thermoscientific

NEW!
TSX Series high-performance undercounter refrigerators

The only undercounter lab-grade refrigerator with redundant cooling

- Low energy and noise
- No compressor
- High storage capacity

ThermoFisher SCIENTIFIC

Introducing the Thermo Scientific™ TSX505

Powered by V-Drive featuring STeM Technology

- Redundant cooling technology protects your storage while delivering 37% less energy, 20X less noise and twice the storage capacity*
- Variable speed control using thermoelectric devices in place of compressors, provides ideal conditions for the most demanding applications

Designed for the following industries

Biological	Diagnostic Kits & Reagents	Molecular Biology	Vaccines & Pharmaceuticals	Clinical Testing	Industrial testing

Air and glycol temperature display

Bright, easy-to-adjust interior LED lighting

ADA compliant, ergonomic handle with reversible doors fits any workspace configuration

Choice of transparent glass or solid door

Datalogging with USB download functionality

Audible & visual alarms
(power fail, high temp, low temp, low battery, memory full, door ajar)

Convenient, adjustable shelves
(rolling wire baskets available as customer installed accessory)

1" rear access port

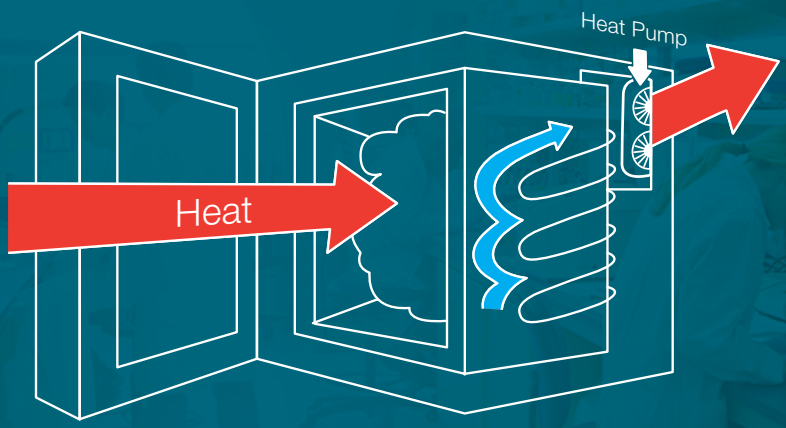
Fits into any plug
See ordering chart for cords and receptacles shipped with models

*Internal data based on comparisons to Thermo Scientific model REL404A.

How the TSX505 works

Compressor-free V-drive featuring STeM (synchronized temperature management)

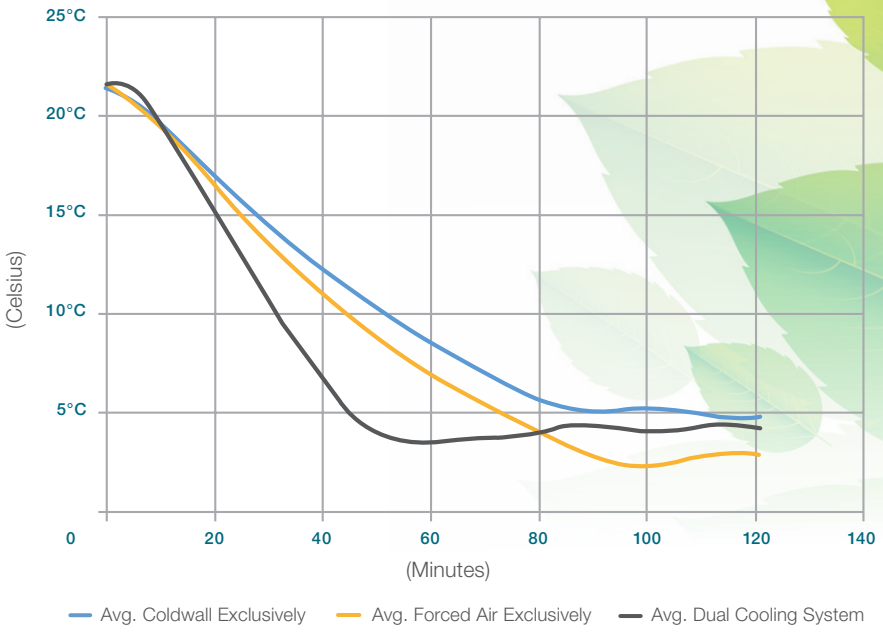
- Dual refrigeration system combines the benefits of cold wall and fan-assisted recovery
- Actively monitors the cabinet to maintain the desired temperature conditions
- Constant monitoring and adjustment during periods of door openings keeps temperatures stable without temperature fluctuation found in models with compressors that cycle on/off
- This tight internal air circulation eliminates the risk of freezing which can ruin materials like vaccines



The TSX505's refrigerant loop absorbs and transfers heat energy from the outside into a heat pump in the back of the refrigerator. There, heat rejection coils transfer heat energy from the heat pump back into the ambient environment.

