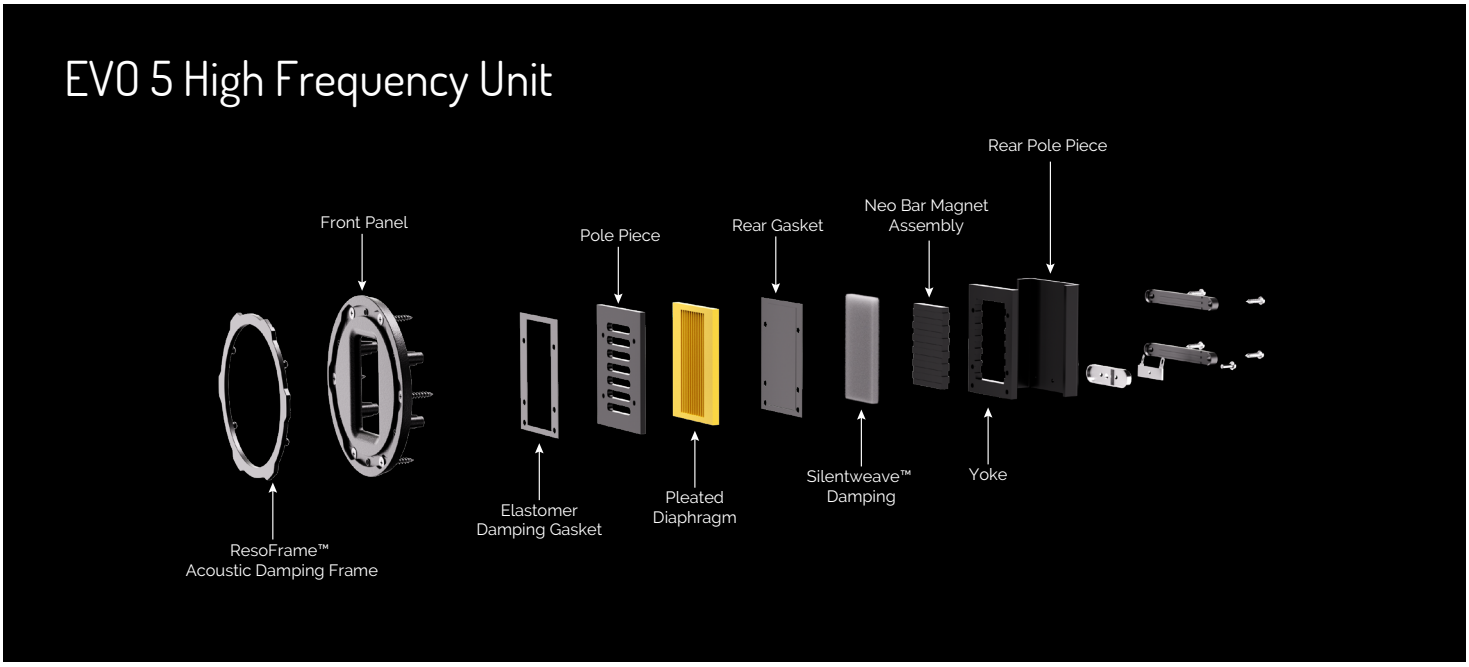
EVO 5 Series

Designer's Notes

EVO 4 was an award winning, highly successful range for Wharfedale, well loved by users and reviewers alike, but our policy of continuous improvement takes the blueprint established by EVO 4 to new heights of performance.

Naturally the first components to come under review are the drive units because these form the basic character of any speaker. In many ways the outstanding features of the latest EVO series are the AMT treble unit and dome midrange. In EVO 5 the AMT treble unit is enhanced by a larger radiating area with a new frontplate design to improve directivity. In addition the rear chamber of the AMT is now filled with a new absorption material that we have called SilentWeave - a combination of cotton and felt fibres that has exemplary damping qualities over midrange and treble frequencies. This material is so effective that it has also been added to the rear chamber of the midrange unit too. The subjective result is superior detailing and clarity for the upper midrange and treble that is immediately obvious when listening to any EVO 5 model.



