

your samples our obsession



daily dependability

Thermo Scientific Forma 900 and Forma 7000 Series

Our Forma 900 and Forma 7000 Series upright freezers

are designed for daily sample protection and dependability. Choose our 900 Series for applications requiring -50°C to -86°C or our 7000 Series when your storage requirements call for -10°C to -40°C.

Rugged construction for everyday use

- · Heavy gauge, cold-rolled steel cabinets with a powder coat paint finish for a uniform exterior that resists chipping and rust.
- 5" (12.7cm) foamed-in-place, polyurethane insulation.
- State-of-the-art, refrigeration system improves temperature control, increases reserve capacity, for more stable temperature sample.
- Two 1" (2.5cm) access ports enable use of inexpedient probes.
- Painted glaveneel interiors with sturdy stainless steel shelving.
- · Vacuum relief port permits easy access after door openings.
- Easy-to-remove washable filter provides protection from dust on the condenser. increasing refrigeration performance.
- Single-hand operation with an easy-to-use, padlock-compatible, ergonomic door handle with integrated key lock.
- Simplified installation with our new easy-roll 2" (5cm) locking casters.

Secure inner doors

• Four inner doors reduce cold air loss and improve temperature recovery after door openings.

Centralized information center

- Microprocessor control and monitoring system ensure that all controls and displays are easy to reach and read.
- · Power management system with low voltage surge protection and buck/boost.
- Optional choice of CO₂ or LN₂ safety back-up systems for additional sample protection in the event of a power or mechanical failure.



Forma 900 Series

-86°C freezer



Forma 900 Series -86°C freezers

Available in four sizes: 13, 17, 23 and 28 cu. ft. (368, 490, 651, 793L) to accommodate your specific lab space and capacity requirements.

Centralized information system ensures that all controls and displays are easy to reach and read.*

Forma 7000 Series

-40°C freezer



Forma 7000 Series -40°C freezers

Available in three sizes 13, 17 and 23 cu. ft. (368, 490, 651L) to accommodate your specific lab space requirements. Features eye level, easy-to-use microprocessor control panel.

Thermo Scientific Forma 900 and Forma 7000 Series

specifications and ordering information

Thermo Scientific Forma 900 Series Upright Freezers (Temperature Range: -50°C to -86°C)

Model	Сар	acity	Electrical	Amps/Breaker	Max. Shelf Weight	Interior Dimensions	Exterior Dimensions	Shipping Weight	
No.	cu. ft. (liters)	2 in. cryobox	Electrical	(Plug)	lbs. (kg)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)	
903			115V / 60 Hz	16/20 (NEMA 5-20)		51.5 00.0 10.0			
909	13.0 (368)	240	208-230V / 60 Hz	12/16 (NEMA 6-15)	125 (57)	51.5 x 23.0 x 19.3 (130.8 x 58.4 x 49.0)	77.9 x 33.3 x 32.9 (197.9 x 84.6 x 83.6)	711 (323)	
902	(000)		230V / 50 Hz	12/16 (European)		(100.0 x 00.1 x 10.0)	(107.0 x 0 1.0 x 00.0)		
904			115V / 60 Hz	16/20 (NEMA 5-20)		515 000 050			
910	17.3 (490)	320	208-230V / 60 Hz	12/16 (NEMA 6-15)	125 (57)	51.5 x 23.0 x 25.3 (130.8 x 58.4 x 64.3)	77.9 x 33.3 x 38.9 (197.9 x 84.6 x 98.9)	830 (376)	
905	(400)		230V / 50 Hz	12/16 (European)		(100.0 x 00.4 x 04.0)	(107.0 x 04.0 x 00.0)		
956			115V / 60 Hz	16/20 (NEMA 5-20)					
957	23.0 (651)	400	208-230V / 60 Hz	12/16 (NEMA 6-15)	125 (57)	51.5 x 30.6 x 25.3 (130.8 x 77.7 x 64.3)	77.9 x 40.8 x 38.9 (197.9 x 103.6 x 98.9)	879 (399)	
906	(001)		230V / 50 Hz	12/16 (European)		(100.0 × 11.1 × 04.0)	(107.0 × 100.0 × 90.9)		
908	28.0	600	208-230V / 60 Hz	16/20 (NEMA 6-15)	105 (57)	51.5 x 36.6 x 27.0	77.9 x 46.8 x 38.9	1000 (404)	
907	(793)	000	230V / 50 Hz	12/16 (European)	125 (57)	(130.8 x 93.0 x 68.6)	(197.9 x 118.9 x 98.9)	1090 (494)	

Thermo Scientific Forma 900 Series Double-Door Upright Freezers (Temperature Range: -50°C to -86°C)

