

JS.C   **LING**[®]
.more than cooling

HEAT PUMP



Dairies



Chemical industry



Public buildings



Fish processing



Meat establishments



Breweries

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J.S.COOLING offers comprehensive services in the field of **industrial cooling and ventilation of turnkey projects as a General Contractor** also for **Industry 4.0**.

Over 32 years of presence on the market, extensive experience gained through completed projects and a staff of specialists guarantee an individual approach to each client. We are the only Polish manufacturer of ammonia chillers.

The equipment we manufacture includes:

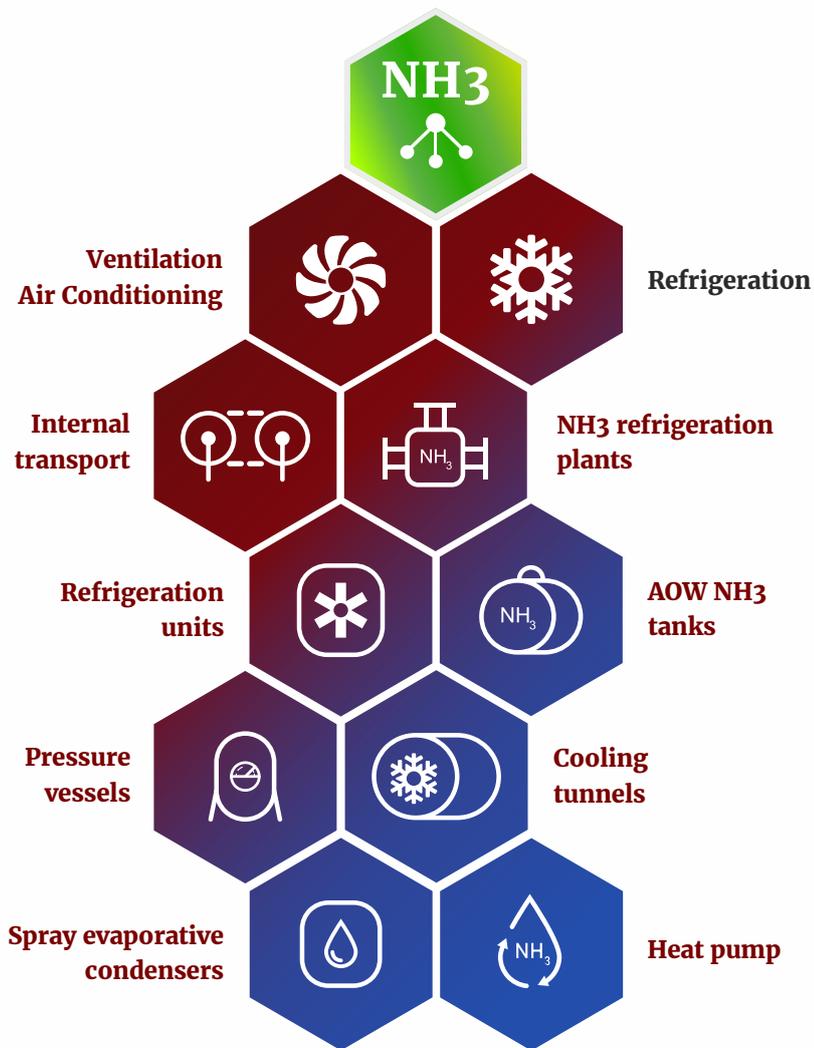
- ammonia refrigeration plants with large capacities
- spray - evaporative condensers
- compressor units based on screw and reciprocating compressors
- pressure tanks
- evaporators
- ice water tanks
- process piping
- cooling tunnels
- pallet conveyors
- ventilation, air-conditioning and heating units

Due to the fact that **our company is a manufacturer of industrial cooling and ventilation devices**, our systems are always perfectly tailored to the customer's needs. We offer a comprehensive service for your investment, from the creation of the design, through the implementation, to the maintenance of the installation 24 hours a day.





