



car audio





### **The quest for more**

What began as a dream in 1975 — to create the perfect loudspeaker — has turned into a life's work for Morel's founder, Meir Mordechai. Inspired by his love of music, Meir's quest to create the ultimate speaker has resulted in a company known worldwide for its dedication to providing superb sound quality. Along the way, Morel has built up an enviable reputation for technological innovation and design excellence.

Morel manufactures a wide range of high-quality drivers including tweeters, midrange, and woofers for the mid- to high-end home hi-fi, home theater, and car audio markets.

### **The car audio enthusiasts' choice**

Morel's range of components and component systems caters to every car audio need. Morel is well known for its high-performance automotive OEM products for the car aftermarket hi-fi industry including two- and three-way systems, coaxial speakers, and components.

### **Our R&D goes into your R&B**

In-house design, R&D, and manufacturing under one roof give Morel unprecedented advantages. Unlimited by constraints on design and boosted by years of experience in manufacturing its own drive units, the company is able to solve technological challenges through devising innovative solutions that set new standards in sound.

### **At Morel, quality is handmade**

Morel's products are made with exceptional care. In fact, they are all assembled by hand and extensively tested — undergoing seven different quality tests — to ensure they meet the highest standards.

### **Winning concepts in car audio**

Morel has been recognized by leading car audio press associations and magazines, winning the "Innovative Product of the Year" and "Reference Speaker Component" awards for its Integra concept, dome midrange, and full component systems. The Morel Supremo won the Amex "Best Component Product of the Year" award.



We've turned our technology inside out.

We'll turn your preconceptions about quality car audio upside down.

### Original components, optimal sound

When Morel set out to improve the state of the art in car audio, it identified the key barriers to optimal sound and found innovative ways to solve them. The company's technologies have been at the forefront of many audio "firsts."

### External Voice Coil (EVC)<sup>™</sup>

Morel's voice coil is three times larger than in conventional speakers with the same cone diameter enabling clear and precise sound reproduction even at higher sound levels. The large cone provides better support for the membrane, thus, enabling the use of shallower cone construction for improved dispersion and the reduction of cone break up during speaker operation.



### Hexatech<sup>™</sup> aluminum voice coil

The Hexatech honeycomb structure reduces air gaps and increases efficiency by up to 20%. The lightweight structure allows for the quick transient response necessary for accurate music reproduction with incredible detail.



### Hybrid<sup>™</sup> motor drive magnet system

The combination of neodymium and ferrite magnets is up to four times more powerful than conventional magnets of the same size. With Hybrid, more amplifying power can be converted into sonic energy, for flawless performance even in a small driver.

### Acuflex<sup>™</sup> coating

Acuflex is a specially engineered material that ensures effective damping, and reduces distortion levels and unwanted resonance, to provide audiophile-grade and warm sound characteristics.



### C.A.R. (Controlled Acoustic Resistance) Filter<sup>™</sup>

Specially designed for car audio applications, where drive units are often installed within free-air environments. The filter mimics the effect of a cabinet to restrain air flow within the drive unit and control cone movement, thereby improving the acoustical loading and power handling.



### Shielded products

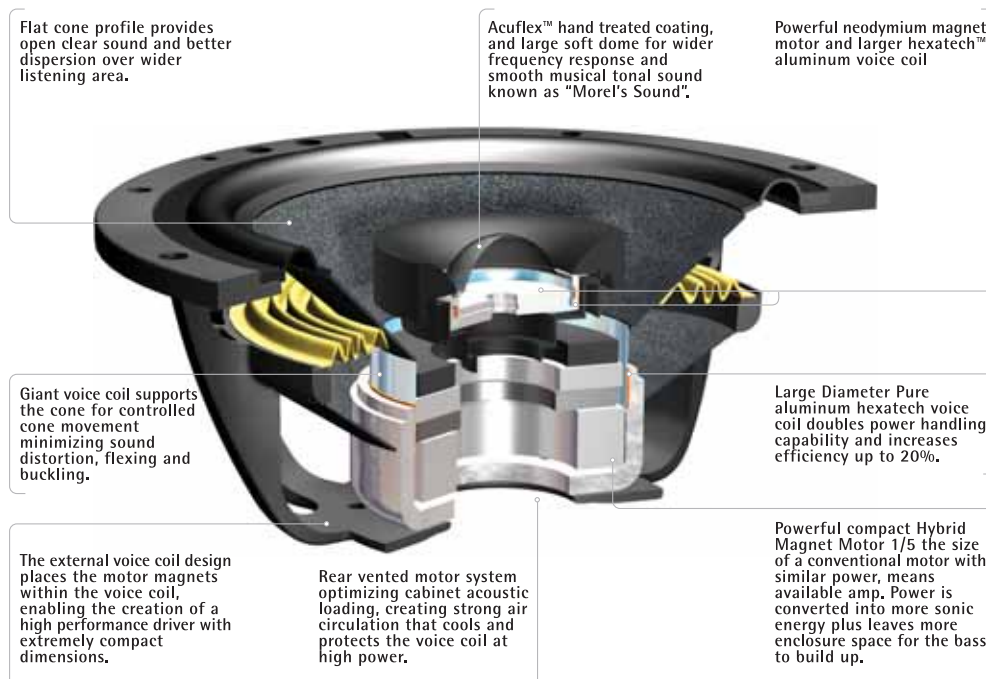
Morel makes magnetically shielded products to eliminate interference with wiring and electronic circuits.

### Uniflow<sup>™</sup> chassis

The Uniflow aerodynamic chassis allows air and sound waves to flow uniformly and smoothly, eliminating interference with the woofer's moving parts. The geometric design enables the use of a low-profile spider that provides greater support and stability to the voice coil and cone under the most demanding operating conditions.

### Accuset<sup>™</sup> crossover alignment system

Morel's new Accuset alignment system enables installers to easily adjust crossover levels from any location in the car, providing the option of 6dB or 12dB crossover frequency roll-off selection and  $\pm 4$ dB – in 2dB steps – for tweeter level settings. The crossover alignment system allows installers to listen to the system and fine-tune the crossover settings to efficiently achieve optimal soundstage and performance. On completion, the crossover settings are transferred from the tuning panel onto the jumper plug terminals.



## Integra Ovation cut section

# SUPREMO™ 2-WAY COMPONENT SYSTEM



The Supremo 2-way system offers car audio enthusiasts a combination of state-of-the-art technological savvy and superior sound reproduction. Designed to confront the unique challenges of car audio, Supremo delivers unsurpassed performance — representing the pinnacle of Morel's component line.

Supremo is based on Morel's linear dynamic under-hung voice coil configuration, which allows the voice coil to move in a significantly higher magnetic field and remain there during operation. This configuration enables linear excursion of the coil and higher magnetic flux, eliminating inter-modulation distortion while considerably improving the dynamic range, transient response, and efficiency.

The Supremo Piccolo tweeter uses Morel's 28mm (1 1/8") Acuflex soft dome for wider dispersion and warmer sound characteristics. Supremo Piccolo's double neodymium magnet structure and its Hexatech aluminum voice coil

construction enable a low resonance point of 800Hz which contributes to a wider frequency response and better off-axis performance. Designed for ease of installation, Supremo Piccolo utilizes a smaller faceplate of 67mm (2 5/8").

Supremo SW woofers employ an aerodynamic die-cast Uniflow chassis to minimize sound reflection distortion and provide shallow mounting capabilities. The 3" EVC Hexatech voice coil, coupled with its unique Hybrid magnet motor structure (combined ferrite and neodymium magnets) produces remarkably high power capability, high efficiency, as well as wide and natural dynamic range. Supremo SW woofers are available in 5", 6", and 9".

The Supremo 2-way component system was engineered to be both an active and passive speaker system in order to provide installers with greater flexibility and to maximize the full potential of its drivers. The new crossover employs high quality components and Mundorf capacitors, it uses a crossover point of 1900Hz with a 12dB/octave slope and ±2dB tweeter level attenuation for improved soundstage and imaging in off-axis installations.

