ThermoFisher SCIENTIFIC

TDE Series ultra-low temperature freezers

ENERGY STAR

thermo scientific

TDE Series ultra-low temperature freezers

Thermo Scientific™ TDE Series –80°C ultra-low temperature (ULT) freezers, powered by the H-Drive system, are designed for efficiency. As a result, the series delivers a foundational ULT experience with the reliability and performance needed to protect your work—and the sustainability to meet global compliance.

Designed to keep your samples safe

- Worry-free storage; with low peak variation, samples are protected throughout the entire cabinet[1]
- Fast door opening recovery; as little as 2 minutes for chest freezers
- Secure freezer settings with sample security
- General-purpose models for nondiagnostic general laboratory use, and FDA Class II Medical Device models for storage of blood, plasma, tissue, skin, and bone[2]
- Backed by our Global Service and Support team

Limit environmental impact and lower HVAC costs

- –86°C 600 box models are ENERGY STAR™–certified and feature an ACT™ Environmental Impact Factor Label
- Energy use as low as 4.9 kWh/day, depending on size and temperature
- Less heat emission lowers HVAC costs
- SNAP and EU F-gas regulation compliant, natural hydrocarbon refrigerants
- Environmentally friendly, polyurethane foam with non-HFC blowing agent is compliant with SNAP and EU F-gas regulations
- Manufactured in an award-winning, zero-waste-to-landfill facility

User-friendly and quiet

- H-Drive Information Center (HIC) touchscreen user interface
- Quiet enough to reside directly in the laboratory; at just 50 dBA, the sound is comparable to a home refrigerator[3]
- Decrease storage footprint up to 25%
- 5-year parts and labor standard warranty*

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

1. Typical freezer data based on internal testing with freezer setpoint at –80°C and ambient temperature at 20°C. Performance data vary across freezer size and electrical specification.

2. FDA Class II Models are listed under product code KSE, regulation number 864.9700. This unit is not intended for use in classified hazardous locations, nor to be used for the storage of flammable inventory. Reference: AABB - Technical Manual 17th Ed., page 273, 274. STANDARDS FOR TISSUE BANKING 14th Ed., Section E, E3.300, E3.310, Table E3.331. Note for clarity: The 'Bone' is the Osteoarticular Graft, a weight-bearing allograft with intact articular surfaces, consisting of a joint with associated soft tissue and bone. STANDARDS FOR TISSUE BANKING 14th Ed., Section page 8.

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

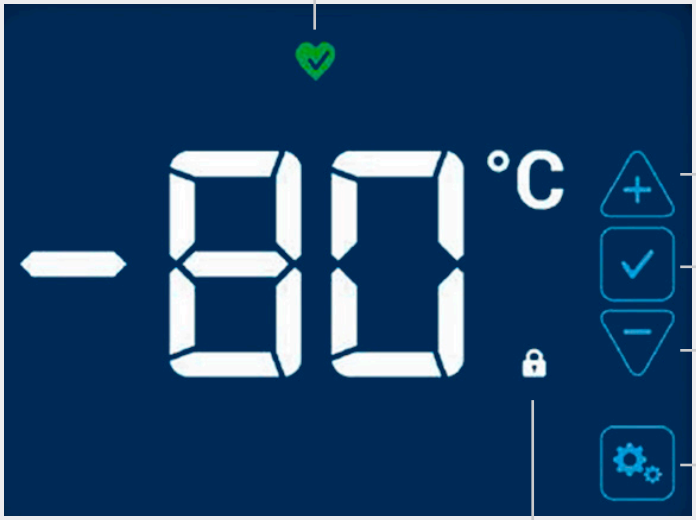
A rich heritage of innovation

From our first ULT freezer in 1940 to today, the combined experience of REVCO, Forma Scientific, Jewett, Harris, and other families of products continues to drive our ability to deliver industry-leading innovations that help accelerate science and health care.

