

## Singularities of the Four-Sided Antiprism Ring

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An antiprism ring is a simple type of spatial truss structures, which is able to produce finite motions and bifurcation points on their compatibility paths. The structure may, under certain topological and geometric conditions, become both statically and kinematically indeterminate, i.e. an overconstrained mechanism. At singular positions the number of instantaneous degrees-of-freedom can change. The structure is quite sensitive to geometric errors. Depending on the initial geometry and different imperfection parameters, various singularities can occur referring to different cases of mobility of the structure. It may form a rigid structure or produce finite or infinitesimal mechanisms as well.

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