

Helical Gears

Helical gears are one type of cylindrical gears with slanted tooth traces. Helical gears offer a refinement over spur gears. The leading edges of the teeth are not parallel to the axis of rotation but are set at an angle. Compared to spur gears, they have a larger contact ratio and excel in quietness and less vibration, and able to transmit large force.



Since the gear is curved, this angling makes the tooth shape a segment of a helix. A pair of helical gears have the same helix angle but the helix hand is the opposite. Helical gears can be meshed in parallel or crossed orientations. The former refers to when the shafts are parallel to each other; this is the most common orientation.