POWERSTAR Freezer Truck

User's Manual

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Freezer Truck

OWNER'S MANUAL

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Preface

Thank you for purchasing POWERSTAR TRUCKS products. For better using your ISUZU Freezer Truck, get the best operating performance, we strongly suggest that before the operation process you could read this manual instructions carefully, and to manipulate the program handily.

The manual detailed describes the performance of freezer truck, structure, usage, precautions and maintenance of such knowledge. While showing details of the truck, both pictures and description will together help you get better understanding of how to use truck. Before the operation, the skilled operator should carefully read the contents of the manual.

After master the truck performance characteristics, methods of operation and precautions, then could start to operate this refrigerator truck. In order to ensure the staff turnover after the operation, and properly use of the truck. This manual book must be properly kept, shall not be lost and damage.

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Contents

Chapter 1. General Description

*POWERSTAR TRUCKS Freezer Truck based on type II ISUZU 4*2 model ELF truck chassis, refrigerator body length could up to 7 meters, mainly used to transport frozen or fresh goods, and the working aerial can be villages, downtowns, cities, and other areas of need.*

*The vehicle designed to fully rely on the advantages of the original ISUZU ELF 4*2 LHD chassis, fully consider the product's convenience and reliability. The freezer body material is international standard, both internal and external use glass fiber reinforced plastics, in the middle use 80mm polyurethane foam, have good effect for warm preservation. Both door lock and hinge use stainless steel casting, which have good performance and long service life. The freezer truck equipped with English guidance control box for easy operation. And can cover all customers' frozen or fresh goods transportation requirement.*

***T**he ISUZU 4*2 Freezer Truck equipped with 7m length refrigerator body and famous brand refrigeration units, cabin control box, whole white painting. Therefore, the vehicle is an ideal Refrigerator Truck mainly used for frozen or fresh goods delivery.*

(Preview for your ISUZU Freezer Truck)

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Chapter 2, Main Technical Data

Basic parameter:

Items		ISUZU Freezer Truck
SIZE	Outer Dimension（L×W×H）(mm)	9100×2250×3300
	Wheelbase (mm)	5200
Kerb Weight（kg）		5000
GEAR	Gearbox brand	ISUZU
	Model	MLD 6-shift gearbox
	Type	Manual
Cab capacity（includes driver）		2+1
ENGIN	Model	ISUZU 4HK1-TCG40
	Type	Four cylinder inline, four stroke, turbocharged Inter-cooling, diesel
	Rating Power（kW/HP）	140 / 190

Note: We keep the right to revise the parameters on the list above.

Hook Loader Superstructure basic parameter list

Items			Parameter
Refrigerator Body	Dimension (mm)		7000*2100*2400
	Material	External	Glass Fiber Reinforced Plastics
		Middle	8mm Polyurethane Foam
		Internal	Glass Fiber Reinforced Plastics
	Door Lock material		Stainless Steel
	Door Hinge material		Stainless Steel
	Door	Rear	Two Hinged Door
		Side	One Hinged Door
Refrigeration Units	Control Box		Manual Operation Box in Cabin
	Operation		As Following
	Safety Assurance		Balance valve for safety

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Chapter 3, Freezer Truck Structure Components

*Overviews for ISUZU 4*2 freezer truck:*

Above picture show the freezer truck dimension for reference; the refrigerator body designed based on requirement, with length can be 7 meters. Both rear and side door for easy operation.

Left View: Refrigerator Units, Convenient side door

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Rear View: Hinged Rear Door

(Pulley)

Chapter 4, Freezer Truck Working Principles

*The operator should fully understand Whole Structure and Working Principle for ISUZU 4*2 Freezer Truck before any operation. Only trained person can operate this vehicle properly and to prevent unnecessary accidents and equipment damage.*

i ,How are the Freezer Truck working?

*The ISUZU 4*2 Freezer Truck makes use of the special power take off (PTO) to get power from the engine, and then use the power to control refrigerator units. Operate the Control Box in cabin to adjust the temperature in freezer body. Then can be used for frozen and fresh goods transportation.*

ii ,What is the main component for truck?

*The freezer truck is refitted based on the ISUZU LHD 4*2 chassis. The refit part includes Refrigerator Units, Freezer Body and Operation System.*

- *Refrigerator Units: Famous brand, which is used to adjust temperature of the body.*
- *Freezer Body: 7 meters long body, with rear hinged door and side door for easy operation.*
- *Operation system: Control box inside of cabin for easy operation*

iii, How to operate freezer trucks?. (Very Important)

1、 Ready to work

(If idle for a long time, please keep the truck engine run for a few minutes. Also, should ensure fuel tank and water tank are enough.)

