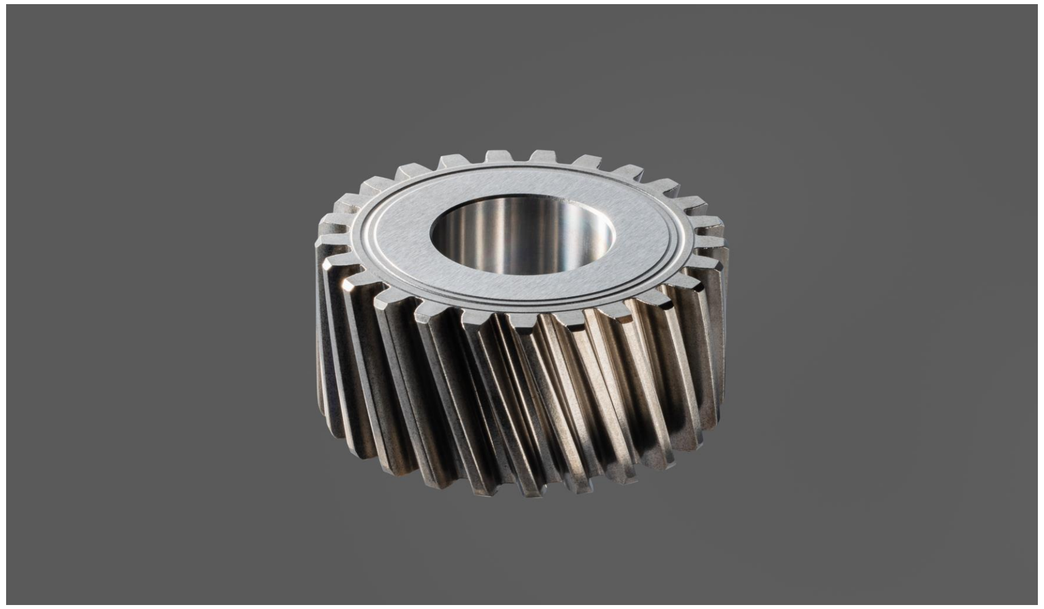
✔ Production ✔ Prototype ✔ Development

Press-Formed PINION GEAR

Reduction of tooth surface machining by **one-shot press forming**

Patented



Benefits of Application

Material yield rate: **48%** → **64%**

Reduction of process due to the abolition of gear cutting processing and gear surface finishing process:

8 Processes → **6 Processes**

Reduction of industrial waste:

Phosphate coating → **Single liquid processing**

Process	Rough material	Lubrication treatment	Material molding	Lubrication & release	Gear cutting processing	Finishing process1	Heat treatment	Finishing process2
Conventional	Round rod cutting	Phosphate coating	Hot forging / Cutting processing	Acid cleaning	Hob processing/ Gear shaving processing	End face / Gear tooth surface finishing / Deburring	Carburizing treatment	Outer & inner diameter / End face / Gear tooth surface / Grinding process
Development	↑	Single liquid processing	**One shot press forming (Cold forging)**			End face /Chamfer /Deburring	↑	Inner diameter /End face