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THE INDUSTRY STANDARD
ANYTHING BUT STANDARD

If you have listened to live music, you have almost certainly listened to Eminence. Virtually every top musical instrument and pro sound manufacturer in the world uses Eminence products.

Nobody knows more about loudspeakers. Eminence has a manufacturing capacity of over 10,000 pieces per day (and growing!) building over 6,000 unique loudspeaker specifications ... our loudspeakers are widely used but they are anything but standard!

Our engineers specialize in creating unique speakers to meet your own proprietary requirements. As an Eminence customer, you can count on our consistency to develop and maintain your reputation for a particular kind of sound. Your own loudspeaker models will be built identically day in day out, year in year out so they will always sound the same.

Our secret is a perfection of the engineering process. Quality control is not a post-production activity: it is inherent in the original engineering. Every component must meet the most rigorous tolerances making the manufacturing process extraordinarily efficient.

We do not waste time and we do not waste materials: the factory's reject level during and after assembly is virtually zero. With productivity high and waste negligible, costs are lower than you might expect. The audio performance of each loudspeaker is perfected in the computer-aided laboratories and judged by what are probably the world's most experienced ears.

The engineering facility - which also designs and builds its own development tools - is undaunted by technical challenges. Sometimes that demands working with specialist suppliers to create new materials with new and superior properties.

Quality, productivity and adaptability all contribute to our legendary capability to compete in world markets. From any other factory, Eminence prices would be too good to be true. In fact, like the loudspeakers, the prices are too good to ignore.

The Genuine Eminence range in this Handbook provides cabinet and combo manufacturers with the world's widest choice of great sounding loudspeakers FROM STOCK!
How a loudspeaker works

The key working components of a loudspeaker are shown in the diagram. When an electrical current passes through a wire coil (the voice coil) in a magnetic field, it produces a force which varies with the current applied. The cone, connected to the voice coil, moves in and out creating waves of high and low air pressure.

The coil and magnet assembly are the ‘motor structure’ of the loudspeaker. The movement is controlled by the loudspeaker’s suspension which comprises the cone surround and the ‘spider’.

The surround and spider allow the coil to move freely along the axis of the magnet’s core (or ‘pole’) without touching the sides of the magnetic gap.

Eminence technology and special materials mean that age-old ‘compromises’ of durability against sensitivity, or power handling against precision of response, are more easily solved than you might imagine.

Heatsinks: In the quest for higher power density (more power and hence more sound from less space), Eminence has progressively introduced innovative heatsink components to selected transducers eg Magnum™ (top) and Kilomax™ (above). The heatsinks pass through or are attached to the pole of the transducer transferring heat away from the core. The air currents caused by the cone movement cool the heatsink.
Prior to 1970, there were no easy or affordable methods accepted as standard in the industry for obtaining comparative data about loudspeaker performance. Recognized laboratory tests were expensive and unrealistic for the thousands of individuals needing performance information. Standard measurement criteria were required to enable manufacturers to publish consistent data for customers to make comparisons between various loudspeakers.

**Thiele-Small parameters**

In the early seventies, several technical papers were presented to the AES (Audio Engineering Society) that resulted in the development of what we know today as “Thiele-Small Parameters”. These papers were authored by A.N. Thiele, and Richard H. Small. Thiele was the senior engineer of design and development for the Australian Broadcasting Commission and was responsible at the time for the Federal Engineering Laboratory, as well as for analyzing the design of equipment and systems for sound and vision broadcasting. Small was, at the time, a Commonwealth Post-graduate Research Student in the School of Electrical Engineering at the University of Sydney.

Thiele and Small devoted considerable effort to show how the following parameters define the relationship between a speaker and a particular enclosure. However, they can be invaluable in making choices because they tell you far more about the transducer’s real performance than the basic benchmarks of size, maximum power rating or average sensitivity.

**Fs** This parameter is the free-air resonant frequency of a speaker. Simply stated, it is the point at which the weight of the moving parts of the speaker becomes balanced with the force of the speaker suspension when in motion. If you’ve ever seen a piece of string start humming uncontrollably in the wind, you have seen the effect of reaching a resonant frequency. It is important to know this information so that you can prevent your enclosure from ‘ringing’. With a loudspeaker, the mass of the moving parts, and the stiffness of the suspension (surround and spider) are the key elements that affect the resonant frequency. As a general rule of thumb, a lower Fs indicates a woofer that would be better for low-frequency reproduction than a woofer with a higher Fs. This is not always the case though because other parameters affect the ultimate performance as well.

**Re** This is the DC resistance of the driver measured with an ohm meter and it is often referred to as the ‘DCR’. This measurement will almost always be less than the driver’s nominal impedance. Consumers sometimes get concerned that Re is less than the published impedance and fear that amplifiers will be overloaded. Due to the fact that the inductance of a speaker rises with a rise in frequency, it is unlikely that the amplifier will often see the DC resistance as its load.

**Le** This is the voice coil inductance measured in millihenries (mH). The industry standard is to measure inductance at 1,000Hz. As frequencies get higher there will be a rise in impedance above Re. This is because the voice coil is acting as an inductor. Consequently, the impedance of a speaker is not a fixed resistance, but can be represented as a curve that changes as the input frequency changes. Maximum impedance (Zmax) occurs at Fs.

**Q Parameters** Qms, Qes and Qts are measurements related to the control of a transducer’s suspension when it reaches the resonant frequency (Fs). The suspension must prevent any lateral motion that might allow the voice coil and pole to touch (this would destroy the loudspeaker). The suspension must also act like a shock absorber. Qms is a measurement of the control coming from the speaker’s mechanical suspension system (the surround and spider). View these components like springs. Qes is a measurement of the control coming from the speaker’s electrical suspension system (the voice coil and magnet). Opposing forces from the mechanical and electrical suspensions act to absorb shock. Qts is called the “Total Q” of the driver and is derived from an equation where Qes is multiplied by Qms and the result is divided by the sum of the same.

As a general guideline, Qts of 0.4 or below indicates a transducer well suited to a vented enclosure. Qts between 0.4 and 0.7 indicates suitability for a sealed enclosure. Qts of 0.7 or above indicates suitability for free-air or infinite baffle applications. However, there are exceptions! The Eminence Kilomax™ 18 has a Qts of 0.56. This suggests a sealed enclosure but in reality it works extremely well in a ported enclosure. Please consider all the parameters when selecting loudspeakers.

If you are in any doubt, contact your Eminence representative for technical assistance.
UNDERSTANDING LOUDSPEAKER DATA

Thiele-Small (cont.)

Vas/Cms Vas represents the volume of air that when compressed to one cubic meter exerts the same force as the compliance (Cms) of the suspension in a particular speaker. Vas is one of the trickiest parameters to measure because air pressure changes relative to humidity and temperature — a precisely controlled lab environment is essential. Cms is measured in meters per Newton. Cms is the force exerted by the mechanical suspension of the speaker. It is simply a measurement of its stiffness. Considering stiffness (Cms), in conjunction with the Q parameters gives rise to the kind of subjective decisions made by car manufacturers when tuning cars between comfort to carry the president and precision to go racing. Think of the peaks and valleys of audio signals like a road surface then consider that the ideal speaker suspension is like car suspension that can traverse the rockiest terrain with race-car precision and sensitivity at the speed of a fighter plane. It’s quite a challenge because focusing on any one discipline tends to have a detrimental effect on the others.

Vd This parameter is the Peak Diaphragm Displacement Volume — in other words the volume of air the cone will move. It is calculated by doubling Xmax (Voice Coil Overhang of the driver) then multiplying the result by Sd (Surface area of the cone). Vd is noted in cc. The highest Vd figure is desirable for a sub-bass transducer.

BL Expressed in Tesla meters, this is a measurement of the motor strength of a speaker. Think of this as how good a weightlifter the transducer is. A measured mass is applied to the cone forcing it back while the current required for the motor to force the mass back is measured. The formula is mass in grams divided by the current in amperes. A high BL figure indicates a very strong transducer that moves the cone with authority!

Mms This parameter is the combination of the weight of the cone assembly plus the 'driver radiation mass load'. The weight of the cone assembly is easy: it’s just the sum of the weight of the cone assembly components. The driver radiation mass load is the confusing part. In simple terminology, it is the weight of the air (the amount calculated in Vd) that the cone will have to push.

Rms This parameter represents the mechanical resistance of a driver’s suspension losses. It is a measurement of the absorption qualities of the speaker suspension and is stated in N*sec/m.

EBP This measurement is calculated by dividing Fs by Qes. The EBP figure is used in many enclosure design formulas to determine if a speaker is more suitable for a closed or vented design. An EBP close to 100 usually indicates a speaker that is best suited for a vented enclosure. On the contrary, an EBP closer to 50 usually indicates a speaker best suited for a closed box design. This is merely a starting point. Many well-designed systems have violated this rule of thumb! Qts should also be considered.

Usable frequency range

This is the frequency range for which Eminence feels the transducer will prove useful. Manufacturers use different techniques for determining ‘Usable Frequency Range’. Most methods are recognized as acceptable in the industry, but can arrive at different results.

