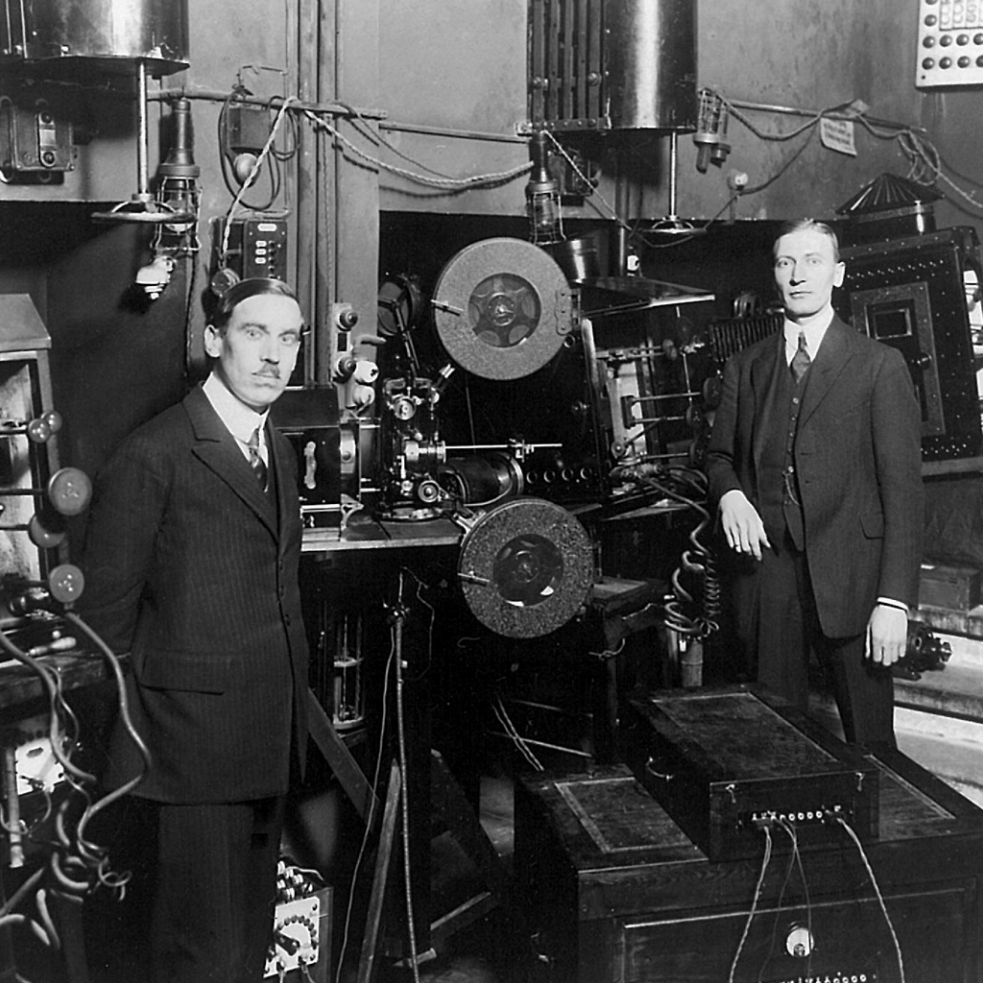
ortofon

Verismo



A century of accuracy in sound

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 with our latest being the MC Verismo.

Today Ortofon is the world leader in phono 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 the company´s technological prowess. Ortofon has its research and manufacturing facilities in Denmark: the production of cartridges and components is carried out at the factory in Nakskov. Production is based on experienced operators with a high level of craftsmanship. This assures the high uniform quality of Ortofon products.

Ortofon is today recognized among consumers and industry professionals as a quality brand. Our products concentrate not only on providing the best sound, but more importantly the faithful and correct reproduction of the recorded sound. Ortofon's world-class engineering and manufacturing continually raise the bar for accurate sound reproduction, with a vast array of products that provide both exceptionally high performance and value for all listeners – music lovers and high-end audiophiles alike.

