



# TDE Series ultra-low temperature freezers



# 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<sup>1</sup>
- Fast door opening recovery; as little as 1 minute for chest freezers
- Secure freezer settings with sample security
- General-purpose models for nondiagnostic general laboratory use, and Class II Medical Device models for storage and preservation of blood and blood products at freezing temperatures<sup>2</sup>
- Backed by our Global Service and Support team

#### Limit environmental impact and lower HVAC costs

- -86°C 600 box models are ENERGY STAR<sup>™</sup>-certified and feature an ACT<sup>™</sup> Environmental Impact Factor Label
- Energy use as low as 6.6 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<sup>3</sup>
- Decrease storage footprint up to 25%
- 5-year parts and labor standard warranty\*

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

<sup>1.</sup> 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.

<sup>2.</sup> Verification of medical devices in the United States can be found on: https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfrl/rl.cfm.

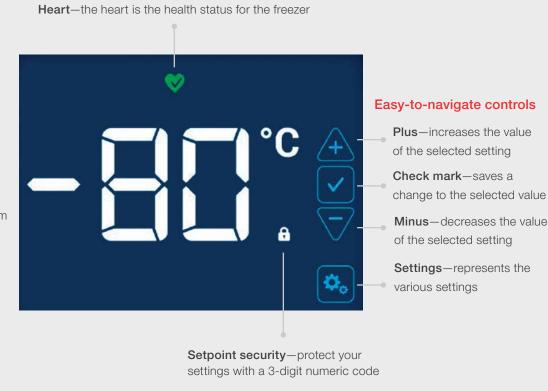
<sup>3.</sup> All data based on internal testing unless otherwise noted. Data on file.

# A rich heritage of innovation

From our first ULT freezer in 1940 to today, the combined experience of REVCO<sup>™</sup>, Forma Scientific<sup>™</sup>, Jewett<sup>™</sup>, Harris<sup>™</sup>, 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



#### 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



## Ready for connectivity

TDE Series ULT freezer models are compatible with the Thermo Scientific™ DeviceLink™ Connect monitoring system. This enables you to have a connected experience with your unit, so you always know the safety of your samples and the performance of your refrigerator or freezer—anytime, anywhere. The units are also compatible with Thermo Scientific™ Smart-Vue™ Pro wireless monitoring systems.

#### Get your ULT freezers connected

The DeviceLink Connect system connects to your instrument. The InstrumentConnect app connects to you.



# Help improve connectivity with automated data collection, storage, and mobile access

- The DeviceLink Connect monitoring solution allows 24/7 access to data and alarms from monitored lab equipment
- Data are securely stored in the cloud and sent to users via email and mobile phone notifications
- Streamlined dashboard-style reports reduce time spent interpreting data

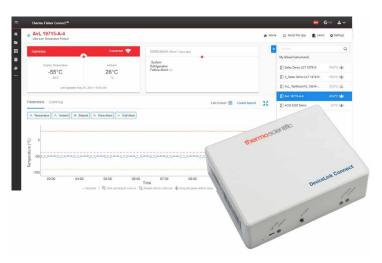
DeviceLink Connect kit ordering information:

Description	Cat. No.
DeviceLink Connect Remote Monitoring	DLCKTULTS101
System (Kits*) for ULT freezers	

<sup>\*</sup> Kit includes a DeviceLink Connect system, 1-year basic monitoring subscription, power cable, commissioner USB, monitoring hardware, and an applicable serial or USB cable.

For more information on the DeviceLink Connect monitoring system, please visit **thermofisher.com/dlc**.

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





## 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

<sup>\*</sup> 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	11.2	+7.2 / -6.1	13	255	51.5
TDE40086	12.9	+6.0 / -4.0	16	277	50.8
TDE50086	12.8	+4.5 / -3.2	21	302	50.0
TDE60086	13.6	+4.6 / -3.3	22	343	50.5



