audio-technica

2018-19 PHONO CARTRIDGES
Audio-Technica Machida, Japan, opened January 2016

The newly constructed global headquarters and research centre of the Audio-Technica Corporation, housing 250 employees & engineers. Affectionately known as “Moby Dick” by staff due to its resemblance to the white whale.
“...a symbol of the continuity, consistency and reliability of Audio-Technica...”
Dear Customer,

I am proud to present the 2018-2019 edition of our full-line phono cartridge and analogue record-related accessories catalogue, and I’m also pleased to introduce two new lines of cartridges that will be particularly interesting.

On page 32 you will find our new Moving Magnet cartridges called the “VM95 Series” - six new cartridges from conical entry model up to the most sophisticated Shibata configuration - the VM95 Series will represent the best value proposition in the category of moving magnet cartridges.

On page 39 you will also find the new range of Moving Magnet cartridges called the “XP Series”, specifically designed for demanding audiophile DJs who play music direct from their precious vinyl records instead of reading files from a computer.

Today our analogue industry is operating under increasingly difficult environments including the competition of digital technologies and the challenge of sourcing components, therefore I am pleased that Audio-Technica continues to be innovative and resourceful, symbolized here with the introduction of the new cartridges.

The three models in the XP Series and the six models in the VM95 Series have distinct features and applications, though importantly are part of the same compatibility system - a symbol of the continuity, consistency and reliability of Audio-Technica continuing to address analogue experts.

We simply wish to share the experience and our passion of analogue, and I would like to take this opportunity to thank you personally for your continued interest in our products.

Kazuo Matsushita
President
Audio-Technica Corporation
History

1962
AT-1
Audio-Technica’s first product: AT-1 stereo cartridge.

1967
AT35X
An early model of the AT35X, the origin of the VM cartridge, which received patents worldwide.

1978
AT25
The AT25, an integral structured body housing a VM cartridge. Features the newly developed toroidal power system.

1979
AT120E/G
Launch of the AT100 series VM cartridges. Audio-Technica improves performance with low-loss para-toroidal power system by using technology developed for the AT25.

1987
AT-OC9
The AT-OC9, launched in 1987, was the original cartridge model from which the AT-OC9ML/II and AT-OC9/III evolved.

2012
AT50ANV
50th anniversary model AT50ANV, the first non-magnetic core MC cartridge.

2016
ART1000
The AT-ART1000 (“ART” for Audio-Technica Reference Transducer) is Audio-Technica’s new flagship phono cartridge, handmade in Japan.

2017
VM Series
After 40 years of legendary success of MM cartridges using VM technology, Audio-Technica introduces the VM Series. A completely renewed line using the latest technologies and materials, keeping the original and exclusive AT-VM design.

2018
XP Series
The AT-XP Series cartridges provide a high quality sound for vinyl DJ’s and are perfect for the stage and club DJ who prioritises sound quality.

VM95 Series
After 38 years of 90 series success, this newly design series represents the best value proposition for every record player user, from conical entry model to the most sophisticated Shibata version.
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Choosing the right cartridge

The ultimate performance potential of any record playing system is defined by the capabilities of its phono cartridge. Tonal balance, response range, clarity on musical peaks, stereo separation and imaging, along with freedom from noise and distortion are all affected at the outset. The selection of this first component is critical to the full enjoyment of the rest of your system.

Your choice of cartridge can also strongly affect the life of your records. With vinyl records becoming more and more difficult to replace, it’s an important point to keep in mind when selecting a cartridge or upgrading your system.

Since Audio-Technica has long been recognized as a world leader in phonograph cartridge design and production, we offer a wide range of models designed to match turntable/tonearm requirements, performance levels and budget considerations. This brochure is intended to help make your decision easier by giving you as much information as possible.

It will also give you specific “numbers” for all of our cartridges, with additional detailed information on our Audiophile Series. But no matter which model you select, we’re confident you’ll find your Audio-Technica cartridge to be outstanding value in every respect.

Choosing your cartridge format

Audio-Technica cartridges can be:
- P-mount (plug-in),
- half-inch mount (1/2”)

• P-mount cartridges have four terminals at the back that simply plug in to the end of the tonearm. The cartridge is then secured to the tonearm with a single screw.

• Half-inch mount cartridges also have four terminals at the back, but they have larger pins that connect to four individual wires at the end of the tonearm. The cartridge is secured to the tonearm’s headshell with two screws, spaced 1/2” apart.

Cartridges such as AT81CP and AT85EP are P-mount design, though they can be used as 1/2” cartridges using the optional half-inch adapter bracket AT-PMA1. Once equipped with the optional half-inch adapter bracket AT-PMA1, P-mount cartridges become compatible with both half-inch mount tonearms and half-inch mount headshells.

The specifications (pages 44 to 47)

The most important specifications include frequency response, channel separation, channel balance and output level.

These “numbers” are an attempt to describe how your cartridge will perform, and how well it will meet your needs. Frequency response is a measure of the range of sounds that the cartridge will reproduce uniformly.

This “flatness” of response ensures that no frequencies are given over- or under-emphasis. And uniform response is a hallmark of Audio-Technica Vector Aligned cartridges, with even the least expensive units providing smooth reproduction within their stated ranges.

Channel separation is another key specification. It is the measure of how well one channel “ignores” the other stereo channel, so that you don’t hear signals from the right channel in your left-side speaker. It’s measured in dB, and the higher the number, the higher the separation. Separation is especially important at the higher frequencies, a region where Audio-Technica cartridges are particularly outstanding.

Channel balance is a measure of both production quality and good basic design. Both sides of a stereo cartridge should have equal loudness when equally recorded levels are present.

Output level is important in matching your cartridge to the electronics. Too low a level can result in noise, too high a level can over-drive a preamp into distortion. However, the output levels of all A-T Dual Magnet cartridges will work well with virtually any magnetic phono input.

There are a number of other measurements of phono cartridge performance, but in the final analysis, the most important characteristics to you will probably be how well the cartridge performs audibly, how it interfaces with your other system components, and how carefully it preserves your record library for future use.

Is tracking force important?

Yes, but not to the exclusion of other characteristics. Each cartridge (regardless of its manufacturer) operates best in a particular range of tonearm tracking forces. It is important that this range is within the capabilities of your turntable if optimum performance is to be achieved. Keep in mind also that record wear goes up as pressure on the record surface increases. Tracking too light can cause as much (or more) damage as tracking too heavily.
Understanding styli shapes, shank shapes and constructions

Four main series of cartridges:
Excellence, Moving Coil, VM Series and Moving Magnet entry models.

Five different diamond stylus shapes:
Special Line Contact, Shibata, Microlinear, Elliptical and Conical.

Four different stylus constructions:
Nude Rectangular Shank, Nude Square Shank, Nude Round Shank and Bonded Round Shank.
The Special Line Contact stylus, offers the optimum tip design for high frequency response with minimum abrasion, providing low distortion and low record wear.
The Shibata stylus was originally developed to play four channels vinyl records (quadraphonic) for this purpose it was necessary to playback up to 45 kHz. The Shibata shape provides a long line of contact with groove walls, minimizing record wear and playback high frequency material with minimal distortion.
The Microlinear stylus almost exactly duplicates the shape of the cutting stylus used to produce the original master disc. This enables it to track portions of the groove other styli cannot reach, resulting in extremely accurate tracking of high frequency passages and ruler-flat frequency response within the audible range.
The Elliptical stylus has two radii, the front radius being wider than the side radius. This allows the stylus to ride in the center of the groove, like the conical, while the smaller side radius can more accurately track higher frequencies.

Elliptical styli are available in two sizes - 0.2 x 0.7 mil (1) and 0.3 x 0.7 mil - with the first number indicating the side radius. The smaller the side radius, the better the sound quality will be.
The Conical stylus is the simplest, least expensive and most widely used stylus. Its spherical tip, which has a typical radius of 0.6 mil, normally touches the center of the record groove walls. The conical design works best in moderate to lower priced, and older record players with a tonearm imposing higher tracking forces, or tonearm not featuring cartridge tilt adjustment.
Typical radius of conical stylus for 78rpm records is 2.5 or 3 mil (pages 43 & 57), four times bigger than LP record conical styli.

Stylus shank construction: Nude or Bonded Stylus
Nude styli, shaped from whole diamonds, are more costly than bonded styli, with their diamond tips “bonded” to metal shanks before finishing. But because of their lower mass, nude stylus track more accurately. Also, since our nude styli are grain-oriented, with their longest-wearing faces touching the record surface, they last longer.

Stylus shank form factor: Rectangular and Square Shanks or Round Shank
Rectangular and square shanks nude styli cost even more than round Shank nude styli to make, but mounting them in laser-cut square holes in the cantilever locks them precisely in correct alignment with record grooves.

Which cartridge is best? Moving coil or moving magnet?
Many serious audiophiles prefer moving coil designs, citing clarity and transparency of tone, better defined transients, precise stereo imaging and lower distortion as the reason for their preference.
Please note that moving coil cartridges require preamps with special compatible inputs (MC phono inputs). The output level of MC cartridges is between 0.2mV to 0.5mV, therefore MM phono inputs designed for cartridges delivering around from 3mV to 5mV cannot accommodate moving coil cartridges.
Moving magnet cartridges are more robust.
Moving magnet cartridges stylus assembly are field replaceable.

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© 2018 Haruki Kodama Photography
Audio-Technica's new reference AT-ART1000 Direct Power Stereo Moving Coil Cartridge has been developed and engineered as part of the company's "Excellence" programme to deliver the highest listening experience for audiophiles. AT-ART1000 Audio-Technica's is the most advanced and sophisticated cartridge to-date.

**Special Line Contact Stylus**
The AT-ART1000 features a special line contact diamond tip stylus and a solid boron cantilever. This high-performance stylus / cantilever combination enables the maximum pick-up of "information" from even the most complex vinyl record grooves.

For the Direct Power System to flourish effectively, a lightweight solid boron has been specially selected for superior strength and subtle control of movement.

**Direct Power System**
To ensure the best possible listening experience when playing analogue records, Audio-Technica have engineered and developed our Direct Power System. Considered by some as simply a theoretical idea, we have succeeded in making this a reality in the AT-ART1000 cartridge by combining our unique analogue technology with the most advanced construction materials available today.

Our Direct Power System places the moving coil directly on top of the stylus tip to ensure that audio quality is not compromised with the negative effects introduced by the cantilever's length and material. With the coils in such close proximity, the stylus tip allows the cartridge to vividly render the most subtle sonic details with unsurpassed transient response.

**Non-magnetic core coil with 3 ohm impedance**
To create the non-magnetic core coil, a 20 µm diameter PCOCC wire wound eight turns to a diameter of 0.9 mm is used. Despite being a non-magnetic core type, an output voltage of 0.2 mV is obtained by placing a 3 ohms coil in the minuscule 0.6 mm gap of a powerful magnetic circuit.

**Titanium Body**
The structure that supports the specialized magnetic circuit and suspension system is constructed from titanium. Known for its lightweight, strong and anti-resonant acoustic properties, this material requires sophisticated machining and is only employed in Audio-Technica's top of the range cartridge models. The titanium also works in tandem with the cartridge's polymer cover and aluminum housing to minimize vibrations that can colour the sound quality.

**Cartridge Rebuild Programme**
To protect against damage to the cantilever and wear to the stylus tip of this product, we offer our Cartridge Rebuild Programme, a paid service. This service offers a replacement of the whole motor unit (stylus tip, cantilever, coils and rubber dampers).

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(1) For more information on how you can apply for this rebuild programme, contact your local Audio-Technica service centre (locations can be found at: www.at-globalsupport.com) or the Excellence retailer from where you purchased your AT-ART1000. For terms and conditions, please visit www.excellence.audio-technica.com.

(2) Please note, as part of the Audio-Technica Excellence programme the AT-ART1000 Direct Power Stereo MC Cartridge is only available from selected Audio-Technica Excellence retailers.
Moving coil cartridges / AT-OC9 Series

The AT-OC9, launched in 1987, was the original cartridge model from which the AT-OC9ML/II and AT-OC9/III evolved. Over the years, the AT-OC series has undergone a number of model changes and it has continued to be a bestseller for over twenty years. While drawing on the basic design of the AT-OC9ML/II which received high critical acclaim, a fresh approach for the AT-OC9/III was taken causing us to review the stylus tip, cantilever, magnetic circuit parts, damper and other aspects in order to track down and embody the highest sound quality.

Flagship model embodying the highest sound quality ever in the series

- Special line contact stylus and solid boron cantilever with a 0.26 mm diameter
  The cartridge features a special line contact stylus with a 1.5 x 0.28 mil curvature radius at the stylus tip. This not only ensures that the music signals engraved in the analogue records will be read out completely but also it gives expression to the highest dynamic compliance of the series.
- Neodymium magnet and permendur yoke have drastically increased the magnetic energy
  The magnet is a neodymium magnet with a maximum energy product, while a permendur yoke is used with a high saturation flux density and excellent magnetic materials. Together, they further boost the magnetic field concentrated in the coil gap area.
- PCOCC used for coils and terminal pins
  PCOCC does not give rise to crystalline interfacing in the transmission direction so audiophiles can enjoy pure transmissions.
- Dual moving coil with high separation and wide response
  Our unique moving coil type cartridge has a basic structure where one cylindrical coil is used for the left channel and another is used for the right channel. This structure by which power is generated independently for the left and right channels physically provides outstanding separation characteristics. The AT-OC9/III adopts a reverse V-shaped formation for the two left and right coils to reduce the vibration mass as seen from the stylus tip and minimize the unnecessary movement of the coils to further diminish the distortion.
- Rugged body dedicated to achieving a design with increased rigidity
  Using a precision-crafted sturdy aluminium alloy as the base, the body’s structure is made of hard resin to keep parasitic resonance down to a minimum. This minimizes undesirable vibration while the bottom of the body is plated to achieve greater rigidity and an improved signal-to-noise ratio.

AT-OC9ML/II
Dual moving MicroCoil™ stereo phono cartridge

- Dual-coil system for maximum channel separation.
- High-flux samarium cobalt magnet for improved electrical generation.
- PCOCC coil windings for low-loss “transparent” signal transmission.
- Gold-plated solid boron cantilever.
- Microlinear stylus.

AT-OC9/III
Dual moving coil stereo cartridge with special line contact stylus

- Price: €549.00 (including VAT)

The AT-OC9ML/II Dual Moving MicroCoil™ cartridge is a significant achievement in precision manufacturing, with tolerances held to mere thousandths of an inch. Stringent quality control assures that these tolerances, as well as performance criteria, are maintained by every AT-OC9ML/II cartridge. In addition, the AT-OC9ML/II features:
Moving coil cartridges / ART Series

AT-ART9
Magnetic core MC type stereo cartridge

1 090,00 €
Including VAT
EAN:4961310122713
Nude Rectangular Shank
Special Line Contact

• Flagship magnetic core MC type cartridge with very high quality magnetic circuit.
The AT-ART9 inherits the basic magnetic design from the AT50ANV, which was developed as our 50th anniversary model. Also, it reproduces the highest-quality sound using the vibration system from the AT-OC9/III.

