

ABSTRACT. We prove Harnack inequalities for parabolic flows of compact orientable hypersurfaces in \mathbf{R}^{n+1} , where the normal velocity is given by a smooth function f depending only on the mean curvature. We use these estimates to prove longtime existence of solutions in some highly nonlinear cases. In addition we prove that compact selfsimilar solutions with constant mean curvature must be spheres and that compact selfsimilar solutions with nonconstant mean curvature can only occur in the case, where $f = A\alpha x^\alpha$ with two constants A and α .