Easy-to-access controls with setpoint security

- Easy to use: plug in and go, no setup required
- HIC combines easy-to-read temperature with simple capacitive touch buttons
- Advanced security features: alarm settings, setpoint security passcode, and padlock-compatible doors

Heart—the heart is the health status for the freezer



Easy-to-read alerts

Alarm bell—indicates visual and audible alarms

Door—illuminates during a door ajar alarm

Wrench—generic service warning

Thermometer—indicates when the cabinet temperature exceeds either warm alarm or cold alarm setpoints

Easy-to-navigate controls

Plus—increases the value of the selected setting

Check mark—saves a change to the selected value

Minus—decreases the value of the selected setting

Settings—represents the various settings

Setpoint security—protect your settings with a 3-digit numeric code

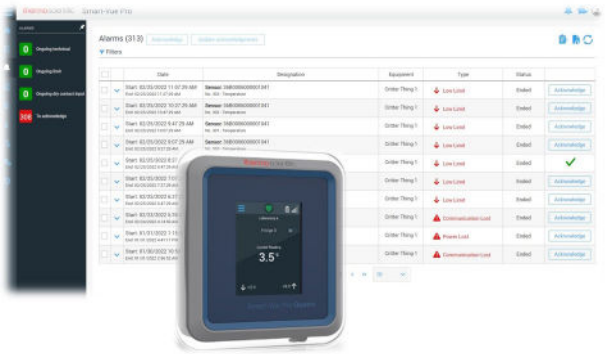
Ready for connectivity

All TDE Series ULT freezers can be managed with optional Thermo Scientific™ Smart-Vue Pro™ remote monitoring. Smart-Vue Pro enables you to view the status of your equipment—and samples—24/7 through a cloud or premise-based portal. Smart-Vue Pro also provides 21 CFR Part 11 validated data logging, eliminating a need for additional resources to perform manual processes.

For more information on Smart-Vue Pro, please visit thermofisher.com/smartvuepro

Smart-Vue Pro Benefits

- Monitoring- Sensors collect temperature, relative humidity, differential pressure, door openings and more, giving you greater situational awareness of your equipment.
- Traceability- Auditable, secure system logs with complete, history of actions and events to eliminate manual logging.
- Sample security- Programmable parameters with alerts and notifications can let you know if freezer contents are at risk.
- Installation, IQ/OQ, calibration and maintenance plans available



ACT.
The Environmental Impact Factor Label

Verified sustainability

TDE Series ULT freezers have completed the ACT Environmental Impact Factor Label labeling process, which is designed to address the need of both scientists and procurement specialists for clear, third party–verified information about the environmental impact of laboratory products. The criteria for the ACT label were developed with input from industry experts and external stakeholders, and the label process entails third-party verification of the sustainable impacts of a product, its operations, and its end of life. For additional information on the ACT label, go to thermofisher.com/actlabel.

User-friendly cabinet design

- Ergonomic design: single-hand operation with lockable door handle for easy and secure access to samples
- Flat top workspace for quick access to hands-free operation
- Casters for easy mobility; all are lockable to safely secure unit into place
- Easy-to-access USB for simplified service

A sound environment

You know that the constant noise created by compressors can compromise communications and create a less-than-ideal working environment. TDE Series ULT freezers are up to 10x quieter than our previous generation of ULT freezers.*

Decibel scale of common sounds

Noise source	Decibel level
Freeway traffic, vacuum cleaner	70
Conversation in restaurant, office, background music	60
TDE Series ULT freezers	50
Library	40
Quiet rural area	30
Rustling leaves	22
Breathing	10

* Thermo Scientific™ TDE60086FA model compared to Thermo Scientific™ Revco™ UXF60086FA model.

TDE Series –80°C ULT upright freezers

Thermo Scientific™ TDE Series –80°C ULT upright freezers, powered by the H-Drive system, are designed for efficiency. As a result, the series enables a foundational ULT experience with the reliability and performance needed to protect your work—and the sustainability to meet global compliance.

Performance data

Model series	Energy consumption* (kWh/day)	Peak variation from –80°C setpoint (°C)**	60 second door opening recovery time (minutes)	Warm-up time (–80°C to –50°C) (minutes)†	Noise level (dBA)
TDE30086	9.2	+6.3 / -3.6	11	268	51.5
TDE40086	10.4	+5.7 / -3.5	15	271	50.8
TDE50086	10.3	+4.2 / -3.8	15	312	50.0
TDE60086	11.9	5.8 / -3.3	21	352	50.5

* Energy consumption: Typical data based on internal testing with freezer setpoint at –80°C and 20°C ambient temperature.
** Peak variation from setpoint: Typical data based on internal testing with freezer setpoint at –80°C and 20°C ambient temperature.
† Warm-up time: Typical freezer data based on internal testing with empty freezer setpoint at –80°C and ambient temperature at 20°C.