• Neodymium magnet and permendur yoke drastically increase the magnetic energy
A neodymium magnet is employed with a maximum energy product BHmax of 50 [kJ/m³] whilst a permendur yoke is used with a high saturation flux density and excellent magnetic materials.

• Hybrid body that reduces unnecessary parasitic resonance
The housing is made of machined aluminium materials and the cover is made of hard plastic materials. This disperses parasitic resonance and results in clear sound quality.

• Machined aluminium base
The base that supports the magnetic circuit and vibration system is made of machined aluminium material. This enables it to serve as a solid base to support stable playback capability.

• High-separation, wide-response dual moving coil
The basic structure is an original MC type, with separate cylindrical coils to the left and right channels. Since power is generated independently in each of the left and right channels, this structure offers truly superior separation. If the signal from the opposite channel escapes, this can cause intermodulation distortion and have a decisive impact on audio quality and how the stereo sound spreads. The structure of this product ensures a clear and smooth sound. Additionally, the two coils have a reverse-V shape which reduce effective moving mass as seen from the stylus tip, limiting unnecessary movement of the coil and further eliminating distortion.

• Special line contact stylus and solid boron cantilever with a 0.26 mm diameter
The stylus tip is a special line contact type with a 1.5 x 0.28 mil curvature radius (used in the AT50ANV) and a solid boron cantilever with a 0.26 mm diameter. This allows accurate transfer of music signals read by the stylus tip to the magnetic coil.

• Non-magnetic core MC type cartridge based on commemorative model AT50ANV.
This product keeps the basic design of non-magnetic core MC type cartridge AT50ANV and changes the coil winding frame from a pure titanium armature to a newly developed liquid crystal polymer armature by an injection molding. This product also succeeds in reducing the weight of the vibration system and provides the extremely natural and clear sound quality with the ability to express three-dimensional sound fields inherent to non-magnetic core types. In addition, this product enables an output voltage of 0.12mV, a relatively high output level for a non-magnetic core system.

• Liquid crystal polymer armature
Liquid crystal polymer used for the coil winding frame not only has an extreme mechanical strength but also a unique property which increases the mechanical strength as the product becomes thinner.

• Newly designed magnetic circuit that maximizes magnetic energy
The magnetic circuit of this product uses a large-sized neodymium magnet with approximately twice the volume of conventional Audio-Technica ferrite core MC types. The permendur magnetic circuit parts located around the magnet have also been newly designed to maximize the strength of the intensive magnetic field in the coil gap. This magnetic circuit increases the output voltage, and also enhances playback capability in the medium-to-low-frequency range that is said to be a weak point of conventional non-magnetic core MC types. This provides a very accurate frequency response.

• Special line contact stylus and solid boron cantilever with a 0.26 mm diameter
The stylus tip is a special line contact type with a 1.5 x 0.28 mil curvature radius (used in the AT50ANV) and a solid boron cantilever with a 0.26 mm diameter.

• Machined aluminium base
The base that supports the magnetic circuit and vibration system is made of machined aluminium material. This enables it to serve as a solid base to support stable playback capability.

• Hybrid body that reduces unnecessary parasitic resonance
The housing is made of machined aluminium materials and the cover is made of hard plastic materials. This disperses parasitic resonance and results in clear sound quality.

Non-magnetic core MC type stereo cartridge

AT-ART7
Non-magnetic core MC type stereo cartridge

1 190,00 €
Including VAT
EAN:4961310118488
Nude Rectangular Shank
Special Line Contact

• High-separation, wide-response dual moving coil
The basic structure is an original MC type, with separate cylindrical coils to the left and right channels. Since power is generated independently in each of the left and right channels, this structure offers truly superior separation. If the signal from the opposite channel escapes, this can cause intermodulation distortion and have a decisive impact on audio quality and how the stereo sound spreads. The structure of this product ensures a clear and smooth sound. Additionally, the two coils have a reverse-V shape which reduce effective moving mass as seen from the stylus tip, limiting unnecessary movement of the coil and further eliminating distortion.

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• Machined aluminium base
The base that supports the magnetic circuit and vibration system is made of machined aluminium material. This enables it to serve as a solid base to support stable playback capability.

• Hybrid body that reduces unnecessary parasitic resonance
The housing is made of machined aluminium materials and the cover is made of hard plastic materials. This disperses parasitic resonance and results in clear sound quality.
Moving coil cartridges / AT33 Series

**AT33Sa**
Dual moving coil stereo cartridge with Shibata stylus

- **MC cartridge with Shibata stylus**
  The AT33Sa is the first Audio-Technica MC cartridge model to feature a Shibata stylus. In addition to its superior high-range performance as a line-contact stylus, the Shibata stylus produces mid and bass sound that is strong and rich. The Shibata stylus is mounted on a boron cantilever with a double damper to greatly improve sound quality.

- **Advanced tapered boron cantilever and reduced weight**
  The AT33Sa uses a tapered boron cantilever. Tapering the cantilever and revising the number of coil rotations reduce the weight, giving the cartridge better high range performance and wide range reproduction.

- **Neodymium magnet with dramatically enhanced magnetic energy and permendur yoke**
  The model uses a neodymium magnet with maximum energy product BHmax of 50 [kJ/m³] and a permendur yoke with high saturation flux density and outstanding magnetic properties, which further enhances the concentrated magnetic field of the coil gap.

- **High-separation, wide response dual moving coil**
  The basic structure is an original MC type, with separate cylindrical coils to the left and right channels. Since power is generated independently in each of the left and right channels, this structure offers truly superior separation. If the signal from the opposite channel escapes, this can cause intermodulation distortion and have a decisive impact on audio quality and how the stereo sound spreads. The structure of this product ensures a clear and smooth sound. Additionally, the two coils have a reverse-V shape which reduces effective moving mass as seen from the stylus tip, limiting unnecessary movement of the coil and further eliminating distortion.

- **A tough body designed to be rigid**
  The product’s housing is made of precision-cast hard aluminum alloy. Hard synthetic resin sandwiching in the structure on the top and bottom suppresses parasitic resonance. This minimizes unnecessary noise while enhancing rigidity and the signal-to-ratio.

**AT33PTG/II**
Dual moving coil stereo cartridge with Micro linear stylus

- **Advanced nude tapered boron and weight reduction**
  This model succeeds in thinning down and shortening the cantilever, compared to the AT33PTG. The coil impedance is also refined from 17Ω to 10Ω. We realized significant weight reduction of the vibration system and successfully improved the basic performance and sound quality of the cartridge.

- **High performance and long-life Micro linear stylus**
  Micro linear (ML) is a specially polished line contact stylus. This has a better high range performance than the conical or elliptical stylus due to its small curvature radius and realizes low distortion and expanding high range reproduction even when playing at the inner circumference of records. And the constancy of the line contact shape is one of its main features with an average product lifetime of around 1,000 hours.

**AT33EV**
Dual moving coil stereo cartridge with Elliptical stylus

- **Elliptical stylus and hard duralumin tapered pipe cantilever**
  The big advantage to the elliptical chip is its ability to richly reproduce sounds in the medium and low ranges. This elliptical diamond is embedded into a hard duralumin tapered pipe cantilever. With its outstanding machine strength, the duralumin cantilever is tough enough for the job and produces natural sounds without distortion. The cantilever of this product, moreover, goes through a tapering process to harden it, making it faster to transmit sound than conventional duralumin cantilevers and producing unsurpassed response. Supporting this cantilever fulcrum with the traditional double damper disperses resonance, enables stable tracing and achieves linear frequency characteristics.

- **"Hanenite" vibration-controlling rubber minimizes unnecessary vibration**
  The vibration-controlling rubber “hanenite” is used in the housing interior and the cantilever fulcrum support to minimize unnecessary vibration. The body structure, designed to be rigid and suppress vibration, allows the outstanding basic performance of the dual moving coil to fully express itself.
Common features of AT-F7 and AT-F2

The cartridges AT-F7 and AT-F2, with a high-quality sound comparable to more expensive models, provide outstanding value and performance, which delights those who appreciate the sound quality of analogue records.

• Neodymium magnet for dramatically increased magnetic energy
  The neodymium magnet provides maximum energy (BHmax of 50[kJ/m3]), while the pure iron yoke provides excellent properties. Together, they further boost the magnetic field concentrated in the coil gap area.

• PCOCC used for coils
  PCOCC does not give rise to crystalline resistance in the transmission direction, enabling audiophiles to enjoy pure transmissions.

• Dual moving coil with high separation and wide response
  Our unique moving coil type cartridge has a basic structure where one cylindrical coil is used for the left channel and another is used for the right channel. This structure by which power is generated independently for the left and right channels physically provides outstanding separation characteristics. The leakage of signals from one channel into the other exerts a decisive influence on the stereo expanse as well as on the sound quality. This is because this leakage is tantamount to creating irregular cross modulation. The reason why the dual moving coil system delivers such a clear and finely delineated sound quality is no doubt due to the system’s naturally excellent separation. The AT-F7 and AT-F2 features a reverse V-shaped formation for the two left and right coils to reduce the vibration mass as seen from the stylus tip.

• Durable construction dedicated to achieving increased rigidity
  Using a precision-crafted sturdy aluminium alloy as the base, the body’s structure is made of hard resin which minimizes parasitic resonance. This achieves greater rigidity and improves signal-to-noise ratio.

AT-F7
Dual moving coil cartridge

- 269.00 € including VAT
- EAN 4961310106850

- The AT-F7 is equipped with an elliptical stylus (curvature radius: 0.2 x 0.7 mil).
- High-rigidity VC mold combined with potassium titanate minimizes unnecessary vibration
  The VC structure that holds the coils in place is made of a hard resin, which is combined with potassium titanate for increased strength and rigidity. The result is less weight and an unprecedented reduction of unnecessary vibration.
- Diameter stainless suspension wire
  The AT-F7 uses 0.07 mm diameter stainless suspension wire, which serves an important role as a fulcrum point for audio signal transfer. This stainless wire is used for higher-quality MC-type cartridges. This stabilizes the fulcrum position and enables auditory lateralization to provide excellent expression of the high-frequency range.

AT-F2
Dual moving coil cartridge

- 199.00 € including VAT
- EAN 4961310127213

- The AT-F2 is equipped with an elliptical stylus (curvature radius: 0.3 x 0.7 mil).
Moving coil phono cartridges for mono vinyl LP records

AT33MONO
High-end moving coil mono cartridge for mono vinyl LP (Long Play) records

AT-MONO3/LP
High output moving coil mono cartridge for mono vinyl LP (Long Play) records

The AT33MONO is made specifically for use on mono LP. The AT33MONO produces sound to a very high quality because it does not easily pick up unnecessary strain components from distorted or scratched records, producing audio that you couldn’t possibly get from a stereo cartridge.

The AT33MONO also has appropriate compliance in the vertical direction to avoid damage to stereo records.

- Mono cartridge compatible with stereo playback systems.
- 0.65mil conical nude square shank stylus hard duralumin cantilever.
- Strong body stabilized by a rigid body set-up.
- “Hanenite” anti-vibration high-damping rubber eliminates unnecessary vibrations.
- High-quality brass fastening screw.
- Note: this model is not compatible with SP records due to the size of the diamond (0.6mil) designed for microgroove 33 1/3rpm and 45rpm vinyl records.

Made specifically for mono recordings on vinyl records, the cartridge only generates signal with horizontal movement. However to produce a minimal wear on the groove, the AT-MONO3/LP also has an adapted vertical compliance.

- Carefully selected components and state of the art technology produce a high resolution cartridge.
- Straight pipe aluminium cantilever and low mass stylus guarantees a high tracking ability.
- The average usage time is 500 hours extending the life span of precious mono recordings.
- High purity PCOCC allows a more transparent signal transmission both high efficiency and high fidelity.
- To support the internal mechanism, the body is made of solid die-cast aluminium alloy, furthermore stiffness is achieved with the addition of rigid synthetic resin to hold the body.
- Note: this model is not compatible with 78rpm SP records due to the size of the diamond (0.6mil) designed for microgroove 33 1/3rpm vinyl records.
Moving coil phono cartridge for 78rpm mono Shellac SP record

The AT-MONO3/SP cartridge is designed to faithfully transcribe the performances recorded on 78rpm Shellac records.

Made specifically for mono recordings, the cartridge only generates signal with horizontal movement. However, to produce minimal wear on the groove, the AT-MONO3/SP also has an adapted vertical compliance.

- Straight pipe aluminium cantilever and low mass stylus guarantees a high tracking ability.
- The average usage time is 500 hours extending the life span of precious mono recordings.
- High purity PCOCC allows a more transparent signal transmission offering a high efficiency and a high fidelity.
- To support the internal mechanism, the body is made of solid die-cast aluminium alloy, furthermore stiffness is achieved with the addition of rigid synthetic resin to hold the body.

AT-MONO3/SP internal wiring

This schematic shows the internal wiring of AT-MONO3/SP featuring two horizontal voice coils wired in series, resulting electrically as a single mono voice coil. The mono signal is available from white-blue terminals, the same signal is also available from red-green terminals in order to feed both inputs of a stereo phono preamp.

AT-MONO3/SP

High output moving coil cartridge for 78rpm mono Shellac SP (Standard Play) records

179.00 € including VAT

EAN 4961310008338

AT33MONO, AT-MONO3/LP and AT-MONO3/SP are true mono cartridges due to the horizontal configuration of the voice coils. The cartridge only generates electrical signal with horizontal movement due to the horizontal configuration of the coil.
Note: Moving Coil Cartridges Styli are not field replaceable

Terms and conditions
The customer must return the old Audio-Technica moving coil cartridge to an Authorized Moving Coil Cartridge Service Centre along with proof of purchase.

The MC cartridge returned under the programme must be outside of its warranty period, and be in working order (with the exception of a worn stylus) with no mechanical damage on the cantilever.

This programme is available exclusively for customers in Europe.

(For customers with damaged or broken cartridges, please contact your local Authorized Moving Coil Cartridge Service Centre for assistance)
Due to the technical nature and highly skilled construction involved in moving coil cartridges, it is not possible to replace the stylus. Audio-Technica does not recommend having a moving coil cartridge re-tipped or repaired by any independent, unauthorized repair centre since the original performance and optimal specifications can only be obtained when the complete cartridge is assembled and thoroughly tested by our skilled engineers at Audio-Technica’s specialist production facility in Japan. Therefore Audio-Technica offers a comprehensive trade-in programme for its customers with moving coil cartridges with worn out styli. Stylus replacement of ART1000 cartridge is achieved by sending back your own cartridge to Tokyo, Machida factory (see cartridge ART1000 rebuild programme price below and details on page 9).

