



VIVID NATURAL SOUND



VISION

A TIMELESS STATEMENT OF HIFI

EMPYREAN



THE FIRST ISODYNAMIC HYBRID ARRAY HEADPHONE



MEZE
AUDIO

+

▶ RINARO ◀

Empeyan is the product of two passionate companies coming together to explore what is possible beyond their individual capabilities. The result is a no compromise headphone embodying the Meze Audio daring aesthetic and user-centered design approach and Rinaro's experience in research and development within the field of planar magnetics.

Rinaro is a progressive audio company with over 30 years of research and development experience in the field of planar magnetics and Isodynamics combining high quality materials & refined design to deliver unrivalled clarity and detail of sound.



The Empeyan was born from passion, curiosity and innovation.



SOUND TECHNOLOGY





▷ RINARO ◁
ISODYNAMICS



EMPYREAN

MZ3 Isodynamic Hybrid Array Driver

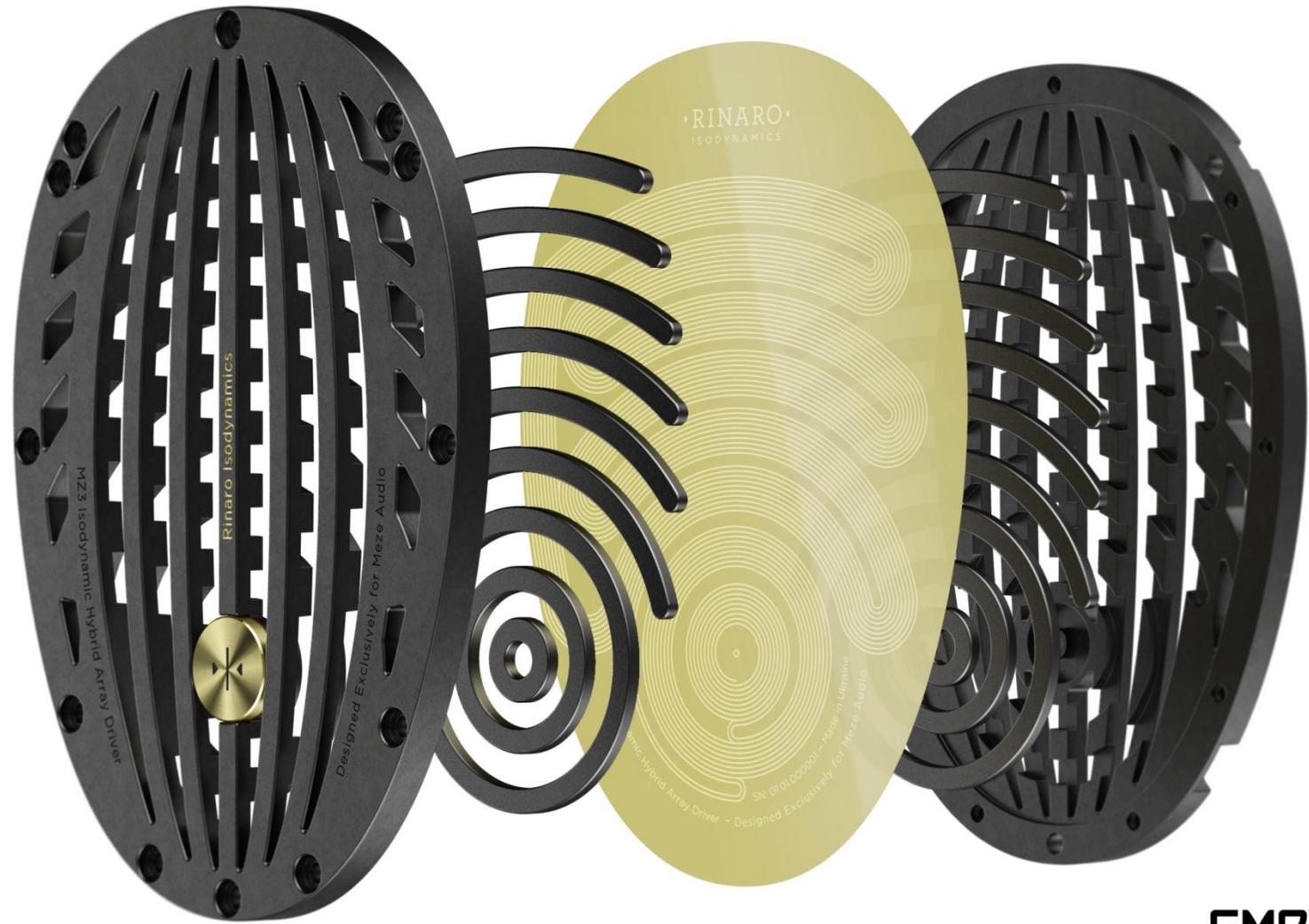
Rinaro have collaborated with Meze to create a new standard in planar magnetic audio with the MZ3 Isodynamic Hybrid Array Driver for their Empyrean headphone. Over 30 years of research and development in the field of Isodynamics have led to the creation of the first dual coil driver array to be seen in the field of planar magnetic headphones. The resulting technology is one of the lightest and most advanced planar magnetic drivers on the market.

