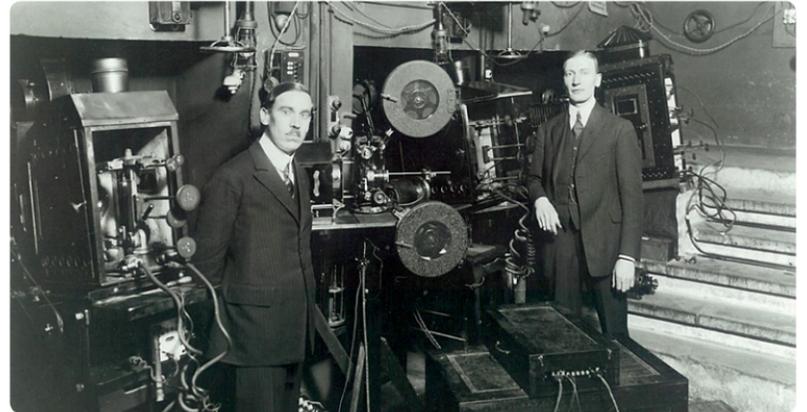


ortofon

Xpression

Ortofon

World leader in the cartridge industry



Ortofon has always been a leading company in the field of sound reproduction. Founded in Copenhagen in 1918, Ortofon started by creating technology which served as the basis for adding a soundtrack to the silent movies of the early 1920s. In 1948, the company developed the first moving coil cartridge, and since then Ortofon has developed and manufactured more than 300 different cartridges.

Today Ortofon is the world leader in cartridges. This is the result of combining design with technology and the highest level of engineering in the audio industry.

Acoustics, materials technology and micro mechanics are key competences in Ortofon's technological prowess. Ortofon has its research and manufacturing facilities in Denmark; the production of cartridges and components is carried out at the company's factory in Nakskov, Denmark.

Production is based on experienced workers with a high level of craftsmanship. This assures the high uniform quality of Ortofon products. The cartridges are sold worldwide through a network of more than 60 importers and sales subsidiaries in the USA and Japan. Ortofon is today recognized among consumers and industry professionals as a quality brand.

Xpression

The Ortofon Xpression is a modern high-end cartridge with a standard headshell connector. This state of the art product combines Ortofon's cutting edge SLM materials technology, pioneered by the MC A90 and SPU 90th Anniversary products, along with applied research from the generator system introduced with the MC A90 and the MC Windfeld. Finally, the Xpression preserves Ortofon's signature design tradition.

The Xpression cartridge bridges the gap between SPU-type cartridges and High-End cartridges like the MC A90 and the MC Windfeld designed for headshell mounting. The result is a high-performance moving coil cartridge with the convenience of a standard headshell connector, which provides a simple and elegant method of directly connecting the generator and tonearm via the Xpression's one-piece body.





Since the cartridge length is identical to that of an SPU, the Xpression can easily be fitted onto these arms without additional concern for proper alignment. The cartridge height is also identical, making further VTA adjustments unnecessary. Additionally, the mass and compliance properties of the Xpression ensure that a proper match will be achieved with any SPU-compatible arm. Finally, the Xpression features a Boron Cantilever and Replicant 100 diamond, found also in the MC A90 and the MC Windfeld cartridges, providing more responsive and transparent sound reproduction.

Magnet

Neodymium magnet with FSE

The magnet system is based on the designs used in such acclaimed cartridges as the MC Windfeld and the MC A90. It is based on an extremely strong, compact neodymium magnet, which makes the generator system both compact and lighter through its minimal dimensions.

Ortofon's Field Stabilizing Element, a small cylinder of conductive material strategically placed inside the magnet system, guarantees that the force field remains stable regardless of the movement of the armature. FSE improves the channel separation, while at the same time minimizing dynamic distortion and intermodulation. The result is the fantastic dynamics and even more elbow room between the musicians.

You simply experience more drama and greater breadth, height and depth in the sound scenario!



