Thermo Scientific™ Forma FMS High-Performance Refrigerators and Freezers

For the protection of flammable materials, solvents and intermediates.

Thermo Scientific™ Forma 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.*

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

* 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.

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

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Capacity cu. ft. (L)</th>
<th>Voltage (Hz)</th>
<th>Amps/Breaker (Plug)</th>
<th>Temperature Range</th>
<th>Defrost</th>
<th>Shelves</th>
<th>Interior Dimensions H x W x D in. (cm)*</th>
<th>Exterior Dimensions H x W x D in. (cm)</th>
<th>Shipping Weight lbs. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFMS2305A</td>
<td>23 (651)</td>
<td>115 (60)</td>
<td>13.5/20 (5-20)</td>
<td>+1 to +8ºC (preset +5ºC)</td>
<td>manual</td>
<td>4 adjustable</td>
<td>58 x 24 x 29 (147 x 61 x 74)</td>
<td>78.6 x 28 x 37 (200 x 72 x 94)</td>
<td>425 (193)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Capacity cu. ft. (L)</th>
<th>Voltage (Hz)</th>
<th>Amps/Breaker (Plug)</th>
<th>Temperature Range</th>
<th>Defrost</th>
<th>Shelves</th>
<th>Interior Dimensions H x W x D in. (cm)</th>
<th>Exterior Dimensions H x W x D in. (cm)</th>
<th>Shipping Weight lbs. (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFMS2320A</td>
<td>23 (651)</td>
<td>115 (60)</td>
<td>13.5/20 (5-20)</td>
<td>-20ºC</td>
<td>manual</td>
<td>4 adjustable</td>
<td>58 x 24 x 29 (147 x 61 x 74)</td>
<td>78.6 x 28 x 37 (200 x 72 x 94)</td>
<td>425 (193)</td>
</tr>
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</table>

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

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

* Condensation management device on the refrigerator reduces interior storage height to 52” (132 cm)
**Smart-Vue 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.

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

Microprocessor Control Details
- Temperature Indicator
- Power failure icon
- Service required icon
- Touchpad data entry
- Setpoint lock
- Door ajar icon
- Battery backup activated; Low battery alarm icon
- Audible alarm; Alarm test

www.thermoscientific.com/flammablesstorage

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DS-FORMAFMS 0514