Ortofon MC Verismo

The story behind the name Verismo

The name Verismo is derived from the Italian “vero”, meaning “true” and is the Italian for "realism". Verismo was a post-Romantic operatic genre, that had its origins in an Italian literary movement in the late 19th and early 20th centuries. Verismo operatic tradition is associated with Italian composers such as Pietro Mascagni, Ruggero Leoncavallo, Umberto Giordano, Francesco Cilea and Giacomo Puccini, who sought to portray the world with greater realism.

At Ortofon, our ultimate purpose is to continually raise the bar for true, faithful and accurate reproduction of recorded sound. It is to provide the ultimate musical experience through a mixture of innovation and technical expertise, creating unique value for all listeners by allowing them to reveal music’s true inner emotions. We believe that our legacy is best preserved and strengthened by the development of exciting new products that keeps Ortofon viable for the future.

The Ortofon Exclusives series cartridges are widely acknowledged as being some of the best Moving Coil cartridges on the market, and we are continuously working on expanding the Exclusives range to offer music lovers even more opportunities to experience the supreme quality, precision, impact and dynamics that a high-end reference cartridge conveys.

The MC Verismo model has been developed based on our extensive knowledge of vibration properties, different shapes and materials characteristics, as well as competences in magnetism, mechanical design and technologies. This new state-of-the-art product, representative of numerous Ortofon design ideals, is truly exemplary of the highest degree of performance possible in contemporary analogue playback technology.

Design elements

High-end materials and technological prowess

The housing of the MC Verismo cartridge is made in Titanium with **the Selective Laser Melting (SLM) technique**. The SLM technique was pioneered by Ortofon in 2008 for manufacturing of the MC A90 and the SPU A90 Anniversary cartridges, and since then was refined in subsequent Exclusive Series models. The SLM technology and high precision process eschews traditional techniques: considered an engineering breakthrough, the SLM process welds fine particles of Titanium together, layer-by layer, to construct a single piece body devoid of extraneous material. This technique allows for precise control of the density of the body material, allowing for extremely high internal damping. The final result provides freedom over vibrations within the cartridge body material.

Consistent **use of Titanium** in the Exclusives cartridges has provided a further improvement to the overall rigidity of the structures, the cartridges' weight and their dynamic capability. For the brand new MC Verismo, this also allows this cartridge 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.

Magnet system

The magnet system is based on an extremely strong, compact neodymium magnet, which makes the generator system both compact and lighter through its minimal dimensions.

Much like its predecessors, the MC A95 and the MC Windfeld Ti, the MC Verismo employs **the special designed armature** comprised of a metal alloy which is less magnetic than normal iron. This provides noteworthy benefit to the dynamic capabilities of the cartridge. The reason for this is that our high-tech armature has almost no influence on the magnetic field during movement. Moreover, it allows to achieve extreme precision in each coil turn in all layers. This enables the MC Verismo to obtain a higher degree of channel separation, while simultaneously offering lower distortion and better channel balance.

Using Oroton's **Aucurum coils of gold-plated, 6NX oxygen free copper** allows for zero-loss transmission of the diamond's movements via its Diamond cantilever. This combination makes use of low moving mass and an extremely high degree of rigidity.

Enhanced damping capabilities

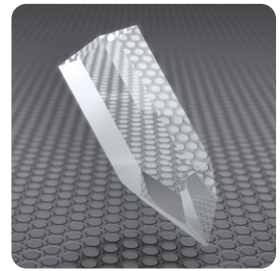
Ortofon's **Field Stabilizing Element (FSE)**, a small cylinder of conductive material strategically placed inside the magnet system, guarantees that the magnetic field remains stable regardless of the movement of the armature. FSE improves the channel separation, while at the same time minimizing dynamic distortion and intermodulation. The result: fantastic dynamics and even more elbow room between the musicians. You simply experience greater breadth, height and depth in the sound scenario between the high-end system's loudspeakers!

One of the important components is Ortofon's patented **Wide Range Damping system (WRD)**, in which 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 range. Because of this, distortion and resonance are virtually eliminated.

