Thermo Scientific TSX Series
Ultra-Low Temperature Freezers

A better environment
inside and out

Thermo
SCIENTIFIC

Sample protection that adapts to you
and your environment

TSX 400 and TSX 600

The sustainable choice for sample protection

Thermo Scientific™ TSX Series ultra-low temperature freezers are designed with features that support sample protection and sustainability objectives. Our V-drive technology is designed to provide temperature uniformity that continually adapts to the lab's environment, offering significant energy savings without compromising sample protection.

Energy savings

While conventional refrigerant ultra-low freezers can run up to 18 kWh/day in energy usage, the TSX600 performs at just 8.7 kWh/day in standard operating model while the TSX400 performs at 7.9 kWh/day

More samples, less freezer footprint

Make the most of your lab space with a choice of two sizes. The TSX600 can hold up to 600 2-inch boxes in a 1.06m^2 footprint while the new TSX400 can hold up to 400 2-inch boxes in a footprint of 0.79m^2.

Whisper quiet operation

Compared to standard freezers*, the TSX offers a whisper quiet operation, so you can bring the freezer out of the hallway and back into your lab without disrupting your audio environment.

Designed to meet tight temperature uniformity requirements

Should your application require ultra-tight temperature control, select high-performance mode for the most stringent qualification requirements.

* Based on published sound specifications, data on file. March, 2015.

Energy savings

Quiet

Sustainability

Sample protection

More sample storage

V-drive technology

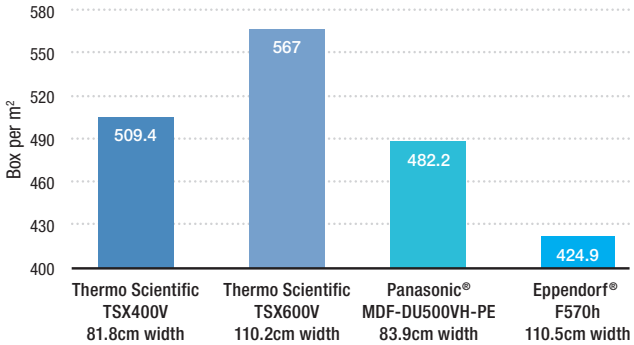
More samples
less freezer footprint

Big storage capacity, small freezer footprint

TSX400
- 400 box capacity (2" standard cryo boxes)
- Store up to 40,000 2mL tubes
- Store up to 67,600 1mL tubes

TSX600
- 600 box capacity (2" standard cryo boxes)
- Store up to 60,000 2mL tubes
- Store up to 101,400 1mL tubes

Box to footprint ratio



Panasonic MDF-DU500VH-PE and Eppendorf F570h specifications based on published data as of February 2016.

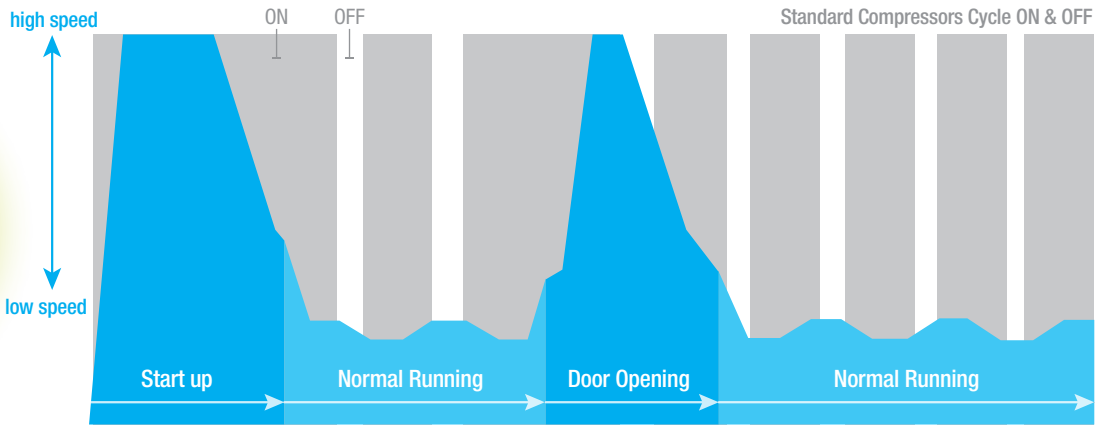
The drive for sample integrity and energy savings

The performance and energy savings of the new TSX are driven by our unique **V-drive technology**.

