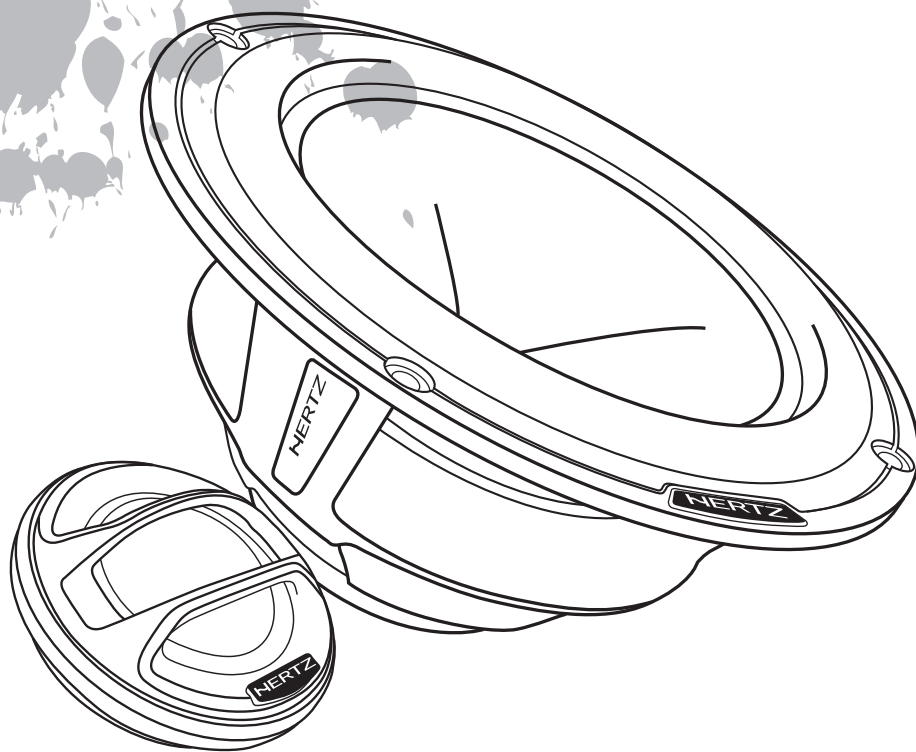


Technology Art & Sound
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elettromedia
Italy



Mille | Product Information

Elettromedia - December 2010

HERTZ

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Mille

Product Information

Elettromedia - December 2010

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Visit www.hertzaudiovideo.com for more information.

Mille

Mille: once again, the reference.

How do you improve a loudspeaker range that is **already renowned as an absolute reference throughout the world**? The new Mille range includes all the features and benefits that have throughout **years of evolution** been enthralling both the most advanced enthusiasts and the most demanding reviewers. The new range reaches its theoretical perfection through accurate refining not limited to the optimization of materials, building processes, new measurement techniques and verifications.



The Hertz R&D department, guided by their unwavering dedication and passion to acoustic reproduction has created a loudspeaker range **that satisfies both emotional and physical traits in terms of listening and in-vehicle installation**. The new range was born from researching public feedback along with hours and hours of in-vehicle and laboratory experimentation.

The new Mille range introduces itself with a tweeter, a midrange, a woofer, two crossovers and four systems: **a concrete answer for high-fidelity reproduction**.

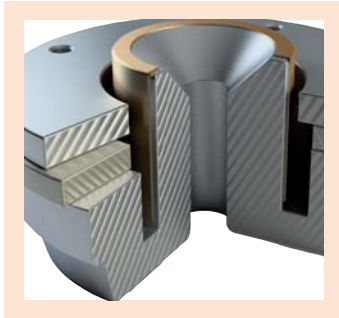
Since the first version of Mille, the Hertz team established a new reference for the industry, especially in terms of technology and reliability. Today the new measurement and verification techniques used allowed a further leap forward with the new range. The mechanical vibrations were “captured” by the **3D Scanning Vibrometer**, an instrument which detects critical resonances which have been improved due to the profile of the cone and to the characteristics of the materials that have been employed. Differing from traditional measurements, this instrument also allows to fine-tune the motor assemblies’ resonances right from the design stage, as it can simulate the behaviour and the distortion of the loudspeaker, without waiting for a prototype build. For example, the design for the surround of the ML 1600 woofer, already optimized thanks to the experience gained by our Hertz designers on this matter, proved to offer good performance.

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Mille

After the 3D Scanning Vibrometer analysis, more improvements were introduced and, in its latest version, shows exemplarily linearity, rigidity and frequency response.

The other important investment regarding the components' reliability is in the **Klippel QC Certification**. Each Hertz Mille loudspeaker undergoes the Klippel Quality Control System which certifies its quality, recording these measurements in a database, making it possible to create a history of the product life cycle.



The project

In every Mille component exists the perfect synergy between the motor assembly and the surround, ensuring absolute control and thus sound quality.

With both **ML 700** and **ML 1600**, 70 mm (2^{3/4}) midrange and 165 mm (6^{1/2}) woofer respectively, the motor assembly is centred upon a largely sized **REN® Neodymium** ring, a solution ensuring control of the moving parts and very high thermal capability, all leading to the dynamic trait of the Mille range.