Model	Сара	acity	Electrical	Amps/Breaker	Max. Shelf Weight	Interior Dimensions	Exterior Dimensions	Shipping Weight	
No.	cu. ft. (liters)	2 in. cryobox	Electrical	(Plug)	lbs. (kg)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)	
992			115V / 60 Hz	16/20 (NEMA 5-20)					
986	13.0 (368)	216	208-230V / 60 Hz	12/16 (NEMA 6-15)	125 (57)	51.5 x 23.0 x 19.3 (130.8 x 58.4 x 49.0)	77.9 x 33.3 x 32.9 (197.9 x 84.6 x 83.6)	711 (323)	
991			230V / 50 Hz	12/16 (European)		(100.0 x 00.1 x 10.0)	(101.0 x 0 1.0 x 00.0)		
993			115V / 60 Hz	16/20 (NEMA 5-20)		5,5 000 050			
988	17.3 (490)	288	208-230V / 60 Hz	12/16 (NEMA 6-15)	125 (57)	51.5 x 23.0 x 25.3 (130.8 x 58.4 x 64.3)	77.9 x 33.3 x 38.9 (197.9 x 84.6 x 98.9)	830 (376)	
994			230V / 50 Hz	12/16 (European)		(100.0 x 00.1 x 0 1.0)	(101.0 x 0 1.0 x 00.0)		
990			115V / 60 Hz	16/20 (NEMA 5-20)		5,5 000 050			
989	23.0 (651)	360	208-230V / 60 Hz	12/16 (NEMA 6-15)	125 (57)	51.5 x 30.6 x 25.3 (130.8 x 77.7 x 64.3)	77.9 x 40.8 x 38.9 (197.9 x 103.6 x 98.9)	940 (426)	
995			230V / 50 Hz	12/16 (European)		(100.0 % 11.1 % 04.0)	(101.0 % 100.0 % 00.0)		

Thermo Scientific Forma 7000 Series Upright Freezers (Temperature Range: -10°C to -40°C)

Model	Сара	acity	Electrical	Amps/Breaker	Max. Shelf Weight	Interior Dimensions	Exterior Dimensions	Shipping Weight	
No.	cu. ft. (liters)	2 in. cryobox	Electrical	(Plug)	lbs. (kg)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)	
7240A			115V / 60 Hz	16/20 (NEMA 5-20)					
7240D	13.0 (368)	240	208-230V / 60 Hz	12/15 (NEMA 6-15)	125 (57)	51.5 x 23.0 x 19.3 (130.8 x 58.4 x 49.0)	77.9 x 33.3 x 32.9 (197.9 x 84.6 x 83.6)	711 (323)	
7240V	(000)		230V / 50 Hz	12/16 (European)		(100.0 x 00.1 x 10.0)	(107.0 % 0 1.0 % 00.0)		
7320A	.=.0		115V / 60 Hz	16/20 (NEMA 5-20)		54.5 00.0 05.0			
7320D	17.3 (490)	320	208-230V / 60 Hz	12/15 (NEMA 6-15)	125 (57)	51.5 x 23.0 x 25.3 (130.8 x 58.4 x 64.3)	77.9 x 33.3 x 38.9 (197.9 x 84.6 x 98.9)	830 (376)	
7320V	(400)		230V / 50 Hz	12/16 (European)		(100.0 x 00.4 x 04.0)	(107.0 × 04.0 × 00.0)		
7400A			115V / 60 Hz	16/20 (NEMA 5-20)					
7400D	23.0 (651)	400	208-230V / 60 Hz	12/15 (NEMA 6-15)	125 (57)	51.5 x 30.6 x 25.3 (130.8 x 77.7 x 64.3)	77.9 x 40.8 x 38.9 (197.9 x 103.6 x 98.9)	879 (399)	
7400V	(001)		230V / 50 Hz	12/16 (European)		(100.0 × 11.1 × 04.0)	(107.0 x 100.0 x 30.3)		

Options (Field-installed must be installed by a qualified professional)

Description		Model No.
LN₂ Backup System	Factory Installed	1950447
Maintains temperature down to -80°C with liquid nitrogen	Field Installed	1950448
CO ₂ Backup System	Factory Installed	1950445
Maintains temperature down to -70°C with CO ₂	Field Installed	1950446
Ink Chart Recorder	Factory Installed	201241
6" (150mm), seven day ink recorder, to -150°C. Includes one red felt tip pen and box of chart paper (qty. 50)	Field Installed	201240
Inkless Chart Recorder	Factory Installed	201249
6" (150mm), seven day inkless recorder, to -150°C. Includes box of chart paper (qty. 50)	Field Installed	201248
Unique Key Lock	Factory Installed	195915
DT100 Canage Optional DT100 concer for connection to building outcome	Factory Installed	290199
PT100 Sensor – Optional PT100 sensor for connection to building automation systems	Field Installed	290211
Stainless steel interior (-86°C models only)	Factory Installed	SSPERFORMANCE

