



# **ELEMENTS OF ELECTRICAL ENGINEERING (UE24EE141B)**

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Department of Electrical Engineering

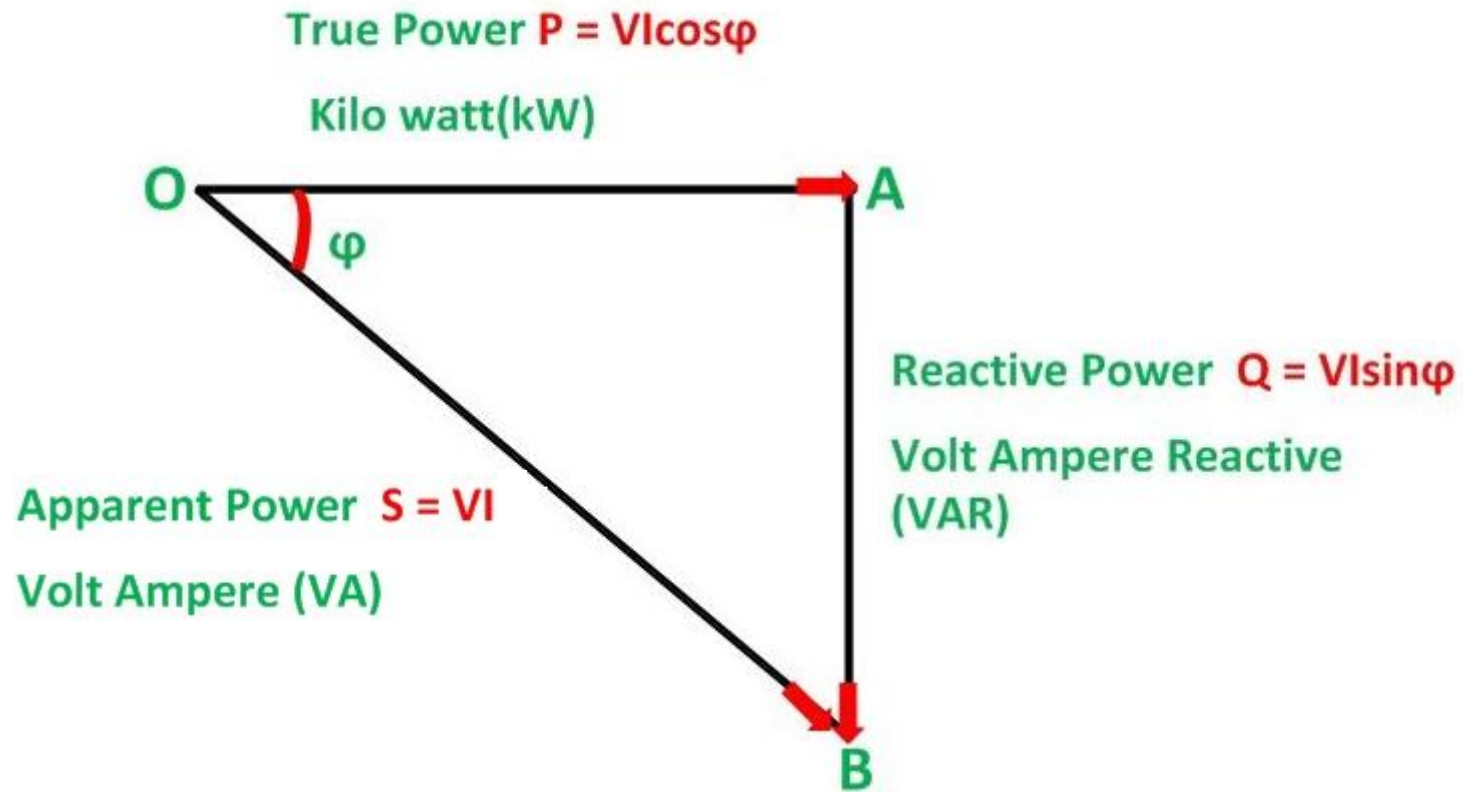
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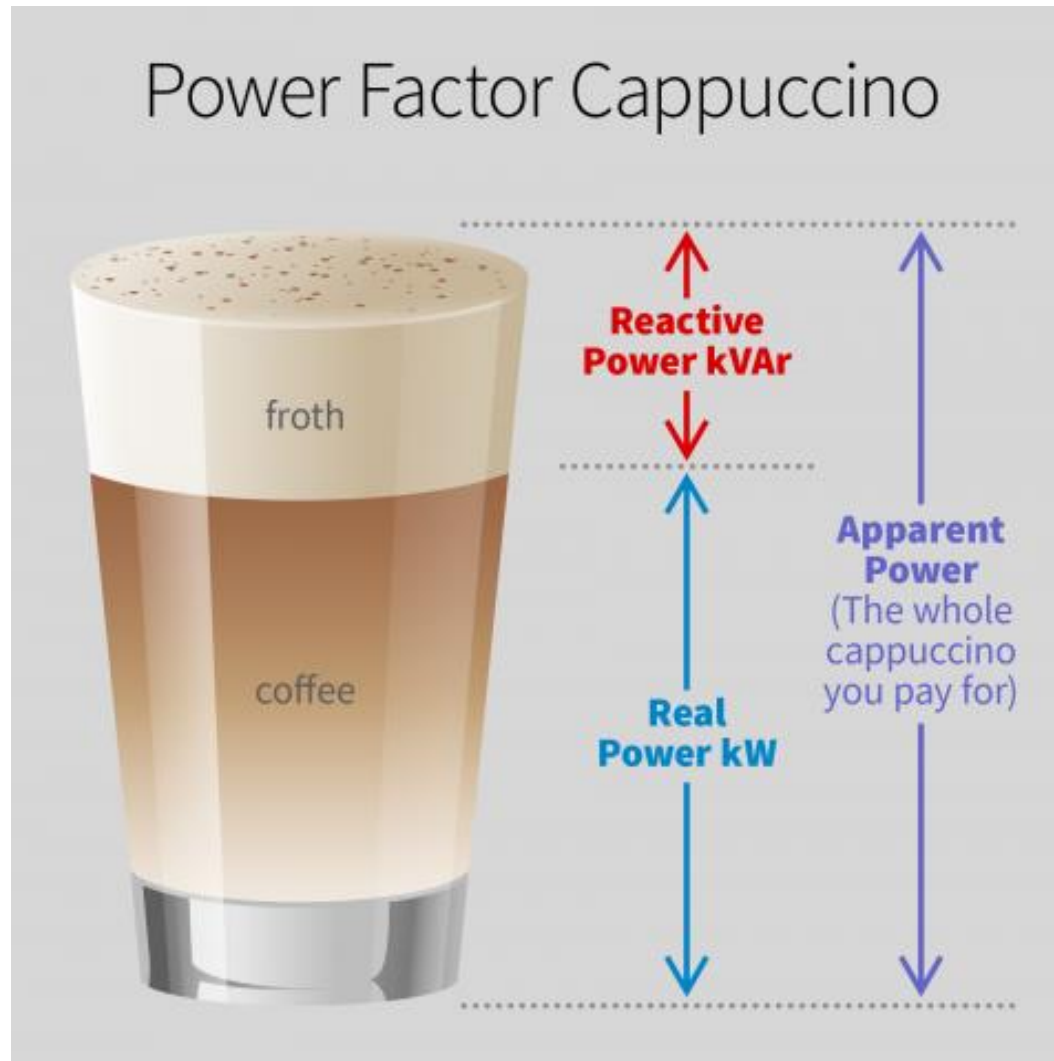
## **Unit 2 – Lecture 37 - CONCEPT OF POWER FACTOR IMPROVEMENT**

Department of Electrical & Electronics Engineering

## Power Factor



## Power Factor



## Power Factor

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A frothy latte =  
Poor power factor correction



A perfect body =  
Good power factor correction



Latte glass = Capacity = kVA  
Coffee = Useful energy = kW  
Froth = Waste capacity

## Importance of Power Factor

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- $I^2R$  Losses is reduced
- Reactive power will get reduced
- A higher Power Factor will help in utilizing the full capacity of electrical system
- Improves the performance of the motor

## Text Book & References

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### Text Book:

“Electrical and Electronic Technology” E. Hughes (Revised by J. Hiley, K. Brown & I.M Smith), 11<sup>th</sup> Edition, Pearson Education, 2012.

### Reference Books:

1. “Basic Electrical Engineering - Revised Edition”, D. C. Kulshreshta, Tata- McGraw-Hill, 2012.
2. “Basic Electrical Engineering”, K Uma Rao, Pearson Education, 2011.
3. “Engineering Circuit Analysis”, William Hayt Jr., Jack E. Kemmerly & Steven M. Durbin, 8<sup>th</sup> Edition, McGraw-Hill, 2012.
4. Google images



**THANK YOU**

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