Upright freezers (–50°C to –86°C)

General-purpose model	Capacity		Electrical	Amps/breaker (plug type)	Max shelf 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)
	Cu. ft. (L)	Cryoboxes (2 in.)						
TDE30086FA	14.9 (422)	300	115V/60Hz	12.6/20 (NEMA 50-20)	125 (57)	51.2 x 17.8 x 28.3 (130.1 x 45.2 x 71.9)	78.0 x 23.0 x 38.5 (198.1 x 58.4 x 97.7)	712 (323)
TDE30086FD			208-230V/60Hz	5.6/15 (NEMA 6-15)				
TDE30086FV			230V/50Hz	5.9/10 (European)				
TDE40086FA	19.4 (549)	400	115V/60Hz	13.0/20 (NEMA 5-20)	165 (75)	51.2 x 23.1 x 28.3 (130.1 x 58.8 x 71.9)	78.0 x 28.3 x 38.5 (198.1 x 71.9 x 97.7)	687 (312)
TDE40086FD			208-230V/60Hz	5.9/15 (NEMA 6-15)				
TDE40086FV			230V/50Hz	5.3/10 (European)				
TDE50086FA	24.1 (682)	500	115V/60Hz	12.5/20 (NEMA 5-20)	205 (93)	51.2 x 28.8 x 28.3 (130.1 x 73.0 x 71.9)	78.0 x 34.0 x 38.5** (198.1 x 86.4 x 97.7)	734 (333)
TDE50086FD			208-230V/60Hz	5.0/15 (NEMA 6-15)				
TDE50086FV			230V/50Hz	5.9/10 (European)				
TDE60086FA	28.8 (816)	600	115V/60Hz	12.7/20 9NEMA 5-20)	245 (111)	51.2 x 34.4 x 28.3 (130.1 x 87.3 x 71.9)	78.0 x 39.6 x 38.5** (198.1 x 100.6 x 97.7)	820 (372)
TDE60086FD			208-230V/60Hz	6.2/15 (NEMA 6-15)				
TDE60086FV			230V/50Hz	6.1/10 (European)				

A 5 inner door option is available, please contact your local representative for more information.
* Allowance for handle and hinge, add 4.2 in. (10.7 cm) to cabinet width.
** Doorway width clearance is 34.5 in. (87.6 cm) for TDE50086 and TDE60086 models.

Upright medical device freezers (–50°C to –86°C)

Medical device model	Capacity		Electrical	Amps/breaker (plug type)	Max shelf 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)
	Cu. ft. (L)	Cryoboxes (2 in.)						
TDE30086LA	14.9 (422)	300	115V/60Hz	12.6/20 (NEMA 50-20)	125 (57)	51.2 x 17.8 x 28.3 (130.1 x 45.2 x 71.9)	78.0 x 23.0 x 38.5 (198.1 x 58.4 x 97.7)	712 (323)
TDE30086LD			208-230V/60Hz	5.6/15 (NEMA 6-15)				
TDE30086LV			230V/50Hz	5.9/10 (European)				
TDE40086LA	19.4 (549)	400	115V/60Hz	13.0/20 (NEMA 5-20)	165 (75)	51.2 x 23.1 x 28.3 (130.1 x 58.8 x 71.9)	78.0 x 28.3 x 38.5 (198.1 x 71.9 x 97.7)	687 (312)
TDE40086LD			208-230V/60Hz	5.9/15 (NEMA 6-15)				
TDE40086LV			230V/50Hz	5.3/10 (European)				
TDE50086LA	24.1 (682)	500	115V/60Hz	12.5/20 (NEMA 5-20)	205 (93)	51.2 x 28.8 x 28.3 (130.1 x 73.0 x 71.9)	78.0 x 34.0 x 38.5** (198.1 x 86.4 x 97.7)	734 (333)
TDE50086LD			208-230V/60Hz	5.0/15 (NEMA 6-15)				
TDE50086LV			230V/50Hz	5.9/10 (European)				
TDE60086LA	28.8 (816)	600	115V/60Hz	12.7/20 9NEMA 5-20)	245 (111)	51.2 x 34.4 x 28.3 (130.1 x 87.3 x 71.9)	78.0 x 39.6 x 38.5** (198.1 x 100.6 x 97.7)	820 (372)
TDE60086LD			208-230V/60Hz	6.2/15 (NEMA 6-15)				
TDE60086LV			230V/50Hz	6.1/10 (European)				

* Allowance for handle and hinge, add 4.2 in. (10.7 cm) to cabinet width.
** Doorway width clearance is 34.5 in. (87.6 cm) for TDE50086 and TDE60086 models.

TDE Series –80°C ULT chest freezers

Thermo Scientific™ TDE Series –80°C ULT chest freezers, powered by the H-Drive system, enable the same excellent experience as our ULT upright freezers, with an additional benefit of enhanced performance. The combination of our ULT chest freezers' rapid door open recovery and tight peak variation make them perfect for frequent entry or long-term storage applications.