Accessories

Description	Model No.	
Replacement Air Filter – Pack of five filters	195890	
Ink Chart Paper (pack of 50)	17020	
Inkless Chart Paper (pack of 50)	180000	
Replacement Back-Up Battery	400159	
Red Felt Tip Chart Pen	245231	
Blue Felt Tip Chart Pen	245232	
Cryo Gloves Medium	4425	
Cryo Gloves Large	4426	
Shelf Kit for 240 box capacity freezer (one shelf and clips)	224134	
Shelf Kit for 320 box capacity freezer (one shelf and clips)	224135	
Shelf Kit for 400 box capacity freezer (one shelf and clips)	224158	
Shelf Kit for 600 box capacity freezer (one shelf and clips)	224180	
LN ₂ Transfer Hose Flexible 6' metal hose. 0.5" diameter, 45° flare with swivel ends	4000401	
Wall Clamp CO ₂ cylinder holder for securing tank to the wall in accordance with OSHA guidelines	950316	
High-Pressure Liquid CO₂ Hose Kink-resistant, stainless steel lined, double-braided shealth. 316 stainless steel NPTF fitting. Max. working pressure 25,000 psig. 6' long	991505	
Seismic restraint kit for 13 cu. ft. (368L)	TF-ULT13	
Seismic restraint kit for 17.3 cu. ft. (490L)		
Seismic restraint kit for 23 cu. ft. (651L)		
Seismic restraint kit for 28 cu. ft. (600L)	TF-ULT28	

Monitoring and Remote Alarms

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Description	Voltage	Model No.	
Remote Alarm with Audible Signal Extend the freezers on-board alarms	120V / 60 Hz	5612-1A	
systems to remote locations in the facility.	230 V / 50 Hz	5612-3V	
Sensaphone™ Telephone Dialing System Monitors up to four channels;	120V / 60 Hz 400047		
Dials up to four numbers (not CE). Dedicated phone line is required	220V / 50Hz	400182	
Sensaphone Telephone Dialing System Monitors up to eight channels;	120V / 60 Hz 40013 4		
Dials up to eight numbers (not CE). Dedicated phone line is required	220V / 50Hz	400183	
Temperature / Power Monitor External Digital and audible / visual	120V / 60 Hz	400048	
alarms monitor temperature and power supply of the freezer. Includes temperature probe	220V / 50Hz	400049	



Sensaphone Telephone Dialing System



Temperature / Power Monitor

Water-Cooled Condenser Option

Model No.	For Use With			
195964	13 cu. ft./368L			
195965	17.3, 23, 28 cu. ft./ 490, 651, 793L			

The water-cooled condenser option is available on our -86°C freezers.

Your work environment stays cooler because 50% less heat is emitted to your surroundings (i.e. less BTU rejection). A water regulating valve automatically controls the water flow needed to maintain the compressor discharge pressure. Cooler compressor temperatures enhance compressor stability and reliability.

Like our standard freezers, those with the water-cooled condenser options are also UL listed to Canadian and United States requirements and bear the CE mark.

The following specifications apply to tower and city water sources:*

Water Pressure and Temperature

Maximum Pressure: 150 psig Maximum Temperature: 29.4°C

Connections

Inlet: 0.5" compression
Outlet: 0.5" compression

Water Flow Rate Required (per minute)

Tower Water: 3.0 gal. (11.4L) City Water: 1.0 gal. (3.8L)

Drain Required?

Tower Water: No (return line)

City Water: Yes

Installation requires a qualified technician and should include proper adjustment of the regulating valve which controls the discharge pressure.

*Actual requirements may vary due to specific water pressure conditions.

Alternate Cord and Plug Options

Model No.	Plug Description
430266	115V/20A Twist Lock Plug (NEMA L5-20P)
430267	230V/15A Twist Lock Plug (NEMA L6-15P)

Racks (single door freezers; bottom half of double door freezers)