**ART1000 rebuild programme price**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price (€ inc. VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-ART1000/RB</td>
<td>ART1000 Cartridge rebuild programme</td>
<td>1990.00</td>
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</tbody>
</table>

**Moving coil cartridge trade-in programme prices**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price (€ inc. VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT-ART9/RP</td>
<td>ART9 Cartridge replacement programme</td>
<td>659.00</td>
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<tr>
<td>AT-ART7/RP</td>
<td>ART7 Cartridge replacement programme</td>
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<tr>
<td>AT-OC9/III/RP</td>
<td>AT-OC9/III Cartridge replacement programme</td>
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<tr>
<td>AT-OC9ML/II/RP</td>
<td>AT-OC9ML/II Cartridge replacement programme</td>
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<tr>
<td>AT33EV/RP</td>
<td>AT33EV Cartridge replacement programme</td>
<td>299.00</td>
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<tr>
<td>AT33PTG/II/RP</td>
<td>AT33PTG/II Cartridge replacement programme</td>
<td>329.00</td>
</tr>
<tr>
<td>AT33Sa/RP</td>
<td>AT33Sa Cartridge replacement programme</td>
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<td>AT-F7/RP</td>
<td>AT-F7 Cartridge replacement programme</td>
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<tr>
<td>AT-F2/RP</td>
<td>AT-F2 Cartridge replacement programme</td>
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</tr>
<tr>
<td>AT-MONO3/LP/RP</td>
<td>AT-MONO3/LP Cartridge replacement programme</td>
<td>109.00</td>
</tr>
<tr>
<td>AT33MONO/RP</td>
<td>AT33MONO Cartridge replacement programme</td>
<td>199.00</td>
</tr>
<tr>
<td>AT-MONO3/SP/RP</td>
<td>AT-MONO3/SP Cartridge replacement programme</td>
<td>109.00</td>
</tr>
</tbody>
</table>

**Limited edition moving coil cartridge trade-in programme**

**AT50ANV**  
AT50ANV anniversary MC cartridge was a limited edition and case stylus replacement is necessary, the owner of AT50ANV will be able to trade in for model AT-ART7, offering very similar performance. (See AT-ART7 trade-in programme prices above.)

**AT-OC9/III LTD**  
AT-OC9/III LTD was a limited edition and in case stylus replacement is necessary, the owner of AT-OC9/III LTD will be able to trade in for the model AT-OC9/III, offering very close similar performance. (See AT-OC9/III trade-in programme prices above.)
VM Series cartridges: features & mechanism
Analogue to the cutter head

A cutter head carves out the record grooves. The modulations in the groove are “analogue” mechanical equivalents of the original audio signals. To “read” these modulations, Audio-Technica developed the Dual Magnet design which duplicates the structure of cutter head.

Instead of using a single, large magnet, the two magnets are arranged in the shape of a “V”. The two magnets are positioned precisely to match the positions of the left and right channels in the stereo groove walls. Consequently, the VM design (VM as V Mount, mounted in a shape of V) ensures outstanding channel separation, extended frequency response and superb tracking.

Importance of tension wire construction and material

Suspension wire (tension wire) has an important role as a fulcrum point of the cantilever/stylus/magnets assembly.

Quality Audio-Technica MC cartridges use stainless suspension wire, providing a mechanical stabilization optimizing auditory lateralization to provide excellent expression of the high frequency range.

Audio-Technica VM Series cartridge models VM760SLC and VM750SH are designed with a moulded integrated suspension system. Other moving magnet Audio-Technica cartridge models are designed with a stainless suspension wire featuring a unique design with selected materials.

Para-toroidal generating system delivers substantial improvements

The new VM cartridges differ in their styli design, but all share the basic construction of their generating systems (Cartridge Engine).

On the Para-toroidal generating system, since leakage of magnetic flux in this continuous and unitised magnetic circuit is low, a superb linearity can be obtained. Permeability of the cores is also optimised through the use of laminated cores.

Centre shield plate between stereo channels

A permalloy centre shield plate enables the effective separation of left and right channels, suppressing electrical crosstalk to below 40dB. This is similar to the actual crosstalk value found in the grooves of the record itself.

6N-OFC Coil Wire

OFC - Oxygen Free Copper - is electronically refined to reduce the level of oxygen: 6N-OFC is more than 99.99997% pure oxygen free copper. This highly sophisticated coil wire material enables the cartridges to pick up an enormous amount of information from the vinyl grooves and provide high resolution audio with a powerful sound image.

Mono Body

For monaural operation, (unless a dedicated archiving phono-preamplifier is used), left and right channels should be connected. Mono body on which left and right terminals are connected internally improve signal-to-noise ratio, minimizing surface noise.

Para-toroidal coil construction of VM Series cartridges

With the VM type dual magnet system & high-performance para-toroidal generator coil system, Audio-Technica’s VM stereo cartridges feature a unique structure. The structure greatly improves electromagnetic performances compared with non para-toroidal construction such as in 90 Series cartridges.

Additionally, the VM series cartridges adopt a lossless para-toroidal generator coil system to their cartridge bodies that results in peak generating efficiency.

Stacking two cores makes further improvements to high frequency characteristics by separating the right-and-left channels from the center shield plate, resulting in reduced electrical cross talk.

Importance of tension wire construction and material

Suspension wire (tension wire) has an important role as a fulcrum point of the cantilever/stylus/magnets assembly.

Quality Audio-Technica MC cartridges use stainless suspension wire, providing a mechanical stabilization optimizing auditory lateralization to provide excellent expression of the high frequency range.

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VM Series cartridges overview

700 Series
For superior sound with superfine fidelity.

- VM760SLC
  Special Line Contact

- VM750SH
  Shibata

- VM740ML
  Microlinear

500 Series

- VM540ML
  Line Contact Styli

VM Series cartridges overview
For more faithful reproduction of sound, with VM cartridge precision.

### 500 Series
For the best sound of mono LP records and 78rpm SP records.

**Elliptical Styli**
- VM530EN: Elliptical Nude
- VM520EB: Elliptical Bonded

**Conical Styli**
- VM510CB: Conical Bonded 0.6 mil

### 600 Series
For special models that bring out the best sound of mono LP records and 78rpm SP records.

**Elliptical Styli**
- VM610MONO: Elliptical Bonded

**Conical Styli**
- VM670SP: Conical Bonded 3 mil
VM cartridges / with line contact styli

VM760SLC
VM cartridge with Special Line Contact Stylus
- Aluminium tapered cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Die-cast aluminium alloy housing reduces vibration and adds a natural electrical shield

Fitted with the Shibata stylus, which was developed for playing quadradisc, 4-channel vinyl records that demand high-frequency reproduction capabilities during playback. Not only high-frequency, it is also ideal for reproducing rich mid and low frequencies.

VM750SH
VM cartridge with Shibata Stylus
- Aluminium tapered cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Die-cast aluminium alloy housing reduces vibration and adds a natural electrical shield

High-end model featuring a Microlinear stylus in an aluminium die-cast alloy body. In addition to outstanding high-frequency reproduction, this model enables clear sound image localisation.

VM740ML
VM cartridge with Microlinear Stylus
- Aluminium tapered cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Die-cast aluminium alloy housing reduces vibration and adds a natural electrical shield

Standard model with a Microlinear stylus. Distortion is low even on the inner circumference of a record because the curvature radius of the stylus tip does not alter even if the stylus becomes worn.

VM540ML
VM cartridge with Microlinear Stylus 500 Series body
- Aluminium tapered cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Durable low resonance polymer housing

VM540ML/H
VM540ML mounted on AT-HS10BK headshell

Using an ultra-lightweight stylus tip ground to a high level of precision, we have achieved a combination of low distortion rate with fuller frequency reproduction during playback. This stylus tip extracts every possible piece of information from the grooves on a record.
VM cartridges / with elliptical & conical styli

VM530EN
Dual moving magnet stereo cartridge

- Aluminium cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Durable low resonance polymer housing

High-end elliptical stylus model equipped with a light-weighted nude elliptical stylus to reduce the execution mass of the vibration system. This enables fuller frequency reproduction.

VM530EN/H
VM530EN mounted on AT-HS10BK headshell

- Aluminium cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Durable low resonance polymer housing

VM520EB
Dual moving magnet stereo cartridge

- Aluminium cantilever
- Para-toroidal coils improve generating efficiency
- Centre shield plate between the left and right channels reduces crosstalk
- Durable low resonance polymer housing

Standard elliptical stylus model equipped with an elliptical bonded stylus. This reduces tracing distortion and allows for more accurate sound reproduction.

VM520EB/H
VM520EB mounted on AT-HS10BK headshell

Entry-level VM cartridge model equipped with a conical bonded stylus. The round stylus is less likely to be affected by placement and boasts stable tracing performance.
VM cartridges / mono cartridges for Shellac & early mono LP’s

**VM670SP**
For Shellac 78rpm mono Standard Play Records

- Aluminium cantilever
- Para-toroidal coils improve generating efficiency
- Mono body terminating left and right channels reduces surface noise
- Durable low resonance polymer housing

**VM610MONO**
For mono Vinyl Microgroove Long Play Records

- Aluminium cantilever
- Para-toroidal coils improve generating efficiency
- Mono body terminating left and right channels reduces surface noise
- Durable low resonance polymer housing

Replacement styli for VM cartridges

**VMN60SLC**
Replacement stylus for VM760SLC

- Nude Rectangular Shank Special Line Contact

**VMN50SH**
Replacement stylus for VM750SH

- Nude Square Shank Shibata

**VMN40ML**
Replacement stylus for VM740ML & VM540ML

- Nude Square Shank Microlinear

**VMN30EN**
Replacement stylus for VM530EN

- Nude Round Shank Elliptical

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VMN70SP
Replacement stylus for VM670SP

- Bonded Round Shank Conical (3 mil)

VMN20EB
Replacement stylus for VM520EB

- Bonded Round Shank Elliptical

VMN10CB
Replacement stylus for VM510CB & VM610MONO

- Bonded Round Shank Conical

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Model dedicated to 78rpm records, whose conical stylus has a large curvature radius at the tip. The curvature radius is 3 mil, and suitable for playing 78rpm records from a wide variety of eras.

Mono LP model with a conical bonded stylus, dedicated to early monaural LP records. Specialised internal wiring allows for reduced surface noise.

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VM610MONO
Mono LP model with a conical bonded stylus, dedicated to early monaural LP records. Specialised internal wiring allows for reduced surface noise.

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Model dedicated to 78rpm records, whose conical stylus has a large curvature radius at the tip. The curvature radius is 3 mil, and suitable for playing 78rpm records from a wide variety of eras.
The cartridge becomes worn after an extended period of play, even the finest diamond stylus. Our VM cartridges can be used again for a long time by only replacing the stylus. Our renewed VM cartridges series is composed of 7 styli and 3 types of bodies. Not only is it not necessary to buy the cartridge itself, but you can also enjoy the experience of upgrading your stylus, or trying a new cartridge / stylus combination.

### Replacement & upgrade styli matrix

The cartridge becomes worn after an extended period of play, even the finest diamond stylus. Our VM cartridges can be used again for a long time by only replacing the stylus. Our renewed VM cartridges series is composed of 7 styli and 3 types of bodies. Not only is it not necessary to buy the cartridge itself, but you can also enjoy the experience of upgrading your stylus, or trying a new cartridge / stylus combination.

<table>
<thead>
<tr>
<th>Cartridge Body</th>
<th>Product</th>
<th>Special Line Contact Stylus</th>
<th>Shibata Stylus</th>
<th>Microlinear Stylus</th>
<th>Elliptical Nude Stylus</th>
<th>Elliptical Bonded Stylus</th>
<th>Conical Bonded Stylus</th>
<th>3mil Conical Bonded Stylus</th>
</tr>
</thead>
<tbody>
<tr>
<td>VM760SLC</td>
<td></td>
<td>Standard Replacement</td>
<td>Becomes VM750SH</td>
<td>Becomes VM740ML</td>
<td>Compatible</td>
<td>Compatible</td>
<td>Compatible</td>
<td>Possible (1)</td>
</tr>
<tr>
<td>VM750SH</td>
<td></td>
<td>Upgrade to VM760SLC</td>
<td>Standard Replacement</td>
<td>Becomes VM740ML</td>
<td>Compatible</td>
<td>Compatible</td>
<td>Compatible</td>
<td>Possible (1)</td>
</tr>
<tr>
<td>VM740ML</td>
<td></td>
<td>Upgrade to VM760SLC</td>
<td>Upgrade to VM750SH</td>
<td>Standard Replacement</td>
<td>Compatible</td>
<td>Compatible</td>
<td>Compatible</td>
<td>Possible (1)</td>
</tr>
<tr>
<td>VM540ML</td>
<td></td>
<td></td>
<td>Standard Replacement</td>
<td>Becomes VM530EN</td>
<td>Becomes VM520EB</td>
<td>Becomes VM510CB</td>
<td></td>
<td>Possible (1)</td>
</tr>
<tr>
<td>VM530EN</td>
<td></td>
<td></td>
<td>Standard Replacement</td>
<td>Becomes VM520EB</td>
<td>Becomes VM510CB</td>
<td></td>
<td></td>
<td>Possible (1)</td>
</tr>
<tr>
<td>VM500 Body</td>
<td>VM500</td>
<td></td>
<td>Becomes VM540ML</td>
<td>Becomes VM530EN</td>
<td>Standard Replacement</td>
<td>Becomes VM610MONO</td>
<td></td>
<td>Standard Replacement</td>
</tr>
<tr>
<td>VM520EB</td>
<td></td>
<td></td>
<td>Becomes VM540ML</td>
<td>Upgrade to VM530EN</td>
<td>Standard Replacement</td>
<td>Becomes VM610MONO</td>
<td></td>
<td>Standard Replacement</td>
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<tr>
<td>VM510CB</td>
<td></td>
<td></td>
<td>Becomes VM540ML</td>
<td>Upgrade to VM530EN</td>
<td>Standard Replacement</td>
<td></td>
<td></td>
<td>Standard Replacement</td>
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<tr>
<td>VM670SP</td>
<td></td>
<td>Possible not recommended*1</td>
<td>Possible not recommended*2</td>
<td>Possible not recommended*2</td>
<td>Possible not recommended*2</td>
<td>Becomes VM610MONO</td>
<td>Becomes VM670SP</td>
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<td>VM600 Body</td>
<td>VM600</td>
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<td>Possible not recommended*2</td>
<td></td>
<td></td>
<td>Standard Replacement</td>
</tr>
</tbody>
</table>

(1) Since SP records only have monaural modulation, combining an SP stylus with a stereo body would be recommended only when used with a dedicated archiving phono Preamplifier-equaliser. These incorporate various features to allow Mono reduction from Stereo inputs (Mono + R, Mono L, Mono R, L&R Variable Mix). When an SP record is played with a standard Stereo Phono Preamplifier, it is recommended that a VM600 body is used for signal to noise ratio optimisation and to minimise record surface noise.

