

# **Application Profile**





**Product** 

#### Application

### Highlights

- Custom worm and worm gear sets with 20:1 ratio
- FC Series 3-jaw couplings with polyurethane inserts

## **Couplings and Custom Gearing**

### **Helicopter Rotor Drivetrain**

The world's leading manufacturer of light, inexpensive civil helicopters required reliable gearing and couplings for the belt drive on their latest model. The components are utilized on an adjustable pulley shaft that is positioned between the engine shaft pulley and the rotor shaft pulley. The adjustable pulley (clutch) shaft is controlled by the pilot to tension the belt that transmits engine torque to the main and tail rotor blades.

Boston Gear engineers worked directly with the OEM to design custom steel worm and bronze worm gear sets with a 20:1 ratio to meet the application requirements.

Boston Gear FC Series 3-jaw type couplings were also supplied. Polyurethane inserts were selected to accommodate the heavy shock loads. FC Series couplings require no lubrication and feature precision machined bores with keyway and set screw.