Technically, many loudspeakers are used to produce frequencies in ranges where they would theoretically be of little use. As frequencies increase, the off-axis
coverage of a transducer decreases relative to its diameter. At a certain point, the coverage becomes ‘beamy’ or narrow like the beam of a flashlight. Following is a chart that demonstrates at what frequency this phenomenon occurs relative to the size of the transducer.

<table>
<thead>
<tr>
<th>Speaker Diameter (Inches)</th>
<th>Theoretical Maximum Frequency Before Beaming (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75</td>
<td>18,240</td>
</tr>
<tr>
<td>1</td>
<td>13,680</td>
</tr>
<tr>
<td>2</td>
<td>6,840</td>
</tr>
<tr>
<td>3</td>
<td>5,472</td>
</tr>
<tr>
<td>5</td>
<td>3,316</td>
</tr>
<tr>
<td>6.5</td>
<td>2,672</td>
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<tr>
<td>8</td>
<td>2,105</td>
</tr>
<tr>
<td>10</td>
<td>1,658</td>
</tr>
<tr>
<td>12</td>
<td>1,335</td>
</tr>
<tr>
<td>15</td>
<td>1,052</td>
</tr>
<tr>
<td>18</td>
<td>903</td>
</tr>
</tbody>
</table>

If you’ve ever stood in front of a guitar amplifier or speaker cabinet, then moved slightly to one side or the other and noticed a different sound, you have experienced this phenomenon and are now aware of why it occurs. Clearly, most two-way enclosures ignore the theory and still perform quite well. The same is true for many guitar amplifiers, but it is useful to know at what point you can expect a compromise in coverage.

**Power handling**

This specification is very important to transducer selection. Obviously, you need to choose a loudspeaker that is capable of handling the input power you are going to provide. By the same token, you can destroy a loudspeaker by using too little power.

The ideal situation is to choose a loudspeaker that has the capability of handling more power than you can provide lending some headroom and insurance against thermal failure. To use an automobile as an analogy; you would not buy a car that could only go 55mph if that were the speed you always intended to drive.

Generally speaking, the number one contributor to a transducer’s power rating is its ability to release thermal energy. This is affected by several design choices, but most notably voice coil size, magnet size, venting, and the adhesives used in voice coil construction.

Larger coil and magnet sizes provide more area for heat to dissipate, while venting allows thermal energy to escape and cooler air to enter the motor structure.

Equally important is the ability of the voice coil to handle thermal energy. Eminence is renowned for its use of proprietary adhesives and components that maximize the voice coil’s ability to handle extreme temperatures.

Mechanical factors must also be considered when determining power handling. A transducer might be able to handle 1,000W from a thermal perspective, but would fail long before that level was reached from a mechanical issue such as the coil hitting the back plate, the coil coming out of the gap, the cone buckling from too much outward movement, or the spider bottoming on the top plate. The most common cause of such a failure would be asking the speaker to produce more low frequencies than it could mechanically produce at the rated power. Be sure to consider the suggested usable frequency range and the Xmech parameter in conjunction with the power rating to avoid such failures.

The Eminence power rating is derived using an EIA 426A noise source and test standard. All tests are conducted for eight hours in a free-air, non-temperature controlled environment. Eminence tests samples from each of three different production runs and each sample must pass a test exceeding the rated power by 50 to 100W. The Eminence peak power rating is double that of our standard RMS rating.

**Sensitivity** (see also page 46)

This data represents one of the most useful specifications published for any transducer. It is a representation of the efficiency and volume you can expect from a device relative to the input power. Loudspeaker manufacturers follow different rules when obtaining this information — there is not an exact standard accepted by the industry. As a result, it is often the case that loudspeaker buyers are unable to compare apples to apples when looking at the sensitivities of different manufacturers’ products.

Please turn to page 46 for a full analysis of Eminence transducer sensitivities and measurement policies.
The Genuine Eminence loudspeaker range comprises five product groups. A wide range of detail improvements have led to enhanced performance across the entire range with a key benefit being increased power handling in the majority of transducers.

To design enclosures using Eminence transducers, Eminence Designer software is an invaluable aid for calculating and modeling the performance. Take care not to be influenced only by power statistics — much can be learned from a considered review of a transducer’s Thiele Small parameters, this table and the Sensitivity table at the back of this Handbook.

To replace a loudspeaker in an existing enclosure, you will need to establish its volume in liters or cubic feet. Again, Eminence Designer can help you, but as a rough guide this table includes a suggested enclosure volume for each Eminence loudspeaker. Enclosure design is a complex subject however and different enclosure sizes and proportions will affect the sound characteristics of a loudspeaker. To “Hot Rod” combos, experimentation is all part of the fun!

### PROFESSIONAL SERIES

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<th>Subwoofer</th>
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<th>Midrange</th>
<th>Enclosure Volume</th>
<th>Power Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnum® 18LF</td>
<td>18LF</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 4—10 cu. ft.</td>
<td>800W RMS</td>
</tr>
<tr>
<td>Magnum® 18HD</td>
<td>18HD</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 4—8 cu. ft.</td>
<td>650W RMS</td>
</tr>
<tr>
<td>Magnum® 15LF</td>
<td>15LF</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 3—6 cu. ft.</td>
<td>700W RMS</td>
</tr>
<tr>
<td>Kilomax® 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.5—12.5 cu. ft.</td>
<td>1250W RMS</td>
</tr>
<tr>
<td>Kilomax® 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 3.25—5.3 cu. ft.</td>
<td>1500W RMS</td>
</tr>
<tr>
<td>Omega Pro 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 5—6 cu. ft.</td>
<td>800W RMS</td>
</tr>
<tr>
<td>Omega Pro 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 3.4—5.6 cu. ft.</td>
<td>800W RMS</td>
</tr>
<tr>
<td>Omega Pro 12</td>
<td>12</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.2—2.0 cu. ft.</td>
<td>700W RMS</td>
</tr>
<tr>
<td>Sigma Pro 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 6.5—9 cu. ft.</td>
<td>650W RMS</td>
</tr>
<tr>
<td>Sigma Pro 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 3.75—6.25 cu. ft.</td>
<td>650W RMS</td>
</tr>
<tr>
<td>Kilomax™ 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 4—10 cu. ft.</td>
<td>800W RMS</td>
</tr>
<tr>
<td>Kilomax™ 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 3—6 cu. ft.</td>
<td>700W RMS</td>
</tr>
<tr>
<td>Kilomax™ 12</td>
<td>12</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.2—2.0 cu. ft.</td>
<td>700W RMS</td>
</tr>
</tbody>
</table>

### AMERICAN ORIGINALS

<table>
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<tr>
<th>Subwoofer</th>
<th>Wofer</th>
<th>Mid-Bass</th>
<th>Midrange</th>
<th>Enclosure Volume</th>
<th>Power Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kappa 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 6—10 cu. ft.</td>
<td>500W RMS</td>
</tr>
<tr>
<td>Kappa 15LF</td>
<td>15LF</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 2.9—4.9 cu. ft.</td>
<td>650W RMS</td>
</tr>
<tr>
<td>Kappa 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 2.25—3.75 cu. ft.</td>
<td>600W RMS</td>
</tr>
<tr>
<td>Kappa 12</td>
<td>12</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1—2 cu. ft.</td>
<td>500W RMS</td>
</tr>
<tr>
<td>Delta 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 7.5—12.5 cu. ft.</td>
<td>1250W RMS</td>
</tr>
<tr>
<td>Delta 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 3.25—5.3 cu. ft.</td>
<td>1250W RMS</td>
</tr>
<tr>
<td>Delta 12</td>
<td>12</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.8—2.92 cu. ft.</td>
<td>1250W RMS</td>
</tr>
<tr>
<td>Kappa 12</td>
<td>12</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.2—2.0 cu. ft.</td>
<td>450W RMS</td>
</tr>
<tr>
<td>Gamma 18</td>
<td>18</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 2.9—4.9 cu. ft.</td>
<td>650W RMS</td>
</tr>
<tr>
<td>Gamma 15</td>
<td>15</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 2.25—3.75 cu. ft.</td>
<td>650W RMS</td>
</tr>
<tr>
<td>Gamma 12</td>
<td>12</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1—2 cu. ft.</td>
<td>500W RMS</td>
</tr>
<tr>
<td>Kappa 10</td>
<td>10</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 0.8—1.5 cu. ft.</td>
<td>500W RMS</td>
</tr>
<tr>
<td>Delta 10</td>
<td>10</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.05—1.75 cu. ft.</td>
<td>500W RMS</td>
</tr>
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### DELTALITE™

<table>
<thead>
<tr>
<th>Subwoofer</th>
<th>Wofer</th>
<th>Mid-Bass</th>
<th>Midrange</th>
<th>Enclosure Volume</th>
<th>Power Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta 2515</td>
<td>2515</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 2.25—4 cu. ft.</td>
<td>300W RMS</td>
</tr>
<tr>
<td>Delta 2512</td>
<td>2512</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1—3 cu. ft.</td>
<td>300W RMS</td>
</tr>
<tr>
<td>Delta 2510</td>
<td>2510</td>
<td>200Hz—4kHz</td>
<td>600Hz—5kHz</td>
<td>Vented 1.05—1.8 cu. ft.</td>
<td>300W RMS</td>
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### HIGH FREQUENCY

<table>
<thead>
<tr>
<th>Compression Driver 1.5kHz—20kHz</th>
<th>Compression Driver 500Hz—1kHz</th>
<th>Supertweeter 3.5kHz—20kHz</th>
<th>Power Rating</th>
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<tr>
<td>IPD-2002</td>
<td>—</td>
<td>—</td>
<td>N/A</td>
</tr>
<tr>
<td>APT Series</td>
<td>—</td>
<td>—</td>
<td>N/A</td>
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</table>
CHOOSING THE CUSTOM SHOP

The Eminence roots are in custom manufacturing. The design and manufacture of special models for a whole range of leading music equipment companies is still the bulk of Eminence business. Eminence has produced thousands of confidential manufacturer-specific formulas since 1966 — branded Eminence loudspeakers did not appear on the market until 1990.