The WRD system, which was originally introduced in the MC 20 Mk II in 1979 and then was also consequently used in the entire Exclusives series cartridges, is one significant reason why the MC Verismo, while achieving the most linear frequency response and the highest upper frequency limit ever, at the same time tracks a fantastic 80 µm at a vertical tracking force of 2.6 grams.

To attain an optimal interaction between compliance and damping, a newly developed rubber compound for the suspension system has been used. The new rubber compound formula based on the Multi Wall Carbon Nano Tubes (MWCNT) highly efficient nano filler. The MWCNT-based compound offers desirable mechanical properties, which ensure better damping and improve the overall performance of the cartridge.

Diamond



Replicant 100
- the finest diamond in the world

One of the preconditions 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 stylus.

As in all Exclusives series cartridges, the MC Verismo makes use of the **Ortofon's Replicant 100 diamond**. This Line Contact type stylus distinguishes itself by having a narrow and long contact surface, which is as close as possible to the original cutting stylus. This ensures the most accurate reproduction, lowest distortion and extended frequency range.

The addition of a solid **Diamond cantilever** provides the best possible interface between the stylus and armature, owing to its hardness and crystal structure. The improvements found in the use of a Diamond cantilever have redefined the boundaries of analogue reproduction, presenting greater inner detail, subtlety, and depth like never before.

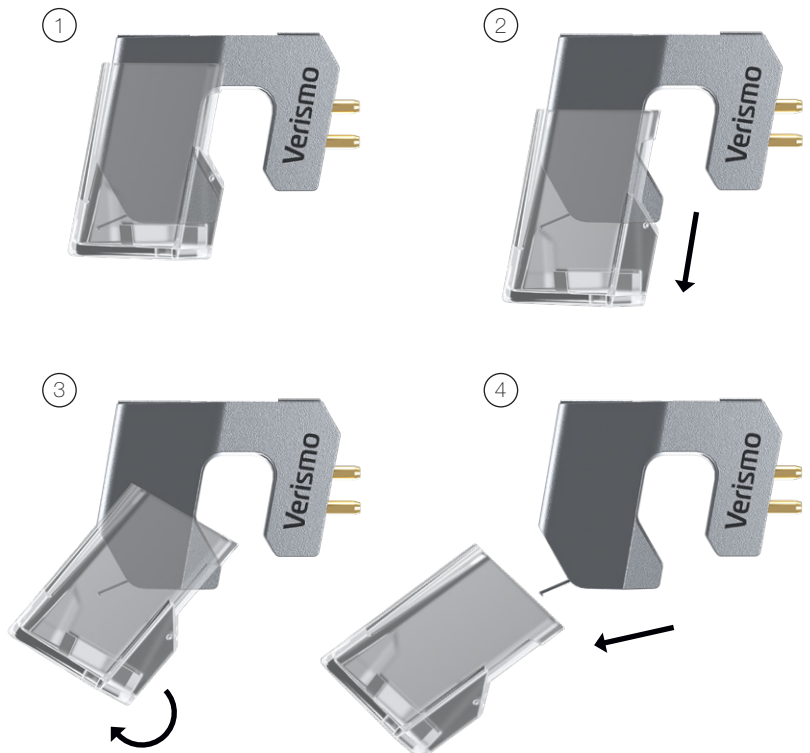
Stylus protection guard

The stylus guard provided for the MC Verismo is designed to be easily replaced and removed without risking contact to the fragile stylus assembly. 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. The stylus guard should also be attached during mounting or removal of the cartridge.

As illustrated by the drawing, the stylus guard is easily removed by grasping the sides using the thumb and forefinger, and pulling straight along the orientation of the cartridge and then tilting down.

Affixing the stylus guard is of course accomplished by the reverse movement: hold the stylus guard obliquely, push it into place, and tilt it up as indicated by the arrows.

Please read our recommendations for stylus care on our HiFi FAQ: **www.ortofon.com/support/support-hifi/faq-installation**.