Performance data

Model series	Energy consumption* (kWh/day)	Peak variation from –80°C setpoint (°C)**	60-second door opening recovery time (minutes)	Warm-up time (–80°C to –50°C) (minutes)†	Noise level (dBA)
TDEC06386	4.9	+4.5 /-2.1	2	156	50.2
TDEC25286	8.5	6.7 /-3.1	2	154	51.6
TDEC39686	10.8	5.9 /-3.5	2	156	53.7

Specifications for chest freezers (–50°C to –86°C)

General-purpose model	Capacity		Electrical	Amps/breaker (plug type)	Interior dimensions H x W x D in. (cm)	Exterior dimensions H x W x D in. (cm)	Shippping weight lbs. (kg)
	Cu. ft. (L)	Cryoboxes (2 in.)					
TDEC06386FA	3 (85)	63	115V/60Hz	10.5/20 (NEMA 5–20)	16.4 x 18.4 x 18.4 (41.7 x 46.7 x 46.7)	43.7 x 28.8 x 32.7 (111.0 x 73.2 x 83.1)	380 (172)
TDEC25286FA	13 (360)	252	115V/60Hz	16/20 (NEMA 5–20)	27.8 x 42.4 x 18.5 (70.6 x 107.7 x 47.0)	40.5 x 72.3 x 33.1 (102.9 x 183.6 x 84.1)	710 (322)
TDEC25286FD			203–230V/60Hz	12/15 (NEMA 6–15)			
TDEC39686FA	20 (566)	396	115V/60Hz	16/20 (NEMA 5–20)	27.8 x 66.4 x 18.5 (70.6 x 168.7 x 47.0)	40.5 x 96.3 x 33.1 (102.9 x 244.6 x 84.1)	860 (390)
TDEC39686FD			203–230V/60Hz	12/15 (NEMA 6–15)			
TDEC06386FV	3 (85)	63	230V/50Hz	5.6/16 (European)	16.4 X 18.4 x 18.4 (41.7 x 46.7 x 46.7)	43.7 x 28.8 x 32.7 (111.0 x 73.2 x 83.1)	380 (176)
TDEC25286FV	13 (360)	252	230V/50Hz	5.2/16 (European)	27.8 x 42.4 x 18.5 (70.6 x 107.7 x 47.0)	40.5 x 72.3 x 33.1 (102.9 x 183.6 x 84.1)	710 (322)
TDEC39686FV	20 (566)	396	230V/50Hz	5.5/16 (European)	27.8 x 66.4 x 18.5 (70.6 x 168.7 x 47.0)	40.5 x 96.3 x 33.1 (102.9 x 244.6 x 84.1)	860 (390)

Specifications for medical device chest freezers (–50°C to –86°C)

Medical device model‡	Capacity		Electrical	Amps/breaker (plug type)	Interior dimensions H x W x D in. (cm)	Exterior dimensions H x W x D in. (cm)	Shippping weight lbs. (kg)
	Cu. ft. (L)	Cryoboxes (2 in.)					
TDEC06386LA	3 (85)	63	115V/60Hz	10.5/20 (NEMA 5–20)	16.4 x 18.4 x 18.4 (41.7 x 46.7 x 46.7)	43.7 x 28.8 x 32.7 (111.0 x 73.2 x 83.1)	380 (172)
TDEC25286LA	13 (360)	252	115V/60Hz	16/20 (NEMA 5–20)	27.8 x 42.4 x 18.5 (70.6 x 107.7 x 47.0)	40.5 x 72.3 x 33.1 (102.9 x 183.6 x 84.1)	710 (322)
TDEC25286LD			203–230V/60Hz	12/15 (NEMA 6–15)			
TDEC39686LA	20 (566)	396	115V/60Hz	16/20 (NEMA 5–20)	27.8 x 66.4 x 18.5 (70.6 x 168.7 x 47.0)	40.5 x 96.3 x 33.1 (102.9 x 244.6 x 84.1)	860 (390)
TDEC39686LD			203–230V/60Hz	12/15 (NEMA 6–15)			
TDEC06386LV	3 (85)	63	230V/50Hz	5.6/16 (European)	16.4 X 18.4 x 18.4 (41.7 x 46.7 x 46.7)	43.7 x 28.8 x 32.7 (111.0 x 73.2 x 83.1)	380 (176)
TDEC25286LV	13 (360)	252	230V/50Hz	5.2/16 (European)	27.8 x 42.4 x 18.5 (70.6 x 107.7 x 47.0)	40.5 x 72.3 x 33.1 (102.9 x 183.6 x 84.1)	710 (322)
TDEC39686LV	20 (566)	396	230V/50Hz	5.5/16 (European)	27.8 x 66.4 x 18.5 (70.6 x 168.7 x 47.0)	40.5 x 96.3 x 33.1 (102.9 x 244.6 x 84.1)	860 (390)

