

# TC-300 touch screen controller

TC-300 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.
- SECOP brand compressor & EBM brand blower.
- VIP (vacuum insulation panel) + high density polyurethane forming 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
- Auto heating & manual 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
- CFC-Free polyurethane foaming insulation
- High efficiency cooling system for lower energy consumption and less carbon emission

## ALARMS

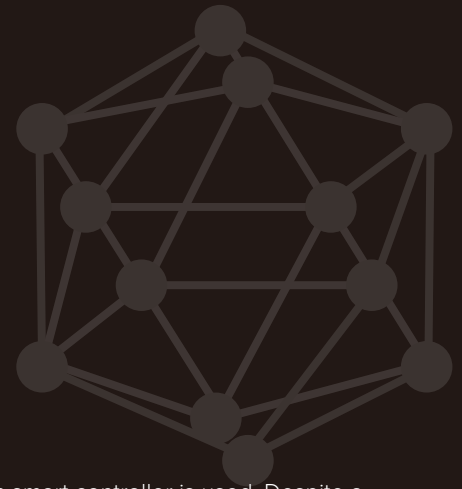
- High temperature
- Low temperature
- High ambient temperature
- Door ajar
- Power failure
- Sensor error

## 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

# BioSafe-MINI

## Under-counter ULT Freezer



ANTECH's compact under-counter ULT freezer MDF-86U108 is an ideal solution to store biological materials in a limited space. The freezer size is designed to match laboratory table height, so that it can be put under counter.

BioSafe-MINI adopts high efficiency single compressor cooling system, with reduced energy consumption and lower noise.

TC-300 touch screen smart controller is used. Despite a compact freezer, the functions are complete for medical and laboratory applications, including data storage and USB port for download, high/low temperature alarm, door open alarm, power failure alarm, remote alarm contact, etc. Therefore, MDF-86U108 meets the most rigorous requirements of healthcare and scientific research.



