

CAPABILITIES

Crown Hobbing & Crown Shaping

Forest City Gear has pioneered fine pitch crown hobbing, a unique technology we apply to fine pitch gearing. This process produces a barrel shape on the flank of the gear tooth that compensates for misalignment and reduces noise. This application is especially advantageous with high-speed spur and helical pinions. In shaping we offer radial or flank crowning.

Carbide Re-hobbing (commonly referred to as skiving)

Forest City Gear's carbide re-hobbing process allows us to produce the highest quality gears at a lower cost than grinding. Carbide re-hobbing eliminates distortion caused by heat treating, allowing us to achieve gear quality of AGMA 9 or better. Gears that have been distorted or enlarged during heat treatment can be salvaged with this process.

Analytical Gear Inspection

Forest City Gear's state-of-the-art analytical inspection equipment shows our commitment to quality. This equipment is capable of checking pitch, runout, lead, and profile error to ten millionths of an inch on spur, helical, worm and worm gears as well as on hobs and shaper cutters. We have performed analytical inspection on gears as fine as 96 diametrical pitch and with diameters up to 35 inches.

Hob & Shaper Sharpening

Forest City Gear realizes accuracy of a gear's profile is determined by the quality of the cutter being used to generate the teeth. Our modern sharpening equipment allows us to re-sharpen hobs and shaper cutters consistently to class AA tolerances.

Gear and Thread Grinding

Forest City Gear's form grinders offers "Master Gear Quality" for single and multi-thread worms. These machines are capable of handling heavily modified profiles and crowned teeth to 550mm diameter and shafts to a meter in length. For spur and helical gears, we have ground master gears as fine as 80DP from solid or finished roughed gears achieving qualities as high as AGMA 14 or 15 (DiN 2-3) on some parameters, and even better occasionally.

Types of Gears

<i>Gear Type</i>	<i>Max O.D. Diametral Pitch</i>	
Thread Grinding	20"	Worm to 4 DP & 1 meter length
Gear Grinding	21.6"	3 DP-80 DP
Spur Hobbing	20"	3 DP-200 DP
Spur Shaping	24"	3 DP-200 DP
Helical Hobbing	20"	3 DP-200 DP
Helical Shaping	24"	3 DP-200 DP
Worm Gear	18"	4 DP-200 DP
Worm	5"	6 DP-200 DP
Sprocket ¹	20"	3/4" CP (Coarsest)
Spline ²	20"	4 DP-200 DP (to 31.5" length)
Internal	24"	4 DP-200 DP (to 7.7" facewidth)
Face	14"	4DP-200 DP

¹ Includes roller, block, silent, and ladder chain type sprockets.

² Includes tapered, involute, straight-sided and serration type spline shafts, and segmented spline shafts.

NOTE: We do not manufacture bevel gears, miters, herring bone, shaved, gear reducers or gear boxes.