Eminence is one of the very few loudspeaker manufacturers capable of producing a speaker to your exact specifications (minimum quantity terms apply). The engineering department places hundreds of man years of experience at your disposal. Whether your requirement is for a variation on one of the stock models in this Handbook or a true custom requirement for a specific product and price point, Eminence invites you to contact us about it. Eminence can provide the solution — a complete manufacturing service, right down to printing and affixing labels if required, so you have to do no more than load the loudspeaker in your cabinet.

Loudspeakers may be packed individually in standard Eminence gift boxes for in-store displays. For manufacturers, the standard packing technique is compact and economical bulk-packaging on pallets.
Enclosure manufacturers, touring sound engineers, musicians and venue owners are on a constant mission to minimize the amount of space and equipment required to produce maximum sound. Reducing the size of enclosures can offer significant savings in shipping and labor. Traditionally, transducers have dictated the size and weight of enclosures—and have required designs that are very large.

A compounding problem is that conventional bass transducers are usually inefficient, requiring large power amplifiers to obtain the desired levels of low-frequency reproduction. This inefficiency often leads to overpowering of the transducer, ultimately resulting in thermal failure. Excessive heat in the motor structure also contributes to increased levels of power compression and distortion.

Eminence was asked by some of the world’s most renowned touring sound professionals and enclosure designers to develop an innovative solution to these problems. Eminence successfully addressed the issue of improving the thermal capacity of large bass transducers with innovative voice coil construction; thermally resistant adhesives and coil former materials; core periphery ventilation and a revolutionary heat sink design. The end result of these efforts is the respected Eminence Kilomax™ series, used in some of the most notable enclosure designs today.

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Eminence designers continued in this vein by next addressing the issues of power compression, efficiency, enclosure volume and distortion. The result is Magnum®.

For Magnum®, a new cone has been developed to maximize strength and efficiency. To meet the objective of moving large volumes of air, a brand new sinusoid suspension system (surround and spider) was also developed. Both the surround and spider are designed for long excursions and are constructed from an incredibly durable poly/cotton material.

Eminence devoted considerable attention to improving power compression and distortion performance. Much research was directed toward creating a more linear flux field. Ultimately, Eminence designers incorporated the use of a copper shorting ring and an undercut pole piece. The copper shorting ring reduced flux modulation created by the energized coil. A more linear flux field provided a more linear output and ultimately lower distortion.

In the process of utilizing the Kilomax™ heat sink design and Core Periphery Ventilation system, Eminence designers decided to address the issue of destructive phase conditions that are typically apparent in large bass transducers. The result is the aluminum Eminence Magnum® Phasor. The phasor works in a similar fashion to those found in much smaller speakers by smoothing the frequency response while aiding the release of thermal energy that would otherwise accumulate in the motor structure.

An innovative dust cover was also developed to prevent foreign material from entering the voice coil gap and, for touring cabinets especially, conceal the phasor. However, you can still see the beautifully engineered alloy phasor through the material if you look closely!

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MAGNUM® SERIES APPLICATION NOTES

MAGNUM® 18LF For all high-power bass applications where a fine balance of extended low frequency, high output, improved transient response, and lower distortion are required in a 4 to 10 cu. ft. enclosure. The 18LF is ideal for use as the subwoofer in professional sound systems, club systems, DJ systems, houses of worship, and cinemas.

MAGNUM® 18HO For all high-power bass applications where high output, improved transient response, and lower distortion are required in a 4 to 8 cu. ft. enclosure. The 18HO is ideal for use as the low-frequency driver in professional sound systems, club systems, DJ systems, houses of worship, and cinemas.

MAGNUM® 15LF Similar characteristics to the MAGNUM® 18LF but for use in smaller 3 to 6 cu. ft. enclosures.

MAGNUM® 15HO Similar characteristics to the MAGNUM® 18HO but for use in smaller 2 to 4 cu. ft. enclosures.
Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance.
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle.
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction.
- Hafler P1500 Trans-Nova amplifier.
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges).

### Magnetic Properties

- **Nominal Basket Diameter**: 18", 457.2mm, 18", 457.2mm
- **Impedance**: 8Ω, 8Ω
- **Power Rating**: 650Watts, 800Watts
- **Resonance**: 30Hz, 32Hz
- **Usable Frequency Range**: 27Hz—2.5kHz, 28Hz—1.6kHz
- **Magnet Weight**: 3.1kg, 190oz.
- **Gap Height**: 0.375", 9.5mm, 0.375", 9.5mm
- **Voice Coil Diameter**: 4", 101.6mm, 4", 101.6mm

### Mechanical Properties

- **Volume Displaced by Driver**: 112—224 liters, 112—280 liters
- **Overall Diameter**: 18", 457.2mm, 18", 457.2mm
- **Baffle Hole Diameter**: 6.58", 168mm, 6.58", 168mm
- **Diaphragm Mass inc. Airload**: 1763 grams, 1763 grams
- **Mechanical Q**: 0.30, 0.32
- **Equiv. Resistance of Mechanical Loss**: 8Ω, 8Ω
- **Diaphragm Mass inc. Airload**: 1763 grams, 1763 grams
- **Equiv. Resistance of Mechanical Loss**: 8Ω, 8Ω
- **Maximum Mechanical Limit**: 31.75" peak excursion, 31.75" peak excursion

### Electrical Properties

- **Peak Diaphragm Displacement**: 3666N*sec/M, 3666N*sec/M
- **Mechanical Compliance of Suspension**: 0.2076mm/N, 0.2076mm/N
- **BL Product**: 21.64 T-M, 21.64 T-M
- **Diaphragm Mass inc. Airload**: 135 grams, 135 grams
- **Equiv. Resistance of Mechanical Loss**: 8Ω, 8Ω
- **Maximum Mechanical Limit**: 31.75" peak excursion, 31.75" peak excursion

### Environmental Properties

- **Shipping Weight**: 20.0lbs, 9.1kg, 20.0lbs, 9.1kg
The Eminence Kilomax™ project began with the objective of creating an efficient 1kW transducer, the goal being to extract the performance of several drivers from just one. The benefit would be fewer enclosures for a given level of sound. This delivers a useful reduction to the cost of buying and transporting cabinets by reducing their physical number, the gross weight and the overall area required for a complete system.

There are, however, fundamental conflicts of physics within this brief. A single transducer handling 1kW must endure significant heat. The strengthening of critical components to cope with the thermal load will then reduce the sensitivity of the driver. This would in turn result in a product unable to generate much more sound pressure than perhaps a 600W device ... but needing a 1kW amplifier to do so. At the heart of the challenge was the need to resolve heat dissipation.

Eminence, in the course of seeking reliability in all its transducers, made important advances in durability through the development of heat resistant materials. A custom Kapton™ formula, created for Eminence by DuPont, had proved very successful at all but eliminating thermal failure across the board. Exploring the ultimate potential of this material was the starting point for Kilomax™.

Components able to withstand intense heat were only one part of the equation. The Eminence solution to heat dissipation is the Kilomax™ trump card: its signature front heatsink.

The heatsink is a single piece of precision-turned aluminum that passes through the pole of the transducer. With the large heatsink disc at the front exposed to cool air, heat from the motor assembly can escape. To aid its escape, Kilomax™ employs Core Periphery Ventilation — a series of holes around the core that enable air to pass through the magnet and motor assembly. The air currents to ‘pull’ cool air in and ‘push’ hot air from the enclosure are generated by the cone movement.

The partnership of durable heat resistant materials with an active cooling system liberates the Kilomax™ from the problem of heavier gauge components dulling its sensitivity. Kilomax™ is a very efficient transducer.

Since its introduction, Kilomax™ has been subjected to a continuous development program. Small detail changes to selected materials, have together, resulted in the power rating of Kilomax™ extending to a massive 1,250W!

The trend for all loudspeaker designers and speaker system users is to improve power density: more sound from less weight and space. A single Kilomax™ loaded bass bin can replace a number of smaller enclosures. With high power amplifiers smaller and less expensive than ever before, it is no surprise that Kilomax™ loaded systems have been widely embraced by audio professionals across the world.
Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer, 26ga. copper voice coil for improved power-handling and durability
- Ferrite magnet
- 0.25” extended core for greater cone travel and increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Kilomax™ aluminum heatsink to transfer heat from the motor structure
- Core Periphery Ventilation

For esoteric high power bass applications.