LOW CO<sub>2</sub>  
EMISSIONS



DOOR  
AJAR ALARM



CFC /HCFC  
FREE



USB PORT



POWER FAILURE  
ALARM



DIRECT  
COOLING



SAFETY DOOR  
LOCK

# -86°C

## BioSafe-MINI



|                          | Model                             | MDF-86U108             |        |        | MDF-86U58            |        |        | MDF-86U158           |        |        |
|--------------------------|-----------------------------------|------------------------|--------|--------|----------------------|--------|--------|----------------------|--------|--------|
| Main specifications      | Type                              | Under-counter, upright |        |        | Upright              |        |        | Upright              |        |        |
|                          | Cooling technology                | Single compressor      |        |        | Single compressor    |        |        | Single compressor    |        |        |
|                          | Temperature setting range (°C)    | -40~-86                |        |        | -40~-86              |        |        | -40~-86              |        |        |
|                          | Climate type                      | N                      |        |        | N                    |        |        | N                    |        |        |
|                          | Capacity (L)                      | 88                     |        |        | 58                   |        |        | 158                  |        |        |
|                          | 2" box storage Qty (Pcs)          | 60                     |        |        | 36                   |        |        | 108                  |        |        |
|                          | Net weight (KGs)                  | 85                     |        |        | 75                   |        |        | 130                  |        |        |
|                          | Internal W×D×H (mm)               | 320×450×610            |        |        | 364×405×409          |        |        | 460×455×800          |        |        |
|                          | External W×D×H (mm)               | 800×700×870            |        |        | 540X620X1115         |        |        | 700x700x1580         |        |        |
|                          | Door entrance limit (≥mm)         | 676                    |        |        | 620                  |        |        | 700                  |        |        |
|                          | Cooling type                      | Direct                 |        |        | Direct               |        |        | Direct               |        |        |
|                          | Defrost                           | Manual                 |        |        | Manual               |        |        | Manual               |        |        |
|                          | Refrigerant                       | Mixed gas              |        |        | Mixed gas            |        |        | Mixed gas            |        |        |
|                          | Number of compressor              | 1                      |        |        | 1                    |        |        | 1                    |        |        |
| Control & display system | Controller                        | TC-300                 |        |        | TC-300E              |        |        | TC-300E              |        |        |
|                          | Display                           | 7" LCD touch screen    |        |        | LED                  |        |        | Electronic           |        |        |
|                          | Password protection               | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | Temperature display accuracy      | 0.1                    |        |        | 0.1                  |        |        | 0.1                  |        |        |
| Power                    | Power supply (V/Hz)               | 220/50                 | 220/60 | 120/60 | 220/50               | 220/60 | 120/60 | 220/50               | 220/60 | 120/60 |
|                          | Rated power (W)                   | 410                    | 460    | 520    | 500                  | 500    | 500    | 500                  | 500    | 500    |
|                          | Rated Current (A)                 | 2.3                    | 2.6    | 6.6    | 3.2                  | 3.2    | 6.0    | 3.2                  | 3.2    | 6.0    |
| Data memory & monitoring | USB port                          | ●                      |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Cloud monitoring (Wi-Fi)          | ○ CryoMonitor 2000TF   |        |        | ○ CryoMonitor 2000TF |        |        | ○ CryoMonitor 2000TF |        |        |
|                          | Chart recorder/ data logger       | ○                      |        |        | ○                    |        |        | ○                    |        |        |
| Alarm functions          | Visible/audible alarm             | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | High/Low temperature              | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | Hot condensor                     | ●                      |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Power failure                     | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | Sensor failure                    | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | High ambient temperature          | ●                      |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Door open                         | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | Remote alarm contact              | ●                      |        |        | ●                    |        |        | ●                    |        |        |
| Accessories              | Inner door                        | 2                      |        |        | 2                    |        |        | 3                    |        |        |
|                          | Casters                           | ●                      |        |        | ●                    |        |        | ●                    |        |        |
|                          | Test access port                  | Φ 20mm x 1             |        |        | Φ 20mm x 1           |        |        | Φ 20mm x 1           |        |        |
|                          | Adjustable shelves                | 1                      |        |        | 1                    |        |        | 2                    |        |        |
|                          | Safety door lock                  | ●                      |        |        | ●                    |        |        | N/A                  |        |        |
|                          | Pressure equalization port        | Manual                 |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Freezer rack                      | ○                      |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Rack type (LxH)                   | 3x5                    |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Rack Qty                          | 4                      |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | CO2/LN2 backup system             | ○                      |        |        | ○                    |        |        | ○                    |        |        |
| Material                 | Exterior                          | Powder coated steel    |        |        | Powder coated steel  |        |        | Powder coated steel  |        |        |
|                          | Interior                          | Pre-coated steel       |        |        | SUS                  |        |        | SUS                  |        |        |
|                          | Insulation                        | Polyurethane           |        |        | Polyurethane         |        |        | Polyurethane         |        |        |
|                          | Vacuum insulation panel (VIP)     | ●                      |        |        | N/A                  |        |        | N/A                  |        |        |
|                          | Cabinet insulation thickness (mm) | 90                     |        |        | 90                   |        |        | 120                  |        |        |
|                          | Outer door thickness (mm)         | 90                     |        |        | 90                   |        |        | 120                  |        |        |
| Shipping                 | Gross weight (KGs)                | 105                    |        |        | 95                   |        |        | 160                  |        |        |
|                          | Packing W×D×H (mm)                | 850×730×953            |        |        | 610×700×1240         |        |        | 780×800×1710         |        |        |
|                          | Volume (m³)                       | 0.59                   |        |        | 0.53                 |        |        | 1.07                 |        |        |

