thermoscientific

Technical Data Sheet High Performance General Purpose Refrigerator

Revision-2

Thermo Fisher Scientific, Asheville, North Carolina

	Thermorisher ocientine, Ashevine, North Outomia				
	Catalog number				
Constitutions	TSX5005GV				
Specifications	Model Number				
-	TSX5005GV				
Application	Application, Rating and Electrical Data Storage of General (non-flammable) Laboratory Materials				
Application	1447 Liters / 51.1 Cubic Feet				
Storage Volume	1447 Liters / S1.1 Cubic Feet 5℃				
Factory Set Point					
Set Point Range / Adjustable Increment	3°C to 7°C / 0.1°C				
Electrical Power / Rated Current	208-230 V 50 Hz 1 Phase / 4.6 A				
Building Supply Rating	15A dedicated grounded non-GFCI circuit. Protected by circuit breaker rated for inductive loads				
Power Plug / Power Cord Length	16 Amp (CEE 7/7) / 3.048 Meters (10 feet)				
Agency Listings	CE, UL, cUL				
Indoor / Outdoor Usage	Indoor Use Only				
Application Environment	Non-Corrosive, Non-Flammable, Non-Explosive, Good Air Ventilation				
Ambient Operating Temperature	15°C - 32°C (60°F - 90°F)				
	Refrigeration Configuration				
Refrigeration System	Vapor Compression System				
Compressor / Number / Capacity	Hermetic Variable Capacity Compressor / 1 / 398 W				
Condenser Type / Number	Enhanced Finned-Tube and Forced-Air Cooled / 1				
Expansion Device	Capillary Tube				
Evaporator Type / Defrost Method	Forced Air Evaporator Coil / Automatic Defrost				
Refrigerant Charge / Flammability	R290, 145 gms, GWP:3 ODP:0 / Flammable				
	Controller/Electrical System Configuration and Features				
Controller Level	Eye Level				
Power Switch	Keyed Off-On - Alarm				
Controller Type	IntrLogic Control System: Digital Display, Graphic Thermometer, Automatic Defrost System				
Setpoint Security / Programmable	Yes / Yes				
Compressor Safe Guard	Current protection				
Control Sensor	Single RTD (1000 ohm shielded Platinum RTD)				
Connectivity / Remote Outputs	Remote Alarm Contacts, RS485 Output and 4-20 mA Output (optional)				
Adjustable Warm / Cold Alarms	Fully Adjustable				
Power Failure Alarm	Standard				
Electronic Chart Recorder	Optional				
	Dimensions and Construction				
Interior Dimensions (D x W x H)	72.4 cm x 133.4 cm x 147.3 cm (28.5" x 52.5" x 58.0")				
Exterior Dimensions (D x W x H)	96.0 cm x 143.5 cm x 199.4 cm (37.8" x 56.5" x 78.5")				
Insulation	5.08 cm (2.0") High-Density Water-Blown Polyurethane Foam				
Door Perimeter Heater	Yes				
Shelves / Load Limit	(8) Adjustable Wire Shelves / 45 kg (100 lbs) per Shelf				
All-Direction Casters	Standard With Locks				
Shipping Weight	303 kg / 669 lb				
	Typical Performance Characteristics				
50 cuft Upright Refrigerator, Pull Down and Warm U	Jp 50 cuft Upright Refrigerator at 5C Cycle Test Unit Series Number or MSO Number: 19585-B-25				
——Pull Down ——Warm Up	——MAX ——MIN ——AVG				
19	Cabinet Load: Unloaded				
17	Average Cabinet Temp at 5C Cycle (C): 4.8 Peak Variation from Setpoint (C): +1.6 /-2.5				
o 15					
9 15 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Stability (C): 3				
e 13	1-min Door Opening Recovery to 5C (min): 2 Duty Cycle at 5C (%): 37				
F -	Cycle (on/off) rate at 5C (min): 4 / 6				
9	Energy Consumption (kw-hr/day): 6.4				
7	Heat Rejection Rate (btu/hr): 916				
5	Pull Down Time (to 5C) (min): 16				
0 50 100 150 200	230 0 120 240 360 480 600 720 Sound (dBA): 52				
Time, minutes	Time, minutes				

- 1) Performance is nominal and individual units may vary.
- 2) Product performance will differ due to product amount, product size and operating conditions.
- 3) Continuous product enhancements may, without notice, result in amendments or ommisions to this specification. Thermo Scientific cannot accept responsibility for damage, injury, loss or expenses resulting from misapplication of the information herein.