<table>
<thead>
<tr>
<th>Thiele-Small parameters</th>
<th>KILOMAX 18</th>
<th>KILOMAX 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Frequency (fs)</td>
<td>33Hz</td>
<td>41Hz</td>
</tr>
<tr>
<td>Impedance (Re)</td>
<td>5.84Ω</td>
<td>4.97Ω</td>
</tr>
<tr>
<td>Coil Inductance (Le)</td>
<td>2.36mH</td>
<td>1.78mH</td>
</tr>
<tr>
<td>Electromagnetic Q (Qes)</td>
<td>0.58</td>
<td>0.40</td>
</tr>
<tr>
<td>Mechanical Q (Qms)</td>
<td>14.24</td>
<td>8.80</td>
</tr>
<tr>
<td>Total Q (Qts)</td>
<td>0.56</td>
<td>0.39</td>
</tr>
<tr>
<td>Compliance Equivalent Volume (Vas)</td>
<td>239.9 liters</td>
<td>154.5 liters</td>
</tr>
<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
<td>1141cc</td>
<td>680cc</td>
</tr>
<tr>
<td>Mechanical Compliance of Suspension (Cms)</td>
<td>0.13mm/ N</td>
<td>0.15mm/ N</td>
</tr>
<tr>
<td>BL Product (BL)</td>
<td>19.7 T-M</td>
<td>17.7 T-M</td>
</tr>
<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
<td>186 grams</td>
<td>98 grams</td>
</tr>
<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
<td>2.69N*sec/M</td>
<td>2.91N*sec/M</td>
</tr>
<tr>
<td>Efficiency Bandwidth Product (EBP)</td>
<td>57</td>
<td>102</td>
</tr>
<tr>
<td>Voice Coil Overhang (Xmax)</td>
<td>9.8mm</td>
<td>7.9mm</td>
</tr>
<tr>
<td>Surface Area of Cone (Sd)</td>
<td>1155cm²</td>
<td>856.3cm²</td>
</tr>
<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>150Ωz</td>
<td>110Ωz</td>
</tr>
<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>38.10mm</td>
<td>26.92mm</td>
</tr>
</tbody>
</table>

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
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PROFESSIONALS
GO FOR GOLD!

It has often been said that Eminence professional loudspeakers are not expensive enough. A genuine American-built cast-frame high performance transducer must surely cost considerably more — after all, most other premium speakers do.

The fact is that nobody else in the world makes quantities like Eminence and nobody else can waste as little during the manufacturing process. If we made fewer and rejected more, we could match their prices...

Eminence ‘Pro’ models have always been remarkably good value. Following a series of detail revisions, they are now even better value.

The major cause of failure in a loudspeaker is thermal overload. Expansion of moving parts — even melting of parts — is terminal. Some time ago, Eminence approached DuPont about formulating a special type of Kapton™ that could efficiently deal with extreme heat conditions. Except for rare accidental overloads, this material all but eliminated voice coil failures.

Eminence has further developed manufacturing techniques with this material and investigated other problem areas in transducer motor structures. The combined effect of a number of seemingly small adjustments to production techniques, component materials and adhesives has yielded dramatic improvements in power handling.

The transducers in the revised ‘Pro’ range offer power handling improvements of up to 50%. The popular Omega Pro series, originally rated at 600W, is now rated between 700W and 800W. The Kappa Pro 15LF, once rated at 400W, is now rated at 600W. To recognize these new models, look for their gold back plate labels.

Now more than ever, selection from this range demands a more considered approach than simply reviewing power handling and sensitivity. We recommend consideration of the sensitivity chart on pages 46-47 and a review of the Thiele-Small explanations on pages 5-8 as a prelude to selecting samples for computer modeling of enclosure designs and listening tests.

The Eminence professional series represents a collection of the most widely used professional loudspeakers in the music industry. From indoor or outdoor concerts, to churches, night clubs, recording studios and arenas all over the world, Eminence has become well known for virtually all applications. Eminence earned this reputation from engineering and manufacturing transducers that incorporate the latest innovations in an affordable package. Why pay more for an over engineered product? Do what the professionals do: put Eminence Inside!
**OMEGA PRO 18**

### Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 27ga copper voice coil for improved power handling and durability
- Ferrite magnet
- Vented and extended core for increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

For all high power bass applications.

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>18&quot;, 457.2mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance (Ω)</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>800Wms</td>
</tr>
<tr>
<td>Resonance (Hz)</td>
<td>28Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>25Hz – 2kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight (oz)</td>
<td>109oz</td>
</tr>
<tr>
<td>Gap Height (mm)</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>4&quot;, 101.6mm</td>
</tr>
</tbody>
</table>

### Mounting information
- Recommended Enclosure Volume (vented): 142 – 170 liters
- Overall Diameter: 18", 457.2mm
- Baffle Hole Diameter: 16.56", 420.55mm
- Front Sealing Gasket fitted as standard
- Rear Sealing Gasket fitted as standard
- Mounting Holes Diameter: 0.25", 6.4mm
- Mounting Hole B.C.D.: 17.25", 438.2mm
- Depth: 8.15", 207mm
- Shipping Weight: 30lbs, 13.6kg

### Thiele-Small parameters
- Resonant Frequency (Hz): 28Hz
- Impedance (Ω): 5.1Ω
- Coil Inductance (mH): 1.67mH
- Electromagnetic Q (Qes): 0.25
- Mechanical Q (Qms): 5.53
- Total Q (Qts): 0.24
- Compliance Equivalent Volume (L): 354 liters
- Peak Diaphragm Displacement Volume (cm³): 12.49 cm³
- Mechanical Compliance of Suspension (cm²/s): 0.19mm/N
- BL Product (T/M): 17.2 T-M
- Diaphragm Mass Inc. Airload (grams): 171 grams
- Equiv. Resistance of Mechanical Suspension Loss (mH): 5.466mH/sec/M
- Efficiency Bandwidth Product (Hz): 114
- Voice Coil Overhang (mm): 4.8mm
- Surface Area of Cone (cm²): 1150cm²
- Impedance at Resonance (Ω): 97Ω
- Maximum Mechanical Limit (Hz): 32.00Hz

**OMEGA PRO 15**

### Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 27ga copper voice coil for improved power handling and durability
- Ferrite magnet
- Vented and extended core for increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

For all high power bass applications.

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>15&quot;, 381mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance (Ω)</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>800Wms</td>
</tr>
<tr>
<td>Resonance (Hz)</td>
<td>39Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>35Hz – 2kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight (oz)</td>
<td>109oz</td>
</tr>
<tr>
<td>Gap Height (mm)</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>4&quot;, 101.6mm</td>
</tr>
</tbody>
</table>

### Mounting information
- Recommended Enclosure Volume (vented): 96 – 150 liters
- Overall Diameter: 15.21", 386.4mm
- Baffle Hole Diameter: 14.0", 355.5mm
- Front Sealing Gasket fitted as standard
- Rear Sealing Gasket fitted as standard
- Mounting Holes Diameter: 0.275", 7mm
- Mounting Hole B.C.D.: 14.56", 369.9mm
- Depth: 6.35", 161mm
- Shipping Weight: 26lbs, 11.6kg

### Thiele-Small parameters
- Resonant Frequency (Hz): 39Hz
- Impedance (Ω): 4.98Ω
- Coil Inductance (mH): 1.48mH
- Electromagnetic Q (Qes): 0.36
- Mechanical Q (Qms): 8.57
- Total Q (Qts): 0.35
- Compliance Equivalent Volume (L): 196 liters
- Peak Diaphragm Displacement Volume (cm³): 12.49 cm³
- Mechanical Compliance of Suspension (cm²/s): 0.19mm/N
- BL Product (T/M): 17.2 T-M
- Diaphragm Mass Inc. Airload (grams): 88 grams
- Equiv. Resistance of Mechanical Suspension Loss (mH): 5.466mH/sec/M
- Efficiency Bandwidth Product (Hz): 114
- Voice Coil Overhang (mm): 4.8mm
- Surface Area of Cone (cm²): 1150cm²
- Impedance at Resonance (Ω): 97Ω
- Maximum Mechanical Limit (Hz): 32.00Hz

**Eminence response curves are measured under the following controlled test conditions:**
- All speakers are tested at 1W 1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Please ask about alternative impedances which are available by special order.
**OMEGA PRO 12**

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 27ga copper voice coil for improved power handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

**For all high power mid-bass applications.**

**Nominal Basket Diameter**
- 12", 304.8mm

**Impedance**
- 8Ω

**Power Rating**
- 700Wmax

**Resonance**
- 39Hz

**Usable Frequency Range**
- 65Hz—1.2kHz

**Sensitivity**
- see page 46

**Magnet Weight**
- 199oz.

**Gap Height**
- 0.375", 9.52mm

**Voice Coil Diameter**
- 4", 101.6mm

**Mounting information**
- **Recommended Enclosure Volume**
  - (vented) 34—57 liters
  - (unvented) 12.4—2.0 cu.ft.

**Overall Diameter**
- 12.4", 314.3mm

**Baffle Hole Diameter**
- 11.06", 281mm

**Front Sealing Gasket**
- fitted as standard

**Rear Sealing Gasket**
- fitted as standard

**Mounting Holes Diameter**
- 0.375", 9.52mm

**Mounting Hole B.C.D.**
- 11.57", 293.8mm

**Depth**
- 5.83", 148mm

**Shipping Weight**
- 24.4lbs., 11.1kg

**Thiele-Small parameters**
- **Resonant Frequency**
  - (fse) 39Hz

- **Impedance**
  - (Re) 5.24Ω

- **Coil Inductance**
  - (Le) 1.39mH

- **Electromagnetic Q**
  - (Qes) 0.22

- **Mechanical Q**
  - (Qms) 8.08

- **Total Q**
  - (Qts) 0.29

- **Compliance Equivalent Volume**
  - (Vas) 88.4 liters

- **Peak Diaphragm Displacement Volume**
  - (Vd) 3.12 cu.ft.