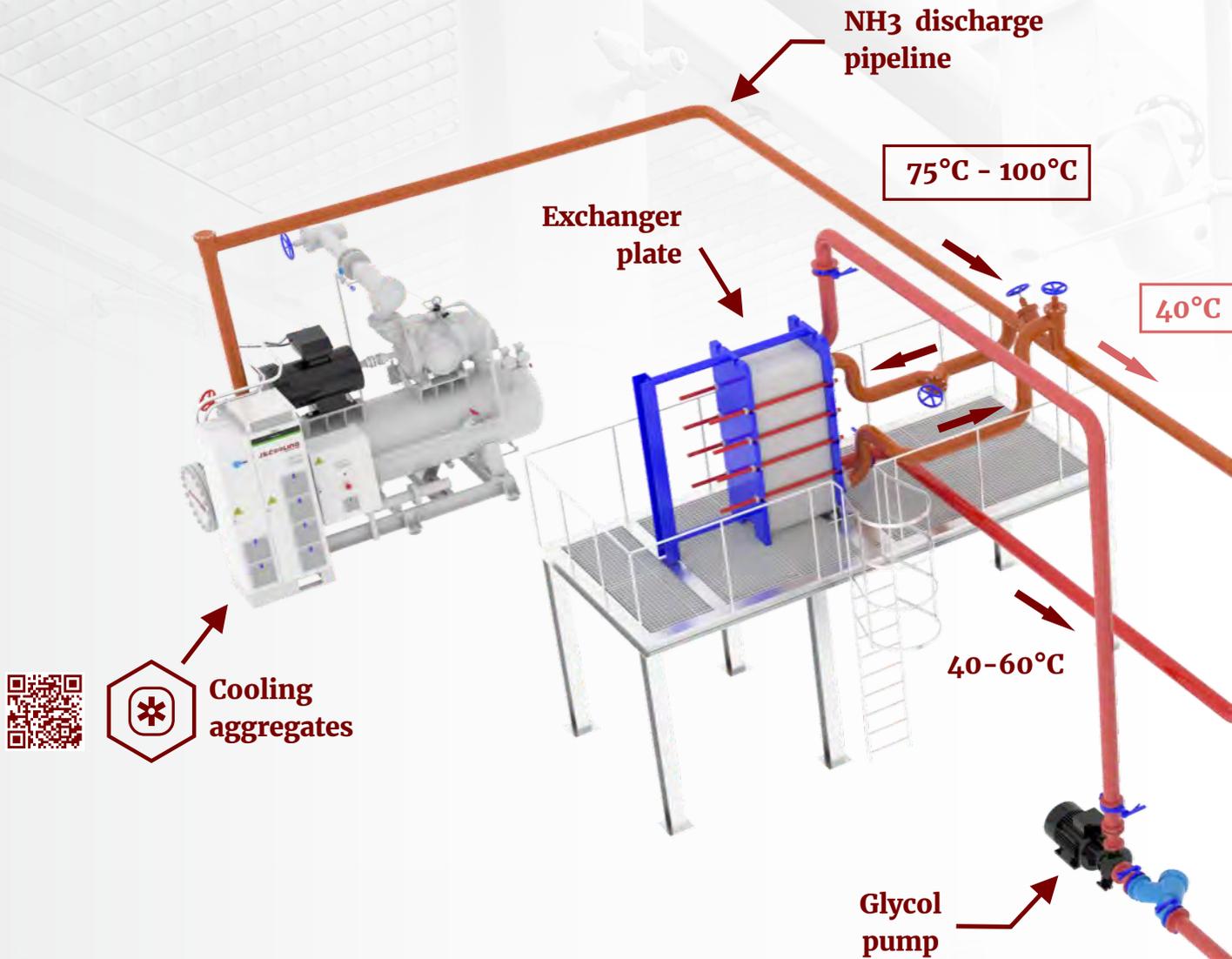
AMMONIA REFRIGERATION



HEAT PUMP

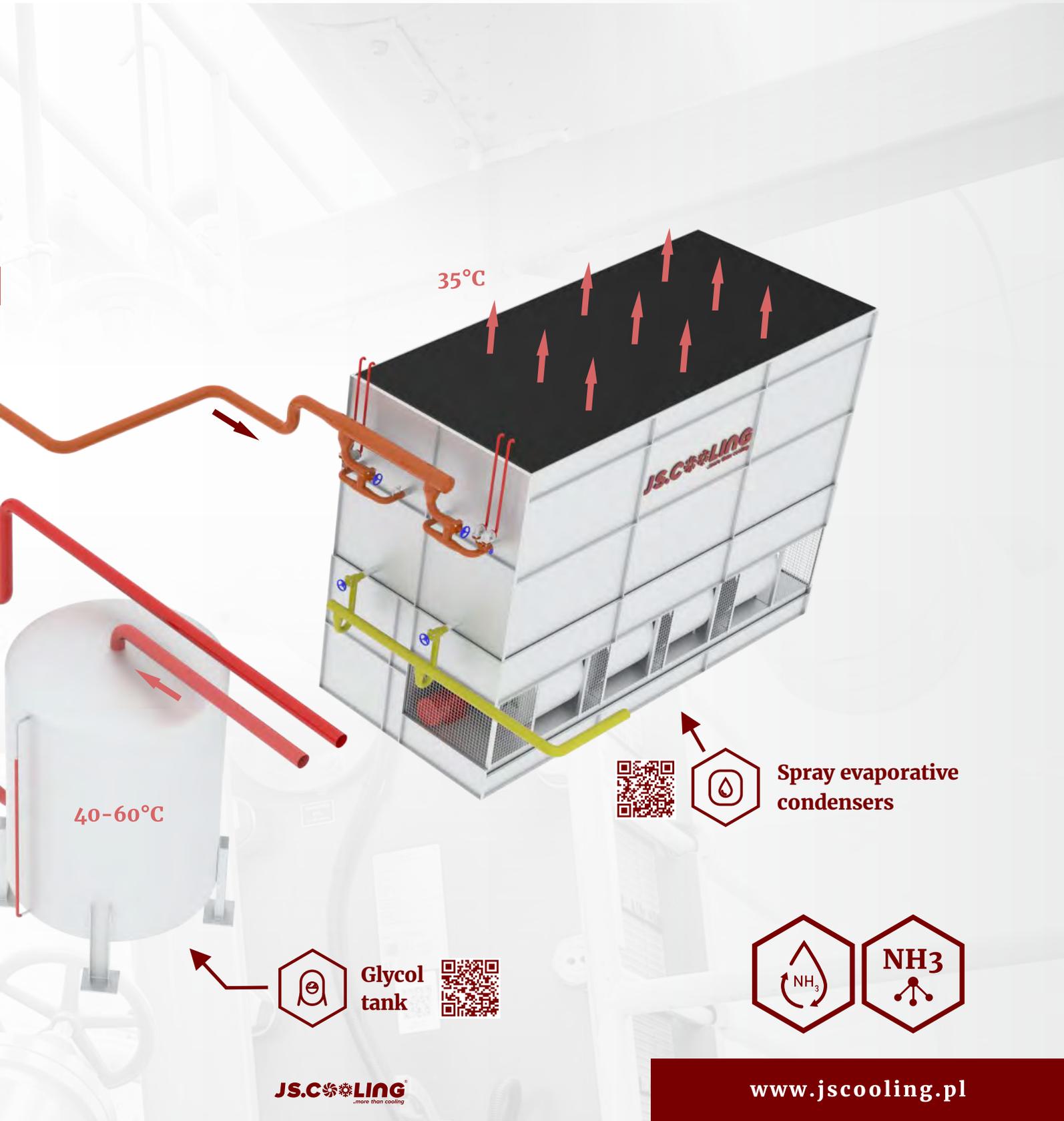


The heat generated **in the cold production process in NH₃** installations can be recovered by installing a plate exchanger connected in series on the discharge pipeline between the compressor units and condensers. For this purpose, ammonia-glycol plate heat exchangers are most often used.

