



heat exchanger

$\leq 1000\text{m}^2$



$\leq 1000\text{m}^2$



compressor racks

$\leq 10000\text{m}^2$



barrel pump system /CO2 system

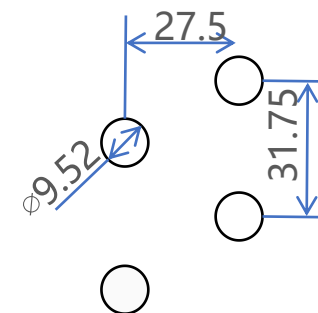
$\geq 10000\text{m}^2$



**open type screw
compressor unit**

$\geq 10000\text{m}^2$

Evaporator (Business type)



*high efficient evaporator design with $\varnothing 9.52$ 、12.7 pipe dia.

double side blow MJD

- ◆ suitable for food processing , ante room;
- ◆ cooling capacity range(R404A, SC2):
- ◆ 14.0-65.0kw;
- ◆ fin space: 4.5mm/6.0mm
- ◆ fan motor qty: 1~4pcs; fan dia.: 350mm 、 400mm 、 500mm
- ◆ Defrost: ele. / hot gas/ water / air

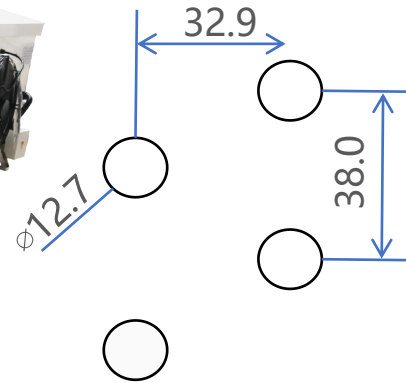
business type MJB :

- ◆ suitable for direct expansion system
- ◆ cooling capacity range (R404A, SC2): 1.5-45.0kw;
- ◆ silent design;
- ◆ fin space: 4.5mm/7.0mm
- ◆ fan motor qty: 1~4; fan dia.: 300/350m (standard ZIEHL-ABEGG)
- ◆ Defrost: ele. / hot gas/ water / air

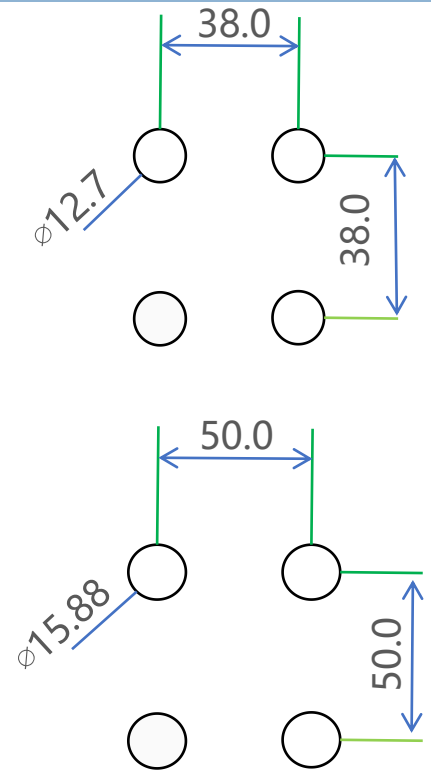
Evaporator (Industrial type)



MJH Series



MJN/L Series



***high efficient evaporator design with $\phi 9.52$ 、 12.7 、 15.88 pipe dia.
s/s pipe and Alu. Pipe is possible**

Evaporator (Special design)



- ◆ suitable for industrial freezer & blast freezer



- ◆ suitable for large & high cold storage

Evaporator (Special design)



- ◆ suitable for frozen food storage
- ◆ fin space : 8.0mm/10.0mm/8-16mm

Condenser (air cooled MNC/ MVC/MWC)



Features

- ◆ design with $\varnothing 9.52$ inner groove copper pipe , 25.4*22
- ◆ fin space : condenser: 2.12mm, dry cooler 3.5mm
- ◆ Use cold-rolled galvanized sheet (zinc layer 80g), outdoor special powder electrostatic spraying
- ◆ Motor: Weiguang / Maer, or other brand

