

Abbr.	Term	Description	Formulas
DP	Diametral Pitch	the number of gear teeth per inch of pitch diameter	$DP = N / PD$
M	Module	the number of millimeters of pitch diameter per gear tooth	$M = PD / N$
PD	Pitch Diameter	diameter of the pitch circle	$PD = N / DP$ $PD = N * M$
OD	Outer Diameter	diameter of the gear blank	$OD = (N + 2) * M$ $OD = (N + 2) / DP$
CP	Circular Pitch	the distance along the circumference of the pitch circle between the centers of two adjacent teeth	$CP = \pi / DP$ $CP = M * \pi$
A	Addendum	the height of each gear tooth above the pitch circle	$A = 1 / DP$ $A = M$
C	Clearance	the gap between the tooth of one gear and the root of another gear when they are properly meshed	$C = A * .157$ (for $DP < 20$ , $M > 1.25$ ) $C = A * .25$ (for $DP \geq 20$ , $M \leq 1.25$ )
D	Dedendum	the depth of each gear tooth below the pitch circle	$D = A + C$
WD	Whole Depth	the distance from the outer diameter to the root diameter clearance	$WD = A + D$
T	Tooth Thickness	the distance between the flanks of each gear tooth at the pitch circle	$T = .5 * CP$

Table 1: Key Formulas for Cutting Spur Gears