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



#### Upright freezers (-50°C to -86°C)

General-	Сар	acity		Amps/breaker	Max shelf	Interior dimensions	Exterior dimensions	Shipping	
purpose model	Cu. ft. (L)	Cryoboxes (2 in.)	Electrical	(plug type)	weight lbs. (kg)	H x W x D in. (cm)	H x W* x D in. (cm)	weight lbs. (kg)	
TDE30086FA	14.9	300	115V/60Hz	12.6/20 (NEMA 5-20)	125	51.2 x 17.8 x 28.3	78.0 x 23.0 x 38.5	712	
TDE30086FD	(422)	300	208-230V/60Hz	5.6/15 (NEMA 6-15)	(57)	(130.1 x 45.2 x 71.9)	(198.1 x 58.4 x 97.7)	(323)	
TDE40086FA	19.4	400	115V/60Hz	13.0/20 (NEMA 5-20)	165	51.2 x 23.1 x 28.3	78.0 x 28.3 x 38.5	687	
TDE40086FD	(549)	400	208-230V/60Hz	5.9/15 (NEMA 6-15)	(75)	(130.1 x 58.8 x 71.9)	(198.1 x 71.9 x 97.7)	(312)	
TDE50086FA	24.1	500	115V/60Hz	12.5/20 (NEMA 5-20)	205	51.2 x 28.8 x 28.3	78.0 x 34.0 x 38.5**	734	
TDE50086FD	(682)	500	208-230V/60Hz	5.0/15 (NEMA 6-15)	(93)	(130.1 x 73.0 x 71.9)	(198.1 x 86.4 x 97.7)	(333)	
TDE60086FA	28.8	600	115V/60Hz	12.7/20 (NEMA 5-20)	245	51.2 x 34.4 x 28.3	78.0 x 39.6 x 38.5**	820	
TDE60086FD	(816)	000	208-230V/60Hz	6.2/15 (NEMA 6-15)	(111)	(130.1 x 87.3 x 71.9)	(198.1 x 100.6 x 97.7)	(372)	

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

#### Upright medical device freezers (-50°C to -86°C)

Medical				Amps/breaker	Max shelf	Interior dimensions	Exterior dimensions	Shipping
device model	Cu. ft. (L)	Cryoboxes (2 in.)	Electrical	(plug type) weight lbs		H x W x D in. (cm)	H x W* x D in. (cm)	weight lbs. (kg)
TDE30086LA	14.9	300	115 V/60Hz	12.6/20 (NEMA 5-20)	125	51.2 x 17.8 x 28.3	78.0 x 23.0 x 38.5	712
TDE30086LD	(422)	300	208-230V/60Hz	5.6/15 (NEMA 6-15)	(57)	(130.1 x 45.2 x 71.9)	(198.1 x 58.4 x 97.7)	(323)
TDE40086LA	19.4	400	115V/60Hz	13.0/20 (NEMA 5-20)	165	51.2 x 23.1 x 28.3	78.0 x 28.3 x 38.5	687
TDE40086LD	(549)	400	208-230V/60Hz	5.9/15 (NEMA 6-15)	(75)	(130.1 x 58.8 x 71.9)	(198.1 x 71.9 x 97.7)	(312)
TDE50086LA	24.1	500	115V/60Hz	12.5/20 (NEMA 5-20)	205	51.2 x 28.8 x 28.3	78.0 x 34.0 x 38.5**	734
TDE50086LD	(682)	500	208-230V/60Hz	5.0/15 (NEMA 6-15)	(93)	(130.1 x 73.0 x 71.9)	(198.1 x 86.4 x 97.7)	(333)
TDE60086LA	28.8	600	115V/60Hz	12.7/20 (NEMA 5-20)	245	51.2 x 34.4 x 28.3	78.0 x 39.6 x 38.5**	820
TDE60086LD	(816)	000	208-230V/60Hz	6.2/15 (NEMA 6-15)	(111)	(130.1 x 87.3 x 71.9)	(198.1 x 100.6 x 97.7)	(372)

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

<sup>†</sup> Warm-up time: Typical freezer data based on internal testing with empty freezer setpoint at -80°C and ambient temperature at 20°C.

 $<sup>^{\</sup>star\star}$  Doorway width clearance is 34.5 in. (87.6 cm) for TDE50086 and TDE60086 models.

