VM Cartridges Series Overview



VM760SLC



VM750SH



VM740ML

700 Series

For superior sound with superfine fidelity.



VM540ML



VM530EN



VM520EB



VM510CB

500 Series

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



VM610MONO



VM670SP

600 Series

For special applications, designed to bring out the best sound of mono and 78 rpm records



Special Line Contact



Shibata

Line Contact Styli



MicroLine®



Elliptical Nude



Elliptical Bonded

Elliptical Styli



Conical Bonded



Conical Styli

Ideal selections for ideal sounds

Styli Shapes

VM cartridge series renewed. Lineup provides ample selections to meet your needs.

Conical Styli

The benefit of conical styli, even if the cartridge is 'lean', is the ball surface of the stylus touches the groove of vinyl records precisely. Due to its stability, it has been used widely in radio stations.



Elliptical Styli

To reduce the tracking distortion and pinch-effect of a conical stylus, the elliptical stylus is made with a smaller effective radius to overcome these two conditions and provide more detailed audio content.



Line Contact Styli

(Special Line Contact, Shibata, MicroLine®)

Having a greater tracking ability than an elliptical stylus, the line contact styli will have a deeper contact area to the vinyl record groove. This enables the stylus to fully reproduce all content of the vinyl record with reduced stylus and groove wear.



Cartridge Bodies

Combine any one of 3 cartridges with any one of 7 styli for a fully customisable analogue sound experience.

700 Series — High-end model fitted with the die-cast aluminium alloy housing. The body reduces unwanted vibration and enhances the superior sound quality of high-performance line contact styli.

500 Series — Standard cartridge body fitted with the paratoroidal coils, centre shield plate, and the same 6N-OFC coil wire used in the 700 series.

600 Series — Specialised mono body with internal wiring dedicated to monaural sound.



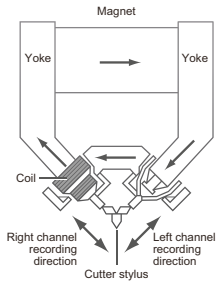
Features & Mechanism

Perfecting sounds of world renown in purely original ways

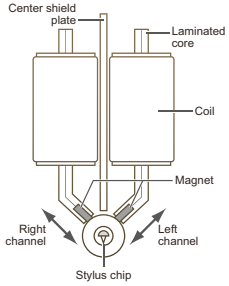
Analogous to the cutter head

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 internationally-patented 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 ensures outstanding channel separation, extended frequency response and superb tracking.

Basic structure of the cutter head



Basic structure of the VM cartridges



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, left and right channels should be connected. Mono body on which left and right terminals are connected internally reduces record noise which is primarily in the vertical direction and obtains highly focused 'centre' sound image compared with stereo bodies.

Elliptical & Conical Styli

Elliptical Nude

Nude Round Shank



VM530EN

DUAL MOVING MAGNET
STEREO CARTRIDGE



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.

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



VM530EN/H

DUAL MOVING MAGNET STEREO
CARTRIDGE WITH HEADSHELL

Elliptical Bonded

Bonded Round Shank



VM520EB

DUAL MOVING MAGNET
STEREO CARTRIDGE



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

- 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/H

DUAL MOVING MAGNET STEREO
CARTRIDGE WITH HEADSHELL

Conical Bonded

Bonded Round Shank



VM510CB

DUAL MOVING MAGNET
STEREO CARTRIDGE

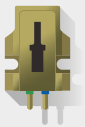


Entry-level VM cartridge model equipped with a conical bonded stylus. The round stylus is less likely to be affected by placement and boasts stable tracing performance.

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

Replacement & Upgrade Styli

Even the finest diamond stylus becomes worn after an extended period of play. The styli in our VM cartridges are no different. But it is easy to replace the stylus and continue to use your cartridge. Our renewed VM cartridges have 7 styli and 3 types of bodies to choose from. Not only is it not necessary to buy an entirely new cartridge, but you can also enjoy the experience of upgrading your stylus or trying a new cartridge/stylus combination.

