

Waste heat is not "waste". It is to be cherished

Low grade waste heat utilization is a global issue.Opcon can take advantage of the hot water at temperature as low as 55℃ to generate electricity.

Waste Heat or pressure meeting one of the following conditions could be used to regenerate electricity:
Hot water: temperature is at 55 ℃ ~ 250 ℃
Exhaust gas: exhaust gas temperature is over 250 ℃
Residual Pressure: the input pressure is within 35 bar (a)
Steam: dry, wet saturated steam

How does the Waste Heat generate electricity?

Opcon as a world-class technical authority of screw machinery advocates making full use of energy. With the principle of screw compressor inversed, the waste heat and pressure gas could be used to drive the rotor and output kinetic energy from the shaft end, which is then sent to the generator for generating electricity. This is the simple principle of how screw expanders generate electricity. The function of Screw Expander is not only generating electricity power, but also replacing the cooling and depressurizing device in the industry.

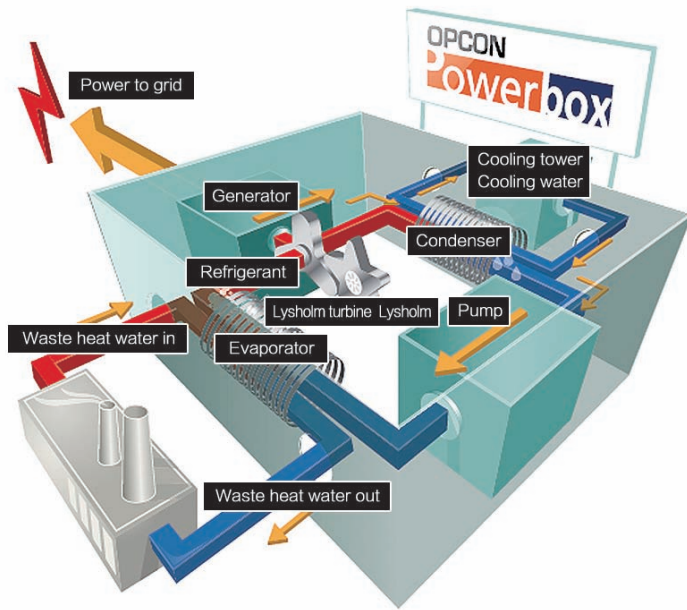
OPCON Powerbox Products' Applicable Fields

Petrochemical industry, thermo-electricity, metallurgy, mining, food, brewing, pharmacy, textile, dying, shipbuilding, papermaking, geothermal and biomass energy, etc.

OPCON Powerbox Products' Type:



OPCON Powerbox ORC is suitable for low temperature hot water, steam and the other various hydrothermal fluid
Working medium: liquid
Working principle: organic Rankine circulation forms into an closed circulation through the intermediate' s phase transition. The circulation realizes the transformation between heat energy and kinetic energy.



OPCON Powerbox WST is Suitable for high pressure dry or wet saturated steam and other high pressure gases
Working medium: gas
Working principle: Industrial gas enters into the screw expander and pushes the expander to work. This ensures the maximum power output under the given steam pressure and other condition. The steam from the expander outlet could be collected into the next procedure or recycled based on the demands.



China has already become “the World’ s Factory”.
From "Made in China" to "Designed in China",
more and more brilliant Chinese companies have come onto the international stage,
relying on their specialties to gain more authority.
Although they don't have hundreds of years of accumulation,
even though they don't have the deep background,
they nevertheless seize the opportunity of development,
with their diligence and keen sight,
to become a listed company,
and the focus of the world.

But they didn't slow down their step.
Instead, with an industrialist’ s pragmatic attitude,
they stay in put in silence,
introducing the world's top technology.
Their motivation is pure and practical,
as their attitude towards industry always is.
Fujian Snowman Co. Ltd is such a company,
a multinational company focusing on refrigeration and the extended industries.