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920 Side 3" Box Racks 920 Slide 195 Slide 920 Slide 920 Slide	djustable side access rack 20018 djustable side access rack 20022 de access rack 20095 iding drawer rack 20097 iding drawer rack 250727 iding drawer rack	(29.5 x 13.7 x 41.9) 11.6 x 5.4 x 22 (29.5 x 13.7 x 55.9) 11.6 x 5.4 x 24.6 (29.5 x 13.7 x 62.5) 11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4 16/240 9 4	4 16/320 22 4 16/352	5 20/400 22 5 20/440	
920 Adju 920 Side 3" Box Racks 920 Slide 195 Slide 195 Slide	20018 djustable side access rack 20022 de access rack 20095 iding drawer rack 20097 iding drawer rack 250727 iding drawer rack	11.6 × 5.4 × 22 (29.5 × 13.7 × 55.9) 11.6 × 5.4 × 24.6 (29.5 × 13.7 × 62.5) 11.9 × 5.5 × 16.6 (30.2 × 14 × 44.2) 11.9 × 5.5 × 22 (30 × 14 × 55.9) 11.9 × 5.5 × 26.3	Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	9	4 16/320 22 4 16/352	5 20/400 22 5 20/440	
Adju 920 Sidu 3" Box Racks 920 Slidu 920 Slidu 195 Slidu 920	djustable side access rack 20022 de access rack 20095 iding drawer rack 20097 iding drawer rack 250727 iding drawer rack	(29.5 x 13.7 x 55.9) 11.6 x 5.4 x 24.6 (29.5 x 13.7 x 62.5) 11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Boxes Per Rack Racks/Boxes Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	9 4	4 16/320 22 4 16/352	5 20/400 22 5 20/440	
Adju 920 Sidu 3" Box Racks 920 Slidu 195 Slidu 920 Slidu 920 Slidu 920 Slidu	djustable side access rack 20022 de access rack 20095 iding drawer rack 20097 iding drawer rack 250727 iding drawer rack	(29.5 x 13.7 x 55.9) 11.6 x 5.4 x 24.6 (29.5 x 13.7 x 62.5) 11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	4 16/320 22 4 16/352	5 20/400 22 5 20/440	
920 Side 3" Box Racks 920 Slid 195 Slid 920	20022 de access rack 20095 iding drawer rack 20097 iding drawer rack 250727 iding drawer rack	11.6 x 5.4 x 24.6 (29.5 x 13.7 x 62.5) 11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	16/320 22 4 16/352	20/400 22 5 20/440 12 5	
920 Slid 920 Slid 195 Slid 920	de access rack 20095 ding drawer rack 20097 ding drawer rack 250727 ding drawer rack	(29.5 x 13.7 x 62.5) 11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Boxes Per Rack Racks/Boxes Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Poxes Per Freezer	4	22 4 16/352 12 4	22 5 20/440 12 5	
920 Slid 920 Slid 195 Slid 920	de access rack 20095 ding drawer rack 20097 ding drawer rack 250727 ding drawer rack	(29.5 x 13.7 x 62.5) 11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	4 16/352 12 4	5 20/440 12 5	
3" Box Racks 920 Slid 920 Slid 195 Slid	20095 Iding drawer rack 20097 Iding drawer rack 250727 Iding drawer rack	11.9 x 5.5 x 16.6 (30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	16/352 12 4	20/440 12 5	
920 Slid 920 Slid 195 Slid	20097 Iding drawer rack 150727 Iding drawer rack	(30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	12	12 5	
920 Slid 920 Slid 195 Slid	20097 Iding drawer rack 150727 Iding drawer rack	(30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	4	5	
920 Slid 195 Slid 920	20097 Iding drawer rack 150727 Iding drawer rack	(30.2 x 14 x 44.2) 11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	4	4	5	
920 Slid 195 Slid 920	20097 iding drawer rack 150727 iding drawer rack	11.9 x 5.5 x 22 (30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf		4	5	-
195 Slid	ding drawer rack	(30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Boxes Per Rack Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf	10/144	4	5	-
195 Slid	ding drawer rack	(30 x 14 x 55.9) 11.9 x 5.5 x 26.3	Racks Per Shelf Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf		4	5	-
195 Slid	950727 Iding drawer rack	11.9 x 5.5 x 26.3	Racks/Boxes Per Freezer Boxes Per Rack Racks Per Shelf			-	-
Slid 920	iding drawer rack		Boxes Per Rack Racks Per Shelf		10/192	20/240	
Slid 920	iding drawer rack		Racks Per Shelf				15
920		(30 x 14 x 66.5)					6
			Racks/Boxes Per Freezer	-			24/360
			Boxes Per Rack	9			24/300
Adju	20009	11.6 x 5.4 x 16.5	Racks Per Shelf	4	-		
	djustable side access rack	(29.5 x 13.7 x 41.9)	Racks/Boxes Per Freezer	16/144	_		
			Boxes Per Rack	10/144	12	12	
920	20017	11.6 x 5.4 x 22	Racks Per Shelf	-	4	5	-
Adj	djustable side access rack	(29.5 x 13.7 x 55.9)	Racks/Boxes Per Freezer		16/192	20/240	-
Microplate Raci	oks		Tidono/Boxed For Freezer		10/102	20/210	
econolici			Plates Per Rack	20			
250000000	50640	11.9 x 5.5 x 16.6	Racks Per Shelf	4			
Slid	iding drawer rack	(30.2 x 14 x 44.2)	Racks/Plates Per Freezer	16/320			
-			Plates Per Rack	10/020	30	30	
-34	50641	11.9 x 5.5 x 22	Racks Per Shelf		4	5	-
Slid	iding drawer rack	(30.2 x 14 x 55.9)	Racks/Plates Per Freezer		16/480	20/600	-
			Plates Per Rack		15, 150	_3,555	35
200 C	50731	11.9 x 5.5 x 26.3	Racks Per Shelf				6
Slid	iding drawer rack	(30.2 x 14 x 66.8)	Racks/Plates Per Freezer				24/840
Districted			Plates Per Rack	56			0 .0
**********	50651	11.9 x 5.3 x 14.7	Racks Per Shelf	4			
Side	de access rack, standard plates	(30.2 x 13.5 x 37.3)	Racks/Plates Per Freezer	16/896			
and the second			Plates Per Rack		84	84	
2.00 (C C C C C C C C C C C C C C C C C C	50652	11.9 x 5.3 x 22	Racks Per Shelf		4	5	
Side	de access rack, standard plates	(30.2 x 13.5 x 55.9)	Racks/Plates Per Freezer		16/1344	20/1680	
www.com	2000	10 55 00	Plates Per Rack		36	36	
BIAN BERN	20036	12 x 5.5 x 22	Racks Per Shelf		4	5	
Side	de access rack, deep-well plates	(30.5 x 14 x 55.9)	Racks/Plates Per Freezer		16/0	20/0	
Specialty Racks	(S						
100		11 5 7 11 7 11					
	30012	11.5 x 11 x 11	Racks Per Shelf/Freezer	1/4	2/8	4/16	
Mul	ulti-drawer rack	(29.2 x 28 x 28)					
920	30030	5.3 x 7 x 18					
100 CO 10	compartment container	(13.5 x 17.8 x 45.7)	Racks Per Shelf/Freezer	6/24			
8 00	Compartment Container	(10.0 X 17.0 X 40.7)					
830	30032	5.3 x 7 x 22.6					
300		(13.5 x 18 x 57.4)	Plates Per Rack		6/8	24/32	