- While conventional ultra-low temperature freezers use single speed compressors that continually cycle on and off, the TSX V-drive runs at variable speeds to adjust cooling performance to the conditions inside and outside of the freezer.
- When combined with the automated tuning control, this variable speed drive optimizes the compressors running speed to the current conditions.
- When conditions are stable, such as overnight or on weekends, the drive runs at a low speed, reducing energy consumption while maintaining a stable temperature for your samples.
- When there are frequent door openings, or samples are added to the freezer, the control system detects the activity and increases the drive speed to bring temperatures back to the set point quickly. This innovative technology is one of the reasons the TSX delivers outstanding door opening recovery (DOR) speed, and more peace of mind for busy laboratories.

V-drive

Low Energy →
Low Operating Cost
Adaptive Control →
Sample Security



Variable Speed Compressors (V-Drive) change speed

As shown in the above graphic, the TSX V-drive, unlike standard compressors that cycle on and off, adjusts to factors such as start-up and door openings, when a higher compressor speed is needed. During normal running time when the door is closed, the V-drive runs at a lower speed to maintain your setpoint.

Energy Usage and Savings: TSX600

	Conventional Ultra-Low Freezer*		TSX600 Standard Mode					
	Energy Usage (kWh/day)	Annual Energy Usage (kWh)	Energy Usage (kWh/day)	Annual Energy Usage (kWh)	Cost/kWh**	Annual Cost Savings/ Freezer	10 Year Savings	Metric Tons of CO_2 Reduced Per Year***
U.K.	18	6570	8.7	3175.5	£0.13	£441.29	£4,412.85	2.01
Germany					€0.31	€1,052.30	€10,522.95	
France					€0.17	€577.07	€5,770.65	
Italy					€0.24	€814.68	€8,146.80	

* Thermo Scientific TSU600V
** Calculated using data from the European Commission's published electricity and natural gas price statistics. http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity_and_natural_gas_price_statistics. Accessed March, 2015.
*** metric tonnes/kWh - 0.0005925

Energy Usage and Savings: TSX400

	Conventional Ultra-Low Freezer*		TSX400 Standard Mode					
	Energy Usage (kWh/day)	Annual Energy Usage (kWh)	Energy Usage (kWh/day)	Annual Energy Usage (kWh)	Cost/kWh**	Annual Cost Savings/ Freezer	10 Year Savings	Metric Tons of CO_2 Reduced Per Year***
U.K.	17	6205	7.9	2883.5	£0.13	£431.80	£4,317.95	1.97
Germany					€0.31	€1,029.67	€10,296.65	
France					€0.17	€564.66	€5,645.55	
Italy					€0.24	€797.16	€7,971.60	

* Thermo Scientific TSU400V
** Calculated using data from the European Commission's published electricity and natural gas price statistics. http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity_and_natural_gas_price_statistics. Accessed March, 2015.
*** metric tonnes/kWh - 0.0005925

Adaptive control

Adapting to your freezer usage patterns, the TSX V-drive increases compressor speed to quickly restore temperature after door openings.