Set-up

Historically, Ortofon has always followed its own path with regard to the mechanical design of the cartridge housing, because mechanical rigidity and total freedom from unwanted vibrations in the audible range are a precondition for optimal sound quality. In the MC Verismo the cartridge's contact with the tonearm takes place through three well-defined contact points placed on the top side of the cartridge. This means that the mechanical integration of the cartridge and the tonearm is always absolutely perfect and will result in a significant and breathtaking increase in dynamics, resolution, and richness in detail.

With optimized weight and moderate compliance to suit the majority of modern tonearms, the MC Verismo is easily compatible with an endless array of contemporary high-end turntable equipment. A low internal impedance of 7 ohm and a low output voltage of 0.2 mV makes the Ortofon MC Verismo a perfect partner for most MC pre-amps as well as step-up transformers, including the Ortofon ST-80 SE.

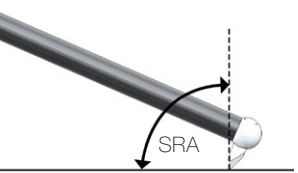
As with any cartridge, set-up is absolutely crucial in order to ensure the best sound reproduction capabilities. Although there are many valid paradigms that exist with regard to cartridge set-up, Ortofon does not endorse a specific methodology and encourages users to explore the options as suggested by their High-End Audio dealer, including professional set-up.

In addition to alignment, consideration must be made to adjust azimuth, anti-skating and VTA/SRA in order to maximize the potential performance of any high-end cartridge.

Please find our recommendations for set-up and alignment on our HiFi FAQ: **www.ortofon.com/support/support-hifi/faq-installation**.

Stylus Rake Angle (SRA)

With a complex stylus shape like the Replicant 100, there must be special attention paid to positioning the diamond in the groove.



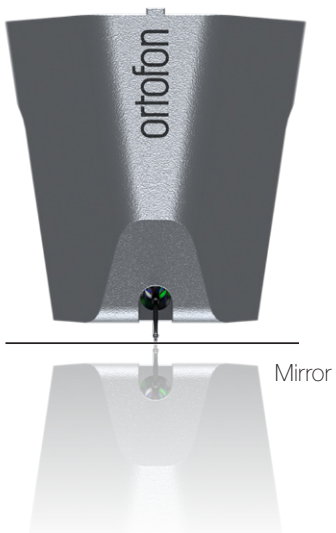
The Stylus Rake Angle (SRA - see figure) is very important to the performance of the Replicant 100 stylus, and the long contact surface (the sharp edge) of the diamond should be almost perpendicular to the record surface when viewed from the side. The angle between the record surface and the cantilever is close to 23 degrees when SRA is 90 degrees.

A perfect starting point is to set the tonearm parallel to the record surface and to use the recommended tracking force. The contact surface will be close to perpendicular to the record surface with this setting. The SRA can now gradually and carefully be changed be adjusting VTF and, if necessary, the tonearm height. The target should be an SRA around 92 degrees, determined by the listening experience. In other words, the point of the stylus should point slightly towards the tonearm base.

Azimuth adjustment

In order to attain maximum channel separation, it may be possible to adjust the azimuth. Should the cartridge not be perfectly perpendicular to the record's surface, the tonearm or headshell may require to be tilted a few degrees.

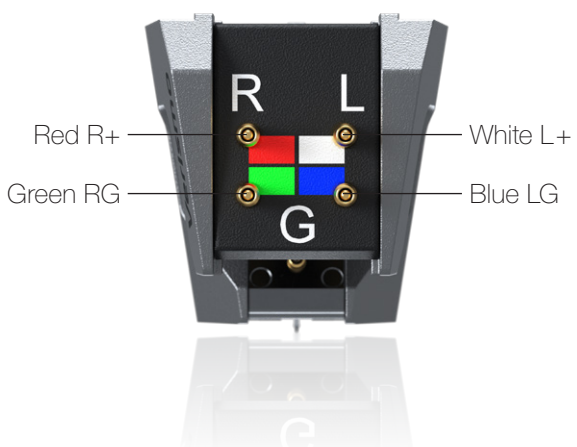
Correct azimuth is established by observing the reflected image of the 2 parallel cartridge front lines. The cartridge's front lines must form a straight line with the reflected lines. A flat mirror may also be used to facilitate this process.



