



2022 Pistoia, Italy **Renewable Energies**

Brazed plate heat exchangers for high pressure are a key element for an important application in the ecological transition: CO₂ refrigeration. For temperature control and refrigeration in food processing or the cold chain, in fact, the use of this fluid/gas becomes an important ally.

The properties of carbon dioxide make it very efficient in heat transfer and guarantee an ozone depletion potential of zero as well as a 'Global Warming Potential' value of 1. Much more impressive results than its synthetic substitutes. In order to achieve the expected results, CO₂ must operate at very high pressure levels in properly designed plants. The challenge is to ensure the condensation and evaporation of CO₂ while withstanding the high operating pressures of up to 140 bar. Achieving this goal is the beginning of a new field of application for sustainable air conditioning and brazed heat exchangers.