Bass/midrange units have also been improved by the addition of an elastomer ring to the junction, at the rear of the cone, to the surround. This elastomer ring, called ResoSeal, has the effect of mass-damping the edge of the cone, as it meets the surround, to absorb unwanted reflections from this part of the cone that would otherwise disturb the natural roll-off of the drive unit beyond the crossover frequency. Now with a smoother frequency response, the crossover can be simplified and more easily optimised for an accurate phase blend to the upper midrange and treble units. The subjective result is that vocals and other instruments sound richer, more natural and more emotionally engaging.

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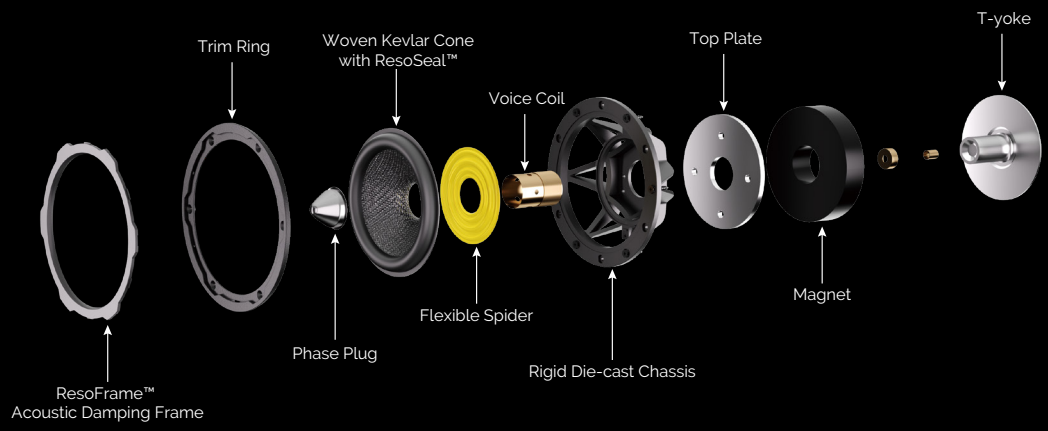
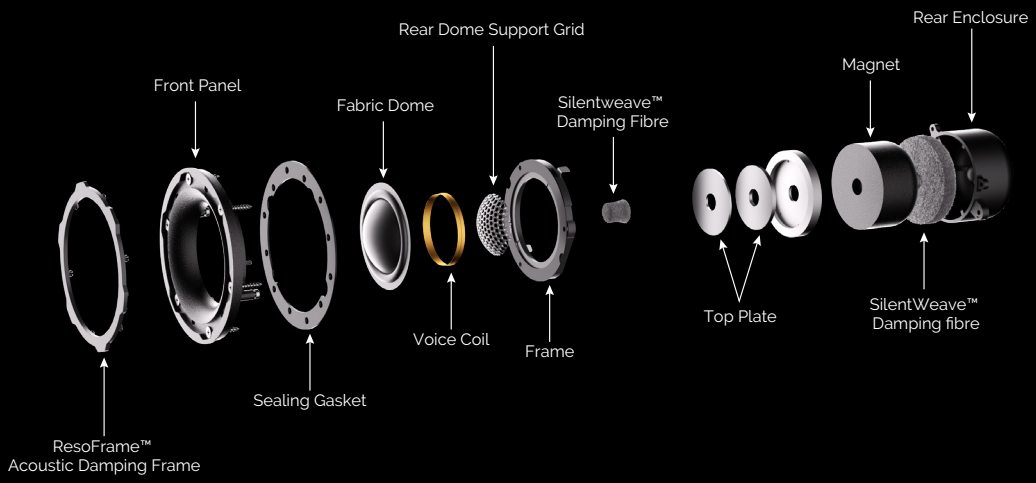
EVO 5 Bass Unit



EVO 5 Midrange Unit



All drive units now benefit from further acoustic damping to the driver front plates using an elastomer damping ring called ResoFrame. This effectively dissipates any resonances that might occur in the front plates resulting in lower distortion and coloration across the whole output of the speaker. The AMT treble unit also uses a gasket of ResoFrame material behind the front plate in order that the delicate high frequency output is unmarred by any unwanted vibration.

