



Icematic



**Engineered Solutions for
Low GWP Refrigerants**





INNOVATION. QUALITY. RELIABILITY.

PAST. PRESENT. FUTURE.

CPI Fluid Engineering offers solutions to meet the demands of today's complex system designs. Emkarate® is the leading brand of lubricants for HFC systems. The Icematic® brand series represents CPI's commitment to provide engineered solutions that meet the requirements of transitional and long-term sustainable low global warming potential (GWP) refrigerants.





CPI Fluid Engineering Is Your Low GWP Navigation Partner

Managing Complexity in the Refrigeration Industry

The refrigeration industry is transitioning towards a more sustainable future. However, this transition does not come without challenges. Key industry stakeholders are faced with navigating a complex landscape, as regulatory bodies around the world grapple with how to best address global warming.

Refrigerant gas manufacturers are responding to regulatory pressure by developing a vast array of new lower GWP refrigerant choices. OEMs are making refrigerant selections that balance technical requirements with regulatory and safety compliance. CPI Fluid Engineering is committed to partnering with industry stakeholders to navigate these challenges.

Choosing the Right Lubricant Navigation Partner

Choosing the right lubricant solutions partner is a critical decision when navigating through the complex low GWP landscape. The ideal partner collaborates to understand the challenges, provides guidance, and delivers innovative solutions. There are three important elements that a strategic navigation partner possesses:



Technology

Innovation requires significant technical and financial resources, as well as market insights. CPI's advanced testing & modeling capabilities, deep expertise on key components and applications, and market focus facilitate a robust approach to solution development and implementation. The combined strength of CPI Fluid Engineering and the Lubrizol Corporation (A Berkshire Hathaway Company) provides unmatched technical resources and support.

Networking

Significant involvement with industry associations, such as ASHRAE, allow CPI to participate in shaping the future of the refrigeration landscape. Collaborating with OEMs, refrigerant gas manufacturers and our customers brings innovative platforms and products to market faster, which benefits the entire industry.

Insights

Decades of experience in the field, complex problem-solving abilities, and a deep understanding of the refrigerant/lubricant relationship are necessary to guide customers to the right choice of lubricant in an ever-changing industry. CPI Fluid Engineering has navigated challenges in refrigeration for over 45 years. Our customers count on our leadership, and our ability to adapt to market changes while providing the best lubricant match for their system designs.



Leading the Refrigeration Industry - Past, Present & Future

CPI Fluid Engineering, the trusted leader in lubricant technology for over 45 years, continues to innovate for the future. In addition to Emkarate® RL - the market-leading brand for HFC compressor systems - CPI now offers the Icematic® brand of solutions. Icematic's engineered solutions for low GWP provide options for both transitional and long-term sustainable refrigerants.

Icematic^{NXG}

The Icematic® NXG series is designed for today's transitional refrigerant gases. These lubricant solutions are ideal for operations that desire to utilize refrigerants offering lower GWP impacts.

Next generation refrigerant gases, such as R-32, R-448A, R-452A, R-513A (among other blends), are options to help lower GWP impacts for compressor systems today. CPI is ready to evaluate your unique technical requirements, and collaborate with your team to select the ideal lubricant match. We offer several series within the NXG product line to meet your needs.

Series Name	Refrigerant(s)
NXG 3000	HFO blends replacing R-404A and R-410A
NXG 3100	HFO blends replacing R-404A and R-410A; R-744
NXG 5000	R-32 and HFO blends replacing R-410A and R-404A

The Icematic® NXG series is designed for today's transitional refrigerant gases.

Lowering the environmental impact of compressor system emissions by using refrigerants with lower GWP is an important step towards sustainability. CPI understands the complexity involved when transitioning between refrigerants. Our ability to evaluate your system lubrication needs, and partner with your technical team can make the process easier and help speed the transition.

R-744



Icematic

Icematic ^{eco}

The Icematic® ECO series is designed for long-term sustainable low GWP refrigerant applications. The ECO series enables premier performance, reliability, and efficiency to achieve the lowest direct and indirect GWP impacts.

HFO refrigerant blends such as R-1234yf and R-1234ze(E) have GWP values that are in the single digits or less. Natural refrigerants such as R-600a (Isobutane), R-290 (Propane), R-717 (Ammonia), and R-744 (Carbon Dioxide) have GWP values that are extremely low or register at zero. Deciding to move to these HFO blends or natural refrigerant options offers significant environmental benefits. However, they may also present unique safety challenges.



The ECO product series is designed for use with long-term sustainable refrigerants to provide optimum compressor system benefits. These lubricant solutions represent CPI's premier product offerings for low GWP refrigerant options.



Series Name	Refrigerant(s)
ECO 1600	R-290; R-717; R-1270
ECO 2000	R-717
ECO 4000	R-717; R-744; R-1270
ECO 7000	R-290; R-600a
ECO 8000*	R-1234ze(E); HFO blends replacing R-134a

**In Development*

Partner with a proven leader in lubricant technology. CPI offers a complete lubricant solution to your compressor system needs concerning low GWP refrigerants. With over 45 years of experience in the industry, and the resources of The Lubrizol Corporation backing us, we are ready to take on the challenges within refrigeration and AC global markets.

The Icematic® ECO series is designed for long-term sustainable low GWP refrigerant applications.

We offer solutions for any application, system design and technical requirement with respect to your local regulatory and desired environmental impact targets. Trust the global leader in lubricant technology, CPI Fluid Engineering, to handle your most challenging retrofit or new system design projects.



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