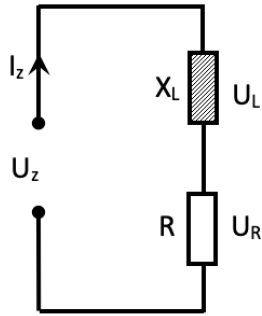## Spóla + raunviðnám raðtenging

$$U_Z = \sqrt{U_R{}^2 + U_L{}^2} \qquad Z = \sqrt{R^2 + X_L{}^2}$$

$$I_Z = \frac{U_Z}{Z}$$

$$\cos\varphi = \frac{U_R}{U_Z}$$

Spóla + raunviðnám hliðtenging

$$I_Z = \sqrt{I_R{}^2 + I_L{}^2} \qquad Z = \frac{U_Z}{I_Z}$$

$$I_L = \frac{U_L}{X_L} \qquad I_R = \frac{U_R}{R} \qquad \cos\varphi = \frac{I_R}{I_Z}$$

Þéttir + raunviðnám raðtenging

$$U_Z = \sqrt{U_R{}^2 + U_C{}^2} \qquad Z = \sqrt{R^2 + X_C{}^2}$$

$$I_Z = \frac{U_Z}{Z}$$
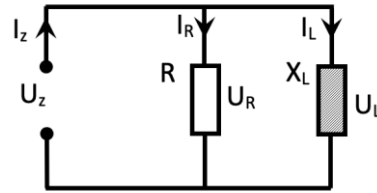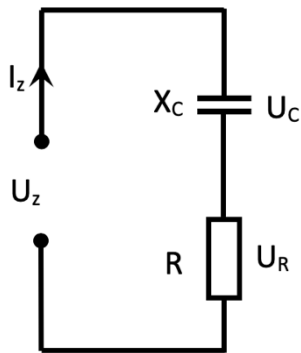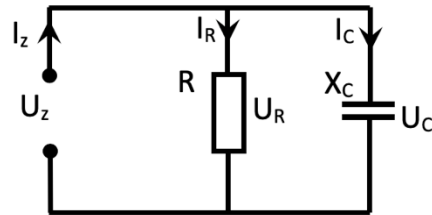
$$\cos\varphi = \frac{U_R}{U_Z}$$

Þéttir + raunviðnám hliðtenging

$$I_Z = \sqrt{I_R{}^2 + I_C{}^2} \qquad Z = \frac{U_Z}{I_Z}$$

$$I_C = \frac{U_C}{X_C} \qquad I_R = \frac{U_R}{R} \qquad \cos\varphi = \frac{I_R}{I_Z}$$

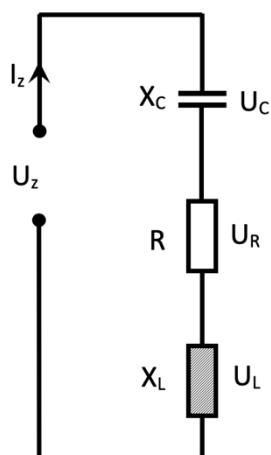## Þéttir + spól + raunviðnám raðtenging

$$U_Z = \sqrt{U_R{}^2 + (U_L - U_C)^2}$$

$$Z = \sqrt{R^2 + (X_L - X_C)^2}$$

$$I_Z = \frac{U_Z}{Z}$$

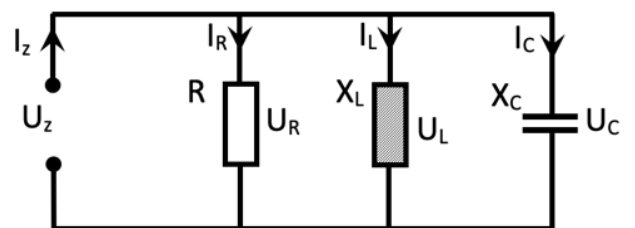$$\cos\varphi = \frac{U_R}{U_Z}$$

$$P = U \times I \times \cos\varphi$$

Þéttir + spól + raunviðnám hliðtenging

$$I_Z = \sqrt{I_R{}^2 + (I_C - I_L)^2}$$

$$Z = \frac{U_Z}{I_Z} \qquad \cos\varphi = \frac{I_R}{I_Z}$$

$$P = U \times I \times \cos\varphi$$

Launviðnám – þéttar og spólur

$$\text{Þéttir: } X_C = \frac{1}{2\pi * f * C} \qquad \text{Spóla: } X_L = 2\pi * f * L \quad [\Omega]$$