* Energy consumption: Typical data based on internal testing with freezer setpoint at –80°C and 20°C ambient temperature,
** Peak variation from setpoint: Typical data based on internal testing with freezer setpoint at –80°C and 20°C ambient temperature.
† Warm-up time: Typical freezer data based on internal testing with empty freezer setpoint at –80°C and ambient temperature at 20°C.
‡ Medical Device Models US only

TDE Series –40°C ULT upright freezers

Thermo Scientific™ TDE Series –40°C ULT freezers, powered by the H-Drive system, bring the excellent experience you'd expect from our –80°C freezers but tuned specifically for the performance required between –10°C and –40°C.

Performance data

General-purpose model	Energy consumption* (kWh/day)	Peak variation from –40°C setpoint (°C)**	60-second door opening recovery time (min)†	Warm-up time (–40°C to –20°C) (min)‡	Sound (dBA)
TDE40040FA	5.2	+2.6/–2.2	20	300	49
TDE40040FD	4.4	+3.4/–1.5	18	314	52
TDE50040FA	5.3	+3.0/–2.4	24	350	51
TDE50040FD	5.1	+2.2/–2.2	25	318	48
TDE60040FA	6.0	+1.4/–2.4	23	384	49
TDE60040FD	5.9	+1.5/–1.9	25	362	49

* Energy consumption: Typical data based on internal testing with freezer setpoints at –40°C and 20°C ambient temperature.
** Peak variation from setpoint: Typical data based on internal testing with freezer setpoint at –40°C and 20°C ambient temperature.
† Door opening recovery: Typical data—internal recovery testing is –38.5°C. During the door opening, all inner and outer doors are opened for 60 seconds.
‡ Warm-up time: Typical data based on internal testing with empty freezer setpoint at –40°C and ambient temperature at 20°C.
For specific model performance data, please refer to the individual technical specification sheet for the desired model.

Specifications for upright freezers (–10°C to –40°C)

General-purpose model	Capacity		Electrical	Amps/breaker (plug type)	Max shelf 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)
	Cu. ft. (L)	Cryoboxes (2 in.)						
TDE40040FA	19.4 (549)	400	115V/60Hz	7.2/20 (NEMA 5-20)	165 (75)	51.2 x 23.1 x 28.3 (130.1 x 58.8 x 71.9)	78.0 x 28.3 x 38.5 (198.1 x 71.9 x 97.7)	642 (292)
TDE40040FD			208-230V/60Hz	3.4/15 (NEMA 6-15)				
TDE40040FV			230V/50Hz	3.2/10 (European)				
TDE50040FA	24.1 (682)	500	115V/60Hz	7.5/20 (NEMA 5-20)	205 (93)	51.2 x 28.8 x 28.3 (130.1 x 73.0 x 71.9)	78.0 x 34.0 x 38.5** (198.1 x 86.4 x 97.7)	668 (304)
TDE50040FD			208-230V/60Hz	4.0/15 (NEMA 6-15)				
TDE50040FV			230V/50Hz	3.4/10 (European)				
TDE60040FA	28.8 (816)	600	115V/60Hz	7.5/20 (NEMA 5-20_	254 (111)	51.2 x 34.4 x 28.3 (130.1 x 87.3 x 71.9)	78.0 x 39.6 x 38.5** (198.1 x 100.6 x 97.7)	765 (348)
TDE60040FD			208-230V/60Hz	4.0/15 (NEMA 6-15)				
TDE60040FV			230V/50Hz	3.4/10 (European)				

A 5 inner door option is available, please contact your local representative for more information.

