

Technical Data Sheet

Controlled-Rate Freezer

Revision-A

Thermo Fisher Scientific, Asheville, North Carolina

	Model Number / Catalog Number TSCM34PV 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 load		
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 ₂ injection using dual solenoid valve and LN ₂ 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 chamb		
Temperature Warming Rate		linimum 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		
Companion Software	PC Interface Software		
Printer Capability	Built-in Thermal Printer		
Interior material	Stainless steel		
Exterior material	Stainless Steel 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		
insulation	Dimensions and Construction		
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		
(ibs & kg)	Typical Performance Characteristics		
Chamber, Sample, Ambi	ont		
		Bags Load	Graph Details:
18	24 16 16 16 16 16 16 16 16 16 16		TCO Number: 20035-B-4
			Test Number: 54486
24 24 26 26 27 28 24 24 24 24 24 24 24 24 24 24	-12 -18 -24		Ambient: 20C Profile run: Preset_3
36	-36		Cabinet Loaded: Yes
	-46	· N	
72	-66 -72 -78		Load: 250ml cryo bags filled with
84 90 96	-84 -90 -96		DMEM media, placed in
102 108	-102 -108 -114	N N	respective size canisters.
120 126	-114 -120 -126		Temp Uniformity (C): 0.5
38 44			Energy consumption: ~0.36 kWł 10:48 1:55:12 LN ₂ Consumption: ~21 liters
		0:14:24 0:28:48 0:43:12 0:57:36 1:12:00 1:26:24 1:	10:48 1:55:12 LN ₂ Consumption: ~21 liters

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.
4) Temperature Uniformity is calculated based on the freezing of the first bag across a grid of bags instrumented with thermocouples.

5) Energy consumption information is an estimate based on test data from Preset Profile 3 and should be considered as reference only.

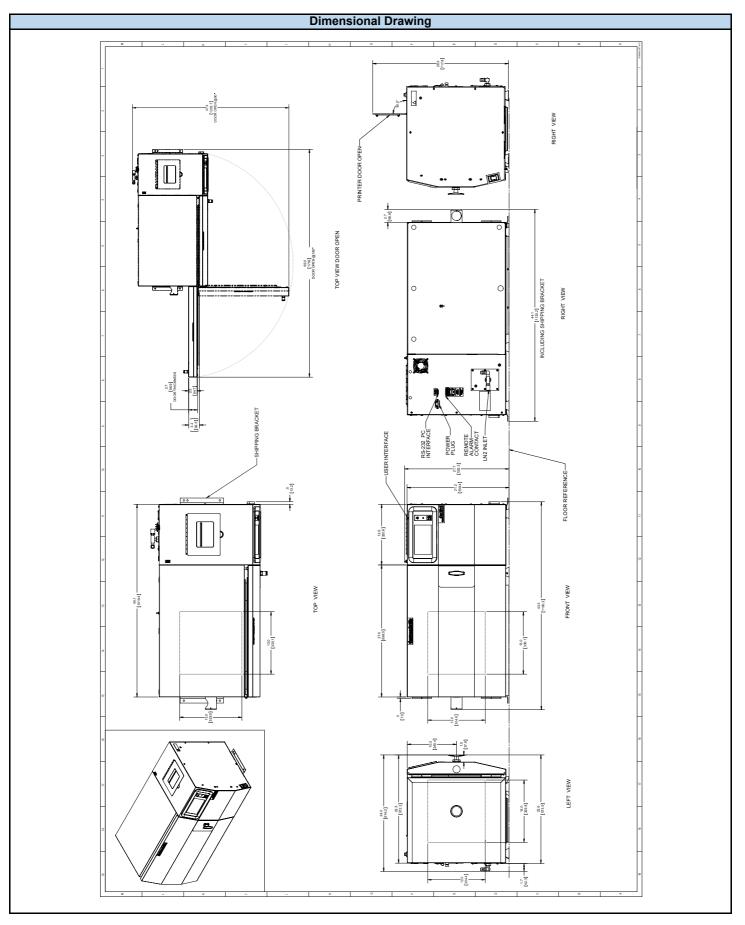
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