



SPECTRUM delivers reliable cooling capacity in almost any size.

Use in industrial process cooling with the option of the heat recovery.

An impressively wide spectrum

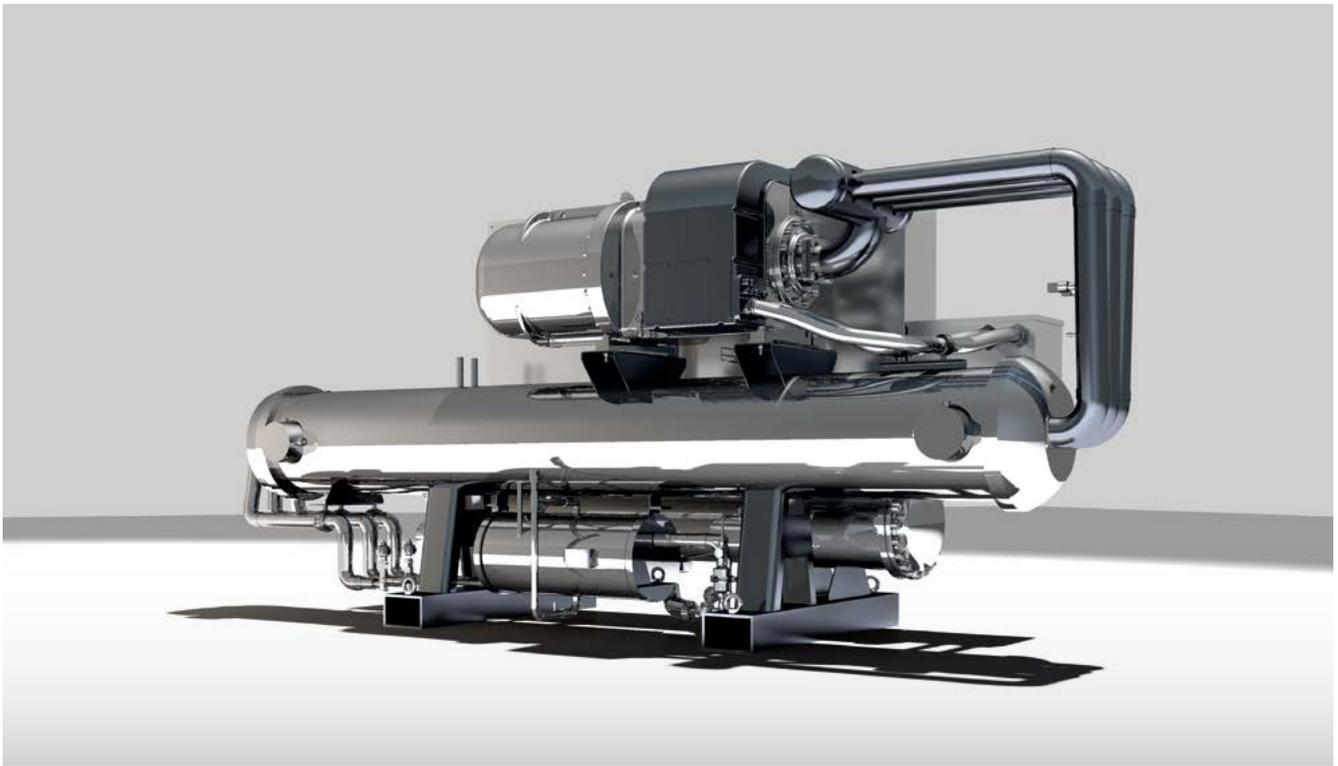
The SPECTRUM from ENGIE Refrigeration has a wide range of uses and is an extremely reliable supplier of “cold” – and it is also possible to recover the heat that is produced. As is the case with any heat pump, there is a fixed relationship between the cold and the heat which is generated: The refrigeration performance is approx. 100 kilowatt (kW), approx. 120 kW or approx. 150 kW at temperatures of -10°C to 25°C and simultaneous heat supply if desired. These are maximum values which can be achieved when implementing the models. One additional advantage: Thanks to the open flash economiser that the SPECTRUM uses, the chilling and heating performance can continuously be regulated by up to approx. 20 % of the nominal power.

From freezing to storing

The SPECTRUM offers efficient refrigeration for many industrial sectors: whether for **storage, logistics, refrigerated storage facilities or production and processing processes** – the SPECTRUM always provides the correct temperature. Typical areas of use include:

- Food industry (shock freezing frozen goods)
- Bakery (freezing bakery products)
- Fish and meat processing industry
- Ice rinks and indoor skiing arenas
- Pharmaceutical industry
(manufacture and storage of medicines)





The characteristics of a specialist in efficiency

The SPECTRUM's high performance core is an open flash economiser that facilitates a higher refrigeration performance compared to conventional chillers with a speed-controlled screw compressor - even if it uses a subcooler economiser. Equipment operators profit from higher Seasonal Energy Efficiency Ratio (SEER) values in the refrigeration segment, and higher Seasonal Coefficient of Performance (SCOP) values when used as a heat pump.

In addition, the SPECTRUM also offers a SIMATIC S7 control unit that corresponds with the most current industry standard and is also compatible over the long-term, expandable on a modular basis, scalable, vibration-resistant and maintenance-free.

The SPECTRUM lives up to its name as it can always be adjusted to the customer's requirements or application and can cover a wide utilisation and temperature spectrum. There is also the option of dividing the condenser and thus adapting the available heat to the application regardless of the required chiller performance.

SPECTRUM'S benefits

- Optimal primary energy utilisation whilst simultaneously using the side that heats and refrigerates
- Minimal energy costs in comparison to separate systems for heating and refrigerating
- Lower investment costs for the necessary infrastructure compared to separate systems for heating and refrigerating
- Cost savings by adapting to the actual cooling and heating required
- Reduced space needed for the technical building installation
- Lower maintenance requirements
- Funding possibilities through government programs



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