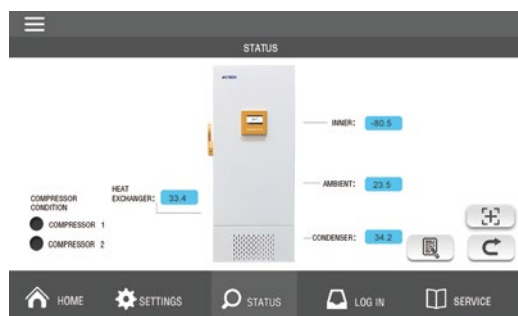
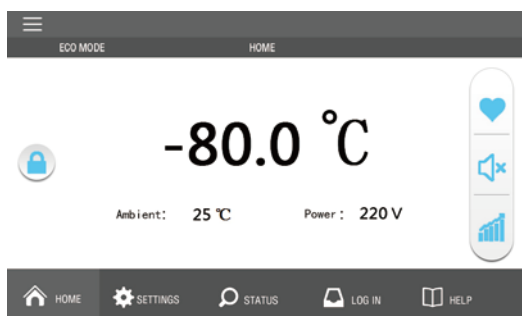


TC-310 touch screen controller

TC-310 smart control system is adopted for easy observation and convenient operation.

- 7" LCD touch screen: sensitive touch, user-friendly HIM;
- Large display of chamber temperature, easy observation at distance;
- Status icon to show freezer situation at first sight: normal or abnormal;
- Password administration to prevent unauthorized change of settings;
- Show temperature curve on touch screen;
- Temperature and event data storage and USB port for download.



LOW CO2 EMISSIONS



CFC /HCFC FREE



USB PORT



POWER FAILURE ALARM



DIRECT COOLING



SAFETY DOOR LOCK

PERFORMANCE

- Optimized cooling system & high efficiency hydrocarbon refrigerant. (Biosafe-ECO system)
- SECOP brand compressor & EBM brand blower.
- VIP (vacuum insulation panel) + high density polyurethane foaming for insulation.
- Forming inner doors for better insulation

ERGONOMIC DESIGN

- 7-inch touch screen for easy operation
- Forming inner doors with door seal for better insulation and less frost
- Adjustable stainless steel shelves to load different size products
- Pressure release port for easy opening of outer door
- Ultra-quiet design reduces noise level
- Optional sliding drawer rack & side access rack for 2ml vials, 5ml vials or SBS boxes

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates (only for Biosafe-ECO series)
- CFC-Free polyurethane foaming insulation
- High efficiency cooling system for lower energy consumption and less carbon emission

ALARMS

- High/low temperature
- High ambient temperature
- Door ajar
- Power failure
- Sensor error
- Abnormal voltage
- Controller failure
- Low battery
- Condenser malfunction

SAFETY

- Build-in data storage and USB port for download
- Temperature quick check via temperature curve
- Password protection avoids key parameters unauthorized change
- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts
- Optional online monitoring system
- Optional CO2/LN2 backup system



▶ **USB port**
Temperature data storage and download



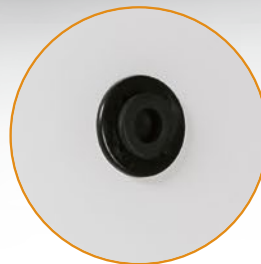
▶ **Door handle with safety lock**
For easy operation and prevent unauthorized access



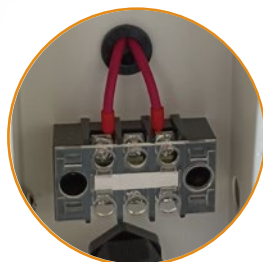
▶ **SUS304 inner cabinet**
Adjustable shelves



▶ **RS485 interface**
Enables freezer to communicate with the computer



▶ **Access port**
One access ports at side and back of freezer, for easy access of additional temperature probe



▶ **Remote alarm contact**
Sending signal to a remote alarm system



-86°C

BioSafe-ECO series



	Model	MDF-86U340T	MDF-86U458T	MDF-86U588T	MDF-86U728T	MDF-86U838T
Main specifications	Type	Upright	Upright	Upright	Upright	Upright
	Cooling technology	Cascade cooling	Cascade cooling	Cascade cooling	Cascade cooling	Cascade cooling
	Temperature setting range (°C)	-40~-86	-40~-86	-40~-86	-40~-86	-40~-86
	Climate type	N	N	N	N	N
	Capacity (L)	338	408	588	728	838
	2" box storage Qty (Pcs)	192	288	400	504	600
	Net weight (KGs)	296	292	335	380	397
	Internal W×D×H (mm)	488*607*1140	606*575*1180	606*738*1310	963*571*1350	894*718*1310
	External W×D×H (mm)	854*1072*1907	891*992*1945.5	891*1155*1994.5	1248*975*1994.5	1179*1135*1994.5
	Cooling type	Direct	Direct	Direct	Direct	Direct
	Defrost	Manual	Manual	Manual	Manual	Manual
	Refrigerant	Hydrocarbon gas	Hydrocarbon gas	Hydrocarbon gas	Hydrocarbon gas	Hydrocarbon gas
	Number of compressor	2	2	2	2	2
Control & display system	Controller	TC-310	TC-310	TC-310	TC-310	TC-310
	Display	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen
	Temperature display accuracy	0.1	0.1	0.1	0.1	0.1
	Password protection	●	●	●	●	●
	Temperature graph	●	●	●	●	●
Power	Power supply (V/Hz)	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60
	Rated power (W)	620	650	690	710	720
Data memory & monitoring	USB port	●	●	●	●	●
	RS 485 port	●	●	●	●	●
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF
	Chart recorder	○	○	○	○	○
Alarm functions	Visible/audible alarm	●	●	●	●	●
	High/Low temp	●	●	●	●	●
	Hot condenser	●	●	●	●	●
	Power failure	●	●	●	●	●
	Sensor failure	●	●	●	●	●
	High ambient temp	●	●	●	●	●
	Door open	●	●	●	●	●
	Power failure backup system	72h	72h	72h	72h	72h
Remote alarm contact	●	●	●	●	●	
Accessories	Inner door	2	2	2	2	2
	Casters	●	●	●	●	●
	Test access port	Φ 25mm	Φ 25mm	Φ 25mm	Φ 25mm	Φ 25mm
	Adjustable shelves	3	3	3	3	3
	Safety door lock	●	●	●	●	●
	Pressure equalization port	●	●	●	●	●
	Freezer rack	○	○	○	○	○
	Rack type (LxH)	4x4	4x5&4x4	5x5	4x5&4x6	5x5
	Rack Qty	12	8+8	16	18+6	24
CO2/LN2 backup system	○	○	○	○	○	
Material	Exterior	Powder coated steel	Powder coated steel	Powder coated steel	Powder coated steel	Powder coated steel
	Interior	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
	Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
	Vacuum insulation panel (VIP)	●	●	●	●	●
	Cabinet insulation thickness (mm)	150	100	100	100	100
	Outer door thickness (mm)	105	105	105	105	105
	Compressor brand	SECOP	SECOP	SECOP	SECOP	SECOP
Shipping	Gross weight (KGs)	306	317	364	400	430
	Packing W×D×H (mm)	950*1090*2070	960*1035*2120	970*1190*2210	1333*1010*2210	1275*1165*2210
	Volume (m³)	2.14	2.75	2.55	2.97	3.03