The same capability is ensured in the **ML 280** tweeter, also equipped with a **REN® Neodymium** magnetic group and optimised through FEM simulation.

An object of exciting appreciation throughout the years, the cone maintains the proprietary **V-Cone® technology**, first introduced in the previous Mille range. With its solid one piece construction and ideal exponential profile, outstanding dispersion characteristics continue.



The pressed-pulp cone combined with cotton fibres and enriched with impregnated water-repellent materials eases that acoustic naturalness which only a high-end component can boast.

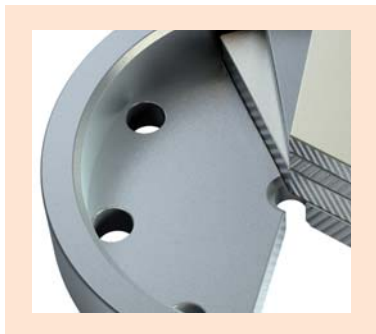
On the ML 700 and the ML 1600 special effort has been focused on frequency response, achieving remarkable results in terms of linearity and efficiency.

The surround has been improved in terms of its profile, smoothing the differences between itself and the cone's contour for more harmonious movement, and to the material by employing **Natural Butyl Rubber**, aiding the symmetry of movement and extending high frequency response.

The **spider is constructed from Nomex®** and features integrated lead wires; a material with specific acoustic properties which can reflect high frequency sounds and strengthen mid-high frequency sounds, thus turning a hidden detail of the music into an indispensable element.

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Mille



The **die-cast aluminium basket, with its self-supporting design** helps in mechanical damping, without affecting acoustics.

The butyl rubber cover protects the magnet and contributes to the reduction of unwanted resonances and residual vibrations, while adding to the component's cosmetic design.



A unique feature of the ML 280 tweeter is the **Tetolon® Fiber dome** featuring a hemispheric-hyperbolic profile: its 28 mm diameter, dome height and the special profile all combine to ensure maximum stiffness and linearity providing flat, smooth frequency response beyond the audible range.

The little one of the Mille family also takes advantage of an **advanced cooling system**: the radial ducts found on the back plate dissipate the heat from inside the damped resonance chamber.

The motor assembly's geometry is centred upon a **pure copper** shorting ring that generates an anti-inductive effect, flattening the speaker's impedance. All of the components in the range employ a very light, compact **CCAW (Copper Covered Aluminium Wire) voice coil**: wound on aluminium former for the ML 280, and on a Kapton® former for ML 700 and ML 1600. Each combination ensures maximum power handling and the smoothest mid-high frequency response.

The grilles, also made of precious die-cast aluminium, provide maximum acoustic transparency, mechanical reliability as well as appealing, aggressive cosmetics.

The four systems available within the new Mille range ensure versatility and offer unheard of timbre balance. There are two stereo passive crossovers; the **MLCX 2 TW** is used in the dedicated two-way **ML 1600** and **ML 280** system known as the **MLK 2 TW**, while the **MLCX 2 TM** is designed to be used with the **ML 700** and **ML 280** mid/high combination, the **MLK 2 TM**. The three-way **MLK 3 PA** and **MLK 3 PA2** kits offer superior performance; composed of the **ML 280**, **ML 700** and dual or quad **ML 1600** respectively. The use of this mixed Active + Passive technology, with amplifier channels dedicated to the woofers (active) and to the mid-high combination (passive), provides the ability to obtain highly impressive acoustics results, with maximum simplicity and versatility.

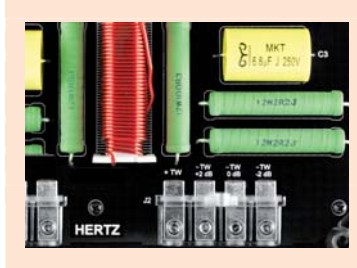
MLCX 2 TW and **MLCX 2 TM** feature first-rate components, all mounted to an FR2 PCB with very robust traces.

The experience accumulated in the crossover design as well as in the selection of materials led the Hertz R&D team to make an unexpected choice: **the woofer's crossover section features an iron core inductor**, instead of air core. The use of iron-magnetic material at such a high-saturation threshold avoided the typical sound deteriorations of traditional solutions. It also remarkably increases the system's efficiency and damping capability, thanks to the generous reduction of the windings' resistive loss.

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The innovative design of the crossover case combines thermal functionalities (plastic material featuring a passive cooling system), ergonomical functionalities (hidden mount system), as well as cosmetic functionalities (Rubber Touch finishing), for practical and impressive installations.



The MLCX 2 TM and the MLCX 2 TW crossovers feature a **three position level control**, in 2 dB steps, for tweeter attenuation. This provides the ability to fine-tune the emission level to one's own tastes.

