ZELLATON© PLURAL EVO

3-Way Floorstanding Speaker System

The unique ZELLATON technology in a modern design

Based on the legendary ZELLATON hard foam diaphragm, we have developed the ZELLATON EVO diaphragm, which seamlessly continues all previous sonic virtues.
The ZELLATON EVO diaphragm is the heart of our new product line, which as usual plays at the highest musical level!

The new ZELLATON EVO diaphragm

We have invested almost 6 years of development work in the new ZELLATON EVO rigid foam membrane, which is unique in this form.
This takes up technical development approaches of bionics for structural optimization and was transferred by CAD to the new ZELLATON EVO membrane.
A special sound-optimized surface structure reduces resonances that impair the sound to a minimum. With its multi-layer structure, it combines lowest weight with high stiffness and also has a high internal damping due to the foam core.
The complex manufacturing process of the full-cone sandwich diaphragm is very time-consuming, as it must be carried out in several steps, starting with handmade paper, followed by embossing of the foil and the temperature-controlled foaming process in complex devices.
We use a 0.3 mm thin PP foil as the carrier foil of the rigid foam - the ideal combination of weight, strength and internal damping. Polypropylene (PP) is a thermoplastic material produced by chain polymerization of propene. It belongs to the group of polyolefins and is partially crystalline and non-polar. Its properties are similar to those of polyethylene, but it is somewhat harder and more resistant to heat. The density of PP is between 0.895 and 0.92 g/cm³. This makes PP the plastic with the lowest density. With a lower density, moulded parts with a lower weight and from a certain mass of plastic more parts can be produced. The modulus of elasticity of PP is between 1300 and 1800 N/mm². Polypropylene has excellent fatigue resistance. An important aspect for a long lifetime. The surface of the EVO membrane is also easy to clean and resistant to environmental influences.
Also in the selection of the materials used, the natural reproduction of music was always a priority.
As in the KLASSIK series, the EVO midrange driver is individually tuned by hand by Dipl. Ing. Manuel Podszus in an extremely complex procedure, by mechanically eliminating possible irregularities in the frequency response.
For example, our ZELLATON EVO rigid foam membrane can cover the entire frequency spectrum from 150 Hz to approx. 7000 Hz, which is essential for a lifelike realistic performance.
The dispersion characteristics of the tweeter chassis are also improved by a specially adapted front cover optimized.
This was the only way we could realize our plan to make the outstanding sound of ZELLATON diaphragms accessible to a broad public by means of industrial production without having to sacrifice their outstanding qualities.

Passive EVO crossover network

Only with an uncompromising crossover can the qualities of the loudspeaker drivers be optimally reproduced; at the same time, the design is as puristic as possible, according to the motto: "Less is more".
It goes without saying that only the highest quality components from Duelund Coherent Audio (copper CAST and VSF) are used in our EVO series, which are laboriously wired directly by hand.

The mechanical linearization of the mid-range frequency response allows us to completely dispense with sound-degrading suction circuits, thus creating an exceptionally low-distortion loudspeaker that sounds extremely impulsive and musical.

As described, the 7" EVO midrange covers a wide frequency spectrum upwards and downwards - this explains the open sound characteristics very similar to a full range driver, without the usual phase problems in the critical areas for the ear! This allows the tweeter to be coupled quite high, which means it can do its job without being unnecessarily burdened by lower frequencies.

PLURAL EVO - Cabinet and paintwork

When determining the case design, we took up the unique form language of our top model STATEMENT in addition to functionality, which harmoniously combines design and technology and continues our philosophy in the EVO series.
A new type of sound-guiding system with a bass port radiating to the (bottom) side allows the unit to be installed close to a wall without compromising the sound quality.
Of course, the EVO midrange driver operates in a separate cabinet chamber with a rear-vented opening to avoid any compression effects.
The multi-layer housing, already proven in the KLASSIK series, ensures good internal damping as well as excellent stability and is optionally available in various top-quality paint finishes.
The choice of the elaborately glued wood layers pursues the goal of optimal sound absorption from the inside to the outside. In addition, bracing and damping mats are used to reduce the vibrations occurring inside the cabinet to a minimum.
The sound dissipation to the floor is also of major importance with regard to the interior design of the room. In order to ensure an ideal coupling independent of the materials used here, we have developed a feet system that absorbs the energy in an optimal ratio and thus does not return it back into the cabinet.
The distance and position of the individual drivers to each other is also phase-optimized and was determined by several listening tests - just like all other parameters. The main focus was always on the "material sound" - this inherent sound of different materials, which is not part of the music recording, can be easily perceived and differentiated by the trained human ear. This explains, besides the different technical concepts for music reproduction, often the different sound characteristics of the countless loudspeaker manufacturers on the market. We at ZELLATON always strive to reduce the material sound to a minimum at the limit of what is physically possible. And we do this with a considerable amount of effort! That is why ZELLATON loudspeakers are able to reproduce any kind of music in a balanced, neutral way and are not optimized for any particular direction. Whether classical, electronic or jazz music - the loudspeaker is no longer the limiting factor and is at best only limited by the recording quality. However, negative influences from electromagnetic interference fields also play an important role for a loudspeaker and were considered in the development of the PLURAL EVO cabinets, among others.
Here we have drawn on the extensive experience of our flagship loudspeaker model ZELLATON STATEMENT. But also, the design language of the STATEMENT can be recognized in the PLURAL EVO, besides technical aspects.

The name PLURAL

The name “PLURAL” picks up the first ZELLATON loudspeaker in history (see original advertising brochure from the 1950s). But in a modern, timeless design.
Every loudspeaker from the ZELLATON manufacture is the result of numerous hours of manual work - Handmade in Germany.