Condensing Unit (air cooled box type)



(2~8HP)



(3~20HP)



(3~25HP)



(6~50HP)



(20~150HP)

Features

- ◆ 1.Compact box type structure
- ◆ 2.High heat exchange U /V type condensers
- ◆ 3.High cooling efficiency and energy saving
- ◆ 4.Low noise axial fan motor and easy to repair
- ◆ 5.Many brands of compressors can be used
- ◆ 6.Suitable for R134a,R404A,R507A,R22

Compressor racks (scroll / semi-hermetic/ screw)

Shot blasting and rust removal process on the frame surface,
anti-rust primer + high-quality topcoat drying
to ensure that the paint will not fall off within three years;



(10-180HP)



(36-300HP)

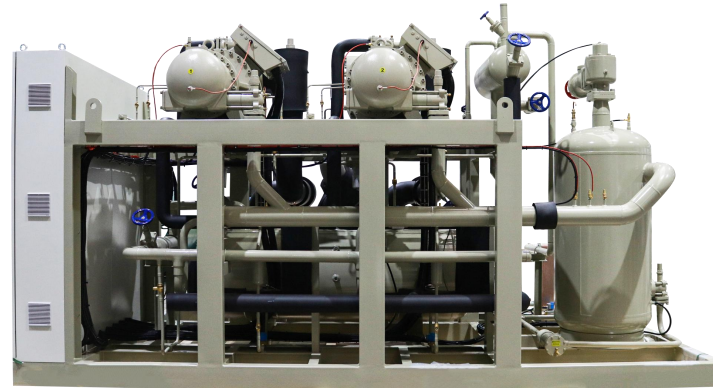


(90-960HP)

Compressor racks (two stage compressor Hanbell LT)



(50 - 180HP)



(100 - 360HP)



(200 - 720HP)

Features:

- ◆ Max. Evaporation temp. -65°C (R507)
- ◆ suitable used with inverter
- ◆ when working during $-30^{\circ}\text{C} \sim -65^{\circ}\text{C}$, compressor efficiency is higher 30% than single stage compressor
- ◆ low noise , low shaking , no need additional vibration
- ◆ remote control function.

Portable Container Type (with evaporative condenser)



Main Function:

- ◆ no need machine room
- ◆ no need installation at site , save time
- ◆ Portable



Industrial Water Chiller (Customorized products)



Hanbell magnetic levitation
variable frequency centrifugal
water-cooled chiller
Water outlet temperature 4~15°C
adjustable
First-class energy efficiency, COP
up to 6.59



**Business type CO₂
(30-330HP)**

Features:

- ◆ Semi-hermetic piston compressor, **stable and reliable operation**, low energy consumption
- ◆ **Strong scalability**, different HP, multiple suction, condensation pressure adjustment, thermal fluorination defrosting and other functions are optional
- ◆ Applicable to various high and low temperature conditions
- ◆ High-quality assembly process and strict factory inspection



Industrial type open type piston compressor

Main Componnets:

- ◆ operation : 900~1500RPM , capacity control valve 100%-75%-50%-25%
- ◆ Oil supply: oil pump
- ◆ oil pump : compressor
- ◆ oil cooler: compressor
- ◆ oil separator , oil filter , oil heater , safety valves
- ◆ Motor : TECO/WEG
- ◆ Control: SIMENSE
- ◆ Start: Inverter / Start triangle



