Technical Data Sheet

High Performance Blood Bank Refrigerator

Revision: 1

Thermo Fisher Scientific, Asheville, North Carolina

thermoscientific

| | Catalog number | | | | | |
|--|---|--|--|--|--|--|
| | TSX3004BV | | | | | |
| Specifications | Model Number | | | | | |
| | TSX3004BV | | | | | |
| | Application, Rating and Electrical Data | | | | | |
| Application | Blood Bank (non-flammable) Refrigerator | | | | | |
| Storage Volume | 827 Liters / 29.2 Cubic Feet | | | | | |
| Factory Set Point | 4°C | | | | | |
| Set Point Range/Adjustable Increment | 3°C to 7°C/ 0.1°C | | | | | |
| Electrical Power / Rated Current | 208-230V 50 Hz 1 Phase / 4.4A | | | | | |
| 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. FDA | | | | | |
| 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) | | | | | |
| Ambient Operating Temperature | Refrigeration Configuration | | | | | |
| Refrigeration System | Vapor compression system | | | | | |
| Compressor / Number / Capacity | Hermetic Variable Capacity Compressor / 1 / 394W | | | | | |
| Condenser Type/Number | Enhanced Finned-Tube and Forced-Air Cooled / 1 | | | | | |
| Expansion Device | Capillary Tube | | | | | |
| Expansion Device Evaporator Type / Defrost Method | Forced Air Evaporator Coil / Automatic Defrost | | | | | |
| Refrigerant Charge / Flammability | | | | | | |
| Reingerant Charge / Flammability | R290, 140gms, GWP:3 ODP:0 / Flammable Controller/Electrical System Configuration and Features | | | | | |
| Controller Level | | | | | | |
| Power Switch | Eye Level Keyed Off-On - Alarm | | | | | |
| Controller Type | IntrLogic Control System: Digital display, Graphic thermometer, Automatic defrost system | | | | | |
| Setpoint Security / Programmable | Yes / Yes | | | | | |
| Compressor Safe Guard | | | | | | |
| Control Sensor | Current protection | | | | | |
| Connectivity / Remote Outputs | Single RTD (1000 ohm shielded Platinum RTD) Standard | | | | | |
| Adjustable Warm / Cold Alarms | Fully Adjustable | | | | | |
| Power Failure Alarm | Standard | | | | | |
| Electronic Chart Recorder | Standard | | | | | |
| Electionic Chart Necorder | Dimensions and Construction | | | | | |
| Interior Dimensions (D x W x H) | 72.3 cm X 76.2 cm X 147.3 cm (28.5" x 30.0" x 58.0") | | | | | |
| Exterior Dimensions (D x W x H) | | | | | | |
| Insulation | 94.7 cm x 86.4 cm x 199.4 cm (37.3" x 34.0" x 78.5") | | | | | |
| Door Perimeter heater | 5.08 cm (2.0") High-Density Water-Blown Polyurethane Foam | | | | | |
| Door Femilieter Neater | Yes | | | | | |
| Shelves / Load Limit | (6) Drawers Adjustable In 1" Increments / 36 kg (80 lbs) per Drawer | | | | | |
| All-Direction Casters | Standard with Locks | | | | | |
| Shipping Weight | 251 kg / 554 lb | | | | | |
| | Typical Performance Characteristics in 20°C Ambient | | | | | |
| 30 cuft Upright Refrigerator, Pull Down and Warm Up ———————————————————Warm Up | 30 cuft Upright Refrigerator at 4C Cycle — MAX — MIN — AVG Test Unit Series Number or MSO Number: 19758-A-4 | | | | | |
| 20 | 7 Cabinet Load: Unloaded | | | | | |
| | | | | | | |
| 18 | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): +1.2 / -0.6 | | | | | |
| U 16 | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): +1.2 / -0.6 | | | | | |
| U 16 | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): +1.2 / -0.6 | | | | | |
| 0 16 2 1 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): 1.2 /-0.6 Uniformity (C): 0.6 Stability (C): 1 I-min Door Opening Recovery to 4C (min): 4 Duty Cycle (on/off) rate at 4C (min): 4 / 10 | | | | | |
| The state of the s | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): Uniformity (C): Stability (C): 1 1-min Door Opening Recovery to 4C (min): 4 Duty Cycle at 4C (%): Cycle (on/off) rate at 4C (min): 4 / 10 Energy Consumption (kw-hr/day): 4.1 | | | | | |
| Temperature 12 12 12 8 6 | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): 1 1 1-min Door Opening Recovery to 4C (min): 2 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | |
| D 16 mag 12 mag 12 mag 12 mag 12 mag 13 mag 14 mag | Average Cabinet Temp at 4C Cycle (C): 4.3 Peak Variation from Setpoint (C): 5 tability (C): 1 1-min Door Opening Recovery to 4C (min): 4 / 10 Energy Consumption (kw-hr/day): 4.1 Peak Variation from Setpoint (C): 5 tability (C): 1 thin Door Opening Recovery to 4C (min): 6 Cycle (on/off) rate at 4C (min): 7 Cycle (on/off) rate at 4C (min): 8 Energy Consumption (kw-hr/day): 9 Heat Rejection Rate (btu/hr): 8 S80 | | | | | |

- 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.