Medical device model	Capacity		Electrical	Amps/breaker (plug type)	Max shelf 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)
	Cu. ft. (L)	Cryoboxes (2 in.)						
TDE40040LA	19.4 (549)	400	115V/60Hz	7.2/20 (NEMA 5-20)	165 (75)	51.2 x 23.1 x 28.3 (130.1 x 58.8 x 71.9)	78.0 x 28.3 x 38.5 (198.1 x 71.9 x 97.7)	642 (292)
TDE40040LD			208-230V/60Hz	3.4/15 (NEMA 6-15)				
TDE40040LV			230V/50Hz	3.2/10 (European)				
TDE50040LA	24.1 (682)	500	115V/60Hz	7.5/20 (NEMA 5-20)	205 (93)	51.2 x 28.8 x 28.3 (130.1 x 73.0 x 71.9)	78.0 x 34.0 x 38.5** (198.1 x 86.4 x 97.7)	668 (304)
TDE50040LD			208-230V/60Hz	4.0/15 (NEMA 6-15)				
TDE50040LV			230V/50Hz	3.4/10 (European)				
TDE60040LA	28.8 (816)	600	115V/60Hz	7.5/20 (NEMA 5-20_	254 (111)	51.2 x 34.4 x 28.3 (130.1 x 87.3 x 71.9)	78.0 x 39.6 x 38.5** (198.1 x 100.6 x 97.7)	765 (348)
TDE60040LD			208-230V/60Hz	4.0/15 (NEMA 6-15)				
TDE60040LV			230V/50Hz	3.4/10 (European)				

* Allowance for handle and hinge, add 4.2 in. (10.7 cm) to cabinet width.
** Doorway width clearance is 34.5 in. (87.6 cm) for TDE50040 and TDE60040.

TDE Series ULT upright freezers—options and accessories

Options (field installations must be performed by a qualified professional)

		Model series			
Description	**Installation**	**TDE30086**	**TDE40086**	**TDE50086**	**TDE60086**
LN_2 Backup System Maintains temperature down to –80°C with liquid nitrogen. Models for TDE30086 are stand-alone.	Factory	N/A	LN4567	LN4567	LN4567
	Field	FLN300D* FLN300V** FLN300W†	FLN456LED* FLN456LEV**	FLN456LED* FLN456LEV**	FLN456LED* FLN456LEV**
CO_2 Backup System Maintains temperature down to –67°C with CO_2. Models for TDE30086 are stand-alone.	Factory	N/A	CO4567	CO4567	CO4567
	Field	FCO300D* FCO300V** FCO300W†	FCO456LED* FCO456LEV**	FCO456LED* FCO456LEV**	FCO456LED* FCO456LEV**
TSX Pro Series User Interface Option (only available for upright models)	Factory	UI34567H	UI34567H	UI34567H	UI34567H
Chart Recorder (Inkless) Seven-day inkless recorder Range: –115°C to +50°C (+5°C resolution) Dia.: 6 in. (15.2 cm)	Factory	N/A	N/A	CR4567	CR4567
	Field	N/A	N/A	FCR500LE	FCR600LE
Chart Recorder (Ink) Seven-day ink recorder Range: –100°C to +38°C (+2°C resolution) Dia.: 6 in. (15.2 cm) Models for TDE30086 and TDE40086 are stand-alone.	Factory	N/A	N/A	CRP4567	CRP4567
	Field	6383-6D* 6383-6V** 6383-6W†	6383-6D* 6383-6V** 6383-6W†	FCRP500LE	FCRP600LE
Revco Five Inner Door Configuration	Factory	5D300	5D400	5D500	5D600
Stainless Steel Freezer Interior	Factory	SS34567	SS34567	SS34567	SS34567
Twist Lock Plug NEMA L6–15P for 208–230V/60Hz	Factory	US230V15ATL	US230V15ATL	US230V15ATL	US230V15ATL
	Field	TL230V15A	TL230V15A	TL230V15A	TL230V15A
Twist Lock Plug NEMA L6–20P for 208–230V/60Hz	Factory	US230V20ATL	US230V20ATL	US230V20ATL	US230V20ATL
	Field	TL230V20A	TL230V20A	TL230V20A	TL230V20A

* D = 208–230V/60Hz (NEMA 6–15 plug).
** V = 230V/50Hz (European plug).
† W = 230V/50Hz (UK plug).
‡ Water-cooled option only available on 230V/50Hz units.

Accessories

	Model series			
Description	**TDE30086**	**TDE40086**	**TDE50086**	**TDE60086**
Air Filter (Replacement)	AF34567LE	AF34567LE	AF34567LE	AF34567LE
Alarm Delay Module Eliminates nuisance alarms due to intermittent or transitory conditions. (The alarm conditions must exist for a user-defined period before the signal is broadcast.)	6903	6903	6903	6903
Battery Backup (Replacement)	400159	400159	400159	400159
Chart Paper, for Inkless Recorder, 50/Pack	N/A	N/A	6185	6185
Chart Paper, for Ink Recorder, 50/Pack	17020	17020	17020	17020
Cryo Gloves, Medium	4425	4425	4425	4425
Cryo Gloves, Large	4426	4426	4426	4426
Seismic Restraint Kits	TF-ULT300	TF-ULT400	TF-ULT500	TF-ULT600
Shelf Kits: Include One Shelf and Clips	SK300	SK400	SK500	SK600