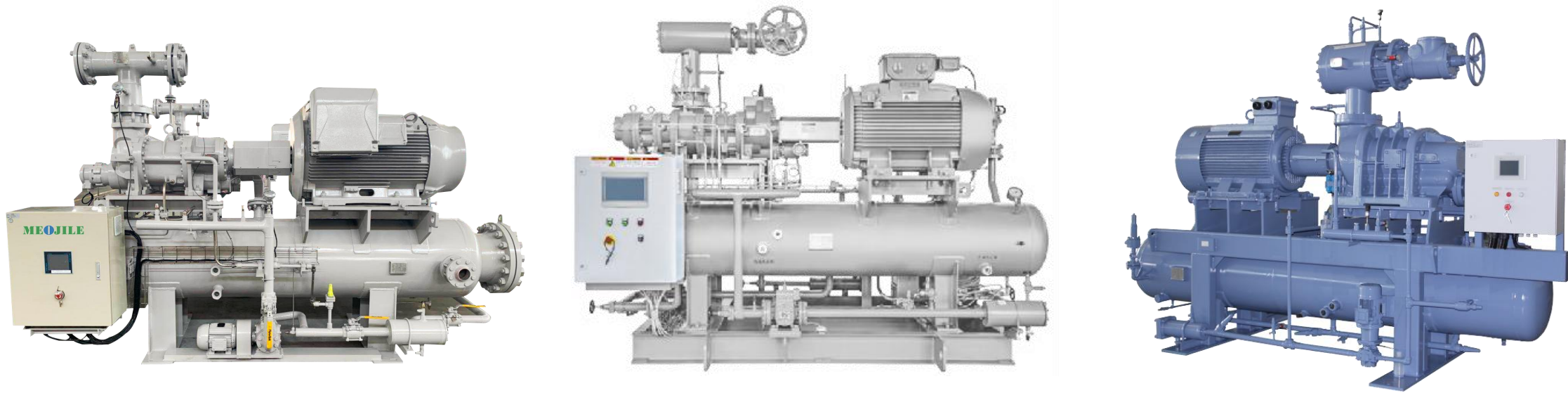
Accumulator & PHE

Features:

- ◆ The evaporator has a high evaporation heat exchange efficiency and good cooling effect.
- ◆ Ensure long distance liquid supply
- ◆ The system is simple and reliable to operate, convenient for centralized control and automation, and the operating conditions of the refrigeration compressor are improved.;
- ◆ Easy defrosting operation
- ◆ Centralized machine room



Open type screw compressor unit (Japan Mycom / Germany GEA)



two stages open screw compressor application:

