



# SPIRIT

## SPIRIT Demo Case 3 - Integration of a high temperature heat pump in a paper mill

Spirit is a 42-month EU project aiming to enable industrial heat pumps to become the reference climate-neutral technology for covering heat demand for temperatures up to 160 °C by 2030



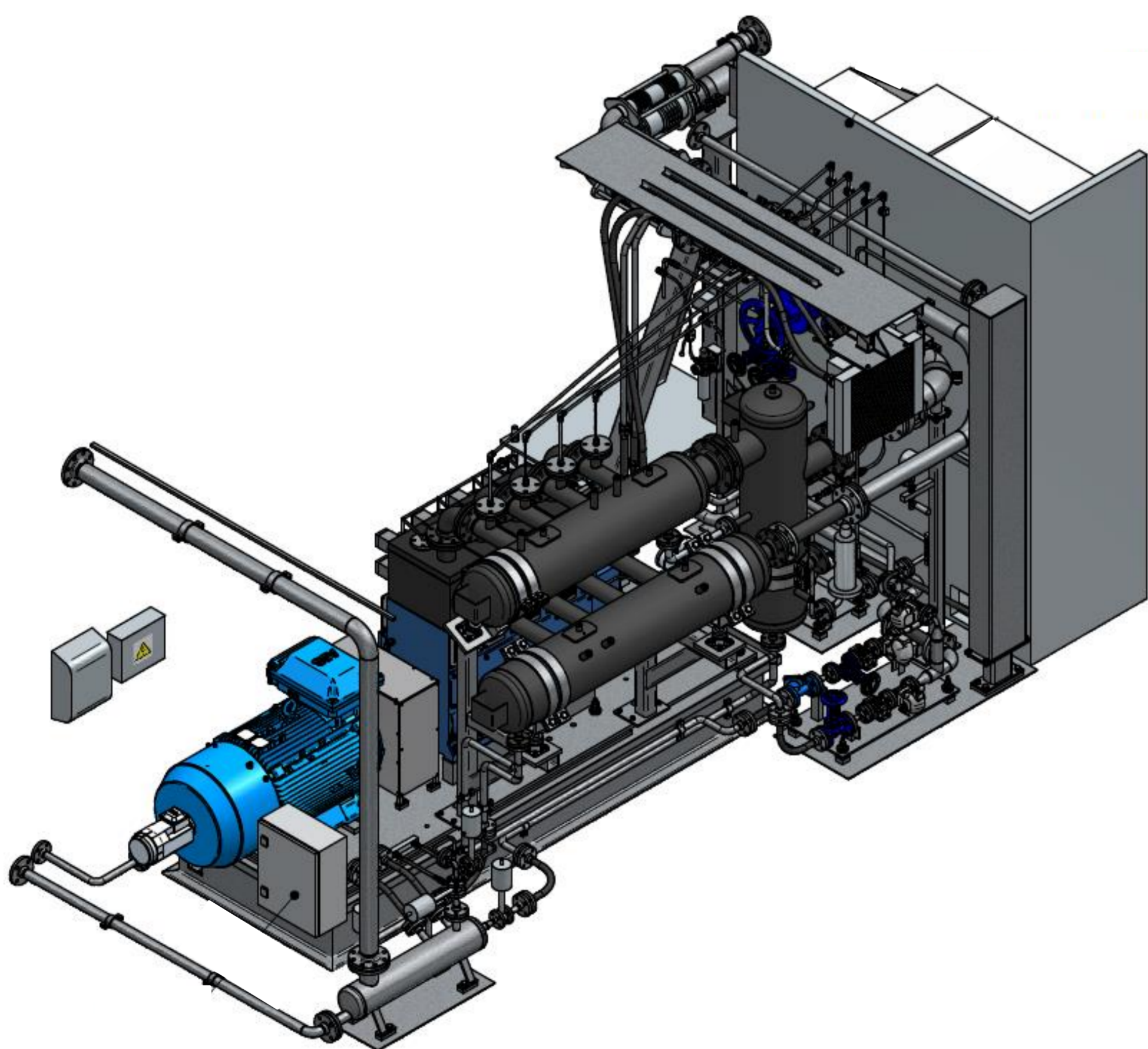
DLR

Smurfit Kappa

**SPIILLING**  
Technologies

- **Smurfit Kappa** – Žimrovice – Czech Republic
- **Spilling** – Hamburg – Germany
- **DLR Institute of Low-Carbon Industrial Processes** – Cottbus/Zittau – Germany

- Pulp & Paper – Corrugated packaging
- Usage of gas boilers for steam production
- 12 t/h of steam @ 6 bar(a) heating 36 cylinders



- Four-cylinder piston compressor from Spilling delivers steam @6 bar(a) (20 feet container)
- Delivers between 250 and 1000 kg/h of steam @ 180 °C
- Steam upgrade from 2 to 6.1 bar(a)
- Approx. 0.8 MW<sub>th</sub> – COP ≈ 5.8
- Commissioning in 2024
- Realisation of an extensive test programme



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