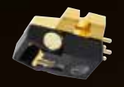
Cartridge Body	Product	 Special Line Contact Stylus **VMN60SLC**	 Shibata Stylus **VMN50SH**	 MicroLine® Stylus **VMN40ML**	 Elliptical Nude Stylus **VMN30EN**	 Elliptical Bonded Stylus **VMN20EB**	 Conical Bonded Stylus **VMN10CB**	 3mil Conical Bonded Stylus **VMN70SP**
 **VM700 Body**	**VM760SLC**	**Standard Replacement**	**Becomes VM750SH**	**Becomes VM740ML**	Compatible	Compatible	Compatible	*(1)
	VM750SH	**Becomes VM760SLC**	**Standard Replacement**	**Becomes VM740ML**	Compatible	Compatible	Compatible	*(1)
	VM740ML	**Becomes VM760SLC**	**Becomes VM750SH**	**Standard Replacement**	Compatible	Compatible	Compatible	*(1)
 **VM500 Body**	**VM540ML**	Compatible	Compatible	**Standard Replacement**	**Becomes VM530EN**	**Becomes VM520EB**	**Becomes VM510CB**	*(1)
	VM530EN	Compatible	Compatible	**Becomes VM540ML**	**Standard Replacement**	**Becomes VM520EB**	**Becomes VM510CB**	*(1)
	VM520EB	Compatible	Compatible	**Becomes VM540ML**	**Upgrade to VM530EN**	**Standard Replacement**	**Becomes VM510CB**	*(1)
	VM510CB	Compatible	Compatible	**Becomes VM540ML**	**Upgrade to VM530EN**	**Upgrade to VM520EB**	**Standard Replacement**	*(1)
 **VM600 Body**	**VM670SP**	*(2)	*(2)	*(2)	*(2)	*(2)	**Becomes VM610MONO**	**Standard Replacement**
	VM610MONO	Compatible	Compatible	Compatible	*(2)	*(2)	**Standard Replacement**	**Becomes VM670SP**

(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 L+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 line contact 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.

*Lifetime of the replacement stylus is approx. 300 to 500 hours for Conical, 300 hours for Elliptical, 1000 hours for MicroLine®, and 800 hours for Shibata and Special Line Contact.

Specifications



	VM760SLC
Type	VM
Frequency response	20 to 30,000Hz
Output voltage	4.0mV (1kHz, 5cm/sec.)
Channel separation	30dB (1kHz)
Output balance	1.0dB (1kHz)
Tracking force	1.8 to 2.2g (2.0g standard)
Coil impedance	2.7k ohms (1kHz)
DC resistance	800 ohms
Load impedance	47k ohms
Load capacitance	100 to 200pF
Coil inductance	460mH (1kHz)
Static compliance	40×10 $^{-6}$ cm/dyne
Dynamic compliance	10×10 $^{-6}$ cm/dyne (100Hz)
Stylus	Nude Special Line Contact (1.5×0.28mil)
Cantilever	Aluminium tapered pipe
Vertical tracking angle	23°
Dimensions	H17.3×W17.0×D28.2mm
Weight	8.0g
Replacement stylus (sold separately)*»	VMN60SLC
Accessories	Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 Non-magnetic screwdriver×1 Brush×1 Lead wire set ×1



	VM750SH
Type	VM
Frequency response	20 to 27,000Hz
Output voltage	4.0mV (1kHz, 5cm/sec.)
Channel separation	30dB (1kHz)
Output balance	1.0dB (1kHz)
Tracking force	1.8 to 2.2g (2.0g standard)
Coil impedance	2.7k ohms (1kHz)
DC resistance	800 ohms
Load impedance	47k ohms
Load capacitance	100 to 200pF
Coil inductance	460mH (1kHz)
Static compliance	40×10 $^{-6}$ cm/dyne
Dynamic compliance	10×10 $^{-6}$ cm/dyne (100Hz)
Stylus	Nude Shibata (2.7×0.26mil)
Cantilever	Aluminium tapered pipe
Vertical tracking angle	23°
Dimensions	H17.3×W17.0×D28.2mm
Weight	8.0g
Replacement stylus (sold separately)*»	VMN50SH
Accessories	Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 Non-magnetic screwdriver×1 Brush×1 Lead wire set ×1



	VM740ML
Type	VM
Frequency response	20 to 27,000Hz
Output voltage	4.0mV (1kHz, 5cm/sec.)
Channel separation	28dB (1kHz)
Output balance	1.0dB (1kHz)
Tracking force	1.8 to 2.2g (2.0g standard)
Coil impedance	2.7k ohms (1kHz)
DC resistance	800 ohms
Load impedance	47k ohms
Load capacitance	100 to 200pF
Coil inductance	460mH (1kHz)
Static compliance	40×10 $^{-6}$ cm/dyne
Dynamic compliance	10×10 $^{-6}$ cm/dyne (100Hz)
Stylus	Nude MicroLine (2.2×0.12mil)
Cantilever	Aluminium tapered pipe
Vertical tracking angle	23°
Dimensions	H17.3×W17.0×D28.2mm
Weight	8.0g
Replacement stylus (sold separately)*»	VMN40ML
Accessories	Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 Non-magnetic screwdriver×1 Brush×1 Lead wire set ×1