Damping

WRD system

Adding to the list of important components is Ortofon's Wide Range Damping (WRD) system. In this system, a small, heavy platinum disc is sandwiched between two rubber absorbers, both with different properties. This ensures not only an exceptional tracking performance, but also creates a perfect damping through the entire frequency spectrum. Because of this, distortion and resonance are virtually eliminated entirely.

The WRD system, which was originally introduced in the MC 20 Mk II in 1979 and was also used in the MC A90, the MC Windfeld and many of Ortofon's other top tier cartridges, is one significant reason why the Xpression, while achieving the most linear frequency response and a high upper frequency limit, at the same time tracks a fantastic 90 μm at a vertical tracking force of 2.6 grams.



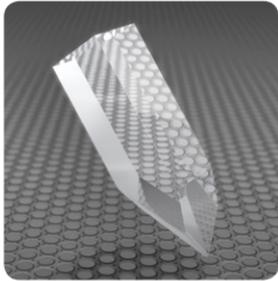
SLM manufacturing

An engineering feature adding to the damping capability of the Xpression cartridge is the recently developed Selective Laser Melting process in which fine particles of stainless steel are welded together, layer-by-layer, to construct a single piece body devoid of unnecessary material. Using this technique the density of the body can be precisely controlled, allowing for extremely high internal damping.

The final result provides absolute freedom from resonances existing in the cartridge body material and allows for the Xpression to be perfectly matched with an extremely wide array of different tonearms. Because of the nature of SLM-based construction, each cartridge body is cosmetically unique and will show small dimples or lines under close examination.



Diamond



The finest diamond in the world

Another precondition for linear reproduction with a wide frequency range and optimal tracking performance is a diamond - the shape of which is as close as possible to the original cutting needle. To achieve this, the Ortofon Xpression uses an ultra-fine and extra polished version of the unique Ortofon Replicant Stylus 100.

This diamond, which is already known from products such as the famous MC Windfeld and the MC A90 cartridges, is incredibly small and light, but has an extraordinarily large vertical contact surface despite its minimal radius of rounding. Correctly fitted at a vertical angle of 23 degrees, an Ortofon Replicant Stylus 100 will read the musical information in the grooves of a record with a greater degree of accuracy than any other kind of needle.

Material

Extremely high end materials benefit new coil technology

Using expensive Aucurum coils of gold-plated, 6NX oxygen free copper allows for zero-loss transmission of the diamonds movements via its boron cantilever. This combination, which has also been employed for use in the MC A90 and the legendary MC Windfeld, combines low moving mass with an extremely high degree of rigidity.

The specially designed armature, created for the MC Windfeld and the MC A90, achieves an extreme precision in each coil turn in all layers. This enables the Xpression to obtain a higher degree of channel separation, while simultaneously offering lower distortion and better channel balance. A low output impedance of 4 ohm and a medium output voltage of 0.3 mV make the Ortofon Xpression a perfect partner for most step-up transformers as well as active MC pre-amps.



Design

The presentation of the Ortofon Xpression is a continuation of the new paradigm in engineering and manufacturing introduced by the MC A90. Because total freedom from resonance in the audible frequency range is a precondition for optimal sound quality, the design of the Xpression has been dictated by the complete elimination of unwanted resonance. Arguably the most exciting development in the Xpression is the introduction of our custom SLM manufacturing process.

By combining the utilization of this SLM process and our WRD system, we are confident that the perfect mechanical integration of this cartridge with your tonearm will result in a significant and breathtaking increase in dynamics, staging, resolution and richness. Also helping to achieve the Xpression's accuracy and sonic purity the ultrahigh purity silver is used for the internal wiring between generator and standard headshell connector. The Xpression, although derived from the materials and techniques employed with the A90 cartridge, finds a superb sonic balance between the literal precision of the A90 and the powerful dynamics and fluid body of its SPU predecessors.