Racking Shelf Kits Includes Sliding Drawer Racks and 2" Boxes with 100 count cell dividers

Model Number	Freezer Volume cu. ft. (liters)	Racks Included	Boxes Included
RSK13SD4	13.0 (368)	4	60
RSK17SD4	17.3 (490)	4	80
RSK23SD4	23.0 (651)	5	100
RSK28CFSD4	28.0 (793)	6	150

Racks (upper half of double door freezers)

2" Box Racks	Model No. Description	Dimensions H x W x D in. (cm)	Storage	13 cu. ft. (368L)	17.3 cu. ft. (490L)	23 cu. ft. (651L)	28 cu. ft. (793L)
2942 7 8 7 5	398332	9.4 x 5.5. x 16.6	Boxes Per Rack	12			
wird .	Sliding drawer rack	(23.9 x 14 x 42.2)	Racks Per Shelf	4			
Verice .	Silding drawer rack	(20.5 × 14 × 42.2)	Racks/Boxes Per Freezer	16/192			
435700000	398331	9.4 x 5.5. x 22	Boxes Per Rack		16	16	
-34	Sliding drawer rack	(23.9 x 14 x 55.9)	Racks Per Shelf		4	5	
-10	Chang drawer rack	(20.0 x 14 x 00.0)	Racks/Boxes Per Freezer		16/256	20/320	
STATE OF	1950728	9.4 x 5.5. x 26.3	Boxes Per Rack				20
-34	Sliding drawer rack	(23.9 x 14 x 66.8)	Racks Per Shelf				6
-nd	Chang drawer rack	(2010 / 11 / 0010)	Racks/Boxes Per Freezer				24/480
The same of the same of	398324	9.4 x 5.5. x 16.5	Boxes Per Rack	12			
AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUM	Adjustable side access rack	(23.9 x 14 x 41.9)	Racks Per Shelf	4			
1		(======================================	Racks/Boxes Per Freezer	16/192			
1.4000	398326	9.4 x 5.5. x 22	Boxes Per Rack		16	16	
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Adjustable side access rack	(23.9 x 14 x 55.9)	Racks Per Shelf		4	5	
No. of the last of	.,,	(1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Racks/Boxes Per Freezer		16/256	20/320	
3" Box Racks							
- Control of	920099	9.5 x 5.5 x 16.5	Boxes Per Rack	9			
23300	Sliding drawer rack	9.5 x 5.5 x 16.5 (24 x 14 x 41.9)	Racks Per Shelf	4			
	Shally drawer rack	(2+ 1 + 1 + 1.3)	Racks/Boxes Per Freezer	16/144			
THE PERSON NAMED IN	398330	9.5 x 5.5 x 22	Boxes Per Rack		12	12	
_51	Sliding drawer rack	(24 x 14 x 55.9)	Racks Per Shelf		4	5	
- Blanch	Silding drawer rack	(24 × 14 × 55.5)	Racks/Boxes Per Freezer		16/192	20/240	
agentage a	1950729	9.5 x 5.5 x 26.3	Boxes Per Rack				15
-10	Sliding drawer rack	(24 x 14 x 66.8)	Racks Per Shelf				6
-21	Silding drawer rack	(24 × 14 × 00.0)	Racks/Boxes Per Freezer				24/360
N a.B.S	398325	9.4 x 5.4 x 16.1	Boxes Per Rack	9			
日本を出	Adjustable side access rack	(23.9 x 13.7 x 40.9)	Racks Per Shelf	4			
1	Adjustable slac decess rack	(20.0 × 10.1 × 40.0)	Racks/Boxes Per Freezer	16/144			
N . D.R.E.	398327	9.4 x 5.4 x 22.1	Boxes Per Rack		12	12	
10 世東岩區	Adjustable side access rack	(23.9 x 13.7 x 56.1)	Racks Per Shelf		4	5	
	,	(20.0 x 10.7 x 00.1)	Racks/Boxes Per Freezer		16/192	20/240	
Microplate Ra	cks						
- 53.511.50%	1950637	9.5 x 5.5 x 16.6	Plates Per Rack	16			
-133 -124	Sliding drawer rack	(24 x 14 x 42.2)	Racks Per Shelf	4			
end .	Chang drawer rack	(2 : x : : x : 2:2)	Racks/Plates Per Freezer	16/256			
ACCUPATION OF THE PARTY OF THE	1950638	9.5 x 5.5 x 22	Plates Per Rack		24	24	
432	Sliding drawer rack	(24 x 14 x 55.9)	Racks Per Shelf		4	5	
med and	S.a.rig drawor rack	(217,117,00.0)	Racks/Plates Per Freezer		16/384	20/480	
SECTION AND ADDRESS OF	1950730	9.5 x 5.5 x 26.3	Plates Per Rack				28
-34 -454	Sliding drawer rack	(24 x 14 x 66.8)	Racks Per Shelf				6
- Col	S. aling drawor rack	(2 1 % 17 % 00.0)	Racks/Plates Per Freezer				24/672
A State of Concession of Conce	398334	9.4 x 5.3 x 14.7	Plates Per Rack	44			
4 M P P P P P P P P P P P P P P P P P P	Side access rack	(23.9 x 13.5 x 37.3)	Racks Per Shelf	4			
155		(_0.0 /. 10.0 /. 01.0)	Racks/Plates Per Freezer	16/704			
THE REAL PROPERTY.	398333	9.4 x 5.3 x 22	Plates Per Rack		66	66	
	Side access rack	(23.9 x 13.5 x 55.9)	Racks Per Shelf		4	5	
		(20.0 % 10.0 % 00.0)	Racks/Plates Per Freezer		16/1056	20/1320	
111111	398335	9.4 x 5.3 x 22	Plates Per Rack		30	30	
	Side access rack for deepwell	(23.9 x 13.5 x 55.9)	Racks Per Shelf		4	5	
and the same of th	microplates	(1212111310710010)	Racks/Plates Per Freezer		16/480	20/600	
THE STATE OF THE S	398321	9.4 x 5.5 x 18.4	Plates Per Rack		84	84	
17 14	Side access rack with locking rod	(23.9 x 14 x 46.7)	Racks Per Shelf		4	5	
3800		,==::::::::::::::::::::::::::::::::::::	Racks/Plates Per Freezer		16/0	20/0	
De nulla	398323	9.4 x 5.5 x 22	Plates Per Rack		36	36	
***	Side access rack with locking rod	(23.9 x 14 x 55.9)	Racks Per Shelf		4	5	
1 260		(Racks/Plates Per Freezer		16/0	20/0	