2-Way System		Supremo 5	Supremo 6
Nominal Impedance		4 ohm	4 ohm
Power Handling		120W	140W
Max. Transient Power Handling		1000W	1000W
Sensitivity (2.83V/1M)		88dB	89dB
Frequency Response		30-25000Hz	25-25000Hz
Recommended Crossover Point		Min. 1400Hz Max. 5000Hz	Min. 1400Hz Max. 5000Hz
Recommended Crossover Slope		6-12-18-24 dB/Octave	6-12-18-24 dB/Octave
Voice Coil Diameter	Woofer: Tweeter:	75mm (3.00") 28mm (1.10")	75mm (3.00") 28mm (1.10")
Voice Coil Wire	Woofer: Tweeter:	Hexatech Aluminum Hexatech Aluminum	Hexatech Aluminum Hexatech Aluminum
Magnet Motor	Woofer: Tweeter:	Linear Dynamic Hybrid, rear vented Neodymium flat pancake design	Linear Dynamic Hybrid, rear vented Neodymium flat pancake design
Unit Diameter	Woofer: Tweeter:	135mm (5.25") 67mm (2.63")	165mm (6.50") 67mm (2.63")
Mounting Depth	Woofer: Tweeter:	60mm (2.36") 32mm (1.25")	61mm (2.40") 32mm (1.25")



# SUPREMO™ & SUPREMO PICCOLO™ TWEETERS



Morel's innovative Supremo tweeters – Supremo and Supremo Piccolo – deliver unsurpassed performance, redefining the state-of-the-art in car audio. Built for music lovers, these mobile audio tweeters are the result of intensive R&D dedicated to meeting the unique challenges posed by car audio.

The Supremo tweeters employ a soft Acuflex coated 28mm (1 1/8") dome resulting in wider dispersion and softer sound characteristics; this enables hours of non-fatiguing listening enjoyment. The large under-hung aluminum Hexatech voice coil together with a powerful neodymium magnet structure provide higher power handling and a high transient response.

Morel's unique linear, dynamic, under-hung configuration is designed to enhance performance by allowing the voice coil to move in a significantly higher magnetic field and remain there during operation. This configuration enables linear excursion of the coil and higher magnetic flux, thus eliminating

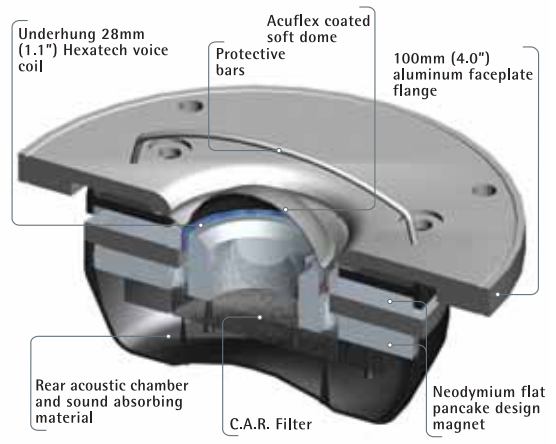
inter-modulation distortion while considerably improving the dynamic range, transient response, and efficiency.

The Supremo tweeters handle low-mid frequencies with ease. The low resonance point – Supremo at 680Hz, and Supremo Piccolo at 800Hz – enables a lower crossover point, which provides installers with greater system design flexibility, enhanced soundstage and imaging.

The Supremo is available in a 4" (100mm) diameter faceplate and the Supremo Piccolo is available in a 2 5/8" (67mm) diameter faceplate. These are ideal sizes for dashboard and A-pillar installations in most cars.

Supremo tweeters use Van Den Hul silver-plated linear crystal cables for input connections, enabling a long working life of clean signal transmission. To ensure optimal results, Supremo tweeters are individually tested and match paired.

Tweeters	Supremo	Supremo Piccolo
Nominal Impedance	6 ohm	6 ohm
Power Handling	220W	200W
Max. Transient Power Handling	1000W	1000W
Sensitivity (2.83V/1M)	92dB	90dB
Frequency Response	1400–25000Hz Limit: 300–50000Hz	1400–25000Hz Limit: 300–50000Hz
Voice Coil Diameter	28mm (1.10")	28mm (1.10")
Voice Coil Wire	Hexatech aluminum	Hexatech aluminum
Magnet System	Neodymium flat pancake design	Neodymium flat pancake design
Dome Type	Acuflex hand coated soft dome	Acuflex hand coated soft dome
Unit Diameter	100mm (4.00")	67mm (2.63")
Mounting Depth	50mm (2.00")	32mm (1.25")





Extraordinary technological know-how and high-fidelity sound are the hallmarks of the Elate series. The distinctive Elate SW woofers feature Morel's solution for deep and accurate bass reproduction. Designed for use in many different applications, the Elate series presents the elite of Morel's component line.

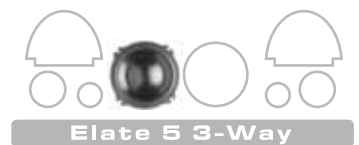
The Uniflow aluminum die-cast chassis has a shallow aerodynamic design to minimize sound reflection distortion. The large diameter 75mm (3") Hexatech voice coil supports a one-piece DPC shallow cone, preventing cone breakup distortion at high levels. The Elate series combines outstanding power handling capability with surprisingly compact size.

Morel's signature "sweet and warm" sound comes to the fore with the MT-23 tweeter and its powerful double neodymium magnet and Acuflex coated soft dome tweeter. Built to perform, it utilizes a 28mm (1 1/8") diameter aluminum Hexatech voice coil to provide better power handling. Its powerful double magnet motor, coupled with its low resonance point, makes the MT-23 a highly transient and dynamic tweeter that delivers a high and wide soundstage and an accurate image.

For those who demand more, the new CDM-88 – optimized for high-end audio systems, is the obvious choice. The CDM-88 soft dome midrange features a large 54mm (2 1/8") diameter aluminum Hexatech voice coil that drives a soft dome membrane with a larger than normal sound radiating surface. CDM-88 has a low resonance point of only 280Hz providing the full midrange frequency spectrum and deep, clear sound. The CDM-88 employs a C.A.R. Filter, providing an excellent acoustic loading while eliminating the need for a rear chamber. Only 3.5" (88mm) in diameter, the new CDM-88 midrange, was engineered to offer installers a small, high-quality midrange that can be easily installed in the dashboard or A-pillars for better sound stage and imaging.

Designed with installers in mind, the Accuset MX-33.4E crossover network offers a variety of adjustment capabilities: Frequency slope selection, level attenuation for all of the components, and bi-wiring and bi-amping assure optimum adaptability of the speaker's performance to any car environment. The new Accuset crossover alignment system further eases the tuning process by enabling easy adjustment of the crossover from any desired location, thereby achieving optimal performance.

3-Way System		Elate 5	Elate 6	Elate 9
Nominal Impedance		4 ohm	4 ohm	4 ohm
Power Handling		160W	200W	200W
Max. Transient Power Handling		1000W	1000W	1000W
Sensitivity (2.83V/1M)		88dB	89dB	91dB
Frequency Response		35–25000Hz	25–25000Hz	20–25000Hz
Crossover Point		700/3800Hz	700/3800Hz	700/3800Hz
Voice Coil Diameter	Woofer:	75mm (3.00")	75mm (3.00")	75mm (3.00")
	Tweeter:	28mm (1.10")	28mm (1.10")	28mm (1.10")
	Midrange:	54mm (2.10")	54mm (2.10")	54mm (2.10")
Voice Coil Wire	Woofer:	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
	Tweeter:	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
	Midrange:	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
Magnet System	Woofer:	Hybrid rear vented	Hybrid rear vented	Hybrid rear vented
	Tweeter:	Double Neodymium	Double Neodymium	Double Neodymium
	Midrange:	Neodymium rear vented	Neodymium rear vented	Neodymium rear vented
Mounting Depth	Woofer:	60mm (2.36")	61mm (2.40")	71mm (2.80")
	Tweeter:	20mm (0.80")	20mm (0.80")	20mm (0.80")
	Midrange:	25mm (1.00")	25mm (1.00")	25mm (1.00")





Car Audio and Electronics

The Elate series presents an exceptional combination of technological know-how and high-fidelity sound. The Elate SW woofers represent Morel's solution for deep and accurate bass reproduction. Engineered to be utilized in a wide array of installation environments, the Elate series features some of the finest technological innovations Morel has to offer.

The Uniflow aluminum die-cast chassis has a shallow aerodynamic design to minimize sound reflection distortion. The large diameter 75mm (3") Hexatech voice coil supports a one-piece DPC shallow cone, preventing cone breakup distortion at high levels. The Elate series offers outstanding power handling capability and convenient, compact size

Morel's signature "sweet and warm" sound comes to the fore with the MT-23 tweeter and its powerful double neodymium magnet and Acuflex coated soft dome tweeter. Built to perform, it utilizes a 28mm (1 1/8") diameter aluminum Hexatech voice coil to provide better power handling. Its powerful

double magnet motor, coupled with its low resonance point, makes the MT-23 a highly transient and dynamic tweeter that delivers a high and wide soundstage and an accurate image.

Designed with installers in mind, the new Accuset MX-22.2E Elate 2-way crossover network offers a variety of adjustment capabilities: Frequency slope selection of 6dB or 12dB for both tweeter and woofer and level adjustment of  $\pm 4$ dB in 2dB steps for the tweeter. The crossover network also offers bi-wiring and bi-amping. The MX-22.2E crossover is built using very high quality components with low-distortion capacitors and resistors, and transparent isolated high-current interconnects.

