

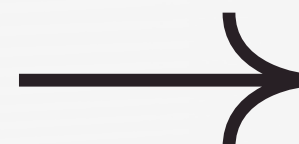


Chillers for

Shellac Production



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Introduction

Tempcon is a leading manufacturer of industrial process chillers in India, with a wide range of products and applications. Tempcon chillers are efficient, reliable, and environmentally friendly.



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Shellac Production



Shellac, a natural resinous substance, originates from the resinous excretions of lac insects. These tiny creatures, primarily found in Southeast Asia, secrete a protective substance on tree branches, known as lac. Harvested and processed, lac resin yields shellac, widely used in various applications like wood finishing, food glazing, and as a binder in products such as pharmaceutical tablets.



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Chiller Overview



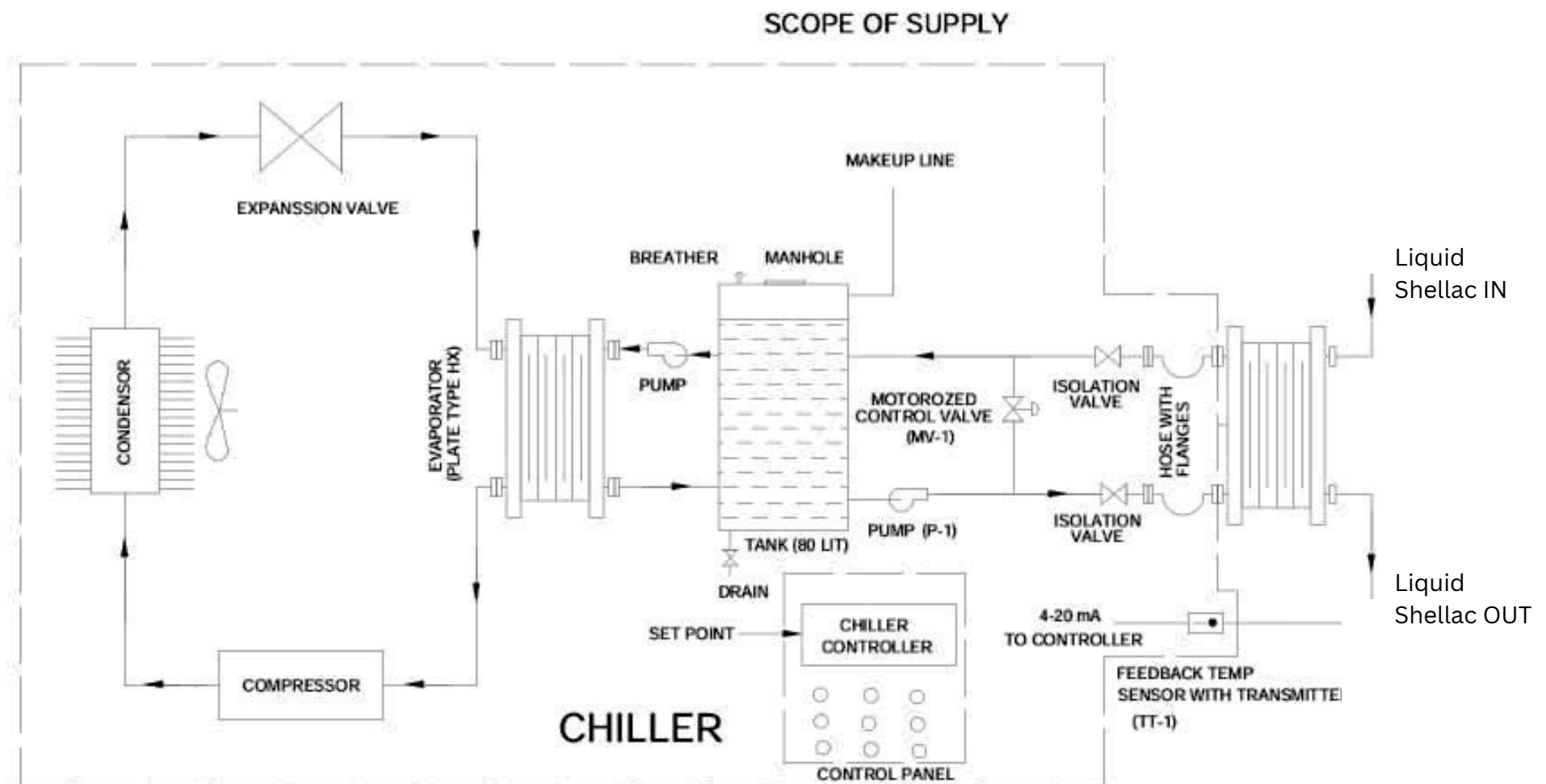
Tempcon industrial chillers function by circulating a refrigerant through a closed-loop system. The process involves absorbing heat from a water source, raising the refrigerant's temperature, and then expelling that heat elsewhere. As the refrigerant cools, it is ready to repeat the cycle. This mechanism allows industrial chillers to generate cold water, catering to diverse applications requiring temperature control in industrial settings.

