# Thermo Scientific TSX Series Ultra-Low Freezers

# Designed to meet the highest protection and sustainability standards for ultra-low storage

- Best peak variation of energy-efficient ultra-low freezers: less than 5°C
- Fastest door opening recovery on the market: 17 minutes
- **Best overall temperature uniformity:** < 5.2°C with door openings, < 4.0°C with no door openings
- Long warm-up time from -80°C to -50°C at 5.05 hours
- Four capacities: 400, 500, 600 and 700 2-inch box
- **5 year standard warranty** plus 7 additional years on V-drive compressors\*

\*Restrictions and exclusions apply. Warranty is void if the unit is not maintained as set forth in the operation and service manuals.



### Designed to keep samples safe

- Low peak variation protects samples throughout the entire freezer cabinet<sup>1</sup>
- V-Drive technology with adaptive control is designed to detect high and low usage patterns, adjust compressor speeds, and reduce energy without compromising protection
- Records temperature and events for the lifetime of the freezer
- No expensive, free-piston engines to repair
- Backed by our Global Service and Support Team

# Designed to limit environmental impact and protect your budget

- Reduce energy usage up to 70% by replacing an older ultra-low freezer with a new TSX<sup>2</sup>
- Uses less than 8 kWh/day, depending on size
- Produces less environmental heat emissions and lowers HVAC costs
- SNAP compliant, natural hydrocarbon refrigerants
- SNAP compliant, environmentallyfriendly, water-blown foam insulation
- Manufactured in an award-winning,<sup>3</sup> zero-waste to landfill facility

# User-friendly design and lab footprint

- All new freezer and user interface design
- Available in four sizes
- Quiet enough to reside directly in the laboratory. At just 45.5 dBA, the sound is comparable to a home refrigerator
- Advanced security features





### All data based on internal data unless otherwise noted. Data on file.

<sup>1.</sup> Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C. Performance data varies across freezer size and electrical specifications.

<sup>2.</sup> For energy savings up to 70% at -80°C set point, reference info was: 8.7 kWh/day TSX600 compared >5 year large ULT 31.9 kWh/day energy calculator. At -70°C set point, reference info was: 7.9 kWh/day TSX600 compared >5 year large ULT 31.9 kWh/day energy calculator. 3. Industry Week Best Plant Award, 2013. http://www.industryweek.com/quality/2013-iw-best-plants-winner-thermo-fisher-scientific-growing-quality-culture-lab

# User friendly touch-screen interface and cabinet

- NEW! Easy-to-use set-up wizard, event log, temperature mapping and data downloads
- **NEW!** Capacitive touch even when using latex gloves
- Eliminate the need for a separate chart recorder with datalogging and temperature mapping features, all exportable via a built-in USB port
- Advanced security features: alarm settings, padlock-compatible doors and optional access card entry
- Ergonomic design: comfortable door handle, eye-level touch-screen and shelf-level placement that doesn't require floor-level loading of racks
- Four capacities (400, 500, 600 and 700 2-inch box) to accommodate a variety of storage needs and lab footprint specifications



### **Specifications & Ordering Information**

Thermo Scientific TSX Series Upright Freezers (-50°C to -86°C)									
	Сар	acity			Max. Shelf				
Model Number	cu. ft. (liters)	2" cryobox	Electrical	Amps / Breaker (Plug)	Weight lbs (kg)	Interior Dimensions H x W x D in (cm)	Exterior Dimensions H x W* x D in (cm)	Shipping Weight lbs (kg)	
TSX40086A	19.4	400	115V / 60Hz	9.0/15 (NEMA 5-15)	165	51.2 x 23.1 x 28.3	78.0 x 28.3 x 37.6	665 (302)	
TSX40086D	(549)	400	208-230V / 60Hz	4.0/10 (NEMA 6-15)	(75)	(130.1 x 58.8 x 71.9)	(198.1 x 71.9 x 95.5)	640 (290)	
TSX50086A	24.1	500	115V / 60Hz	9.5/15 (NEMA 5-15)	205	51.2 x 28.8 x 28.3	78.0 x 34.0 x 37.6**	721 (327)	
TSX50086D	(682)	300	208-230V / 60Hz	5.1/10 (NEMA 6-15)	(93)	(130.1 x 73.0 x 71.9)	(198.1 x 86.4 x 95.5)	696 (316)	
TSX60086A	28.8	600	115V / 60Hz	8.5/15 (NEMA 5-15)	245	51.2 x 34.4 x 28.3	78.0 x 39.6 x 37.6**	790 (358)	
TSX60086D	(816)	000	208-230V / 60Hz	4.0/10 (NEMA 6-15)	(111)	(130.1 x 87.3 x 71.9)	(198.1 x 100.6 x 95.5)	765 (347)	
TSX70086A	33.5	700	115V / 60Hz	10.6/15 (NEMA 5-15)	285	51.2 x 40.0 x 28.3	78.0 x 45.2 x 37.6**	894 (406)	
TSX70086D	(949)	700	208-230V / 60Hz	5.8/10 (NEMA 6-15)	(129)	(130.1 x 101.6 x 71.9)	(198.1 x 114.8 x 95.5)	869 (394)	

<sup>\*</sup> Allowance for handle and hinge, add 4.2 in (10.7 cm) to cabinet width

<sup>\*\*</sup> Doorway width clearance is 34.5 in (87.6 cm) for TSX50086, TSX60086, and TSX70086

Performance Data									
Model Number	Energy Consumption (kW-hr/day)* Standard Mode	Peak Variation from -80°C setpoint (°C)**	Door Opening Recovery (minutes)	Warm Up Time (-80°C to -50°C) (minutes)***	Noise Level (dBA)				
TSX40086A	8.3	+6.0 / +1.1	17	267	47.5				
TSX40086D	7.9	+0.0 / +1.1		207	47.5				
TSX50086A	8.7	+7.1 / +0.4	24	282	49.0				
TSX50086D	8.3	+7.17 +0.4			49.0				
TSX60086A	9.4	+6.9 / +1.8	24	303	45.5				
TSX60086D	8.7	+0.9 / +1.0	24	303	45.5				
TSX70086A	10.4	+7.0 / +1.6	27	282	48.0				
TSX70086D	9.6	+1.0/+1.0	<u> </u>	202	48.0				

<sup>\*</sup> Energy Calculation: Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C

<sup>\*\*\*</sup> Warm Up Time: Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C





### Find out more at thermofisher.com/tsx

<sup>\*\*</sup> Peak Variation From Setpoint: Typical freezer data based on internal testing with freezer setpoint at -80°C and ambient temperature at 20°C

### Thermo Scientific™ TSX Series Ultra-Low Freezers

### Options and Accessories (Field Installed must be installed by a qualified professional)

Options	Installation	TSX40086	TSX50086	TSX60086	TSX70086
	Factory	LN4567	LN4567	LN4567	LN4567
LN2 Backup System  Maintains temperature down to -80°C with liquid nitrogen.	Field	FLN4567LE	FLN4567LE	FLN4567LE	FLN4567LE
CO2 Backup System	Factory	CO4567	CO4567	CO4567	CO4567
Maintains temperature down to -67°C with CO2.	Field	FCO4567LE	FCO4567LE	FCO4567LE	FCO4567LE
Chart Recorder (Inkless)	Factory	CR4567	CR4567	CR4567	CR4567
6" (15.2 cm), seven day inkless recorder, -115° to +50°C, +5°C resolution	Field	FCR400TSXLE	FCR500TSXLE	FCR600TSXLE	FCR700TSXLE
Chart Recorder (Ink)	Factory	CRP4567	CRP4567	CRP4567	CRP4567
6" (15.2 cm), seven day ink recorder, -100° to +38°C, +2°C resolution	Field	FCRP400TSXLE	FCRP500TSXLE	FCRP600TSXLE	FCRP700TSXLE
Access Key Option Card	Factory	RAC34567	RAC34567	RAC34567	RAC34567
Access control. Includes five key cards. Supports ISO15693 and ISO14443 protocols.	Field	FAC34567LE	FAC34567LE	FAC34567LE	FAC34567LE
Stainless Steel Freezer Interior	Factory	SS34567	SS34567	SS34567	SS34567
Twist Lock Plug	Factory	US125V20ATL	US125V20ATL	US125V20ATL	US125V20ATL
NEMA L5-20P for 115V / 60Hz	Field	TL125V20A	TL125V20A	TL125V20A	TL125V20A
Twist Lock Plug	Factory	US230V15ATL	US230V15ATL	US230V15ATL	US230V15ATL
NEMA L6-15P for 208-230V / 60Hz	Field	TL230V15A	TL230V15A	TL230V15A	TL230V15A
Twist Lock Plug	Factory	US230V20ATL	US230V20ATL	US230V20ATL	US230V20ATL
NEMA L6-20P for 208-230V / 60Hz	Field	TL230V20A	TL230V20A	TL230V20A	TL230V20A
	Factory	TSX5SHELFOPTION	TSX5SHELFOPTION	TSX5SHELFOPTION	TSX5SHELFOPTION
Shelf Kit: Includes one shelf and shelf support clips	Field	SK400TSX	SK500TSX	SK600TSX	SK700TSX
Accessories		TSX40086	TSX50086	TSX60086	TSX70086
Access Key Pack (U.S.): Includes five key cards. Supports ISC	D15693 protocol	ACU34567	ACU34567	ACU34567	ACE34567
Chart Paper Ink (Pack of 50)		17020	17020	17020	17020
Chart Paper Inkless (Pack of 50)		6185	6185	6185	6185
Replacement Air Filter		AF34567LE	AF34567LE	AF34567LE	AF34567
Replacement Back-Up Battery		400159	400159	400159	400159
Alarm Delay Module: Eliminates nuisance alarms due to intern conditions. Adjustable delaly requires alarm condition to exist fo period before signal is released to monitoring system.	,	6903	6903	6903	6903
Cryo Gloves Medium		4425	4425	4425	4425
Cryo Gloves Large		4426	4426	4426	4426

<sup>\*</sup> A = 115V/60Hz (NEMA 5-20 plug)

<sup>\*\*</sup> D = 208-230V/60Hz (NEMA 6-15 plug)





# Thermo Scientific™ TSX Series Ultra-Low Freezers

### **Packages**

TSX with two shelves of sliding drawer racks, including boxes								
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*			
TSX40086ARAK	400 box	19.4	115V	8	200			
TSX40086DRAK	400 box	19.4	208-230V	8	200			
TSX50086ARAK	500 box	24.1	115V	10	250			
TSX50086DRAK	500 box	24.1	208-230V	10	250			
TSX60086ARAK	600 box	28.8	115V	12	300			
TSX60086DRAK	600 box	28.8	208-230V	12	300			
TSX70086ARAK	700 box	33.5	115V	14	350			
TSX70086DRAK	700 box	33.5	208-230V	14	350			

TSX with factory-installed LN2 back-up, two shelves of sliding drawer racks, including boxes								
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*			
TSX40086ARAKLN	400 box	19.4	115V	8	200			
TSX40086DRAKLN	400 box	19.4	208-230V	8	200			
TSX50086ARAKLN	500 box	24.1	115V	10	250			
TSX50086DRAKLN	500 box	24.1	208-230V	10	250			
TSX60086ARAKLN	600 box	28.8	115V	12	300			
TSX60086DRAKLN	600 box	28.8	208-230V	12	300			
TSX70086ARAKLN	700 box	33.5	115V	14	350			
TSX70086DRAKLN	700 box	33.5	208-230V	14	350			

TSX with factory-installed CO2 back-up, two shelves of sliding drawer racks, including boxes								
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*			
TSX40086ARAKCO	400 box	19.4	115V	8	200			
TSX40086DRAKCO	400 box	19.4	208-230V	8	200			
TSX50086ARAKCO	500 box	24.1	115V	10	250			
TSX50086DRAKCO	500 box	24.1	208-230V	10	250			
TSX60086ARAKCO	600 box	28.8	115V	12	300			
TSX60086DRAKCO	600 box	28.8	208-230V	12	300			
TSX70086ARAKCO	700 box	33.5	115V	14	350			
TSX70086DRAKCO	700 box	33.5	208-230V	14	350			

TSX with factory-installed chart recorder, two shelves of sliding drawer racks, including boxes								
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*			
TSX40086ARAKCR	400 box	19.4	115V	8	200			
TSX40086DRAKCR	400 box	19.4	208-230V	8	200			
TSX50086ARAKCR	500 box	24.1	115V	10	250			
TSX50086DRAKCR	500 box	24.1	208-230V	10	250			
TSX60086ARAKCR	600 box	28.8	115V	12	300			
TSX60086DRAKCR	600 box	28.8	208-230V	12	300			
TSX70086ARAKCR	700 box	33.5	115V	14	350			
TSX70086DRAKCR	700 box	33.5	208-230V	14	350			

TSX with factory-installed access card, two shelves of sliding drawer racks, including boxes									
Model No.	Capacity Freezer	Cubic Feet	Electrical, 60Hz	# of Racks	# of Boxes*				
TSX40086ARAKHID	400 box	19.4	115V	8	200				
TSX40086DRAKHID	400 box	19.4	208-230V	8	200				
TSX50086ARAKHID	500 box	24.1	115V	10	250				
TSX50086DRAKHID	500 box	24.1	208-230V	10	250				
TSX60086ARAKHID	600 box	28.8	115V	12	300				
TSX60086DRAKHID	600 box	28.8	208-230V	12	300				
TSX70086ARAKHID	700 box	33.5	115V	14	350				
TSX70086DRAKHID	700 box	33.5	208-230V	14	350				

<sup>\*2-</sup>inch fiberboard boxes with 100-count cell dividers



# Thermo Scientific™ TSX Series Ultra-Low Freezers

### **Racks for Boxes and Microplates**

Racks for 2" (5.0	Racks for 2" (5.08 cm) Boxes									
Model No.	Description	Dimensions H x W x D in. (cm)	Storage	TSX40086	TSX50086	TSX60086	TSX70086			
			Boxes Per Rack	25	25	25	25			
000000	Sliding Drawer Rack	11.9 x 5.5 x 26.9 (30.2 x 14 x 68.3)	Racks Per Shelf	4	5	6	7			
920090			Racks Per Freezer	16	20	24	28			
			Boxes Per Freezer	400	500	600	700			
			Boxes Per Rack	25	25	25	25			
1050500	Adjustable Side	11.6 x 5.4 x 26.75	Racks Per Shelf	4	5	6	7			
1950520	Access Rack	(29.5 x 13.7 x 67.9)	Racks Per Freezer	16	20	24	28			
			Boxes Per Freezer	400	500	600	700			

Racks for 3" (7.62 cm) Boxes									
Model No.	Description	Dimensions H x W x D in. (cm)	Storage	TSX40086	TSX50086	TSX60086	TSX70086		
920091	Sliding Drawer Rack	11.9 x 5.5 x 26.9 (30.2 x 14 x 68.3)	Boxes Per Rack	15	15	15	15		
			Racks Per Shelf	4	5	6	7		
			Racks Per Freezer	16	20	24	28		
			Boxes Per Freezer	240	300	360	420		

Racking Shelf Kits								
Description	Storage	TSX40086	TSX50086	TSX60086	TSX70086			
Sliding Drawer Racks and 2" Boxes with 100 Count Cell Dividers (fits one shelf)	Model No.	RSK400SD4	RSK500SD4	RSK600SD4	RSK700SD4			
	Racks Included	4	5	6	7			
(	Boxes Included	100	125	150	175			

Racks for Microplates									
Model No.	Description	Dimensions H x W x D in. (cm)	Storage	TSX40086	TSX50086	TSX60086	TSX70086		
	Side Access Rack with Locking Rod for Standard or Deepwell	11.9 × 5.5 × 25.7 (30.2 × 14 × 65.3)	Plates Per Rack	147	147	147	147		
1050500			Racks Per Shelf	4	5	6	7		
1950592			Racks Per Freezer	16	20	24	28		
			Plates Per Freezer	2352	2940	3528	4116		



# Thermo Scientific™ TSX Series Ultra-Low Freezers

### **Boxes**

Model No.	Description	# of Divisions	Quantity	Color	
5026-0909	Thermo Scientific™ Nalgene™ polycarbonate 2" (5.08 cm) box for 1.2-2.0 mL vials	81	24	white	
5954	2" (5.08 cm) fiberboard box	0	12	white	
820002	2" (5.08 cm) fiberboard box	81	1	white	
820109	2" (5.08 cm) fiberboard box	100	1	white	
5956	3" (7.62 cm) fiberboard box	0	12	white	
820003	3" (7.62 cm) fiberboard box	81	1	white	
1950878	2" (5.08 cm) fiberboard box	0	12	multiple	
1950879	2" (5.08 cm) fiberboard box	0	12	pink	
1950880	2" (5.08 cm) fiberboard box	0	12	red	
1950881	2" (5.08 cm) fiberboard box	0	12	yellow	
1950882	2" (5.08 cm) fiberboard box	0	12	green	
1950883	2" (5.08 cm) fiberboard box	0	12	blue	
1950884	2" (5.08 cm) fiberboard box	0	12	black	

### **Fiberboard Dividers**

Model No.	Description	Quantity/Case
5958	Grid dividers for 100 12mm vials	12
6212	Grid dividers for 81 13mm vials	12
5960	Grid dividers for 64 14mm vials	12
5959	Grid dividers for 49 16mm vials	12

### **Vials and Tubes**

Model No.	Description	Quantity/Case
377267	Thermo Scientific™ Nunc™ 1.8mL screw-top round-bottom vials with internal threading	1,800

Visit **thermofisher.com** for additional vials, tubes and sample storage consumables



# Thermo Scientific™ TSX Series Ultra-Low Freezers

### **Sliding Drawer Racks for Matrix and Cryobank Tubes**

		Freezer Model	TSX40086	TSX50086	TSX60086	TSX70086
200 μL Cap	pacity Tubes					
		Rack Model No	1950787	1950787	1950787	1950787
	Thermo Scientific™ Matrix™ 200 µL 2D	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
3747, 3748.	Internally-threaded Universal Tubes	Tubes per Box	96	96	96	96
4988	Box Dimension:	Boxes Per Rack	56	56	56	56
	3.365 x 5.03 x 1.082 in.	Racks Per Shelf	4	5	6	7
	(8.5 x 12.8 x 2.75 cm)	Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	86,016	107,520	129,024	150,528
500 μL Cap	pacity Tubes					
	Thermo Scientific	Rack Model No	1950787	1950787	1950787	1950787
3734, 3735, 4898	Matrix 500 μL 2D Open Top Tubes Box Dimension: 3.365 x 5.03 x 1.022 in. (8.5 x 12.8 x 2.6 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
	Thermo Scientific™ Matrix™ 200 µL 2D with Duraseals Installed	Tubes per Box	96	96	96	96
0700		Boxes Per Rack	56	56	56	56
3736, 3737,	Internally-threaded Universal Tubes	Racks Per Shelf	4	5	6	7
4899	Box Dimension: 3.365 x 5.03 x 1.082 in. (8.5 x 12.8 x 2.75 cm)	Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	86,016	107,520	129,024	150,528
	Thermo Scientific	Rack Model No	1950791	1950791	1950791	1950791
374086, 374087 (including color options)	Nunc™ Cryobank™ 500 µl Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 1.394 in. (8.5 x 12.8 x 3.5 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
	Thermo Scientific Matrix 500 µL 2D Internally Threaded ScrewTop Tubes Box Dimension: 3.365 x 5.03 x 1.745 in. (8.5 x 12.8 x 4.4 cm)	Tubes per Box	96	96	96	96
3743, 3744, 3745 (including		Boxes Per Rack	42	42	42	42
		Racks Per Shelf	4	5	6	7
color options)		Racks Per Freezer	16	20	24	28
-  /		Tubes Per Freezer	64,512	80,640	96,768	112,896