(2) For best results when playing vintage mono LPs, Audio-Technica recommends using the VMN510CB Conical stylus. A Special Line Contact, Shibata, Microlinear or Elliptical type stylus can be considered if you are sure that the dimensional groove construction of the LP(s) can safely handle these stylus tip shapes.

(3) Lifetime of the replacement stylus is approx. 300 to 500 hours for Conical, 300 hours for Elliptical, 1000 hours for Microlinear, and 800 hours for Shibata and Special Line Contact.
VM95 Series

For 38 years the AT95E has been known as the best-in-class cartridge. Now after more than 5 million sold, it’s time to move to a new level...

...introducing the new generation AT-VM95E

The new AT-VM95E has been upgraded and redesigned to offer the user improved performance and better sound quality.

- An improved and distinctive design resulting in a more rigid low resonance housing.
- A new coil design delivering increased output voltage (4mV) compared to AT95 and AT95EX.
- Newly designed radial damping ring improving and increasing frequency and transient response to 22,000Hz.
- Easier to mount using threaded inserts in the cartridge body enabling it to be mounted to the headshell or on an integral tonearm with just two screws (no nuts).

Designed to be interchanged and upgraded

The VM95 Series will not only replace two legendary Audio-Technica products, its adaptable design allows the interchangeability and the upgrade to more expensive styli.

One family, 18 products:

- Six moving magnet VM cartridges in the Series, use the same electromagnetic engine-body featuring six different styli, offering a wide choice of options for every budget and application.
- Six interchangeable replacement styli are perfectly compatible with VM95 Series body (and also with XP Series DJ cartridges).
- Six cartridge sets featuring each of the VM95 Series cartridge pre-mounted on the black version of AT-HS6 headshell for plug and play solution.

Due to the increased quantity of counterfeit products available online, never accept an Audio-Technica cartridge, replacement stylus or cartridge-headshell set in non Audio-Technica original packaging and always buy from an Audio-Technica Authorized Dealer.
VM95 Series overview

VM95 Series consist of 18 new products, six cartridges using the same electromagnetic engine-body featuring six different styli, offering a wide choice for every budget and every application. The six cartridges are also available factory mounted on the exclusive AT-HS6BK headshell.

Six cartridges using the same electromagnetic engine-body

Six replacement styli all interchangeable

Six factory pre-mounted sets using AT-HS6BK headshell

Conical Bonded 0.6 mil

Conical Styli

Elliptical Bonded

Elliptical Styli
VM95 Series overview

Line Contact Styli

- AT-VM95SH
- AT-VMN95SH
- AT-VM95SH/H

- AT-VM95ML
- AT-VMN95ML
- AT-VM95ML/H

Microlinear
Shibata

SP Styli for 78rpm

- AT-VM95SP
- AT-VMN95SP
- AT-VM95SP/H

Conical Bonded 3 mil
VM95 Series cartridges and sets

The AT-VM95C, the new Audio-Technica entry model Conical cartridge will replace the legendary AT90 Series models such as AT91, AT91R and CN5625AL. Also the AT-VM95C is a “budget” cartridge featuring a conical stylus, the compatibility in the range will allow to upgrade with any of the 4 other LP styli of the Series such as Elliptical, Elliptical Nude, Microlinear and Shibata.

**AT-VM95C**
Cartridge with Conical Stylus

- Aluminium cantilever
- 4.0mV output voltage
- Compatible body with all VM95 Series stylus assemblies
- Replacement for AT91, AT91R and CN5625AL

**AT-VM95C/H**
AT-VM95C mounted on AT-HS6BK headshell

- The AT-VM95C/H Audio-Technica cartridge set is assembled, tested and packed in the Audio-Technica Factory in Fukui-Japan
- The total set weight is 15.5g

The AT-VM95E, the new Audio-Technica entry model Elliptical cartridge will replace the legendary AT95E and take advantage of the developments of the AT95EX introduced in 2015. The AT-VM95E features an improved and distinctive design resulting in a more rigid low resonance housing, and two threaded inserts in the cartridge body enabling it to be mounted to the headshell or on an integral tonearm with just two screws, no nuts.

**AT-VM95E**
Cartridge with Elliptical Stylus

- Aluminium cantilever
- 4.0mV output voltage
- Compatible body with all VM95 Series stylus assemblies
- Replacement for AT95E and AT95EX
- 20 to 22,000Hz frequency response

**AT-VM95E/H**
AT-VM95E mounted on AT-HS6BK headshell

- The AT-VM95E/H Audio-Technica cartridge set is assembled, tested and packed in the Audio-Technica Factory in Fukui-Japan
- The total set weight is 15.5g

The AT-VM95EN, features a Nude Elliptical Diamond. The construction of the stylus being a one piece diamond with a round shank inserted in the cantilever creates a lighter and more rigid transmission system than a diamond tip bonded on a round titanium shank such as in the AT-VM95E. Also the use of nude diamond implies a substantial difference in pricing, yet the quality of the reproduction will be immediately noticed, specifically in the fidelity of high frequencies and in the quality of the transient responses.

**AT-VM95EN**
Cartridge with Nude Elliptical Stylus

- Aluminium cantilever
- 3.5mV output voltage
- Compatible body with all VM95 Series stylus assemblies
- 20 to 23,000Hz frequency response

**AT-VM95EN/H**
AT-VM95EN mounted on AT-HS6BK headshell

- The AT-VM95EN/H Audio-Technica cartridge set is assembled, tested and packed in the Audio-Technica Factory in Fukui-Japan
- The total set weight is 15.5g
VM95 Series cartridges and sets

The AT-VM95ML features a Nude Microlinear diamond, not only the Microlinear stylus will permit to double the duration of your stylus. The performance of a line contact stylus, will minimize the “inner groove distortion” as well as providing extended frequency response and maximize resolution in the medium and high frequencies of the audio program material.

AT-VM95ML
Cartridge with Microlinear Stylus

169.00 €
Including VAT
EAN 4961310145996

- Aluminium cantilever
- 3.5mV output voltage
- Compatible body with all VM95 Series stylus assemblies
- 20 to 25,000Hz frequency response

AT-VM95ML/H
AT-VM95ML mounted on AT-HS6BK headshell

199.00 €
Including VAT
EAN 4961310145989

- The AT-VM95ML/H Audio-Technica cartridge set is assembled, tested and packed in the Audio-Technica Factory in Fukui-Japan
- The total set weight is 15.5g

The AT-VM95SH, features a Nude Shibata stylus, one of the most acclaimed stylus format by high end audiophiles. The Shibata stylus produces mid and bass sounds strong and rich in addition to offer a frequency response up to 25,000 Hz

AT-VM95SH
Cartridge with Shibata Stylus

199.00 €
Including VAT
EAN 4961310145996

- Aluminium cantilever
- 3.5mV output voltage
- Compatible body with all VM95 Series stylus assemblies
- 20 to 25,000Hz frequency response

AT-VM95SH/H
AT-VM95SH mounted on AT-HS6BK headshell

229.00 €
Including VAT
EAN 4961310146030

- The AT-VM95SH/H Audio-Technica cartridge set is assembled, tested and packed in the Audio-Technica Factory in Fukui-Japan
- The total set weight is 15.5g

Since SP records have monaural modulation, when combining an SP stylus with a stereo body, such as the AT-VM95SP, it is recommended to use the “MONO ON” function of your standard Stereo Phono Preamplifier to minimize record surface noise. AT-VM95SP, as stereo cartridge for SP mono records, when used with a dedicated archiving phono preamplifier-equalizer incorporating various functions to generate a mono signal from Stereo inputs (Mono L+R, Mono L, Mono R, LR Variable Mix) allows professional archivers to minimize noise and distortion by sampling the least damage side of the grooves from an old record.

AT-VM95SP
78rpm cartridge with 3mil SP Conical Stylus

79.00 €
Including VAT
EAN 4961310146030

- 3mil SP stylus for reduced record surface noise
- Aluminium cantilever
- 2.7mV output voltage
- Compatible body with all VM95 Series stylus assemblies

VM95SP/H
AT-VM95SP mounted on AT-HS6BK headshell

109.00 €
Including VAT
EAN 4961310146542

- The AT-VM95SP/H Audio-Technica cartridge set is assembled, tested and packed in the Audio-Technica Factory in Fukui-Japan
- The total set weight is 15.5g
VM95 Series - Styli compatibility charts

Every cartridge diamond stylus becomes worn after a period of play. Around 500 hours for a conical stylus, 300 hours for an Elliptical stylus, 1000 hours for a Microlinear stylus, and 800 hours for a Shibata stylus.

Our VM95 Series dual moving magnet cartridges can be used almost forever by replacing the interchangeable stylus. It is no longer necessary to purchase a complete cartridge when your diamond is worn out, you can simply buy the matching replacement stylus, but also enjoy the experience of upgrading your cartridge with a different stylus. The six models of VM95 Series cartridges all use the same electromagnetic engine-body, therefore each of the six replacement styli are perfectly compatible.

VM95 Series - Replacement Styli

AT-VMN95C  Conical replacement stylus for AT-VM95C
AT-VMN95E  Elliptical replacement stylus for AT-VM95E
AT-VMN95EN  Elliptical nude replacement stylus for AT-VM95EN
AT-VMN95ML  Microlinear replacement stylus for AT-VM95ML
AT-VMN95SH  Shibata replacement stylus for AT-VM95SH
AT-VMN95SP  3mil Conical replacement SP stylus for AT-VM95SP
The AT-XP series cartridges provide a high quality sound for vinyl DJ’s. Offering all of the features of a DJ cartridge, but with a Hi-fi sound, the XP series are perfect for the stage and club DJ who prioritises sound quality. The following features demonstrate the quality of the AT-XP series, and show why DJ’s can rely on th Audio-Technica sound for a true Hi-fi audio performance.

- High quality audiophile experience in DJ venues
- Durable robust design for high-quality specialist DJ playback
- Signal output level and output impedance characteristics suited for professional DJ applications
- Great visibility of stylus tip for instant positioning in dark environments
- VM dual magnet construction
- High-rigidity and Low-resonance cartridge housing
- Produced in the Audio-Technica Fukui factory in Japan under strict quality control for precise manufacturing.

Audio-Technica’s VM architecture

One of the reasons for the excellent sound reproduction of the VM series is Audio-Technica’s VM cartridge structure. Instead of using a single, large magnet, the two magnets are arranged in the shape of a “V” positioned precisely to match the positions of the left and right channels in the stereo groove walls.

Consequently, the VM design (VM meaning V-Mount) ensures outstanding channel separation, extended frequency response and superb tracking. As featured in the VM range of Hi-fi cartridges an excellent stereo image will be provided through the improved channel separation.

Due to the VM architecture, the XP series DJ cartridges are not suitable for scratch or turntablist applications. Nevertheless unlike most of Hi-fi cartridges they allow manual cueing and back-cueing.
XP Series - Audiophile DJ cartridges

AT-XP7
Audiophile DJ cartridge, elliptical stylus aluminum tapered pipe cantilever
149.00 € Including VAT
EAN 4961310142537
- Tapered aluminum cantilever providing outstanding rigidity
- Stainless wire suspension, double-layered rubber damper and tapered aluminum cantilever ensure precise tracking

AT-XP5
Audiophile DJ cartridge, elliptical stylus carbon fiber-reinforced ABS cantilever
89.00 € Including VAT
EAN 4961310142551
- Durable carbon fiber-reinforced ABS cantilever and nylon wire suspension ensure precise tracking

AT-XP3
Audiophile DJ cartridge, conical stylus carbon fiber-reinforced ABS cantilever
59.00 € Including VAT
EAN 4961310145613
- Durable carbon fiber-reinforced ABS cantilever and nylon wire suspension ensure precise tracking

AT-XP7/H
AT-XP7 mounted on AT-HS6BK headshell
179.00 € Including VAT
EAN 4961310146559

AT-XP5/H
AT-XP5 mounted on AT-HS6BK headshell
119.00 € Including VAT
EAN 4961310146566

AT-XP3/H
AT-XP3 mounted on AT-HS6BK headshell
89.00 € Including VAT
EAN 4961310146573

Replacement styli for XP Series DJ cartridges

ATN-XP7
Elliptical replacement stylus for AT-XP7
The ATN-XP7 is also compatible with AT-XP5, AT-XP3 and all VM95 Series bodies.
119.00 € Including VAT
EAN 4961310142544
- Aluminum tapered cantilever
- Bonded Round Shank Elliptical

ATN-XP5
Elliptical replacement stylus for AT-XP5
The ATN-XP5 is also compatible with AT-XP7, AT-XP3 and all VM95 Series bodies.
59.00 € Including VAT
EAN 4961310142568
- Carbon reinforced cantilever
- Bonded Round Shank Elliptical

ATN-XP3
Conical replacement stylus for AT-XP3
The ATN-XP5 is also compatible with AT-XP7, AT-XP5 and all VM95 Series bodies.
29.00 € Including VAT
EAN 4961310146520
- Carbon reinforced cantilever
- Bonded Round Shank Conical
P-mount moving magnet plug-in cartridges

This selection of three cartridges allows owners of Technics™, Hitachi™, Pioneer™(3) and similar linear tracking turntables with T4P plug-in connectors to enjoy the high-fidelity sound that only Audio-Technica can offer.

Each is designed specifically for the linear format, while all feature Audio-Technica's unique dual moving magnet construction. The dual magnet system is combined with the para-toroidal coil construction to assure an excellent sonic clarity and wide channel separation. Special Alnico magnets are employed for a natural and uncoloured sonic performance.

Conical stylus P-mount moving magnet cartridge

**AT81CP**
P-mount MM cartridge, conical stylus

- 0.6 mil conical stylus
- Carbon fiber cantilever
- Bonded round shank, conical diamond

**AT85EP**
P-mount MM cartridge, elliptical stylus

- 0.3 x 0.7 mil elliptical stylus
- Alloy tube cantilever
- Bonded round shank, elliptical diamond

P-mount cartridge replacement styli

**ATN81CP**
Replacement conical stylus for AT81CP.
The ATN81CP is also compatible with AT300P, AT3482P and AT3482H/U.

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<th>Description</th>
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**ATN85EP**
Replacement elliptical stylus for AT85EP
The ATN85EP is also compatible with AT92ECD, AT301EP and AT311EP.

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P-mount to 1/2” adapter

**AT-PMA1**
Half-inch adapter bracket

<table>
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<th>Description</th>
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</tr>
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<tbody>
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</table>

The P-Mount Adapter bracket allows to mount P-mount cartridges on half-inch mount tonearms and half-inch mount headshells.
P-MOUNTING

• **P-mount cartridge** has four terminals at the back that simply plug in to the end of the tonearm. The cartridge is then secured to the tonearm with a single screw.

