

Calculation

Bevel Gear

Pitch Diameter of gear : 45 mm

Pitch diameter of pinion : 45 mm

Pitch cone angle of gear : 45°

Pitch cone angle of pinion = 45°

Pitch cone radius of both gear and pinion = 35.35 mm

Addendum for both gear and pinion= 1.5 mm

Addendum angle = 2.43°

Dedendum for both gear and pinion= 1.736 mm

Dedendum angle = 2.811°

Whole depth at large end = 3.326 mm

Tooth thickness= 2.3552 mm

Cutting angle of gear = 42.189°

Face angle of gear= 47.43°

Cutting angle of pinion = 42.189°

Face angle of pinion= 47.43°

Angular addendum for gear and pinion= 1.06066 mm

Outside diameter of gear = 46.342 mm

Outside diameter of pinion= 46.342 mm

No. of teeth needed to select a cutter for the gear=43

No of teeth needed to select a cutter for pinion = 43