eFreeChiller™ Box, Ice-free and Power-free

eFreeChiller box provides sample cooling or freezing without ice, electricity or batteries. The reusable internal cooling or freezing CoolEngergizer™ provides hours of “0 to 4.0℃” cooling or “-22 to -18℃” freezing. eFreeChiller box may also be used with dry ice to create a compact portable workstation for bacteria, virus and proteins.

- Accommodates thermo-conductive ColdBlock™ sample modules for 0.2ml PCR tube, 8- and 12-tube strips, 96-well PCR microplate,1.5 ~ 2.0mL conical centrifuge tube and 1ml cryogenic vials.
- One module of the ColdBlock has a unique built-in temperature indicator to read out the instant temperature.
- Uniform and consistent well temperature.
- ColdBlock module without built-in temperature indicator can be autoclaved and cleaned with bleach solution, alcohol or common laboratory detergents.
- eFreeChiller box and CoolEngergizer may be cleaned with bleach solution, alcohol or common laboratory detergents.
- Each unit of eFreeChiller comes with a high-performance EVA base, collar, lid, one CoolEnergizer(optional), and one ColdBlock module(optional) .

Model:EFC-3

-22~-18°C

0~4°C

CoolEnergizer Performance

CoolEnergizer Type	Pre-frozen time		Duration	
			Lid Closed	Lid Open
0~4℃	-20℃	4 hours	＞14 hours	＞11 hours
	-80℃	2 hours		
Note : Remove 0~4℃ CoolEnergizer from the freezer and place on benchtop for approximately 10 minutes. Frost may form on the CoolEnergizer exterior upon removal from the freezer. Freezing CoolEnergizer for less than the specified time will result in decreased cooling duration.				
-22 ~ -18℃	-80℃	4 hours	＞6 hours	＞4 hours
Note : Remove -22~-18℃ CoolEnergizer from the freezer and it can be placed onto eFreeChiller base right away. Frost may form on the CoolEnergizer exterior upon removal from the freezer. Freezing CoolEnergizer for less than the specified time will result in decreased cooling duration				
Note : Pre-chilled CoolBlock can provide better performace.				
Note : CoolEnergizer can’t be autoclaved.				

Using Dry Ice for Maintaining Freezing Samples at -78℃

	Duration	
300~400ml Dry Ice to fill the base	＞5 hours	＞3 hours

ColdBlock Performance

On the ice	ColdBlock can equilibrate the temp below 4℃ in approximately 90 seconds.	
On the dry ice	ColdBlock can drop the temp to -78℃ in approximately 7 minutes.	
In liquid nitrogen	ColdBlock(without temp indicator) can drop the temp to around -140℃ in approximately 15 minutes	
ColdBlock Capacity	without temp. indicator	35 places to hold 1.5 ~ 2.0mL conical centrifuge tube or 1.0mL cryogenic vial.
	with temp. indicator	30 places to hold 1.5~ 2.0mL conical centrifuge tube or 1.0mL cryogenic vial.
Note : ColdBlock with built-in temp. indicator can't be placed in liquid nitrogen.		
Note : ColdBlock with temp. indicator can only show from -10℃ to 10℃.		

Optional ColdBlock Module :

120-well for 0.2ml PCR tube, 8- and 12-tube strips, 96-well PCR microplate

35-well for 1.5 ~ 2.0mL conical centrifuge tube or 1.0mL cryogenic vial.

30-well for 1.5 ~ 2.0mL conical centrifuge tube or 1.0mL cryogenic vial.

eFreeChiller box Dimensions : 20.2 x 16 x 16.2 cm
eFreeChiller weight : 206g
CoolEnergizer weight : 850g
ColdBlock weight : 180g

Ordering Information :

EFC-35	Empty EVA box with base, collar and lid
EFC-CCE	CoolEnergizer 0~4℃
EFC-FCE	CoolEnergizer -22~-18℃
EFC-35-TCV1	ColdBlock with temp. indicator for 1.0mL cryogenic vial
EFC-35-TCCT15	ColdBlock with temp. indicator for 1.5mL conical centrifuge tube
EFC-35-TCCT2	ColdBlock with temp. indicator for 2.0mL centrifuge tube
EFC-120-TCCT02	ColdBlock without temp. indicator for 0.2ml PCR tube, 8- and 12-tube strips, and 96-well PCR microplate.
EFC-35-CV1	ColdBlock without temp. indicator for 1.0mL cryogenic vial
EFC-35-CCT15	ColdBlock without temp. indicator for 1.5mL conical centrifuge tube
EFC-35-CCT2	ColdBlock without temp. indicator for 2.0mL centrifuge tube