- **Mechanical Compliance of Suspension**
  - (Cms) 0.22mm/”N

- **BL Product**
  - (BL) 17.4 T-M

- **Diaphragm Mass inc. Airload**
  - (Vms) 75 grams

- **Equiv. Resistance of Mechanical Suspension Loss**
  - (Rms) 2.27N•sec/M

- **Efficiency Bandwidth Product**
  - (EBP) 124

- **Voice Coil Overhang**
  - (Xmax) 4.8mm

- **Surface Area of Cone**
  - (Sd) 532.4cm²

- **Impedance at Resonance**
  - (Zmax) 139Ω

- **Maximum Mechanical Limit**
  - (Xmax) 20.83mm

**Eminence response curves are measured under the following controlled test conditions:**
- **All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance**
- **LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle**
- **2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction**
- **Hafler P1500 Trans-Nova amplifier**
- **2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)**

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**SIGMA PRO 18**

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 28ga copper voice coil for improved power handling and durability
- Ferrite magnet
- Vented and extended core for rigidity
- Die-cast aluminum basket for rigidity
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

**For all high power bass applications.**

**Nominal Basket Diameter**
- 18", 457.2mm

**Impedance**
- 8Ω

**Power Rating**
- 650Wmax

**Resonance**
- 28Hz

**Usable Frequency Range**
- 25Hz—2.5kHz

**Sensitivity**
- see page 46

**Magnet Weight**
- 95oz.

**Gap Height**
- 0.375", 9.52mm

**Voice Coil Diameter**
- 3", 76.2mm

**Mounting information**
- **Recommended Enclosure Volume**
  - (vented) 106—177 liters
  - (unvented) 15", 457.2mm

- **Overall Diameter**
  - 16.56", 420.5mm

- **Baffle Hole Diameter**
  - 16.25", 412.0mm

- **Front Sealing Gasket**
  - fitted as standard

- **Rear Sealing Gasket**
  - fitted as standard

- **Mounting Holes Diameter**
  - 0.25", 5.4mm

- **Mounting Hole B.C.D.**
  - 17.25", 438.2mm

- **Depth**
  - 8.15", 207mm

- **Shipping Weight**
  - 27.2lbs., 12.4kg

**Thiele-Small parameters**
- **Resonant Frequency**
  - (fse) 28Hz

- **Impedance**
  - (Re) 6.29Ω

- **Coil Inductance**
  - (Le) 1.90mH

- **Electromagnetic Q**
  - (Qes) 0.30

- **Mechanical Q**
  - (Qms) 8.28

- **Total Q**
  - (Qts) 0.29

- **Compliance Equivalent Volume**
  - (Vas) 441.2 liters

- **Peak Diaphragm Displacement Volume**
  - (Vd) 15.58 cu.ft.

- **Mechanical Compliance of Suspension**
  - (Cms) 0.24mm/”N

- **BL Product**
  - (BL) 22.1 T-M

- **Diaphragm Mass inc. Airload**
  - (Vms) 140 grams

- **Equiv. Resistance of Mechanical Suspension Loss**
  - (Rms) 2.81N•sec/M

- **Efficiency Bandwidth Product**
  - (EBP) 95

- **Voice Coil Overhang**
  - (Xmax) 6.0mm

- **Surface Area of Cone**
  - (Sd) 1140.1cm²

- **Impedance at Resonance**
  - (Zmax) 199Ω

- **Maximum Mechanical Limit**
  - (Xmax) 36.45mm

**Eminence response curves are measured under the following controlled test conditions:**
- **All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance**
- **LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle**
- **2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction**
- **Hafler P1500 Trans-Nova amplifier**
- **2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)**
### Eminence LF models

Eminence LF models are specially designed with extended Xmax to deliver more bass than standard models and provide a ‘true woofer’ for three way applications. This unit has been specially designed to give a clean bass response in extended bass applications. For all high power bass applications including bass guitar.

### Materials of construction

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Basket Diameter</td>
<td>15°, 381mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>600Watts</td>
</tr>
<tr>
<td>Resonance</td>
<td>48Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>40Hz−4kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>95oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3&quot;, 76.2mm</td>
</tr>
</tbody>
</table>

### Mounting information

- **Recommended Enclosure Volume** (vented): 82—139 liters
- **Overall Diameter**: 2.9—4.9 cu.ft.
- **Baffle Hole Diameter**: 14.0", 355.5mm
- **Depth**: 6.57", 167mm
- **Shipping Weight**: 23.4lbs, 10.6kg

### Thiele-Small parameters

<table>
<thead>
<tr>
<th>Parameter (f(Ω))</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Frequency</td>
<td>46Hz</td>
</tr>
<tr>
<td>(f(Ω)) Impedance</td>
<td>5.00Ω</td>
</tr>
<tr>
<td>(f(Ω)) Coil Inductance</td>
<td>1.29mH</td>
</tr>
<tr>
<td>(f(Ω)) Electromagnetic Q</td>
<td>0.39</td>
</tr>
<tr>
<td>(f(Ω)) Mechanical Q</td>
<td>7.90</td>
</tr>
<tr>
<td>Total Q (f(Ω))</td>
<td>0.38</td>
</tr>
<tr>
<td>Compliance Equivalent Volume (f(Ω))</td>
<td>127.5 liters</td>
</tr>
<tr>
<td>Peak Diaphragm Displacement Volume (f(Ω))</td>
<td>4.5 cu.ft.</td>
</tr>
<tr>
<td>Mechanical Compliance of Suspension (f(Ω))</td>
<td>0.122N/m</td>
</tr>
<tr>
<td>BL Product (f(Ω))</td>
<td>19.8 T-M</td>
</tr>
<tr>
<td>Diaphragm Mass inc. Airload (f(Ω))</td>
<td>97 grams</td>
</tr>
<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (f(Ω))</td>
<td>3.54N*sec/M</td>
</tr>
<tr>
<td>Efficiency Bandwidth Product (f(Ω))</td>
<td>117</td>
</tr>
<tr>
<td>Voice Coil Overhang (f(Ω))</td>
<td>4.8mm</td>
</tr>
<tr>
<td>Surface Area of Cone (f(Ω))</td>
<td>856.3cm²</td>
</tr>
<tr>
<td>Impedance at Resonance (f(Ω))</td>
<td>116Ω</td>
</tr>
<tr>
<td>Maximum Mechanical Limit (f(Ω))</td>
<td>26.42mm</td>
</tr>
</tbody>
</table>

### Eminence response curves

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance.
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle.
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction.
- Hafler P1500 Trans-Nova amplifier.
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges).

### Kappa Pro 15

- **Nominal Basket Diameter**: 15°, 381mm
- **Impedance**: 8Ω
- **Power Rating**: 500Watts
- **Resonance**: 47Hz
- **Usable Frequency Range**: 40Hz−4kHz
- **Sensitivity**: see page 46
- **Magnet Weight**: 80oz.
- **Gap Height**: 0.375", 9.52mm
- **Voice Coil Diameter**: 3", 76.2mm

### Mounting information

- **Recommended Enclosure Volume**: 106—177 liters
- **Overall Diameter**: 15.32", 389mm
- **Baffle Hole Diameter**: 14.0", 355.5mm
- **Front Sealing Gasket**: fitted as standard
- **Rear Sealing Gasket**: fitted as standard
- **Mounting Holes Diameter**: 0.275", 7mm
- **Mounting Hole B.C.D.**: 14.56", 369.9mm
- **Depth**: 6.06", 154mm
- **Shipping Weight**: 20lbs, 9.1kg

### Thiele-Small parameters

- **Resonant frequency**: 47Hz
- **Impedance**: 5.23Ω
- **Coil Inductance**: 1.01mH
- **Electromagnetic Q**: 0.40
- **Mechanical Q**: 8.01
- **Total Q**: 0.38
- **Compliance Equivalent Volume**: 167.7 liters
- **Peak Diaphragm Displacement Volume**: 5.92 cu.ft.
- **Mechanical Compliance of Suspension**: 0.162N/m
- **BL Product**: 16.6 T-M
- **Diaphragm Mass inc. Airload**: 72 grams
- **Equiv. Resistance of Mechanical Suspension Loss**: 2.62N*sec/M
- **Efficiency Bandwidth Product**: 117
- **Voice Coil Overhang**: 3.2mm
- **Surface Area of Cone**: 856.3cm²
- **Impedance at Resonance**: 110Ω
- **Maximum Mechanical Limit**: 26.42mm
Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 28ga copper voice coil for improved power handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

Performance optimized for sound reinforcement systems. Also suitable for bass guitar, keyboards, club music systems and stage monitors.

