Comparison – Glycol vs CRANE Temper with energy in focus

In industrial refrigeration, achieving high energy efficiency and reducing operational costs are essential for long-term success. While traditional systems like those using glycol have been widely adopted due to their low upfront costs, they often fall short in performance over time. CRANE Temper offers an innovative alternative that can transform the economics of industrial refrigeration.

The table below reveals the differences between CRANE Temper and glycol. For companies prioritizing sustainability and operational excellence, CRANE Temper is the clear choice —providing the path to smarter, more sustainable refrigeration solutions.

Glycol	CRANE Temper
Heat Transfer	**Heat Transfer**
Glycol's limited heat transfer efficiency demands higher compressors energy, leading to high energy consumption.	CRANE Temper's superior thermal properties enable the compressor to run at temperatures up to 3 degrees higher then glycol, resulting in energy savings of up to 8% in compressor energy usage
Energy	**Energy**
High viscosity at low temperatures leads to the need of increased pump energy and larger system components.	CRANE Temper's low viscosity leads to lower pressure drop, reduce pump energy up to 55% and allowing the use of smaller components.
Stability and Maintenance	**Stability and Maintenance**
Glycol degrades over time, requiring regular fluid replacement which increase maintenance costs.	CRANE Temper is chemically stable, reducing the need for replacement and downtime, which lower maintenance costs.
Safety and Environment	**Safety and Environment**
Mono-ethylene glycol (MEG) is toxic which requires additional safety measures and shall not be used in food processing applications	CRANE Temper is readily biodegradable, neither toxic or flammable, making it safe for use in various industries. CRANE Temper is approved according to NSF – HT1 registered.

CRANE Temper – Reduce power, save energy and boost sustainability

CRANE Temper is the ideal solution for companies focused on reducing total cost of ownership (TCO) and maximizing energy efficiency. Compared to glycols, CRANE Temper offers up to 10% energy savings, significantly lowering operational expenses. This includes reductions in compressor energy demand by up to 8% and pump energy demand by up to 55%.Unlike glycol, CRANE Temper maintains its stability over time, ensuring consistent performance and reducing maintenance costs. Operating at temperatures up to 3 degrees higher then glycol, it provides a sustainable, cost-effective, and reliable refrigeration solution. Choose CRANE Temper for a future-ready approach that reduces costs, enhances performance, and delivers dependable long-term results.

Heat Transfer Fluid [°C]	Operating Temperature [°C]	Kinematic Viscosity [mm²/s]	Heat Transfer Coefficient [W/m². °C]	Pressure Drop [kPa]
CRANE Temper -20	-15	**5,4**	**1458**	**14,1**
Glycol (MEG-20)	-15	9,6	1085	14,6
Glycol (MPG-20)	-15	30,1	547	18,3
CRANE Temper -30	-25	**12,9**	**908**	**17,4**
Glycol (MEG-30)	-25	22,5	668	17,6
Glycol (MPG-30)	-25	127,3	141	52,5
CRANE Temper -40	-35	**24,9**	**641**	**20,3**
Glycol (MEG-40)	-35	62,0	155	26,0
Glycol (MPG-40)	-35	513*	130	214
CRANE Temper -55	-50	**84,9**	**157**	**40,9**
Glycol (MEG-55)	-50	404,5*	132	173
Glycol (MPG-55)	-50	N/A	N/A	N/A

Note: The values in this table are based on a pipe with a 50 mm diameter and 20 m length, with a fluid flow velocity of 1,5 m/s.

***** *For viscosities above 300 cP, centrifugal pumps are unsuitable, leading to higher capital costs due to alternative pump requirements.*