Cord description	Model
NEMA 5–20 125V/20A	US125V20A
NEMA 6–20 230V/15A	US230V15A
Argentina 230V/16A	AR230V16A
Australia 230V/16A	AU230V16A
Brazil 230V/16A	BR230V16A
China 230V/16A	CH230V16A
Denmark 230V/16A	DK230V16A
Continental EU 230V/16A	EU230V16A
India 230V/16A	IN230V16A
Israel 230V/16A	IS230V16A
Italy 230V/16A	IT230V16A
Japan 125V/20A	JP125V20A
Japan 250V/15A	JP250V15A
Switzerland 230V/16A	SW230V16A
UK 230V/13A	UK230V13A

Racks for boxes and microplates

Racks for 5 cm boxes

Description	Dimensions H x W x D cm	Storage capacities	Model series				Cat. No.
			TDE30086	TDE40086	TDE50086	TDE60086	
Sliding drawer rack	30.2 x 14.0 x 68.3	Boxes/rack	25	25	25	25	920090
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Boxes/freezer	300	400	500	600	
Adjustable side access rack	29.5 x 13.7 x 67.9	Boxes/rack	25	25	25	25	1950520
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Boxes/freezer	300	400	500	600	

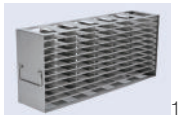
Racks for 7.62 cm boxes

Description	Dimensions H x W x D cm	Storage capacities	Model series				Cat. No.
			TDE30086	TDE40086	TDE50086	TDE60086	
Sliding drawer rack	30.2 x 14.0 x 68.3	Boxes/rack	15	15	15	15	920091
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Boxes/freezer	180	240	300	360	
Adjustable side access rack for 3 in. boxes	29.5 x 13.7 x 67.9	Boxes/rack	15	15	15	15	1950521
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Boxes/freezer	180	240	300	360	

Racking shelf kits

Description	Storage capacities	Model series			
		TDE30086	TDE40086	TDE50086	TDE60086
	Cat. No.	RSK300SD4	RSK400SD4	RSK500SD4	RSK600SD4
Sliding drawer racks with boxes for one shelf (12.7 x 12.7 x 5.0 cm boxes with 100-count cell dividers)	Racks included	3	4	5	6
	Boxes included	75	100	125	150

Racks for standard or deep-well microplates

Description	Dimensions H x W x D cm	Storage capacities	Model series				Cat. No.
			TDE30086	TDE40086	TDE50086	TDE60086	
Side access rack with locking rod	30.2 x 14.0 x 65.3	Plates/rack	147	147	147	147	1950592
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Plates/freezer	1,764	2,352	2,940	3,528	
Side access microplate rack	30.2 x 14.0 x 65.3	Plates/rack	105	105	105	105	 1950523
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Plates/freezer	1,260	1,680	2,100	2,520	
Sliding drawer microplate rack	30.2 x 14.0 x 66.3	Plates/rack	35	35	35	35	1950642
		Racks/shelf	3	4	5	6	
		Racks/freezer	12	16	20	24	
		Plates/freezer	420	560	700	840	

Boxes and dividers

Description	No. of dividers	Quantity	Color	Cat. No.
Thermo Scientific™ Nalgene™ polycarbonate 5.08 cm box for 1.2 to 2.0 mL vials	81	24/case	White	5026-0909
5.08 cm fiberboard box	0	12/pack	White	5954
5.08 cm fiberboard box	81	1	White	820002
5.08 cm fiberboard box	100	1	White	820109
7.62 cm fiberboard box	0	12/pack	White	5956
7.62 cm fiberboard box	81	1	White	820003
5.08 cm fiberboard box	0	12/pack	Multiple	1950878
5.08 cm fiberboard box	0	12/pack	Pink	1950879
5.08 cm fiberboard box	0	12/pack	Red	1950880
5.08 cm fiberboard box	0	12/pack	Yellow	1950881
5.08 cm fiberboard box	0	12/pack	Green	1950882
5.08 cm fiberboard box	0	12/pack	Blue	1950883
5.08 cm fiberboard box	0	12/pack	Black	1950884