Audio-Technica P-mount cartridges can be mounted as follows:
- **P-mount (plug-in)**
- **Half-inch mount (1/2’’)** using universal AT-PMA1 adapter

![P-mount cartridge mounted on P-mount tonearm (screw and nut are supplied with all models).](image)

![P-mount cartridge mounted on standard 1/2” headshell using AT-PMA1 U-mount adapter.](image)

HALF-INCH MOUNTING

• **Half-inch mount cartridge** also has four terminals at the back, but they are larger pins that connect to four individual wires at the end of the tonearm. The cartridge is secured to the tonearm’s headshell with two screws, spaced 1/2” apart.

![Half-inch mount cartridge mounted on headshell.](image)
Playing 78rpm Shellac SP Records

Why 78, Why Shellac, Why SP?
Those records are black, heavy, easily breakable and were the main music and audio media from 1900 to 1960.
• **78** is one way to name them in the sense that the rotational speed is in general 78rpm (rotations per minute).
• **Shellac** is another way to name them because they were made among other components out of Shellac resin.
• **SP** is another way to name them, it is the abbreviation of Standard Play, as opposed Long Play (LP) who started to replace SP records from 1955.

“Play your SP records as many times as you want!”
As long as you use a modern dedicated SP cartridge, you can play them again and again with very minor alteration of the record, as the tracking force of a modern phono cartridge is only 2 to 5 grams.
As opposed to the tracking force of over 50 grams that was applied by an acoustic Gramophone using needles, when the extra weight could potentially damage the record.
To play SP Records, you need a turntable that operates at 78rpm

Obviously, if the rotational speed of the record is 78rpm, your turntable needs to be able to operate at this given speed. If your turntable plays only 33rpm or 45rpm as many turntables do, you will not be able to play your SP record.

Audio-Technica AT-LP120 models and the AT-1240 model operate perfectly at 78rpm and in addition the speed is adjustable within 10%, a nice feature as a lot of SP records were not always recorded at the right speed.

To play SP Records, you need a dedicated SP cartridge

Never use any cartridge designed for LP Vinyl records on an SP record.

As you can see on the schematic, the groove of an SP record is much wider than the groove of an LP record (Vinyl). Using a LP record stylus, typically of a radius of 0.6 mil on a 78 record will result in more noise than music. Playing SP records with LP stylus will result in damage to both the record and the cartridge. The typical radius size of a SP stylus is from 2.5 mil to 3.5 mil, about 5 times the radius size of the typical styli used for LP records.

Audio-Technica cartridges for SP 78rpm records

**AT-MONO3/SP**
High output true mono moving coil cartridge for 78rpm mono Shellac SP records

- 179.00 € Including VAT
- EAN 4961310008338
- 2.5mil Conical Stylus
- Bonded Round Shank

See entire description on page 19.

**VM670SP**
VM Series mono moving magnet cartridge for 78rpm mono Shellac SP records

- 139.00 € Including VAT
- EAN 4961310137618
- 3mil Conical Stylus
- Bonded Round Shank

See entire description on page 28.

**AT-VM95SP**
VM95 Series stereo moving magnet cartridge for 78rpm mono Shellac SP records

- 79.00 € Including VAT
- EAN 4961310146030
- 3mil Conical Stylus
- Bonded Round Shank

See entire description on page 35.
Audiophile moving coil cartridges specifications

**Model Number**
- ART1000
- AT-OC9/III
- AT-OC9MLII
- AT-ART9
- AT-ART7

**Type**
- Direct Power System
- Dual Moving Coil
- Dual Moving Coil
- Dual Moving Coil
- Non-magnetic Core Moving Coil

**Body Material**
- Aluminium / Titanium
- Aluminium
- Aluminium
- Aluminium
- Aluminium

**Frequency Response**
- 10 to 50,000 Hz
- 10 to 50,000 Hz
- 10 to 50,000 Hz
- 10 to 50,000 Hz
- 10 to 50,000 Hz

**Channel Separation**
- 30 dB (1 kHz)
- 30 dB (1 kHz)
- 30 dB (1 kHz)
- 30 dB (1 kHz)
- 30 dB (1 kHz)

**Output Channel Balance**
- 0.5 dB (1 kHz)
- 0.5 dB (1 kHz)
- 0.5 dB (1 kHz)
- 0.5 dB (1 kHz)
- 0.5 dB (1 kHz)

**Output Voltage**
- 0.2 mV (at 1 kHz, 5 cm/sec)
- 0.4 mV (at 1 kHz, 5 cm/sec)
- 0.4 mV (at 1 kHz, 5 cm/sec)
- 0.4 mV (at 1 kHz, 5 cm/sec)
- 0.4 mV (at 1 kHz, 5 cm/sec)

**Vertical Tracking Angle**
- 21 degrees
- 23 degrees
- 23 degrees
- 23 degrees
- 23 degrees

**Vertical Tracking Force Range**
- 1.8 to 2.2 g (standard 1.5 g)
- 1.8 to 2.2 g (standard 1.5 g)
- 1.8 to 2.2 g (standard 1.5 g)
- 1.8 to 2.2 g (standard 1.5 g)
- 1.8 to 2.2 g (standard 1.5 g)

**Stylus Shape**
- Special Line Contact
- Special Line Contact
- Special Line Contact
- Special Line Contact
- Special Line Contact

**Stylus Curvature Radius**
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil

**Stylus Construction**
- Nude rectangular shank
- Nude rectangular shank
- Nude rectangular shank
- Nude rectangular shank
- Nude rectangular shank

**Cantilever**
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron

**Static Compliance**
- 30 x 10^-6 cm / dyne
- 35 x 10^-6 cm / dyne
- 35 x 10^-6 cm / dyne
- 35 x 10^-6 cm / dyne
- 35 x 10^-6 cm / dyne

**Dimensions**
- 16 (H) x 16.6 (W) x 26.5 (L) mm
- 16 (H) x 16.6 (W) x 26.5 (L) mm
- 16.0 (H) x 16.6 (W) x 26.5 (L) mm
- 17.3 (H) x 16.8 (W) x 25.4 (L) mm
- 17.3 (H) x 16.8 (W) x 25.4 (L) mm

**Vertical Tracking Angle**
- 20 degrees (IEC/DIN standard)
- 20 degrees (IEC/DIN standard)
- 20 degrees (IEC/DIN standard)
- 20 degrees (IEC/DIN standard)
- 20 degrees (IEC/DIN standard)

**Stylus Curvature Radius**
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 2.2 x 0.12 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil

**Stylus Construction**
- Nude rectangular shank
- Nude rectangular shank
- Nude square shank
- Nude square shank
- Bonded round shank

**Cantilever**
- Gold plated nude tapered boron
- Gold plated nude tapered boron
- Gold plated nude tapered boron
- Gold plated nude tapered boron
- Gold plated nude tapered boron

**Static Compliance**
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne

**Dimensions**
- 17.3 (H) x 17 (W) x 25.5 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm

**Vertical Tracking Angle**
- 21 degrees
- 21 degrees
- 21 degrees
- 21 degrees
- 21 degrees

**Stylus Curvature Radius**
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 2.2 x 0.12 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil

**Stylus Construction**
- Nude rectangular shank
- Nude rectangular shank
- Nude square shank
- Nude square shank
- Bonded round shank

**Cantilever**
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron

**Static Compliance**
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne

**Dimensions**
- 17.3 (H) x 17 (W) x 25.5 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm

**Vertical Tracking Angle**
- 21 degrees
- 21 degrees
- 21 degrees
- 21 degrees
- 21 degrees

**Stylus Curvature Radius**
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 2.2 x 0.12 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil

**Stylus Construction**
- Nude rectangular shank
- Nude rectangular shank
- Nude square shank
- Nude square shank
- Bonded round shank

**Cantilever**
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron

**Static Compliance**
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne

**Dimensions**
- 17.3 (H) x 17 (W) x 25.5 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm

**Vertical Tracking Angle**
- 21 degrees
- 21 degrees
- 21 degrees
- 21 degrees
- 21 degrees

**Stylus Curvature Radius**
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil
- 2.2 x 0.12 mil
- 1.5 x 0.28 mil
- 1.5 x 0.28 mil

**Stylus Construction**
- Nude rectangular shank
- Nude rectangular shank
- Nude square shank
- Nude square shank
- Bonded round shank

**Cantilever**
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron
- Solid platinated nude tapered boron

**Static Compliance**
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne
- 15 x 10^-6 cm / dyne

**Dimensions**
- 17.3 (H) x 17 (W) x 25.5 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 16.8 (W) x 25.7 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm
- 17.3 (H) x 17.0 (W) x 25.4 (L) mm

---

(1) Vertical tracking angle of 20 degrees is IEC/DIN standard.
(2) The abbreviation mil is equal to a thousandth of an inch - 1 mil = 0.001 inch = 0.0254 mm = 25.4 m
(3) PCOCC = Pure Copper by Ohno Continuous Casting process.
(4) When head amplifier connected.
(5) When head amplifier connected.
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<td>4.0 dB (at 1 kHz, 5 cm/sec)</td>
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<td>Static Compliance</td>
<td>13 x 10⁻⁶ cm²/dyne</td>
<td>13 x 10⁻⁶ cm²/dyne</td>
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<tr>
<td>Recommended Load Capacitance</td>
<td>100-200 pF</td>
<td>100-200 pF</td>
<td>100-200 pF</td>
<td>100-200 pF</td>
<td>100-200 pF</td>
<td>100-200 pF</td>
</tr>
<tr>
<td>Cartridge Weight</td>
<td>4.1g</td>
<td>4.1g</td>
<td>4.1g</td>
<td>4.1g</td>
<td>4.1g</td>
<td>4.1g</td>
</tr>
<tr>
<td>Mounting</td>
<td>Two M2.6 threaded inserts</td>
<td>Two M2.6 threaded inserts</td>
<td>Two M2.6 threaded inserts</td>
<td>Two M2.6 threaded inserts</td>
<td>Two M2.6 threaded inserts</td>
<td>Two M2.6 threaded inserts</td>
</tr>
<tr>
<td>Replacement Stylus</td>
<td>AT-VM89C</td>
<td>AT-VM95E</td>
<td>AT-VM95EN</td>
<td>AT-VM95ML</td>
<td>AT-VM95SH</td>
<td>AT-VM95SP</td>
</tr>
<tr>
<td>Replacement Stylus EAN Code</td>
<td>4961310146085</td>
<td>4961310146078</td>
<td>4961310146054</td>
<td>4961310146047</td>
<td>4961310146030</td>
<td>4961310146023</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Non-magnetic screwdriver; Two washers;</td>
<td>Non-magnetic screwdriver; Two washers;</td>
<td>Non-magnetic screwdriver; Two washers;</td>
<td>Non-magnetic screwdriver; Two washers;</td>
<td>Non-magnetic screwdriver; Two washers;</td>
<td>Non-magnetic screwdriver; Two washers;</td>
</tr>
<tr>
<td>Dimensions (H x W x D mm)</td>
<td>17.2 x 18.9 x 28.3</td>
<td>17.2 x 18.9 x 28.3</td>
<td>17.2 x 18.9 x 28.3</td>
<td>17.2 x 18.9 x 28.3</td>
<td>17.2 x 18.9 x 28.3</td>
<td>17.2 x 18.9 x 28.3</td>
</tr>
</tbody>
</table>
| (1) Vertical tracking angle of 20 degrees is O.D/O.D standard.
(2) The abbreviation mil is equal to a thousandth of an inch - mil = 0.001 inch = 0.0254 mm = 25.4 μm.
(3) T.P.C, Tough Pitch Copper ETP grade Copper; Electrolytic Tough Pitch Copper is about 99.9% purity of copper, has excellent electrical and thermal conductivity.
(4) AT-VM95 SP is used to play 78rpm mono records, nevertheless the AT-VM95 SP is a stereo cartridge. It allows to choose between the signal, from right or left groove in order for archiving engineer to minimise noise and distortion.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>AT81CP</th>
<th>AT85EP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cartridge EAN Code</td>
<td>4961310146535</td>
<td>4961310146528</td>
</tr>
<tr>
<td>Bundle EAN Code</td>
<td>4961310146535</td>
<td>4961310146528</td>
</tr>
<tr>
<td>Type</td>
<td>Stereo Dual Magnet</td>
<td>Stereo Dual Magnet</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 to 30,000 Hz</td>
<td>20 to 30,000 Hz</td>
</tr>
<tr>
<td>Channel Separation</td>
<td>18 dB (1 kHz)</td>
<td>20 dB (1 kHz)</td>
</tr>
<tr>
<td>Output Channel Balance</td>
<td>4.0 dB (at 1 kHz, 5 cm/sec)</td>
<td>2.0 dB (1 kHz)</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>2.5 dB (1 kHz)</td>
<td>2.0 dB (1 kHz)</td>
</tr>
<tr>
<td>Vertical Tracking Angle</td>
<td>25 degrees</td>
<td>25 degrees</td>
</tr>
<tr>
<td>Vertical Tracking Force Range</td>
<td>1.0 to 1.5 g (1.25g recommended)</td>
<td>1.0 to 1.5 g (1.25g recommended)</td>
</tr>
<tr>
<td>Stylus Shape</td>
<td>Conical</td>
<td>Elliptical</td>
</tr>
<tr>
<td>Stylus Radius</td>
<td>0.6 mil (2)</td>
<td>0.6 mil (2)</td>
</tr>
<tr>
<td>Stylus Construction</td>
<td>Bonded Round Shank</td>
<td>Bonded Round Shank</td>
</tr>
</tbody>
</table>
| Colour / body / stylus | Black | Black

(1) Vertical tracking angle of 20 degrees is O.D/O.D standard.
(4) The abbreviation mil is equal to a thousandth of an inch - mil = 0.001 inch = 0.0254 mm = 25.4 μm.
Moving coil cartridges specification for mono vintage records