The MZ3 is an Isodynamic Hybrid Array Driver that has been created exclusively for Meze Audio.

The MZ3 combines individual switchback and spiral shaped voice coils in the one driver, their individual unique benefits allow sound to be targeted with accuracy around the natural shape of the ear. This combination has allowed for an increased exposure of direct sound wave frequencies over the 10kHz range and improved imaging and localization by decreasing the impact of short wave time delays caused by diffused field reflections.

Higher efficiency through weight reduction has been key to enabling longer listening sessions without the pressure point fatigue inherently created by heavy headphones, putting user-comfort at the same level of priority as audio performance.

Isodynamic Hybrid Array Driver construction



• RINARO •
ISODYNAMICS

The first of its kind the Emyrean Isodynamic Hybrid Array Driver combines two independent shaped coils within the same diaphragm delivering more selective acoustic performance to the various areas within the structure of the ear.

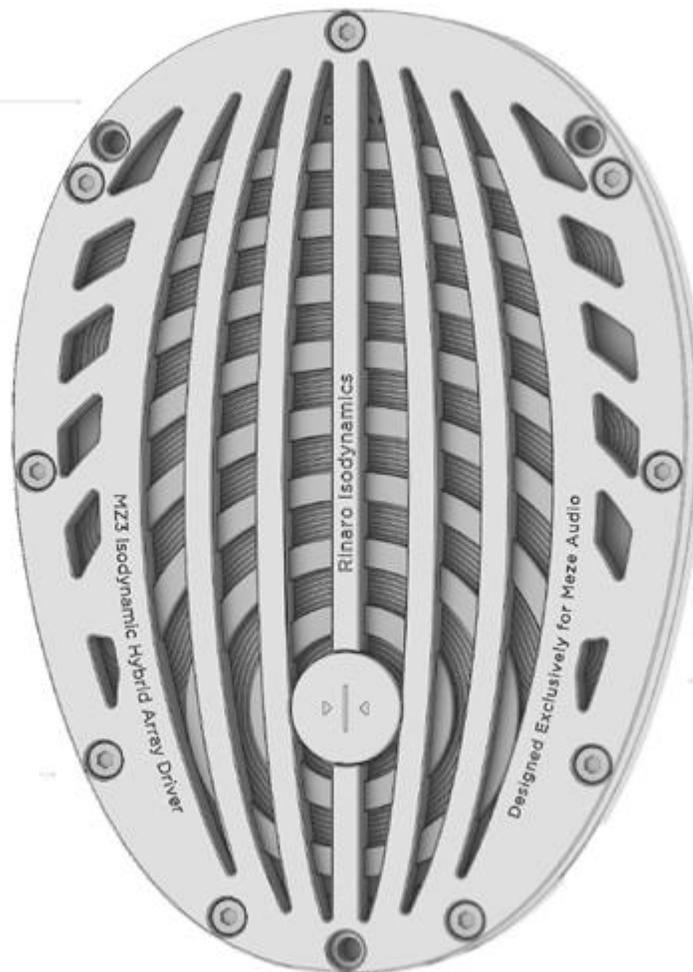
EMPYREAN