System Comparison Chart

In the chart, the gray line represents the additive effect of using cold wall (blue line) and forced air (orange line), with the benefit that if one of those systems should experience an issue, you know the other system can keep the unit going until service arrives.*



*Up to approximately 2.5 days.

Designed to save energy, reduce noise and meet sustainability protocols

The TSX505 uses up to 37% less energy with an annual cost reduction of 30%*

Energy Usage

Refrigerator Model	Annual Power Usage (kW)	Annual Run Time (hours)	Annual Energy Usage (kWh)	Additional Energy Used
TSX505	0.11	24	2.7	0%
REL404	0.18	24	4.30	37.2%

Annual Cost to Run

Refrigerator Mode	Cycle/Day	Usage Hours/Day	Usage Hours/Year	Energy Cost ($/kWh)**	Annual Cost	Additional Cost
TSX505	1	24	8,760	$0.1019	$98.19	0%
REL404	1	24	8,760	$0.1019	$160.68	30%

The sound of quiet

Whisper-quiet operation is the unseen feature of the TSX505. As shown, the 35 dBA sound output is less than an average library, enabling the refrigerator to reside comfortably in work station areas.

The SNAP compliant choice

The TSX505 is designed to meet the standards established by the U.S. Environmental Protection Agency's Significant New Alternatives Policy (SNAP) program. SNAP evaluates refrigerants that are potentially harmful to the environment. The TSX505 has been designed with refrigerants that are in compliance with SNAP.

*Internal data based on comparisons to Thermo Scientific model REL404A.

**https://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_6_a. Use data from the most current month reported and use the energy rate for the "US Total" in the "Commercial" sector.

Decibel scale of common sounds

Noise source	Decibel level (dBA)
Freeway traffic, vacuum cleaner	70
Conversation in restaurant, office, background music	60
Library	40
TSX Series undercounter refrigerator	**35†**
Quiet rural area	30
Rustling leaves	20
Breathing	10

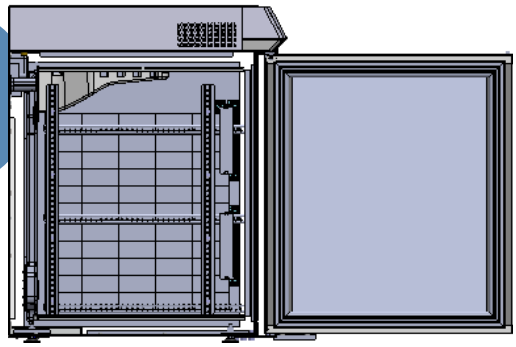
† Steady state 35 dBA; start-up 42 dBA

Designed to hold more within a smaller footprint

As shown in these two side views, the TSX505 does not include internal protrusions such as overhead fans. This allows you to store more inside its interior. Also, with the V-drive and STeM cooling, temperatures are consistent at all shelf levels, making the TSX505 a smart choice for vaccines, reagents, media and other sensitive material.

TSX Series undercounter

495
BOXES

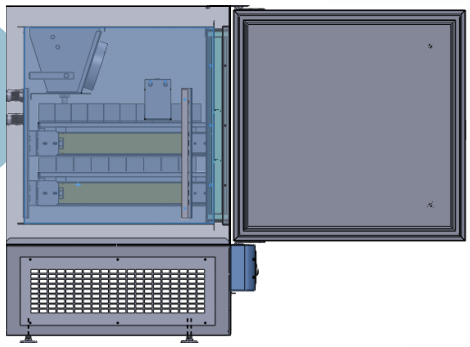


- 45 boxes per level (9x5 pattern)
- 225 boxes per shelf (5 levels per shelf, 2 shelves per unit)
- +45 boxes (1 additional level above top shelf)