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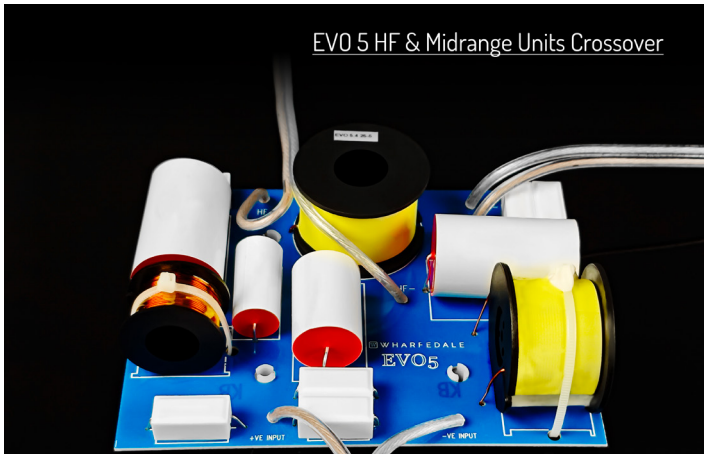
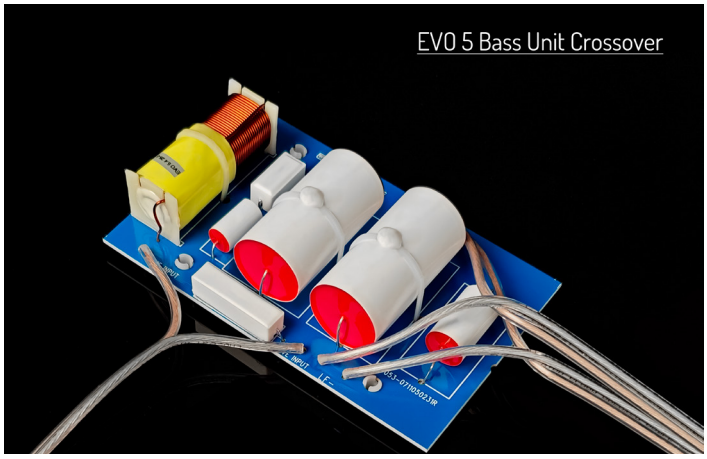
All these enhancements to the drive units have allowed the development of a more advanced crossover network. The crossover is the heart of every speaker, not only optimising the transfer of musical energy between the drive units but also controlling the acoustic performance of each driver and its directivity. Two years research into what is called the Directivity Index (DI) of loudspeakers has allowed us to optimise the off-axis output of the EVO 5 speaker designs to better match the on-axis performance. The result is that the speakers sound more natural in any room acoustic as the listener's ears are less disturbed by differences in the reflective character of the speaker compared to its direct sound. This not only lowers coloration but also enhances the spatial performance of the speakers in the listening room.

During the fine-tuning process, which is undertaken using hundreds of hours of subjective assessment of each speaker design using a wide variety of music, the crossover components were upgraded to special audiophile quality Superior Polypropylene capacitors in the critical signal path

and air cored coils for midrange and treble filters. New PCB layouts are designed to give a 'straight-through' signal path from the input terminals to the drive units and, in the case of the 3-way speakers, the crossovers filters are split onto two PCBs in order to minimise electromagnetic interference from the high current carrying bass section to the lower level signal carried by the midrange and treble section. As you can imagine, these changes improve the transfer of the musical signal to the drive units and further enhance the integration between them resulting in a seamless, hear-through, performance.





Finally both the cabinet designs and reflex porting have been optimised to match the enhanced performance of the bass drivers. Internal cabinet volume has been increased and the Wharfedale SLPP (Slot Loaded Profile Port) system redesigned for triple venting to the sides and rear of the plinth. SLPP enhances the transfer of the high pressure output of the port tube opening to the lower pressure in the room, increasing bass power by a factor of up to 1.5dB as well as reducing distortion significantly. For the EVO 5 series, the bass extension and power are both significantly improved with superior integration with the acoustics of the listening room.

These advances in drive unit performance, crossover fine-tuning and cabinet and reflex port enhancement has resulted in a more open and expansive soundstage with musical performers placed in a natural acoustic that enhances the realism of the listening experience. Both overall clarity through to the recording and the audibility of nuanced textures in the musical production are improved. As a result, listening to music through any EVO 5 model is a captivating and emotionally engaging experience designed for music lovers no matter what genre of music is being played.

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