

## Delta Con Rod

**Company:** GKN Sinter Metals



**Application Sector:** Consumer Goods

**Requirements:** Small Con-Rods for Refrigerators are a good example of a classic application for PM Technology. The shape and material specification have been well established and in recent years this kind of part has become almost a pure commodity with cost a critical factor.

**Benefits:** Weight reduction was investigated with Finite Element Analysis and as a result the rod between the two bores could be reduced down to 1mm thickness. Also due to the triangular shape with triangular bore the torsion and bending deformations are equal to the traditional design. To optimize the cost aspect the material is SintDI I with an additional steam Treatment in a self-developed Belt Furnace. This is enough to satisfy the customer's resistance requests with excellent cost containment.

**Product Density:** (g/cm<sup>3</sup>) 2.65

**Product Tensile Strength:** 300MPa

**Product Hardness:** 700 + 200

**Finishing:** Sizing, Tempering, Machining