### KAPPA PRO 12

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>12&quot;, 304.8mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>500Watts</td>
</tr>
<tr>
<td>Resonance</td>
<td>37Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>35Hz—2.5kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>80oz.</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3&quot;, 76.2mm</td>
</tr>
</tbody>
</table>

**Mounting Information**

Recommended Enclosure Volume
- (vented): 17—23 liters
- Overall Diameter: 12.38", 314.3mm
- Baffle Hole Diameter: 11.06", 281mm
- Front Sealing Gasket: fitted as standard
- Rear Sealing Gasket: fitted as standard
- Mounting Holes Diameter: 0.275", 7mm
- Mounting Hole B.C.D.: 11.57", 293.8mm
- Depth: 6.22", 158mm
- Shipping Weight: 18.1lbs, 8.6kg

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>37Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance (Re)</td>
<td>5.4Ω</td>
</tr>
<tr>
<td>Coil Inductance (Le)</td>
<td>1.22mH</td>
</tr>
<tr>
<td>Electromagnetic Q (Qes)</td>
<td>0.25</td>
</tr>
<tr>
<td>Mechanical Q (Qms)</td>
<td>6.93</td>
</tr>
<tr>
<td>Total Q (Qts)</td>
<td>0.24</td>
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<tr>
<td>Compliance Equivalent Volume (Vas)</td>
<td>121 liters</td>
</tr>
<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
<td>247cc</td>
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<tr>
<td>Mechanical Compliance of Suspension (Cms)</td>
<td>0.32mm²/N</td>
</tr>
<tr>
<td>BL Product (BL)</td>
<td>17.3 T-M</td>
</tr>
<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
<td>59 grams</td>
</tr>
<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
<td>1.97N*sec/M</td>
</tr>
<tr>
<td>Efficiency Bandwidth Product (EBP)</td>
<td>148</td>
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<tr>
<td>Voice Coil Overhang (Xmax)</td>
<td>1.88mm</td>
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<tr>
<td>Surface Area of Cone (Sd)</td>
<td>519.5cm²</td>
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<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>158Ω</td>
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<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>29.59mm</td>
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### KAPPA PRO 10

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>10&quot;, 254mm</th>
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</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>500Watts</td>
</tr>
<tr>
<td>Resonance</td>
<td>46Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>45Hz—3kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>80oz.</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3&quot;, 76.2mm</td>
</tr>
</tbody>
</table>

**Mounting Information**

Recommended Enclosure Volume
- (vented): 5.6—8.5 liters
- Overall Diameter: 10.25", 260.4mm
- Baffle Hole Diameter: 9.35", 238.1mm
- Front Sealing Gasket: fitted as standard
- Rear Sealing Gasket: fitted as standard
- Mounting Holes Diameter: 0.275", 7mm
- Mounting Hole B.C.D.: 9.63", 244.5mm
- Depth: 4.33", 110mm
- Shipping Weight: 16.8lbs, 7.6kg

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>46Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance (Re)</td>
<td>6.50Ω</td>
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<tr>
<td>Coil Inductance (Le)</td>
<td>1.15mH</td>
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<tr>
<td>Electromagnetic Q (Qes)</td>
<td>0.20</td>
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<td>Mechanical Q (Qms)</td>
<td>10.10</td>
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<tr>
<td>Total Q (Qts)</td>
<td>0.20</td>
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<tr>
<td>Compliance Equivalent Volume (Vas)</td>
<td>52.2 liters</td>
</tr>
<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
<td>110cc</td>
</tr>
<tr>
<td>Mechanical Compliance of Suspension (Cms)</td>
<td>0.31mm²/N</td>
</tr>
<tr>
<td>BL Product (BL)</td>
<td>18.8 T-M</td>
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<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
<td>38 grams</td>
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<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
<td>1.10N*sec/M</td>
</tr>
<tr>
<td>Efficiency Bandwidth Product (EBP)</td>
<td>225</td>
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<tr>
<td>Voice Coil Overhang (Xmax)</td>
<td>3.2mm</td>
</tr>
<tr>
<td>Surface Area of Cone (Sd)</td>
<td>344.9cm²</td>
</tr>
<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>280Ω</td>
</tr>
<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>21.84mm</td>
</tr>
</tbody>
</table>

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LDS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
DELTA PRO 15

Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 28ga aluminum voice coil for lower mass and increased sensitivity
- Ferrite magnet
- Vented and extended core for increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Rolled cloth cone edge with deep corrugations for extended Xmax
- Solid composition paper dust cap

For all high power bass applications, ideal for 2-way PA systems.

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Thiele-Small parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Delta Pro 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Frequency (fs)</td>
<td>42Hz</td>
</tr>
<tr>
<td>Impedance</td>
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<tr>
<td>Coil Inductance (Le)</td>
<td>0.83mH</td>
</tr>
<tr>
<td>Mechanical Q (Qms)</td>
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</tr>
<tr>
<td>Total Q (Qts)</td>
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</tr>
<tr>
<td>Compliance Equivalent Volume (Vas)</td>
<td>243.5 liters</td>
</tr>
<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
<td>272cc</td>
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<tr>
<td>Mechanical Compliance of Suspension (Cms)</td>
<td>0.24mm²/N</td>
</tr>
<tr>
<td>BL Product (BL)</td>
<td>14.5 T-M</td>
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<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
<td>61 grams</td>
</tr>
<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
<td>3.4IN²/sec/M</td>
</tr>
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<td>Efficiency Bandwidth Product (EBP)</td>
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<tr>
<td>Voice Coil Overhang (Xmax)</td>
<td>3.2mm</td>
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<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>67Ω</td>
</tr>
<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>27.31mm</td>
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</table>

DELTA PRO 12

Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 28ga aluminum voice coil for lower mass and increased sensitivity
- Ferrite magnet
- Vented and extended core for increased power handling
- Die-cast aluminum basket for rigidity
- Paper cone
- Rolled cloth cone edge with deep corrugations for extended Xmax
- Solid composition paper dust cap

For all high power bass applications, ideal for 2-way PA systems.

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Thiele-Small parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Delta Pro 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Frequency (fs)</td>
<td>51Hz</td>
</tr>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Coil Inductance (Le)</td>
<td>0.84mH</td>
</tr>
<tr>
<td>Mechanical Q (Qms)</td>
<td>0.37</td>
</tr>
<tr>
<td>Total Q (Qts)</td>
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</tr>
<tr>
<td>Compliance Equivalent Volume (Vas)</td>
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<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
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<td>Mechanical Compliance of Suspension (Cms)</td>
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</tr>
<tr>
<td>BL Product (BL)</td>
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<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
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<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
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</tr>
<tr>
<td>Efficiency Bandwidth Product (EBP)</td>
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<td>Voice Coil Overhang (Xmax)</td>
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</tr>
<tr>
<td>Surface Area of Cone (Sd)</td>
<td>532.4cm²</td>
</tr>
<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>122Ω</td>
</tr>
<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>27.31mm</td>
</tr>
</tbody>
</table>
AMERICAN ORIGINALS

Pressed steel loudspeakers have been the backbone of Eminence Speaker LLC for nearly 40 years. You could say we have had a lot of practice at making these! This is our signature range of loudspeakers. A series fashioned by a team with more combined experience in loudspeaker design than any other team in the world. A group of people who, collectively, have created over 6,000 different loudspeaker designs — and that’s only the number that made it to production!

Every one of these loudspeakers has been designed and carefully built by individuals for whom developing loudspeakers is a way of life. We think it shows. We know you can hear it too. Take a look at some of the remarkable performance figures. On these two pages alone there are 500W and 600W drivers which punch air with astonishing authority. Eminence pressed steel baskets possess remarkable strength and are often stronger than the cast frames of other manufacturers. The voice coils in this series are among the best in the world. They are responsive and durable — designed to make the best of the available amplifier power and to faithfully reproduce music.

The advances made since 1966 have been significant and even in the lifetime of this range, our philosophy of “making a better speaker for less” holds true. In particular, detail changes in our voice coil assemblies have increased thermal efficiency. As a result, power ratings have improved by up to 100% or more in some cases. The Kappa models, once rated at 400W across the board, are now rated between 450W and 600W. The Alpha models, once rated at 100W, are now rated at between 100W and 200W. The Beta 15 was originally rated at 150W but has been re-engineered for a massive 350W! To recognize these new models, look for their chrome back labels.

Now more than ever, selection from this range demands a more considered approach than simply reviewing power handling and sensitivity. We recommend consideration of the sensitivity chart on pages 46-47 and a review of the Thiele-Small explanations on pages 5-8 as a prelude to selecting samples for computer modeling of enclosure designs and listening tests.

