# Ultra-high temperature heat pump in leather production process

## Ochsner Energie Technik

**Figure 1: Ultra-high temperature heat pump IWWDS 270 ER4b.**

## Summary of demonstration case

In this demonstration case, an ultra-high temperature heat pump is integrated into a leather production process. The heat pump contributes to decarbonize the process by providing heat very efficiently using potentially emissions-free electricity and thereby replacing fossil fuel-driven technologies.

The machine is running in continuous operation.

For the optimal integration of the heat pump in the industrial process, the requirements for the correct operation of the heat pump and of the leather production process should be met (e.g. the start-up temperatures must meet the compressor requirements, and the hydraulics and the minimum operating times should be adequate for the heat pump).

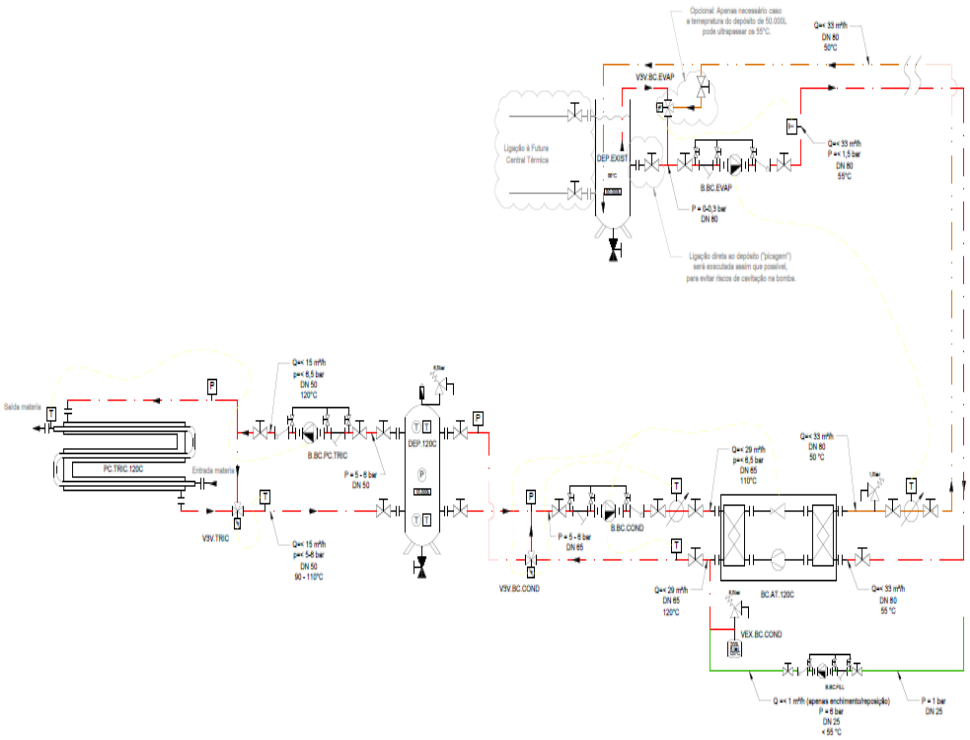

**Figure 2: Hydraulic system for leather production process**

## FACTS ABOUT THE CASE

**Installation year:** 2020
**Operating hours:** 8000 hours/a
**Working fluid used:** R1233zd
**Compressor technology:** semi-hermetic screw / single stage
**System manufacturer:** OCHSNER Energie Technik
**Performance in design point:**

- **Heat source:** 55 °C → 50 °C, water
- **Heat sink:** 100 °C → 110 °C, pressurized water
- **Max. Supply Temperature:** 130 °C
- **Heat supply capacity:** 338 kW
- **$COP_{Heating}$:** 3.2 measured in laboratory

**Specific Investment cost:** 350-700 €/kW
**Savings:** -
**Estimated annual $CO_2$ savings:** -
**Link to webpage or report: -**

## Contact information

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All information were provided by the supplier without third-party validation. The infomation was provided as an indicative basis and may be different in final installations depending on application specific parameters.