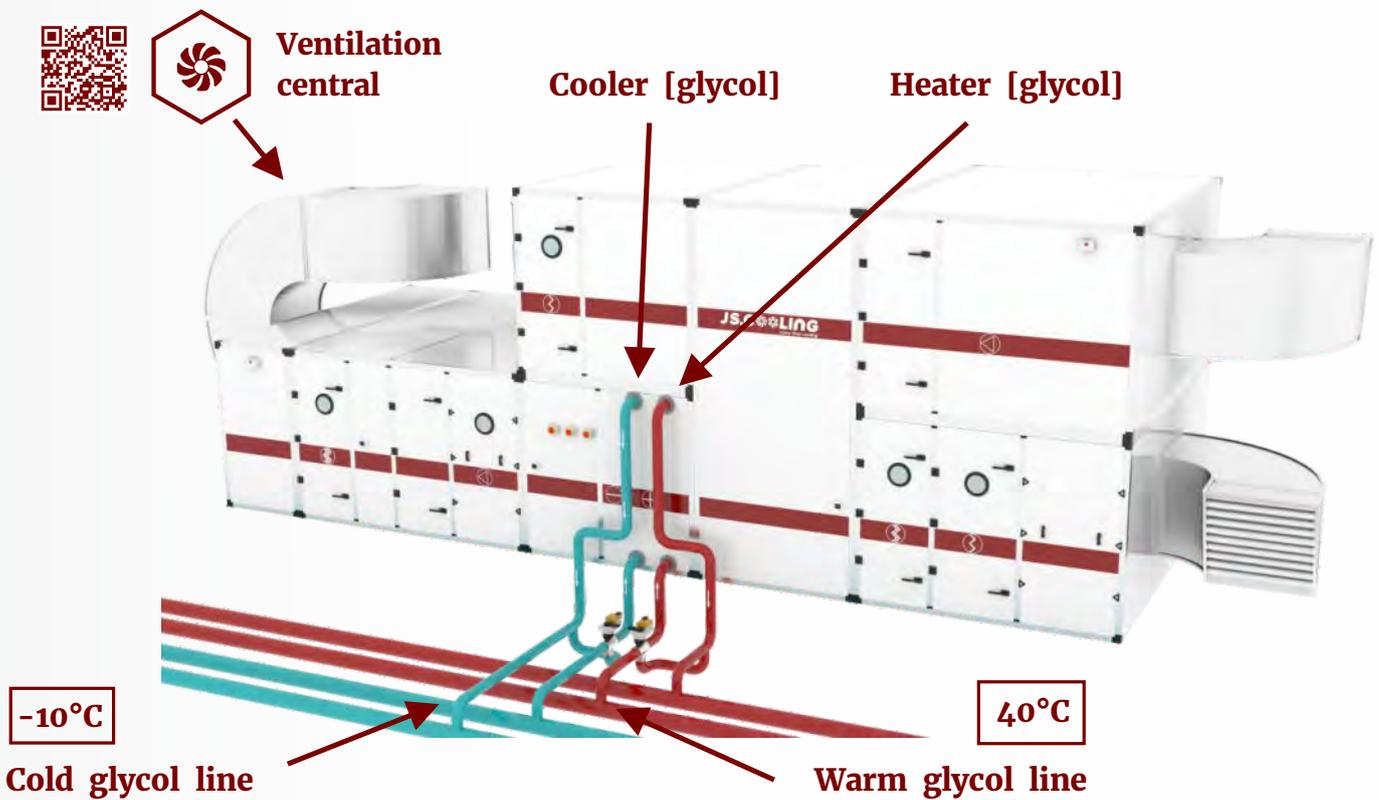
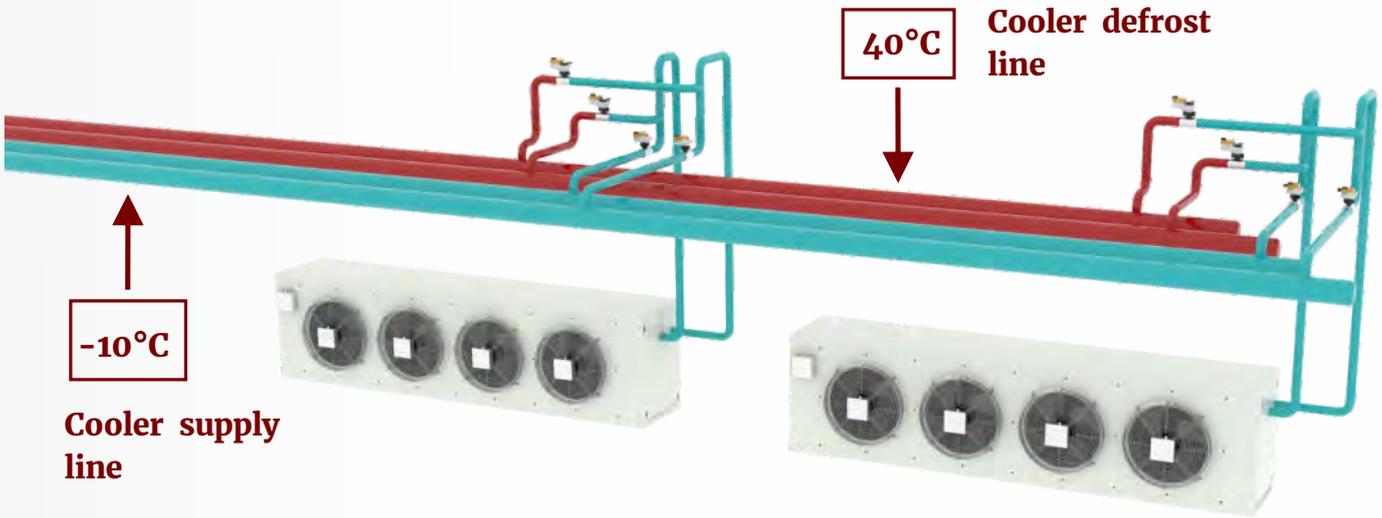