COMP Mille

ML 280 180 W



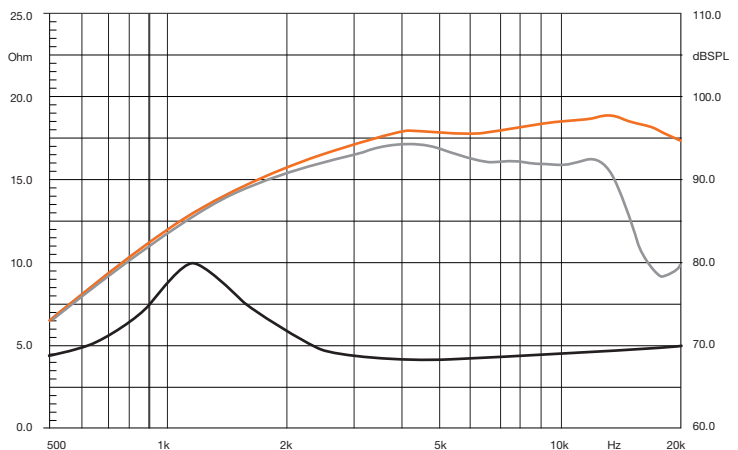
Electro-Acoustic Parameters

Component	Tweeter	
Size	mm (inch)	28 (1" 1/8)
Power Handling	W Peak	180 Hi-pass filtered 1.8 kHz @ 12 dB Oct.
Impedance	Ω	4
Freq. Response	Hz	1,3k \div 25k
Sensitivity	dB/SPL	95
Outer \varnothing	mm (inch)	54 (2" 1/8)
Mounting \varnothing	mm (inch)	48 (1" 7/8)
Total depth	mm (inch)	27 (1" 1/16)
Mount. depth	mm (inch)	12,5 (1/2")
Weight	kg (lb)	0,11 (0,24)
Voice coil \varnothing	mm (inch)	28 (1" 1/8)
Magnet	REN [®] Neodymium	
Dome/Cone	Tetolon [®]	

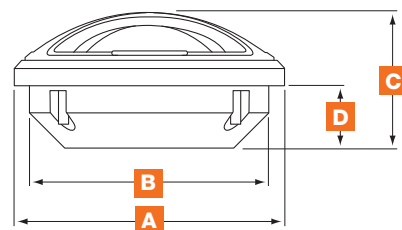
1. Tetolon[®] Fiber dome features a hemispheric-hyperbolic profile, for maximum rigidity and linear frequency response.
2. The magnetic motor assemble is optimised through the use of FEM instruments. The use of a double REN[®] Neodymium magnet generates extraordinary energy, for extremely high performance.
3. The pure copper shorting ring creates an anti-inductive effect, ensuring linear impedance. The CCAW voice coil is wound on an aluminium former, making this mobile group especially light, yet rigid.
4. Decompression and venting ducts provide thermal dissipation, prevent compression from forming under the dome, optimise the damping factor and control resonance.
5. The main structure and the rear acoustic chamber are CNC machined from a solid aluminium block, creating an absolutely inert chassis.

Electro-Acoustic Parameters

D	mm	28
Xmax	mm	-
Re	Ω	3,3
Fs	Hz	1100
Le	mH @ 1 kHz	0,46
Le	mH @ 10 kHz	0,01
Vas	l	-
Mms	g	-
Cms	mm/N	-
BL	T-m	-
Qts		0,56
Qes		0,88
Qms		1,50
Spl	dB	95



A	54 mm (2" 1/8)
B	48 mm (1" 7/8)
C	27 mm (1" 1/16)
D	12,5 mm (1/2")



HERTZ

COMP Mille

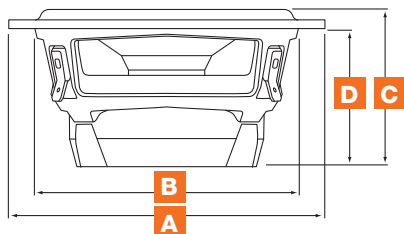
ML 700 100 W

Electro-Acoustic Parameters

Component	Midrange	
Size	mm (inch)	70 (2 ³ / ₄)
Power Handling	W Peak	100 Hi-pass filtered 250 Hz @ 12 dB Oct.
Impedance	Ω	4
Freq. Response	Hz	200 ÷ 14k
Sensitivity	dB/SPL	92
Outer Ø	mm (inch)	88 (3 ⁷ / ₁₆)
Mounting Ø	mm (inch)	73 (2 ⁷ / ₈)
Total depth	mm (inch)	44 (1 ³ / ₄)
Mount. depth	mm (inch)	38 (1 ¹ / ₂)
Weight	kg (lb)	0,27 (0,60)
Voice coil Ø	mm (inch)	20 (13/16")
Magnet	REN® Neodymium	
Dome/Cone	Ultra Light Pressed Paper	