Leading performance

Thermo Scientific TSX400

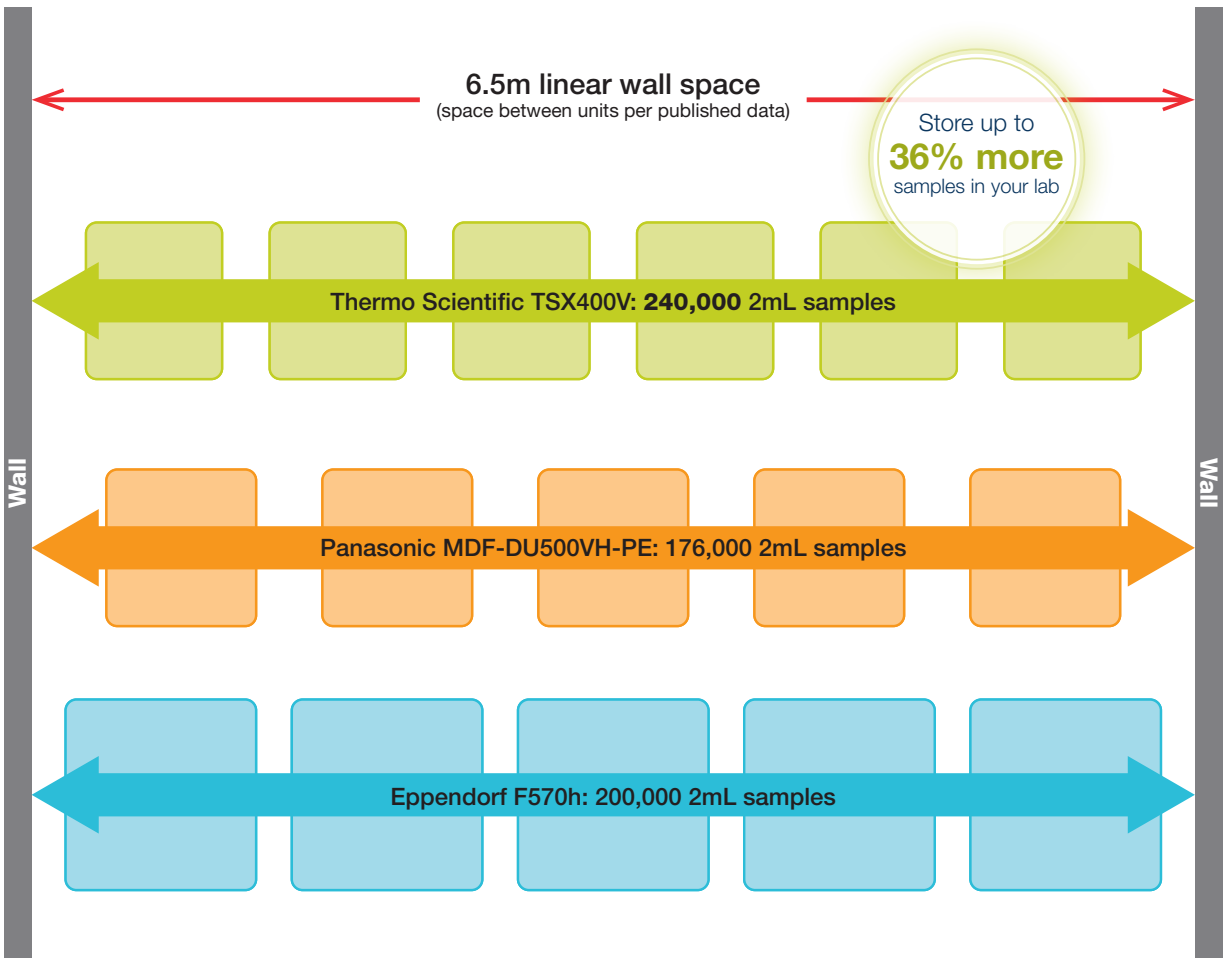
Freezer	Energy Consumption (kWh/day)*		Peak Variation From –80°C Setpoint**		Peak Variation From –70°C Setpoint**		Door Opening Recovery Minutes	Warm-Up Time (–80°C to –50°C) Minutes***
	Standard Mode	High-Performance Mode	Standard Mode	High-Performance Mode	Standard Mode	High-Performance Mode		
TSX400	7.9	9.4	+6.0/+1.1	+4.0/–1.4	+3.6/–2.8	+3.6/–2.8	17	267

* Energy calculation: Typical freezer data based on internal testing with freezer setpoint at –80˚C and ambient temperature at 20˚C

** Peak variation from set point: Typical freezer data based on internal testing with freezer set point at –80˚C/–70˚C and ambient temperature at 20˚C

*** Warm up time: Typical freezer data based on internal testing with freezer set point at –80˚C and ambient temperature at 20˚C

Optimize Your Lab Space



*Space between units per manufacturer published data as of April 2016. Sample storage capacity is based on 100 sample tubes per 2" standard cryo box.