Total number of vaccine boxes: 495 boxes (225 + 225 + 45)**

Alternative model*

216
BOXES



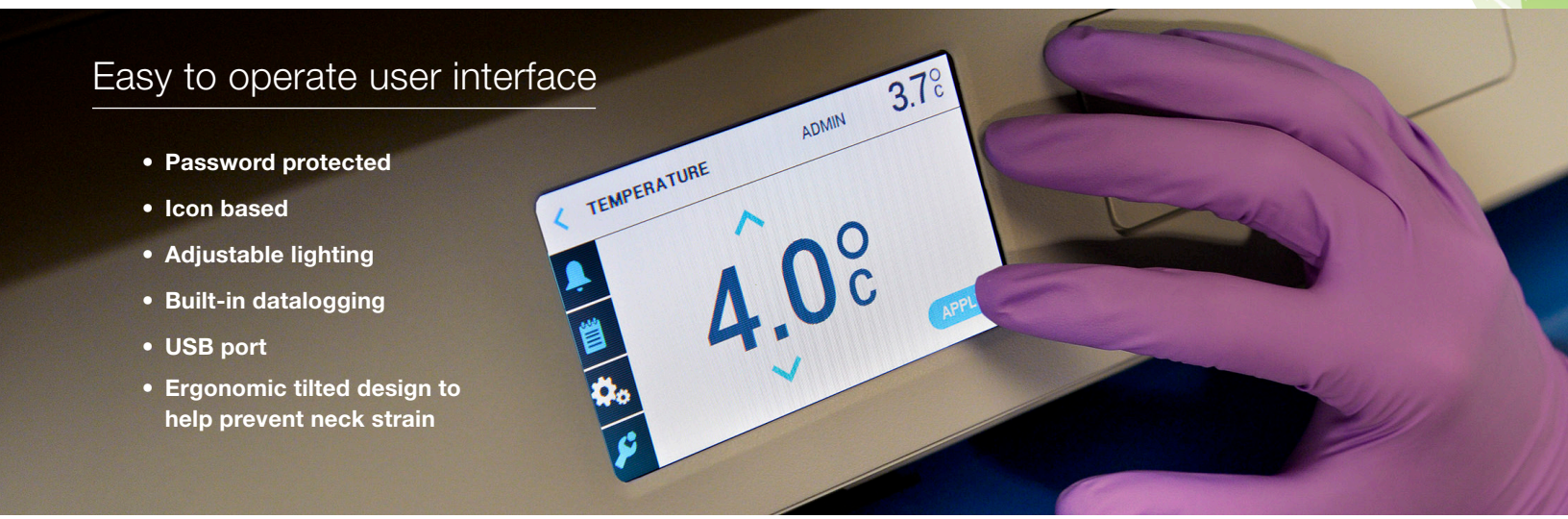
- 36 boxes per level (9x4 pattern)
- 108 boxes per shelf (3 levels per shelf, 2 shelves per unit)

Total number of vaccine boxes: 216 boxes (108 + 108)

*Thermo Scientific Revco, model REL404
**MMR vaccine box: 3.5"W x 1.75"H x 1.625"D

Easy to operate user interface

- **Password protected**
- **Icon based**
- **Adjustable lighting**
- **Built-in datalogging**
- **USB port**
- **Ergonomic tilted design to help prevent neck strain**



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Specifications & Ordering Information

Thermo Scientific TSX Series high-performance undercounter refrigerator

Model No.	Settable Range	Capacity cu. ft. (liters)	Electrical	Plug Type*	Doors	Shelves	Defrost	Sound Level	Energy Consumption	Certifications	Interior Dimensions: (D x W x H)	Exterior Dimensions: (D x W x H)	Shipping Weight lbs. (kg)
TSX505SA TSX505SD TSX505SV TSX505SW TSX505SC	+3°C to +7°C	5.5 (156)	100 - 230v, 50/60hz	NEMA 5-15 NEMA 5-16 EU UK China	1, Solid	3	Auto	35 dBA	2.7 kWh/day	UL, CE, REACH, RoHS	20.5" x 19.5" x 23" in. (52 x 49.5 x 58.4 cm)	23.6 x 26.9 x 31.3 in. (60 x 68.3 x 79.5 cm)	144 (20)
TSX505GA TSX505GD TSX505GV TSX505GW TSX505GC	+3°C to +7°C	5.5 (156)	100 - 230v, 50/60hz	NEMA 5-15 NEMA 5-16 EU UK China	1, Glass	3	Auto	35 dBA	3.1 kWh/day	UL, CE, REACH, RoHS	20.5" x 19.5" x 23" in. (52 x 49.5 x 58.4 cm)	23.6 x 26.9 x 31.3 in. (600 x 685 x 795 cm)	144 (20)

*All models can accommodate any plug. Contact your sales rep for help determining the appropriate plug/cord type for your facility.

Customer Installed Accessories

Description	Model no.
Rolling wire basket	WB05
Additional wire shelf	WS05

Visit **thermofisher.com** for accessories, wireless monitoring, consumables, media, reagents and more.

Australia: +61 39757 4300
Austria: +43 1 801 40 0
Belgium: +32 53 73 42 41
China: +800 810 5118 or
+400 650 5118
France: +33 2 2803 2180
Germany national toll-free: 0800 1 536 376
Germany international: +49 6184 90 6000

India toll free: 1800 22 8374
India: +91 22 6716 2200
Italy: +39 02 95059 552
Japan: +81 3 5826 1616
Netherlands: +31 76 579 55 55
New Zealand: +64 9 980 6700
Nordic/Baltic/CIS Countries:
+358 9 329 10200

Russia: +7 812 703 42 15
Spain/Portugal: +34 93 223 09 18
Switzerland: +41 44 454 12 12
UK/Ireland: +44 870 609 9203
USA/Canada: +1 866 984 3766

Other Asian Countries: +852 2885 4613
Countries not listed: +49 6184 90 6000

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