The new Accuset crossover alignment system further simplifies the tuning process. This exceptional sound-tuning device enables easy and fast adjustment of the crossover from any location, thereby achieving optimal soundstage and performance.

2-Way System		Elate 5	Elate 6	Elate 9
Nominal Impedance		4 ohm	4 ohm	4 ohm
Power Handling		160W	200W	200W
Max. Transient Power Handling		1000W	1000W	1000W
Sensitivity (2.83V/1M)		88dB	89dB	90dB
Frequency Response		35-25000Hz	25-25000Hz	20-25000H
Crossover Point		1800Hz	1800Hz	1800Hz
Voice Coil Diameter	Woofer: Tweeter:	75mm (3.00") 28mm (1.10")	75mm (3.00") 28mm (1.10")	75mm (3.00") 28mm (1.10")
Voice Coil Wire	Woofer: Tweeter:	Hexatech aluminum Hexatech aluminum	Hexatech aluminum Hexatech aluminum	Hexatech aluminum Hexatech aluminum
Magnet System	Woofer: Tweeter:	Hybrid rear vented Doubled Neodymium	Hybrid rear vented Double Neodymium	Hybrid rear vented Doubled Neodymium
Mounting Depth	Woofer: Tweeter:	60mm (2.36") 20mm (0.80")	61mm (2.40") 20mm (0.80")	71mm (2.80") 20mm (0.80")



# HYBRID OVATION II™ 2-WAY COMPONENT SYSTEM



Some believe that the Hybrids are one of the best sounding speakers we ever produced, now it got even better with the new Hybrid Ovation II. At the heart of the Morel sound is its unique technology - unconventional, innovative, and highly effective. Compact, slim, and efficient, the Hybrid Ovation II series drive unit with Hexatech™ voice coil and double magnet (neodymium and ferrite) system delivers exceptional sound that's pleasing to the ear.

The MT-22 tweeter with 28mm (1 1/8") diameter aluminum Hexatech™ voice coil is hand coated with Acuflex, a special material that provides good damping for the soft dome and reduces distortion. The tweeter offers smoother linear frequency response, enhanced low midrange reproduction, and crystal clear high frequencies. Hybrid Ovation II heightens the enjoyment of music, living up to Morel's reputation for delivering more.

The Uniflow aluminum die-cast chassis' aerodynamic design minimizes sound reflection distortion and increases the speaker's overall performance. The low-profile flat spider provides greater support and stability to the voice coil and cone during the most demanding operating conditions. Uniflow's streamlined and stylish design once more illustrates Morel's flair for combining technological breakthroughs with design excellence.

Morel's new Accuset MX-22.4 crossover system is designed with installers in mind, with an easy-to-install smaller crossover and a by-passable poly-switch protection on the tweeter. It also features various adjustment of the crossovers (6dB or 12dB slope adjustment and ±3dB tweeter level attenuation settings) making it easier for installers to reach optimal acoustics in any car environment.

2-Way System	Hybrid Ovation II 4	Hybrid Ovation II 5	Hybrid Ovation II 6
Nominal Impedance	4 ohm	4 ohm	4 ohm
Power Handling	100W	120W	140W
Max. Transient Power Handling	300W	500W	600W
Sensitivity (2.83V/1M)	89dB	91dB	90dB
Frequency Response	50-25000Hz	40-25000Hz	35-25000Hz
Crossover Point	1800Hz	1800Hz	1800Hz
Voice Coil Diameter	Woofer: 54mm (2.10") Tweeter: 28mm (1.10")	Woofer: 54mm (2.10") Tweeter: 28mm (1.10")	Woofer: 54mm (2.10") Tweeter: 28mm (1.10")
Voice Coil Wire	Woofer: Hexatech aluminum Tweeter: Hexatech aluminum	Woofer: Hexatech aluminum Tweeter: Hexatech aluminum	Woofer: Hexatech aluminum Tweeter: Hexatech aluminum
Magnet System	Woofer: Hybrid rear vented Tweeter: Neodymium	Woofer: Hybrid rear vented Tweeter: Neodymium	Woofer: Neodymium rear vented Tweeter: Neodymium
Mounting Depth	Woofer: 50mm (2.00") Tweeter: 20mm (0.80")	Woofer: 60mm (2.36") Tweeter: 20mm (0.80")	Woofer: 61mm (2.40") Tweeter: 20mm (0.80")







Installing car speakers can be very cumbersome due to the inherent acoustical problems present in off-axis system designs and asymmetrical car environments. These problems make it hard to accurately tune and select the crossing frequency points in two- and three-way component systems.

Keeping your needs in mind, Morel has designed its Accuset crossover alignment system. The Accuset Alignment system provides installers an easy way to tune a sound system to reach optimum performance. The Accuset alignment system is connected to each of the Accuset crossover units using ribbon cables and acts as an extension to the crossovers; enabling installers to make all necessary adjustments from any seat in the car. With the Accuset alignment system, installers now can fine-tune crossover settings in real-time to achieve the best performance and sound quality while listening to music.

The Accuset alignment system offers several different adjustment options, giving you greater flexibility in sound system design.

**Tweeter Section**

The tweeter level can be adjusted from -4dB to +4dB in 2dB increments. It also has 6dB and 12dB crossover slope-cut options.

**Woofer Section**

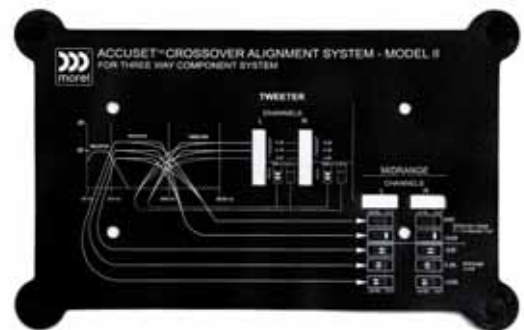
The woofer can be adjusted to a 6dB or a 12dB crossover slope cut. Woofer adjustment does not affect the tweeter adjustment and vice versa. Both the woofer and the tweeter can be independently adjusted to meet your needs.

**Midrange Section**

The midrange can be adjusted to a 6dB / 12dB crossover slope cut, and ± 1.5dB level adjustments.

**Accuset Alignment System**

Compatible for speaker systems	Elate 3-way Elate 2-way Hybrid Ovation 2-way
Compatible for crossovers	MX-33 / 33.3 / 33.4E MX-22 / 22.2 MX-22E / 22.2E
Cable length	1.6 meters (5ft)
Net Weight	2.4Kg (5.28Lb)



# DOTECH OVATION™ 2-WAY COMPONENT SYSTEM



Featuring some of Morel's best technological innovations, the Dotech Ovation series delivers quality, performance, and affordability in one compact stylish system. Dotech Ovation holds great appeal for car audio lovers looking for powerful sound and exceptional value. Dotech represents a sound investment for music lovers.

Dotech Ovation features Morel's Unified one piece chassis with shallow aerodynamic design to reduce sound reflection distortion and mounting depth. Dotech's double magnet drive motor and its large 54mm (2 1/8") diameter Hexatech aluminum voice coil, provides better cone support and higher power handling. The use of Morel's C.A.R. Filter technology improves acoustical loading and enhances the woofer's ability to perform well in free-air environments.

Morel's new MT-12 Acuflex coated soft dome tweeter with neodymium magnet motor and large diameter 28mm (1 1/8") voice coil allows wide frequency response and a lower resonance point, providing perfect integration with its mid-bass woofer.

The high-quality Mini-Accuset MX-20 crossover, built using high grade air coils and caps, offers  $\pm 3$ dB tweeter level attenuation, making it easier to achieve optimal performance in different car audio environments.

The tuning process is further simplified with the new mini-accuset crossover alignment system, designed to work with the mini-accuset MX-20 crossover. This exceptional sound-tuning device enables easy and fast adjustment of the crossover from any location to achieve optimal soundstage and imaging.

