

Thermo Scientific TSHP Series FMS High-Performance Refrigerators and Freezers

For the protection of flammable materials,
solvents and intermediates.



Thermo Scientific™ TSHP Series FMS high-performance lab refrigerators and freezers are designed to meet stringent US Pharmacopeia standards for drug storage as well as the NFPA safety provisions for the storage of flammable liquids.* These refrigerators and freezers are designed to maintain a safe environment while keeping valuable samples within a tight temperature range. Each model is listed by UL as a special purpose refrigerator or freezer intended for flammable material storage in accordance with NFPA 45, 70 and 99.*45, 70 and 99.*

Features and Benefits:

- Easy to use intuitive digital display featuring microprocessor control
- Lockable doors, audio and visual alarms including door ajar alarms for security and peace of mind

- Convenient access port and casters
- Outstanding construction featuring painted, high-quality steel exteriors with durable finish
- Ignition-free interior cabinet design for the safe storage of flammable materials
- Meets safety standards in accordance with UL, NFPA* and OSHA* for regulatory compliance
- Optional, built-in, inkless, seven-day graphic chart recorder
- Optional, barrier-protected 4-20 milliamp output for external monitoring
- Manual defrost

Not Available Outside North America

* Products complying with the applicable requirements of NFPA 70, "National Electric Code", NFPA 45, "Fire Protection for Laboratories Using Chemicals," and NFPA 99 "Health Care Facilities" are considered to meet the OSHA guidelines for these types of facilities. These units have no internal electrical components that could trigger an explosion or fire of flammable materials inside the unit. Flammable material storage units are not for use in classified hazardous locations which require the use of explosion-proof units.

Thermo Scientific TSHP Series FMS High-Performance Refrigerators (Not Available Outside North America)

Model No.	Capacity cu. ft. (L)	Voltage (Hz)	Amps/Breaker (Plug)	Temperature Range	Defrost	Shelves	Interior Dimensions H x W x D in. (cm)*	Exterior Dimensions H x W x D in. (cm)	Shipping Weight lbs. (kg)
TSFMS2305A	23 (651)	115 (60)	13.5/20 (5-20)	+1 to +8°C (preset +5°C)	manual	4 adjustable	58 x 24 x 29 (147 x 61 x 74)	78.6 x 28 x 37 (200 x 72 x 94)	425 (193)

Thermo Scientific TSHP Series FMS High-Performance Freezers (Not Available Outside North America)

Model No.	Capacity cu. ft. (L)	Voltage (Hz)	Amps/Breaker (Plug)	Temperature Range	Defrost	Shelves	Interior Dimensions H x W x D in. (cm)	Exterior Dimensions H x W x D in. (cm)	Shipping Weight lbs. (kg)
TSFMS2320A	23 (651)	115 (60)	13.5/20 (5-20)	-20°C	manual	4 adjustable	58 x 24 x 29 (147 x 61 x 74)	78.6 x 28 x 37 (200 x 72 x 94)	425 (193)

Optional Accessories for 23.3 cu. ft. (659L)

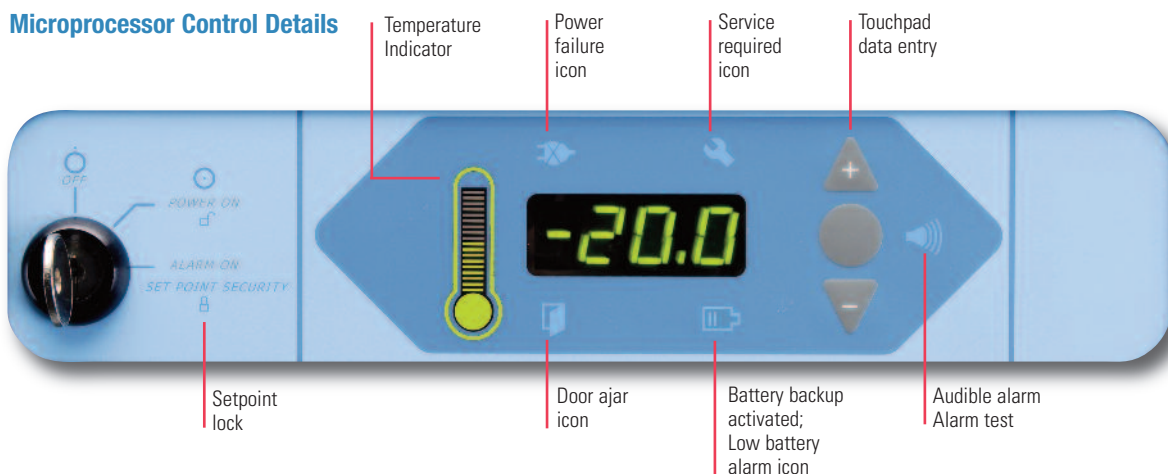
Model No.	Description
61837FMS	Temperature chart recorder (factory-installed)
6184	Replacement chart paper (box of 50)
4706FMS	4-20 milliamp output
7203FMS	4-20 milliamp output for use with Thermo Scientific™ Smart-View™ wireless monitoring solution**
6696	Additional shelf, full size
6698	Additional shelf, half size
TFR210	Seismic restraint kits (basic)
TF-LRF23	Seismic restraint kits (for OSHPD)

Designed to Store:

- Acetone
- Alcohol
- Benzene
- Cyclopropane
- Ethanol
- Ethyl ether
- Gasoline
- Hexane/ethyl acetate
- Isopropanol (2-propanol)
- Lacquer
- Methanol
- Methyl ethyl ketone (2-butanone)
- Naphtha
- Tetrahydrofuran (THF)
- Toluene

* Condensation management device on the refrigerator reduces interior storage height to 52" (132 cm)
 ** Smart-View wireless monitoring must be used in conjunction with the 7203FMS powered 4-20 milliamp option (factory- or customer-installed) in order for this product to remain certified to applicable NFPA standards.

Microprocessor Control Details



www.thermoscientific.com/flammablestorage

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