Typical Cabinet Temperature Map Refrigerator 50cuft , 8 Inner-Shelves + Base, 2 Outer Doors Temperatures are averages during > 20 cycles after reaching a setpoint of 5C

Top View of Shelves

REAR

FRONT

М3	M5	M4	M53	M54 M55		
M1		M2	M51	M52		
	M10			M60		
M13		M14	M63	M64		
	M15			M65		
M11		M12	M61	M62		
	M20		M70			
M23		M24	M73	M74		
	M25			M75		
M21		M22	M71	M72		

Front View



19585-B-25

Cabinet Average: 4.8 C **Probe Average:** 5.5 C

Peak Variation: +1.6 C / -2.5 C

	M1	M2	M3	M4	M5	M10
Avg	5.3	4.9	4.4	4.7	4.8	4.8
Max	6.6	6.2	6	6.2	6	6
Min	3.9	3.6	2.8	2.9	3.5	3.4

_		M11	M12	M13	M14	M15	M20
	Avg	4.8	4.9	4.5	4.6	4.4	4.3
	Max	6.1	6.2	6	6.2	5.8	6
	Min	3.4	3.5	2.9	2.6	2.8	2.5

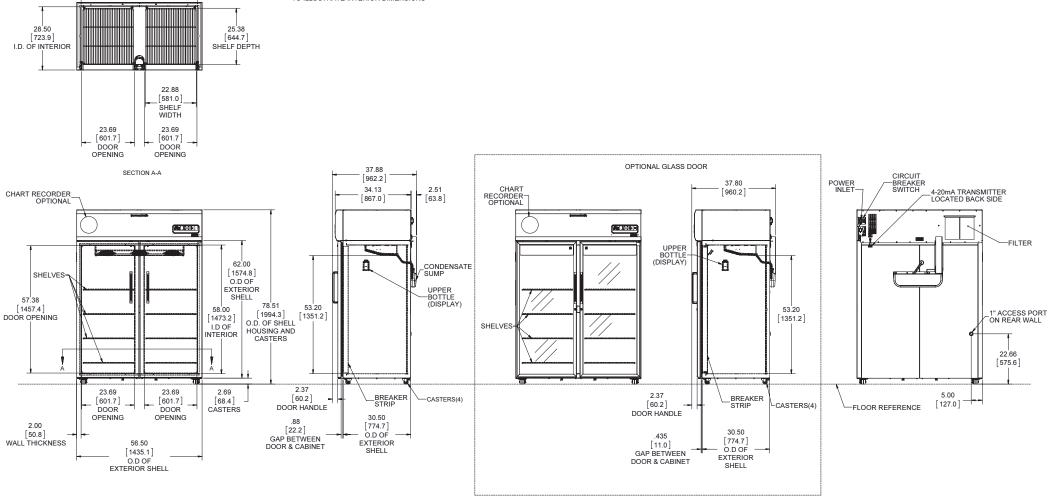
_		M21	M22	M23	M24	M25
	Avg	4.5	4.6	4.6	4.5	4.5
	Max	6	6.1	5.9	5.9	6.2
	Min	2.8	3	3.2	2.9	2.5

	M51	M52	M53	M54	M55	M60
Avg	5.2	5.3	4.8	5	5.3	5.1
Max	6.5	6.3	6.2	6.4	6.4	6.4
Min	3.8	4.3	3.4	3.6	4	3.7

	M61	M62	M63	M64	M65	M70
Avg	5	5.4	4.9	4.8	5	4.8
Max	6.3	6.6	6.5	6.4	6.3	6.3
Min	3.4	4	3	3	3.4	3.1

	M71	M72	M73	M74	M75
Avg	4.8	4.8	4.8	4.9	4.8
Max	6.3	6.3	6.3	6.3	6.4
Min	3	3.1	3.1	3.3	2.9

ONLY CABINET SHOWN FOR CLARITY IN TOP VIEW, TO ILLUSTRATE INTERIOR DIMENSIONS thermoscientific



52.50 [1333.5]

I.D. OF INTERIOR