<table>
<thead>
<tr>
<th>Model Number</th>
<th>AT-MONO3/SP</th>
<th>AT-MONO3/LP</th>
<th>AT-33 MONO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Horizontal Mono Moving Coil (see note*5)</td>
<td>Horizontal Mono Moving Coil (see note*5)</td>
<td>Horizontal Mono Moving Coil</td>
</tr>
<tr>
<td>Body Material</td>
<td>Aluminum/Synthetic Resin</td>
<td>Aluminum/Synthetic Resin</td>
<td>Aluminum/Synthetic Resin</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 to 100,000 Hz</td>
<td>20 to 100,000 Hz</td>
<td>20 to 100,000 Hz</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>1.2 mV at 1 kHz, 12 cm/sec</td>
<td>1.2 mV at 1 kHz, 5.0 cm/sec</td>
<td>0.35 mV at 1 kHz, 5.0 cm/sec</td>
</tr>
<tr>
<td>Vertical Tracking Angle</td>
<td>23 degrees</td>
<td>23 degrees</td>
<td>23 degrees (see note n°1)</td>
</tr>
<tr>
<td>Vertical Tracking Force Range</td>
<td>3 to 7 g (standard 5.0 g)</td>
<td>3 to 7 g (standard 2.5 g)</td>
<td>3 to 7 g (standard 2.5 g)</td>
</tr>
<tr>
<td>Stylus Shape</td>
<td>Conical bonded</td>
<td>Conical bonded</td>
<td>Conical bonded</td>
</tr>
<tr>
<td>Stylus Curvature Radius</td>
<td>2.5 mil (see note n°4)</td>
<td>0.6 mil (see note n°4)</td>
<td>0.65 mil (see note n°4)</td>
</tr>
<tr>
<td>Stylus Construction &amp; Size</td>
<td>Bonded round shank</td>
<td>Bonded round shank</td>
<td>Node square shank</td>
</tr>
<tr>
<td>Cartridge Mounting</td>
<td>Aluminum Pipe</td>
<td>Aluminum Pipe</td>
<td>Graphite Pipe</td>
</tr>
<tr>
<td>Static Compliance</td>
<td>10 x 10⁻⁶ cm / dyne</td>
<td>20 x 10⁻⁶ cm / dyne</td>
<td>20 x 10⁻⁶ cm / dyne</td>
</tr>
<tr>
<td>Dynamic Compliance</td>
<td>3.5 x 10⁻⁶ cm / dyne (100 Hz)</td>
<td>7 x 10⁻⁶ cm / dyne (100 Hz)</td>
<td>8 x 10⁻⁶ cm / dyne (100 Hz)</td>
</tr>
<tr>
<td>Recommended Load Impedance</td>
<td>PCOCC (see note n°2)</td>
<td>PCOCC (see note n°2)</td>
<td>PCOCC (see note n°2)</td>
</tr>
<tr>
<td>Recommended Load Capacitance</td>
<td>400 Ω to 47,000 Ω (see note n°6)</td>
<td>400 Ω to 47,000 Ω (see note n°6)</td>
<td>Min 100 Ω (see note n°3)</td>
</tr>
<tr>
<td>Coil Impedance</td>
<td>40 Ω (1 kHz)</td>
<td>40 Ω (1 kHz)</td>
<td>10 Ω (1 kHz)</td>
</tr>
<tr>
<td>DC Resistance</td>
<td>40 Ω</td>
<td>40 Ω</td>
<td>10 Ω</td>
</tr>
<tr>
<td>Coil Inductance</td>
<td>190 µH (1 kHz)</td>
<td>190 µH (1 kHz)</td>
<td>228 µH (1 kHz)</td>
</tr>
<tr>
<td>Cartridge Weight</td>
<td>6.8 g</td>
<td>6.8 g</td>
<td>6.9 g</td>
</tr>
<tr>
<td>Dimensions</td>
<td>16.0 (H) x 16.6 (W) x 26.5 (L) mm</td>
<td>16.0 (H) x 16.6 (W) x 26.5 (L) mm</td>
<td>16.0 (H) x 16.6 (W) x 26.5 (L) mm</td>
</tr>
<tr>
<td>Mounting</td>
<td>1/2&quot; centers</td>
<td>1/2&quot; centers</td>
<td>1/2&quot; centers</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Non-magnetic screwdriver; 1 brush; 2 washers; 2 x 20 mm mounting screws; 2 x 10 mm mounting screws; 2 x nuts; 1 plastic protector; 1 set of PCOCC lead wires AT6101</td>
<td>Non-magnetic screwdriver; 1 brush; 2 washers; 2 x 20 mm mounting screws; 2 x 10 mm mounting screws; 2 x nuts; 1 plastic protector; 1 set of PCOCC lead wires AT6101</td>
<td>Non-magnetic screwdriver; 1 brush; 2 washers; 2 x 20 mm mounting screws; 2 x 10 mm mounting screws; 2 x nuts; 1 plastic protector; 1 set of PCOCC lead wires AT6101</td>
</tr>
</tbody>
</table>

XP series audiophile DJ moving magnet cartridges specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>AT-XP7</th>
<th>AT-XP5</th>
<th>AT-XP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Moving Magnet VM Cartridge</td>
<td>Moving Magnet VM Cartridge</td>
<td>Moving Magnet VM Cartridge</td>
</tr>
<tr>
<td>Mounting</td>
<td>Half-inch</td>
<td>Half-inch</td>
<td>Half-inch</td>
</tr>
<tr>
<td>Frequency Response</td>
<td>20 to 20,000 Hz</td>
<td>20 to 18,000 Hz</td>
<td>20 to 18,000 Hz</td>
</tr>
<tr>
<td>Channel Separation</td>
<td>22 dB (1 kHz)</td>
<td>22 dB (1 kHz)</td>
<td>22 dB (1 kHz)</td>
</tr>
<tr>
<td>Output Channel Balance</td>
<td>2.5 dB (1 kHz)</td>
<td>2.5 dB (1 kHz)</td>
<td>2.5 dB (1 kHz)</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>6.0 mV at 1 kHz, 5 cm/sec</td>
<td>5.5 mV at 1 kHz, 5 cm/sec</td>
<td>5.5 mV at 1 kHz, 5 cm/sec</td>
</tr>
<tr>
<td>Vertical Tracking Angle</td>
<td>20 degree (see note n°1)</td>
<td>20 degree (see note n°1)</td>
<td>20 degree (see note n°1)</td>
</tr>
<tr>
<td>Vertical Tracking Force Range</td>
<td>2.0 to 4.0 g (standard 3g)</td>
<td>2.0 to 4.0 g (standard 3g)</td>
<td>2.0 to 4.0 g (standard 3g)</td>
</tr>
<tr>
<td>Stylus Shape</td>
<td>Elliptical bonded</td>
<td>Elliptical bonded</td>
<td>Conical bonded</td>
</tr>
<tr>
<td>Stylus Size</td>
<td>0.3 x 0.7 mil (see note n°4)</td>
<td>0.3 x 0.7 mil (see note n°4)</td>
<td>0.6 mil (see note n°4)</td>
</tr>
<tr>
<td>Stylus Construction &amp; Size</td>
<td>Bonded Round Shank</td>
<td>Bonded Round Shank</td>
<td>Bonded Round Shank</td>
</tr>
<tr>
<td>Cartridge Mounting</td>
<td>Aluminium tapered tube</td>
<td>Carbon reinforced ABS</td>
<td>Carbon reinforced ABS</td>
</tr>
<tr>
<td>Coil Impedance</td>
<td>6,700 ohms (1 kHz)</td>
<td>6,700 ohms (1 kHz)</td>
<td>6,700 ohms (1 kHz)</td>
</tr>
<tr>
<td>Static Compliance</td>
<td>20 x 10⁻⁶ cm / dyne</td>
<td>20 x 10⁻⁶ cm / dyne</td>
<td>20 x 10⁻⁶ cm / dyne</td>
</tr>
<tr>
<td>Dynamic Compliance</td>
<td>8.0 x 10⁻⁶ cm / dyne (100 Hz)</td>
<td>6.0 x 10⁻⁶ cm / dyne (100 Hz)</td>
<td>6.0 x 10⁻⁶ cm / dyne (100 Hz)</td>
</tr>
<tr>
<td>Recommended Load Impedance</td>
<td>47,000 Ω</td>
<td>47,000 Ω</td>
<td>47,000 Ω</td>
</tr>
<tr>
<td>Recommended Load Capacitance</td>
<td>100-200 pf</td>
<td>100-200 pf</td>
<td>100-200 pf</td>
</tr>
<tr>
<td>Weight</td>
<td>6.2 g</td>
<td>6.2 g</td>
<td>6.2 g</td>
</tr>
<tr>
<td>Dimensions</td>
<td>17.2 (H) x 17.8 (W) x 28.3 (L) mm</td>
<td>17.2 (H) x 17.8 (W) x 28.3 (L) mm</td>
<td>17.2 (H) x 17.8 (W) x 28.3 (L) mm</td>
</tr>
<tr>
<td>Replacement Stylus</td>
<td>ATX-XP7</td>
<td>ATX-XP5</td>
<td>ATX-XP3</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Cartridge installation screws 11 mm x 2.8 mm x 2; Washer x2, Nut x2; Non-magnetic screwdriver x1</td>
<td>Cartridge installation screws 11 mm x 2.8 mm x 2; Washer x2, Nut x2; Non-magnetic screwdriver x1</td>
<td>Cartridge installation screws 11 mm x 2.8 mm x 2; Washer x2, Nut x2; Non-magnetic screwdriver x1</td>
</tr>
</tbody>
</table>

XP Series pre-mounted cartridge-headshell sets specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>AT-XP7/H</th>
<th>AT-XP5/H</th>
<th>AT-XP3/H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>H127.5 x W124.5 x L62.4 mm</td>
<td>H127.5 x W124.5 x L62.4 mm</td>
<td>H127.5 x W124.5 x L62.4 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>15 kg</td>
<td>15 kg</td>
<td>15 kg</td>
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</table>
VM Series cartridges specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>VM760SLC</th>
<th>VM750SH</th>
<th>VM740ML</th>
<th>VM540ML</th>
<th>VM530EN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>VM Stereo</td>
<td>VM Stereo</td>
<td>VM Stereo</td>
<td>VM Stereo</td>
<td>VM Stereo</td>
</tr>
<tr>
<td><strong>Frequency Response</strong></td>
<td>20Hz to 20,000Hz</td>
<td>20Hz to 20,000Hz</td>
<td>20Hz to 20,000Hz</td>
<td>20Hz to 20,000Hz</td>
<td>20Hz to 20,000Hz</td>
</tr>
<tr>
<td><strong>Output Voltage</strong></td>
<td>50mV (1kHz, 5cm/sec.)</td>
<td>50mV (1kHz, 5cm/sec.)</td>
<td>50mV (1kHz, 5cm/sec.)</td>
<td>50mV (1kHz, 5cm/sec.)</td>
<td>50mV (1kHz, 5cm/sec.)</td>
</tr>
<tr>
<td><strong>Channel Separation</strong></td>
<td>20dB (1kHz)</td>
<td>20dB (1kHz)</td>
<td>20dB (1kHz)</td>
<td>20dB (1kHz)</td>
<td>20dB (1kHz)</td>
</tr>
<tr>
<td><strong>Output Impedance</strong></td>
<td>100mΩ</td>
<td>100mΩ</td>
<td>100mΩ</td>
<td>100mΩ</td>
<td>100mΩ</td>
</tr>
<tr>
<td><strong>Recommended Load Impedance</strong></td>
<td>47kΩ</td>
<td>47kΩ</td>
<td>47kΩ</td>
<td>47kΩ</td>
<td>47kΩ</td>
</tr>
<tr>
<td><strong>Cartridge installation screws</strong></td>
<td>5mm×2; 8mm×2 and 10mm×2</td>
<td>5mm×2; 8mm×2 and 10mm×2</td>
<td>5mm×2; 8mm×2 and 10mm×2</td>
<td>5mm×2; 8mm×2 and 10mm×2</td>
<td>5mm×2; 8mm×2 and 10mm×2</td>
</tr>
<tr>
<td><strong>Washer</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>Cartridge installation screws 5mm×2; 8mm×2 and 10mm×2</td>
<td>Cartridge installation screws 5mm×2; 8mm×2 and 10mm×2</td>
<td>Cartridge installation screws 5mm×2; 8mm×2 and 10mm×2</td>
<td>Cartridge installation screws 5mm×2; 8mm×2 and 10mm×2</td>
<td>Cartridge installation screws 5mm×2; 8mm×2 and 10mm×2</td>
</tr>
<tr>
<td><strong>Replacement Stylus</strong></td>
<td>VM760SLC</td>
<td>VM540ML</td>
<td>VM530EN</td>
<td></td>
<td></td>
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</table>

VM series pre-mounted cartridge-headshell sets specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>VM540ML/H</th>
<th>VM530EN/H</th>
<th>VM520EB/H</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>H17.3×W17.0×L60.4mm</td>
<td>H17.3×W17.0×L60.4mm</td>
<td>H21.3×W21.0×L86.4mm</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>8.0g</td>
<td>8.0g</td>
<td>6.4g</td>
</tr>
</tbody>
</table>
Replacement styli for audio-technica models availables exclusively mounted on turntables

**ATN95E**
Replacement stylus for AT95E
The ATN95E is also compatible with discontinued models AT93 and AT95.

- **27,00 €** Including VAT
- **EAN 4961310062484**
- Bonded Round Shank
- Elliptical

**ATN95Ex**
Replacement stylus for AT95EX
The ATN95Ex is also compatible with discontinued models AT93 and AT95.

- **33,00 €** Including VAT
- **EAN 5055145749381**
- Bonded Round Shank
- Elliptical

**ATN3600L**
Replacement stylus for AT3600L
This ATN3600L styl is compatible with the following cartridges: AT3600 - AT3600L - AT3601 - AT3651 - AT36550L - AT3650 - AT3626.

- **17,00 €** Including VAT
- **EAN 5055145749399**
- Bonded Round Shank
- Conical
- Tracking force for ATM3600L should be 3.5g

**ATN91**
Replacement stylus for AT91
The ATN91 is also a compatible stylus for CN5625AL and AT90 discontinued cartridges.

- **18,00 €** Including VAT
- **EAN 5055145749376**
- Bonded Round Shank
- Conical
- ABS carbon reinforced cantilever

**ATP-N2**
Replacement stylus for ATP-2
The ATP-2 was included with AT-PL120 turntable from 2005 to 2010. The ATP-N2 is also compatible with ATP-2, ATP-1 and ATP-2XN cartridges.

- **69,00 €** Including VAT
- **EAN 4961310062507**
- Bonded Round Shank
- Elliptical

---

Replacement styli for discontinued audio-technica models

**ATN91R**
Replacement stylus for AT91R
The ATN91R is also a compatible stylus for CN5625AL and AT90 discontinued cartridges.

- **22,00 €** Including VAT
- **EAN 4961310038974**
- Bonded Round Shank
- Conical
- Aluminium cantilever

---

**ATN91R**
Replacement stylus for AT91R
The ATN91R is also a compatible stylus for CN5625AL and AT90 discontinued cartridges.

- **22,00 €** Including VAT
- **EAN 4961310038974**
- Bonded Round Shank
- Conical
- Aluminium cantilever

**ATN3600L**
Replacement stylus for AT3600L
This ATN3600L styli is compatible with the following cartridges: AT3600 - AT3600L - AT3601 - AT3651 - AT36550L - AT3650 - AT3626.