2-Way System	Dotech Ovation 4	Dotech Ovation 5	Dotech Ovation 6
Nominal Impedance	4 ohm	4 ohm	4 ohm
Power Handling	100W	120W	140W
Max. Transient Power Handling	300W	500W	500W
Sensitivity (2.83V/1M)	88dB	89dB	90dB
Frequency Response	50-22000Hz	45-22000Hz	40-22000Hz
Crossover Point	3200Hz 6dB/octave	3200Hz 6dB/octave	3200Hz 6dB/octave
Voice Coil Diameter	Woofer: 54mm (2.10") Tweeter: 28mm (1.10")	54mm (2.10") 28mm (1.10")	54mm (2.10") 28mm (1.10")
Voice Coil Wire	Woofer: Hexatech aluminum Tweeter: Copper	Hexatech aluminum Copper	Hexatech aluminum Copper
Magnet System	Woofer: Double ferrite rear vented Tweeter: Neodymium	Double ferrite rear vented Neodymium	Double ferrite rear vented Neodymium
Mounting Depth	Woofer: 50mm (2.00") Tweeter: 20mm (0.80")	60mm (2.36") 20mm (0.80")	60mm (2.36") 20mm (0.80")



# INTEGRA OVATION XO™ POINT SOURCE SPEAKERS



Once again, Morel introduces a new concept in car audio with its new point source Integra Ovation XO. As its name suggests, Integra integrates tweeter and woofer into one compact and powerful point source speaker – expertly engineered for car installations that cannot accommodate component systems. The Integra Ovation XO is the audiophile’s ultimate solution, offering superb soundstage, image, and musicality. The Integra Ovation XO offers hours of listening pleasure for ardent music lovers.

Integra Ovation XO utilizes the neodymium magnet motor drive system to achieve reduced mounting depth and increased loudspeaker sensitivity. The large-diameter 54mm (2 1/8”) EVC aluminum Hexatech voice coil increases power handling and transient response.

The Acuflex-coated soft dome tweeter delivers the warm, crystal-clear sound Morel is known for. The tweeter is acoustically integrated with the woofer

motor drive system, constructed to allow perfect integration and phase linearity with the woofer. This construction ensures smooth and linear frequency response to produce a unique point-source speaker.

The aerodynamic design of the Uniflow aluminum die-cast chassis minimizes sound reflection distortion and increases overall speaker performance.

The Integra Ovation XO is designed to provide installers with optimal flexibility with its separate input tags for the woofer and tweeter and external crossover network. By allowing installers to attenuate tweeter level by ±3dB, the new external crossover improves the speaker’s performance in off-axis installations and elevates some of the problems of reflective surfaces in a specific frequency range.

	Integra Ovation XO 4	Integra Ovation XO 5	Integra Ovation XO 6
Nominal Impedance	4 ohm	4 ohm	4 ohm
Power Handling	80W	90W	100W
Max. Transient Power	250W	300W	400W
Sensitivity (2.83V/1M)	88dB	89dB	90dB
Frequency Response	60–25000Hz	50–25000Hz	45–25000Hz
Crossover Point (Separate Unit)	3200Hz 6dB W 18dB T	3200Hz 6dB W 18dB T	3200Hz 6dB W 18dB T
Voice Coil Diameter	Woofer: 54mm (2.10") Tweeter: 28mm (1.10")	54mm (2.10") 28mm (1.10")	54mm (2.10") 28mm (1.10")
Voice Coil Wire	Woofer: Hexatech aluminum Tweeter: Copper	Hexatech aluminum Copper	Hexatech aluminum Copper
Magnet System	Woofer: Neodymium Tweeter: Neodymium	Neodymium Neodymium	Neodymium Neodymium
Mounting Depth	50mm (2.00")	60mm (2.36")	61mm (2.40")





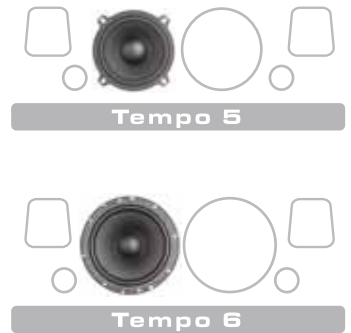
Tempo component system is Morel's answer to the demand for performance coupled with competitive pricing. Features some of Morel's innovative technologies, the new Tempo component systems offer car audio enthusiasts the best performance in its class. Now, feeling the tempo as you drive down the street is a whole lot more fun.

The new soft dome 28mm (1 1/8") diameter tweeter utilizes EVC technology to set new performance standards. The soft dome produces an extended frequency response, yielding solid front stage and accurate stereo imaging. The new tweeter installation flexibility offers four different mounting options.

Tempo bass/midrange units feature a new high-grade ferrite magnet, which provides increased magnetic flux, power handling rating, and efficiency. At the same time, it decreases its physical size by 35% compared to standard ferrite magnets to provide smaller mounting depth. The woofer membrane is carefully shaped for clean and linear movement during low midrange frequency reproduction, reducing distortion and increasing bass dynamics.

The crossover network is built using high-grade components to eliminate any distortion. To ensure optimal performance and installation flexibility in dealing with off-axis installations, the Tempo crossover network offers 0dB and +3dB tweeter level attenuation.

2-Way System		Tempo 5	Tempo 6
Nominal Impedance		4 ohm	4 ohm
Power Handling		110W	120W
Max. Transient Power Handling		270W	280W
Sensitivity (2.83V/1M)		89dB	90dB
Frequency Response		46-22000Hz	40-22000Hz
Crossover Point		3800Hz 6dB/octave	3800Hz 6dB/octave
Voice Coil Diameter	Woofer: Tweeter:	25mm (1.00") 28mm (1.10")	25mm (1.00") 28mm (1.10")
Voice Coil Wire	Woofer: Tweeter:	Copper Copper	Copper Copper
Magnet System	Woofer: Tweeter:	T-type high-grade ferrite Neodymium	T-type high-grade ferrite Neodymium
Mounting Depth	Woofer: Tweeter:	59mm (2.32") 20mm (0.80")	62mm (2.44") 20mm (0.80")





For performance coupled with competitive pricing, nothing beats Morel's new Tempo Coaxial speakers. Featuring some of Morel's innovative technologies, Tempo offers car audio enthusiasts the best performance in its class. For those who like their car audio loud and proud, Tempo is the power-packed solution.

The Tempo Coax speakers feature a 25mm (1") soft dome tweeter with a low resonance point, which enables the tweeter to produce a wider frequency range in the lower midrange band. The tweeter can be swiveled to optimize speaker performance and enhance the listening experience.

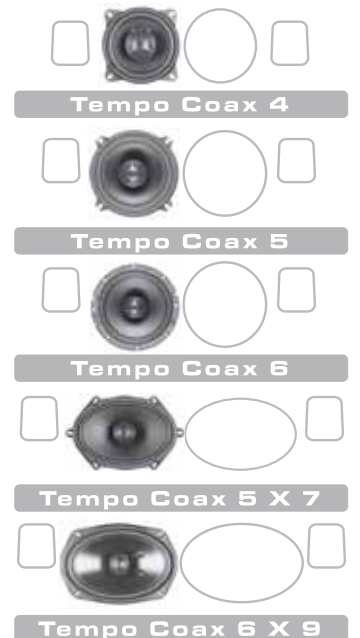
Morel's new high-grade ferrite magnet provides increased magnetic flux, power handling rating, and efficiency. At the same time, the smaller size

(35% smaller than standard ferrite magnets) provides shallow mounting depth. The woofer membrane is carefully shaped for clean and linear movement during low midrange frequency reproduction, reducing distortion and increasing bass dynamics.

For added flexibility, the Tempo Coax provides installers with an external plug & play crossover that enables the use of two separate inputs in bi-amping or bi-wiring installations, as well as -3/0 dB tweeter attenuation.

Available in 4", 5 1/4", 6 1/2", 5x7, and 6x9" size speakers, Tempo Coax fits in any speaker placement, providing superior sound quality to any sound system.

Tempo Coax	4	5	6	5 x 7	6x9
Nominal Impedance	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm
Power Handling	50W	100W	110W	90W	140W
Max. Transient Power Handling	120W	200W	200W	200W	250W
Sensitivity (2.83V/1M)	85dB	89dB	90dB	90dB	91dB
Frequency Response	70-22000Hz	55-22000Hz	40-22000Hz	50-22000Hz	35-22000Hz
Crossover Point	4000Hz	4000Hz	4000Hz	4000Hz	3800Hz
Voice Coil Diameter	Woofer: 25mm (1.00") Tweeter: 25mm (1.00")	Woofer: 25mm (1.00") Tweeter: 25mm (1.00")	Woofer: 25mm (1.00") Tweeter: 25mm (1.00")	Woofer: 25mm (1.00") Tweeter: 25mm (1.00")	Woofer: 30mm (1.18") Tweeter: 25mm (1.00")
Voice Coil Wire	Woofer: Copper Tweeter: Copper	Copper Copper	Copper Copper	Copper Copper	Copper Copper
Magnet System	Woofer: High-grade ferrite magnet Tweeter: Neodymium	High-grade ferrite magnet Neodymium	High-grade ferrite magnet Neodymium	High-grade ferrite magnet Neodymium	High-grade ferrite magnet Neodymium
Mounting Depth	48mm (1.89")	60mm (2.36")	64mm (2.51")	60mm (2.36")	86mm (3.38")



# MAXIMO 2-WAY COMPONENT SYSTEM



We are adamant about our signature sound. It's a sound that is shared amongst each Morel product, including the new entry level Maximo line of speakers. Like their more expensive siblings, the focus of our R&D team was to stretch the Morel sonic qualities into a new price level category. With its vast knowledge - Morel managed to optimize each of the system components to its maximum sonic performance - which is really what it's all about.

