

Ortofon MC Windfeld Ti

A decade ago, Ortofon paid homage to its retiring design chief with a pick-up bearing his name. A hard act to follow, this new successor has had more than a makeover
 Review: **David Price** Lab: **Paul Miller**

Back in the harvest years of the vinyl LP when practically everyone used a turntable to listen to music, hi-fi hobbyists would talk in terms of a pick-up's 'sound'. We knew the score – Supexes were rich and warm, Shures were fast and punchy, and Ortofons were smooth and detailed. There was a certain Scandinavian tidiness to them, allied to real refinement and musical insight.

DANISH INNOVATION

For that, you can thank Per Windfeld, the company's designer from 1976 until 2006. He gave the Danish brand a family sound that spanned everything from the humble VMS20E moving-magnet to the loftiest MC Rohmann, taking in the classic Concordes to the modern Kontrapunkts with over 40 more models along the way. No surprise then that, upon his departure, his successor chose to make a commemorative moving-coil. Leif Johannsen, Chief Officer of Acoustics and Technology, came up with the MC Windfeld precisely ten years ago [*HFN* Jan '08].

This was effectively 'Ortofon's greatest hits', an amalgam of many of Per Windfeld's innovations found in earlier designs. It had an extremely low mass, large vertical-contact Replicant 100 diamond stylus – said to closely resemble the profile of a cutting stylus – affixed to a boron cantilever. The coils were wound with Ortofon's 'Acurum' gold-plated, 6N oxygen-free copper wire and sat inside a stainless steel and alloy body with the initials PW inscribed in gold. The generator system was based on a powerful but compact neodymium magnet, thus reducing the cartridge's weight. It was a class act, and one that the new £3100 MC Windfeld Ti has to better...

The new model is partly inspired by the work on the MC A95, named in celebration

of Ortofon's 95th anniversary [*HFN* Sep '09]. It still has much in common with the first Windfeld, yet is more than just a quick mid-life makeover. The old stylus and cantilever magnet system are retained, but the new 'Ti' brings a major upgrade to the cartridge body. In addition to the alloy and stainless steel outer section, there is now a titanium inner structure produced by a novel engineering process called Selective Laser Melting (SLM) [see boxout, facing page].

The original's coils are retained, but a new and specially designed armature – inspired by that MC A95 design – is said to achieve extreme precision in each coil turn. The company's Field Stabilising Element (FSE) – a small cylinder of conductive material strategically placed inside the magnet system – is also kept for this new model and this is said to keep the force field stable regardless of armature movement. As before, cantilever travel is carefully controlled by the company's Wide Range Damping (WRD) system, where a small but dense platinum disc is sandwiched between two rubber absorbers.

The body is new, and designed for even better mechanical rigidity than its predecessor. Most of it is a black anodised aluminium alloy with a central titanium section, and this gives a classier look than the original. A new shield is fitted to the underside for greater mechanical rigidity, while on top you will find three new hard, well-defined contact points, designed to be the mechanical interface points between the cartridge body and headshell.

Ortofon claims a mass of 11g, which is not inconsiderable, albeit a useful 2g lighter than the original model. Compliance is said to be 13µm/mN, and the output is rated is 0.2mV – very low in the great scheme of modern MC cartridges [see PM's Lab Report, p55]. Prospective purchasers will need to check that they have a phono preamplifier with adequate sensitivity and low noise.

'The new Windfeld satisfies your soul by engaging your brain'

SIMPLE SET-UP

The MC Windfeld Ti is reasonably easy to install into a tonearm, although the recessed rear output pins will require petite fingers and/or the use of a pair of tweezers to fit the wires and tags. Fortunately the stylus guard is a good secure design that remains firmly in place as you fiddle your way through the mounting process. The bottom side sections of the pick-up are straight, making it easier to use in conjunction with an alignment protractor than some rival designs with more rounded bodies.

It balanced up easily enough, and after some experimentation I concurred with Ortofon's recommended 2.3g tracking force. Go lighter and the tracking deteriorates slightly, go heavier and things sound a little less lively. During the



RIGHT: Tracking performance is as good as you'll get from a low compliance MC thanks to the excellent WRD suspension, rigid boron cantilever and extended (line) contact 'Replicant 100' stylus. Output is a low 200µV though...



LEFT: The two-part titanium body with alloy 'overcoat' includes threaded mounting holes, but note the three points of contact on the cartridge top. The exposed cantilever demands caution but cueing is made much easier

[RCA 1503] immediately showed... This is not a great recording and my 1960s pressing is, as antique dealers would put it, 'distressed'. Yet the MC Windfeld Ti appeared able to 'magic' its way past the damaged record surface and get right into the sound, offering a powerful central image with a bold and assertive quality. The stereo image pushed out wide and there was a fair degree of depth too. This cartridge has quite an 'architectural' sound with everything clearly in proportion and little added or taken away. Confident, stable, poised and precise, it's an excellent moving-coil design.