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Step 1

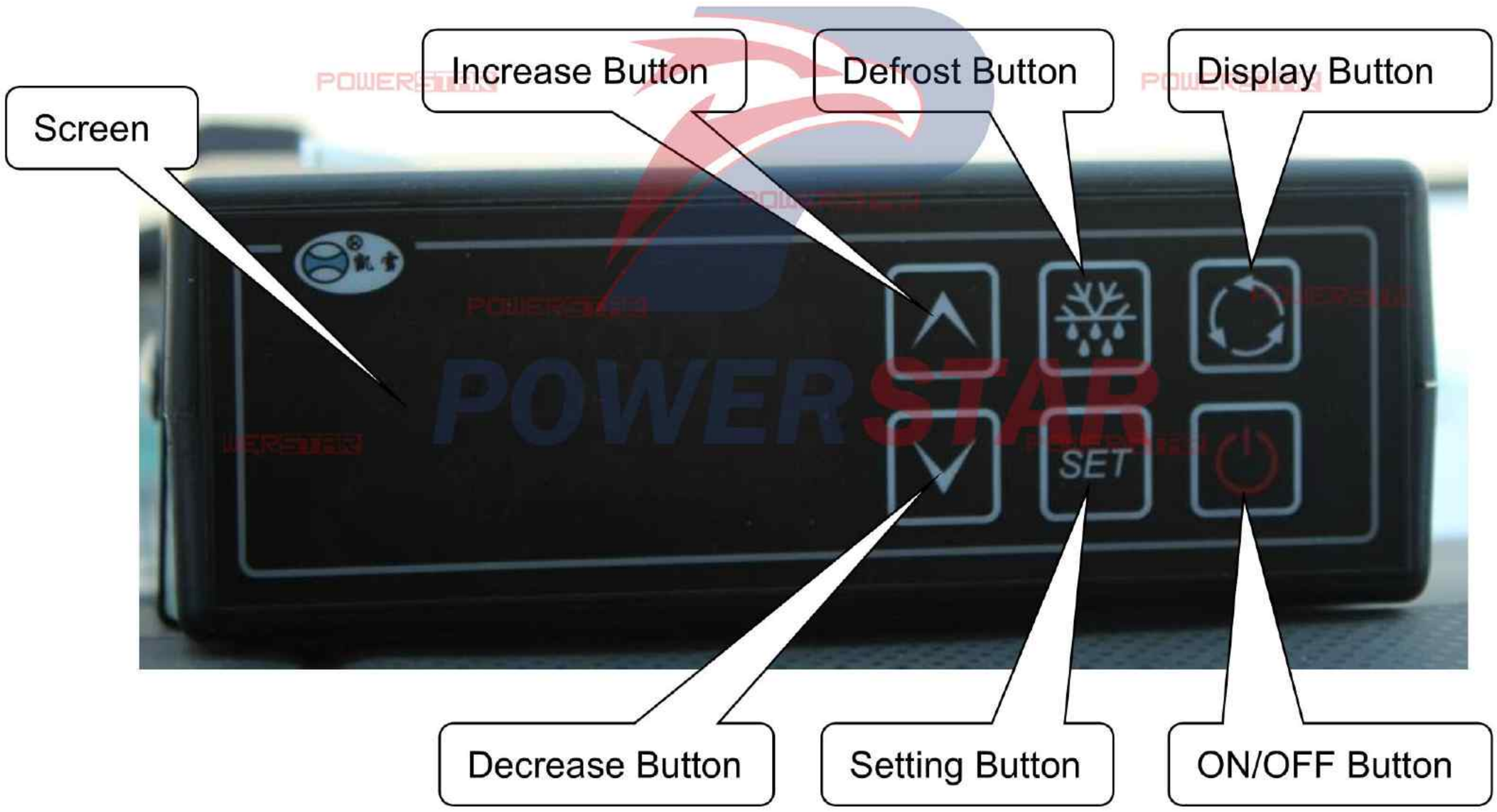
Start the truck engine. Operate the Control Box to make refrigerator units working.

***NOTE**: Please start the truck engine firstly, and then turn on the refrigerator!*

Please turn off the refrigerator units firstly, and then stalling the truck engine!

Step 2

Be familiar with Control Box then can control the Freezer truck



ON/OFF Button: Control the Refrigerator Units ON & OFF

Turn ON Operation → Press once, the refrigerator units start working (Bumming once)

Turn OFF Operation → Press two second, the refrigerator units stop working (Bumming three times)

Display Button: Control the Screen display

*Operation 1, Press Shortly → Screen show the temperature, which can change from **Body Temperature** to **Defrost Temperature**.*

*Operation 2, Press Longly → Screen show **Working Voltage** and **Refrigerator Units Working Time**.*

Defrost Button: Control the defrost function

Press two second

Bumming three times → Defrost function start, ❄ *indicator is ON*

Bumming five times → Defrost function temperature setting not suitable, you need to change the temperature setting.