Terminal connections

Please correlate the colour code for the terminals on the drawing with the colour coding on the cartridge.

The terminals for right and left channel have the same position as normal for Ortofon cartridges. We recommend the enclosed LW-7N leadwires to be mounted on the cartridge and tonearm before aligning and calibrating the cartridge. The length of the enclosed lead wires will fit a distance between cartridge and tonearm terminals of 35 mm, which will work with most headshells.



Mounting

There are 4 sets of screws included for mounting the cartridge to your tonearm. It is of great importance to choose the correct length of screws when mounting the cartridge. Using too long screws may stop the screws inside the cartridge resulting in insufficient mounting in the headshell.

The choice of screw length depends on the thickness of the headshell, and a maximum of 2.5 mm free screw length under the headshell.

Mount the cartridge loosely to the headshell during this procedure.

Antiskating

Correct bias or anti-skating adjustment is important in order to achieve optimal tracking ability and thereby minimum record wear and distortion. For the Ortofon Replicant stylus used in MC Verismo just set normal antiskating according to recommended tracking force.

Cartridge break-in

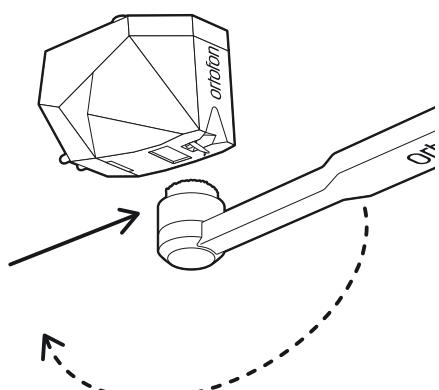
Although the MC Verismo will provide top reproduction right out of the box, the cartridge may slightly change character during the first tens of hours of use. This is completely normal and you may, in fact, find that this adds further refinement to your listening experience.

Maintenance

Stylus care

Ortofon does not recommend the use of solvents of any kind for cleaning of either the 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. Record care should also be performed regularly and is of paramount importance to prolong the life and condition of the stylus. Because of this, a record cleaning machine may be considered for ease and quality of record cleaning.



Repair service

Ortofon MC Verismo is an exclusive cartridge of very high quality. To support our customers who have accidentally damaged their cartridges, Ortofon offers a special Repair service and/or Exchange service. Should you have a need for any service, please contact your local Ortofon authorized HiFi partner for further assistance: **www.ortofon.com/where-to-buy**.

Special Repair service is also available through Ortofon webshop: **www.ortofon.com/hifi/products/repair-service**.

Warning

Ortofon MC Verismo cartridge is only for mounting on tonearms and must not be used for other purposes.

MC Verismo Technical Data

TECHNICAL DATA	MC Verismo
Output voltage at 1 kHz, 5cm/sec.	0.2 mV
Channel balance at 1 kHz	0.5 dB
Channel separation at 1 kHz	25 dB
Channel separation at 15 kHz	20 dB
Frequency response	20 Hz – 20 kHz +2 dB/-1 dB
Tracking ability at 315 Hz at recommended tracking force	80 µm
Compliance, dynamic, lateral	13 µm/mN
Stylus type	Special polished Nude Ortofon Replicant 100 on Diamond Cantilever
Stylus tip radius	r/R 5/100 µm
Tracking force range	2.5 – 2.8 g (25 – 28 mN)
Tracking force, recommended	2.6 g (26 mN)
Tracking angle	23°
Internal impedance, DC resistance	7 Ohm
Recommended load impedance	10 Ohm
Coil wire material	Aucurum, gold-plated, 6NX oxygen free copper
Cartridge body material	SLM Titanium
Cartridge colour	Silver
Cartidge weight	9.5 g

10/2021 5-80167-12 MC Verismo Userguide

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CARTONS ET EMBALLAGE PAPIER À TRIER

Get more information about the Ortofon cartridges

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Date:	Approved by:	

Ortofon A/S | Stavangervej 9 | DK-4900 Nakskov | Denmark | support@ortofon.dk | www.ortofon.com