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## Simulation of an Automatic Commercial Ice Maker

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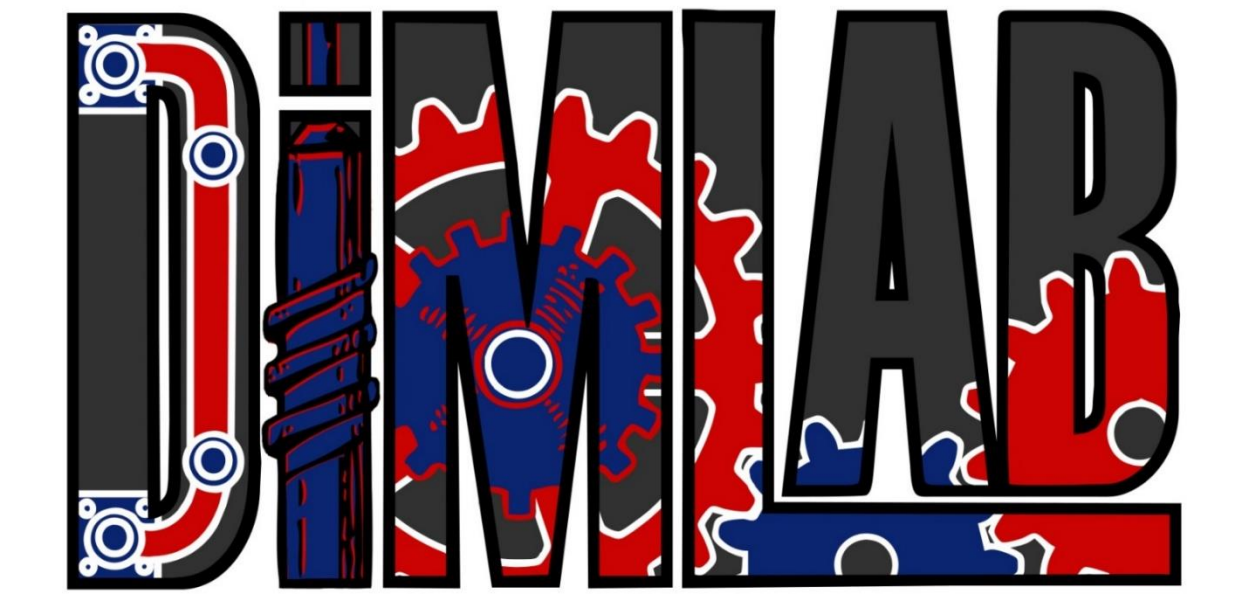
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# Simulation Model of an Automatic Commercial Ice Machine

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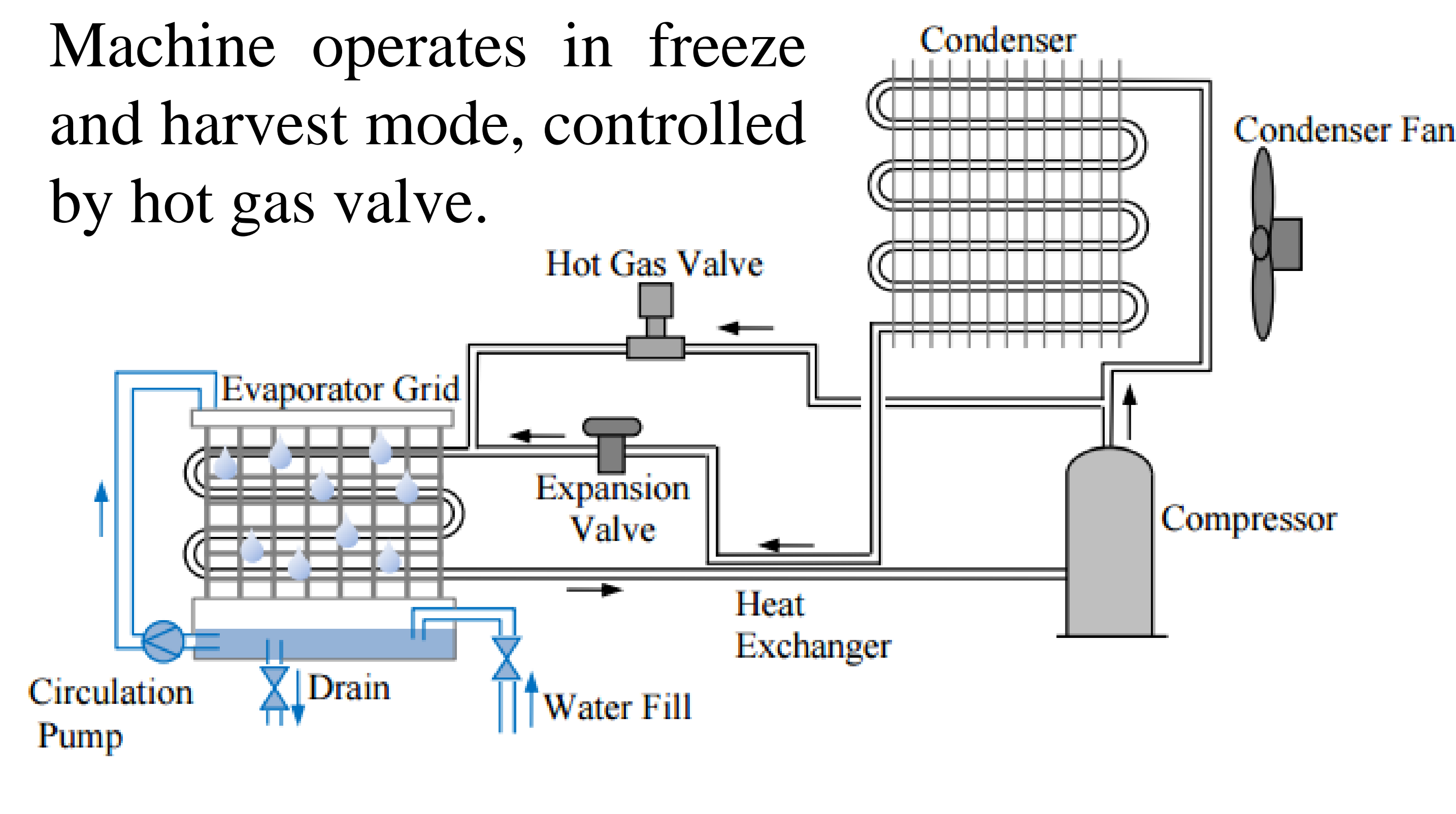


## Motivation

The U.S. Department of Energy has set a target of reducing energy usage by 10 -15% by 2018. This model simulates the transient operation of a cuber ice machine based on fundamental principles and generalized correlations.

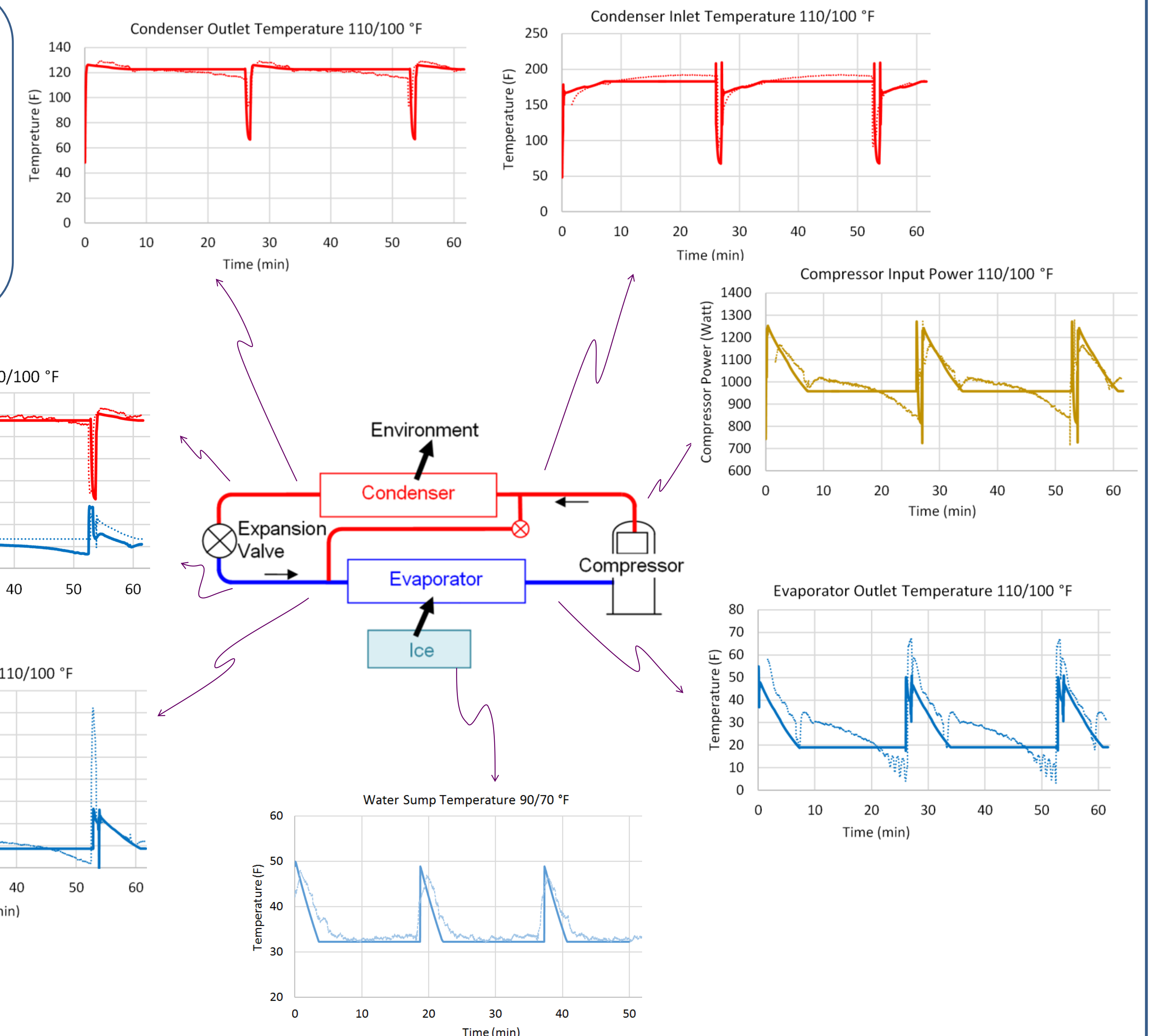
## Ice Maker Description

Machine operates in freeze and harvest mode, controlled by hot gas valve.