Racking Shelf Kits Includes Sliding Drawer Racks and 2" Boxes with 100 count cell dividers

Model Number	Freezer Volume cu. ft. (liters)	Racks Included	Boxes Included
RSK13SD5	13.0 (368)	4	48
RSK17SD5	17.3 (490)	4	64
RSK23SD5	23.0 (651)	5	80

versatile and reliable

Thermo Scientific Forma 8600 Series

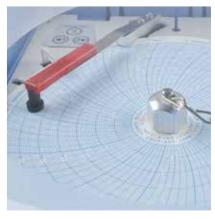
Our Forma 8600 Series chest freezers feature all the sample protection features of our 900 and 7000 Series upright freezers. Choose a -86°C or -40°C cabinet in four convenient sizes as well as a full range of racking solutions.

Rugged construction for everyday use

- Heavy gauge, cold-rolled steel cabinets with a powder coat paint finish for a uniform exterior that resists chipping and rust.
- 5" (12.7cm) foamed-in-place, polyurethane **insulation** reduces power consumption, maintains temperature setpoint and combined with triple-point door gasket, provides longer holding time in the event of a power failure.
- State-of-the-art, refrigeration system improves temperature control and increases reserve capacity, resulting in a more stable temperature sample.
- 1" (2.5cm) access ports allow for the use of independent probes or instrumentation.
- Stainless steel interior









Microprocessor control

Easy-to-read centralized information center features microprocessor control and monitoring system with a 12-character, alphanumeric LED display showing setpoints and other messages. Knee level on the 3 cu. ft. (85L) models.

Optional chart recorder

Optional built-in chart recorder can be installed at waist level; knee level on our 3 cu. ft. (85L) models.

Easy-to-remove washable filter

Provides protection from dust on the condenser, increasing refrigeration performance and decrease risk to samples.



milliamp analog outputs

For independent monitoring.

Polystyrene interior sub-lids

Reduce cold air loss and improve temperature recovery after door openings.

Single-hand operation

Easy-to-use, ergonomic door handle.

Simplified installation

With our new easy-roll 2" (5.1cm) locking casters.

