

# Helical-D Pinch

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## Summary

A stabilized pinch configuration is described, consisting of a D-shaped plasma cross section wrapped tightly around a guiding axis. The “helical–D” geometry produces a very large *axial* (toroidal) transform of magnetic line direction that reverses the pitch of the magnetic lines without the need of azimuthal (poloidal) plasma current. Thus, there is no need of a “dynamo” process and its associated fluctuations. The resulting configuration has the high magnetic shear and pitch reversal of the reversed field pinch (RFP). (Pitch =  $P = qR$ , where  $R$  = major radius.) A helical–D pinch might demonstrate good confinement at  $q \ll 1$ .