

Capacitors Connected in Parallel



Find the equivalent capacitance of two capacitors connected in parallel:

- Charge on capacitors: $Q_1 + Q_2 = Q$
- Voltage across capacitors: $V_1 = V_2 = V$
- Equivalent capacitance:

$$C \equiv \frac{Q}{V} = \frac{Q_1 + Q_2}{V} = \frac{Q_1}{V_1} + \frac{Q_2}{V_2}$$

- $\Rightarrow C = C_1 + C_2$