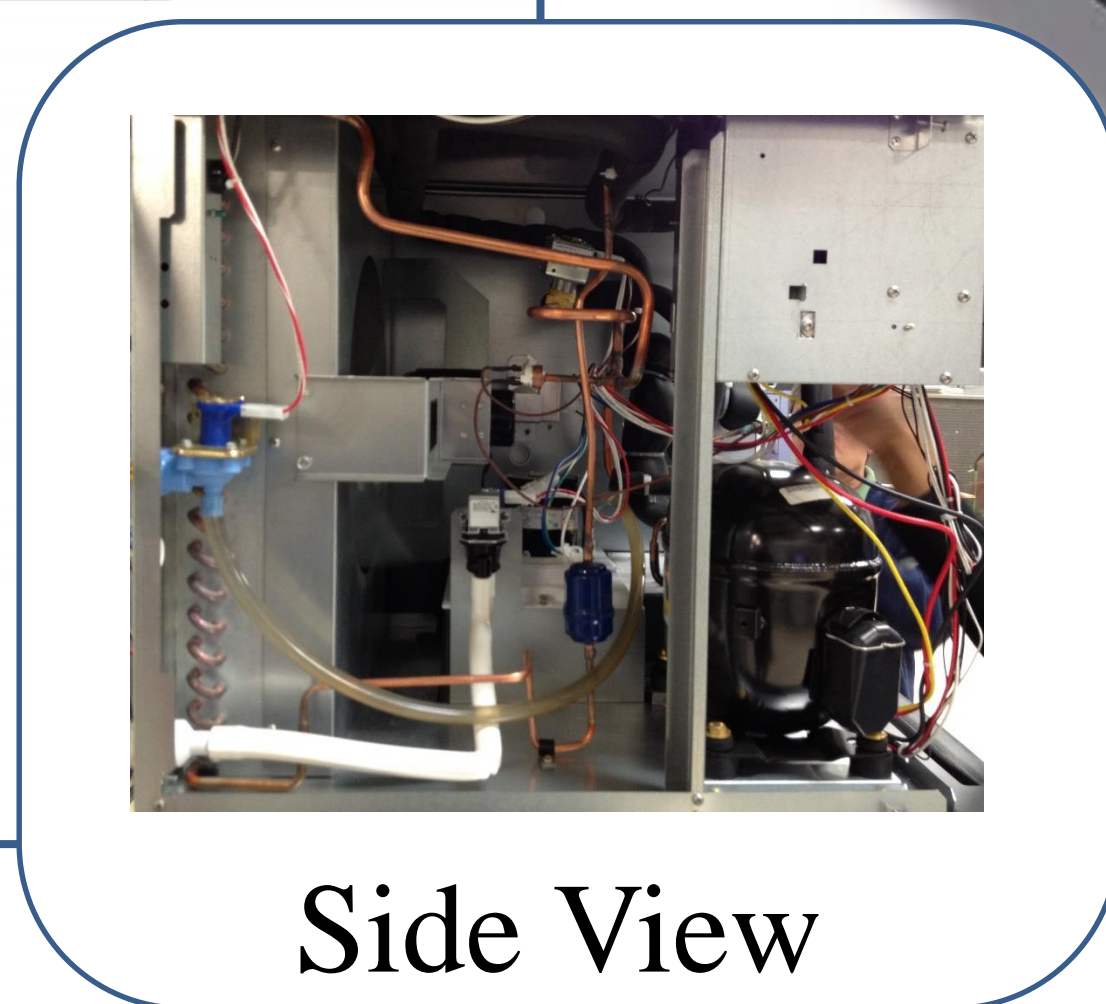
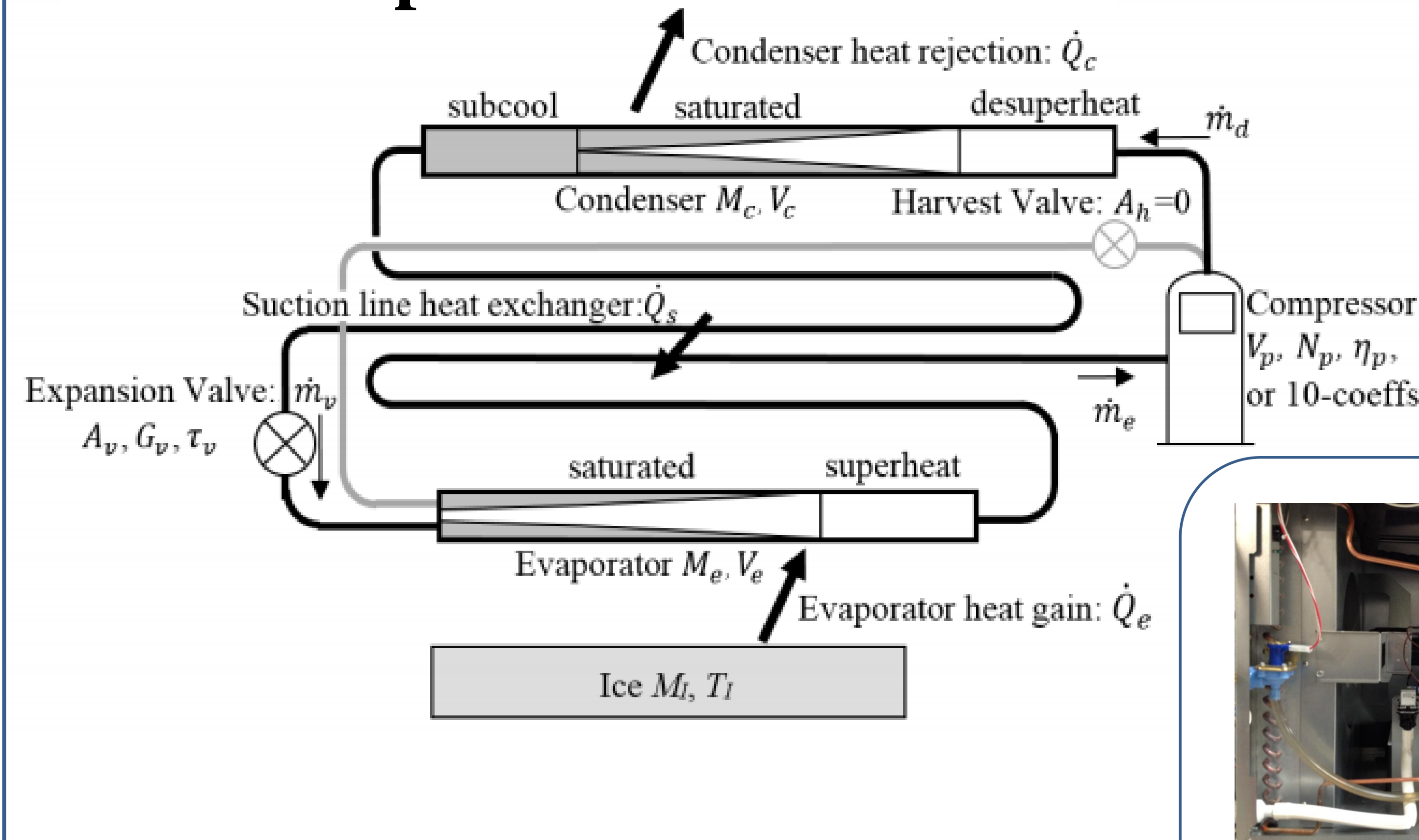


## Results

A comparison of experimental and simulated transient response of pressures, temperatures and compressor power at various locations on the ice machine.



## Model Operation Overview



Graphical representation of the transient comparisons at 110/100 °F

Patent application is filed to protect simulation strategy