

### DIAMETRAL PITCH (IMPERIAL)

Diametral Pitch is the Number of Teeth to each Inch of the Pitch Diameter.

To obtain the	If you have the...	Formula
Diametral Pitch	Circular Pitch	$DP = \frac{3.1416}{CP}$
Diametral Pitch	Pitch Diameter and the Number of Teeth	$DP = \frac{N}{PD}$
Diametral Pitch	Outside Diameter and Number of Teeth	$DP = \frac{N+2}{OD}$
Diametral Pitch	Module	$DP = \frac{25.4}{MOD}$
Pitch Diameter	Number of Teeth and the Diametral Pitch	$PD = \frac{N}{DP}$
Pitch Diameter	Number of Teeth and the Outside Diameter	$PD = \frac{(OD)(N)}{N+2}$
Pitch Diameter	Outside Diameter and the Diametral Pitch	$PD = OD - \frac{2}{DP}$
Outside Diameter	Number of Teeth and the Diametral Pitch	$OD = \frac{N+2}{DP}$
Outside Diameter	Pitch Diameter and the Diametral Pitch	$OD = PD + \frac{2}{DP}$
Outside Diameter	Pitch Diameter and the Number of Teeth	$OD = \frac{N+2}{N \div PD}$
Number of Teeth	Pitch Diameter and the Diametral Pitch	$N = (PD) \times (DP)$
Number of Teeth	Outside Diameter and the Diametral Pitch	$N = (OD) \times (DP) - 2$
Module	Diametral Pitch	$MOD = \frac{25.4}{DP}$

Please note: the above formulae relates to standard outside diameters and pitch diameters.

### MODULE (METRIC)

Module represents the amount of Pitch Diameter (mm) per tooth

To obtain the	If you have the...	Formula
Module	Pitch Diameter and the Number of Teeth	$MOD = \frac{PD}{N}$
Module	Circular Pitch	$MOD = \frac{CP}{3.1416}$

Module	Diametral Pitch	$MOD = \frac{25.4}{DP}$
Module	Outside Diameter and the Number of Teeth	$MOD = \frac{OD}{N+2}$
Pitch Diameter	Module and the Number of Teeth	$PD = MOD \times N$
Pitch Diameter	Number of Teeth and the Outside Diameter	$PD = \frac{OD \times N}{N+2}$
Pitch Diameter	Outside Diameter and the Module	$PD = OD - 2MOD$
Outside Diameter	Module and the Number of Teeth	$OD = (N+2) \times MOD$
Diametral Pitch	Module	$DP = \frac{25.4}{MOD}$

Please note: the above formulae relates to standard outside diameters and pitch diameters.

For bevels, worm gears and helicals we suggest you have these drawn up and send the drawing to Ronson Gears for quotation.