Electro-Acoustic Parameters

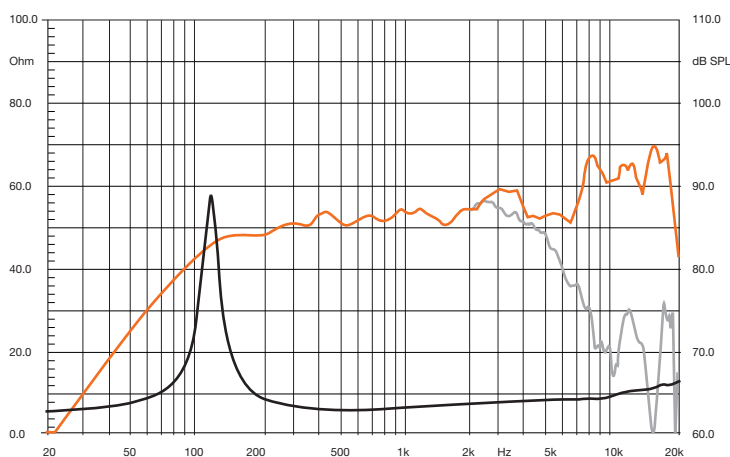
D	mm	60
Xmax	mm	0,5
Re	Ω	4
Fs	Hz	116
Le	mH @ 1 kHz	0,67
Le	mH @ 10 kHz	0,06
Vas	l	0,8
Mms	g	3,85
Cms	mm/N	0,49
BL	T-m	4,73
Qts		0,48
Qes		0,51
Qms		7,60
Spl	dB	92



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1. The pressed-pulp cone is enriched with cotton fibres combined with water-repellent impregnants. With the absence of the traditional dustcap, the exponential profile generates an outstanding dispersion pattern.
2. The central pole piece is covered with a pure copper sleeve. This combined with its 20 mm CCAW double layer voice coil wound on a Kapton® former provides a linear impedance.
3. The motor assembly is centred upon a uniquely sized REN® Neodymium ring.
4. Anti-resonant aluminium alloy basket; the unique low incidence spokes offer minimum resistance to rear wave emissions.
5. Nomex® spider with integrated lead wires.
6. The butyl rubber cover protects the magnet and contributes to the reduction of unwanted resonances and residual vibrations.



A	88 mm (3 ⁷ / ₁₆)
B	73 mm (2 ⁷ / ₈)
C	44 mm (1 ³ / ₄)
D	38 mm (1 ¹ / ₂)

COMP Mille

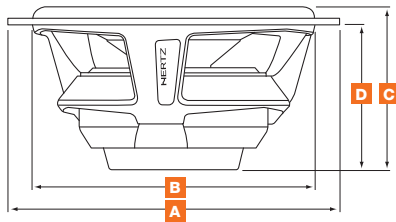
ML 1600 250W

Electro-Acoustic Parameters

Component	Woofers	
Size	mm (inch)	165 (6 ^{5/16})
Power Handling	W Peak	250
	W Continuous	125
Impedance	Ω	4
Freq. Response	Hz	40 ÷ 7k
Sensitivity	dB/SPL	93
Outer Ø	mm (inch)	167 (6 ^{9/16})
Mounting Ø	mm (inch)	144 (5 ^{11/16})
Total depth	mm (inch)	85 (3 ^{3/8})
Mount. depth	mm (inch)	75 (2 ^{15/16})
Weight	kg (lb)	1,24 (2,73)
Voice coil Ø	mm (inch)	36 (1 ^{7/16})
Magnet	REN® Neodymium	
Dome/Cone	Ultra Light Pressed Paper	

Electro-Acoustic Parameters

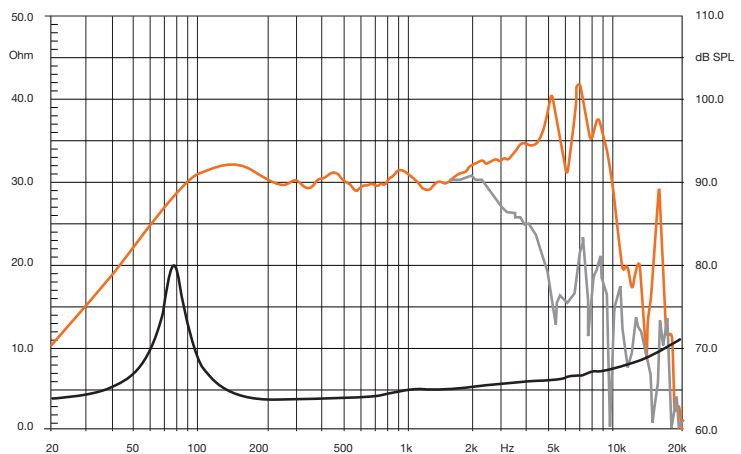
D	mm	130
Xmax	mm	4,5
Re	Ω	3
Fs	Hz	71
Le	mH @ 1 kHz	0,14
Le	mH @ 10 kHz	0,06
Vas	l	6,8
Mms	g	18,45
Cms	mm/N	0,27
BL	T-m	6,02
Qts		0,63
Qes		0,69
Qms		8,20
Spl	dB	93



HERTZ



1. The pressed-pulp cone is enriched with cotton fibres combined with water-repellent impregnants. With the absence of the traditional dustcap, the exponential profile generates an outstanding dispersion pattern.
2. The central pole piece is covered with a pure copper sleeve. This combined with its 36 mm CCAW double layer voice coil wound on a Kapton® former provides a linear impedance.
3. The motor assembly is centred upon a uniquely sized REN® Neodymium ring.
4. Anti-resonant aluminium alloy basket; the unique low incidence spokes offer minimum resistance to rear wave emissions.
5. Nomex® spider with integrated lead wires.
6. The butyl rubber cover protects the magnet and contributes to the reduction of unwanted resonances and residual vibrations.