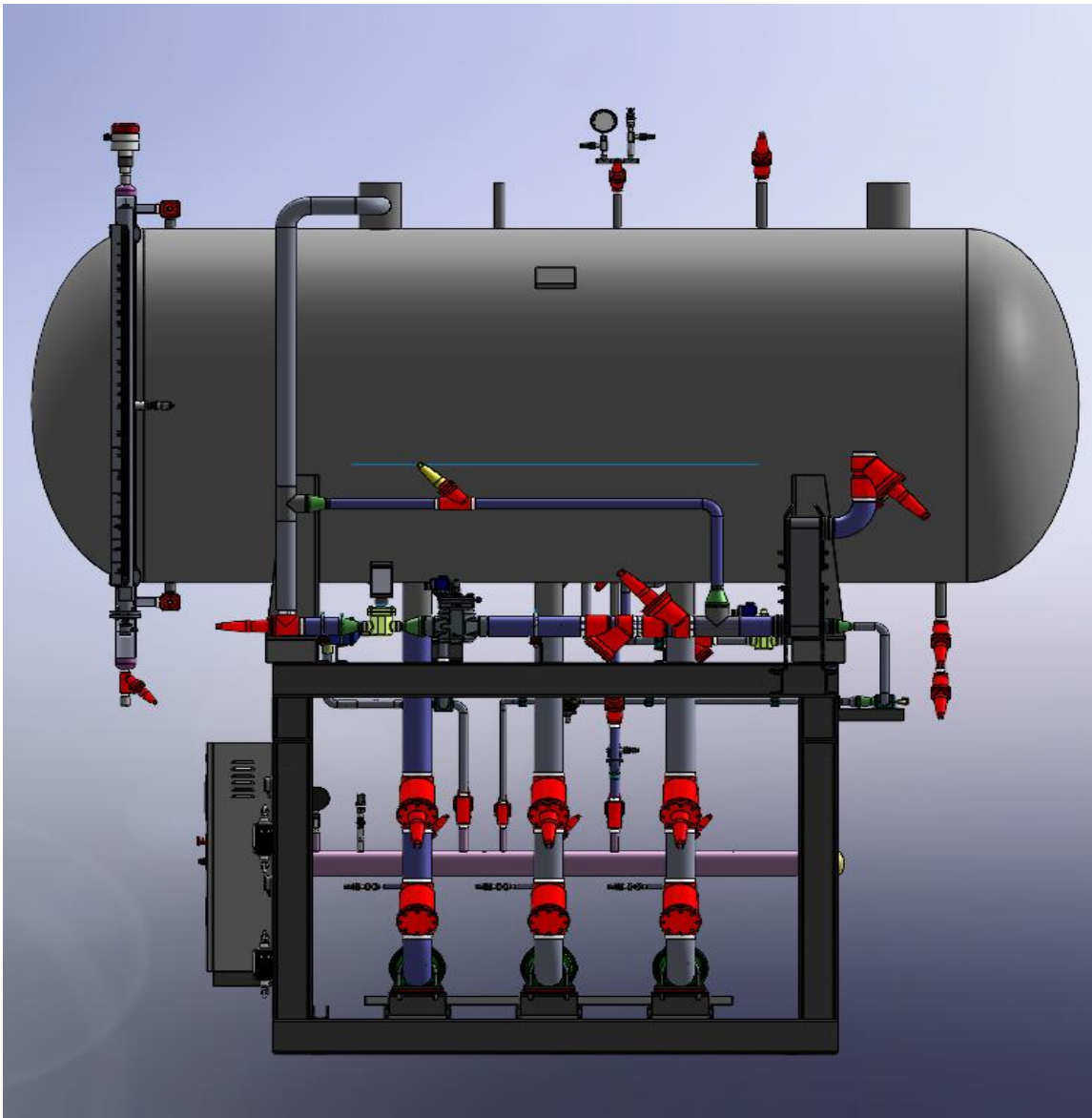
- ◆ Freezer, Chiller, quick freezing (-20°C low temperature cold storage, quick freezing, ultra-low temperature freezing of tuna)
- ◆ Food Processing (IQF, Tunnel freezer, dairy products , ice cream ~)
- ◆ Pharmacy (Biochemical extraction, process cooling)
- ◆ Vacuum drying
- ◆ Chemical Industry

Open type screw compressor unit (Japan Mycom / Germany GEA)



