Meshing Frequency

Meshing frequency is defined as the number of belt teeth that enter and exit the sprocket grooves per unit of time. Meshing frequency is assumed to be the primary frequency of noise generated by synchronous drives since the noise is generated from meshing interference and land impact during operation. The most common unit of meshing frequency is # teeth/sec. This is equivalent to cycles/sec. Each sprocket may have its own meshing frequency, but the major noise generator tends to be the driveR with the belt entering at its highest tension.

Meshing frequency can be calculated as follows:

(# Sprocket Grooves x rpm) / 60 = cycles/sec