<sup>\*\*</sup> 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) <sup>†</sup>	Noise level (dBA)
TDEC06386	6.6	+5.1/-3.6	1	141	50.9
TDEC25286	9.4	5.2/-3.4	3	134	55.5
TDEC39686	11	5.2/-2.8	1	162	52.9

#### Specifications for chest freezers (-50°C to -86°C)

General-	_ Capacity				Interior dimensions	Exterior dimensions	Chianian mainh
purpose model	Cu. ft. (L)	Cryoboxes (2 in.)	Electrical	Amps/breaker (plug type)	H x W x D in. (cm)	H x W x D in. (cm)	Shipping weight Ibs. (kg)
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	252	115V/60Hz	16/20 (NEMA 5-20)	27.8 x 42.4 x 18.5	40.5 x 72.3 x 33.1	710
TDEC25286FD	(360)	202	203-230V/60Hz	12/15 (NEMA 6-15)	(70.6 x 107.7 x 47.0)	(102.9 x 183.6 x 84.1)	(322)
TDEC39686FA	20	396	115V/60Hz	16/20 (NEMA 5-20)	27.8 x 66.4 x 18.5	40.5 x 96.3 x 33.1	860
TDEC39686FD	(566)	390	203-230V/60Hz	12/15 (NEMA 6-15)	(70.6 x 168.7 x 47.0)	(70.6 x 168.7 x 47.0) (102.9 x 244.6 x 84.1)	

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

Modical	Medical Capacity			Amps/breaker	Interior dimensions	Exterior dimensions	Shinning weight
device model	Cu. ft. (L)	Cryoboxes (2 in.)	Electrical	(plug type)	H x W x D in. (cm)	H x W x D in. (cm)	Shipping weight Ibs. (kg)
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	252	115V/60Hz	16/20 (NEMA 5-20)	27.8 x 42.4 x 18.5	40.5 x 72.3 x 33.1	710
TDEC25286LD	(360)	252	203-230V/60Hz	12/15 (NEMA 6-15)	(70.6 x 107.7 x 47.0)	(102.9 x 183.6 x 84.1)	(322)
TDEC39686LA	20	396	115V/60Hz	16/20 (NEMA 5-20)	27.8 x 66.4 x 18.5	40.5 x 96.3 x 33.1	860
TDEC39686LD	(566)	396	203-230V/60Hz	12/15 (NEMA 6-15)	(70.6 x 168.7 x 47.0)	(102.9 x 244.6 x 84.1)	(390)

 $<sup>^{\</sup>star}\,\text{Energy consumption:}\,\text{Typical data based on internal testing with freezer setpoint}\,\text{at}\,-80\,^{\circ}\text{C}\,\text{and}\,20\,^{\circ}\text{C}\,\text{ambient temperature}.$ 

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

<sup>†</sup> Warm-up time: Typical freezer data based on internal testing with empty freezer setpoint at -80°C and ambient temperature at 20°C.

# 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) <sup>†</sup>	Warm-up time (–40°C to –20°C) (min) <sup>‡</sup>	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



<sup>\*\*</sup> Peak variation from setpoint: Typical data based on internal testing with freezer setpoint at -40°C and 20°C ambient temperature.



#### Specifications for upright freezers (-10°C to -40°C)

	Capacity				Max shelf			Shipping
General- purpose model	Cu. ft. (L)	Cryoboxes (2 in.)	Electrical	Amps/breaker (plug type)	weight lbs. (kg)	Interior dimensions H x W x D in. (cm)	Exterior dimensions H x W* x D in. (cm)	weight lbs. (kg)
TDE40040FA	19.4	400	115V/60Hz	7.2/20 (NEMA 5-20)	165	51.2 x 17.8 x 28.3	78.0 x 28.3 x 38.5	642
TDE40040FD	(549)	400	208-230V/60Hz	3.4/15 (NEMA 6-15)	(75)	(130.1 x 45.2 x 71.9)	(198.1 x 71.9 x 97.7)	(292)
TDE50040FA	24.1	500	115V/60Hz	7.5/20 (NEMA 5-20)	205	51.2 x 28.8 x 28.3	78.0 x 34.0 x 38.5	668
TDE50040FD	(682)	500	208-230V/60Hz	4.0/15 (NEMA 6-15)	(93)	(130.1 x 73.0 x 71.9)	(198.1 x 86.4 x 97.7)	(304)
TDE60040FA	28.8	600		7.5/20 (NEMA 5-20)	245	51.2 x 34.4 x 28.3	78.0 x 39.6 x 38.5**	765
TDE60040FD	(816)	600	208-230V/60Hz	4.0/15 (NEMA 6-15)	(111)	(130.1 x 87.3 x 71.9)	(198.1 x 100.6 x 97.7)	(348)

 $<sup>^{\</sup>star}$  Allowance for handle and hinge, add 4.2 in. (10.7 cm) to cabinet width.