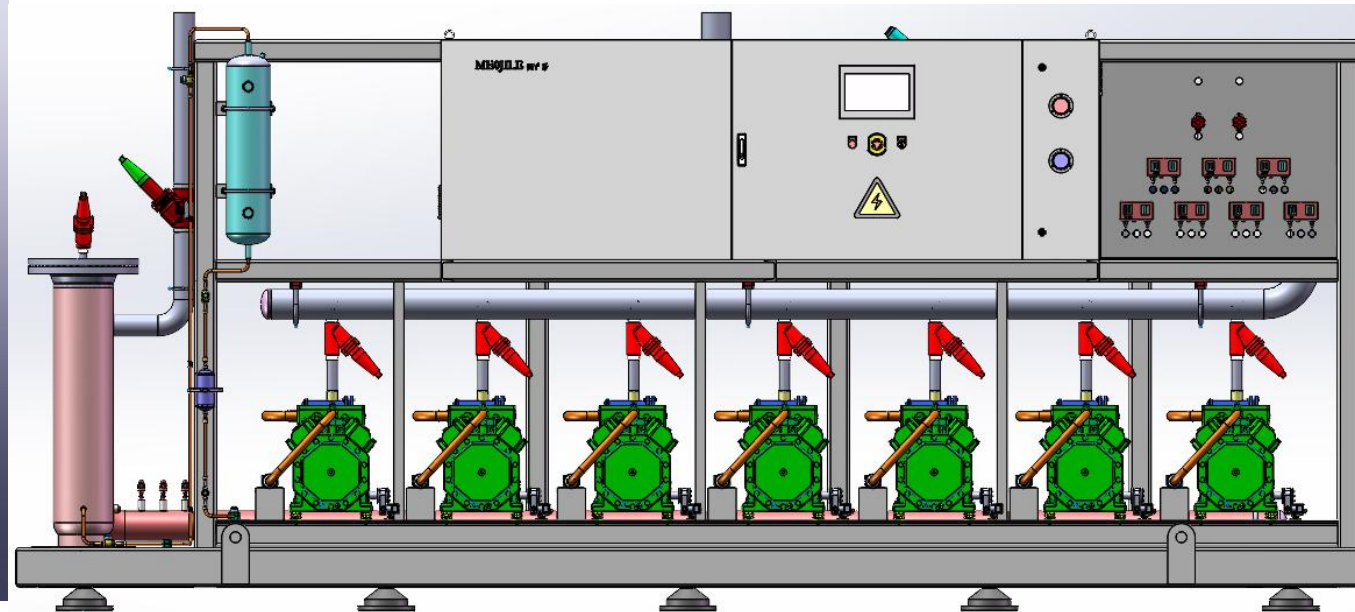
- ◆ The inlet temperature range is $-40^{\circ}\text{C} \sim +10^{\circ}\text{C}$, the exhaust temperature is $+45^{\circ}\text{C} \sim +100^{\circ}\text{C}$, and it is suitable for various conventional refrigerants such as R717, R404A, R507A, R22, etc.
- ◆ **Max. speed up to 6000rpm** , Can increase the refrigeration capacity of a single machine by 50%.
- ◆ It can be used in many fields such as industrial refrigeration, agricultural and sideline product processing, air conditioning and refrigeration, and ship refrigeration.
- ◆ Through automatic/manual VI adjustment, the compressor can maintain high energy efficiency ratio operation under different working conditions.
- ◆ **High-efficiency screw compressor with No.1 performance in a wide range**
- ◆ **Vi variable (2.63 to 5.8) effectively supports a wide temperature range 160V、200V、250V、320V**

CO2 barrel pump unit, CO2 piston compressor racks



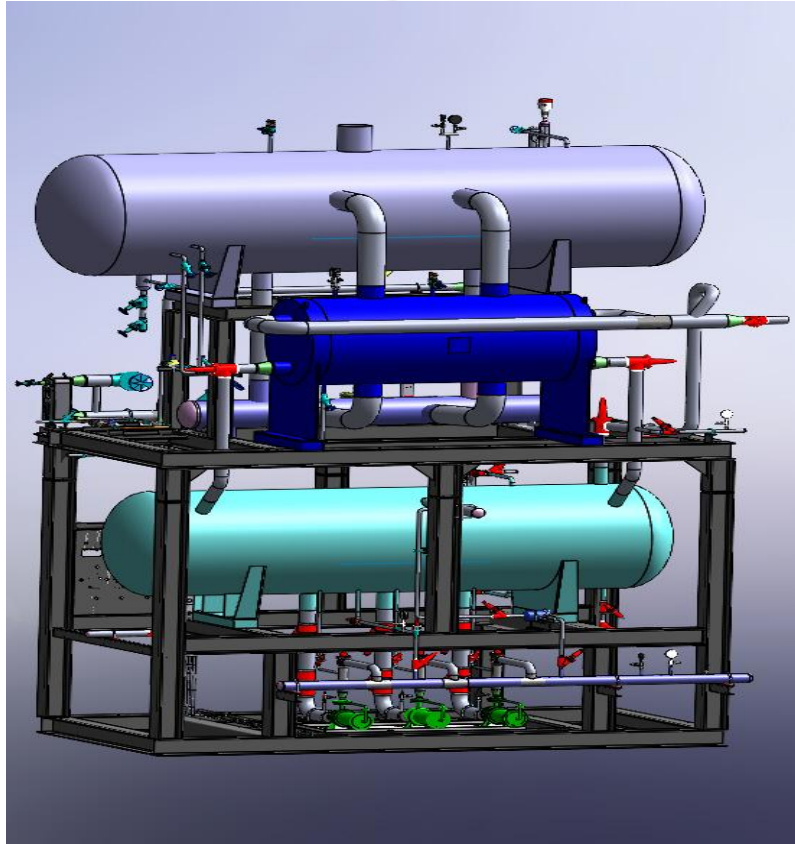
1. pressure vessels

design pressure (4.0MPa/5.1 MPa)



