

Cabinet

- **Passively time aligned baffle** (mostly impacted on Tower & Monitor, as they have woofers sharing the same frequency band) – each driver is angled towards listening position for optimal phase coherency transient response.
 - Ultra-thick and sturdy baffle of 8cm thickness – eliminates cabinet resonance and coloration.
 - The entire baffle consists of two pressed pieces containing multiple thin pieces of HDF with glue between each layer, one outer baffle and one inner baffle that is first glued as a part of the cabinet – then the outer baffle is glued under pressure to the inner baffle and cabinet.
 - This is a process that takes multiple stages. First, we press all the thin layers of HDF that has to cure for 75 minutes (under several tonnes of pressure in large machines, equipped with the custom-made tooling to press the shape of our baffle), without applying heat as would be normal on thinner baffles – but to get a perfectly uniform glueing process as well as a uniform moisture level throughout the baffle, which avoids any defectives that bend out of shape after the fact. This process then takes place twice for a single speaker.
 - After the baffle is pressed into the large radius curve, we must CNC mill out the second curve in the opposite direction, making it a compound curve, requiring an advanced 5-axis CNC. All in all, this process is extremely time consuming.
- **25mm wall thickness**, heavily braced and damped with butyl sheets to remove any resonances in the cabinet – improving transparency, dynamics and soundstage.
- Massive **aluminum trim rings** surrounding the woofers, each weighing near 1kg.
- Sturdy cast **aluminum bars** without a visible cap on top, for a sleeker appearance.
- **Substantial rubber feet** with M10 threads.
- **Steel grilles** covering each of the woofers, made with a rubber backing – designed to give the illusion of floating off the cabinet, creating a space between the trim ring and front of the grille.
- **Over-sized ports** are used for all speakers except Slim (which is a sealed design), tuned very low for great bass extension while avoiding turbulence. The sheer length of the ports would induce port resonances unless we did something to alleviate it. We have induced a cancelling airflow into the port's tube to phase out the resonances appearing in the port by adding strategically placed holes that are covered in damping material to give just the right amount of turbulence reduction in the pipes.

Crossover

- **Level adjustability** for optimal in-room-performance on Bookshelf, Tower and Monitor.
 - Level adjusters made of pure oxygen free copper, plated with Rhodium for optimal sonic performance and longevity.
- **Bi-wire/bi-amp terminals and jumpers** made of solid pieces of copper, plated with Rhodium for optimal sonic performance and longevity. This enables the use of dedicated amps for the Mid/HF section separated from the woofer section.
- **Heavy-gauge air-core inductors** for the woofer sections (2 square-millimeter thickness), air-core inductors also for midrange and tweeter, which gives better clarity, dynamics and transparency.
- **Polypropylene caps** for Tweeter and Midrange and large Polyester for Woofer for optimal sonic reproduction.
- **Wire-wound resistors** (green types) and aluminum heatsinked wire-wound resistors (that handle extreme amounts of heat) for optimal sonic clarity and longevity.
- **4th order filters** for MID/HF and 3rd order filters between WF/MID for the entire series.
- We use **non-ferrous parts** only in the signal chain of the speakers, no steel nuts and washers that can smear the signal in any way.
- All in all, the **level of parts** used in these crossovers are unheard of in this price range.

Drivers

- **Tweeter**- 28mm Lithium-magnesium dome that offers exceptionally low material density (about one-third of that of a beryllium dome) combined with high stiffness and good inert damping it offers exceptional clarity and details while remaining completely natural sounding. Tweeter motor using large copper shorting ring, and a substantial neodymium motor ensures ultra-low distortion. Combined with the ultra-light dome it offers high sensitivity (96dB 1w/1m) and high power handling capabilities.
- **Midrange** – 5” Carbon-graphene cone. The carbon layers are not woven like a typical carbon cone, but instead using long carbon fibre strands that are mashed together in ultra-thin layers with graphene – this gives the cone a random break-up behavior which avoids known resonances in more normal carbon cones and with the added graphene is incredibly stiff and light. The random break-up behavior of the cone means that we have exceptionally good damping properties of the cone itself which is critical in the upper midrange area to have a natural sound. The high stiffness of the cone translates to a high level of details, accuracy and literally scary dynamics.
 - The motor is a giant for the midrange’s overall size, combined with a fully enclosed basket, we get exceptionally high sensitivity (97,5dB 1w/1m) out of the driver, which together with copper shorting ring leads to ultra-low distortion and low dynamic compression even at high SPL levels.
- **Woofers** – 8” Aluminum cone with a bespoke shape and added ribs in the form of a prism-pattern to create exceptional stiffness and accurate reproduction of the bass and lower midrange area. This is a driver with low-inert damping properties which would be a disaster in the upper midrange area where some manufacturers use such cones, but it is a total blessing for the lower midrange and bass which is far away from any cone break-up and resonance – it ensures a clarity and detail in lower male voices and bass dynamics that is nothing short of breathtaking.
 - We have designed the motor to have high excursion capabilities while adding massive amounts of copper in the motor to reduce distortion by a lot. In comparison, this new woofer has half of the distortion of our 1723 Speakers that are already extremely high performers in this area.
 - Our substantial inverted surround with ribs is simulated using Comsol for optimal performance of the drivers, and together with the effort made in the motor this ensures optimal behavior of the cone. Even at extreme excursion levels it helps keeping distortion at a minimum.

Waveguide / midrange assembly

- **Elliptic shaped waveguide** made to mount the tweeter and midrange as close to each other as physically possible to ensure good vertical dispersion with minimal lobing characteristics.
 - The shape of the waveguide is optimized for a wide listening window even in the upper frequencies.
 - The grille in front of the tweeter is optimized to increase sensitivity (and lowering distortion) in the 7-15kHz area while improving off-axis behavior. It is also a protector of the lithium-magnesium dome which is a sensitive material that would deteriorate if touched with bare hands.
- The **waveguide assembly** is directly mounted to a thick piece of steel, for the main purpose of properly mounting the midrange unit, which motor is so large that it is impossible to use screw inserts in the wood directly. Instead, it is mounted via the waveguide assembly to the threaded steel plate.

Puck Pro

- **Isolation feet** specifically designed for Arendal 1528 Tower speakers. Using a CNC milled aluminum housing, with a specially made soft rubber compound screwed from the inside. The rubber allows for adjusting the height of the feet by up to 10mm and ensures perfect angle of the 1528 Tower speakers to match your listening distance by either adjusting the front or rear feet height.
 - The isolation properties of Puck pro means you highly reduce vibrations in the cabinet from reaching the floor, and from floor vibrations to be channeled back into the speaker. The effect is better dynamics and better clarity.