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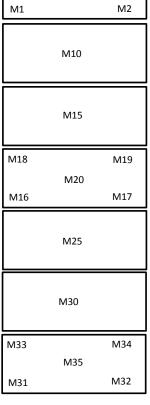
Typical Cabinet Temperature Map Refrigerator 30cuft , 6 Drawers, Single Outer Door Temperatures are averages during > 20 cycles after reaching a setpoint of 4C

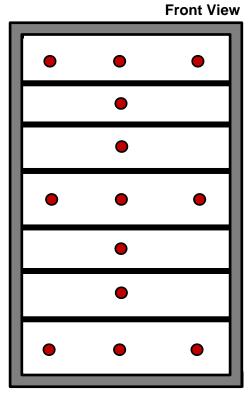
Top View of Shelves

| M3 | | M4 |
|----|----|----|
| | M5 | |
| M1 | | M2 |
| | | |

REAR

FRONT





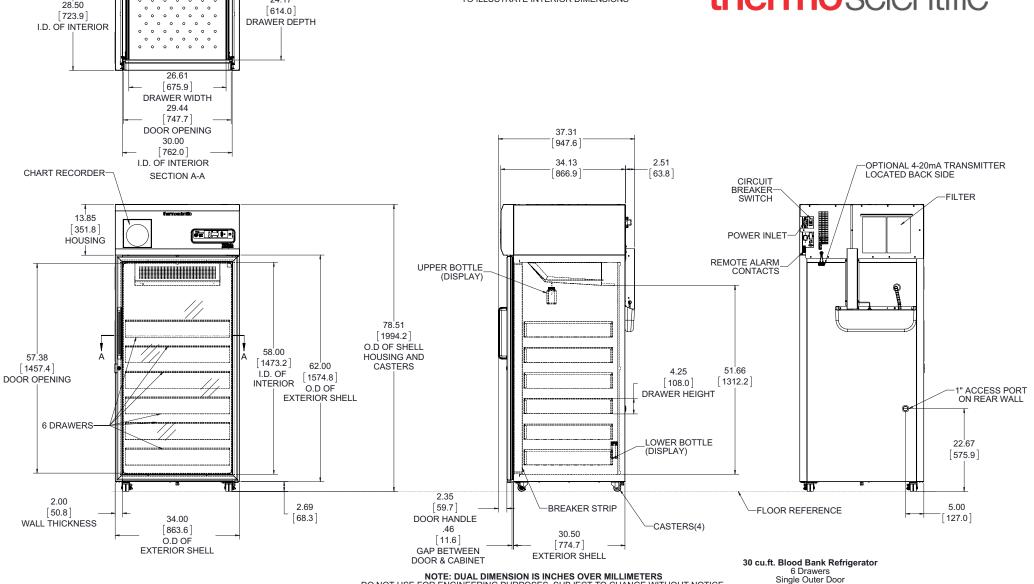
| | IVI1 | IVI2 | IVI3 | IVI4 | IVI5 |
|-----|------|------|------|------|------|
| Avg | 4.4 | 4.6 | 4.3 | 4.3 | 4.4 |
| Max | 4.9 | 4.8 | 5 | 4.9 | 5.2 |
| Min | 4 | 4.4 | 3.6 | 3.8 | 3.9 |
| | M10 | M15 | | | |
| Avg | 4.2 | 4.2 | | | |
| Max | 5 | 4.8 | | | |
| Min | 3.5 | 3.8 | | | |
| | M16 | M17 | M18 | M19 | M20 |
| Avg | 4.2 | 4.3 | 4.1 | 4.1 | 4.2 |
| Max | 4.8 | 4.6 | 5 | 4.6 | 4.8 |
| Min | 3.9 | 4.1 | 3.4 | 3.7 | 3.8 |
| | M25 | M30 | | | |
| Avg | 4.3 | 4.4 | | | |
| Max | 4.8 | 4.8 | | | |
| Min | 4 | 4.2 | | | |
| | M31 | M32 | M33 | M34 | M35 |
| Avg | 4.5 | 4.4 | 4.3 | 4.3 | 4.3 |
| Max | 4.8 | 4.8 | 5 | 4.8 | 4.9 |
| Min | 4.3 | 4.1 | 3.8 | 3.8 | 3.9 |

Cabinet Average: 4.3 C **Probe Average:** 4.5 C

Peak Variation: +1.2 C / -0.6 C

19758-A-2





DO NOT USE FOR ENGINEERING PURPOSES. SUBJECT TO CHANGE WITHOUT NOTICE.

Top Mount Controls

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