

## **Technical Data Sheet**

#### **Controlled-Rate Freezer**

Revision-A

### Thermo Fisher Scientific, Asheville, North Carolina

	Model Number / Catalog Number TSCM34SV Application, Rating and Electrical Data	
Specifications		
Product	Thermo Scientific CryoMed Controlled-Rate Freezer General Purpose	
Application	Controlled Sample preparation for multiple biological sample types	
lectrical Power / Full Load Current		
Building Supply Rating	15A dedicated grounded non-GFCI circuit. Protected by circuit breaker rated for inductive loads	
Power Cord / Plug Length	CEE (7/7) / 8Ft	
Minimum Air Clearance Required	Add 2.8in. (7.1cm) to F-B for utilities and door handle	
Ambient Operating Conditions	15°C - 35°C Temperature Range, 20% - 85% RH (non condensing)	
Agency Listings	CE	
Application Environment	Indoor use only, Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation	
	System Configuration	
Cooling Method	LN <sub>2</sub> injection using dual solenoid valve and LN <sub>2</sub> injection ring	
Heating Method	Tubular Heater 945W, 115V	
Operation Temp Range	+50°C to -180°C	
Temperature Freezing Rate	Minimum 0.1°C / minute; Maximum 99.9°C / minute (no load, T-couple in free air, center of chamber	
Temperature Warming Rate	Minimum of 0.1°C / minute; Maximum of 10.0°C / minute (same conditions as above)	
	Product Attributes	
No. of doors / Type of door	(1) Front access door opening left to right.	
Access Type / Sample Loading	Front Loading	
Use Interface / Display	Touch-Screen LCD	
Temperature Sensor	T-Type Thermocouple	
Remote Communication Protocol	Open Platform Communications United Architecture (OPC UA) - Ethernet only	
Companion Software	PC Interface Software	
Printer Capability	No Thermal Printer included	
Interior material	Stainless steel	
Exterior material	Stainless Steel powder-coat finish	
Freezing profiles	6 Presets, up to 14 Custom profiles with User Interface	
Door closure mechanism	T-handle high compression latch mechanism	
Insulation	Foamed in-place polyurethane insulation (HFC Free) and Teflon heat breaks	
	Dimensions and Cons	
Internal Chamber Capacity	34Liters / 1.2Cubic Feet	
Exterior Dimensions (W X H X D)	43.3 x 21.7 x 24.3in. (109.9 x 55.1 x 61cm)	
Interior Dimensions (W x H x D)	13 x 12 x 13in. (33 x 30.5 x 33cm)	
Unpacked Weight (lbs & kg)	174lbs / 79kg	
Packaged / Shipping Weight		
(lbs & kg)	230lbs / 104kg	
	Typical Performance Characteristics	
Chamber, Sample, Ambi	ent Bags Load	Graph Details:
24	24	<b>TCO Number:</b> 20035-B-4
		Test Number: 54486
-12 -12 -18		Ambient: 20C
		Profile run: Preset_3
-48 -54 -60	-48 -54 -54 -54 -54 -54 -54 -54 -54 -54 -54	Cabinet Loaded: Yes
-66 -72 -78	-66	Load: 250ml cryo bags filled with
-84 -90 -96		DMEM media, placed in respective size canisters.
24 12 12 13 14 14 14 14 14 14 14 14 14 14		Temp Uniformity (C): 0.5
120 126 132		Energy consumption: ~0.36 kWh
138 144 0:00:00 0:14:24 0:28:48 0:43:12 0:57:36 1:12:00		IN Consumptions W21 liters
0.00100 0.11210 0.20.40 0.40.12 0.00 1.12.00	and a starte and a starte 0.00/00 0:14:24 0:26:46 0:45:12 0:57:56 1:12:00 1:26:24 1:40:	TO 1.33.12 - 2

3) Continuous product enhancements may, without notice, result in amendments or omissions to this specification. Thermo Scientific

cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.

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Temperature Uniformity is calculated based on the freezing of the first bag across a grid of bags instrumented with thermocouples.
Energy consumption information is an estimate based on test data from Preset Profile\_3 and should be considered as reference only.

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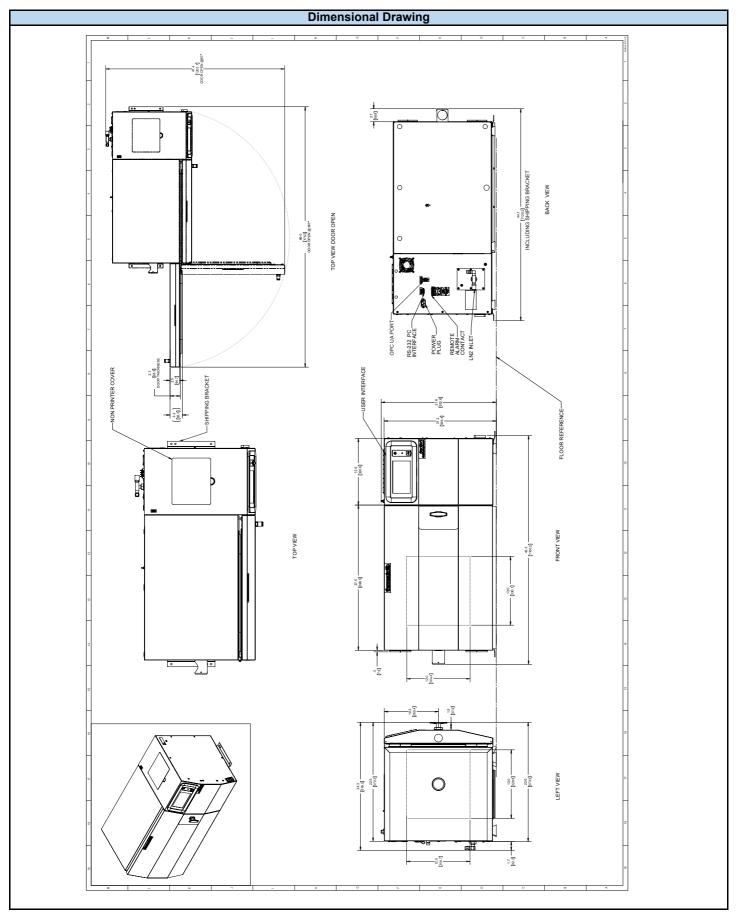
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