



Green and effective energy
Scancool – industrial heat pumps



Industrial heat pumps generate energy savings of up to 80%!

Scancool industrial heat pumps specialize in efficiently recovering waste heat produced during production processes. Heat energy can be recovered from process water, waste water, flue gas, hot air and cooling condensation heat, among others.

Industrial heat pumps capture waste heat that was formerly lost and re-uses it efficiently (normally operating at a Coefficient of Performance or COP of 4-6) by heating water or air to 40–80°C. The recov-

ered energy can be channelled back into the industrial production processes, space heating, or sold back to the district heating grid. There are several options available.

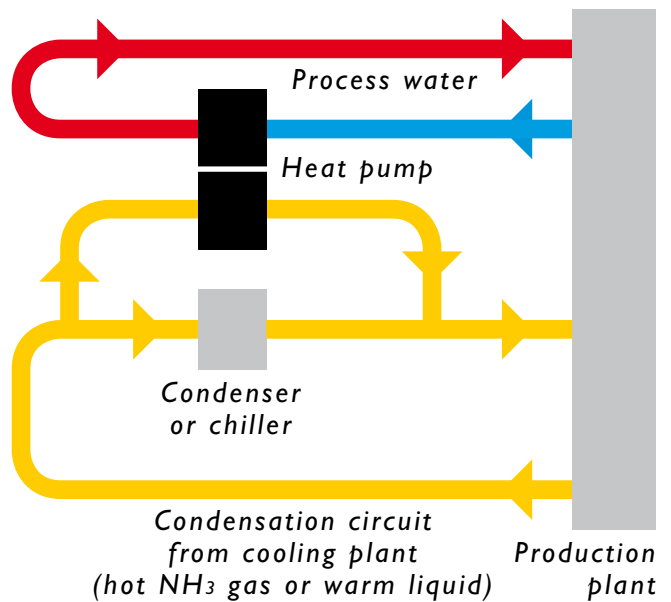
An industrial heat pump is an investment that pays itself back quickly. In just one year, you could see a savings of up to 80% on energy costs, with an equal reduction in carbon dioxide emissions!

Applications

Cooling – a valuable source of heat

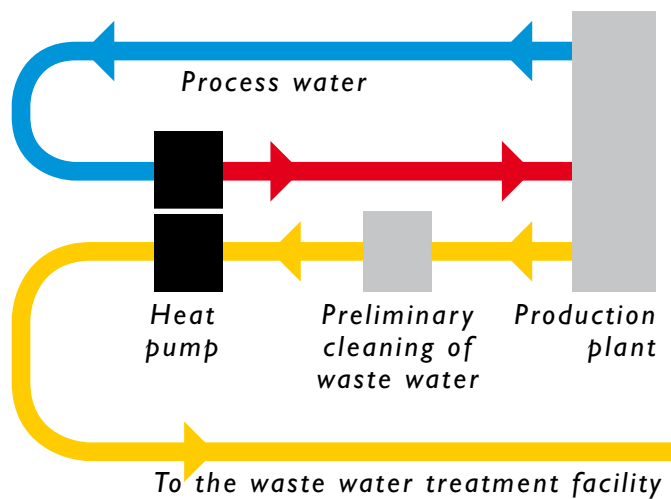
Cooling systems work to remove heat from areas that need to stay cool. All of this heat energy, including the electricity needed for the compressors, ends up as low temperature waste heat in a compressor or the water cooling system.

Direct utilization of this heat has been hampered due its low temperature, but heat pump technology can transform this condensation heat into hot water (40–80°C), recovering the waste energy to replace expensive primary energy.

