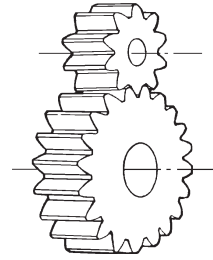


## GEAR TYPES & MANUFACTURING

[sdp-si.com/resources](http://sdp-si.com/resources)



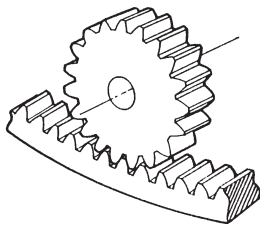
### 1. Spur Gear

This is a cylindrical shaped gear in which the teeth are parallel to the axis. It has the largest applications and, also, it is the easiest to manufacture.



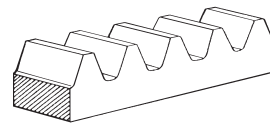
### 2. Helical Gear

This is a cylindrical shaped gear which can bear more load than a spur gear. They are widely used in applications where axial thrust force the helix form



### 5. Internal Gear

This is a cylindrical shaped gear but with the teeth inside the circular ring. It can mesh with a spur gear. Internal gears are often used in planetary gear systems.



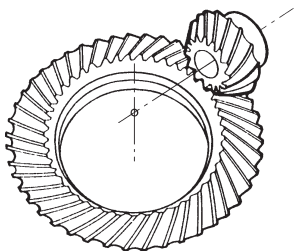
### 6. Spur Rack

This is a linear shaped gear which can mesh with a spur gear with any number of teeth. The spur rack is a portion of a spur gear with an infinite radius.



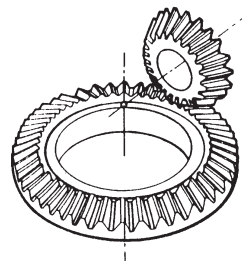
### 7. Helical Rack

This is a linear shaped gear with teeth cut at an angle. Again, it can be regarded as a portion of a spur gear with an infinite radius.



### 10. Spiral Bevel Gear

This is a bevel gear with a helical angle of spiral teeth. It is much more complex to manufacture, but offers a higher strength and lower noise.



### 13. Zerol Gear

Zerol gear is a special case of spiral bevel gear. It is a spiral bevel with zero degree of spiral angle tooth advance. It has the characteristics of both the straight and spiral bevel gears. The forces acting upon the tooth are the same as for a straight bevel gear.



### 14. Hypoid Gear

This is a deviation from a bevel gear, a special development for the drive to the rear axle and thus allowed the auto body to be very much like the spiral bevel gear, but is complicated to design and is the most expensive on a bevel gear generator.