A	167 mm (6 ^{9/16})
B	144 mm (5 ^{11/16})
C	85 mm (3 ^{3/8})
D	75 mm (2 ^{15/16})

COMP Mille

MLCX 2 TM

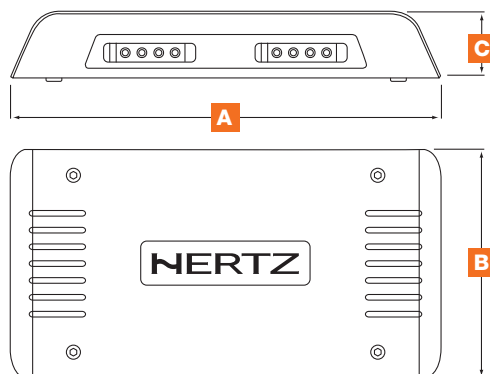
300 W



Technical Specifications

Component Size	mm inch	2 Way Mid-High Passive Crossover 150 x 283 x 43,5 5" 7/8 x 11" 1/8 x 1" 11/16
Weight	kg lb	0,89 1,96
Power Handling W	Peak continuous	300 150
Crossover	type cut off	Lo/Hi-pass 4kHz 18/18 db Oct.
Component Adjustment		Tw +2; 0; -2 dB

1. The highest quality components are mounted to a FR 2 PCB with very thick traces required for high power handling.
2. The Rubber Touch crossover case features a passive cooling system and hidden mounts for practical and impressive installations.
3. Three position level control, in 2 dB steps, for tweeter attenuation. This provides the ability to adjust the emission level to one's own tastes.



A	283 mm (11" 1/8)
B	150 mm (5" 7/8)
C	43,5 mm (1" 11/16)

HERTZ

COMP Mille

MLCX 2 TW

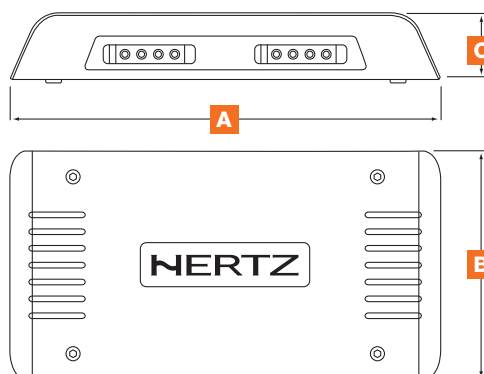
300 W



Technical Specifications

Component Size	mm inch	2 Way Passive Crossover 150 x 283 x 43,5 5" 7/8 x 11" 1/8 x 1" 11/16
Weight	kg lb	0,89 1,96
Power Handling W	Peak continuous	300 150
Crossover	type cut off	Lo/Hi-pass 2,5kHz 18/18 db Oct.
Component Adjustment		Tw +2; 0; -2 dB

1. The highest quality components are mounted to a FR 2 PCB with very thick traces required for high power handling.
2. The Rubber Touch crossover case features a passive cooling system and hidden mounts for practical and impressive installations.
3. Three position level control, in 2 dB steps, for tweeter attenuation. This provides the ability to adjust the emission level to one's own tastes.



A	283 mm (11" 1/8)
B	150 mm (5" 7/8)
C	43,5 mm (1" 11/16)

HERTZ

SYSTEM Mille

MLK 2 TW 300 W

Technical Specifications

Component	2 way system	
Size mm (inch)	ML 1600 Woofer	165 (6" 1/2)
	ML 280 Tweeter	28 (1" 1/8)
	MLCX 2 TW Crossover	150 x 283 x 43,5 (5" 7/8 x 11" 1/8 x 1" 11/16)
Power Handling	W Peak	300
	W continuous	150
Impedance	Ω	4
Frequency Response	Hz	40 ÷ 25k
Sensitivity	dB/SPL	93
Crossover included	LO/HI PASS	2.5 kHz @ 18/18 dB Oct.
Comp. adjustment	Tweeter	+2; 0; -2
Outer Ø mm (inch)	Woofer	167 (6" 9/16)
	Tweeter	54 (2" 1/8)
Mounting Ø mm (inch)	Woofer	144 (5" 11/16)
	Tweeter	48 (1" 7/8)
Total depth mm (inch)	Woofer	85 (3" 3/8)
	Tweeter	27 (1" 1/16)
Mount. depth mm (inch)	Woofer	75 (2" 15/16)
	Tweeter	12,5 (1/2")
Weight of one component kg (lb)	Woofer	1,24 (2,73)
	Tweeter	0,11 (0,24)
	Crossover	0,89 (1,96)
Voice Coil Ø mm (inch)	Woofer	36 (1" 7/16)
	Tweeter	28 (1" 1/8)

Electro-Acoustic Parameters

D	mm	130
Xmax	mm	4,5
Re	Ω	3
Fs	Hz	71
Le	mH @ 1 kHz	0,14
Le	mH @ 10 kHz	0,06
Vas	l	6,8
Mms	g	18,45
Cms	mm/N	0,27
BL	Tm	6,02
Qts		0,63
Qes		0,69
Qms		8,20
Spl (1m/2,83V)	dB	93



ML 280

1. Tetolon® Fiber dome features a hemispheric-hyperbolic profile, for maximum rigidity and linear frequency response.
2. The magnetic motor assemble is optimised through the use of FEM instruments. The use of a double REN® Neodymium magnet generates extraordinary energy, for extremely high performance.
3. The pure copper shorting ring creates an anti-inductive effect, ensuring linear impedance. The CCAW voice coil is wound on an aluminium former, making this mobile group especially light, yet rigid.
4. Decompression and venting ducts provide thermal dissipation, prevent compression from forming under the dome, optimise the damping factor and control resonance.
5. The main structure and the rear acoustic chamber are CNC machined from a solid aluminium block, creating an absolutely inert chassis.