But, as I have said, there are more emotional and gushing cartridges out there, ones that make you feel as if you have had one glass of red too many as the evening rolls on. The Windfeld Ti however gives a more studied approach – it satisfies your soul by engaging your brain, delighting in digging up all that information with forensic zeal. It was able to convey the song's harmonies with great delicacy, yet never quite seemed to get lost in the music as some rivals can.

ALWAYS IN CONTROL

This pick-up is always in control and given (by way of contrast) a fine classic analogue recording like Wings' 'London Town' [from *London Town*; MPL Communications Inc 8X-PAS 10012], and the new Windfeld flies. This late 1970s Abbey Road track sounded better than I'd heard it for a very long time. What really struck home was the timbre of Paul McCartney's voice – here with a wonderful richness and tactility, and a lustre that appeared so much less processed than I had become used to. Likewise, the timbre of the backing vocals, bass guitar and piano work was gorgeous to behold.

This is a dreamy, 'floaty' track and the MC Windfeld Ti didn't detract from this aspect of it one bit, yet still pulled me in more deeply than usual. I was struck by how plaintive the lead vocal sounded, lightly tinged with melancholy. The overall effect was really quite special.

So even if this is not the most dramatic of performers, it will nonetheless still serve up a satisfying musical performance. ➔

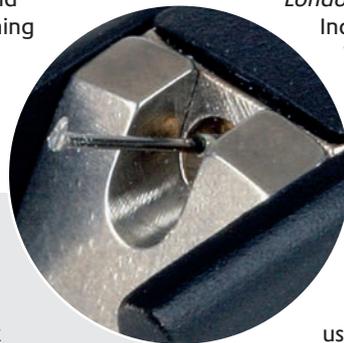
review period it found itself in several tonearms, from an Origin Live Enterprise to a classic Audio-Technica AT-1000.

INSIGHT AND RESOLUTION

By any measure this is a superb-sounding MC. It is distinctively 'Ortofon' with the company's typically very balanced and methodical way of making music, yet it offers far greater insights than you might expect from such an even-handed device. One would never confuse it with a fatter, sweeter sounding van den Hul, or a more clinical and analytical Audio-Technica. Instead it treads a middle way that's rarely experienced at this end of the MC market. Some might criticise it for a certain lack of character, yet surely it is for the music to have the colour, and not the pick-up?

So on first acquaintance the MC Windfeld Ti can seem just slightly bland, yet the more you listen the more you find yourself being pulled in. It's less of a music-maker, more of a 'gatekeeper' to the recording, one might say. There's no artifice about it, so you don't get an overly bulbous bass to power the song along, or a biting treble to keep you on the edge of your seat. Instead it is a translucent-sounding design, able to convey the vibrancy of a good recording.

Without sensationalising the music, its resolution and insight is really something else, as my ageing 7in single of The Mamas & the Papas' 'California Dreamin'



TITANIUM TECH

For decades we have seen constant new thinking on cartridge body materials, with all kinds of wood, alloys and plastics used – and sometimes even skeletal designs with no conventional body at all. For the MC Windfeld Ti, Ortofon has chosen to stick with the alloy and stainless steel construction seen in its predecessor, but add a new inner structure made of titanium (hence the suffix), using a process the company calls Selective Laser Melting (SLM). First seen in 2008's MC A90 [HFN Sep '09], the idea is to present the strongest and most rigid cartridge assembly to the tonearm's headshell. The thinking is that any lost energy here can never be recovered, resulting in a diminution of dynamics and detail. The unique SLM process welds fine particles of titanium together, layer upon layer, to construct a single piece body devoid of extraneous material, says Ortofon. The technique is claimed to give precise control of the density of the body material, allowing for extremely high internal damping. The result is a lighter, quieter and yet more rigid cartridge compared to its already sturdy predecessor.

ORTOFON MC WINDFELD TI

This exquisitely-constructed cartridge is a story of two halves – the lateral (L+R, in-phase) and vertical (L–R, out-of-phase stereo). But let's start with the basics, for conventional tests reveal a pick-up that offers remarkable L/R symmetry, its highly improbable ~0.03dB channel balance achieved with exactly 199µV from Left and Right (re. 1kHz at 5cm/sec into 50-200ohm). A low-noise step-up (active or transformer) will be vital in drawing the best from the Windfeld Ti, but tracking will never be an issue for – at an admittedly high-ish 2.3g – it tracks like a trooper, easing through the maximum 80µm groove pitch and clearing the +18dB test (315Hz lateral cut, re. 11.2µm) at 2.5% THD.

