

ForgeCore[™]

The ultra-low-distortion motor system

A tweeter's magnet system is a critical part of the design, as it typically serves as both its motor and its enclosure. YG AcousticsTM' new ForgeCoreTM magnetsystem is unique in optimizing both functions (motor and enclosure), thus dramatically lowering distortion in tweeters. ForgeCoreTM does so by introducing computer-optimized, highly sophisticated 3D geometries into the magnet system, using CNC-cutting

of the motor parts. In comparison, standard tweeters use stamped or laser-cut motors, which are limited to mostly 2D features. The process is extremely precise, and the resulting improvement is immediately audible as a sense of ease in the sound. It is especially noticeable in how relaxing long-term listening becomes thanks to ForgeCoreTM.



Tweeter motors being CNC-cut at the YG Acoustics™ factory

ForgeCore

How is ForgeCore™ different than BilletCore™?

- ► Both technologies work together inside YG AcousticsTM speakers, but are optimized for different frequency ranges: ForgeCoreTM lowers distortion in tweeters, BilletCoreTM lowers distortion in woofers and mids.
- ▶ Both technologies use CNC-cutting, but on different parts: ForgeCoreTM is a magnetsystem (motor) technology, BilletCoreTM is a membrane (cone) technology.
- ► Technically (for gearheads only), ForgeCoreTM uses CNC-cut steel forgings with some non-machinable features, whereas BilletCoreTM uses CNC-machined solid aircraft-grade aluminum billet.

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Measurements

Below is a distortion measurement of a YG Acoustics™ speaker utilizing the ForgeCore™ tweeter, and the same speaker using its predecessor tweeter, with its Scan-Speak Illuminator magnet system. As can clearly be seen, the ForgeCore™ tweeter dramatically reduces distortion over the already-excellent Illuminator motor. This independent measurement was conducted by the Canadian National Research Council (NRC).

Note: the total freedom from distortion throughout the midrange in both graphs is thanks to the BilletCore™ mid-woofer.

YG Acoustics™
Sonja™ 1.1 with ForgeCore™,
THD 90 dB @ 2 m (96 dB @ 1 m), 200-20k Hz, 10 dB Div
Same mid-woofer, but with predecessor
Illuminator-based tweeter