ML 1600

1. The pressed-pulp cone is enriched with cotton fibres combined with water-repellent impregnants. With the absence of the traditional dustcap, the exponential profile generates an outstanding dispersion pattern.
2. The central pole piece is covered with a pure copper sleeve. This combined with its 36 mm CCAW double layer voice coil wound on a Kapton® former provides a linear impedance.
3. The motor assembly is centred upon a uniquely sized REN® Neodymium ring.
4. Anti-resonant aluminium alloy basket; the unique low incidence spokes offer minimum resistance to rear wave emissions.
5. Nomex® spider with integrated lead wires.
6. The butyl rubber cover protects the magnet and contributes to the reduction of unwanted resonances and residual vibrations.

MLCX 2 TW

1. The highest quality components are mounted to a FR 2 PCB with very thick traces required for high power handling.
2. The Rubber Touch crossover case features a passive cooling system and hidden mounts for practical and impressive installations.
3. Three position level control, in 2 dB steps, for tweeter attenuation. This provides the ability to adjust the emission level to one's own tastes.

HERTZ

SYSTEM Mille

MLK 2 TM

300 W

Technical Specifications

Component		2 way system	
Size mm (inch)	ML 700 Midrange	70 (2 ^{7/8})	
	ML 280 Tweeter	28 (1 ^{1/8})	
	MLCX 2 TM Crossover	150 x 283 x 43,5 (5 ^{7/8} x 11 ^{1/8} x 1 ^{11/16})	
Power Handling	W Peak	300*	
	W continuous	150*	
Impedance	Ω	4	
Frequency Response	Hz	40 ÷ 25k*	
Sensitivity	dB/SPL	92	
Crossover included	LO/HI PASS	4 kHz @ 18/18 dB Oct.	
Comp. adjustment	Tweeter	+2; 0; -2	
Outer Ø mm (inch)	Midrange	88 (3 ^{7/16})	
	Tweeter	54 (2 ^{1/8})	
Mounting Ø mm (inch)	Midrange	73 (2 ^{7/8})	
	Tweeter	48 (1 ^{7/8})	
Total depth mm (inch)	Midrange	44 (1 ^{3/4})	
	Tweeter	27 (1 ^{1/16})	
Mount. depth mm (inch)	Midrange	38 (1 ^{1/2})	
	Tweeter	12,5 (1/2")	
Weight of one component kg (lb)	Midrange	0,27 (0,60)	
	Tweeter	0,11 (0,24)	
	Crossover	0,89 (1,96)	
Voice Coil Ø mm (inch)	Midrange	20 (13/16")	
	Tweeter	28 (1 ^{1/8})	

*Combined to ML 1600

Electro-Acoustic Parameters

D	mm	60
Xmax	mm	0,5
Re	Ω	4,0
Fs	Hz	116
Le	mH @ 1 kHz	0,67
Le	mH @ 10 kHz	0,06
Vas	l	0,8
Mms	g	3,85
Cms	mm/N	0,49
BL	Tm	4,73
Qts		0,48
Qes		0,51
Qms		7,60
Spl	dB	92



ML 280

1. Tetolon® Fiber dome features a hemispheric-hyperbolic profile, for maximum rigidity and linear frequency response.
2. The magnetic motor assemble is optimised through the use of FEM instruments. The use of a double REN® Neodymium magnet generates extraordinary energy, for extremely high performance.
3. The pure copper shorting ring creates an anti-inductive effect, ensuring linear impedance. The CCAW voice coil is wound on an aluminium former, making this mobile group especially light, yet rigid.
4. Decompression and venting ducts provide thermal dissipation, prevent compression from forming under the dome, optimise the damping factor and control resonance.
5. The main structure and the rear acoustic chamber are CNC machined from a solid aluminium block, creating an absolutely inert chassis.

ML 700

1. The pressed-pulp cone is enriched with cotton fibres combined with water-repellent impregnants. With the absence of the traditional dustcap, the exponential profile generates an outstanding dispersion pattern.
2. The central pole piece is covered with a pure copper sleeve. This combined with its 20 mm CCAW double layer voice coil wound on a Kapton® former provides a linear impedance.
3. The motor assembly is centred upon a uniquely sized REN® Neodymium ring.
4. Anti-resonant aluminium alloy basket; the unique low incidence spokes offer minimum resistance to rear wave emissions.
5. Nomex® spider with integrated lead wires.
6. The butyl rubber cover protects the magnet and contributes to the reduction of unwanted resonances and residual vibrations.

