B&D INDUSTRIAL

# Gear Manufacturing Capabilities

WESTLAND, MICHIGAN

PRECISION GEARS · ONE PIECE OR A SHORT RUN

## Precision you can measure.

Engineered or made to your print, cut and ground on our floor, then inspected analytically and graded to AGMA, ISO or DIN classes. Hobbed to 100", ground to 49.2", from one gear to a short run.



**100"**
MAX HOBBED OD

**49.2"**
MAX GROUND OD

**1–48 DP**
25.4–0.53 MODULE

**63"**
ANALYTICAL INSPECTION

## GEAR MANUFACTURING RANGE

| GEAR TYPE | MAX SIZE | PITCH |
|---|---|---|
| **Spur** | 100" OD hobbed · 49.2" OD ground | 1–48 DP |
| **Helical** | 100" OD hobbed · 49.2" OD ground | 1–48 DP |
| **Herringbone / double helical** | 49.2" OD | 1–48 DP |
| **Worm gearing** | 60" OD | 1 DP and finer |
| **Bevel (straight, spiral, hypoid)** | Engineered and rated by B&D, cut by our vetted bevel partners | Per application |
| **Internal spur / spline (shaped)** | 40" OD × 6" stroke | 3 DP and finer |
| **External splined shaft** | 49.2" OD × 72" between centers; 36" max spline | 1 DP and finer |
| **Spur or helical rack** | 6" wide × 144" long | 2 DP and finer |

## Send us a drawing or the worn gear.

No drawing? We measure the sample, recreate it and make the replacement.

**gears@bdindustrial.com**
**734-595-6400**

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## MACHINE SHOP

### Turning, gear cutting, grinding and inspection under one roof.

| | |
|---|---|
| **Sawing** | 12" max diameter |
| **CNC turning** | 38" max dia × 124" centers |
| **Vertical turning (VTL)** | Up to 100" diameter |
| **CNC milling** | 20" × 40" × 20" |
| **Manual milling** | 40" × 20" × 25.81" |
| **Broaching** | 10" dia, 5" stroke, keys to 3" wide |
| **Keyseating** | 36" OD, 12" stroke, keys to 2.5" wide |
| **External thread grinding** | 14" dia × 39"; 80 max pitch; 45° max angle |
| **Internal thread grinding** | 10" dia × 4.25"; 80 max pitch; 10° max angle |
| **ID grinding** | 24" max dia × 8" length |
| **OD grinding** | 12" max dia × 48" length |

### GEAR INSPECTION

Analytical inspection to 63" (1,600 mm) on an EMZ 1602 CNC gear measuring center: involute profile, lead/helix, pitch and runout, graded to AGMA, ISO or DIN tolerance classes.

Keyence WM-6000 wide-area CMM for dimensional checks.

### ENGINEERING

**Reverse engineering** of worn or undocumented gears: we measure the sample, recreate the drawing and specify the replacement.

**Design and rating** in KISSsoft to AGMA standards.

### OUTSIDE PROCESSES

Bevel gears, heat treating and welding run through vetted outside partners. B&D engineers the part, manages the vendor and inspects the result.

## CUSTOM & COMPLEX REQUIREMENTS

Need a size, pitch or configuration outside our in-house envelope? Through our approved manufacturing partner network, we provide complete turnkey management for oversized, high-capacity and specialty requirements.

## Request a quote.

Send us your drawing, sample or application details. Our engineers take it from there.

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