CO₂ condenser-evaporoator unit -3 types

plate & shell type



shell & tube type

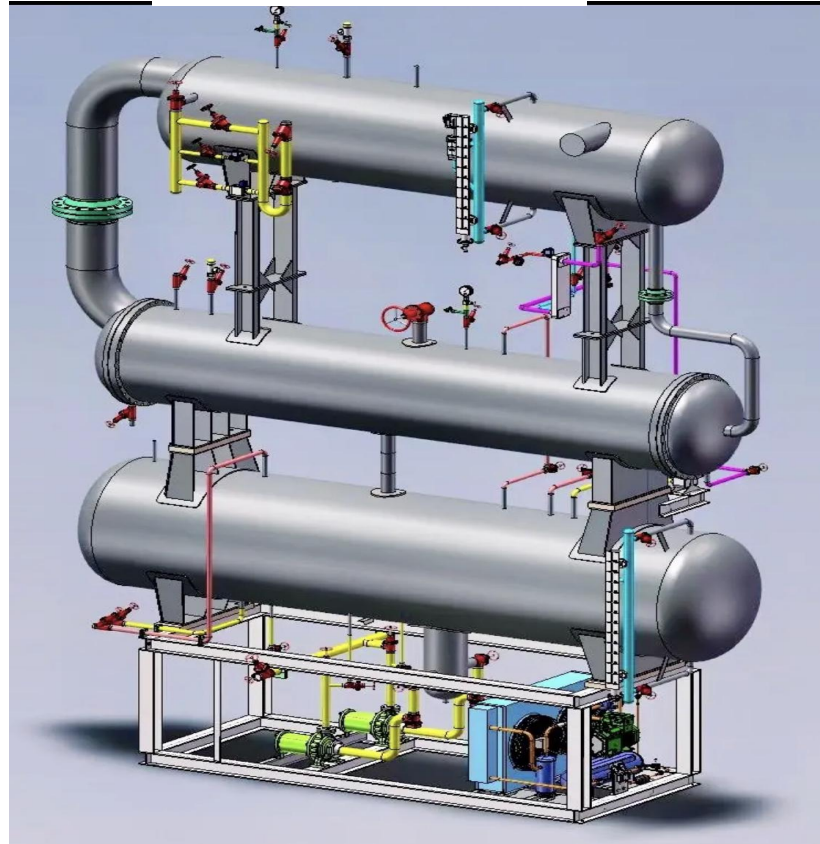
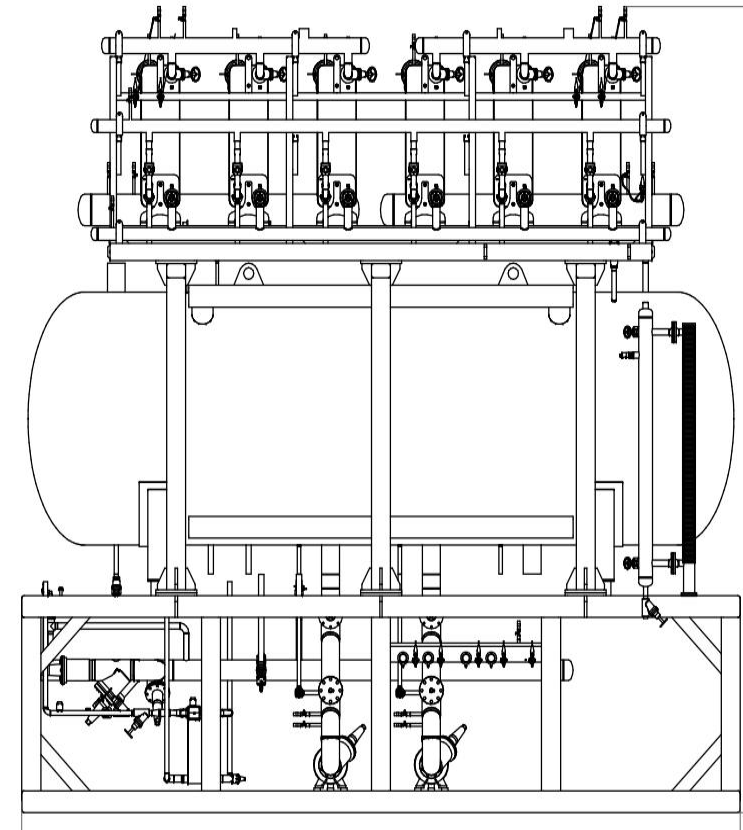
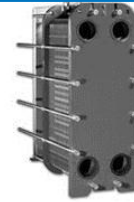