After amend the temperature setting, and then you can control the defrost function.

Setting Button / Increase Button / Decrease Button: Control the Refrigerator Units Temperature

*Setting Button Operation → Press once, the screen show the **Setting Temperature** or **Sensor Temperature** (Basic show)*

*Temperature Operation → When screen show **Setting Temperature**, press Increase Button and Decrease Button to adjust the temperature.*

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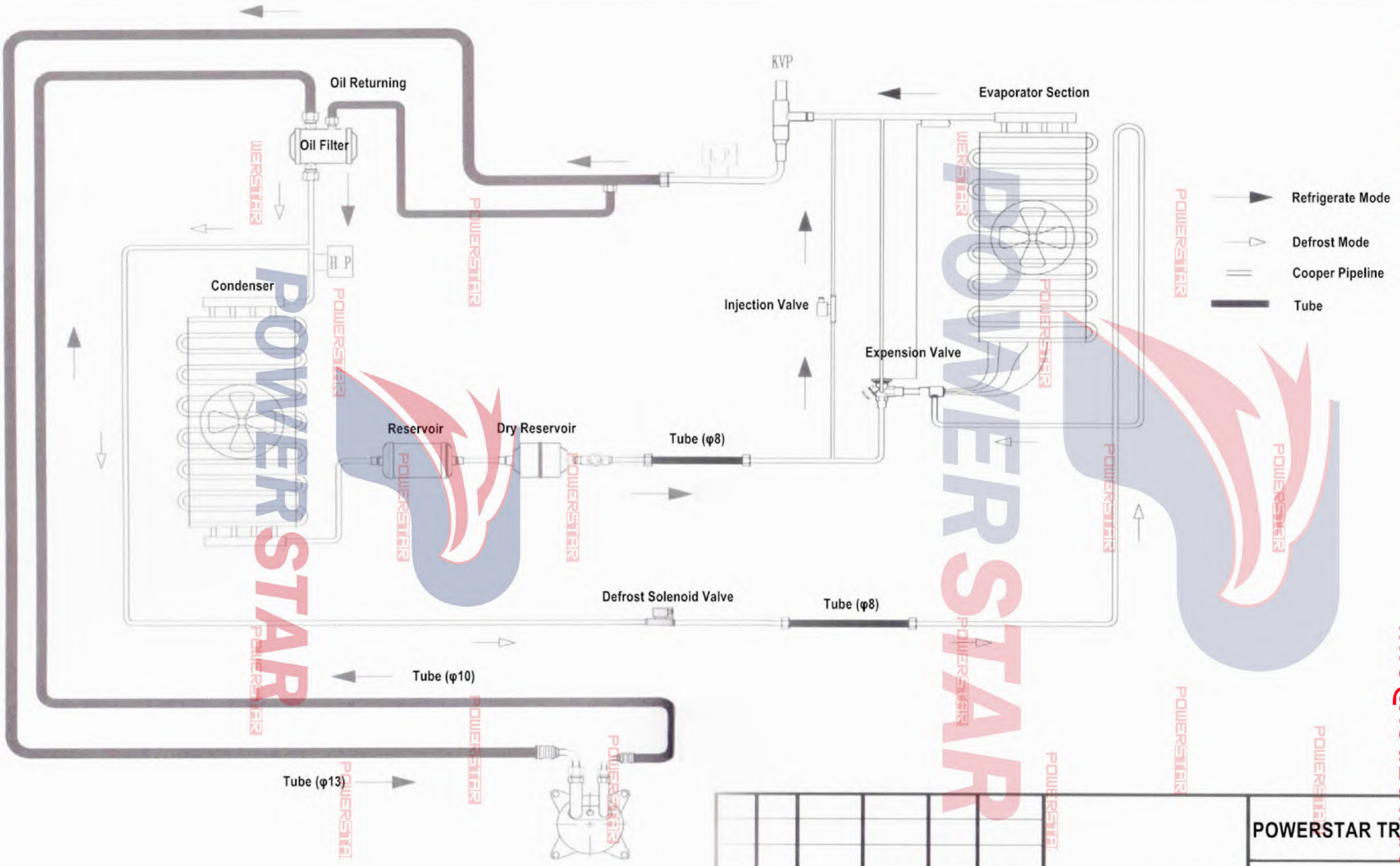
Indicator introduction:

Indicator	Status	Remark
	Yellow Colour	Refrigerator Units standby status, and ready for normal working
	Blue Colour	Refrigerator Units normally working
	Light	Defrosting Working ON
	Twinkle	Defrosting Working OFF
	On	Evaporation Fan start working
	On	Heating Mode
	On	Electrical heating start working
	On	Warning light
	On	Refrigerator Units connected with standby power, and normal working under standby power

Refrigerator Units Working Principle:



标记	处数	分区	更改文件号	签名	日期			
设计			标准化			阶段标记	重量	比例
审核								
工艺			批准			共 1 张	第 1 张	

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Refrigerator Units Principle

Chapter 5, Alarm Signal Treatment

Indicator	Illustration	Generated Quantity
P1-H	Body temperature sensor short circuit	Alarm action, compressor controlled by CON and COF parameter
P1-L	Body temperature sensor open circuit	Alarm action, compressor controlled by CON and COF parameter
P2-H	Body temperature sensor short circuit	Alarm action, others not change
P2-L	Body temperature sensor open circuit	Alarm action, others not change
HA	High temperature alarm	Alarm action, others not change
LA	Low temperature alarm	Alarm action, others not change
HP	High pressure alarm	Alarm action, others signal all closed
LP	Low pressure alarm	Alarm action, others signal all closed
HUER	Refrigerator Units high voltage	Alarm action, others signal all closed
LUER	Refrigerator Units low voltage	Alarm action, others signal all closed
Fuse Failure	Compressor Fuse Failure: FU01	Except for Evaporation Fan Fuse Failure, all others will make refrigerator units stop working
	Condensate Fan Fuse Failure: FU02	
	Evaporation Fan Fuse Failure: FU03	
	Defrost Valve Fuse Failure: FU04	
	Stop Valve Fuse Failure: FU05	
Standby Power	Standby power working condition, but cannot detect AC power	All refrigerator units stop working. Restart the control box if necessary.

Note: 1. when trouble happens; trouble code and temperature alternate display, and bumming six times. Press any button to cancel alarm code display
2. If trouble code more than 2 units, the screen will show Er r2 / Er r3
3. Cancel alarm, the trouble code will not display any more. But trouble light on all the time, and can check the trouble code.

Chapter 6, Maintenance

Please kindly checking below information for regular maintenance.

First Time Maintenance	➢ Carefully check the tightness of bolts and nuts, and check the Refrigerator Units' installation position ok or not ➢ Carefully check if any leakage ➢ Carefully check the Compressor revolving speed RPM right or not ➢ Carefully check the Compressor belt tension ➢ Carefully check the Standby Power bolt tightness ➢ Carefully check the Standby Power abrasion
Maintenance A	➢ Clean the battery and battery holder ➢ Carefully check the Compressor belt tension ➢ Change the Compressor belt every 3000 hours ➢ Carefully check if the refrigerant leakage ➢ Carefully check all electrical connection ➢ Carefully check refrigeration mode ➢ Carefully check defrost mode ➢ Carefully check cabin control box operation status ➢ Clean the condenser coil ➢ Carefully check the Standby Power bolt tightness ➢ Carefully check the Standby Power abrasion
Maintenance B	➢ If necessary, change the tension wheel bearing
Every Year	➢ Change filter desiccant ➢ Clean the expansion valve filter
Every Two Years	➢ Change Compressor oil ➢ Change refrigerant ➢ Change expansion valve

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Chapter 7, Troubleshooting

Please kindly checking below possible troubleshooting, which just for your reference.

Malfunction	Possible Reason	Solution
Control Box cannot turn ON	➢ Control Box fuse damage ➢ Control Box broke down	➢ Change new fuse ➢ Change new Control Box
P1L / P2L warning	➢ Sensor poor contact	➢ Check the Sensor connector plug
P1H / P2H warning	➢ Sensor damage	➢ Check the line or change new Sensor
LP warning, Refrigerator Units stop working	➢ System low working pressure ➢ Pressure switch damage	➢ Check system leakage or block ➢ Change Pressure switch
HP warning, Refrigerator Units stop working	➢ System high working pressure ➢ Pressure switch damage	➢ Check Condensate Fan working or not ➢ Change Pressure switch
Compressor abnormal sound	➢ The belt too loose	➢ Tension the belt
Refrigerator Units not working	➢ Check the setting temperature	➢ Resetting the temperature
System working voltage too low	➢ Check the generator or device cathode	➢ Repair or change the generator ➢ Reconnect the cathode
Fuse problem	➢ Fuse damage	➢ Check and change the fuse
NOSP	➢ Standby Power mode damage ➢ Standby Power mode feedback to screen disconnected	➢ Check the Standby Power mode ➢ Check the feedback circuit