Pulling from some of Morel's innovative technologies, the Maximo component speakers deliver the powerful sound car audio enthusiasts seek yet without the ear fatiguing harshness found in similar priced speakers. This is because the foundation for the Maximo tweeter is rooted with the same design principles as our hi-end tweeters. The Maximo tweeters feature a 25mm (1") soft dome tweeter using our EVC™ technology along with a powerful neodymium magnet motor. The design optimizes off-axis performance and extends frequency response for a solid front stage and accurate imaging. And, the tweeter installation kit further enhances the systems flexibility offering four different mounting options.

Efficiency is another Morel trait, one that is incorporated into the new Maximo bass/midrange units as well. At the source is a new high-grade ferrite magnet that generates increased magnetic flux, thereby increasing power handling and output. At the same time, the more powerful magnet (35% smaller than standard ferrite magnets) affords the Maximo to be smaller in size, providing a shallow mounting depth for easy installation in tight places.

Maximo is the first in Morel's lineup to use a new proprietary coating called Acudamp which is an ultra lightweight polymer resin applied to the bass/midrange cone to eliminate cone resonances largely responsible for distortion. This, along with the computer optimized cone and suspension result in clean, linear movement during low frequency reproduction and increased bass dynamics.

The outboard crossover network is built using high-grade components commonly found in systems priced twice as much. Featuring film capacitors and large gauge inductors in the 12dB filters, power handling is no longer limited by distortion inducing crossover components.

With Maximo, the maximum from a car audio system is at your reach.

2-Way System		Maximo 5 1/4"	Maximo 6 1/2"
Nominal Impedance		4 ohm	4 ohm
Power Handling		80W	90W
Max. Transient Power Handling		160W	180W
Sensitivity (2.83V/1M)		89dB	90.5dB
Frequency Response		50-20,000 Hz	50-20,000 Hz
Voice Coil Diameter	Woofer:	25mm(1")	25mm(1")
	Tweeter:	25mm(1")	25mm(1")
Voice Coil Wire		Copper	Copper
Magnet System	Woofer:	High grade ferrite magnet	High grade ferrite magnet
	Tweeter:	Neodymium	Neodymium
Mounting Depth		56mm (2.2")	63mm (2.5")





Morel's new Maximo coaxial speakers offer the sonic performance you expect from a Morel product, yet with pricing you don't.

Like the Maximo components, the Maximo Coax inherits several of the company's innovative technologies. The foundation for the Maximo tweeter is rooted with the same design principles as our hi-end tweeters. Each coaxial speaker features a 19mm (0.8") soft dome tweeter with a powerful neodymium magnet motor. The design, along with high quality film capacitors used in the crossover, suppresses distortion while optimizing off-axis performance and maintaining the "sweet and warm" signature sound only a Morel can produce.

Efficiency is a Morel trait, one that is incorporated into the new Maximo Coax woofer as well. At the source is a new high-grade ferrite magnet that generates increased magnetic flux, thereby increasing power handling and output. At the same time, the more powerful magnet (35% smaller than standard ferrite magnets) affords the Maximo to be smaller in size, providing a shallow mounting depth for easy installation in tight places.

Maximo is the first in Morel's lineup to use a new proprietary coating called Acudamp, which is an ultra lightweight polymer resin applied to the bass/midrange cone to eliminate cone resonances largely responsible for distortion. This, along with the computer optimized cone and suspension result in clean, linear movement during low frequency reproduction and increased bass dynamics.

Available in 4", 5 1/4", 6 1/2", and 6x9" size speakers, Maximo Coax fits in any speaker placement, providing superior sound quality to any sound system.

Maximo Coax	4"	5 1/4"	6 1/2"	6X9"
Nominal Impedance	4 ohm	4 ohm	4 ohm	4 ohm
Power Handling	45W	70W	80W	100W
Max. Transient Power Handling	100W	140W	160W	200W
Sensitivity (2.83V/1M)	87.5dB	89.5dB	91dB	92dB
Frequency Response	75-20,000 Hz	55-20,000 Hz	55-20,000 Hz	45-20,000 Hz
Voice Coil Diameter	Woofer:	25mm(1")	25mm(1")	25mm(1")
	Tweeter:	19mm(0.8")	19mm(0.8")	19mm(0.8")
Voice Coil Wire	Copper	Copper	Copper	Copper
Magnet System	Woofer:	High grade ferrite magnet	High grade ferrite magnet	High grade ferrite magnet
	Tweeter:	Neodymium	Neodymium	Neodymium
Mounting Depth	52mm (2.1")	56mm (2.2")	63mm (2.5")	81mm (3.24")



MAXIMO 4 COAX



MAXIMO 5 1/4 COAX



MAXIMO 6 1/2 COAX



MAXIMO 6X9 COAX

# ULTIMO SUBWOOFER



The same uncompromising dedication to innovation, craftsmanship and sound quality that have made Morel the choice of music aficionados the world over, now brings you the Ultimo Subwoofer series.

The Ultimo was engineered to set new standards in subwoofer technology and bass performance, satisfying the most demanding car audio enthusiasts. Available in a single voice coil configuration, the Ultimo subwoofer series is engineered to perform well in both sealed and ported enclosures, offering the flexibility of a wide range of applications.

Equipped with a gigantic 5.1" Hexatech External Voice coil (EVC™), constructed of a heavy gauge high temperature aluminum wire and extra thick aluminum former, the Ultimo subwoofer produces 1000WRMS (3000W peak) clean power output. The new DMM™ motor design achieves over 90% efficiency and the PFS™ spider/surround technology ensures maximum linearity, minimum distortion, and truly flat response curve.

The Ultimo subwoofer employs a unique hybrid paper-carbon fibre composite cone that generates an extraordinary musicality in SQ applications.

The high venting capability of the voice coil and the rigid Uniflow™ die-cast aluminum basket design provide reliable and stable operation of the subwoofer enabling many hours of listening enjoyment.

Morel's new, top-of-the-line subwoofer was a long time in coming, but it was well worth the wait. Spoil yourself, and hear how bass was meant to sound.

## Recommended enclosure sizes:

	ULTIMO 8	ULTIMO 10	ULTIMO 12
Ported enclosure	10-15 lit (0.353-0.529 cu.ft) Optimal performance at 10 lit (0.353 cu.ft)	18-40 lit (0.635-1.412 cu.ft) Optimal performance at 30 lit (1.059 cu.ft)	25-60 lit (0.882-2.11 cu.ft) Optimal performance at 45 lit (1.589 cu.ft)
Sealed enclosure	6.5-15 lit (0.222-0.529 cu.ft) Optimal performance at 10 lit (0.353 cu.ft)	12-45 lit (0.423-1.589 cu.ft) Optimal performance at 25 lit (0.882 cu.ft)	20-60 lit (0.706-2.11 cu.ft) Optimal performance at 30 lit (1.059 cu.ft)





# ULTIMO SC SUBWOOFER



The Ultimo SC is the new member of the Ultimo series. It is Morel's solution to clean, musical and life-like bass reproduction qualities at a great consumer value.

Available in a single voice coil configuration, the Ultimo SC subwoofer series is engineered to perform well in both sealed and ported enclosures, offering the flexibility of a wide range of applications.

The Ultimo SC employs some of the finest technological features of the Ultimo subwoofer such as a gigantic 5.1" Hexatech™ External Voice coil (EVC™), a highly efficient magnet system - DMM™ Double Magnet ferrite Motor design that achieves over 90% efficiency.

Similar to its sibling - the Ultimo SC subwoofer employs a unique hybrid paper-carbon fibre composite cone to achieve the extraordinary musicality in SQ application. It features a solid stamped steel chassis and power handling is 600WRMS.

Morel's new Ultimo SC series provides car audio enthusiasts a new performance standard for its class.