Leading performance

Thermo Scientific TSX600

Freezer	Energy Consumption (kWh/day)*		Peak Variation From –80°C Setpoint**		Peak Variation From –70°C Setpoint**		Door Opening Recovery Minutes	Warm-Up Time (–80°C to –50°C) Minutes***
	Standard Mode	High-Performance Mode	Standard Mode	High-Performance Mode	Standard Mode	High-Performance Mode		
TSX600	8.7	10.2	+6.9/+1.8	+4.4/–0.4	+4.3/–3.7	+4.3/–3.7	24	303

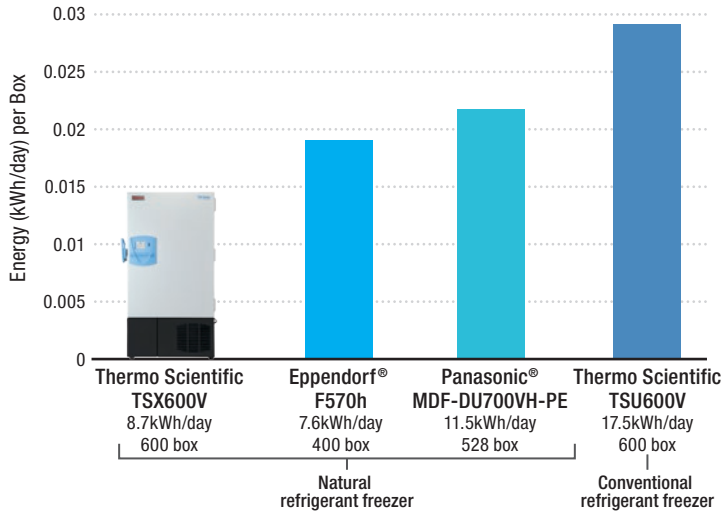
* Energy calculation: Typical freezer data based on internal testing with freezer setpoint at –80˚C and ambient temperature at 20˚C

** Peak variation from set point: Typical freezer data based on internal testing with freezer set point at –80˚C/–70˚C and ambient temperature at 20˚C

*** Warm up time: Typical freezer data based on internal testing with freezer set point at –80˚C and ambient temperature at 20˚C

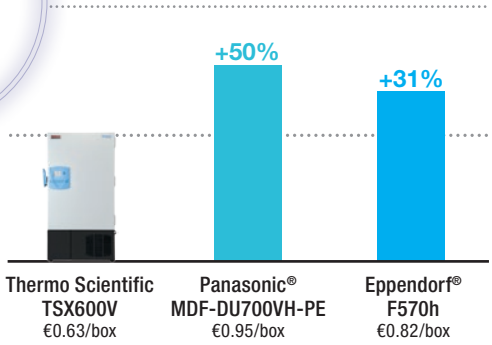
Energy Savings Per Box†

Save up to **50%** over conventional freezers

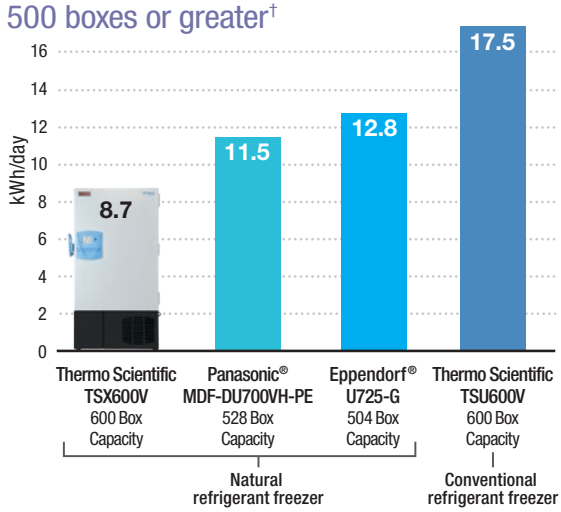


Save on storage costs

Cost to Store 1 box for 1 year†



Freezer kWh/day comparison of freezers 500 boxes or greater†



† Calculated based on manufacturer published energy consumption data as of 2/26/2015 (TSX600V) and 2/24/2016 (TSX400V) and energy cost assumption of 0.12 euros / kWh. Energy consumption is based on manufacturer published energy consumption data as of 2/26/2015. Data on file. Thermo Scientific TSU600V data with high-performance mode.

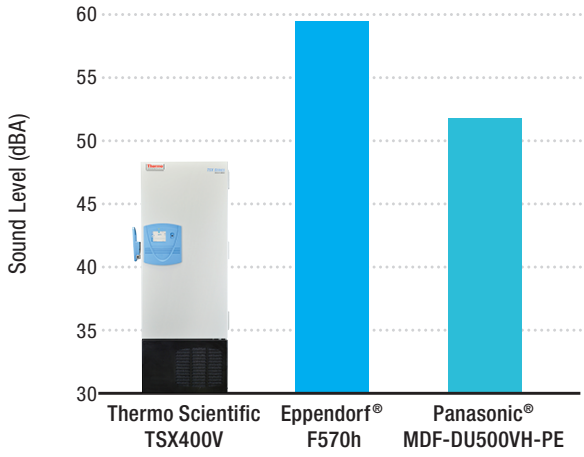
A sound environment
for critical samples

You know that the constant noise created by compressors can compromise communications and create a less than ideal working environment. The new TSX is **up to 20X quieter than our previous generation of freezers**.* Our new V-drive technology, combined with superior insulation, limits the sound output of the TSX600 to **less than 46 dB**, and the new TSX400 to **47.5 dB** approximately the sound generated by a conventional refrigerator.**

Decibel Scale of Common Sounds
Examples of noise levels in decibels

Noise Source	Decibel Level
Freeway traffic 15M, vacuum cleaner	70
Conversation in restaurant, office, background music	60
Quiet suburb, conversation at home	50
TSX 400	47.5
TSX 600	45.5
Library	40
Quiet rural area	30
Rustling leaves	20
Breathing	10

Whisper Quiet Operation***



* Thermo Scientific TSU600V.

** Internal performance data comparing TSX sound to conventional refrigerators. Data on file. March, 2015.

*** Based on manufacturers' published specifications, April 2016.

Environmentally-friendly design

- Natural refrigerants for lower environmental impact and higher cooling efficiency
- Water-blown foam insulation eliminates the refrigerant out-gassing, common in other foam products
- Manufactured in an award-winning*, zero waste to landfill facility (93% recycling, 7% waste to energy)

* *Industry Week* 2013 Best Plant Award. http://www.industryweek.com/quality/2013-iw-best-plants-winner-thermo-fisher-scientific-growing-quality-culture-lab

What are the details, inside and out?

Information at your fingertips
New touch-screen user interface provides access to vital freezer information including event log, settings and user profiles.

Environmentally-friendly refrigerants and insulation
Natural refrigerants and water-blown foam insulation

Optional LN_2 and CO_2 back-up systems
Provide three control points of additional protection to maximize sample protection.

On-board data storage
Store up to 15 years worth of temperature and event data on our on-board computer.

Easily exchange data
Use the new USB port to download freezer temperature and event log data or freezer settings from one freezer to another.

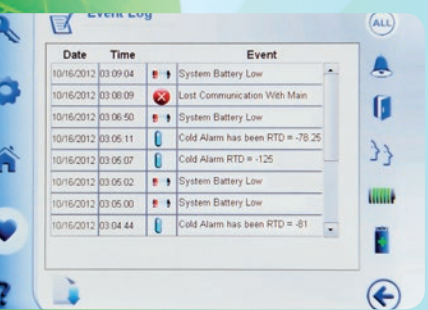
Single-hand operation
Easy-to-use, padlock-compatible, ergonomic door handle with integrated key lock.

Easy-to-remove, washable filter
Provides protection from dust on the condenser, increasing refrigeration performance and decreasing risk to samples.

Optional chart recorder
Seven day, 6" (15.2cm) chart recorder for validation and regulatory requirements.

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

Insulated inner doors
Improve energy consumption and reduce ice. Polystyrene insulated inner doors allow for 4 or 5 shelf configurations and are removable for easy cleaning.



While there are a lot of new features to the TSX, you'll appreciate the performance of our touch screen interface. Whenever you need to know what's going on inside the freezer, the answers are just a touch away.

- Alarm status
- Door opening status
- Temperature status
- Environmental conditions
- Back-up system status

Specifications and Ordering Information

Thermo Scientific TSX Series Upright Freezers (–50°C to –86°C)

Specifications

Model No.	Electrical	Amps/Breaker (Plug)	Max. Shelf Weight kg (lbs.)	Interior Dimensions H x D x W cm. (in.)	Exterior Dimensions H x D x W cm. (in.)	Shipping Weight kg (lbs.)
TSX400V	208-230V 50/60Hz	4/10 (European)	73.4 (165)	130 x 68.6 x 58.9 (51.2 x 27 x 23.2)	198.1 x 96 x 81.8 (78.0 x 37.8 x 32.2)	332 (730)
TSX400D		4/10 (NEMA 6-15)				
TSX600V	208-230V 50/60Hz	4/10 (European)	110.1 (245)	130 x 68.6 x 87.4 (51.2 x 27 x 34.4)	198.1 x 96 x 110.2* (78.0 x 37.8 x 43.4)	388 (854)
TSX600D		4/10 (NEMA 6-15)				