- **17,00 €** Including VAT
- **EAN 5055145749399**
- Bonded Round Shank
- Conical
- Tracking force for ATM3600L should be 3.5g

---

**ATN91**
Replacement stylus for AT91
The ATN91 is also a compatible stylus for CN5625AL and AT90 discontinued cartridges.

- **18,00 €** Including VAT
- **EAN 5055145749376**
- Bonded Round Shank
- Conical
- ABS carbon reinforced cantilever

---

**ATP-N2**
Replacement stylus for ATP-2
The ATP-2 was included with AT-PL120 turntable from 2005 to 2010. The ATP-N2 is also compatible with ATP-2, ATP-1 and ATP-2XN cartridges.

- **69,00 €** Including VAT
- **EAN 4961310062507**
- Bonded Round Shank
- Elliptical

---

**ATN95Ex**
Replacement stylus for AT95EX
The ATN95Ex is also compatible with discontinued models AT93 and AT95.

- **33,00 €** Including VAT
- **EAN 5055145749381**
- Bonded Round Shank
- Elliptical

---

**ATN95E**
Replacement stylus for AT95E
The ATN95E is also compatible with discontinued models AT93 and AT95.

- **27,00 €** Including VAT
- **EAN 4961310062484**
- Bonded Round Shank
- Elliptical
## Replacement Styli Guide for Other Discontinued Audio-Technica Models

<table>
<thead>
<tr>
<th>Discontinued model</th>
<th>Original stylus shape</th>
<th>Recommended replacement</th>
<th>Alternative replacement / Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT100E</td>
<td>Elliptical</td>
<td>VMN20EB</td>
<td>Any VMN model can be selected</td>
</tr>
<tr>
<td>AT101EP</td>
<td>Elliptical</td>
<td>ATN3472SE</td>
<td>ATN3472P (Makes cartridge conical)</td>
</tr>
<tr>
<td>AT101P</td>
<td>Conical</td>
<td>ATN3472P</td>
<td>ATN3472SE (Makes cartridge elliptical)</td>
</tr>
<tr>
<td>AT103</td>
<td>Elliptical</td>
<td>VMN20EB</td>
<td>Any VMN model can be selected</td>
</tr>
<tr>
<td>AT120E</td>
<td>Elliptical</td>
<td>VMN20EB</td>
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## Headshells

Removable headshell for half-inch cartridges with azimuth and overhang adjustment

### AT-LH13/OCC

13g TechniHard™ adjustable headshell with AT6101 quad wire

- Threaded headshell avoiding use of nuts when fitting cartridge
- 7 pairs of installation screws (3mm, 5mm, 6mm, 8mm, 10mm, 12mm and 14mm)
- 1 hexagon wrench (for overhanging and tilt adjustment)

**Price:** 79.00 € Including VAT (EAN 4961310002374)

### AT-LH18/OCC

18g TechniHard™ adjustable headshell with AT6101 quad wire

- Threaded headshell avoiding use of nuts when fitting cartridge
- 7 pairs of installation screws (3mm, 5mm, 6mm, 8mm, 10mm, 12mm and 14mm)
- 1 hexagon wrench (for overhanging and tilt adjustment)

**Price:** 79.00 € Including VAT (EAN 4961310002381)

### AT-LH15/OCC

15g TechniHard™ adjustable headshell with AT6101 quad wire

- Threaded headshell avoiding use of nuts when fitting cartridge
- 7 pairs of installation screws (3mm, 5mm, 6mm, 8mm, 10mm, 12mm and 14mm)
- 1 hexagon wrench (for overhanging and tilt adjustment)

**Price:** 79.00 € Including VAT (EAN 4961310002398)

### Removable headshell for half-inch cartridges, M2.6 threaded

#### AT-LT13A

13g headshell aluminium die cast body

- Threaded headshell avoiding use of nuts when fitting cartridge
- 7 pairs of screws (3mm, 5mm, 6mm, 8mm, 10mm, 12mm and 14mm)
- Includes gold plated terminals quad wire
- 3 pairs of M2.6 threaded holes with 3.5mm distance allows 3 overhang positions adjustment
- 12.8g with cables, without screws

**Price:** 39.00 € Including VAT (EAN 4961310021964)

#### AT-MG10

10g headshell magnesium body

- Threaded headshell avoiding use of nuts when fitting cartridge
- 7 pairs of screws (3mm, 5mm, 6mm, 8mm, 10mm, 12mm and 14mm)
- Includes gold plated terminals quad wire
- 3 pairs of M2.6 threaded holes with 3.5mm distance allows 3 overhang positions adjustment
- 10g with cables, without screws

**Price:** 49.00 € Including VAT (EAN 4961310021957)

### AT6101

Cartridge to headshell PCOCC lead wires

- Perfect Crystal OCC quad wire (PCOCC high purity oxygen free copper conductors)
- Ø 0.12mm x 22 core strand construction
- 24K gold plated crimped lead tip

**Price:** 12.00 € Including VAT (EAN 4961310021850)

### AT6108

Cartridge to headshell lead wires

- 6N-OFCC 99.9999% high-purity oxygen-free copper
- Ø 0.12mm x 29 core strand construction
- 24K gold plated crimped lead tip

**Price:** 34.30 € Including VAT (EAN 4961310144227)
Headshells

Removable headshell for half-inch cartridges with slot type overhang adjustment

**AT-HS10BK**
10g headshell aluminium
die cast body - black finish

- Includes gold plated terminals quad wire
- 1 pair of 16mm screws and 1 pair of 10mm screws
- 1 pair of M2.6 nuts with plastic washer

39.00 €
Including VAT
EAN 4961310132033

**AT-HS10SV**
10g headshell aluminium
die cast body - silver finish

- Includes gold plated terminals quad wire
- 1 pair of 16mm screws and 1 pair of 10mm screws
- 1 pair of M2.6 nuts with plastic washer

29.00 €
Including VAT
EAN 4961310132026

**AT-HS6BK**
9g headshell aluminium
die cast body - black finish

- Includes terminals quad wire
- 1 pair of 10mm screws and 1 pair of 8mm screws
- 1 pair of M2.6 nuts with plastic washer

29.00 €
Including VAT
EAN 4961310132026

**AT-HS6SV**
9g headshell aluminium
die cast body - silver finish

- Includes terminals quad wire
- 1 pair of 10mm screws and 1 pair of 8mm screws
- 1 pair of M2.6 nuts with plastic washer

29.00 €
Including VAT
EAN 4961310147075

**AT-HS1**
10g dj style cartridge headshell

- Includes terminals quad wire
- 1 pair of 16mm screws and 1 pair of 10mm screws
- 1 pair of M2.6 nuts with plastic washer

12.00 €
Including VAT
EAN 5055145748282

**AT-HS3**
11.1g angled shape headshell
for straight tonearm

- Compatible with AT-LP3, AT-LP2x turntables*
- Includes terminals quad wire
- 1 pair of 16mm screws and 1 pair of 10mm screws
- 1 pair of M2.6 nuts with plastic washer

*On AT-LP2x turntable, the AT-HS3 headshell is an exclusive black finish version.

**AT-HS4**
Angled shape headshell
for straight tonearm

- Compatible with AT-LPW Series turntables
- Includes terminals quad wire
- 1 pair of 8mm, and 1 pair of 10mm screws
- 1 pair of M2.6 nuts with plastic washer

32.00 €
Including VAT
EAN 4961310147419

**P20008**
Non-magnetic screwdriver

P.O.A.
EAN 4961310139414
Turntables related accessories

AT6006R
Tonearm Safety Raiser

- Lifts tonearm automatically at the end of a record, protecting stylus tip
- Hydraulic lift with rubber lift bar operates safely and smoothly
- Can be mounted on a variety of turntables with different tonearm heights

AT6003R
Cartridges protective display

AT6181DL
Stroboscope Disc and Strobe Quartz Light

- Stroboscope disc and light kit allows you to precisely check a turntable’s rotation speed
- Yellow LED light provides a clear, accurate reading of 33⅓, 45 and 78rpm speeds
- Useful overhang guide is included on the stroboscope disc

AT6180a
Stroboscopic disc (50 Hz / 60 Hz) 33⅓ - 45rpm and overhang adjustment tool

AT618a
Disc stabilizer

- Holds record firmly in place stabilising the record
- Thick rubber construction
- 600g

AT615a
Turntable leveler

- Precise level for horizontal adjustment of turntable
- Machined aluminium housing
Cleaning accessories

AT617a
Cartridge Stylus Cleaner

34.90 €
Including VAT
EAN 4961310145460

- Specially formulated polyurethane gel gently removes dirt particles from stylus tip
- Gel remains tacky for years
- Surface is washable for repeated use

AT607a
Stylist cleaner liquid with brush applicator

12.90 €
Including VAT
EAN 4961310144289

- 10ml volume
- Applicator brush is attached to the cap for ease of use.

AT6011a
Anti-static record brush

18.00 €
Including VAT
EAN 4961310144296

- Removes harmful dust and contaminants from your vinyl records.

AT6012
Record care kit

19.90 €
Including VAT
EAN 4961310082406

Scientific record-care formula gently removes microdust and other contaminants, dissolves fingerprints, and eliminates static electricity.
- Velvet brush pad reaches into grooves
- Inner reservoir directs the record care solution into brush pad’s leading edge
- For LP/EP use only (do not use for Shellac records)
- A two-ounce bottle of A-T Record Care Solution is available separately as AT634a.

AT634a
Record care solution

9.90 €
Including VAT
EAN 4961310144296

- One bottle supplied with AT6012 record care kit

P20009
Anti-static stylus brush

P.O.A.
EAN 4961310059606

- 10ml volume
- Applicator brush is attached to the cap for ease of use.
Cartridge-making dictionary Audio-Technica’s guide to cartridge-making terminology

**33rpm**
33rpm very often denotes 12” LP Vinyl records (1949-Today), that should be played at a speed of 33³/₅rpm. Rpm stands for Rotation Per Minute.

**45 rpm**
45rpm very often denotes 7” Vinyl records (1949-Today), that should be played at a speed of 45rpm. Rpm stands for Rotation Per Minute.

**78rpm**
78rpm very often denotes 10” Shellac SP Gramophone records (1925-1950), that should be played at a speed of 78rpm. Rpm stands for Rotation Per Minute.

**Anti-skating**
When the record is in play, the friction between the stylus in the groove of the record and the length of the arm (the distance between the tip and the arm bearing) creates a force that pulls the cartidge toward the center of the disk. Anti-skating creates a force that pushes the arm toward the outer edge of the disc to compensate it. Because records don’t have a constant amplitude, a static compensation will never totally cure the problem. It is a matter of balance. Badly set anti-skating will produce channel balance and distortion issues. When the anti-skating is set too high, the left channel will distort during loud passages, while on the other side if it’s too low, the right channel will distort. Also the amount of anti-skating depends on the shape of the tip. Conical stylus tends to require more anti-skating (due to the amount of friction generated by their shape) than more complex shapes (Line contact or Micro linear).

**Azimuth** (see also Tilt)
For magnetic tape drives, azimuth refers to the angle between the tape head and magnetic tape. For phonograph cartridges, Azimuth is the angle between the surface of the record and the vertical axis of the cartridge. The difference between cartridge removable head shells: some models such as the "Technichard Series" (page 50) feature an "azimuth" adjustment. This feature is particularly useful when it is not provided by the tonearm itself.

**Bonded diamond**
Bonded diamond refers to a stylus where the diamond tip is glued on a metal shank that is itself glued into the hole of the cantilever. This construction may increase the mass of the overall tip and affect transient reproduction compared with nude stylus that are preferred and used on higher-priced models.

**Boron** (boron cantilever)
Boron is a chemical element from the metalloid family, extracted from Borax and Kernite. Its atomic number is 5. Boron is used for high-end cantilevers due to its lightweight and high-rigidity properties. It reaches a score of 9.5 of the Mohs hardness scale (for reference Diamond scores 10 and Aluminium 3).

**Cantilever** (stylus cantilever)

Stylus are principally made of three components: Stylus Tip, Stylus Cantilever, and Stylus Suspension.

**Counterweight** (Tonearm Counterweight)

**Dual Moving Magnet cartridge**
Audio-Technica’s Vertical Dual Magnet phono cartridge, unlike conventional cartridges, use the 90° V-Shape of the cutter head. The standard cutter head (used to record the vinyl master) uses two transducer coils, mounted perpendicular to each other at 45° from horizontal, to cut the channel: one in each wall of the 90° record groove. This way, the cartridge achieves accurate tracking, excellent channel separation, high definition of the stereo image and extreme clarity over the entire audio spectrum.

**Elliptical** (form factor of the diamond stylus)
An Elliptical stylus is produced starting from a Conical Stylus, then two cuts are made in order to make the stylus longer and the front to back contact narrower. The elliptical tip follows the groove modulation with more precision than a conical tip, improving frequency response, phase response, and lowering distortion, specifically in the inner turns of the record.

**Impedance**
The impedance is a measure of the total opposition that a circuit presents to alternate electric current. The output impedance of an electronic device is the impedance of its internal circuit “seen” by any device connected to its output. Impedance mismatch will work as a filter and degrade the sound making it dull or harsh depending on the setup. A general rule of thumb...
Cartridge-making dictionary Audio-Technica’s guide to cartridge-making terminology

is that the input impedance of your phono preamp (also referred to as the load impedance of your cartridge) should be 10 times the output impedance of your cartridge (also called the source impedance).

Load
When connected to a phono preamp, the cartridge forms a RLC (Resistor, Inductor, Capacitor) circuit which acts as a resonant filter emphasizing certain frequencies while reducing others. In order to achieve the most linear frequency response, manufacturers specify several load values (load capacitance, load impedance and so on). By following these specifications for the choice of the phono stage, one can achieve the best sonic results.

LP Record
LP stands for Long Play or 33rpm microgroove vinyl record format. Introduced by Columbia Records in 1948, it was adopted in the mid-fifties as a new standard by the entire record industry. It became stereophonic in the mid 60’s and is still the standard format of vinyl albums today.

Magnetic cartridge
(see cartridge)

MC phono input
MC stands for Moving Coil. A Phono Input on a preamplifier or Amplifier mentioning MC means that the characteristics of the preamplifier input stage, in terms of Input impedance, Gain and de-emphasis equalisation are such that it will allow you to use a Moving Coil Phono Cartridge by plugging it into this input.

Microlinear
(see cartridge)

Magnetic cartridge
A specific shape of a diamond stylus, Microlinear refers to a particular “ridge shape” stylus. An Audio-Technica trademark, Microlinear styli are known as Microlinear.

Micro-linear
(form factor of a stylus diamond, see Microlinear)
A specific shape of a diamond stylus, Micro Linear refers to a particular “ridge shape” stylus. An Audio-Technica trademark, Micro Linear styli are known as Microlinear.