## Recommended enclosure sizes:

	ULTIMO SC 10	ULTIMO SC 12
Ported enclosure	19-40 lit ( 0.67-1.412 cu.ft) Optimal performance at 29 lit (1.024 cu.ft)	30-60 lit (1.059-2.11 cu.ft) Optimal performance at 45 lit (1.58 cu.ft)
Sealed enclosure	13-30 lit (0.459-1.059 cu.ft) Optimal performance at 15 lit (0.529 cu.ft)	20-50 lit (0.706-1.76 cu.ft) Optimal performance at 28 lit (0.988 cu.ft)



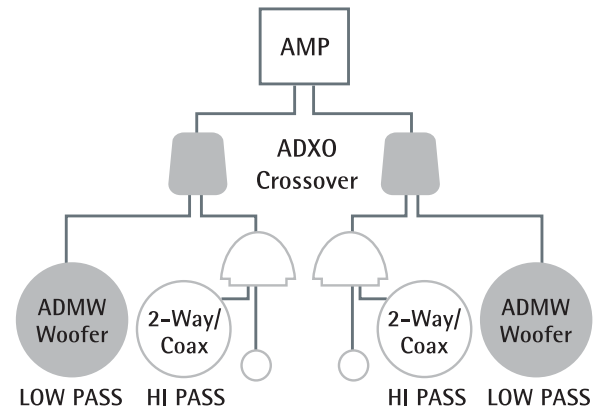
## ADMW 3-WAY ADD-ON KIT



Improving a 2-way component system has never been easier with Morel's 3-way add-on kit. Available in 6", 9" and 10" and with a high quality Hi-Pass/Low-Pass crossover, installers can upgrade most 2-way component

systems or coaxial speakers by adding another bass woofer to improve dynamic range and bass response and overall sound quality.

3-Way Add-On Kit	ADMW 6	ADMW 9	ADMW 10
Nominal Impedance	4 ohm	4 ohm	4 ohm
Power Handling	160W	180W	200W
Max. Transient Power Handling	1000W	1000W	1000W
Sensitivity (2.83V/1M)	87dB	88dB	89dB
Frequency Response	30-3500Hz	25-3000 Hz	20-2500 Hz
Crossover Point	150 Hz HP/LP	150 Hz HP/LP	150 Hz HP/LP
Voice Coil Diameter	75mm (3.00")	75mm (3.00")	75mm (3.00")
Voice Coil Wire	Aluminium Hexatech	Aluminium Hexatech	Aluminium Hexatech
Magnet System	Double ferrite	Double ferrite	Double ferrite
Mounting Depth	61mm (2.40")	71mm (2.80")	74mm (2.91")



## COMPONENTS

### WOOFERS



	Supremo SW5	Supremo SW6	Supremo SW9	Elate SW5	Elate SW6	Elate SW9
Nominal Impedance	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm
Power Handling	120W	140W	150W	160W	200W	200W
Max. Transient Power Handling	1000W	1000W	1000W	1000W	1000W	1000W
Sensitivity (2.83V/1M)	88dB	89dB	91dB	88dB	89dB	91dB
Frequency Response	30-4200Hz	25-5000Hz	20-2600Hz	35-5000Hz	25-4000Hz	20-3300Hz
Unit Diameter	135mm (5.25")	165mm (6.50")	222mm (8.75")	135mm (5.25")	165mm (6.50")	222mm (8.75")
Mounting Depth	60mm (2.36")	61mm (2.40")	71mm (2.80")	60mm (2.36")	61mm (2.40")	71mm (2.80")

# COMPONENTS

Morel car audio components offer powerful performance coupled with superb style. Morel rises to the challenges of car audio system design, developing a wide range of speaker components to meet the needs of installers and consumers alike.

Knowing that flexibility in system design is fundamental to car audio enthusiasts, Morel is offering these components to meet individual needs.

At Morel, there is no compromise on quality. Morel's state-of-the-art technology and unique styling provides an unrivaled car audio experience. With Morel, you get more.

## MIDRANGES

## TWEETERS



	CDM-54	CDM-88	Supremo	Supremo Piccolo	MT-37	MT-23	MT-22	MT-12
Nominal Impedance	4 ohm	4 ohm	6 ohm	6 ohm	6 ohm	6 ohm	4 ohm	4 ohm
Power Handling	100W	100W	220W	200W	200W	130W	110W	80W
Max. Transient Power Handling	300W	300W	1000W	1000W	1000W	350W	300W	250W
Sensitivity (2.83V/1M)	91dB	89dB	92dB	90dB	93dB	91dB	91dB	91dB
Frequency Response	450-7000Hz	450-7000Hz	1400-25000Hz	1400-25000Hz	1800-22000Hz	1400-25000Hz	1600-25000Hz	1800-22000Hz
Unit Diameter	100mm (4.00")	88mm (3.50")	100mm (4.00")	67mm (2.63")	94mm (3.70")	45mm (1.80")	45mm (1.80")	45mm (1.80")
Mounting Depth	25mm (1.00")	21mm (0.83")	50mm (2.00")	32mm (1.25")	58mm (2.30")	20mm (0.80")	20mm (0.80")	20mm (0.80")

## CROSSOVER NETWORKS



	Supremo MXS-2.0	Accuset MX-33.4E	Accuset MX-22.2E	Accuset MX-22.4	Mini Accuset MX-20-4/5/6
Nominal Impedance	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm
Power Handling	250W	250W	280W	200W	150W
Crossover Point	1900Hz	Woofer: 700Hz/12dB Midrange: low 700Hz 6dB, High 3800Hz 6/12dB (Variable) Tweeter: 3800Hz 6/12dB (variable)	1800Hz	1800Hz	3200Hz-6dB/Octave
Crossover Controls	Tweeter level -2dB, 0dB, +2dB	Midrange upper frequency slope cut: 6/12dB Midrange level: -2dB, 0dB, +2dB Tweeter frequency slope cut: 6/12dB/octave Tweeter level: -2dB, 0dB, +2dB	Frequency slope cut: 6/12dB Tweeter level: ±4dB (2dB steps)	Frequency slope cut: 6/12dB Tweeter level: ±3dB Tweeter protection	Tweeter level -3dB, 0dB, +3dB
Wiring Options	Standard, bi-amp, bi-wire	Standard, bi-amp, bi-wire	Standard, bi-amp, bi-wire	Standard	Standard



	Elate SW 10	Hybrid Ovation II 4	Hybrid Ovation II 5	Hybrid Ovation II 6	Dotech Ovation 4	Dotech Ovation 5	Dotech Ovation 6
Nominal Impedance	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm	4 ohm
Power Handling	200W	100W	120W	140W	100W	120W	140W
Max. Transient Power Handling	1000W	300W	500W	600W	300W	300W	300W
Sensitivity (2.83V/1M)	92dB	89dB	91dB	90dB	88dB	89dB	90dB
Frequency Response	15-3000Hz	50-4200Hz	35-3000Hz	35-3000Hz	50-4000Hz	45-4500Hz	40-4000Hz
Unit Diameter	263mm (10.35")	104mm (4.00")	135mm (5.25")	165mm (6.50")	104mm (4.00")	135mm (5.25")	165mm (6.50")
Mounting Depth	74mm (2.91")	50mm (2.00")	60mm (2.36")	61mm (2.40")	50mm (2.00")	60mm (2.36")	61mm (2.40")