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Schematic Diagram of A Chiller producing Shellac



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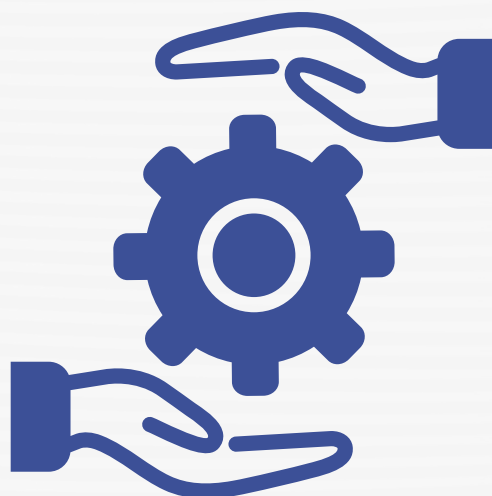




Role of Chillers in Shellac Manufacturing

1. Flow Control: Chillers regulate temperature in shellac manufacturing, ensuring optimal viscosity for smooth material flow during application and processing.
2. Curing Enhancement: Precise temperature control from chillers accelerates the curing process, improving shellac's hardness and durability.
3. Bonding Quality: Maintaining consistent temperatures with chillers promotes strong chemical bonding in shellac, enhancing the overall quality and performance of the final product.

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Improved Quality

1. Temperature Control: Chiller applications maintain optimal temperature conditions during shellac production, preventing variations that could compromise quality.
2. Consistent Viscosity: Precise cooling ensures uniform viscosity, enhancing the consistency of shellac coatings and finishes.
3. Reduced Impurities: Chiller systems minimize impurities by creating an environment that discourages the formation of unwanted by-products, resulting in higher-quality shellac.
4. Extended Shelf Life: Improved temperature management extends the shelf life of shellac products, preserving their quality over time.

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Increased Efficiency

1. Temperature Control: Chillers maintain optimal temperatures in industrial processes, preventing equipment overheating and ensuring consistent production.
2. Energy Savings: Efficient chillers minimize energy consumption, reducing operational costs and environmental impact.
3. Enhanced Product Quality: Stable temperatures contribute to higher product quality by preventing variations in manufacturing conditions.
4. Downtime Reduction: Chillers prevent equipment breakdowns, minimizing downtime and boosting overall production efficiency.
5. Process Optimization: Temperature control with chillers allows for fine-tuning of manufacturing parameters, optimizing processes for maximum efficiency.

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Chiller Integration



1. Pre-Processing Cooling:

Highlight the use of chillers in cooling raw materials before shellac extraction.

2. Extraction Temperature Control:

Discuss chiller integration in maintaining optimal temperatures during shellac extraction processes.

3. Solvent Recovery Cooling:

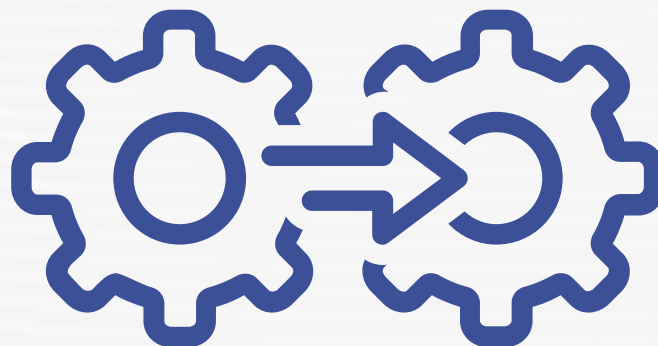
Showcase examples of chillers aiding in the cooling of solvents during recovery stages.

4. Final Product Cooling:

Illustrate how chillers are utilized to cool and solidify shellac for packaging post-production.

5. Energy Efficiency:

Emphasize the energy-efficient aspects of chiller integration in shellac processing.



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Contact us

Connect with TempCon for all inquiries. Visit our website for contact options. We look forward to assisting you with your temperature control needs.



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