# -86°C

## Chest type



| Model                    |                                   | MDF-86C118           |        |        | MDF-86C458            |        |        | MDF-86C728            |        |        |
|--------------------------|-----------------------------------|----------------------|--------|--------|-----------------------|--------|--------|-----------------------|--------|--------|
| Main specifications      | Type                              | Chest                |        |        | Chest                 |        |        | Chest                 |        |        |
|                          | Cooling technology                | Single compressor    |        |        | Cascade cooling       |        |        | Cascade cooling       |        |        |
|                          | Temperature setting range (°C)    | -40~-86              |        |        | -40~-86               |        |        | -40~-86               |        |        |
|                          | Climate type                      | N                    |        |        | N                     |        |        | N                     |        |        |
|                          | Capacity (L)                      | 130                  |        |        | 495                   |        |        | 746                   |        |        |
|                          | 2" box storage Qty (Pcs)          | 96                   |        |        | 360                   |        |        | 585                   |        |        |
|                          | Net weight (KGs)                  | 98                   |        |        | 225                   |        |        | 275                   |        |        |
|                          | Internal W×D×H (mm)               | 630×440×470          |        |        | 1310×600×630          |        |        | 1310×740×770          |        |        |
|                          | External W×D×H (mm)               | 850×740×1023         |        |        | 1965×860×910          |        |        | 1965×1000×1040        |        |        |
|                          | Door entrance limit (≥mm)         | 740                  |        |        | 780                   |        |        | 997                   |        |        |
|                          | Cooling type                      | Direct               |        |        | Direct                |        |        | Direct                |        |        |
|                          | Defrost                           | Manual               |        |        | Manual                |        |        | Manual                |        |        |
|                          | Refrigerant                       | Hydrocarbon gas      |        |        | Hydrocarbon gas       |        |        | Hydrocarbon gas       |        |        |
|                          | Number of compressor              | 1                    |        |        | 2                     |        |        | 2                     |        |        |
| Control & display system | Controller                        | TC-300               |        |        | TC-300                |        |        | TC-300                |        |        |
|                          | Display                           | 7" LCD touch screen  |        |        | 7" LCD touch screen   |        |        | 7" LCD touch screen   |        |        |
|                          | Password protection               | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Temperature display accuracy      | 0.1                  |        |        | 0.1                   |        |        | 0.1                   |        |        |
| Power                    | Power supply (V/Hz)               | 220/50               | 220/60 | 120/60 | 220/50                | 220/60 | 120/60 | 220/50                | 220/60 | 120/60 |
|                          | Rated power (W)                   | 480                  | 480    | 540    | 900                   | 850    | 780    | 980                   | 900    | 820    |
|                          | Rated Current (A)                 | 2.8                  | 2.8    | 6.7    | 7.0                   | 5.0    | 8.8    | 7.2                   | 5.8    | 9.0    |
| Data memory & monitoring | USB port                          | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Cloud monitoring (Wi-Fi)          | ○ CryoMonitor 2000TF |        |        | ○ CryoMonitor 2000TF  |        |        | ○ CryoMonitor 2000TF  |        |        |
|                          | Chart recorder/ data logger       | ○                    |        |        | ○                     |        |        | ○                     |        |        |
| Alarm functions          | Visible/audible alarm             | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | High/Low temperature              | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Hot condensor                     | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Power failure                     | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Sensor failure                    | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | High ambient temperature          | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Door open                         | NO                   |        |        | ●                     |        |        | ●                     |        |        |
|                          | Remote alarm contact              | ●                    |        |        | ●                     |        |        | ●                     |        |        |
| Accessories              | Inner door                        | N/A                  |        |        | 2                     |        |        | 2                     |        |        |
|                          | Castors                           | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Test access port                  | Φ 20mm x 1           |        |        | Φ 20mm x 2            |        |        | Φ 20mm x 2            |        |        |
|                          | Adjustable shelves                | N/A                  |        |        | N/A                   |        |        | N/A                   |        |        |
|                          | Safety door lock                  | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Pressure equalization port        | Manual               |        |        | Auto x 1 & manual x 1 |        |        | Auto x 1 & manual x 1 |        |        |
|                          | Freezer rack                      | ○                    |        |        | ○                     |        |        | ○                     |        |        |
|                          | Rack type (LxH)                   | 1x8                  |        |        | 1x10                  |        |        | 1x13                  |        |        |
|                          | Rack Qty                          | 12                   |        |        | 36                    |        |        | 45                    |        |        |
| Material                 | CO2/LN2 backup system             | ○                    |        |        | ○                     |        |        | ○                     |        |        |
|                          | Exterior                          | Powder coated steel  |        |        | Powder coated steel   |        |        | Powder coated steel   |        |        |
|                          | Interior                          | Stainless steel      |        |        | Stainless steel       |        |        | Stainless steel       |        |        |
|                          | Insulation                        | Polyurethane         |        |        | Polyurethane          |        |        | Polyurethane          |        |        |
|                          | Vacuum insulation panel (VIP)     | ●                    |        |        | ●                     |        |        | ●                     |        |        |
|                          | Cabinet insulation thickness (mm) | 90                   |        |        | 90                    |        |        | 90                    |        |        |
| Shipping                 | Outer door thickness (mm)         | 90                   |        |        | 90                    |        |        | 90                    |        |        |
|                          | Gross weight (KGs)                | 116                  |        |        | 278                   |        |        | 318                   |        |        |
|                          | Packing W×D×H (mm)                | 930×780×1160         |        |        | 2010×880×1030         |        |        | 2010×1095×1165        |        |        |
| Shipping                 | Volume (m³)                       | 0.84                 |        |        | 1.82                  |        |        | 2.56                  |        |        |