However, the L+R and L–R performances are less symmetrical. In practice the 23° tracking angle was closer to 28° with a parallel arm tube and while the very flat and extended lateral response [black trace, Graph 1] was bang-on Ortofon's specification, with the mildest 'sting' at 12-15kHz, the vertical response [red trace] shows a much more obvious presence/treble roll-off of –5dB/20kHz. This suggests that in-phase cuts, like a central vocalist, will sound more vibrant than any out-of-phase backing performers. The Windfeld Ti's distortion trend also reflects this 'Jekyll and Hyde' character with lateral cuts showing a very low sub-1% THD up to 2kHz (–8dB relative to 5cm/sec; equalised) but then increasing quite substantially with frequency [black infill, Graph 2], reaching 15%/20kHz. This is a function of bandwidth not generator linearity, for while vertical cuts demonstrate a uniformly higher ~2% distortion through bass and midrange, there's a perceived drop in THD at very high frequencies where the response falls away. PM



LEFT: Despite the economy of its sleek profile, the weight of this aluminium/titanium cartridge is not inconsiderable at 11g. The gold-plated rear pins are recessed but clearly marked and well spaced to accept over-sized tonearm leads/connections

Things here just 'lilted along' in a carefree and tender way with no sense of either the musicians – or indeed the cartridge – trying to add extra bite to impress. The MC Windfeld Ti reached deep into the depths of the mix, pulling out vast amounts of detail, ensuring the drum work was a pleasure to behold and the sheer delicacy beguiling. This combination of subtlety and control, beautifully measured, defines its nature. Along with its obvious ability, at this point I began to contemplate the new Windfeld's almost complete lack of vice.

GRACE UNDER PRESSURE

4hero's 'Spirits In Transit' [from *2 Pages*; Talkin' Loud 568 879-1] was recorded 18 years after 'London Town', and benefits from a cleaner and punchier sound. This track has a powerful acoustic double-bass that demands much from any pick-up, and the Windfeld showed good judgment. Never overdone, it nevertheless demonstrated real steel that could pile-drive bass with the best of them. Even on bruising transients, the cartridge showed grace under pressure.

Heavily modulated electronic drum 'n' bass from Goldie – 'Timeless' [from *Timeless*; FFRR 828 614-1] – had just the same effect. The Windfeld Ti satisfied with its smooth, crisp and delicately etched hi-hat cymbal sound, with palpable air and space up in the treble region. I've heard sweeter and more

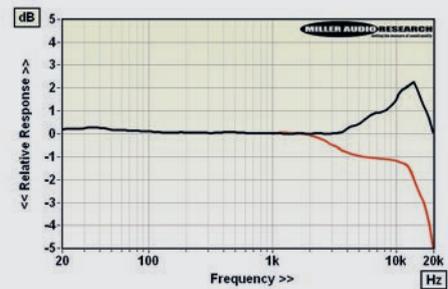
delicate treble from equivalently-priced Lyras, yet I doubt that they sound any more realistic.

Classical music was another joy. Hearing this genre via ageing analogue discs is not an especially popular pursuit, but I find fine moving-coils have the power to make some old analogue LPs sound electrifying, some of which have staggering presence. My venerable pressing of Beethoven's 'Pastoral Symphony' [BPO/Karajan; DG 2531106] was a delight, for while the orchestra sounded a little less spacious at its extremities than I've sometimes heard, it still presented a strong and bold central image. Moreover with the superb timbre of the Berlin strings and the enjoyably fluid gait to the proceedings as a whole, I was enthralled. ☺

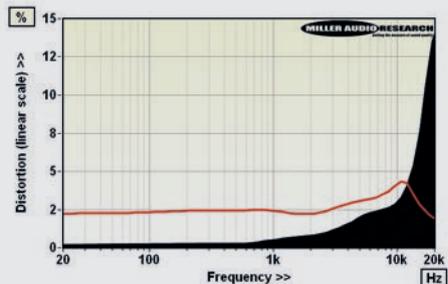
HI-FI NEWS VERDICT

There's no shortage of high-end moving-coil cartridges and to earn its rightful place the Ortofon MC Windfeld Ti has to offer a distinctive proposition to buyers. This it does in no uncertain terms – it has power, scale, precision and poise, while never being an overly 'showy' performer. It serves up a 'matter of fact' sound in a more compelling way than one might think possible, giving it an admirably wide appeal.

Sound Quality: 85%



ABOVE: Frequency response curves (–8dB re. 5cm/sec) lateral (L+R, black) versus vertical (L–R, red)



ABOVE: Lateral (L+R, black infill) and vertical (L–R, red) tracing and generator distortion (2nd-4th harmonics) vs. frequency from 20Hz-20kHz (–8dB re. 5cm/sec)

HI-FI NEWS SPECIFICATIONS

Generator type/weight	Moving-coil / 11g
Recommended tracking force	2.0-2.5mN (2.3mN)
Sensitivity/balance (re. 5cm/sec)	199µV / ~0.03dB
Compliance (vertical/lateral)	18cu / 15cu
Vertical tracking angle	28 degrees
L/R Tracking ability	>80µm / >80µm
L/R Distortion (–8dB, 20Hz-20kHz)	0.25-14% / 0.5-20%
L/R Frequency resp. (20Hz-20kHz)	+2.3 to –0.1dB / +2.3 to –0.3dB
Stereo separation (1kHz / 20kHz)	30dB / 20dB