# PRODUCT SPECIFICATIONS

## WOOFERS

	Supremo SW 5	Supremo SW 6	Supremo SW 9	Elate SW 5	Elate SW 6	Elate SW 9	Elate SW 10
Nominal Impedance	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm
Power Handling	120W	140W	150W	160W	200W	200W	200W
Max. Transient Power Handling	1000W	1000W	1000W	1000W	1000W	1000W	1000W
Sensitivity (2.83V/1M)	88dB	89dB	91dB	88dB	89dB	91dB	92dB
Frequency Response	35–4200Hz	25–5000Hz	20–2600Hz	35–5000Hz	25–4000Hz	20–3300Hz	15–3000Hz
FS	65Hz	62Hz	56Hz	55Hz	50Hz	40Hz	32Hz
Voice Coil Diameter	75.00mm (3.00")	75.00mm (3.00")	75.00mm (3.00")	75.00mm (3.00")	75.00mm (3.00")	75.00mm (3.00")	75.00mm (3.00")
Voice Coil Height	5.00mm (0.20")	5.00mm (0.20")	5.00mm (0.20")	14.50mm (0.57")	14.50mm (0.57")	14.50mm (0.57")	14.50mm (0.57")
Voice Coil Type/ Former	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Voice Coil Wire	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
DC Resistance	3.50 ohm	3.50 ohm	3.50 ohm	3.70 ohm	3.70 ohm	3.70 ohm	3.80 ohm
Voice Coil Inductance @1kHz	0.20MH	0.22MH	0.22MH	0.39MH	0.38MH	0.72MH	0.63MH
Magnet System	Linear dynamic Hybrid rear vented	Linear dynamic Hybrid rear vented	Supremo Hybrid rear vented	Hybrid rear vented	Hybrid rear vented	Hybrid rear vented	Hybrid rear vented
HE-Magnetic Gap Height	16.00mm (0.64")	16.00mm (0.64")	16.00mm (0.64")	6.00mm (0.25")	6.00mm (0.25")	6.00mm (0.25")	6.00mm (0.25")
B-Flux Density	0.70T	0.70T	0.70T	0.80T	0.80T	0.90T	0.95T
BL Product/BXL	4.32	4.32	4.32	6.15	6.35	7.04	9.36
Max. Linear Excursion/Xmax	11.00mm (±5.5mm)	11.00mm (±5.5mm)	11.00mm (±5.5mm)	8.50mm (±4.25mm)	8.50mm (±4.25mm)	8.50mm (±4.25mm)	8.50mm (±4.25mm)
Suspension Compliance CMS	714	727	425	676	721	706	518
Mechanical Q Factor QES	0.61	0.75	1.20	0.42	0.39	0.42	0.46
Total Q Factor Q/T	0.45	0.55	0.72	0.35	0.33	0.35	0.36
QMS	1.72	2.14	2.70	1.99	2.06	2.09	1.69
Mechanical Resistance RMS	1.85kgS <sup>1</sup>	1.49kgS <sup>1</sup>	1.49kgS <sup>1</sup>	1.03kgS <sup>1</sup>	1.03kgS <sup>1</sup>	1.28kgS <sup>1</sup>	2.92kgS <sup>1</sup>
Moving Mass MMS	7.82gr	8.20gr	15.20gr	11.80gr	13.56gr	21.63gr	49.20gr
Equivalent Cas Air Load VAS	8.00L (0.28ft <sup>3</sup> )	14.35L (0.51ft <sup>3</sup> )	32.00L (1.14ft <sup>3</sup> )	8.00L (0.28ft <sup>3</sup> )	14.35L (0.51ft <sup>3</sup> )	47.50L (1.68ft <sup>3</sup> )	76.40L (2.70ft <sup>3</sup> )
Effective Piston Area SD	90cm <sup>2</sup> (13.95in <sup>2</sup> )	119cm <sup>2</sup> (18.45in <sup>2</sup> )	219cm <sup>2</sup> (33.95in <sup>2</sup> )	90cm <sup>2</sup> (13.95in <sup>2</sup> )	119cm <sup>2</sup> (18.45in <sup>2</sup> )	219cm <sup>2</sup> (33.95in <sup>2</sup> )	324cm <sup>2</sup> (50.22in <sup>2</sup> )
Cone Type	One-piece formed	One-piece formed	One-piece formed	One-piece formed	One-piece formed	One-piece formed	One-piece formed
Cone Material	Coated cellular fiber	Coated cellular fiber	Coated cellular fiber	DPC	DPC	DPC	DPC
Unit Diameter	135.00mm (5.25")	165.00mm (6.50")	222.00mm (8.75")	135.00mm (5.25")	165.00mm (6.50")	222.00mm (8.75")	263.00mm (10.35")
Mounting Depth	60.00mm (2.36")	61.00mm (2.40")	71.00mm (2.80")	60.00mm (2.36")	61.00mm (2.40")	71.00mm (2.80")	74.00mm (2.91")
Mounting Cutout	120.00mm (4.72")	141.00mm (5.55")	192.00mm (7.56")	120.00mm (4.72")	141.00mm (5.55")	192.00mm (7.56")	230.00mm (9.05")
Net Weight	1.35kg (3.00lb)	1.47kg (3.20lb)	1.60kg (3.55lb)	1.05kg (2.31lb)	1.18kg (2.60lb)	1.42kg (3.13lb)	1.47kg (3.24lb)

## MIDRANGE

## TWEETERS

	CDM-54	CDM-88	Tempo	MT-12	MT-22	MT-23	MT-37	Supremo	Supremo Piccolo
Nominal Impedance	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	6.00 ohm	6.00 ohm	6.00 ohm	6.00 ohm
Power Handling	100W	100W	80W	80W	110W	130W	200W	220W	200W
Max. Transient Power Handling	300W	300W	250W	250W	300W	350W	1000W	1000W	1000W
Sensitivity (2.83V/1M)	91dB	89dB	91dB	90dB	91dB	91dB	93dB	92dB	90dB
Frequency Response	450–7000Hz	450–7000Hz	1800–22000Hz	1800–22000Hz	1600–25000Hz	1400–25000Hz	1800–22000Hz	1.40 to 25kHz Limit: 0.30–50kHz	1.40 to 25kHz Limit: 0.30–50kHz
FS	300Hz	280Hz	950Hz	950Hz	950Hz	950Hz	700Hz	680Hz	800Hz
Voice Coil Diameter	54.00mm (2.10")	54.00mm (2.10")	28.00mm (1.10")	28.00mm (1.10")	28.00mm (1.10")	28.00mm (1.10")	28.00mm (1.10")	28.00mm (1.10")	28.00mm (1.10")
Voice Coil Former	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Voice Coil Wire	Hexatech aluminum	Hexatech aluminum	Copper	Copper	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
DC Resistance	3.50 ohm	3.50 ohm	3.40 ohm	3.40 ohm	3.40 ohm	5.20 ohm	5.20 ohm	5.20 ohm	5.20 ohm
Magnet System	Neodymium rear vented	Neodymium rear vented	Neodymium	Neodymium	Neodymium	Double magnet neodymium	Ferrite	Neodymium flat pancake design	Neodymium flat pancake design
Dome Type	Acuflex soft dome	Acuflex soft dome	Soft dome	Acuflex soft dome	Acuflex soft dome	Acuflex soft dome	Acuflex soft dome	Acuflex soft dome	Acuflex soft dome
Dome Material	Silk	Silk	Silk	Silk	Silk	Silk	Silk	Silk	Silk
Unit Diameter	100.00mm (4.0")	88.00mm (3.50")	45.00mm (1.80")	45.00mm (1.80")	45.00mm (1.80")	45.00mm (1.80")	94.00mm (3.70")	100.00mm (4.00")	67.00mm (2.63")
Mounting Depth	25.00mm (1.00")	21.00mm (0.83")	20.00mm (0.80")	20.00mm (0.80")	20.00mm (0.80")	20.00mm (0.80")	58.00mm (2.30")	50.00mm (2.00")	32.00mm (1.25")
Mounting Cutout	84.00mm (3.30")	75.50mm (2.97")	49.00mm (2.00")	50.00mm (2.00")	50.00mm (2.00")	50.00mm (2.00")	76.00mm (3.00")	100.00mm (4.00")	55.00mm (2.16")
Net Weight	0.25kg (0.55lb)	0.25kg (0.55lb)	0.06kg (0.13lb)	0.06kg (0.13lb)	0.06kg (0.13lb)	0.07kg (0.15lb)	0.56kg (1.23lb)	0.45kg (1.00lb)	0.35kg (0.80lb)

Elate, Hybrid Ovation, Dotech Ovation, Supremo, Supremo Piccolo, Integra Ovation XO, Tempo, Tempo Coax, and Accuset are trademarks of Morel. Specifications and design are subject to change without notice.