Fiberboard dividers

Description	Quantity/pack	Cat. No.
Grid dividers, hold 100 x 12 mm tubes/vials	12	5958
Grid dividers, hold 81 x 13 mm tubes/vials	12	6212
Grid dividers, hold 64 x 14 mm tubes/vials	12	5960
Grid dividers, hold 49 x 16 mm tubes/vials	12	5959

TDE Series ULT chest freezers—options and accessories

Accessories

		Model series		
Description	**Installation**	**TDEC06386**	**TDEC25286**	**TDEC39686**
LN_2 Backup System, maintains temperature down to –80°C with liquid nitrogen	Factory	332353G01	332353G05	332353G05
CO_2 Backup System, maintains temperature down to –70°C with CO_2	Factory	332353G02	332353G06	332353G06
Chart Recorder (Inkless), 7-day inkless recorder Range: –115°C to +50°C (+5°C resolution) Diameter: 6 in. (15.2 cm)	Factory	332791G01	332166G01	332166G01
Chart Recorder (Ink), 7-day ink recorder Range: –115°C to +50°C (+5°C resolution) Diameter: 6 in. (15.2 cm)	Factory	332791G02	332166G02	332166G02

Description	**Model No.**
Replacement Air Filter Chest Freezers (quantity of 5)	332297H02
Replacement Backup Battery	400159
Chart Paper, for Inkless Recorder, 50/pack	90520H07
Chart Paper, for Ink Recorder, 50/pack	17020
Cryo Gloves, medium	4425
Cryo Gloves, large	4426

	Description/dimensions H x W x D in. (cm)	**Freezer capacity cu. ft. (liters)**	**Boxes/rack (plates)**	**Racks/freezer (plates)**	**Boxes/freezer (plates)**	**Cat. No.**
	2 Box Rack with locking rod, 5.5 x 15.2 x 5.5 (14 x 38.6 x 14)	3 (85)	7	9	63	398184
	3 Box Rack, 5.5 x 5.5 x 16 (14 x 14 x 40.6)	3 (85)	5	9	45	398185
	2 Box Rack with locking rod, 5.5 x 5.6 x 26.5 (14 x 14.2 x 67.3)	13 (360)	12	21	252	398186
		20 (566)	12	33	396	
	3 Box Rack, 9.4 x 5.5 x 26.5 (14 x 14 x 67.3)	13 (360)	8	21	168	398187
		20 (566)	8	33	264	
	27 Position Microplate Rack, 5.3 x 3.5 x 25.8 (13.5 x 8.9 x 65.5)	13 (360)	(27)	(33)	(891)	398188
		20 (566)	(27)	(51)	(1377)	
	Wire Basket with Rollers* 11.8 x 16.5 x 12.3 (29.9 x 41.9 x 31.2)	13 (360)	NA	5	NA	114048
		20 (566)	NA	9	NA	

*Basket rail set is required.

Services

Certificate of calibration

Control, alarm, and temperature recording systems are systematically calibrated at the factory for accurate performance. An optional certificate of calibration to an NIST (National Institute of Standards and Technology, formerly National Bureau of Standards) traceable instrument includes a model number and serial number certificate (single-point calibration). Multiple-point calibration is also available. Calibration certificates must be requested when ordering. For details, contact your sales representative.

Validation testing program

Validation testing services ordered in advance of shipment may accelerate in-house installation qualification (IQ) and operation qualification (OQ) programs. Validation services include documentation and performance reports, compressor and subsystem component specifications, microprocessor flow diagrams, software specifications, and more. For more details, contact your sales representative.

Services description	Cat. No.
Temperature mapping of 24 hours at setpoint to include: • Mapping data graphed at each location • Thermocouple placement diagram • Test equipment list • Average uniformity and stability at specified cycle • Minimum, average, and maximum temperatures at each thermocouple location • Uniformity and stability at each location	74554TA
Temperature mapping of 24 hours (traceable instruments and raw data) at setpoint to include: • Mapping data graphed at each location • Thermocouple placement diagram • Test equipment list utilizing Kaye Validator™ thermal validation equipment • Calibration certificates of test equipment • Thermocouple calibration reports • Average uniformity and stability at specified cycle • Minimum, average, and maximum temperatures at each thermocouple location • Uniformity and stability at each location	7456TA
Certificate of verification	6916-2
Factory quality control test log report	6916-4
Factory quality control test temperature graphs	6916-5
Calibration Certificate (chest)	260029
Certificate of Conformance (chest)	260043
Unit specific calibration certificate (chest)	260049

Note: Selected models require calibration certificate for NSF 456 vaccine standard labeling.

ThermoFisher SCIENTIFIC

Also available: TSX Series ULT freezers

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

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