Finally, the bottom cover has been constructed from a special proprietary TPE (Thermo-Plastic Elastomer) material, which provides extremely high damping. Also included is an easy-to-grab finger lift as well as a simple to use stylus guard.

When combined with Ortofon's world-class knowledge in analogue sound reproduction, the Xpression will undoubtedly provide sound which is literally unsurpassed and simply has to be experienced. Of course, aesthetically, the Xpression has a distinctive, elegant design which makes no compromises.

Setup

Antiskating

For the Xpression stylus type, just set normal antiskating, according to recommended tracking force.

Warning

This phono cartridge is only for mounting on tonearms and must not be used for other purposes.

Protection

Stylus Guard

The Xpression ships with a newly engineered stylus guard which is designed to be easily replaced and removed without risking contact to the fragile stylus assembly. The new stylus guard design offers a safe and effective functionality. To avoid accidental damage to the stylus or cantilever please mount the enclosed stylus guard onto the cartridge whenever the cartridge is not in use.



This also includes whenever the cartridge is being mounted or removed from the headshell. As illustrated by the drawing, the stylus guard is simple removed by taking hold of the sides using the thumb and forefinger, and pulling straight along the orientation of the cartridge. Affixing the stylus guard is of course accomplished by the reverse movement, but still using a straight movement as indicated by the guidelines.

A new stylus protection guard can be purchased on the Ortofon webshop www.ortofon-shop.com.



Maintenance

Stylus care

Ortofon does not recommend the use of solvents of any kind for cleaning of either record surface or stylus. If necessary, records may be washed in lukewarm demineralized water with a dash of sulphonic soap. Remove dust carefully from record surfaces by using a fine antistatic brush or cloth before every use. The use of solvents on the stylus and cantilever may damage stylus cement; interior parts of the cartridge can be affected seriously by the intrusion of solvents.

The Ortofon warranty will not be valid in cases where such treatment has caused malfunction. For cleaning the stylus, use the enclosed fiber brush a few times along the cantilever in the direction of the stylus, whenever you play a new record or change sides. This will take all normal dust and most of the slick release agent from new records.



Cartridge break-in

Although the Xpression will provide top reproduction right out of the box, the cartridge may slightly change character during the first tens of hours of use. This is completely normal and you may, in fact, find that this adds further refinement to your listening experience.

Ortofon exchange service

Owing to the design of the Ortofon moving coil cartridge, the stylus is not part of a replaceable assembly and therefore Ortofon offers, through its dealers, an Exchange service, please contact your dealer if you need this service.

Ortofon also offers Special Repair service for the Xpression cartridge, please contact your local Ortofon Authorised dealer if you need this service.

Special Repair service is also available on the Ortofon webshop:
www.ortofon-shop.com.

Xpression Technical Data

Technical Data	Xpression
Output voltage at 1 kHz, 5 cm/sec.	0.3 mV
Channel balance at 1 kHz	< 0.2 dB
Channel separation at 1 kHz	> 28 dB
Channel separation at 15 kHz	> 22 dB
Frequency range at - 3 dB	10 – 60 kHz
Frequency response	20 Hz - 20 kHz + 0.5 – 1.5 dB
Tracking ability at 315 Hz at recommended tracking force	90 µm
Compliance, dynamic, lateral	11 µm/mN
Stylus type	Special polished Nude Ortofon Replicant 100 on Boron Cantilever
Stylus tip radius	r/R 5/100 µm
Tracking force range	2.3 – 2.8 g (23-28 mN)
Tracking force, recommended	2.6 g (26 mN)
Tracking angle	23°
Internal impedance, DC resistance	4 Ohm
Recommended load impedance	> 10 Ohm
Cartridge body material	SLM Stainless Steel and Special proprietary TPE-compound
Cartridge colour	Black
Cartridge weight	28 g



Get more information about
the Xpression cartridge.

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Date:

Approved by: