

GOLDRING



EST. 1906

ETHOS SE

TECHNICAL BULLETIN



Introducing the Goldring Ethos SE

World-renowned analogue audio specialist, Goldring, introduces Ethos SE - a special edition of its award-winning Ethos model. Sitting at the very top of Goldring's range of moving coil cartridges, Ethos SE combines uncompromising engineering with unique new features to produce a cartridge of exquisite sound reproduction capabilities.

Thanks to a raft of exclusive and carefully engineered upgrades - including pure silver coils, low reluctance pole shoes and a black anodized, aircraft-grade aluminium body - Ethos SE sets entirely new standards in terms of detail retrieval, channel separation and low colouration. Even when judged against cartridges costing a great deal more, this new special edition cartridge delivers a totally immersive, thrillingly complete musical experience - which has always been the Goldring ethos.

KEY FEATURES

- **New pure silver coils** feature fewer high conductivity windings, reducing the effective mass and internal impedance of the pick-up for improved tracking and greater transient response.
- **Low-mass cross-armature core** made from Swedish iron improves channel separation and produces a more realistic soundstage.
- **A Vital line-contact diamond stylus** features a narrow, low tip-mass, large contact-area that enhances high-frequency response and minimises distortion and colouration.
- **New low-reluctance pole-shoes** ensure a smooth and extended frequency response via an exclusive process..
- **Low-resonance, aircraft-grade aluminium body** is selected for its low density and superior rigidity.

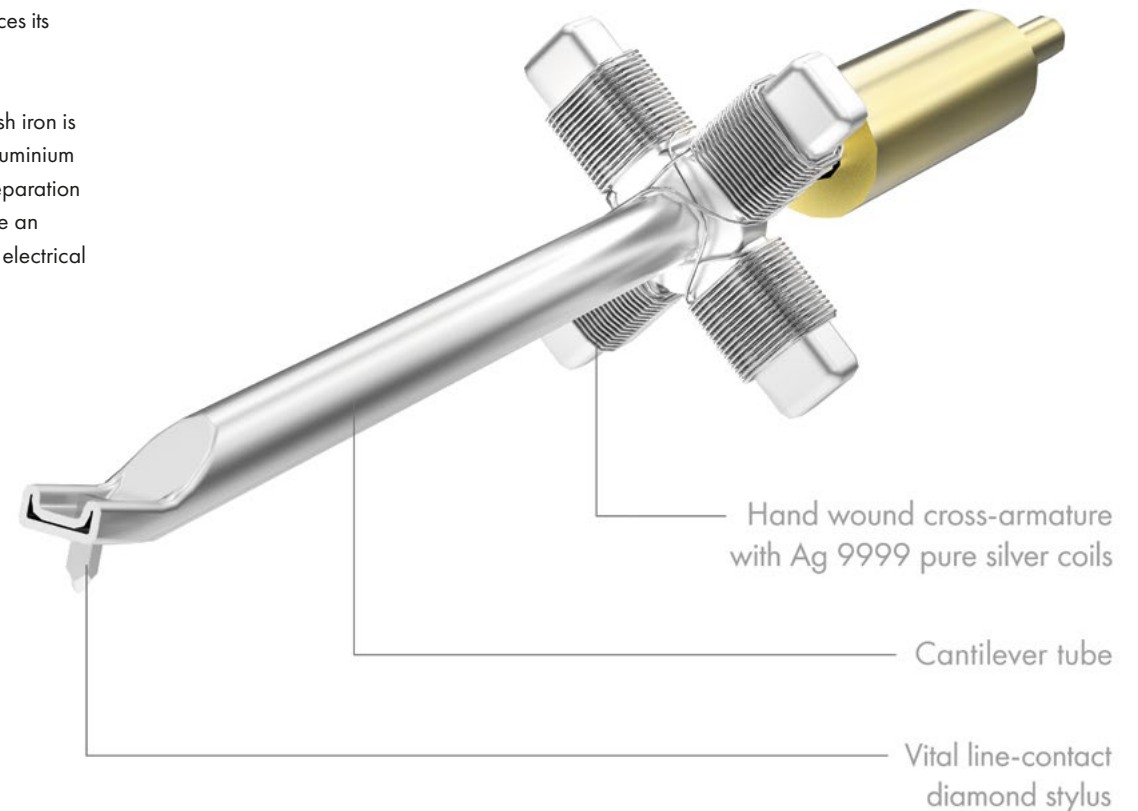


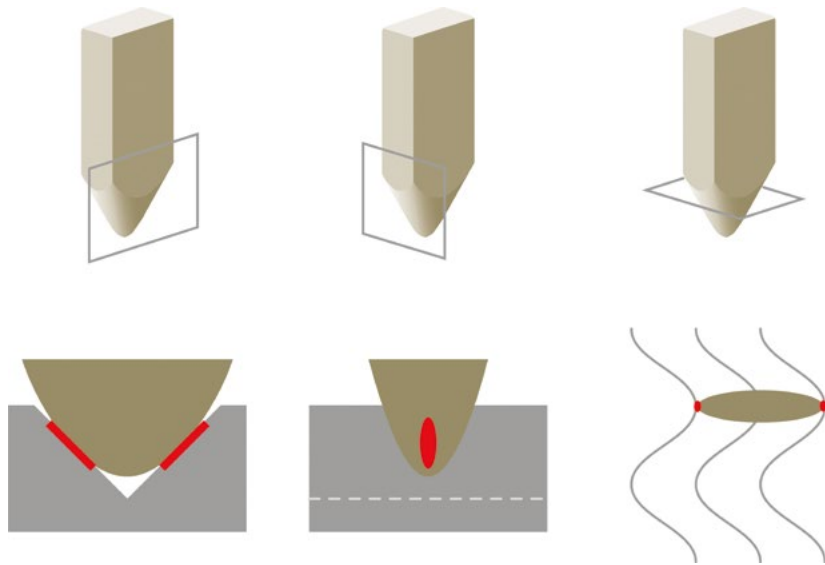


New Pure Silver Armature

One of the limiting factors on the performance of any phonograph pick-up is its effective tip mass. The cantilever and stylus and the attached armature coils function as the unsprung element of a suspension system. The lighter this can be made the better its trackability or ability to negotiate the terrain of the record groove without losing contact. The Ethos SE relies on Ag 9999 pure silver coil windings which have very low internal resistance and lower mass because fewer windings are used. The coils therefore have a significantly lower mass than the standard copper windings. This enables the Ethos SE to demonstrate greater trackability and transient response and also further reduces its tendency to resonate in the audio band, leading to a flatter frequency response overall.

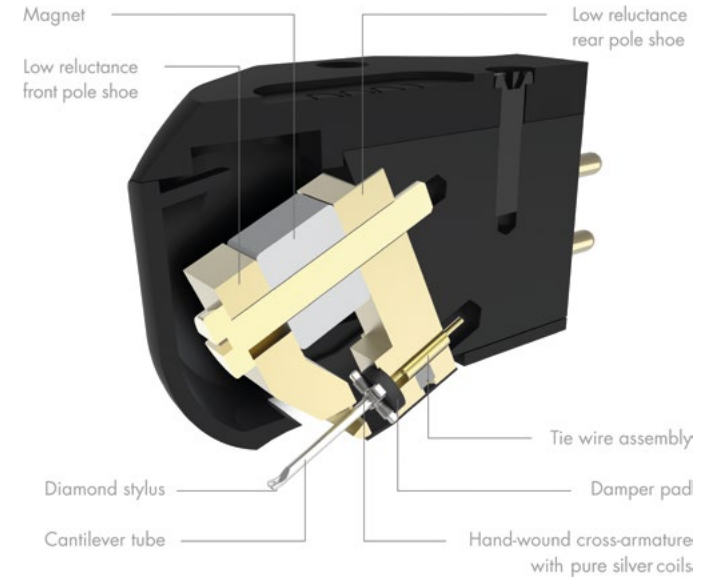
To improve channel separation, a low-mass, cross-shape core of high permeability Swedish iron is used instead of a conventional (and heavier) square type. The lightweight hand-wound aluminium coils are therefore physically *and* electrically isolated from each other so that a channel separation in excess of 30 dB can be achieved. The result is an armature assembly that can reproduce an exceptionally realistic stereo soundstage, precisely track high frequency detail, has a high electrical output and suffers less from distortion due to mis-tracking.





Vital Line-Contact Stylus

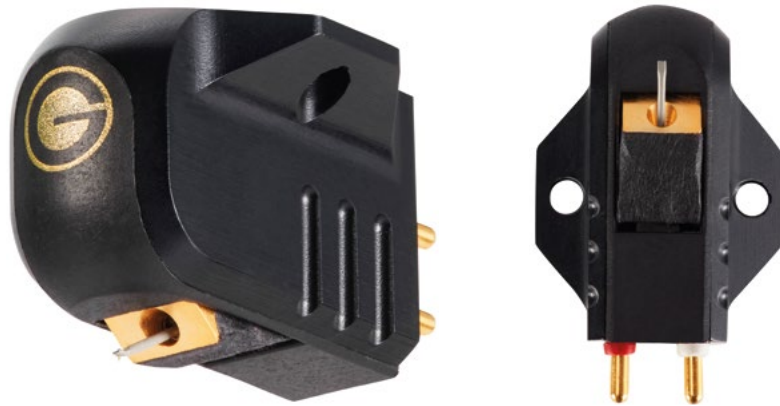
Ethos SE uses a Vital-shank, nude, diamond stylus. This polyhedral, line-contact diamond profile was chosen because it has a very low tip-mass and a large contact area whilst being very narrow from front to back, enabling the accurate retrieval of even the highest frequencies in the recording. The stylus is connected to the armature by a stiff and lightweight alloy cantilever tube with low resonance and coloration.



GOL-1 Generator

At the heart of each Ethos SE cartridge is Goldring's GOL-1 generator. Originally developed in the hey-day of vinyl for a smooth and extended frequency response, our engineers continue to develop all aspects of its design and assembly, to maintain its world-class reputation.

Exclusively for the SE version, the pole shoes have been subjected to a new process, which enhances the permeability of the metal, creating a lower reluctance magnetic circuit. This serves to flatten and extend the frequency response, especially in the upper registers where musical detail resides.

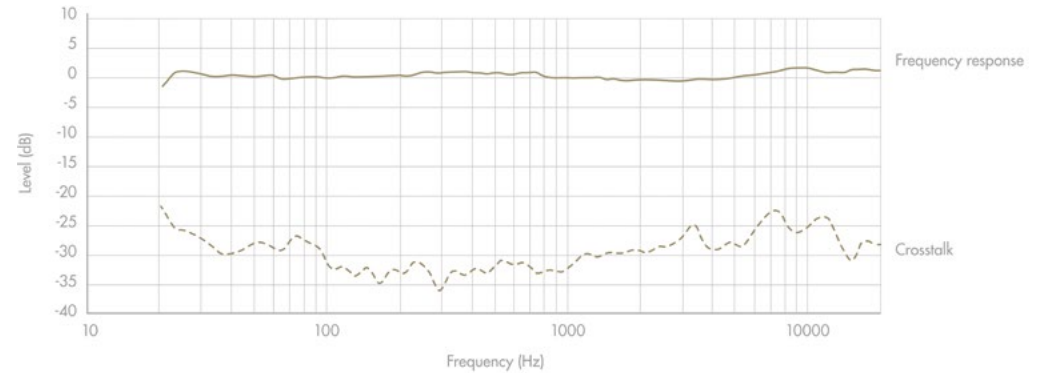


Aircraft Aluminium Body Shell

The generator is fitted into a precision-milled 6082-T6 aircraft aluminium body shell which has been selected for its low density and superior rigidity. The body, which benefits from contemporary styling and a durable and uniform black anodized finish will facilitate the 'grounding' of unwanted resonant frequencies when coupled to a well-designed tonearm with a quality bearing.

Production and tooling

As one would expect, each example of Ethos SE is precisely set up and adjusted to provide optimal performance and listening pleasure. New tooling and set-up equipment has been designed and manufactured to achieve this. Such performance is very reliant on careful and precise installation of the cartridge into the tonearm. This process has been made as easy as possible for the user by the inclusion of tapped fixing points in the aluminium body shell. Without having fiddly nuts and bolts the installer is left with only the correct setting of cartridge overhang and playing weight to worry about.



The Result

Our measurement and listening tests show that Ethos SE design has scaled new heights of performance. The use of a top-quality Vital line-contact diamond stylus and new pure silver windings gives Ethos SE an exemplary ability to retrieve every last ounce of detail from the record groove; the excellent channel separation reproduces an exceptionally accurate and realistic stereo sound stage; at the same time the enhanced trackability and absence of colouration delivers undiluted enjoyment of the music. One is able to forget about the technical aspects and limitations of the vinyl playback system and completely immerse oneself in the musical experience....and that's our whole Ethos.



Technical Specification

Frequency Response	20 Hz – 20 kHz \pm 2 dB
Frequency Range	12 Hz – 32 kHz
Channel Balance	within 1 dB @ 1 kHz
Channel Separation	better than 30 dB @ 1 kHz
Sensitivity	0.35 mV \pm 1 dB, 1 kHz @ 5 cm/sec
Static Compliance	28 mm/N
Trackability	90 μ m (@ 315 Hz)
Equivalent tip mass	0.34 mg
Vertical Tracking Angle	24 $^{\circ}$
Stylus Profile:	Vital line-contact
Stylus Radius	0.3 x 0.7 mil
Stylus Type	Non-Replaceable (re-tip service available see website)
Load Resistance	100 Ω
Load Capacitance	100 – 500 pF
Internal Inductance	3.5 μ H
Internal Resistance	4.2 Ω
Cartridge Mass	7.7 g
Cartridge Mass (inc. fixings)	8.5 g (without stylus cover)
Fixing Centres	0.5 " (12.7 mm)
Playing Weight	1.5 - 2.0 g (1.75 g nom.)



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