<sup>†</sup> 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.

<sup>\$\</sup>pmu \text{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.

<sup>\*\*</sup> 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, Backup System	Factory	N/A	LN4567	LN4567	LN4567	
Maintains temperature down to -80°C with liquid nitrogen. Models for TDE30086 are stand-alone.	Field	FLN300A* FLN300D**	FLN456LEA* FLN456LED**	FLN456LEA* FLN456LED**	FLN456LEA* FLN456LED**	
CO, Backup System	Factory	N/A	CO4567	CO4567	CO4567	
Maintains temperature down to -67°C with CO <sub>2</sub> . Models for TDE30086 are stand-alone.	Field	FCO300A* FCO300D**	FCO456LEA* FCO456LED**	FCO456LEA* FCO456LED**	FCO456LEA* FCO456LED**	
TSX Pro Series User Interface Option (only available for upright models)	Factory	UI34567H	UI34567H	Ul34567H	UI34567H	
Chart Recorder (Inkless)	Factory	N/A	N/A	CR4567	CR4567	
Seven-day inkless recorder Range: -115°C to +50°C (+5°C resolution) Dia.: 6 in. (15.2 cm)	Field	N/A	N/A	FCR500LE	FCR600LE	
Chart Recorder (Ink)	Factory	N/A	N/A	CRP4567	CRP4567	
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.	Field	6383-6A* 6383-6D**	6383-6A* 6383-6D**	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	
TWIST LOOK FING INCINIA COTTOF TOLI 200-2500//00112	Field	TL230V15A	TL230V15A	TL230V15A	TL230V15A	
Twist Lock Plug NEMA L6-20P for 208-230V/60Hz	Factory	US230V20ATL	US230V20ATL	US230V20ATL	US230V20ATL	
TWIST LOOK FING INCINIA CO-201 TOLI 200-2007/00/12	Field	TL230V20A	TL230V20A	TL230V20A	TL230V20A	

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

#### 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

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

## Racks for boxes and microplates

#### Racks for 5 cm boxes

Description	Dimensions	Chavara comonitico	Model series				Cat. No.	
Description	H x W x D cm	Storage capacities	TDE30086	TDE40086	TDE50086	TDE60086	Gat. No.	
		Boxes/rack	25	25	25	25		
Sliding 30.2 x 1	30.2 x 14.0 x 68.3	Racks/shelf	3	4	5	6	9	
	30.2 X 14.0 X 66.3	Racks/freezer	12	16	20	24	920090	
		Boxes/freezer	300	400	500	600	920090	
		Boxes/rack	25	25	25	25		
Adjustable side access rack	00.540.707.0	Racks/shelf	3	4	5	6		
	29.5 x 13.7 x 67.9	Racks/freezer	12	16	20	24	1050500	
		Boxes/freezer	300	400	500	600	1950520	

#### Racks for 7.62 cm boxes

Description	Dimensions	Stavana aanaaitiaa	Model series				· Cat. No.
Description	H x W x D cm	Storage capacities	TDE30086	TDE40086	TDE50086	TDE60086	- Gal. No.
Sliding	_	Boxes/rack	15	15	15	15	
	30.2 x 14.0 x 68.3	Racks/shelf	3	4	5	6	5
drawer rack		Racks/freezer	12	16	20	24	920091
		Boxes/freezer	180	240	300	360	020001
		Boxes/rack	15	15	15	15	
Adjustable side access rack for 3 in.	29.5 x 13.7 x 67.9	Racks/shelf	3	4	5	6	1445
boxes		Racks/freezer	12	16	20	24	1950521
		Boxes/freezer	180	240	300	360	1930321

