

## Involute Gear Cutter Size Chart

Each involute gear cutter is only suitable for cutting gears within a specific range

For Diametral Pitch (inch) Cutters:

Cutter Number	Cuts Gears from
1	135 teeth to rack
2	55 to 134 teeth
3	35 to 54 teeth
4	26 to 34 teeth
5	21 to 25 teeth
6	17 to 20 teeth
7	14 to 16 teeth
8	12 or 13 teeth

For Module (metric) Cutters:

Cutter Number	Cuts Gears from
1	12 or 13 teeth
2	14 to 16 teeth
3	17 to 20 teeth
4	21 to 25 teeth
5	26 to 34 teeth
6	35 to 54 teeth
7	55 to 134 teeth
8	135 teeth to rack

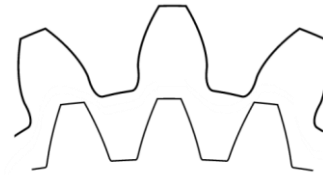
Expanded Half-Size

For Diametral Pitch (inch) Cutters:

Cutter Number	Cuts Gears from
1	135 teeth to rack
1.5	80 to 134 teeth
2	55 to 79 teeth
2.5	42 to 54 teeth
3	35 to 41 teeth
3.5	30 to 34 teeth
4	26 to 29 teeth
4.5	23 to 25 teeth
5	21 to 23 teeth
5.5	19 or 20 teeth
6	17 or 18 teeth
6.5	15 or 16 teeth
7	14 or 15 teeth
7.5	13 teeth
8	12 teeth

Why?

As the tooth count of a gear increases, the shape of its teeth changes and become straighter and less curved. The gear cutters need to be different shapes to cut the appropriate curve onto the gear tooth

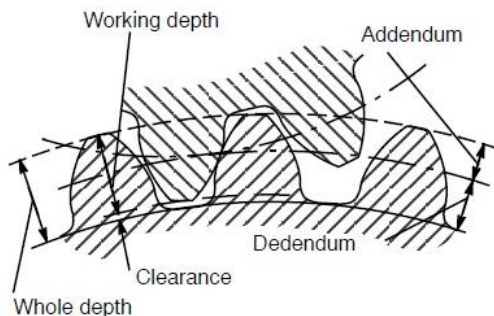


Profile comparison between a 16-tooth (top) and 64-tooth (bottom) gear



Read more at:

<https://evolventdesign.com/blogs/history/choose-a-gear-cutter>



Check out our gear calculator collection:

<https://evolventdesign.com/pages/calculators>