plate type



CO2 subcritical type condensing unit (semi-hermetic/ screw type)



**Business type
with semi-hermetic compressors
(30-300HP)**

- ◆ Semi-hermetic piston compressor, stable and reliable operation with low energy consumption.
- ◆ Highly scalable, with options for different capacities, multiple suction, condensing pressure regulation, hot gas defrosting, and other functions.
- ◆ Suitable for various high and low temperature changing conditions.
- ◆ High-quality assembly process and strict factory inspection.

CO2 subcritical type condensing unit (semi-hermetic/ screw type)



**Industril type
with open type pistion compressors**

- ◆ Operation: 900~1500 RPM, capacity control valve 100%-75%-50%-25%
- ◆ CO2 piston machine design pressure 60 bar, much higher than operating pressure, long service life, high efficiency;
- ◆ Oil separator: vertical oil separator with filter element and automatic oil return float valve
- ◆ Oil filter, oil heater, dual safety valve
- ◆ Coupling and coupling guard, stop valve and exhaust check valve
- ◆ Drain valve and oil drain valve, pressure sensor - oil pressure, suction, exhaust, temperature sensor
- ◆ Main motor manufacturer: TECO/WEG (general standard motor, easy to replace)
- ◆ Control panel: Siemens microprocessor, starter cabinet: variable frequency or star-delta starter cabinet
- ◆ Complete piping and wiring on the set, all components installed on a common frame
- ◆ 2-year warranty, all machine heads are warranted by original factory personnel, Shanghai has commonly used spare parts in stock, after-sales service on-site within 2 hours;

Barrel pump unit & condenser-evaporoator unit (Freon/CO2)



Accumulator part



- The evaporator has high heat transfer efficiency for evaporation and good cooling effect.
- It can ensure long-distance liquid supply.
- The system is simple and reliable to operate, convenient for centralized control and automation, and the operating conditions of the refrigeration compressor are improved;
- defrosting operation is simple.
- Centralized machine room.

Barrel pump unit & condenser-evaporoator unit (Freon/CO2)



condenser-evaporoator unit

1. The liquid level sensor AKS4100U can monitor the liquid level height inside the container in real time and transmit the liquid level height signal to the liquid level controller EKE347.
2. After the liquid level controller EKE347 (PLC) receives the actual liquid level signal, it compares it with the preset ideal liquid level height, and then sends a valve opening signal recommendation to the actuator ICM electric expansion valve.
3. The ICM electric expansion valve adjusts proportionally from 0-100% opening and can display the real-time opening.
4. In addition, this solution requires a float switch AKS38 to be configured as a high liquid level alarm signal.
5. Using Venturi hot gas injection oil return technology, in the circulating tank, the oil-rich layer redirects refrigerant liquid containing abundant refrigeration oil back to the injection oil return device, and then back to the suction side of the refrigeration unit, which is simple, efficient, and achieves good oil return.