Snowman’s Sub-brands and Cooperating Partners

Snowkey

World Leader of Ice Making machines

SRMTEC

The inventor and leader of screw compressors in the world

RefComp

World-class screw and piston compressor brand

OPCON
Powerbox

The founder and leader of screw type expander in the world

OPCON

World leader of Gas Compression and Energy Utilization Technology

Concepts NREC

World leader of Centrifugal and Turbine Technology

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SNOWMAN GROUP

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SRM100years

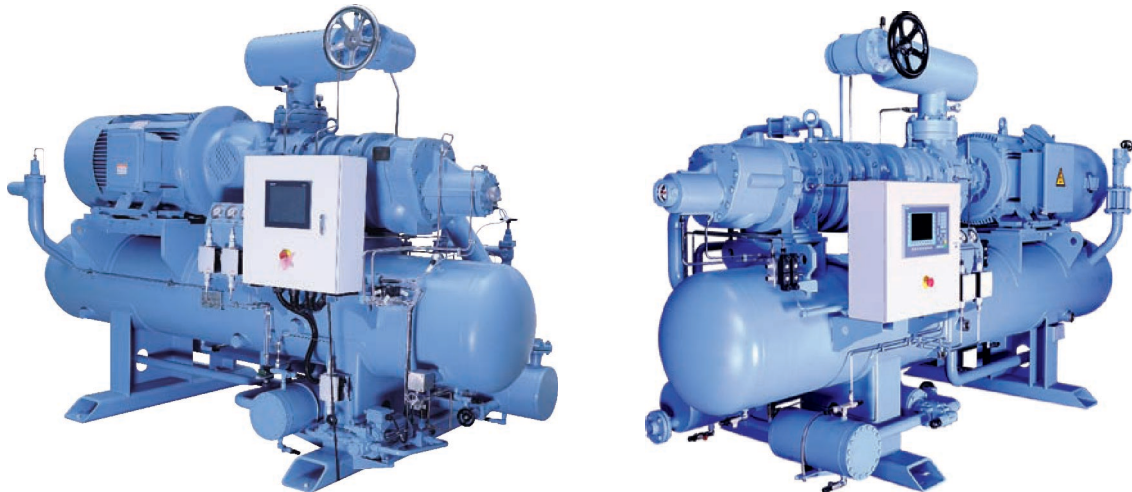
- 1908 years
- 1934 years
- 1946 years
- the founder of SRM invented the world's first Dual-rotor Turbine, and, from then on, started the prelude of becoming a leader in creativity and innovation;
SRM developed the world's first Screw Compressor, and began to provide technical solutions for Screw Compressor users around the world. Nowadays, 90% of the world's Screw Compressor use SRM' s patented technology;
SRM company of Sweden licensed British Howden company to use its compressor technology. Howden company became the first Screw Compressor manufacturer. Then SRM company licensed many other companies in Europe, America and Japan to use this technology.

Some famous examples include:

- Europe: Howden, Atlas, Aerzen, STAL, Linde, Grasso, Sabro.
- America: York, Trane, Carrier, Frick, Ingersoll Rand, Themoking.
- Asia: Hitachi, Mayekawa, Kobel Co, Mitsubishi, IHI, LG, Ebara.

- 1957 years
- 1961 years
- 1994 years
- 2000 years
- 2010 years
- 2013 years
- 2015 years
- SRM of Sweden successfully developed oil injected Air Screw Compressors.
SRM of Sweden invented the bilateral asymmetric lines and successfully developed oil injection Screw Refrigeration Compressor & Screw Process Compressor.
SRM of Sweden successfully developed Natural Gas Screw Compressor. Its exhaust pressure was up to 80 bar, and the rotor used new materials & new water lubrication system.
SRM of Sweden successfully developed the world's first Oil-free Screw Refrigeration Compressor.
SRM of Sweden cooperated with Snowman, They worked together to develop the new generation of Screw Refrigeration Compressor.
Snowman invested in SRM' s parent company (OPCON AB Sweden) and became the second largest shareholder.
Snowman acquired OPCON's two core business, which were its 2 sub companies, SRM & OES, and their 100%

- Open-type Single Stage Screw Compressor units SRMP1 (@ 50 hz displacement range: 215-10850 m³ / h)
- Open-type Single Machine Dual Stage Screw Compressor units SRMP2 (@ 50 hz displacement range: 544-5084 m³ / h)
- Open-type High Temperature and Pressure Screw Compressor SRH (@ 50 hz displacement range: 215-4280 m³ / h)
- Semi-hermetic Single Screw Compressor units SRS (@ 50 hz displacement range: 215-310 m³ / h)
- Semi-hermetic Single Machine Dual-Stage Screw Compressor units SRS (@ 50 hz displacement range: 141-625 m³ / h)



Screw Compressor (central AC products)

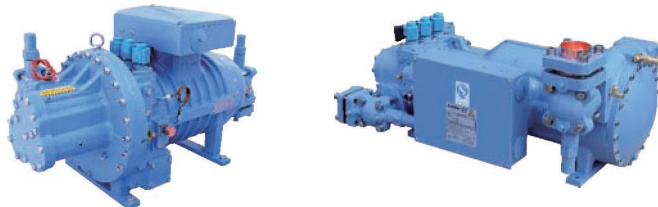
SRC-S series (for R22, R407C, R290 refrigerant etc, displacement range @ 50 hz: 118-1650 m³ / h)

World's first: specially designed for R134a models
134 -S fixed frequency series
(displacement range @ 50 hz, 270-1100 m³ / h)
World's first integrated variable frequency Screw Refrigeration Compressor
134-I built-in variable frequency series
(displacement range @ 50 hz, 378-1540 m³ / h)



Screw Compressor (frozen product)

SW3 series (displacement range @ 50 hz, 118-700 m³ / h)
SW5L series (displacement range @ 50 hz, 85-850 m³ / h)



Piston Compressor and Units Product

SP series piston machine (displacement range @ 50 hz: 17.5-222 m³ / h)
AP and WP series single piston condensing unit (3 HP - 50 HP)



Commercial Compression (condensing) Units Series

Screw Compression Condensing unit
Parallel Screw Compression unit
Parallel Piston Compression unit



Containerized ice plant station
Containerized cold water plant station (up to 1°C water outlet)
Modular concrete cooling system



0.5-60 tons/day flake ice machine
(slurry ice machine 5-40 tons/day)



Tube ice machine 1-100 tons/day



Plate ice machine 1-10 tons/day



Block Ice machine 1-10 tons/day



Snowman became a member and the organizer of the working group on Ice machine of natinal Technical committee 238 on refrigeration & Air conditioning equipment of standardization Administration of china.
Domestic honors: Snowkey was named "China well-known trademark" in 2011.
International glory: snowman provided concrete cooling system for the world's highest building, burj khalifa Tower. Snowman' s products have been used in many landmark buildings and public facility projects overseas.

Auxiliary Products



Finned Heat Exchanger
(air cooler & air-cooled condenser)



Pressure Vessels & Shell Heat Exchanger



Evaporative Condenser