Thermo Scientific Forma 8600 Series

specifications and ordering information

Thermo Scientific Forma 8600 Series Chest Freezers

Model No.	Capacity		Electrical	Amps / Breaker	Interior Dimensions	Exterior Dimensions	Shipping Weight
	cu. ft. (liters)	2" cryobox		(Plug)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)
803CA	3.0	60	120V / 60 Hz	10.5/20 (NEMA 5-20)	16.5 x 18.5 x 18.5	43.8 x 28.5 x 29.9 (111.3 x 72.4 x 75.9)	432 (196)
803CV	(84.9)	63	230V / 50 Hz	5.4/15 (European)	(41.9 x 47.0 x 47.0)		
813CA		(359.6) 252	115V / 60 Hz	16/20 (NEMA 5-20)		40.5 x 72.0 x 33.4 (102.9 x 182.9 x 84.8)	716 (325)
813CD	12.7 (359.6)		208-230V / 60 Hz	12/15 (NEMA 6-15)	28.0 x 42.5 x 18.5 (71.1 x 108.0 x 47.0)		
813CV			230V / 50 Hz	12/15 (European)	(11.1 × 100.0 × 41.0)	(102.0 % 102.0 % 04.0)	
817CA		(481.4) 348	115V / 60 Hz	16/20 (NEMA 5-20)		40.5 x 87.6 x 33.8 (102.9 x 222.5 x 85.9)	821 (372)
817CD	17.0 (481.4)		208-230V / 60 Hz	12/15 (NEMA 6-15)	28.0 x 58.8 x 18.5 (71.1 x 149.4 x 47.0)		
817CV			230V / 50 Hz	12/15 (European)	(11.1 × 140.4 × 41.0)	(102.0 x 222.0 x 00.0)	
820CA			115V / 60 Hz	16/20 (NEMA 5-20)		40.5 x 96.0 x 33.4 (102.9 x 243.8 x 84.8)	
820CD	20.0 (566.3)	396	208-230V / 60 Hz	12/15 (NEMA 6-15)	28.0 x 66.5 x 18.5 (71.1 x 168.9 x 47.0)		833 (378)
820CV			230V / 50 Hz	12/15 (European)	(11.1 × 100.3 × 41.0)	(102.0 x 240.0 x 04.0)	

Thermo Scientific Forma 8600 Series Chest Freezers (Temperature Range: -10°C to -40°C)

Model No.	Capacity		Electrical	Amps / Breaker	Interior Dimensions	Exterior Dimensions	Shipping Weight
	cu. ft. (liters)	2" cryobox		(Plug)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)
703CA	3.0	63	120V / 60 Hz	10.5/20 (NEMA 5-20)	16.5 x 18.5 x 18.5	43.8 x 28.5 x 29.9 (111.3 x 72.4 x 75.9)	395 (179)
703CV	(84.9)	03	230V / 50 Hz	5.4/15 (European)	(41.9 x 47.0 x 47.0)		
713CA			115V / 60 Hz	16/20 (NEMA 5-20)		40.5 x 72.0 x 33.4 (102.9 x 182.9 x 84.8)	659 (299)
713CD	12.7 (359.6)	252	208-230V / 60 Hz	12/15 (NEMA 6-15)	28.0 x 42.5 x 18.5 (71.1 x 108.0 x 47.0)		
713CV			230V / 50 Hz	12/15 (European)	(11.1 × 100.0 × 41.0)	(102.0 x 102.0 x 04.0)	
717CA			115V / 60 Hz	16/20 (NEMA 5-20)		40.5 x 87.6 x 33.8 (102.9 x 222.5 x 85.9)	764 (347)
717CD	17.0 (481.4)	348	208-230V / 60 Hz	12/15 (NEMA 6-15)	28.0 x 58.8 x 18.5 (71.1 x 149.4 x 47.0)		
717CV			230V / 50 Hz	12/15 (European)	(11.1 × 110.1 × 11.0)	(102.0 X 222.0 X 00.0)	
720CA		11	115V / 60 Hz	16/20 (NEMA 5-20)		40.5 x 96.0 x 33.4 (102.9 x 243.8 x84.8)	
720CD	20.0 (566.3)	396	208-230V / 60 Hz	12/15 (NEMA 6-15)	28.0 x 66.5 x 18.5 (71.1 x 168.9 x 47.0)		776 (352)
720CV			230V / 50 Hz	12/15 (European)	(1 1.1 × 100.0 × 41.0)	(102.0 x 2 10.0 x04.0)	

Options (Field-installed must be installed by a qualified professional)

Description	For use with	703C	713C	717C	720C	
LN ₂ Backup System Maintains temperature	Factory Installed	1950447				
down to -80°C with liquid nitrogen.	Field Installed	1950448				
CO ₂ Backup System Maintains temperature	Factory Installed	1950445				
down to -70°C with CO ₂	Field Installed	1950446				
Chart Recorder 6" (150mm), seven day ink	Factory Installed	201241				
recorder, to -150°C includes 50 chart papers	Field Installed	201240				
	RS-232, (0-1V)	398213				
Data Outputs (Factory Installed Only)	RS-485, (0-1V)	398214				
	RS-485, (0-5V)	398215				
Water-Cooled Condenser Option (See page 19 for details)	Factory Installed	N/A 195967				

