

# Mobile Ultra cold ( $-80^{\circ}\text{C}$ ) storage box

**Ideal for covid19 vaccine transport  
Contributing to ZERO emission**

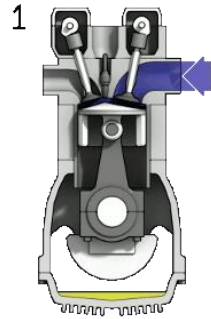
## **Solution for last one miles transportation**



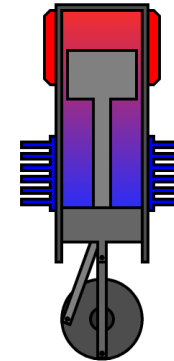
**Beijing Tai Kun Industrial Equipment Co.,Ltd.**

# 1 . What`s a Stirling Engine

Normal Engine





VS



Stirling Engine

Normal Engine	Stirling Engine
Operated by combustion inside the piston	Operated by temperature difference outside the piston
Carbon dioxide emissions High power Low cost Fossil fuels	Decarbonisation No CFC emissions ECO • Environmentally friendly Heliumgas/Electronic

## 2 . Comparison of cooling performance

Compressor	Stirling Engine
	
Lubricant (No tipping)	Non Oil (Can be 360 degree rotation )
Refrigerant gas	Helium gas (Non Freon gas)
Valve operating (24 pcs of the parts)	Non valve oprerating (2 pcs of the parts only)
Surge current generation	Non surge current generation
Low cost	High cost
Cannot be used for transportation	Can be used for transportation
Big capacity and fixed use	Small capacity and mobile use

### 3. Compare with other products



### **Ultra Low Freezers**

**Fixed type:  
Not use for transportation**

A beautiful environment for the next generation



## 4. Our products

### CPF01L86 : 1L Mobile ultra cold storage box

The ultra-low temperature mobile storage box is specially designed for medical scenarios. It is small size and light weight. The temperature can be as low as  $-86^{\circ}\text{C}$ . It solves the industry weak points of liquid nitrogen transportation. Accurate temperature control of  $\pm 0.5^{\circ}\text{C}$  ensures high quality transportation. , The machine has a built-in large-capacity lithium battery, which can work for more than 1 hour without an external power source. At the same time, the NFC electronic lock with the IOT background to ensure the safety of transported goods. The IOT supports function is real-time tracing ,temperature monitoring and remote machine control.



Size : 270 x 270 x 450 (mm)  
Inner size : 150 x 134 x 54.5(mm)  
Weight : 13.5kg  
Ranges :  $-4^{\circ}\text{C}$  ~  $-86^{\circ}\text{C}$



## 4. Our products

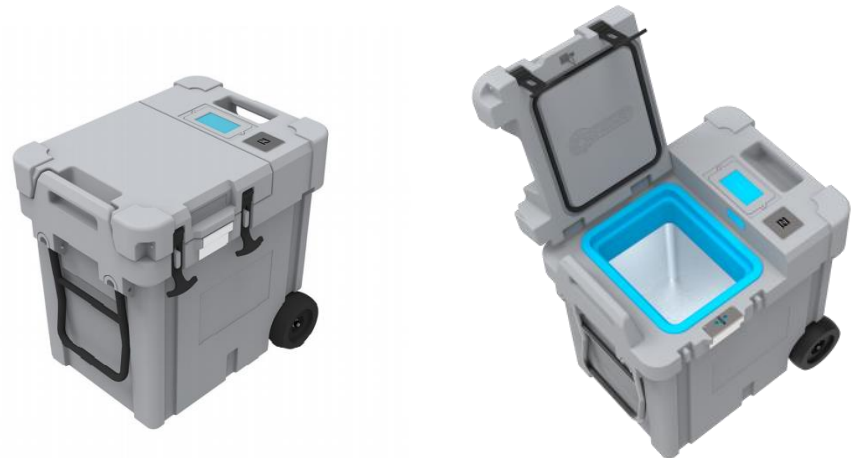
### CPF10L80 : 10L Mobile ultra cold storage box

The portable ultra cold storage box is specially designed for vaccine transportation. It is small size and light weight. The temperature can be as low as  $-80^{\circ}\text{C}$ . It solves the weak points of liquid nitrogen transportation.

Accurate temperature control of  $\pm 2^{\circ}\text{C}$  ensures high quality for transport, the machine can be built-in large-capacity lithium battery, and the duration is optional, and the transportation can be completed without external power supply.

At the same time, RFID electronic lock system with the IOT background to ensure the safety of transported goods. The background of the IOT supports real-time viewing of machine location and operating data, supports remote machine control, and can export data so that the entire process can be controlled and traced.

