GEAR GRINDING

SL.Carborundum Gear Grinding

On the Highest Level

As a machine element, the gear wheel is an essential component of almost all modern machines. This wheel, equipped with teeth evenly distributed along the circumference, is primarily installed in all types of gearboxes to transfer rotational motion. Gear drives represent the largest group among gearboxes, offering positive-locking and slip-free motion transmission.

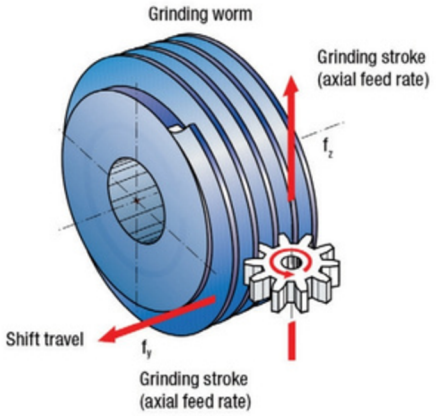
The Importance of Precision in Gear Grinding

Gear grinding requires high precision throughout the process, making it crucial to use the right grinding wheel for the application. The selection of abrasive material, wheel configuration, and grain size depends on the base alloy, tooth geometry, and production requirements.

SL.Carborundum offers cutting-edge technology to meet growing demands for tighter dimensional tolerances, improved surface finishes, and efficient production schedules.

Our Products and Services

- ✓ Customizable according to the user's preferences.
- ✓ Technical cooperation for process optimization
- ✓ Cost calculation assistance



Every Solution for Every Application

Threaded Gear Grinding

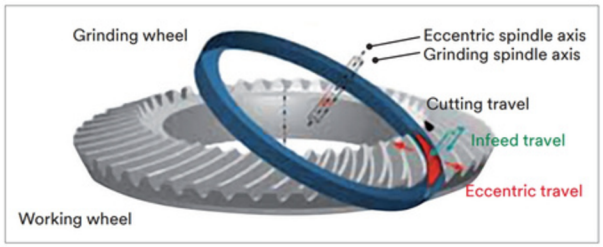
Threaded gear grinding is a high-precision method where multiple motions occur simultaneously. The grinding wheel moves axially along the workpiece while the gear rotates. The radial infeed ensures effective material removal, and the thickness of the grinding wheel allows for continuous grinding without difficulty.

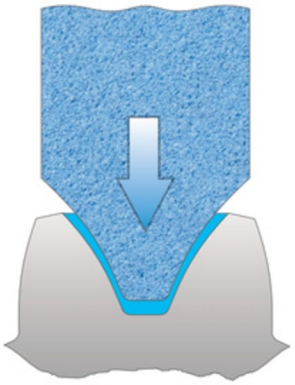
Bevel Gear Grinding

In bevel gear machining, there are two primary grinding methods:

1. Generation Grinding (Discontinuous)
- Grinding is performed tooth by tooth.
- Produces highly accurate tooth profiles.
- Ensures consistent surface quality.

2. Plunge Grinding
- A discontinuous grinding process where machining occurs tooth by tooth.
- Both flanks are machined simultaneously.
- Produces smooth, parallel grinding grooves along the tooth base.
- Ideal for pinion gears and large gear sets.





Single Rib Gear Grinding

This method uses a grinding wheel with a predefined gear profile, ensuring that each gap is machined individually. Compared to generation grinding, this technique achieves higher profile accuracy due to the direct contact between the grinding wheel and workpiece.

✓ Lower power consumption
✓ Better cooling due to interrupted contact
✓ Superior accuracy in gear profile formation

With SL.Carborundum Gear Grinding Wheels, manufacturers can achieve exceptional precision, durability, and efficiency in their grinding processes. Whether for high-speed industrial applications or ultra-fine precision gear machining, our solutions ensure top performance and reliability.