

# Thermo Scientific Forma<sup>®</sup> Explosion-Proof and Flammable Material Refrigerators and Freezers

**Maximum Safety  
for Volatile Materials**



**Our Explosion-Proof and Flammable Material Storage refrigerators and freezers prevent the trigger of an explosion inside and/or outside of the cabinet. Models offer temperature ranges and capacities to suit a variety of laboratory storage needs.**

## Maximum Capacity

- Refrigerator capacities from 14.5 to 20.7 cu. ft.
- Freezer capacities from 5.0 to 20.7 cu. ft.

## Safety and Performance

- Units comply with OSHA/National Fire Protection Association safety standards
- Dependable refrigeration technology ensures optimum cold storage performance and quiet operation

## Adjustable Temperature Control

- Refrigerator temperature range +2°C to +10°C (factory pre-set to +4°C)
- Freezer temperature range -12°C to -20°C (factory pre-set to -20°C)

## Durable Construction

- Rugged, white acrylic exteriors; seamless, easy-to-clean interiors
- Foam-in-place insulation ensures high performance and low operating costs
- Environmentally-friendly, CFC-free refrigerants and insulation

## Explosion-Proof refrigerators and freezers

- Units meet OSHA/National Fire Protection Association safety standards and are suitable for Class 1, Group C and Group D hazardous material environments
- Safe, spark-proof interiors
- Steel-encased electrical components eliminate ignition sources inside and outside of the cabinet
- Non-sparking magnetic vinyl gaskets provide a positive seal to maintain temperature integrity

## Flammable Material Storage refrigerators and freezers

- Units comply with OSHA/National Fire Protection Association safety standards
- Externally-mounted thermostats ensure that interiors are spark proof
- Non-sparking magnetic vinyl gaskets provide a positive seal to maintain temperature integrity

# Thermo Scientific Forma Explosion Proof and Flammable Material Refrigerators and Freezers

►  
Our specialty refrigerators and freezers meet a wide range of temperature, space and capacity requirements for volatile sample storage.



## Specifications and Ordering Information

### Flammable Material Storage Refrigerators

Temperature Range +2°C to +10°C; Factory preset +4°C

Cat. No.	Volume cu.ft. (liters)	Voltage/Hz	Shelves Supplied	Door Lock	Interior Dimensions H x W x D, inches (mm)	Exterior Dimensions H x W x D, inches (mm)	Ship Weight lbs (kg)	Noise Level (dBA)
FRFS164A	15 (411)	115/60/1 phase	3	Standard	52 x 27 x 18 (1308 x 686 x 457)	65 x 32 x 30 (1656 x 813 x 762)	235 (107)	45
FRFS214A	21 (586)	115/60/1 phase	4	Standard	57 x 27 x 24 (1448 x 686 x 597)	70 x 32 x 32 (1783 x 813 x 818)	250 (113)	45

### Flammable Material Storage Freezers

Temperature Range -12°C to -20°C; Factory preset -20°C

Cat. No.	Volume cu.ft. (liters)	Voltage/Hz	Shelves Supplied	Door Lock	Interior Dimensions H x W x D, inches (mm)	Exterior Dimensions H x W x D, inches (mm)	Ship Weight lbs (kg)	Noise Level (dBA)
FFMS418A	5 (141)	115/60/1 phase	2	None	29 x 19 x 20 (737 x 476 x 495)	34 x 21 x 27 (851 x 540 x 673)	84 (38)	28
FFMS1618A	17 (490)	115/60/1 phase	3	Standard	52 x 27 x 22 (1308 x 686 x 546)	65 x 32 x 30 (1656 x 813 x 762)	235 (107)	45
FFMS2118A	21 (586)	115/60/1 phase	4	Standard	57 x 27 x 24 (1448 x 686 x 597)	70 x 32 x 30 (1783 x 813 x 818)	250 (113)	45

Note: Forma Flammable material storage refrigerators and freezers are engineered with externally-mounted electrical components to ensure that interiors are spark proof. Specified interior volumes are nominal, and usable capacities may be offset by shelves, drawers, blower coils or cabinet protrusions. Refrigerator or freezer performance may be affected by ambient temperature and humidity conditions, sample loading preferences, and frequency of door openings. All Forma Flammable Storage refrigerators and freezers have a manual defrost mode.

### Explosion Proof Refrigerators

Temperature Range +2°C to +10°C; Factory preset +4°C

Cat. No.	Volume cu.ft. (liters)	Voltage/Hz	Shelves Supplied	Door Lock	Interior Dimensions H x W x D, inches (mm)	Exterior Dimensions H x W x D, inches (mm)	Ship Weight lbs (kg)	Noise Level (dBA)
FRXP164A	15 (411)	115/60/1 phase	3	Standard	52 x 27 x 18 (1308 x 686 x 457)	65 x 32 x 33 (1656 x 813 x 831)	235 (107)	45
FRXP214A	21 (586)	115/60/1 phase	4	Standard	57 x 27 x 24 (1448 x 686 x 597)	70 x 32 x 35 (1783 x 813 x 884)	250 (113)	45

### Explosion Proof Freezers

Temperature Range -12°C to -20°C; Factory preset -20°C

Cat. No.	Volume cu.ft. (liters)	Voltage/Hz	Shelves Supplied	Door Lock	Interior Dimensions H x W x D, inches (mm)	Exterior Dimensions H x W x D, inches (mm)	Ship Weight lbs (kg)	Noise Level (dBA)
FEXF418A	5 (141)	115/60/1 phase	2	None	29 x 19 x 20 (737 x 476 x 495)	34 x 21 x 29 (851 x 540 x 730)	84 (38)	28
FEXF1618A	17 (490)	115/60/1 phase	3	Standard	52 x 27 x 22 (1308 x 686 x 546)	65 x 32 x 33 (1656 x 813 x 832)	235 (107)	45
FEXF2118A	21 (586)	115/60/1 phase	4	Standard	57 x 27 x 24 (1448 x 686 x 597)	70 x 32 x 35 (1783 x 813 x 884)	250 (113)	45

Note: Thermo Scientific Forma Explosion Proof refrigerators and freezers are designed to meet OSHA/National Fire Protection Association safety standards. Specified interior volumes are nominal, and usable capacities may be offset by shelves, drawers, blower coils or cabinet protrusions. Refrigerator or freezer performance may be affected by ambient temperature and humidity conditions, sample loading preferences, and frequency of door openings. All Forma Explosion Proof refrigerators and freezers have a manual defrost mode.

**North America:** USA/Canada +1 866 984 3766

**Europe:** Austria +43 1 801 40 0, Belgium +32 2 482 30 30, Finland +358 9 329 100, France +33 2 2803 2000, Germany national toll free 08001-536 376, Germany international +49 6184 90 6940, Italy +39 02 95059 1, Netherlands +31 76 571 4440, Russia/CIS +7 (812) 703 42 15, Spain/Portugal +34 93 223 09 18, Switzerland +41 44 454 12 12, UK/Ireland +44 870 609 9203

**Asia:** China +86 21 6885 4588 or +86 10 5850 3588, India +91 22 5542 9494, Japan +81 45 453 9220, Other Asian countries +852 2885 4613

**Countries not listed:** +49 6184 90 6940 or +33 2 2803 2000

[www.thermo.com/cold](http://www.thermo.com/cold)

© 2007 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

DS-LEFOEXPFLM-0907

**Thermo**  
SCIENTIFIC