# Thermo Scientific™ TSX Series Ultra-Low Freezers

### **Sliding Drawer Racks for Matrix and Cryobank Tubes**

		Freezer Model	TSX40086	TSX50086	TSX60086	TSX70086	
750 μL Capacity Tubes							
3731, 3732, 4896	Thermo Scientific Matrix 750 µL 2D Open Top Tubes Box Dimension: 3.365 x 5.03 x 1.55 in. (8.5 x 12.8 x 3.9 cm)	Rack Model No	1950791	1950791	1950791	1950791	
		Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	
		Tubes per Box	96	96	96	96	
	Thermo Scientific Matrix 750 µL 2D Tubes	Boxes Per Rack	42	42	42	42	
3729, 4896	with Duraseals Installed Box Dimension:	Racks Per Shelf	4	5	6	7	
	3.365 x 5.03 x 1.55 in. (8.5 x 12.8 x 3.9 cm)	Racks Per Freezer	16	20	24	28	
	(6.6 % 12.6 % 6.6 6.1.)	Tubes Per Freezer	64,512	80,640	96,768	112,896	
1.0 mL Ca	pacity Tubes						
		Rack Model No	1950642	1950642	1950642	1950642	
374088,	Thermo Scientific Nunc Cryobank 1.0 mL Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	
374089 (including		Tubes per Box	96	96	96	96	
color		Boxes Per Rack	35	35	35	35	
options)		Racks Per Shelf	4	5	6	7	
		Racks Per Freezer	16	20	24	28	
		Tubes Per Freezer	53,760	67,200	80,640	94,080	
		Rack Model No	1950799	1950799	1950799	1950799	
3740, 3741, 3742 (including color options)	Thermo Scientific Matrix 1.0mL 2D Internally Threaded ScrewTop Tubes Box Dimension: 3.365 x 5.03 x 2.3 in. (8.5 x 12.8 x 5.8 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	
		Tubes per Box	96	96	96	96	
		Boxes Per Rack	28	28	28	28	
		Racks Per Shelf	4	5	6	7	
		Racks Per Freezer	16	20	24	28	
		Tubes Per Freezer	43,008	53,760	64,512	75,264	



# Thermo Scientific™ TSX Series Ultra-Low Freezers

### **Sliding Drawer Racks for Matrix and Cryobank Tubes**

		Freezer Model	TSX40086	TSX50086	TSX60086	TSX70086
1.4 mL Capacity Tubes						
	Thermo Scientific	Rack Model No	1950642	1950642	1950642	1950642
3791, 3792, 4890	Matrix 1.4ml 2D Open Top Tubes Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
3801, 4890	Thermo Scientific Matrix 1.4mL 2D Tubes with Duraseals Installed	Tubes per Box	96	96	96	96
	Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Boxes Per Rack	35	35	35	35
	Thermo Scientific Matrix 1.4ml Human	Racks Per Shelf	4	5	6	7
3711, 3112, 4890	Readable Open Top Tubes Installed Box Dimension: 3.365 x 5.03 x 1.92 in. (8.5 x 12.8 x 4.9 cm)	Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	53,760	67,200	80,640	94,080
1.8 to 2.0 m	L Capacity Tubes					
	Thermo Scientific	Rack Model No	1950642	1950642	1950642	1950642
374500, 374501	Nunc 1.8 mL Externally-threaded Universal Tubes Box Dimension: 3.365 x 5.03 x 2.15 in. (8.5 x 12.8 x 5.5 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
	Thermo Scientific Nunc Cryobank 2.0 ml Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 2.15 in. (8.5 x 12.8 x 5.5 cm)	Tubes per Box	48	48	48	48
		Boxes Per Rack	35	35	35	35
374221, 374223		Racks Per Shelf	4	5	6	7
01 4220		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	26,880	33,600	40,320	47,040
5.0 mL Cap	pacity Tubes					
		Rack Model No	1950819	1950819	1950819	1950819
374220,	Thermo Scientific Nunc Cryobank 5.0 ml Internally Threaded Tubes Box Dimension: 3.365 x 5.03 x 3.78 in. (8.5 x 12.8 x 9.6 cm)	Freezer Rack Dimensions W x H x D	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)	5.5 x 11.9 x 26.96 in. (14 x 30.3 x 68.5 cm)
		Tubes per Box	48	48	48	48
374222		Boxes Per Rack	21	21	21	21
		Racks Per Shelf	4	5	6	7
		Racks Per Freezer	16	20	24	28
		Tubes Per Freezer	16,128	20,160	24,192	28,224