Size : 580 x 481 x 615 (mm)  
Inner size : 227 x 292 x 155 (mm)  
Weight : 23kg  
Ranges :  $30^{\circ}\text{C}$  ~  $-80^{\circ}\text{C}$





## 5. Temperature monitoring panel



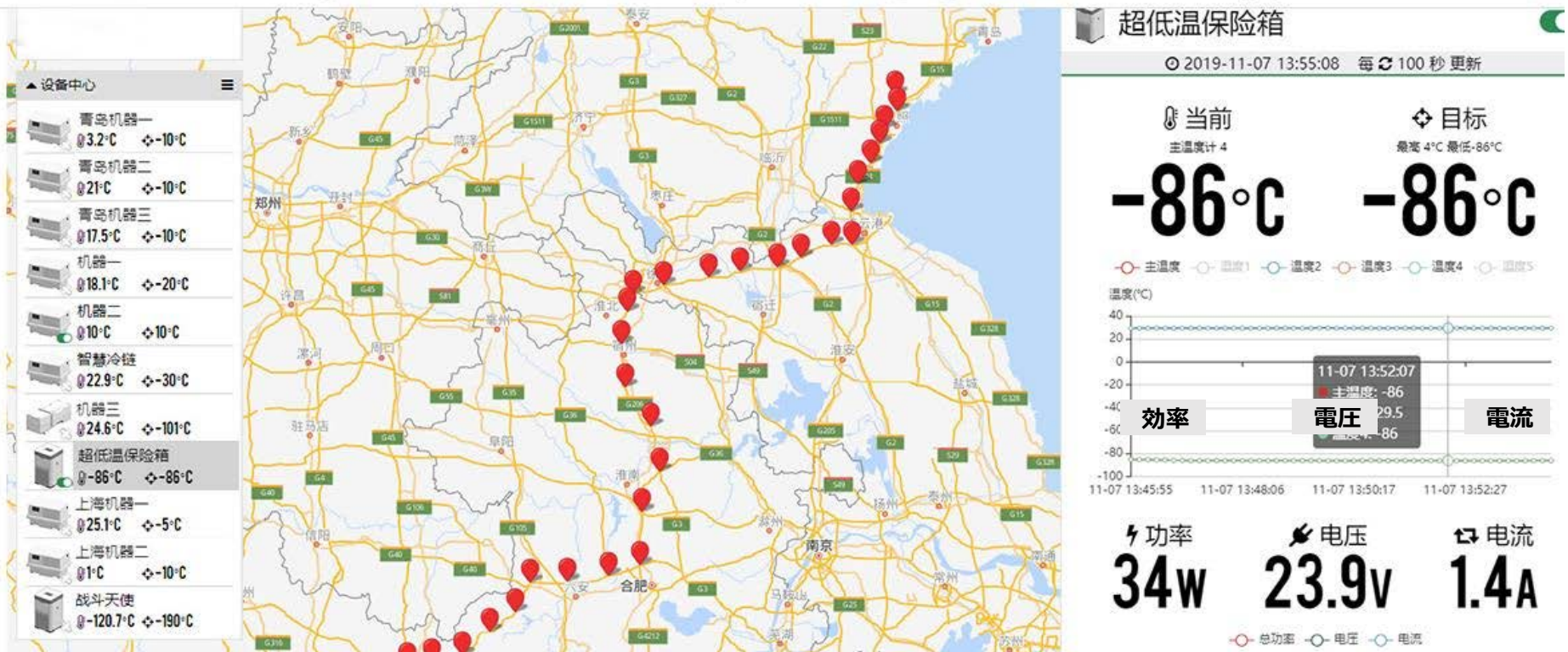
Actual Temperature

Setting  
temperature

Actual temperature on  
the monitoring panel



## 6. GPS trace and remote control system



## 7. Our products line-up

**1 L**



- Produce in DEC.2020
- Temperature  $-86^{\circ}\text{C} \sim 4^{\circ}\text{C}$   $\pm 0.5^{\circ}\text{C}$  adjustable
- Capacity 1 L

**10L**



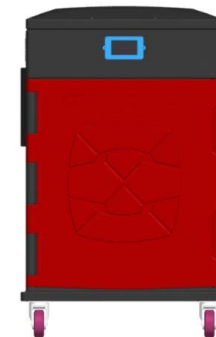
- Produce in JAN.2021
- Temperature  $-80^{\circ}\text{C} \sim 30^{\circ}\text{C}$   $\pm 2^{\circ}\text{C}$  adjustable
- Capacity 10 L

**25L**



- Produce in NOV.2020
- Temperature  $-40^{\circ}\text{C} \sim 30^{\circ}\text{C}$   $\pm 1^{\circ}\text{C}$  adjustable
- Capacity 25 L

**130L**



- Produce in MAR.2021
- Temperature  $-80^{\circ}\text{C} \sim 30^{\circ}\text{C}$   $\pm 1^{\circ}\text{C}$  adjustable
- Capacity 130 L