MLCX 2 TM

1. The highest quality components are mounted to a FR 2 PCB with very thick traces required for high power handling.
2. The Rubber Touch crossover case features a passive cooling system and hidden mounts for practical and impressive installations.
3. Three position level control, in 2 dB steps, for tweeter attenuation. This provides the ability to adjust the emission level to one's own tastes.

HERTZ

SYSTEM Mille

MLK 3 PA

300 W

Technical Specifications

Component	3 way system	
Size mm (inch)	ML 1600 Woofer	165 (6 ¹¹ / ₂)
	ML 700 Midrange	70 (2 ³ / ₄)
	ML 280 Tweeter	28 (1 ¹ / ₈)
	MLCX 2 TM Crossover	150 x 283 x 43,5 (5 ⁹ / ₁₆ x 11 ¹ / ₈ x 1 ¹¹ / ₁₆)
Power Handling	W Peak	300
	W continuous	150
Impedance	Ω	4
Frequency Response	Hz	40 ÷ 25k
Sensitivity	dB/SPL	93
Crossover included	LO/HI PASS	4 kHz @ 18/18 dB Oct.
Comp. adjustment	Tweeter	+2; 0; -2
Outer Ø mm (inch)	Woofer	167 (6 ⁷ / ₁₆)
	Midrange	88 (3 ⁷ / ₁₆)
	Tweeter	54 (2 ¹ / ₈)
Mounting Ø mm (inch)	Woofer	144 (5 ¹¹ / ₁₆)
	Midrange	73 (2 ⁷ / ₈)
	Tweeter	48 (1 ⁷ / ₈)
Total depth mm (inch)	Woofer	85 (3 ³ / ₈)
	Midrange	44 (1 ³ / ₄)
	Tweeter	27 (1 ¹ / ₁₆)
Mount. depth mm (inch)	Woofer	75 (2 ¹⁵ / ₁₆)
	Midrange	38 (1 ¹ / ₂)
	Tweeter	12,5 (1/2")
Weight of one component kg (lb)	Woofer	1,24 (2,73)
	Midrange	0,27 (0,60)
	Tweeter	0,11 (0,24)
	Crossover	0,89 (1,96)
Voice Coil Ø mm (inch)	Woofer	36 (1 ³ / ₈)
	Midrange	20 (13/16")
	Tweeter	28 (1 ¹ / ₈)

Electro-Acoustic Parameters

D	mm	130
Xmax	mm	4,5
Re	Ω	3
Fs	Hz	71
Le	mH @ 1 kHz	0,14
Le	mH @ 10 kHz	0,06
Vas	l	6,8
Mms	g	18,45
Cms	mm/N	0,27
BL	Tm	6,02
Qts		0,63
Qes		0,69
Qms		8,20
Spl	dB	93



ML 280

1. Tetolon® Fiber dome features a hemispheric-hyperbolic profile, for maximum rigidity and linear frequency response.
2. The magnetic motor assemble is optimised through the use of FEM instruments. The use of a double REN® Neodymium magnet generates extraordinary energy, for extremely high performance.
3. The pure copper shorting ring creates an anti-inductive effect, ensuring linear impedance. The CCAW voice coil is wound on an aluminium former, making this mobile group especially light, yet rigid.
4. Decompression and venting ducts provide thermal dissipation, prevent compression from forming under the dome, optimise the damping factor and control resonance.
5. The main structure and the rear acoustic chamber are CNC machined from a solid aluminium block, creating an absolutely inert chassis.

ML 700 / ML 1600

1. The pressed-pulp cone is enriched with cotton fibres combined with water-repellent impregnants. With the absence of the traditional dustcap, the exponential profile generates an outstanding dispersion pattern.
2. The central pole piece is covered with a pure copper sleeve. This combined with its 20 mm (ML 700) and 36 mm (ML 1600) CCAW double layer voice coil wound on a Kapton® former provides a linear impedance.
3. The motor assembly is centred upon a uniquely sized REN® Neodymium ring.
4. Anti-resonant aluminium alloy basket; the unique low incidence spokes offer minimum resistance to rear wave emissions.
5. Nomex® spider with integrated lead wires.
6. The butyl rubber cover protects the magnet and contributes to the reduction of unwanted resonances and residual vibrations.

MLCX 2 TM

1. The highest quality components are mounted to a FR 2 PCB with very thick traces required for high power handling.
2. The Rubber Touch crossover case features a passive cooling system and hidden mounts for practical and impressive installations.
3. Three position level control, in 2 dB steps, for tweeter attenuation. This provides the ability to adjust the emission level to one's own tastes.

