

thermo scientific



# Thermo Scientific TDE Series Ultra-Low Temperature Freezers

**ThermoFisher**  
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# Thermo Scientific™ TDE Series Ultra-Low Temperature Freezers

- **H-drive hydrocarbon refrigeration system** provides sustainable performance with reliability you can count on
- **Low peak variation** helps ensure sample temperature protection throughout entire cabinet
- **Fast door opening recovery** in as little as 14 minutes
- **Long warm-up time** from -80°C to -50°C in up to 5 hours
- **Four capacities:** 300, 400, 500 and 600 2-inch boxes
- **Decrease storage footprint** up to 25%
- **5-year** standard warranty



## Designed to keep your samples safe

- Worry-free storage; with low peak variation, samples are protected throughout the entire cabinet.<sup>1</sup>
- Secure freezer settings with sample security
- Backed by our Global Service and Support Team

## Limit environmental impact and lower HVAC costs

- Uses as low as 11.2 kWh/day, depending on size
- Less heat emission lowers HVAC costs
- Natural refrigerants compliant with EU F-Gas regulation: R170 and R290
- Environmentally-friendly, water-blown foam insulation
- Manufactured in an award-winning, zero-waste-to-landfill facility

## User-friendly and quiet

- New HIC touch screen user interface
- Quiet enough to reside directly in the laboratory; at just 50 dBA, the sound is comparable to a home refrigerator.<sup>2</sup>

1. 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.

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

# Dependable storage with operational savings and sustainability

## User-friendly HIC interface and cabinet

- Easy to use: plug in and go; no setup required
- H-drive Information Center (HIC) combines easy-to-read temperature with simple capacitive touch buttons
- Advanced security features: alarm settings, setpoint security passcode, and padlock-compatible doors
- Ergonomic design: single-hand door operation, eye-level display, and shelf-level placement that do not require floor-level loading of racks
- Four inner doors minimize ambient temperature during sample retrieval



## Specifications & Ordering Information



### Upright Freezers (-50°C to -86°C)

General Purpose Model	Capacity		Electrical	Amps / Breaker (Plug type)	Max Shelf Weight kg	Interior Dimensions H x W x D cm	Exterior Dimensions H x W* x D cm	Shipping Weight kg
	Liters	Cryoboxes 5 cm						
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
TDE30086FV			230V/50Hz	5.9/10 (European)				
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
TDE40086FV			230V/50Hz	5.3/10 (European)				
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
TDE50086FV			230V/50Hz	5.9/10 (European)				
TDE60086FD	816	600	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
TDE60086FV			230V/50Hz	6.1/10 (European)				

\*Allowance for handle and hinge, add 10.7 cm to cabinet width

\*\*Doorway width clearance is 87.6 cm for TDE50086 and TDE60086



### Performance Data

Model Series	Energy Consumption* (kW-hr/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	+5.9/-3.7	14	248	52
TDE40086	12.3	+5.7/-2.9	17	257	51
TDE50086	12.7	+4.2/-2.9	21	260	50
TDE60086	14.2	+3.4/-2.9	24	297	50

\*Energy Consumption: Typical data - internal testing with freezer setpoint at -80°C and 20°C ambient temperature

\*\*Peak Variation from Setpoint: Typical data - internal testing with freezer setpoint at -80°C and 20°C ambient temperature

\*\*\*Warm Up Time: Typical data - internal testing with empty freezer setpoint at -80°C and ambient temperature at 20°C

## Options (Field installations must be performed by a qualified professional)

Description	Installation	For Model Series			
		TDE30086	TDE40086	TDE50086	TDE60086
<b>LN<sub>2</sub> Backup System</b> Maintains temperature down to -80°C with liquid nitrogen. <i>Models for TDE30086 are stand alone.</i>	Factory	N/A	LN4567	LN4567	LN4567
	Field	FLN300D* FLN300V** FLN300W***	FLN456LED* FLN456LEV**	FLN456LED* FLN456LEV**	FLN456LED* FLN456LEV**
<b>CO<sub>2</sub> Backup System</b> Maintains temperature down to -67°C with CO <sub>2</sub> . <i>Models for TDE30086 are stand alone.</i>	Factory	N/A	CO4567	CO4567	CO4567
	Field	FCO300D* FCO300V** FCO300W***	FCO456LED* FCO456LEV**	FCO456LED* FCO456LEV**	FCO456LED* FCO456LEV**
<b>Chart Recorder (Inkless)</b> Seven-day inkless recorder Range: -115° to +50°C (+5°C resolution) Dia.: 6" (15.2cm)	Factory	N/A	N/A	CR4567	CR4567
	Field	N/A	N/A	FCR500LE	FCR600LE
<b>Chart Recorder (Ink)</b> Seven day ink recorder Range: -100° to +38°C (+2°C resolution) Dia.: 6" (15.2cm) <i>Models for TDE30086 and TDE40086 are stand alone.</i>	Factory	N/A	N/A	CRP4567	CRP4567
	Field	6383-6D* 6383-6V** 6383-6W***	6383-6D* 6383-6V** 6383-6W***	FCRP500LE	FCRP600LE
<b>Stainless Steel Freezer Interior</b>	Factory	SS34567	SS34567	SS34567	SS34567
<b>Water-Cooled Condenser Option</b>	Factory	N/A	WC34567****	WC34567****	WC34567
<b>Twist Lock Plug NEMA L6-15P for 208-230V/60Hz</b>	Factory	US230V15ATL	US230V15ATL	US230V15ATL	US230V15ATL
	Field	TL230V15A	TL230V15A	TL230V15A	TL230V15A
<b>Twist Lock Plug NEMA L6-20P for 208-230V/60Hz</b>	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

Description	For Model Series			
	TDE30086	TDE40086	TDE50086	TDE60086
<b>Air Filter (Replacement)</b>	AF34567LE	AF34567LE	AF34567LE	AF34567LE
<b>Alarm Delay Module</b> 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
<b>Battery Backup (Replacement)</b>	400159	400159	400159	400159
<b>Chart Paper, for Inkless Recorder, 50/Pack</b>	N/A	N/A	6185	6185
<b>Chart Paper, for Ink Recorder, 50/Pack</b>	17020	17020	17020	17020
<b>Cryo Gloves, Medium</b>	4425	4425	4425	4425
<b>Cryo Gloves, Large</b>	4426	4426	4426	4426
<b>Seismic Restraint Kits</b>	TF-ULT300	TF-ULT400	TF-ULT500	TF-ULT600
<b>Shelf Kits: Include One Shelf and Clips</b>	SK300	SK400	SK500	SK600