# WOOFERS

Hybrid Ovation II 4	Hybrid Ovation II 5	Hybrid Ovation II 6	Dotech Ovation 4	Dotech Ovation 5	Dotech Ovation 6	Integra Ovation XO 4	Integra Ovation XO 5	Integra Ovation XO 6
4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm	4.00 ohm
100W	120W	140W	100W	120W	140W	80W	90W	100W
300W	500W	600W	300W	300W	300W	250W	250W	400W
89dB	91dB	90dB	88dB	89dB	90dB	89dB	90dB	90dB
50-4200Hz	35-3000Hz	35-3000Hz	50-4000Hz	45-4500Hz	40-4000Hz	60-5000Hz	50-3800Hz	45-3300Hz
82Hz	60Hz	60Hz	95Hz	67Hz	65Hz	92Hz	70Hz	65Hz
54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")	54.00mm (2.10")
10.50mm (0.41")	10.50mm (0.41")	12mm (0.47")	8.00mm (0.57")	12.00mm (0.48")	12.00mm (0.48")	-	-	-
Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum	Hexatech aluminum
4.20 ohm	3.70 ohm	3.50 ohm	3.00 ohm	3.50 ohm	3.50 ohm	3.40 ohm	3.50 ohm	3.20 ohm
0.34MH	0.31MH	0.29MH	0.17MH	0.21MH	0.21MH	0.17MH	0.44MH	0.58MH
Hybrid rear vented	Hybrid rear vented	Neodymium rear vented	Double ferrite rear vented	Double ferrite rear vented	Double ferrite rear vented	Neodymium	Neodymium	Neodymium
5.00mm (0.20")	5.00mm (0.20")	5.00mm (0.20")	4.00mm (0.16")	4.00mm (0.16")	4.00mm (0.16")	4.00mm (0.18")	5.00mm (0.20")	5.00mm (0.20")
0.85T	1.00T	0.90T	0.65T	0.68T	0.68T	0.90T	0.90T	0.85T
5.92	4.33	4.50	2.53	2.95	2.97	3.86	4.12	3.95
5.50mm (±2.75mm)	5.50mm (±2.75mm)	7.00mm (±3.5mm)	4.00mm (±2.00mm)	8.00mm (±4.00mm)	8.00mm (±4.00mm)	4.00mm (±2.00mm)	5.50mm (±2.75mm)	5.50mm (±2.75mm)
551	921	0.62	456	744	613	469	920	806
0.41	0.55	0.55	1.41	1.28	1.35	0.70	0.52	0.57
0.35	0.45	0.46	0.98	0.90	1.09	0.58	0.45	0.50
2.44	2.54	2.40	3.29	2.99	5.60	3.27	3.23	3.95
0.68kgS <sup>1</sup>	0.52kgS <sup>1</sup>	1.74kgS <sup>1</sup>	0.39kgS <sup>1</sup>	0.36kgS <sup>1</sup>	0.32kgS <sup>1</sup>	0.42kgS <sup>1</sup>	0.42kgS <sup>1</sup>	0.38kgS <sup>1</sup>
6.48gr	7.00gr	11.40gr	4.35gr	7.46gr	10.00gr	4.40gr	5.67gr	6.54gr
3.17L (0.11ft <sup>3</sup> )	10.50L (0.37ft <sup>3</sup> )	12L (0.42ft <sup>3</sup> )	2.68L (0.09ft <sup>3</sup> )	8.47L (0.30ft <sup>3</sup> )	13.00L (0.46ft <sup>3</sup> )	3.00L (0.11ft <sup>3</sup> )	10.50L (0.37ft <sup>3</sup> )	16.00L (0.57ft <sup>3</sup> )
64cm <sup>2</sup> (9.92in <sup>2</sup> )	90cm <sup>2</sup> (13.95in <sup>2</sup> )	119cm <sup>2</sup> (18.45in <sup>2</sup> )	64cm <sup>2</sup> (9.92in <sup>2</sup> )	90cm <sup>2</sup> (13.95in <sup>2</sup> )	119cm <sup>2</sup> (18.45in <sup>2</sup> )	64cm <sup>2</sup> (9.92in <sup>2</sup> )	90cm <sup>2</sup> (13.95in <sup>2</sup> )	119cm <sup>2</sup> (18.45in <sup>2</sup> )
One-piece formed	One-piece formed	One-piece injected	-	-	-	-	-	-
DPC	DPC	DPC	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber	Composite cellular fiber
104.00mm (4.00")	135.00mm (5.25")	165.00mm (6.50")	104.00mm (4.00")	135.00mm (5.25")	165.00mm (6.50")	104.00mm (4.00")	135.00mm (5.25")	165.00mm (6.50")
50.00mm (2.00")	60.00mm (2.36")	61.00mm (2.40")	50.00mm (2.00")	60.00mm (2.36")	60.00mm (2.36")	50.00mm (2.00")	60.00mm (2.36")	61.00mm (2.40")
95.00mm (3.74")	120.00mm (4.72")	141.00mm (5.55")	95.00mm (3.74")	120.00mm (4.72")	141.00mm (5.55")	95.00mm (3.74")	120.00mm (4.72")	141.00mm (5.55")
0.53kg (1.17lb)	0.60kg (1.32lb)	0.60kg (1.32lb)	0.54kg (1.19lb)	0.55kg (1.21lb)	0.60kg (1.32lb)	0.50kg (1.10lb)	0.60kg (1.32lb)	0.75kg (1.65lb)

# SUBWOOFERS

	ULTIMO 8		ULTIMO 10		ULTIMO 12		ULTIMO SC 10		ULTIMO SC 12	
	2 Ohm	4 Ohm	2 Ohm	4 Ohm	2 Ohm	4 Ohm	2 Ohm	4 Ohm	2 Ohm	4 Ohm
Overall dimensions	Ø222mm (8.74") X 120 mm (4.72")		Ø263mm (10.35") X 140.3 mm (5.52")		Ø 305mm (12") X 146.9 mm (5.78")		Ø 263mm (10.35") X 143 mm (5.63")		Ø305mm (12") X 151.5 mm (5.96")	
Power handling RMS	800 W		1000 W		1000 W		600 W		600 W	
Transient power 10ms	3000 W		3000 W		3000 W		2000 W		2000 W	
Sensitivity 2.83 Vrms / 1M	91.5 dB	87.4 dB	87.5 dB		88 dB		95 d	90.5 dB	95 dB	91.5 dB
Sensitivity 1W / 1M	84dB	83.5 dB	84.5 dB		85 dB		87 dB	86.5 dB	87 dB	87 dB
Frequency response	20-900 Hz		10-900 Hz		10-900 Hz		10-900 Hz		10-900 Hz	
Cone material	Carbon-fiber laminated paper		Carbon-fiber laminated paper		Carbon-fiber laminated paper		Carbon-fiber laminated paper		Carbon-fiber laminated paper	
Net weight	6.1 Kg. (13.44 lb)		6.5 Kg. (14.3 lb)		6.7 Kg. (15 lb)		6.1 Kg. (13.44 lb)		6.2 Kg. (13.66 lb)	
Driver Displacement	2.0 Lit (0.07 cu.ft)		2.34 Lit (0.08 cu.ft)		2.6 Lit (0.09 cu.ft)		2.34 Lit (0.08 cu.ft)		2.6 Lit (0.09 cu.ft)	
Voice Coil Diameter	130 mm (5.1")		130 mm (5.1")		130 mm (5.1")		130 mm (5.1")		130 mm (5.1")	
Voice Coil Height	37mm (1.45")		37mm (1.45")		37mm (1.45")		31mm (1.2")		31mm (1.2")	
Voice Coil Former	Aluminum		Aluminum		Aluminum		Aluminum		Aluminum	
Voice Coil Wire	Hexatech Aluminum		Hexatech Aluminum		Hexatech Aluminum		Hexatech Aluminum		Hexatech Aluminum	
Number of Layers	2		2		2		2		2	
Max. Linear Excursion	±12.5 mm (0.5") (Each way)		±12.5 mm (0.5") (Each way)		±12.5 mm (0.5") (Each way)		± 9.5 mm (0.37") (Each way)		±9.5 mm (0.37") (Each way)	
Magnet System Type	Double magnet vented		Double magnet vented		Double magnet vented		Double magnet vented		Double magnet vented	
HE-Magnetic Gap Height	12mm (0.5")		12mm (0.5")		12mm (0.5")		12mm (0.47")		12mm (0.47")	
B Flux Density	0.64 T		6.4 T		6.4 T		6.4 T		6.4 T	
BL Product	7.1 NA	12 NA	13.0 TM		13.0 TM		6.75 T.M	11 T.M	6.75 T.M	11 T.M
Nominal Impedance	2.0 Ohm	4.0 Ohm	2.0 Ohm	4.0 Ohm	2.0 Ohm	4.0 Ohm	2.0 Ohm	4.0 Ohm	2.0 Ohm	4.0 Ohm
DC Resistance	1.7 Ohm	3.7 Ohm	1.7 Ohm	3.7 Ohm	1.7 Ohm	3.7 Ohm	1.3 Ohm	3.0 Ohm	1.3 Ohm	3.0 Ohm
Voice Coil Inductance @ 1KHz	0.30 MH	1.0 MH	0.30 MH	1.0 MH	0.30MH	1.0MH	0.27 MH	0.85 MH	0.27 MH	0.85 MH
Suspension Compliance	0.17	0.17	0.22	0.22	0.80	0.40	0.25	0.3	0.45	0.42
Mechanical Q Factor	1.43	1.62	1.86	1.712	1.238	1.72	1.8	1.84	1.73	1.93
Electrical Q Factor	0.62	0.58	0.58	0.55	0.49	0.46	0.49	0.43	0.45	0.41
Total Q Factor	0.43	0.43	0.40	0.42	0.36	0.345	0.38	0.35	0.36	0.34
Mechanical Resistance	15.4	14.5	21.9	13.9	14.4	14.2	10.86	9.97	8.7	8.45
Moving Mass	85 gr.	95 gr.	121 gr.	128 gr	135 gr.	143 gr.	91.6 gr.	101.7 gr.	103.2 gr.	112.2 gr.
Eq. Cas Air Load	41 Hz	40 Hz	30 Hz	29 Hz	22 Hz	20 Hz	33 Hz	29 Hz	23 Hz	23 Hz
Resonant Frequency	14 Lit(0.4944 cu.ft)		34.5 Lit (1.22 cu.ft)		105 Lit(3.71 cu.ft)		42 Lit(1.48 cu.ft)	50 Lit(1.77 cu.ft)	121 Lit(4.27 cu.ft)	113 Lit(4.0 cu.ft)
Effective Piston Area	0.0243 m <sup>2</sup>		0.03 m <sup>2</sup>		0.0471 m <sup>2</sup>		0.0346 m <sup>2</sup>		0.0471 m <sup>2</sup>	



morel MX 22  
crossover





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