

# 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 11 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
- Get Connected with DeviceLink™ Hub (*Coming Soon*)
- Backed by our Global Service and Support Team

## Limit environmental impact and lower HVAC costs

- Uses as low as 10.7 kWh/day, depending on size
- Less heat emission lowers HVAC costs
- SNAP compliant, natural hydrocarbon refrigerants
- Environmentally-friendly, water-blown foam insulation is compliant with SNAP
- 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 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	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)		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)		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)		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)		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)

\*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



### 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	10.7	+6.9/-3.4	11	248	52
TDE40086	12.5	+5.2/-3.7	16	257	51
TDE50086	12.9	+4.0/-2.9	20	260	50
TDE60086	13.8	+3.9/-3.1	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 freezer data based on 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	FLN300A* FLN300D**	FLN456LEA* FLN456LED**	FLN456LEA* FLN456LED**	FLN456LEA* FLN456LED**
<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	FCO300A* FCO300D**	FCO456LEA* FCO456LED**	FCO456LEA* FCO456LED**	FCO456LEA* FCO456LED**
<b>Chart Recorder (Inkless)</b> Seven-day inkless recorder Range: -115° to +50°C (+5°C resolution) Dia.: 6 in. (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 in. (15.2cm) <i>Models for TDE30086 and TDE40086 are stand alone.</i>	Factory	N/A	N/A	CRP4567	CRP4567
	Field	6383-6A* 6383-6D**	6383-6A* 6383-6D**	FCRP500LE	FCRP600LE
<b>Stainless Steel Freezer Interior</b>	Factory	SS34567	SS34567	SS34567	SS34567
<b>Twist Lock Plug NEMA L5-20P for 115V/60Hz</b>	Factory	US125V20ATL	US125V20ATL	US125V20ATL	US125V20ATL
	Field	TL125V20A	TL125V20A	TL125V20A	TL125V20A
<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

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

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

## 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