

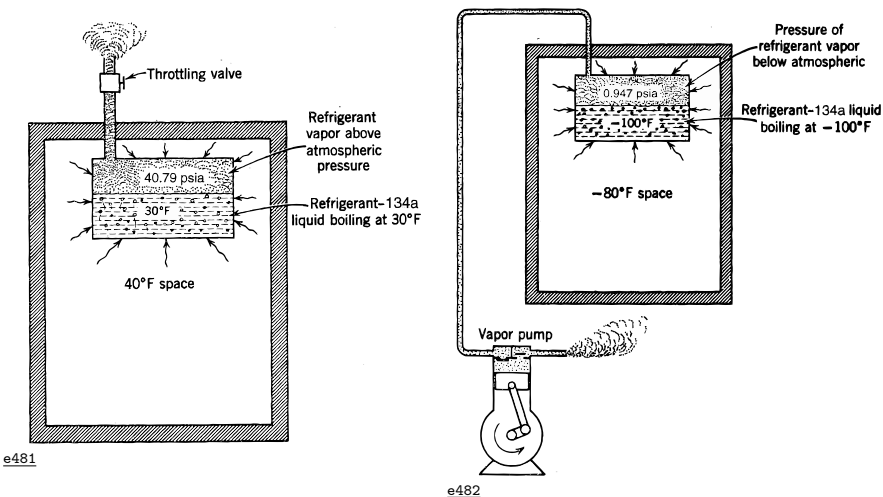
# Vapour Compression Refrigeration

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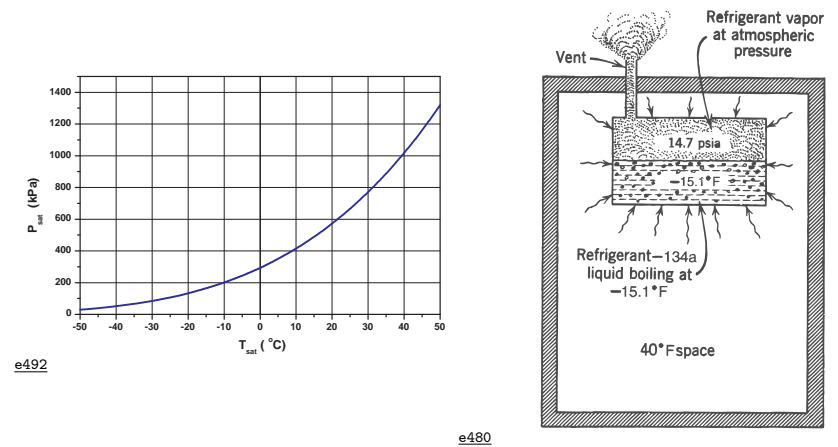
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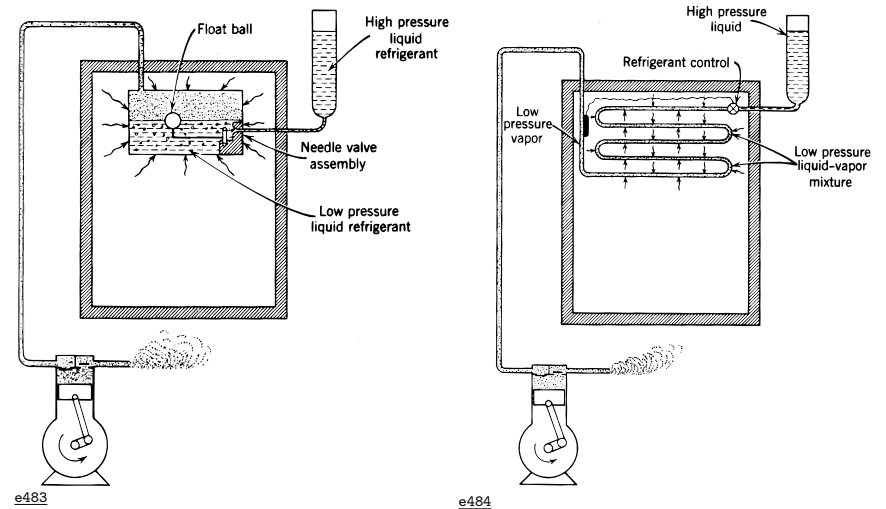
ME 415: Refrigeration & Building Mechanical Systems



## Evaporation & Condensation of Refrigerant, R134a



Refrigerant boils & condenses at different temperatures at different pressures. During boiling/condensation it absorbs/rejects latent heat.