HEAT RECOVERY PROCESS IN THE NH₃ COOLING SYSTEM

As can be seen in the diagram above, hot ammonia vapours on the way from the unit to the condenser are directed to the plate exchanger where the excess heat is transferred to the glycol, which has its own circuit and tank. **This heat can then be used for defrosting coolers, space heating and production processes.** Otherwise it would be released into the atmosphere as water vapour in the condenser. Depending on the heat reception and the power of the cooling system, warm glycol can reach temperatures of 40–60°C.



Warm glycol is also an ideal solution for defrosting coolers. Thanks to it, you can replace electric heaters, thus reducing electricity consumption and, consequently, operating costs. By using automatic valves, the defrost takes place at scheduled times and the defrost time of the radiator is shorter compared to electric heaters.



In addition, the heat recovered in the exchanger can heat all kinds of rooms in industrial plants through air handling units thanks to the use of glycol heaters. In most cases, the heat supplied to the units comes from gas combustion, so using the above solution can completely eliminate gas consumption for heating purposes

By using an additional hot glycol-water exchanger, it is also possible to preheat domestic hot water (DHW) used for production processes.

Comparison of two types of refrigeration installations

	Cooling installation without heat recovery	Cooling installations with heat recovery
Defrost coolers	Electric heaters	Warm recycled glycol
Space heating	Gas	Warm glycol fed to the heater
Domestic hot water	Gas	Initial heating of water through an additional water / glycol exchanger
Liquefaction	Working performance at high efficiency and spraying efficiency	Reduced condenser time and efficiency
Energy efficiency and ecology	The excess heat is released into the atmosphere	Recycled heat significantly reduces electricity and gas consumption

Application + Audit + Documentation

When installing a heat recovery installation, you can count on a return in the form of White Certificates, which can then be sold or kept for investment, because their value is constantly increasing from the moment they appear on the market. The amount of TOE s received depends on the amount of energy saved, which will be demonstrated after the final audit.

As part of the heat recovery contract, we offer assistance in completing all formalities (submitting an application, conducting an audit before and after installing the heat recovery installation).



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