

Power Factor Correction

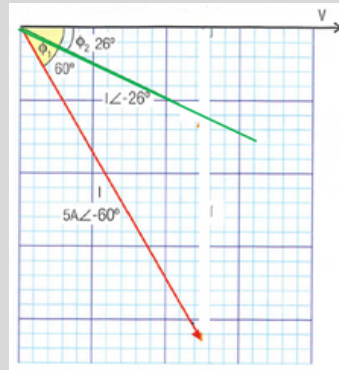
WHAT IS PFC?

- Increasing reactive current Q with capacitors to counteract the circuits inductive current -Q.
- The result is Apparent power is reduced saving current.
- True or Consumed power is unaffected.



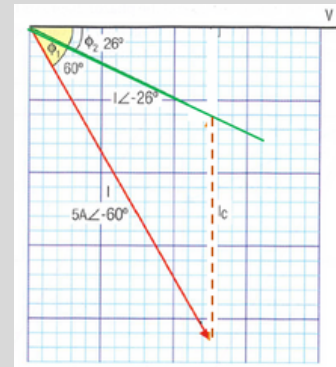
Determine Ic - Step 1

- Scaled phasor diagram with inductive current and angle, and the required or corrected angle. Example below;
- $IL = 5A \angle -87^\circ$
- $IT = ? A \angle -26^\circ$



Determine Ic - Step 2

- From the tip of phasor **IL** project up at 90 degrees until the line cuts **IT**.
- **IC** = Scale of this length at 90 degrees.
- **IC** = 3.1A $\angle +90^\circ$



Determine Ic - Step 3

- Put **IC** in correct location as this process has been a phasor subtraction.
- Correction VAR = V x IC
 $220 \times 3.1 = 682 \text{ VAR}$