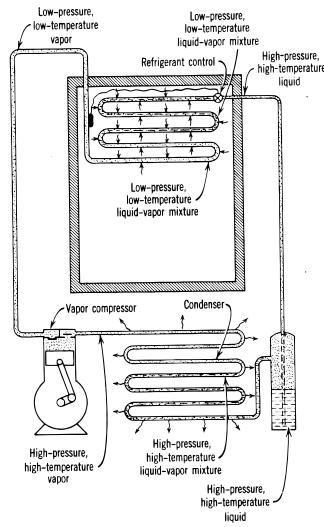


Float Valve to maintain liquid level

TXV to regulate liquid flow



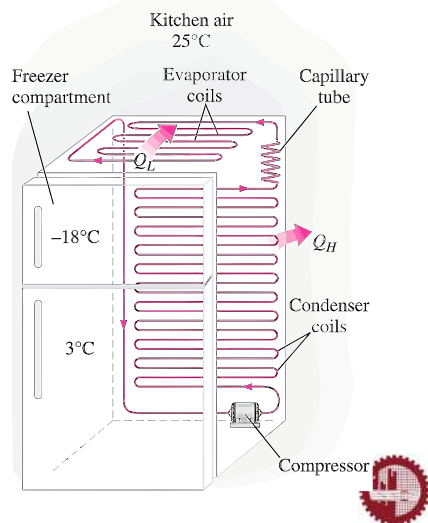
## Basic Components of a Refrigeration System



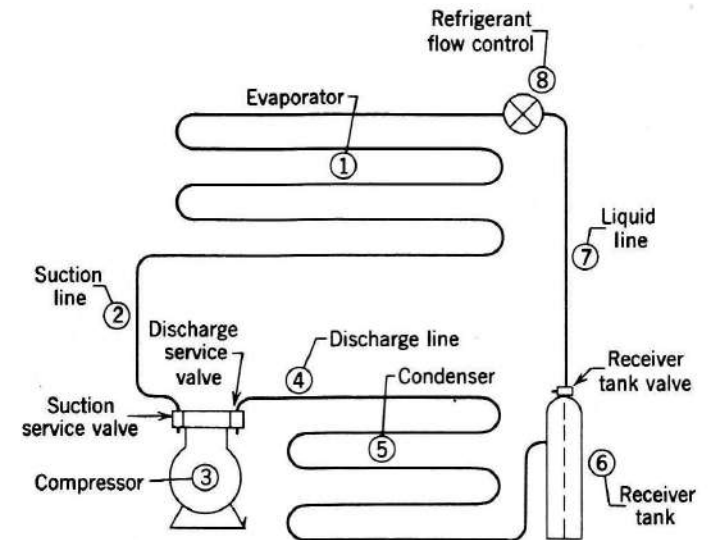
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## Key Components of Refrigeration System

- ① Evaporator
- ② Suction line
- ③ Vapour compressor
- ④ Hot gas/discharge line
- ⑤ Condenser
- ⑥ Receiver tank
- ⑦ Liquid line
- ⑧ Refrigerant flow control device