Accessories

Description	For use with ▶	703C	713C	717C	720C			
Replacement Air Filter (pack of	195947 195948							
Ink Chart Paper (pack of 50)		17020						
Inkless Chart Paper (pack of 50))		180000					
Replacement Back-Up Battery	•		400	159				
Red Felt Tip Chart Pen		245231						
Blue Felt Tip Chart Pen	Blue Felt Tip Chart Pen			245232				
LN₂ Transfer Hose Flexible 6' m 0.5" diameter, 45° flare with swive	4000401							
Wall Clamp CO ₂ cylinder holder to the wall in accordance with OS	950316							
High-Pressure Liquid CO ₂ Hos stainless steel lined, double-braid 316 stainless steel NPTF fitting. No pressure 25,000 psig. 6' long	991505							
Cryo Gloves Medium	4425							
Cryo Gloves Large	4426							



For Cryoboxes and Dividers please refer to page 15.

Monitoring and Remote Alarms

Description	Voltage	Model No.
Remote Alarm with Audible Signal Extend the freezer's on-board alarms systems	120V / 60 Hz	5612-1A
to remote locations in the facility.	230 V / 50Hz	5612-3V
Sensaphone Telephone Dialing System Monitors up to four channels;	120V / 60 Hz	400047
Dials up to four numbers (not CE). Dedicated phone line is required	220V / 50Hz	400182
Sensaphone Telephone Dialing System Monitors up to eight channels;	120V / 60 Hz	400134
Dials up to eight numbers (not CE). Dedicated phone line is required	220V / 50Hz	400183
Temperature / Power Monitor External digital and audible/visual alarms monitor temperature	120V / 60 Hz	400048
and power supply of the freezer. Includes temperature probe	220V / 50Hz	400049

Visit thermoscientific.com/smart-vue for wireless monitoring options

Thermo Scientific Forma 8600 Series Chest Freezer Racks

Model No. Description	Dimensions W x H x D in. (cm)	Freezer Vol. cu. ft. (liters)	Boxes Per Rack	Racks / Freezer	Boxes / Freezer
398184 2" Box Rack with locking rod	5.5 x 15.2 x 5.5 (14 x 38.6 x 14)	3 (85)	7.0	9.0	63
398186		12.7 (360)	12.0	21.0	252
2" Box Rack with	5.5 x 26.5 x 5.6 (14 x 67.2 x 14.2)	17.0 (481)	12.0	29.0	348
locking rod	(11 X 01.2 X 11.2)	20.0 (566)	12.0	33.0	396
398185 3" Box Rack	5.5 x 16 x 5.5 (14 x 40.6 x 14)	3 (85)	5.0	9.0	45
	5.5 x 26.5 x 5.5 (14 x 67.3 x 14)	12.7 (360)	8.0	21.0	168
398187 3" Box Back		17.0 (481)	8.0	29.0	232
O BOX HOOK		20.0 (566)	8.0	33.0	264
398188		12.7 (360)	27.0	33.0	891
27 Position	5.3 x 25.8 x 3.5 (13.5 x 65.5 x 8.9)	17.0 (481)	27.0	48.0	1,296
Microplate Rack		20.0 (566)	27.0	51.0	1,377
114048*	11.8 x 12.3 x 16.5	12.7 (360)	NA	5.0	NA
Wire Basket with Rollers	(30 x 31.2 x 42)	20.0 (566)	NA	9.0	NA
189001 Wire Basket Rail Set	NA	12.7 (360)	NA	NA	NA
189000 Wire Basket Rail Set	NA	20.0 (566)	NA	NA	NA











398188

398187

^{*} Basket rail set is required.

Thermo Scientific™ Smart-Vue™

with so much at stake, obsessive is smart.

The Smart-Vue wireless monitoring solution safeguards the integrity of precious samples by continuously monitoring critical parameters of laboratory equipment and securely logging data to give you peace-of-mind. This wireless solution features audit trail traceability to assist with conformance to 21 CFR part 11, and other regulatory requirements. For more information, visit **www.thermoscientific.com/smart-vue**

Smart

Continuous, real-time monitoring of critical parameters – alerting you remotely when sample integrity is threatened

Scalable

Flexibility to grow with your expanding laboratory needs

Simple

Easy to install, use and maintain

For more information, contact your sales representative. Smart-Vue is not available in all Radio Frequency (RF) regions.

Note: Smart-Vue wireless monitoring kits are designed for first time users monitoring critical temperature parameters in ultra-low temperature freezers. Smart-Vue modules and sensors are available for temperature, RH, CO₂ concentration, differential pressure, 4-20mA output, ambient conditions and alarm/relay dry contacts. Solutions vary by RF regions worldwide and are compatible with multiple types of laboratory equipment. Please ask your sales representative to evaluate a Smart-Vue wireless monitoring solution that best meets your specific needs.



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