

$$\frac{\partial \rho}{\partial t} + \nabla \cdot \mathbf{j}_m = 0$$

$$\frac{\partial \rho u}{\partial t} + \nabla \cdot \mathbf{j}_u = 0$$

$$\frac{\partial \rho_e}{\partial t} + \nabla \cdot \mathbf{j}_e = 0$$