



OLPP[®] - RESILIENCE + EFFICIENCY IN EXTREME TEMPS

Baby, It's Cold Outside!

January has proven to be a frigid month, particularly in Alberta, where temperatures have plummeted to some of the coldest recorded in a century, dropping below -40 degrees for an extended period. This extreme weather can pose significant challenges, not only for heating systems struggling to cope but also for conventional refrigeration methods.

In these extreme conditions, conventional high-pressure refrigeration systems have demonstrated their inadequacy. Using outdated strategies like flooded condensers, receiver heaters, and pressure-dependent valves makes these systems ill-equipped when faced with extremely low ambient temperatures. Moreover, they use more than double the required refrigerant, devoid of any heat exchange benefits – essentially occupying space without contributing to the system's efficiency. The absence of features like true floating head capabilities and adaptable ambient control strategies further exacerbates their shortcomings.

This deficiency in conventional systems can lead to compromised performance, increased energy consumption, and elevated operational costs, placing additional strain on the energy grid. Additionally, pressure-driven controls experience precision limitations in extreme conditions, impacting temperature and pressure control accuracy crucial for optimal system performance.

In contrast, the OLPP, using a low-pressure refrigerant, HFO 513A (with an ultra-low GWP of less than 600), addresses these issues through its integrated, low-pressure drop design. This innovative platform offers adaptability, flexibility, and precision, ensuring consistently efficient refrigeration performance. It not only outperforms conventional systems but also excels in extreme temperatures. It begs the question: when will we fully embrace the fact that digital technologies significantly enhance both performance and environmental impact?



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