To create an audiophile headphone that is powerful yet light the driver needed to maximize power output while reducing weight as much as possible. Weight was minimized by optimizing a magnet structure around an ovoid shape that fits the ear more closely, reducing unnecessary inactive surface area (and weight). Power output was increased through the use of a completely bespoke coil and magnet array design that optimized the active usable area of the driver within it's ovoid shape.

ACCURATE REPRODUCTION
Total harmonic distortion (THD) measures under 0.1% in the whole frequency range

LIGHTWEIGHT
Reduced driver weight designed to create a headphone that offers prolonged listening sessions

ERGONOMIC SHAPE
Ergonomically shaped driver structure with increased active area



ULTRA HIGH RESOLUTION AUDIO
Upper frequency limit of audio reproduction is 110,000 Hz

ULTRA EFFICIENT
100db@1mw/1kHz
High performance without needing amplification

PATENT PENDING ISODYNAMIC HYBRID ARRAY DRIVER
A worlds first in planar magnetic headphones



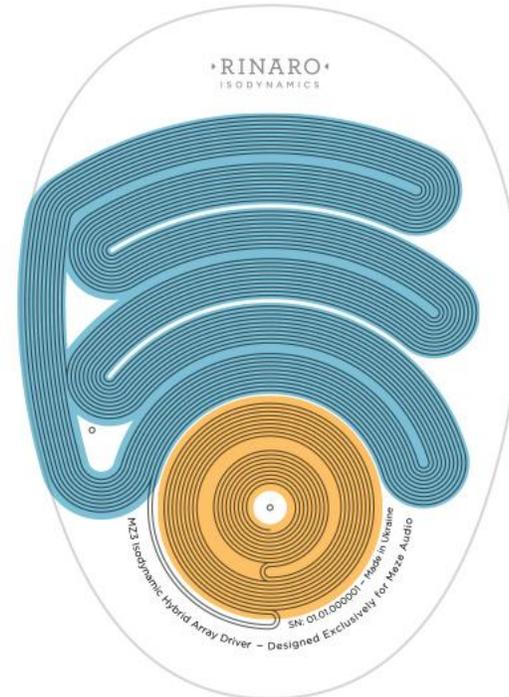
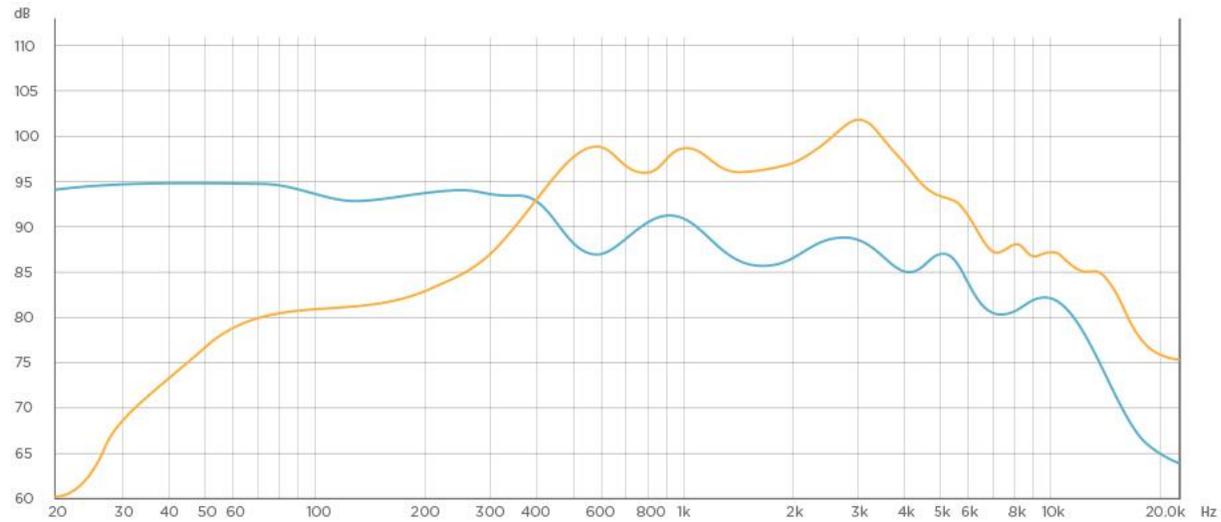
▸ RINARO ◀
ISODYNAMICS