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
Kappa 15LF

Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 28ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Rolled cloth cone edge with deep corrugations for strength
- Solid composition paper dust cap

Eminence LF models are specially designed with extended Xmax to deliver more bass than standard models and provide "a true wofer" for three-way applications. This unit has been specially designed to give a clean bass guitar. For all high power bass applications including bass guitar, Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Table: Thiele-Small parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>15&quot;, 381mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Basket Diameter</td>
<td>15&quot;, 381mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>600Wkms</td>
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<tr>
<td>Resonance</td>
<td>39Hz</td>
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<tr>
<td>Usable Frequency Range</td>
<td>35Hz—3kHz</td>
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<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>95oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3&quot;, 76.2mm</td>
</tr>
<tr>
<td>Mounting information</td>
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<tr>
<td>Recommended Enclosure Volume (vented)</td>
<td>82—139 liters</td>
</tr>
<tr>
<td>Overall Diameter</td>
<td>15.16&quot;, 384.9mm</td>
</tr>
<tr>
<td>Baffle Hole Diameter</td>
<td>13.77&quot;, 349.6mm</td>
</tr>
<tr>
<td>Front Sealing Gasket</td>
<td>fitted as standard</td>
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<tr>
<td>Rear Sealing Gasket</td>
<td>fitted as standard</td>
</tr>
<tr>
<td>Mounting Holes Diameter</td>
<td>0.25&quot;, 6.4mm</td>
</tr>
<tr>
<td>Mounting Hole B.C.D.</td>
<td>14.56&quot;, 369.9mm</td>
</tr>
<tr>
<td>Depth</td>
<td>6.375&quot;, 162mm</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>22.1lbs, 10kg</td>
</tr>
</tbody>
</table>

Kappa 15

Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 29ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Table: Thiele-Small parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>15&quot;, 381mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Basket Diameter</td>
<td>15&quot;, 381mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>4Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>450Wkms</td>
</tr>
<tr>
<td>Resonance</td>
<td>36Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>30Hz—2.5kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>80oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3&quot;, 76.2mm</td>
</tr>
<tr>
<td>Mounting information</td>
<td></td>
</tr>
<tr>
<td>Recommended Enclosure Volume (vented)</td>
<td>64—106 liters</td>
</tr>
<tr>
<td>Overall Diameter</td>
<td>15.16&quot;, 384.9mm</td>
</tr>
<tr>
<td>Baffle Hole Diameter</td>
<td>13.77&quot;, 349.6mm</td>
</tr>
<tr>
<td>Front Sealing Gasket</td>
<td>fitted as standard</td>
</tr>
<tr>
<td>Rear Sealing Gasket</td>
<td>fitted as standard</td>
</tr>
<tr>
<td>Mounting Holes Diameter</td>
<td>0.25&quot;, 6.4mm</td>
</tr>
<tr>
<td>Mounting Hole B.C.D.</td>
<td>14.56&quot;, 369.9mm</td>
</tr>
<tr>
<td>Depth</td>
<td>6.125&quot;, 155mm</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>19.3lbs, 8.8kg</td>
</tr>
</tbody>
</table>

Table: Thiele-Small parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>15&quot;, 381mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Frequency</td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>Re</td>
</tr>
<tr>
<td>Coil Inductance</td>
<td>(Le)</td>
</tr>
<tr>
<td>Electromagnetic Q</td>
<td>(Qes)</td>
</tr>
<tr>
<td>Mechanical Q</td>
<td>(Qms)</td>
</tr>
<tr>
<td>Total Q</td>
<td>(Qts)</td>
</tr>
<tr>
<td>Compliance Equivalent Volume</td>
<td>159 liters</td>
</tr>
<tr>
<td>Mechanical Compliance of Suspension</td>
<td>0.155M N</td>
</tr>
<tr>
<td>BL Product</td>
<td>18.6 T-M</td>
</tr>
<tr>
<td>Diaphragm Mass inc. Airload</td>
<td>105 grams</td>
</tr>
<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss</td>
<td>4.28N/sec/4Ω</td>
</tr>
<tr>
<td>Efficiency Bandwidth Product</td>
<td>97</td>
</tr>
<tr>
<td>Voice Coil Overhang</td>
<td>5.5mm</td>
</tr>
<tr>
<td>Surface Area of Cone</td>
<td>856.3cm²</td>
</tr>
<tr>
<td>Impedance at Resonance</td>
<td>(Zmax)</td>
</tr>
<tr>
<td>Maximum Mechanical Limit</td>
<td>(Xmech)</td>
</tr>
</tbody>
</table>
Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 27gms aluminum voice coil for lower mass and increased sensitivity
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

Designed for sound reinforcement systems. Also suitable for lead and bass guitar, keyboards, guitar combos, club music reinforcement systems, bass reinforcement systems, bass guitar combos, club music systems and stage monitors.

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

<table>
<thead>
<tr>
<th>KAPPA 12</th>
<th>DELTA 15LF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal Basket Diameter</strong></td>
<td>12&quot;, 304.8mm</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>8Ω</td>
</tr>
<tr>
<td><strong>Power Rating</strong></td>
<td>450Watts</td>
</tr>
<tr>
<td><strong>Resonance</strong></td>
<td>45Hz</td>
</tr>
<tr>
<td><strong>Usable Frequency Range</strong></td>
<td>40Hz - 4kHz</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>see page 46</td>
</tr>
<tr>
<td><strong>Magnet Weight</strong></td>
<td>80oz.</td>
</tr>
<tr>
<td><strong>Gap Height</strong></td>
<td>0.375&quot;, 9.52mm</td>
</tr>
<tr>
<td><strong>Voice Coil Diameter</strong></td>
<td>3&quot;, 76.2mm</td>
</tr>
<tr>
<td><strong>Mounting information</strong></td>
<td>12.27&quot;, 311.7mm</td>
</tr>
<tr>
<td><strong>Recommended Enclosure Volume</strong></td>
<td>28 - 57 liters</td>
</tr>
<tr>
<td><strong>Overall Diameter</strong></td>
<td>1 - 2 cu.ft.</td>
</tr>
<tr>
<td><strong>Baffle Hole Diameter</strong></td>
<td>11.03&quot;, 280.0mm</td>
</tr>
<tr>
<td><strong>Front Sealing Gasket</strong></td>
<td>fitted as standard</td>
</tr>
<tr>
<td><strong>Rear Sealing Gasket</strong></td>
<td>fitted as standard</td>
</tr>
<tr>
<td><strong>Mounting Holes Diameter</strong></td>
<td>0.255&quot;, 6.5mm</td>
</tr>
<tr>
<td><strong>Mounting Hole B.C.D.</strong></td>
<td>0.25&quot;, 6.5mm</td>
</tr>
<tr>
<td><strong>Depth</strong></td>
<td>5.625&quot;, 143mm</td>
</tr>
<tr>
<td><strong>Shipping Weight</strong></td>
<td>17.4lbs, 7.9kg</td>
</tr>
<tr>
<td><strong>Thiele-Small parameters</strong></td>
<td>12&quot;, 304.8mm</td>
</tr>
<tr>
<td><strong>Resonant Frequency</strong></td>
<td>(fR) 45Hz</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>(Re) 5.4Ω</td>
</tr>
<tr>
<td><strong>Coil Inductance</strong></td>
<td>(Le) 0.77mH</td>
</tr>
<tr>
<td><strong>Electromagnetic Q</strong></td>
<td>(Qes) 0.28</td>
</tr>
<tr>
<td><strong>Mechanical Q</strong></td>
<td>(Qms) 7.76</td>
</tr>
<tr>
<td><strong>Total Q</strong></td>
<td>(Qts) 0.27</td>
</tr>
<tr>
<td><strong>Compliance Equivalent Volume</strong></td>
<td>(Vas) 121.1 liters</td>
</tr>
<tr>
<td><strong>Peak Diaphragm Displacement Volume</strong></td>
<td>3.96 cu.ft.</td>
</tr>
<tr>
<td><strong>Mechanical Compliance of Suspension</strong></td>
<td>(Cms) 0.36mm/N</td>
</tr>
<tr>
<td><strong>BL Product</strong></td>
<td>15.2 T-M</td>
</tr>
<tr>
<td><strong>Diaphragm Mass inc. Airload</strong></td>
<td>(Vd) 165cc</td>
</tr>
<tr>
<td><strong>Overall Diameter</strong></td>
<td>(Ms) 42 grams</td>
</tr>
<tr>
<td><strong>Recommended Enclosure Volume</strong></td>
<td>12&quot;, 304.8mm</td>
</tr>
<tr>
<td><strong>Min. Rms Power</strong></td>
<td>150Watts</td>
</tr>
<tr>
<td><strong>Max. Rms Power</strong></td>
<td>450Watts</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>8Ω</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>see page 46</td>
</tr>
<tr>
<td><strong>Maximum Mechanical Limit</strong></td>
<td>23.88mm</td>
</tr>
<tr>
<td><strong>Thiele-Small parameters</strong></td>
<td>15&quot;, 381mm</td>
</tr>
<tr>
<td><strong>Resonant Frequency</strong></td>
<td>(fR) 41Hz</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>(Re) 6.3Ω</td>
</tr>
<tr>
<td><strong>Coil Inductance</strong></td>
<td>(Le) 1.49mH</td>
</tr>
<tr>
<td><strong>Electromagnetic Q</strong></td>
<td>(Qes) 0.64</td>
</tr>
<tr>
<td><strong>Mechanical Q</strong></td>
<td>(Qms) 6.65</td>
</tr>
<tr>
<td><strong>Total Q</strong></td>
<td>(Qts) 0.58</td>
</tr>
<tr>
<td><strong>Compliance Equivalent Volume</strong></td>
<td>(vas) 186.1 liters</td>
</tr>
<tr>
<td><strong>Peak Diaphragm Displacement Volume</strong></td>
<td>6.57 cu.ft.</td>
</tr>
<tr>
<td><strong>Mechanical Compliance of Suspension</strong></td>
<td>(Cms) 0.18mm/N</td>
</tr>
<tr>
<td><strong>BL Product</strong></td>
<td>14.5 T-M</td>
</tr>
<tr>
<td><strong>Diaphragm Mass inc. Airload</strong></td>
<td>(Vd) 92—150 liters</td>
</tr>
<tr>
<td><strong>Overall Diameter</strong></td>
<td>(Ms) 400cc</td>
</tr>
<tr>
<td><strong>Recommended Enclosure Volume</strong></td>
<td>15&quot;, 381mm</td>
</tr>
<tr>
<td><strong>Min. Rms Power</strong></td>
<td>20Watts</td>
</tr>
<tr>
<td><strong>Max. Rms Power</strong></td>
<td>500Watts</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>8Ω</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>see page 46</td>
</tr>
<tr>
<td><strong>Maximum Mechanical Limit</strong></td>
<td>23.88mm</td>
</tr>
</tbody>
</table>