#### Racking shelf kits

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

### Racks for standard or deep-well microplates

Description	Dimensions	Stavena conscition	Model series				· Cat. No.	
Description	H x W x D cm	Storage capacities	TDE30086	TDE40086	TDE50086	TDE60086	- Cat. No.	
		Plates/rack	147	147	147	147		
Side access rack	30.2 x 14.0 x 65.3	Racks/shelf	3	4	5	6		
with locking rod	30.2 X 14.0 X 65.3	Racks/freezer	12	16	20	24	1950592	
		Plates/freezer	1,764	2,352	2,940	3,528	1000002	
	30.2 x 14.0 x 65.3	Plates/rack	98	98	98	98		
Side access		Racks/shelf	3	4	5	6		
microplate rack		Racks/freezer	12	16	20	24		
		Plates/freezer	1,260	1,680	2,100	2,520	1950523	
		Plates/rack	35	35	35	35		
Sliding drawer microplate rack	30.2 x 14.0 x 66.3	Racks/shelf	3	4	5	6	Di ogo	
	3U.2 X 14.U X 00.3	Racks/freezer	12	16	20	24		
		Plates/freezer	420	560	700	840	1950642	

#### 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 <sub>2</sub> Backup System, maintains temperature down to	Factory	332353G01	332353G05	332353G05			
-80°C with liquid nitrogen	Field	FLN743A*	FLN744A*/FLN744D**	FLN744A*/FLN744D**			
CO <sub>2</sub> Backup System, maintains temperature down to	Factory	332353G02	332353G06	332353G06			
–70°C with CO <sub>2</sub>	Field	FCO743A*	FCO744A*/FCO744D**	FCO744A*/FCO744D**			
Chart Recorder (Inkless), 7-day inkless recorder	Factory	332791G01	332166G01	332166G01			
Range: -115°C to +50°C (+5°C resolution) Diameter: 6 in. (15.2 cm)	Field	FCR741	FCR742	FCR742			
Chart Recorder (Ink), 7-day ink recorder	Factory	332791G02	332166G02	332166G02			
Range: -115°C to +50°C (+5°C resolution) Diameter: 6 in. (15.2 cm)	Field	FCR741INK	FCR742INK	FCR742INK			

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

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

Description	Cat. 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/racks (plates)	Racks/freezer (plates)	Boxes/freezer (plates)	Cat. No.
	2 in. Box Rack - Side Access Rack (Tower), 15.2 x 5.5 x 5.5 (38.6 x 14.0 x 14.0)	3 (85)	7	9	63	398184
	3 in. Box Rack - Side Access Rack (Tower), 16.0 x 5.5 x 5.6 (40.6 x 14.0 x 14.2)	3 (85)	5	9	45	398185
	2 in. Box Rack - Side Access Rack (Tower), 26.5 x 5.5 x 5.5 (67.3 x 14.0 x 14.0)	13 (360)	12	21	252	398186
		20 (566)	12	33	396	
THE STATE OF THE S	3 in. Box Rack - Side Access Rack (Tower), 26.3 x 5.5 x 5.6 (66.8 x 14.0	13 (360)	8	21	168	- 398187
	x 14.2)	20 (566)	8	33	264	000101
	Microplate Rack, 26.5 x 5.5 x 5.5 (67.3 x 14.0 x 14.0)	13 (360)	27	21	567	398188
		20 (566)	27	33	891	- 000100
		13 (360)	NA	5	NA	
	Wire Basket with Rollers* 12.3 x 16.5 x 11.8 (31.2 x 41.9 x 29.9)	20 (566)	NA	9	NA	114048

 $<sup>^{\</sup>star}$  Basket rail set is required: Cat. No. 189001 for 360 L chest and Cat. No. 189000 for 566 L chest.

## **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 a 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	74554TA
Average uniformity and stability at specified cycle	
Minimum, average, and maximum temperatures at each thermocouple location	
Uniformity and stability at each location	
Temperature mapping of 24 hours (traceable instruments and raw data) at setpoint to include:	
Mapping data graphed at each location	
Thermocouple placement diagram	
<ul> <li>Test equipment list utilizing Kaye Validator<sup>™</sup> thermal validation equipment</li> </ul>	
Calibration certificates of test equipment	7456TA
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	
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

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

Certificate of conformance (chest)

Unit-specific calibration certificate (chest)

260043

260049



# Also available: Thermo Scientific<sup>™</sup> TSX<sup>™</sup> Universal Series ULT freezers

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



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