HERTZ

SYSTEM Mille

MLK 3 PA2

300 W

Technical Specifications

Component	3 way system with double woofer		
Size mm (inch)	ML 1600 Woofer	165	(6 ^{11/16})
	ML 700 Midrange	70	(2 ^{3/4})
	ML 280 Tweeter	28	(1 ^{11/16})
	MLCX 2 TM Crossover	150 x 283 x 43,5	(5 ^{7/8} x 11 ^{11/16} x 1 ^{7/16})
Power Handling	W Peak	300	
	W continuous	150	
Impedance	Ω	4	
Frequency Response	Hz	40 ÷ 25k	
Sensitivity	dB/SPL	93	
Crossover included	LO/HI PASS	4 kHz @ 18/18 dB Oct.	
Comp. adjustment	Tweeter	+2; 0; -2	
Outer Ø mm (inch)	Woofer	167	(6 ^{9/16})
	Midrange	88	(3 ^{7/16})
	Tweeter	54	(2 ^{1/8})
Mounting Ø mm (inch)	Woofer	144	(5 ^{11/16})
	Midrange	73	(2 ^{7/8})
	Tweeter	48	(1 ^{7/8})
Total depth mm (inch)	Woofer	85	(3 ^{3/8})
	Midrange	44	(1 ^{3/4})
	Tweeter	27	(1 ^{1/16})
Mount. depth mm (inch)	Woofer	75	(2 ^{15/16})
	Midrange	38	(1 ^{1/2})
	Tweeter	12,5	(1/2")
Weight of one component kg (lb)	Woofer	1,24	(2,73)
	Midrange	0,27	(0,60)
	Tweeter	0,11	(0,24)
	Crossover	0,89	(1,96)
Voice Coil Ø mm (inch)	Woofer	36	(1 ^{7/16})
	Midrange	20	(13/16")
	Tweeter	28	(1 ^{1/8})

Electro-Acoustic Parameters

D	mm	130
Xmax	mm	4,5
Re	Ω	3
Fs	Hz	71
Le	mH @ 1 kHz	0,14
Le	mH @ 10 kHz	0,06
Vas	l	6,8
Mms	g	18,45
Cms	mm/N	0,27
BL	Tm	6,02
Qts		0,63
Qes		0,69
Qms		8,20
Spl	dB	93

HERTZ



ML 280

1. Tetolon® Fiber dome features a hemispheric-hyperbolic profile, for maximum rigidity and linear frequency response.
2. The magnetic motor assembly is optimised through the use of FEM instruments. The use of a double REN® Neodymium magnet generates extraordinary energy, for extremely high performance.
3. The pure copper shorting ring creates an anti-inductive effect, ensuring linear impedance. The CCAW voice coil is wound on an aluminium former, making this mobile group especially light, yet rigid.
4. Decompression and venting ducts provide thermal dissipation, prevent compression from forming under the dome, optimise the damping factor and control resonance.
5. The main structure and the rear acoustic chamber are CNC machined from a solid aluminium block, creating an absolutely inert chassis.

ML 700 / ML 1600

1. The pressed-pulp cone is enriched with cotton fibres combined with water-repellent impregnants. With the absence of the traditional dustcap, the exponential profile generates an outstanding dispersion pattern.
2. The central pole piece is covered with a pure copper sleeve. This combined with its 20 mm (ML 700) and 36 mm (ML 1600) CCAW double layer voice coil wound on a Kapton® former provides a linear impedance.
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MLCX 2 TM

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About us

Elettromedia, an Italian company, is a leader within the world-wide car Hi-Fi market.

Born in 1987 in Potenza Picena by a group of friends who shared the same passion for in-car high fidelity, throughout the past years Elettromedia has been walking the path of excellence: its products are distributed in more than 50 countries; the company has received many awards and acknowledgements from the most authoritative leaders within the car audio industry; it also can boast reviews of more than 2000 pages published in 30 different languages (visit: www.elettromedia.it/press_area.asp).

The Elettromedia brands are Audison, Hertz, Connection and AZaudiocomp. Through a co-branding strategy, the company offers all of the components required for a complete, top-level car audio system.



elettromedia



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Awards



Mille

CD Contents

Mille Technical Data Sheets (PDF version, 150 dpi resolution)

Logos: Hertz, Mille (Adobe Illustrator version, 300 dpi resolution)

Photos (JPEG version, 300 dpi resolution)



ML 280



ML 700



ML 1600



MLCX 2 TM / MLCX 2 TW



MLK 2 TW



MLK 3 PA



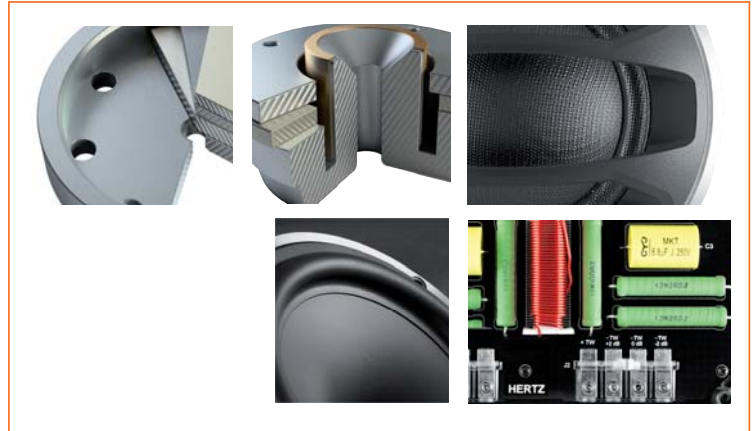
MLK 2 TM



MLK 3 PA2

The Hertz logo, featuring a stylized orange and black 'H' followed by the word 'ERTZ' in black.

Mille



Technologies



Elettromedia_headquarter



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HERTZ

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