In the context of theories with a first order phase transition, we propose a general covariant description of coexisting phases separated by domain walls using an additional order parameter-like degree of freedom. In the case of a holographic Witten model with a confining and deconfined phases, the resulting model extends hydrodynamics and has a simple formulation in terms of a spacetime action with corresponding expressions for the energy-momentum tensor. The proposed description leads to simple analytic profiles of domain walls, including expressions for surface tension density, which agree nicely with holographic numerical solutions, despite the apparent complexity of those gravitational backgrounds.