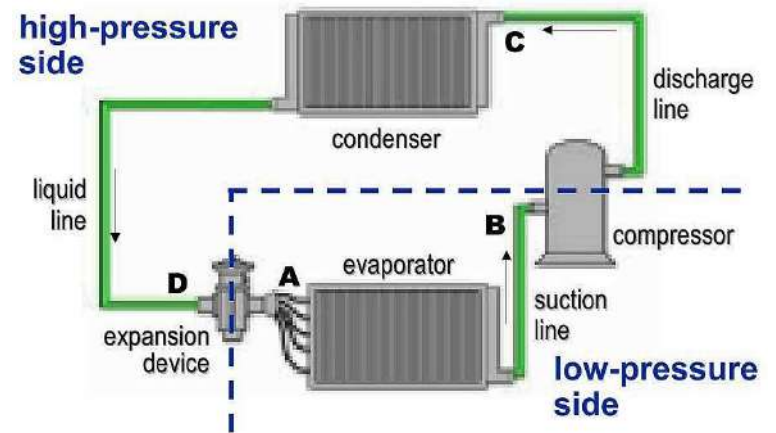


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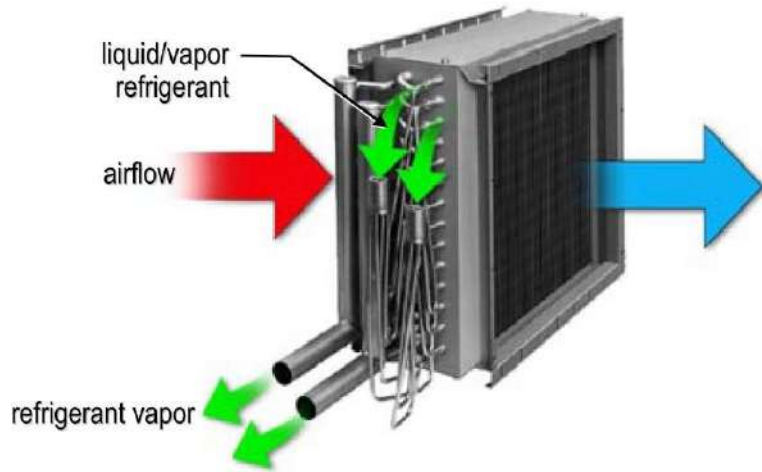
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## Components of Vapour Compression (VC) System



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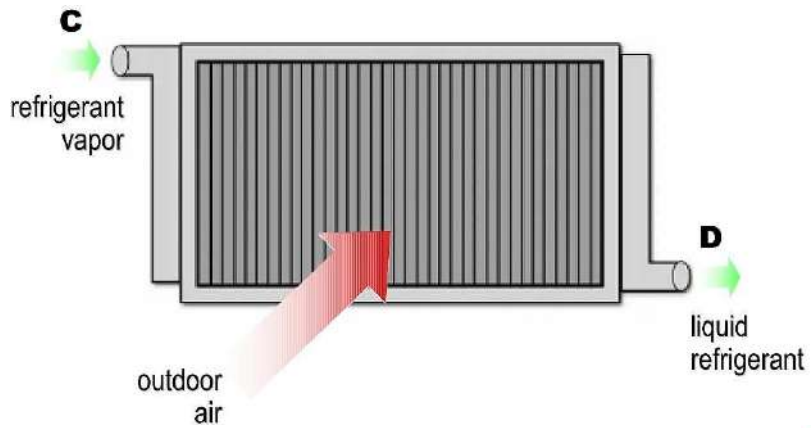
## Evaporator



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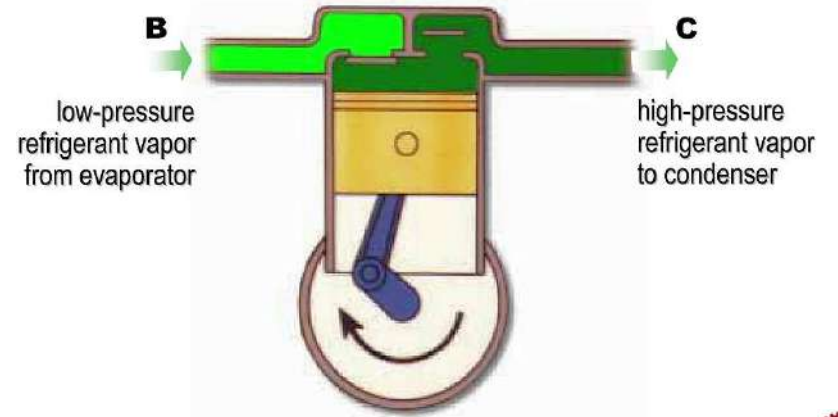
## Condenser



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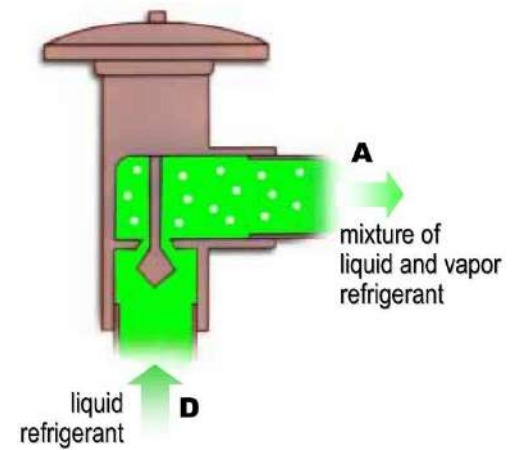
## Compressor



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## Expansion Device



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