA + Silicone (pt) | 1/4" × 3/8" × 15 cm (6") + Female LL + plug, pinch clamp | Thermowell sealed end tube 3/16" × 10 4" × 10 cm (4") Female LL + plug | 10 |
| FZB129261 | Celsius® -Pak, 100 mL, Thermowell, Sil | EVA + Silicone (pt) | 1/4" × 3/8" × 15 cm (6") + Female LL + plug, pinch clamp | Thermowell sealed end tube 3/16" × 10 4" × 10 cm (4") Female LL + plug | 10 |

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



| Part Number | Description | Tubing | Port 1 | Qty./Box |
|-------------|---|-------------------------|--|----------|
| FZB129265 | Celsius®-Pak, 30 mL, MPC connectors, Sil | EVA + Silicone (pt) | 1/4" x 3/8" x 15 cm (6") + MPC male + sealing cap, pinch clamp | 10 |
| FZB129262 | Celsius®-Pak, 100 mL, MPC connectors, Sil | EVA + Silicone (pt) | 1/4" x 3/8" x 15 cm (6") + MPC male + sealing cap, pinch clamp | 10 |
| FZB129266 | Celsius®-Pak, 30 mL, MPC connectors, Sil | EVA + Clear C-Flex® 374 | 1/4" x 3/8" x 15 cm (6") + MPC male + sealing cap, pinch clamp | 10 |
| FZB129263 | Celsius®-Pak, 100 mL, MPC connectors, Sil | EVA + Clear C-Flex® 374 | 1/4" x 3/8" x 15 cm (6") + MPC male + sealing cap, pinch clamp | 10 |

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Hardware

| Part Number | Description |
|------------------|---|
| FTH-CS00000-0001 | Celsius® S ³ System with US Computer |
| FTH-CS00000-0002 | Celsius® S ³ System with EU Computer |

C-Flex® is a registered trademark of Saint-Gobain Performance Plastics Corporation.

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
 Argentina +54.11.4721.0505
 Brazil +55.11.4451.6226
 Mexico +52.5555.62.1102
 UK +44.1372.737159
 France +33.442.845600
 Italy +39.055.63.40.41
 Spain +34.913.586.098
 Russian Federation +7.812.327.5.327
 Japan +81.3.4331.4300
 China +86.21.68782300

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