EMPYREAN

INDIVIDUAL FREQUENCY RESPONSE OF SPIRAL & SWITCHBACK COILS

1/6 octave smoothing, 1mW / Bruel & Kjaer Head & Torso Simulator (HATS) Type 4128

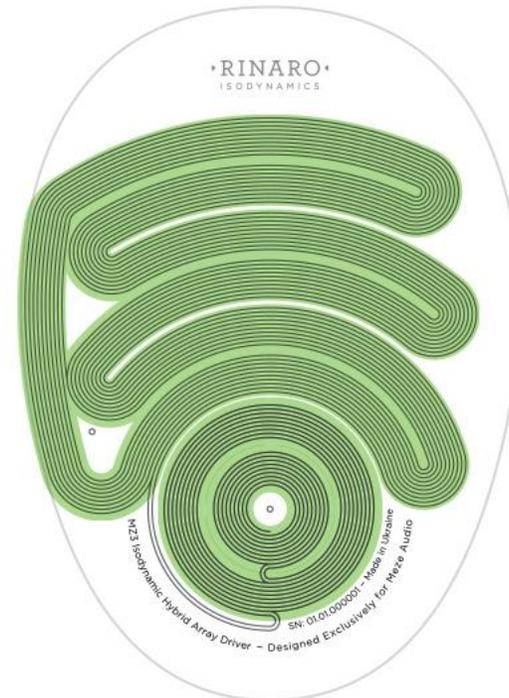
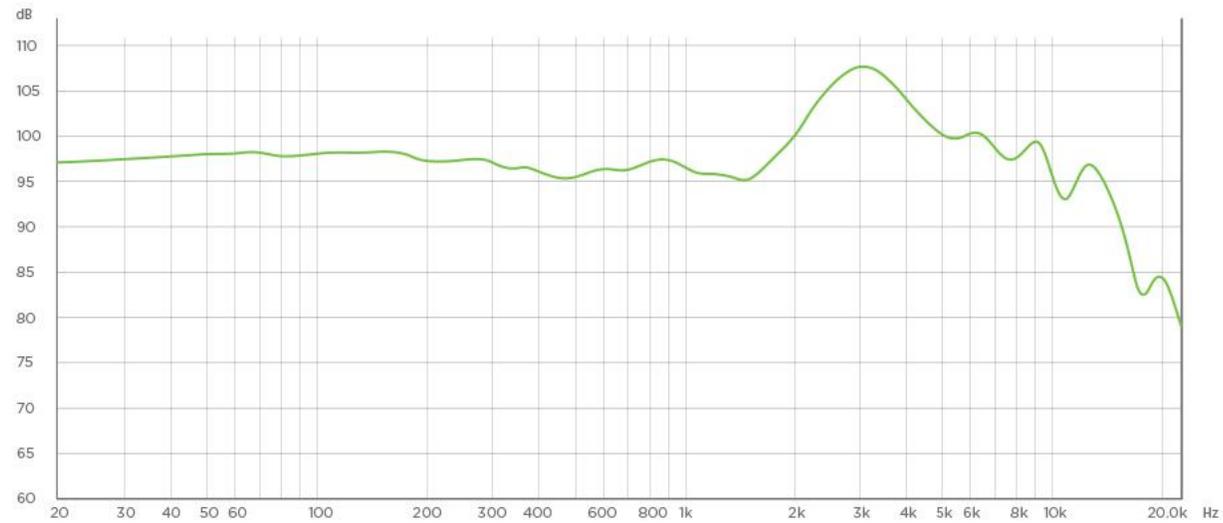
- SWITCHBACK COIL
- SPIRAL VOICE COIL



