$$
\begin{cases}
\frac{\partial \rho}{\partial t} + \nabla \cdot (\rho \mathbf{v}) = 0 \\
\frac{\partial \mathbf{v}}{\partial t} + \mathbf{v} \cdot \nabla \mathbf{v} = -\frac{1}{\rho} \left(\nabla p + \frac{1}{4\pi} (\nabla \times \mathbf{B_0}) \times \mathbf{B_0} \right) \\
\left(\frac{\partial}{\partial t} + \mathbf{v} \cdot \nabla \right) p \rho^{-\gamma} = 0 \\
\frac{\partial \mathbf{B_0}}{\partial t} = \nabla \times (\mathbf{v} \times \mathbf{B_0}) \\
\nabla \cdot \mathbf{B_0} = 0
\end{cases}
$$