Neodymium
Neodymium is used as a component in the alloys used to make high-strength, powerful permanent magnets (neodymium magnets). These magnets are widely used throughout the audio industry in products such as speakers, professional loudspeakers, or in-ear headphones, where low magnet mass or volume, and strong magnetic fields, are required.

Nude Shank diamond
Nude diamond refers to a stylus when the diamond glued into the hole of the cantilever is made out of one single piece of diamond. This construction as opposed to Bonded Shank (jointed) improves the mass of the overall tip and, because the vibrating signal does not have to transfer through two different materials, provides the best possible transient reproduction. Nude styli, although expensive to produce, are preferred and used on the higher priced models.

Overhang
(Cartridge overhang adjustment)
In the case of cartridges mounted on a removable headshell, it could be necessary to adjust the cartridge by several millimeters in order for the stylus to be properly aligned with the tangent of the groove. Older tonearms provide adjustment on their bases in order to perform a proper setting using a tonearm protractor alignment system. Most modern tonearms do not provide this feature. In such a case, it is important to be able to adapt the distance between contact point of the stylus and axis of the tonearms with the Overhang adjustment provided by the cartridge headshell.

Para-toroidal coil
Para-toroidal coils are used on high-end Moving Magnet Audio-Technica cartridges, providing better channel separation, channel balance and improved transient response. Para-toroidal inductors are passive electronic components, widely used for transformer construction. The inductor with a closed-loop core can have a higher magnetic field and thus higher inductance and Q factor than similarly constructed coils with a straight core. The advantage of the toroidal shape is that due to its symmetry, the amount of magnetic flux that escapes outside of the core (leakage flux) is minimum; therefore it radiates less electromagnetic interference to nearby circuits or equipment.

Phono Preamp
Denotes a preamplifier with an input or a series of inputs capable of handling the output from a Phono cartridge. As opposed to a “standard” line input preamp such as a Microphone input preampifier, the Phono Preamp will provide the necessary gain, Input impedance matching to the output impedance of the cartridges, and the de-emphasis equalisation needed to support the signal originated from the phono cartridge playing a record. In the case of a Vinyl record, the equalisation will usually be RIAA.

Phono Cartridge
(see Cartridge)

Phono input
Denotes the pair of input connectors (L&R) of the Phono Preamp.

Pole Piece
The pole piece is a structure composed of material of a high magnetic permeability that serves to direct the magnetic field produced by the magnet. A pole piece attaches to and, in a sense, extends a pole of the magnet, hence the name.

Radius
(Stylus Radius)
The radius of a stylus is the distance (R) in either mil (thousandth of an inch) or μm (micro, 10^-6, of a meter). The conical stylus has a unique Radius which varies from 0.6 to 0.7 mil for Vinyl records. (2, 2.5, 3, or 3.5mil for shellac records). The elliptical stylus has two radii, R1 and R2, for the front and side. Standard elliptical Stylis are around 0.3 x 0.7 mil. Due to the complexity of line contact and Microlinear stylis, their radius value is not always an accurate description of their shape and size.

Moving Coil cartridges
The MC design is a tiny electromagnetic generator, but as opposed to MM design, the 2 coils are attached to the stylus (the moving part), and move within the field of a fixed permanent magnet. The coils are much smaller than MM cartridge coils and made from very thin copper wire.

Moving Magnet cartridges
The MM design is a tiny electromagnetic generator, but as opposed to the MC (moving coil) design the stylus cantilever carries a pair of small permanent magnets. Those magnets are positioned between two sets of fixed coils forming the tiny electromagnetic generator. As the magnet vibrates in response to the stylus following the record groove, it induces a tiny current in the coils.

Neural Shank diamond
Nude diamond refers to a stylus when the diamond glued into the hole of the cantilever is made out of one single piece of diamond. This construction as opposed to Bonded Shank (jointed) improves the mass of the overall tip and, because the vibrating signal does not have to transfer through two different materials, provides the best possible transient reproduction. Nude styli, although expensive to produce, are preferred and used on the higher priced models.

Output Voltage
(of a cartridge)
Amplitude in mV of the electrical signal delivered by the cartridge for a given standard program material of the record groove. Knowing the Output voltage is an important factor: it will inform of the characteristic of the Phono input needed in order to accommodate a given cartridge. Output voltages may vary from under 0.1mV for the least efficient Moving Coil models on the market, up to 5mV for very efficient Moving Magnet cartridges. Such differences of more than 30dB shows that when selecting a cartridge, the selection of the associated preamplifier, with or without step-up transformer, is essential.

MM input
MM stands for Moving Magnet: an MM input denotes the input stage of a preamplifier able to handle the signal of a Moving Magnet phono cartridge and the MM input also has an input impedance suitable for the output impedance of MM cartridges.

Monaural
Monophonic sound reproduction (often called mono) is single-channel audio program material or single channel audio reproduction. Monaural recording on vinyl has been replaced by stereo sound during the mid 60’s. 78 rpm records and Vinyl records from 1952 to 1960 are Monaural. Stereo sound on vinyl records was introduced in 1958.
Cartridge-making dictionary  Audio-Technica’s guide to cartridge-making terminology

Replacement Stylus
Stylus assembly of Moving Magnet cartridges are field replaceable. When the diamond is worn out, (between 600 and 1000 hours) or if the cantilever becomes damaged, the stylus assembly needs to be replaced. The Stylus assembly represents between 60% to 80% of the cost of a complete cartridge (depending on the nature of the diamond tip). It makes sense, not only for economic reasons but also to avoid work on the cartridge wiring or mechanical position, to replace only the Stylus assembly instead of the complete cartridge.

RIAA
RIAA stands for: Recording Industry Association of America (RIAA), the trade organization that represents the recording industry in the United States. Early RIAA standards included the RIAA equalization curve, the format of the stereophonic record groove and the dimensions of records.

RIAA equalization
A specification for the recording and playback of phonograph records. The purpose of the equalization is to permit greater recording times, improve sound quality, and to reduce the groove damage that would otherwise arise during playback. RIAA equalization is a form of pre-emphasis on recording and de-emphasis on playback. A recording is made with the low frequencies reduced and the high frequencies boosted, and on playback the opposite occurs.

RIAA input
(Also known as Phono input)
Input of a preamplifier section providing the de-emphasis equalization needed to support the signal originating from a phono cartridge playing a vinyl record. (Note: Most 78rpm shellac records produced after 1942 can be played with RIAA equalization, nevertheless we recommend you check the nature of the pre-emphasis used by the record company.)

Round Shank
Specifically the shape of the shank where the tip is fitted. Round shank is generally used for shapes that require no or minimal orientation (round, conical elliptical).

Shellac record
Shellac records are also described as 78rpm records or SP (Short Play)

Shibata
The Shibata stylus has two radii, similar to an elliptical stylus. However, the radii of a Shibata stylus are longer and more narrow. This allows for more surface contact and effective pick-up of ultra-high frequencies with less groove stress and distortion.

SP record
(see Shellac record)
SP stands for Short Play denoting 78rpm Shellac records, as opposed to LP (Long Play) denoting 33 1/3 rpm micro-groove vinyl records.

Special Line Contact
(form factor of specific stylus diamonds) Audio-Technica uses Special Line Contact shape stylus on several high-end cartridge styli. The tip of the diamond is such that it allows a contact surface between 50 and 75μm². The shape is “similar” to other diamond tips known as Shibata.

Spherical (diamond, see conical)

Square Shank
Square shank stylus cost more than round shank to make but mounting them in laser cut holes in the cantilever locks them precisely in correct alignment with the record groove. This is the reason why they are used for shapes that need a precise orientation (Line Contact, Microlinear).

Step-up Transformer
An MC cartridge has both a low output voltage (generally below 0.5mV) and a low output impedance compared to a MM cartridge. The role of the step-up transformer is to raise the output voltage while, at the same time, match the required impedance between your cartridge and the phono preamplifier.

Stylus Holder (Stylus Assembly)
The plastic part of an interchangeable stylus that holds the cantilever and the vibrating part, both forming the Stylus assembly. On Moving magnet cartridges, the removable stylus assembly is held in place on the cartridge casing.

Tilt (see also Azimuth)
Tilt is the angle between the surface of the record and the vertical axis of the cartridge. This angle should be 90° in order to ensure optimal channel balance.

Transient Response
The transient response is the behaviour of a system when a signal is changing from one value to a specified higher value. Rise time (the time required for the signal to change) and Overshoot are among the most important parameters entering under the generic definition, Transient response. A transducer having a good transient response will result in perceiving that the music material is sharp, with fast accelerations, capable of reproducing accurately and in a realistic manner the fastest impulses of musical instruments. On a record, the signal is present in the groove, the cartridge is transforming the mechanical groove of the record into an electrical current, and the transient response of the cartridge will essentially respond to fast changing sound waves present into the groove. Under Transient response, the capacity of the moving parts such as cantilever/stylus/tension spring assembly to be controlled and not to produce parasitic oscillations is also part of the transient response quality. The capacity of the system after changing to revert to its equilibrium is also important.

Vertical Tracking Angle
Vertical Tracking Angle is the angle between the record surface and the axis “cantilever-pivot-point” to “stylus-contact-area”.

Vinyl
(see also LP record)
Vinyl for most people denotes a 12 inch, 33 1/3 rpm, micro-groove LP record. The word Vinyl comes from the chemical form of the material used to produce LP records: vinyl chloride. An important industrial application of this molecule is PVC (Poli Vinyl Chlorid), the plastic commonly known as vinyl. Vinyl was used for the first time to produce records by Columbia in 1946. During the early 50’s the Vinyl record replaced the 78rpm Shellac SP record as the standard.

VM™ (see Dual Magnet cartridge)

Tracking Force
To play back a vinyl disc, the stylus must make good contact with the walls of the record groove. Excessive down force (tracking force or tracking weight) will both wear and not guarantee that the stylus will perfectly follow the record groove. Audio-Technica specifies the tracking force, for each cartridge, as a range of recommended values in grams. A cartridge given insufficient tracking force is more likely to cause damage to the groove wall than one whose tracking weight is set at the high-end of the recommended range. The cartridge could lose contact with the groove wall, or “jump”, causing damage to the record as it bounces trying to regain contact.

Tracking weight
(see Tracking force)
Understanding the sizes and shapes of Audio-Technica stylus tips and contact areas in the record groove for microgroove Long Play vinyl records (LP)

<table>
<thead>
<tr>
<th>Stylus curvature radius</th>
<th>Stylus shape</th>
<th>Stylus front view</th>
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</thead>
<tbody>
<tr>
<td>0.6mil</td>
<td>Conical</td>
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<tr>
<td>0.2 x 0.7mil</td>
<td>Elliptical</td>
<td><img src="2" alt="Elliptical" /></td>
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<tr>
<td>0.3 x 0.7mil</td>
<td>Elliptical</td>
<td><img src="3" alt="Elliptical" /></td>
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<tr>
<td>2.2 x 0.12mil</td>
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<tr>
<td>2.7 x 0.26mil</td>
<td>Shibata</td>
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<tr>
<td>1.5 x 0.28mil</td>
<td>Special Line Contact</td>
<td><img src="6" alt="Special Line Contact" /></td>
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</table>

Audio-Technica moving coil cartridges
- AT33MONO (0.65mil)
- AT-MONO3/LP
- AT-F7
- AT33EV
- AT-F2
- AT-OC9ML/II
- AT33PTG/II
- AT33Sa
- AT-ART1000
- AT-ART7 - AT-ART9
- AT-OC9/III

Audio-Technica VM Series cartridges
- VM610MONO
- VM510CB
- VM530EN
- VM520EB
- VM740ML
- VM840ML
- VM750SH
- VM760SLC

Audio-Technica VM95 Series cartridges
- AT-VM95C
- AT-VM95EN
- AT-VM95ML
- AT-VM95SH

Audio-Technica moving magnet DJ cartridges
- AT-XP3
- AT-XP5 - AT-XP7

Audio-Technica moving magnet P-mount cartridges
- AT81CP
- AT85EP

Dimensions (see horizontal cross section)
- R=0.6mil
- R=0.7mil
- R=0.7mil
- R=2.2mil
- R=2.7mil
- R=1.5mil

Contact surface on record groove (stylus side view)
- D1/D2=1
- D1/D2=1.85
- D1/D2=1.60
- D1/D2=2.25
- D1/D2=3
- D1/D2=6

Approximative contact dimensions ratio
1) D2 represents the contact dimension at the horizontal plane while D1 shows the contact dimension at the vertical plane. These two dimensions indicate the contact area between the record groove walls and the stylus tip. D2 must be as small as possible to track small groove variations (high frequency). The total contact area should be as large as possible to minimize record wear and maximize accurate reproduction. The larger the area, the smaller the pressure from the cartridge on the record; as opposed to the smaller the area, the more pressure is applied on a specific point of the groove, leading to record wear.

We can see from the above table that the Line Contact and Microlinear shapes offer a smaller horizontal contact area leading to superior precision and high frequency transcription, while offering a larger contact area than conical or elliptical styli due to a taller vertical contact area minimizing record wear.

Understanding the styli sizes of Standard Play Shellac records (SP)

<table>
<thead>
<tr>
<th>Stylus sizes</th>
<th>Stylus shape</th>
<th>Stylus front view</th>
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<td>2.5mil</td>
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</table>

Audio-Technica moving coil SP cartridges
- AT-MONO3/SP

Audio-Technica VM Series SP cartridges
- VM670SP

Audio-Technica VM95 Series SP cartridges
- AT-VM95SP

Illustration of different sizes between two typical conical styli:
- on the left, 3mil radius SP stylus for 78rpm records
- on the right, typical 0.6mil conical LP stylus for 33 and 48rpm records

LP and SP record grooves are represented at the same scale
- groove width of LP record 0.0025”, groove width of SP record 0.0070”
- groove depth of LP record 0.0013”, groove depth of SP record 0.0029”
# Alphanumeric product listing

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Established in 1962, Audio-Technica’s first product was the AT1 phono cartridge.

Early stereo phono cartridge production line in Shinjuku, Tokyo, Japan.

The quality and musicality of the Audio-Technica phono cartridges of today is the result of 56 years of analogue heritage, the ongoing dedication of our design engineers and continued handcraftsmanship of our production teams.

Audio-Technica Corporation are proud to be both a co-founded and sponsor of The Analogue Foundation which is creating opportunities for more people to discover, learn and simply enjoy the qualities of analogue. Through seminars, productions, collaborations and events, the Analogue Foundation seeks to share both the experience and passion of analogue. Pictured is the Listening Station, a collaboration between the Analogue Foundation and luxury heritage luggage brand Globe-Trotter, which travels the world fitted with specially selected Audio-Technica analogue audio products, offering people a high-end vinyl listening experience.

Find out more at http://www.analoguefoundation.com
Audio-Technica Fukui, Japan, opened 2010
Housing 170 employees & engineers, the main production plant for Audio-Technica phono cartridges.