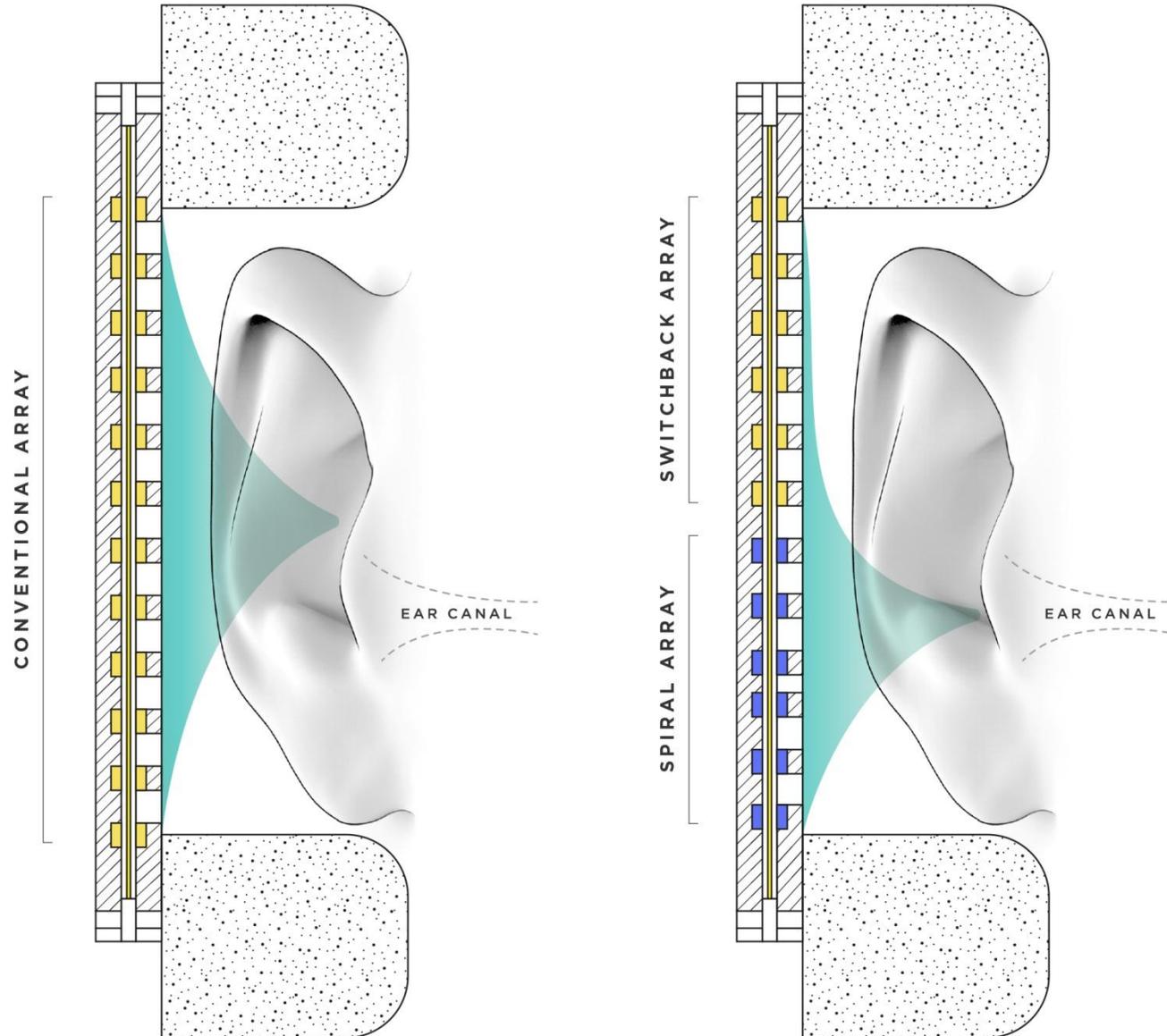
COMBINED FREQUENCY RESPONSE OF SPIRAL & SWITCHBACK COILS

1/6 octave smoothing, 1mW / Bruel & Kjaer Head & Torso Simulator (HATS) Type 4128

● COMBINED COILS



Diaphragm power focus at high frequencies



ISOMAGNETIC EARCUP TO EARPAD COUPLING TECHNOLOGY

An innovative design feature developed by Rinaro for Meze audio is the Isomagnetic ear cup attachment which utilizes the magnetic field generated by the hybrid array driver to hold the ear cup in place whilst improving the efficiency of the driver by 1db or 12% by targeting the magnetic field back into the driver.



90%

Magnetic field Shielding

The ferromagnetic ear pads decrease the magnetic stray field affecting the listeners head by 95%



12%

Increase in driver power

Patented ferromagnetic plates channel the magnetic field back into the driver increasing output by 1db or 12%



Ferro-lock system
Innovative use the magnetic field of the drivers to fix the earpads

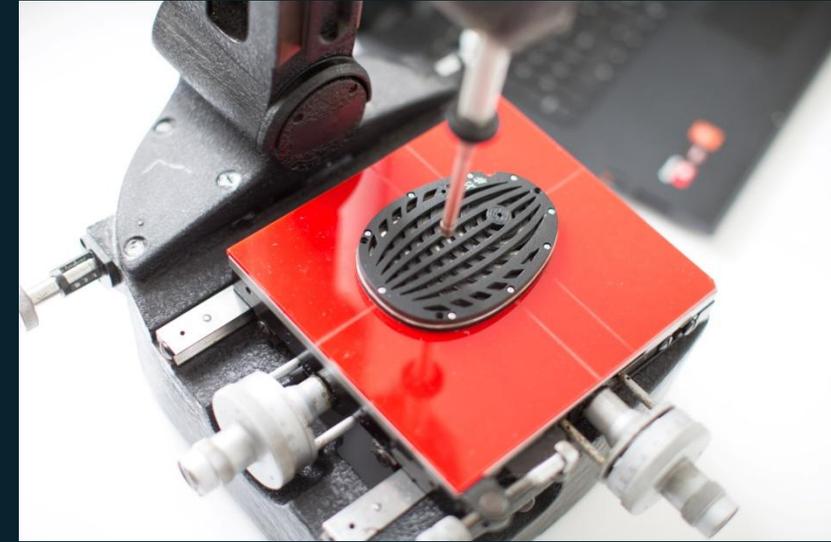


MEZE
AUDIO

▸ **RINARO** ◀
ISODYNAMICS

EMPYREAN

ISODYNAMIC DRIVER MANUFACTURED IN Lviv, UKRAINE





DESIGN DEVELOPMENT

DESIGNED AND BUILT IN ROMANIA

The Emyrean is hand assembled in Romania.



A close-up, black and white photograph of a high-quality headphone. The top part of the image shows a curved headband with a woven carbon fiber texture. Below it, the top of a large earcup is visible, featuring a pebbled leather texture. The background is a plain, light gray.

COMFORT AND FIT

The comfier the headphone the longer the listening experience, this is a fact. We have designed the Empeyrean to deliver comfort and prolonged listening sessions allowing for a truly immersive experience for you and your music.

LIGHTWEIGHT

under 400 gram: CARBON FIBER
HEADBAND AND SCULPTED
ALUMINIUM SKELETON



EARPAD ERGONOMICS

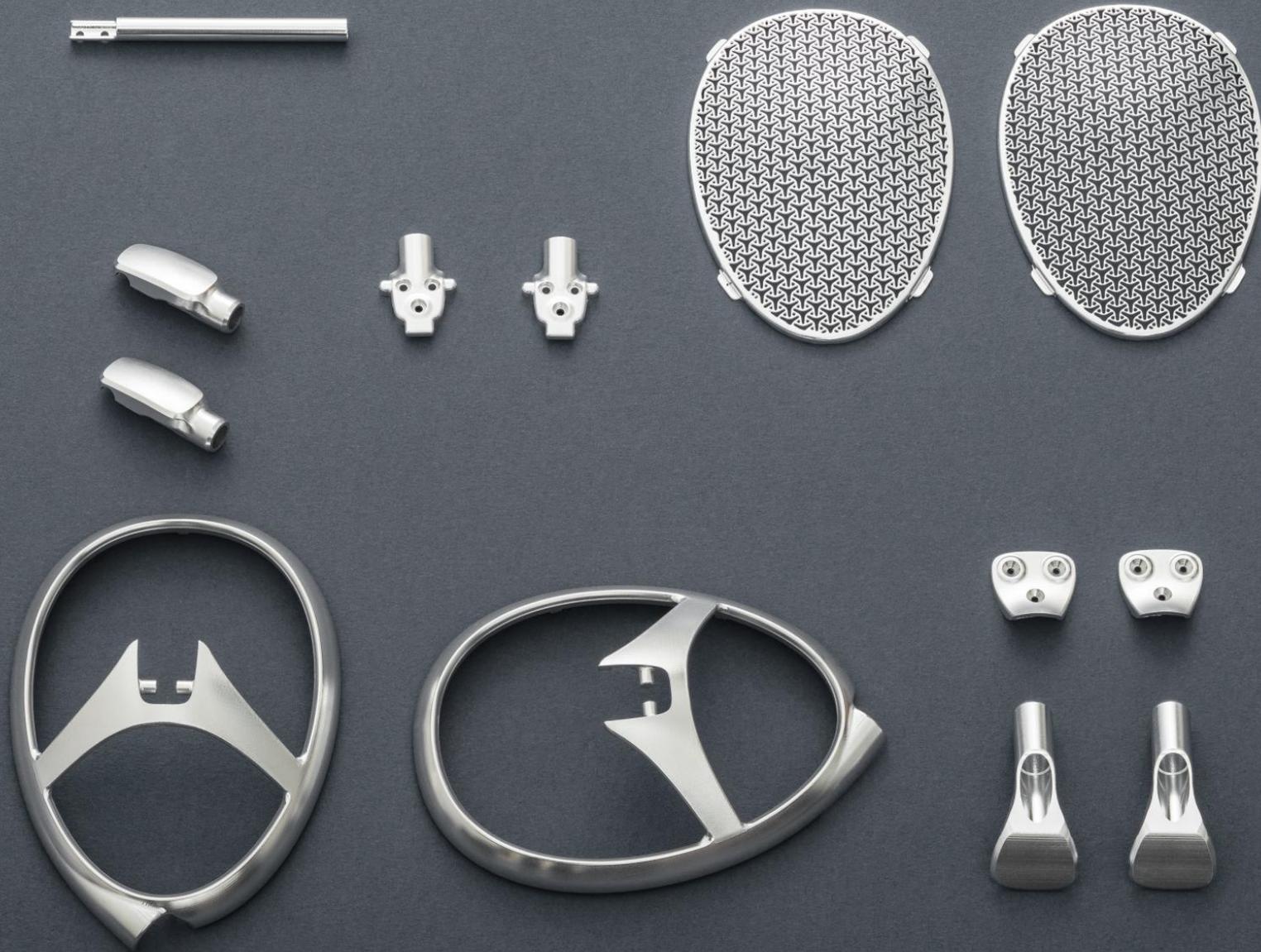


Anatomically designed ovate
earcups



Anthropometric earpad
design

CNC SCULPTED CHASSIS



High precision CNC aluminum chassis, milled from solid aluminum

AIRFLOW CONTROL



Milled aluminum grill with a specific 45% sound transparency is a work of art in its own right.

HIGH ENDURANCE ANODIZED SURFACE





KEY POINTS

- Lightweight & Comfortable
- Isodynamic Hybrid Array Driver
 - Ultra-HiRes
 - Low THD
- High Sensitivity
- Powerful