* Door opening clearance is 86cm (34.5")

Capacity

Model No.	Interior Volume liters (cu. ft.)	Area Footprint (Nominal)	2" Box Capacity	3" Box Capacity	2mL Tube Capacity	CryoBank™ 1mL Tube Capacity
TSX400V	548 (19.4)	0.79m² (8.45 sq. ft.)	400	300	40,000	67,600*
TSX400D						
TSX600V	815 (28.8)	1.06m² (11.38 sq. ft.)	600	450	60,000	101,400*
TSX600D						

* CryoBank 1mL tube stored in 2-inch box with 169 cell divider

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

Description		Model Number TSX400	Model Number TSX600
LN_2 Backup System Maintains temperature down to –80°C with liquid nitrogen	Factory Installed	LN4567	
	Field Installed	FLN4567	
CO_2 Backup System Maintains temperature down to –67°C with CO_2	Factory Installed	CO4567	
	Field Installed	FCO4567	
Chart Recorder (Inkless) 6" (15.2cm), seven day inkless recorder, –115 to +50°C, +5°C resolution	Factory Installed	CR400TSX	CR567TSX
	Field Installed	FCR400TSX	FCR567TSX
Chart Recorder (Ink) 6" (15.2cm), seven day ink recorder, –100 to +38°C, +2°C resolution	Factory Installed	CRP400TSX	CRP567TSX
	Field Installed	CRP400TSX	FCR567TSX
Access Key Option Card access control. Includes five key cards. Supports ISO15693 and ISO14443 protocols	Factory Installed	RAC34567	
	Field Installed	FFAC34567	
Five Shelf Option	Factory Installed	5IDTSX	
	Field Installed	SK400TSX	SK600TSX
Stainless Steel Freezer Interior	Factory Installed	SS34567	
Specialty Plug – Argentina	Factory Installed	AR230V16A	
Specialty Plug – Australia	Factory Installed	AU230V16A	
Specialty Plug – Brazil	Factory Installed	BR230V16A	
Specialty Plug – China	Factory Installed	CH230V16A	
Specialty Plug – Denmark	Factory Installed	DK230V16A	
Specialty Plug – Great Britain	Factory Installed	UK230V13A	
Specialty Plug – India	Factory Installed	IN230V16A	
Specialty Plug – Israel	Factory Installed	IS230V16A	
Specialty Plug – Italy	Factory Installed	IT230V16A	
Specialty Plug – Switzerland	Factory Installed	SW230V16A	
Twist Lock Plug (NEMA L6-15P)	Factory Installed	US230V15ATL	
	Field Installed	TL230V15A	

Accessories

Description	Model Number TSX400	Model Number TSX600
Access Key Pack (EU) Includes five cards; supports ISO14443 protocol	ACE34567	
Chart Paper Ink (pack of 50)	17020	
Chart Paper Inkless (pack of 50)	6185	
Replacement Air Filter	AF34567	
Replacement Back-Up Battery	400159	
Alarm Delay Module Designed to eliminate alarms due to intermittent or transitory conditions. Adjustable delay requires alarm condition to exist for user defined period before signal is released to monitoring system.	6903	
Cryo Gloves™ Medium	4425	
Cryo Gloves Large	4426	
Seismic Restraint Kit	TF-ULT400	TF-ULT600

Boxes and Dividers

5.1cm (2 in.) Fiberboard Cryo Boxes

Model No.	Dimensions	Dividers	Quantity	Holds
5954	12.7cm x 12.7cm (5" x 5")	None	12	versatile
820002		81	1	81 vials
820109		100	1	100 vials

7.6cm (3 in.) Fiberboard Cryo Boxes

Model No.	Dimensions	Dividers	Quantity	Holds
5956	12.7cm x 12.7cm (5" x 5")	None	12	versatile
820003		81	1	81 vials

Fiberboard Grid Dividers

Model No.	Dimensions	Dividers	Quantity	Holds
5958	10 x 10, 0.49" cell	100	12	12mm vials (100)
820100	10 x 10, 0.49" cell	100	1	12mm vials (100)
6212	9 x 9, 0.54" cell	81	12	13mm vials (81)
820081	9 x 9, 0.54" cell	81	1	13mm vials (81)
5960	8 x 8, 0.61" cell	64	12	14mm vials (64)
820064	8 x 8, 0.61" cell	64	1	14mm vials (64)
5959	7 x 7, 0.7" cell	49	12	16mm vials (49)
820049	7 x 7, 0.7" cell	49	1	16mm vials (49)
820025	5 x 5, 0.98" cell	25	1	25 vials
820016	4 x 4, 1.22" cell	25	1	16 vials

Racks for Boxes and Microplates

2" Box Racks

2" Box Racks	Model No. Description	Dimensions H x W x D cm (in.)	Storage	TSX400	TSX600
	920090 Sliding Drawer Rack for 2" Boxes	30.2 x 14 x 68.3 (11.9 x 5.5 x 26.9)	Boxes Per Rack	25	25
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Boxes Per Freeze	400	600
	1950520 Adjustable Side Access Rack for 2" Boxes	29.5 x 13.7 x 67.9 (11.6 x 5.4 x 26.75)	Boxes Per Rack	25	25
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Boxes Per Freezer	400	600

3" Box Racks

3" Box Racks	Model No. Description	Dimensions H x W x D cm (in.)	Storage	TSX400	TSX600
	920091 Sliding Drawer Rack for 3" Boxes	30.2 x 14 x 68.3 (11.9 x 5.5 x 26.9)	Boxes Per Rack	15	15
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Boxes Per Freezer	300	360
	1950521 Adjustable Side Access Rack for 3" Boxes	29.5 x 13.7 x 67.9 (11.6 x 5.4 x 26.75)	Boxes Per Rack	15	15
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Boxes Per Freezer	240	360

Racking Shelf Kit

Racking Shelf Kit		TSX400	TSX600
Includes Sliding Drawer Racks and 2" Boxes with 100 Count Cell Dividers	Model No.	RSK400SD4	RSK600SD4
	Racks Included	4	6
	Boxes Includled	100	150

Microplate Racks

Microplate Racks	Model No. Description	Dimensions H x W x D cm (in.)	Storage	TSX400	TSX600
	1950642 Sliding Drawer Rack for Standard or Deepwell	30.2 x 14 x 68.3 (11.9 x 5.5 x 26.9)	Plates Per Rack	35	35
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Plates Per Freezer	560	840
	1950523 Side Access Rack for Standard Plates	30.2 x 14 x 65.3 (11.9 x 5.5 x 25.7)	Plates Per Rack	105	105
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Plates Per Freezer	1540	2520
	1950592 Side Access Rack with Locking Rod for Standard or Deepwell	30.2 x 14 x 65.3 (11.9 x 5.5 x 25.7)	Plates Per Rack	147	147
			Racks Per Shelf	4	6
			Racks Per Freezer	16	24
			Plates Per Freezer	2352	3528

Sliding Drawer Freezer Racks for Thermo Scientific Nunc Cryobank and Matrix Tubes

for 200µL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No. 1950787		
3747, 3748 & 4988	Thermo Scientific™ Matrix™ 200µL 2D internally-threaded universal tubes **Rack Dimension:** 8.5 x 12.8 x 2.7cm (3.365 x 5.03 x 1.082 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
		Boxes Per Rack	56	56
		Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	86,016	129,024

for 500µL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No. 1950787		
3734, 3735 & 4898	Thermo Scientific Matrix 500µL 2D open top tubes **Rack Dimension:** 8.5 x 12.8 x 2.6cm (3.365 x 5.03 x 1.022 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
3736, 3737 & 4899	Thermo Scientific Matrix 500µL 2D tubes with Duraseals™ installed **Rack Dimension:** 8.5 x 12.8 x 2.7cm (3.365 x 5.03 x 1.082 in.)	Tube Racks Per Freezer Rack	56	56
		Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	86,016	129,024