	VM540ML
Type	VM
Frequency response	20 to 27,000Hz
Output voltage	4.0mV (1kHz, 5cm/sec.)
Channel separation	28dB (1kHz)
Output balance	1.0dB (1kHz)
Tracking force	1.8 to 2.2g (2.0g standard)
Coil impedance	2.7k ohms (1kHz)
DC resistance	800 ohms
Load impedance	47k ohms
Load capacitance	100 to 200pF
Coil inductance	460mH (1kHz)
Static compliance	40×10 $^{-6}$ cm/dyne
Dynamic compliance	10×10 $^{-6}$ cm/dyne (100Hz)
Stylus	Nude MicroLine (2.2×0.12mil)
Cantilever	Aluminium tapered pipe
Vertical tracking angle	23°
Dimensions	H17.3×W17.0×D28.2mm
Weight	8.0g
Replacement stylus (sold separately)*»	VMN40ML
Accessories	Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 Non-magnetic screwdriver×1 Brush×1 Lead wire set ×1

VM cartridges with Headshell



	VM540ML/H
Dimensions	H21.3×W21.0×D60.4mm
Weight	16.8g



	VM530EN/H
Dimensions	H21.3×W21.0×D60.4mm
Weight	16.8g



	VM520EB/H
Dimensions	H21.3×W21.0×D60.4mm
Weight	16.8g



VM530EN
VM
20 to 25,000Hz
4.5mV (1kHz, 5cm/sec.)
27dB (1kHz)
1.5dB (1kHz)
1.8 to 2.2g (2.0g standard)
2.7k ohms (1kHz)
800 ohms
47k ohms
100 to 200pF
460mH (1kHz)
35×10 $^{-6}$ cm/dyne
8×10 $^{-6}$ cm/dyne (100Hz)
Nude elliptical (0.3×0.7mil)
Aluminium pipe
23°
H17.3×W17.0×D28.2mm
6.4g
VMN30EN
Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 Non-magnetic screwdriver×1 Brush×1 –



VM520EB
VM
20 to 23,000Hz
4.5mV (1kHz, 5cm/sec.)
27dB (1kHz)
1.5dB (1kHz)
1.8 to 2.2g (2.0g standard)
2.7k ohms (1kHz)
800 ohms
47k ohms
100 to 200pF
460mH (1kHz)
35×10 $^{-6}$ cm/dyne
8×10 $^{-6}$ cm/dyne (100Hz)
Bonded elliptical (0.3×0.7mil)
Aluminium pipe
23°
H17.3×W17.0×D28.2mm
6.4g
VMN20EB
Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 – – –



VM510CB
VM
20 to 20,000Hz
5.0mV (1kHz, 5cm/sec.)
25dB (1kHz)
1.5dB (1kHz)
1.8 to 2.2g (2.0g standard)
2.7k ohms (1kHz)
800 ohms
47k ohms
100 to 200pF
460mH (1kHz)
35×10 $^{-6}$ cm/dyne
8×10 $^{-6}$ cm/dyne (100Hz)
Bonded conical (0.6mil)
Aluminium pipe
23°
H17.3×W17.0×D28.2mm
6.4g
VMN10CB
Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 – – –



VM670SP
VM
20 to 20,000Hz
3.0mV (1kHz, 5cm/sec.)
–
–
4.5 to 5.5g (5.0g standard)
1.4k ohms (1kHz)
400 ohms
47k ohms
100 to 200pF
230mH (1kHz)
15×10 $^{-6}$ cm/dyne
2.0×10 $^{-6}$ cm/dyne (100Hz)
Bonded conical (3mil)
Aluminium pipe
23°
H17.3×W17.0×D28.2mm
6.4g
VMN70SP
Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 – – –



VM610MONO
VM
20 to 20,000Hz
3.0mV (1kHz, 5cm/sec.)
–
–
1.8 to 2.2g (2.0g standard)
1.4k ohms (1kHz)
400 ohms
47k ohms
100 to 200pF
230mH (1kHz)
35×10 $^{-6}$ cm/dyne
8×10 $^{-6}$ cm/dyne (100Hz)
Bonded conical (0.6mil)
Aluminium pipe
23°
H17.3×W17.0×D28.2mm
6.4g
VMN10C
Cartridge installation screws 5mm×2 and 10mm×2 Washer×2 Hexagon nut×2 – – –

*In this series, we offer replacement styli with different stylus tip structures and point shapes.
For more details, please refer to «Replacement Stylus Lineup» on page 10.
Specifications are subject to change without notice due to improvements.