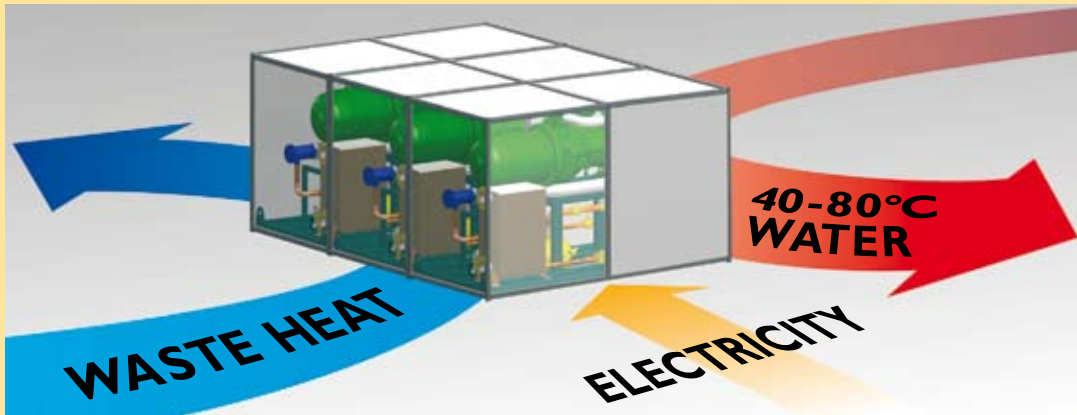


Waste water into energy

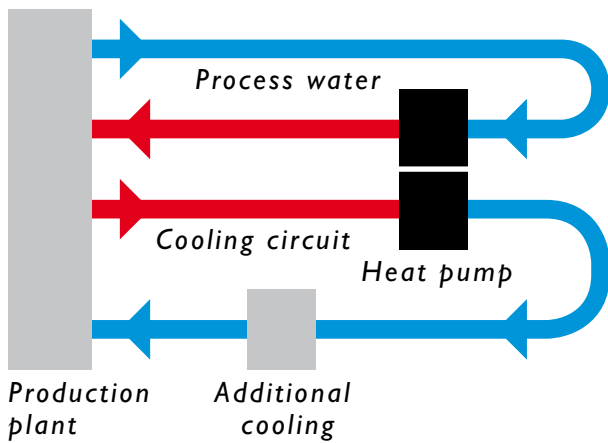
Waste water from production plants, municipalities and cities is drained into sewer systems or waterways, usually at a temperature of 10–30°C. Heat pumps make it possible to cool this waste water and recover the energy contained within it simultaneously. This recovered energy can produce hot water for company use or be sold back to the district heating grid.







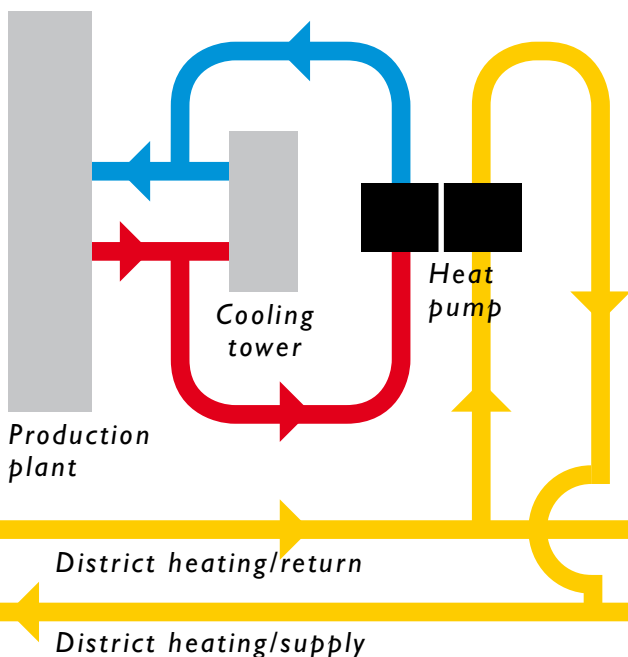
Cooling and heating- with just one machine



All manner of production facilities require both cooling and heating. In most premises, cooling is provided by an air conditioner and heat is produced by oil, district heating, electricity or other heating facilities.

Now both heating and cooling can be generated with one machine, a single investment: the heat pump. Heat pumps use only slightly more electricity than air conditioners, which only serve one purpose. Heat pumps both heat and cool. The heat that is generated replaces pricey purchased energy. Savings are created both in terms of investment costs and energy-efficiency.

Turning waste heat from industrial processes into district heating



Industry involves many processes that must be cooled. Waste water from this process is discharged into waterways or directed to a cooling tower to cool, where the heat is released into the atmosphere. In both cases, large quantities of heat are released into the environment because the low temperature of the waste water makes the heat difficult to capture.

This free source of energy can be harnessed with heat pump technology to produce hot water for company use or the district heating grid.

Quality assurance and product development

Scancool products and solutions are known for their superior quality and operational reliability. Scancool also offers extensive maintenance services. Before customer delivery, Scancool carries out full-scale bench testing, with a diverse array of assessment set in the same conditions in which the equipment will operate. In this way we can ensure the reliable operation of our products and optimal performance in varying conditions. Careful testing also minimizes the time spent on installation and implementation, allowing the customer to quickly reap the full benefit of their investment.

The Scancool test bench is also an important tool for product development in the rapidly expanding heat pump sector, as it provides us with a cost-efficient, convenient opportunity to test solutions based on simulation models as well as the applicability of new components to different systems. We strive to continually develop more energy-efficient, inexpensive and environmentally-friendly solutions to meet the needs of our customers.



Scancool both cools and heats

Scancool Oy is one of Finland's leading suppliers of industrial refrigeration and heat pump solutions. A specialist in refrigeration technology since 1984, Scancool has devoted the first decade of the 21st century to expanding our operations and investing in the development of our own production facilities. Our

years of refrigeration expertise have provided us with the ideal foundation for the development of optimal industrial refrigeration and heat pump solutions. Scancool now provides both heating and cooling services from the same reliable source.

- Turn-key industrial refrigeration solutions from design to implementation, utilizing ammonia (NH₃), hydro fluorocarbons (HFC) and carbon dioxide (CO₂) as refrigerants
- CO₂ retail refrigeration, effective and safe solutions from Star Refrigeration
- Scancool HP and HHP industrial heat pumps (HFC, can heat water to 80°C, thermal output 0.1–5MW)
- Neatpump (Natural refrigerant heat pumps, NH₃, can heat water to 90°C, thermal output 0.5–20MW)
- Design and maintenance of refrigeration and energy technology



ISO 3834-2

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Keeping You Cool

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