Tube Model No.	Tube Description	Freezer Rack Model No. 1950791		
374086 & 374087 (incl. color options)	Thermo Scientific™ Nunc™ Cryobank™ 500µL internally threaded tubes **Rack Dimension:** 8.5 x 12.8 x 2.6cm (3.365 x 5.03 x 1.394 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
		Boxes Per Rack	42	42
3743, 3744 & 3745 (incl. color options)	Thermo Scientific Matrix 500µL 2D internally threaded screw top tubes **Rack Dimension:** 8.5 x 12.8 x 4.4cm (3.365 x 5.03 x 1.745 in.)	Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	64,512	96,768

for 750µL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No. 1950791		
3731, 3732 & 4896	Thermo Scientific Matrix 750µL 2D open top tubes **Rack Dimension:** 8.5 x 12.8 x 3.9cm (3.365 x 5.03 x 1.55 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
		Boxes Per Rack	42	42
3729 & 4896	Thermo Scientific Matrix 750µL 2D Tubes with Duraseals installed **Rack Dimension:** 8.5 x 12.8 x 3.9cm (3.365 x 5.03 x 1.55 in.)	Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	64,512	96,768

for 1.0mL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No. 1950642		
374088 & 374089 (incl. color options)	Thermo Scientific Nunc Cryobank 1.0mL internally threaded tubes **Rack Dimension:** 8.5 x 12.8 x 4.9cm (3.365 x 5.03 x 1.92 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
		Boxes Per Rack	35	35
		Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	53,760	80,640

Tube Model No.	Tube Description	Freezer Rack Model No. 1950799		
3740, 3741 & 3742 (incl. color options)	Thermo Scientific Matrix 1.0mL 2D internally threaded screw top tubes **Rack Dimension:** 8.5 x 12.8 x 5.8cm (3.365 x 5.03 x 2.3 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
		Boxes Per Rack	28	28
		Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	43,008	64,512

for 1.4mL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No. 1950642		
3791, 3792 & 4890	Thermo Scientific Matrix 1.4mL 2D open top tubes **Rack Dimension:** 8.5 x 12.8 x 4.9cm (3.365 x 5.03 x 1.92 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	96	96
3801 & 4890	Thermo Scientific Matrix 1.4mL 2D tubes with Duracell installed **Rack Dimension:** 8.5 x 12.8 x 4.9cm (3.365 x 5.03 x 1.92 in.)	Boxes Per Rack	35	35
		Racks Per Shelf	4	6
3711, 3112 & 4890	Thermo Scientific Matrix 1.4mL human readable open top tubes **Rack Dimension:** 8.5 x 12.8 x 4.9cm (3.365 x 5.03 x 1.92 in.)	Racks Per Freezer	16	24
		Tubes Per Freezer	53,760	80,640

for 1.8 to 2.0mL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No.1950642		
374500 & 374501*	Thermo Scientific Nunc 1.8mL externally-threaded universal tubes **Rack Dimension:** 8.5 x 12.8 x 5.5cm (3.365 x 5.03 x 2.15 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	48	48
		Boxes Per Rack	35	35
374221 & 374223	Thermo Scientific Nunc Cryobank 2.0mL internally threaded tubes **Rack Dimension:** 8.5 x 12.8 x 5.5cm (3.365 x 5.03 x 2.15 in.)	Racks Per Shelf	4	6
		Racks Per Freezer	20	24
		Tubes Per Freezer	26,880	40,320

for 5.0mL Capacity Tubes

Tube Model No.	Tube Description	Freezer Rack Model No.	1950819	
374220 & 374222	Thermo Scientific Nunc Cryobank 5.0mL internally threaded tubes **Rack Dimension:** 8.5 x 12.8 x 9.6cm (3.365 x 5.03 x 3.78 in.)	Freezer Rack Dimensions	14 x 30.2 x 66.5cm (5.5 x 11.9 x 26.96 in.)	
			TSX400	TSX600
		Tubes per Box	48	48
		Boxes Per Rack	21	21
		Racks Per Shelf	4	6
		Racks Per Freezer	16	24
		Tubes Per Freezer	16,128	24,192

Thermo Scientific™ Smart-Vue™

The Smart-Vue wireless monitoring solution is designed to safeguard the integrity of precious samples by continuously monitoring critical parameters of laboratory equipment and securely logging data to give you peace-of-mind.

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Smart-Vue Package	Model No 868Mhz – Europe	Model No 867Mhz – India	Model No 434Mhz – Asia/Pacific
Wireless radio module system, external PT100 temperature probe (100mm x 3mm), range: –100°C to +150°C, calibrated at –80°, –40° and 0°C. Package consists of: Module, external sensor, 3.6V lithium battery, mounting holder with Velcro, magnet and hardware, sensor mounting kit.	SV200-101-LSB	SV200-102-LSB	SV200-103-LSB

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