For more information, please see page 46.
DELTA 15

Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 29ga aluminum voice coil for lower mass and increased sensitivity
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

For all high power bass applications including bass guitar:

Nominal Basket Diameter: 15". 381mm
Impedance: 8Ω or 16Ω
Power Rating: 400Watts
Resonance: 40Hz
Usable Frequency Range: 40Hz – 4kHz
Sensitivity: 94dB/2.83V/1m
Magnet Weight: 56oz.
Gap Height: 0.375", 9.52mm
Voice Coil Diameter: 2.5", 63.5mm

Mounting information
Recommended Enclosure Volume:
106—177 liters (vented)
15.15", 384.8mm
Overall Diameter: 3.75—6.25 cu.ft.
13.77", 349.6mm
Baffle Hole Diameter: 0.25", 6.4mm
Front Sealing Gasket: fitted as standard
Rear Sealing Gasket: fitted as standard
Mounting Holes Diameter: 14.58", 369.9mm
Mounting Hole B.C.D.: 6.05", 153.6mm
Depth: 6.05", 153.6mm
Shipping Weight: 14.6lbs, 6.6kg

Thiele-Small parameters
Resonant Frequency: (fs) 40Hz
Impedance: (Re) 6.9Ω
Coil Inductance: (Le) 0.86mH
Electromagnetic Q: (Qes) 0.54
Mechanical Q: (Qms) 6.56
Total Q: (Qts) 0.49
Compliance Equivalent Volume: (vas) 293 liters
Peak Diaphragm Displacement Volume: (Vd) 231cc
Mechanical Compliance of Suspension: (Cms) 0.28mm^2/sec/M
BL Product: (BL) 13.6 T-M
Diaphragm Mass inc. Airload: (Mms) 55 grams
Eqiv. Resistance of Mechanical Suspension Loss: (Rms) 2.12N/sec/M
Efficiency Bandwidth Product: (EBP) 77
Voice Coil Overhang: (Xmax) 2.7mm
Surface Area of Cone: (Sd) 856.3cm^2
Impedance at Resonance: (Zmax) 52Ω
Maximum Mechanical Limit: (Xmech) 22.23mm

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

DELTA 12LF

Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 29ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented and extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Rolled cloth cone edge with deep corrugations for extended Xmax
- Extended Xmax
- Vented and extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Rolled cloth cone edge with deep corrugations for extended Xmax
- Solid composition paper dust cap

Nominal Basket Diameter: 12", 304.8mm
Impedance: 8Ω
Power Rating: 5000Watts
Resonance: 45Hz
Usable Frequency Range: 45Hz – 3kHz
Sensitivity: 94dB/2.83V/1m
Magnet Weight: 56oz.
Gap Height: 0.375", 9.52mm
Voice Coil Diameter: 2.5", 63.5mm

Mounting information
Recommended Enclosure Volume:
85—142 liters (vented)
12.02", 305.2mm
Overall Diameter: 389.4mm
11.05", 280.7mm
Baffle Hole Diameter: 0.25", 6.4mm
Front Sealing Gasket: fitted as standard
Rear Sealing Gasket: fitted as standard
Mounting Holes Diameter: 11.63", 295.3mm
Mounting Hole B.C.D.: 3.75", 95.26mm
Depth: 3.75", 95.26mm
Shipping Weight: 13.6lbs, 6.2kg

Thiele-Small parameters
Resonant Frequency: (fs) 45Hz
Impedance: (Re) 6.06Ω
Coil Inductance: (Le) 1.45mH
Electromagnetic Q: (Qes) 0.45
Mechanical Q: (Qms) 7.28
Total Q: (Qts) 0.42
Compliance Equivalent Volume: (vas) 67.88 liters
Peak Diaphragm Displacement Volume: (Vd) 241cc
Mechanical Compliance of Suspension: (Cms) 0.24mm^2/sec/M
BL Product: (BL) 14.1 T-M
Diaphragm Mass Inc. Airload: (Mms) 51 grams
Eqiv. Resistance of Mechanical Suspension Loss: (Rms) 2.27N/sec/M
Efficiency Bandwidth Product: (EBP) 101
Voice Coil Overhang: (Xmax) 4.8mm
Surface Area of Cone: (Sd) 506.7cm^2
Impedance at Resonance: (Zmax) 93Ω
Maximum Mechanical Limit: (Xmech) 26.92mm

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Please ask about alternative impedances which are available by special order.
### DELTA 12

**Nominal Basket Diameter**: 12", 304.8mm  
**Impedance**: 8Ω or 16Ω  
**Power Rating**: 450Watts  
**Resonance**: 55Hz  
**Usable Frequency Range**: 55Hz—5kHz  
**Sensitivity**: see page 46  
**Magnet Weight**: 56oz.  
**Gap Height**: 0.375", 9.52mm  
**Voice Coil Diameter**: 2.5", 63.5mm

**Mounting Information**
- **Recommended Enclosure Volume (vented)**: 64—106 liters  
- **Overall Diameter**: 12.02", 305.2mm  
- **Baffle Hole Diameter**: 10.97", 278.6mm  
- **Front Sealing Gasket**: fitted as standard  
- **Rear Sealing Gasket**: fitted as standard  
- **Mounting Holes Diameter**: 2.25", 57mm  
- **Mounting Hole B.C.D.**: 11.63", 295.3mm  
- **Depth**: 5.35", 136mm  
- **Shipping Weight**: 13.2lbs, 6kg

**Thiele-Small parameters**
- **Resonant Frequency (fs)**: 55Hz  
- **Impedance (Re)**: 6.3Ω  
- **Coil Inductance (Le)**: 0.74mH  
- **Electromagnetic Q (Qes)**: 0.46  
- **Mechanical Q (Qms)**: 6.53  
- **Total Q (Qts)**: 0.33  
- **Diaphragm Mass inc. Airload (Wd)**: 82cc  
- **Diaphragm Mass inc. Airload (BL)**: 13.5 T·M  
- **Equiv. Resistance of Mechanical Suspension Loss (Rms)**: 2.55N·sec/M  
- **Efficiency Bandwidth Product**: 119  
- **Voice Coil Overhang (Xmax)**: 1.6mm  
- **Surface Area of Cone (Sd)**: 519.5cm²  
- **Impedance at Resonance (Zmax)**: 78Ω  
- **Maximum Mechanical Limit (Xmech)**: 19.81mm

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection  
- Polyamide-imide coated two-layer 29ga aluminum voice coil for lower mass and increased sensitivity  
- Ferrite magnet  
- Vented core for increased power handling  
- Premium pressed steel basket for maximum strength  
- Paper cone  
- Cloth cone edge  
- Solid composition felt dust cap

**Performance optimized for midrange in three-way systems and bass-mid in two-way systems. Also suitable for bass guitar, keyboards, club music systems and stage monitors.

---

### DELTA 10

**Nominal Basket Diameter**: 10", 254mm  
**Impedance**: 8Ω or 16Ω  
**Power Rating**: 350Watts  
**Resonance**: 66Hz  
**Usable Frequency Range**: see page 46  
**Sensitivity**: 65Hz—3.5kHz  
**Magnet Weight**: 56oz.  
**Gap Height**: 0.375", 9.52mm  
**Voice Coil Diameter**: 2.5", 63.5mm

**Mounting Information**
- **Recommended Enclosure Volume**: 0.375—3.75 cu.ft. fitted as standard  
- **Overall Diameter**: 10.09", 256.2mm  
- **Baffle Hole Diameter**: 9.05", 229.7mm  
- **Front Sealing Gasket**: fitted as standard  
- **Rear Sealing Gasket**: fitted as standard  
- **Mounting Holes Diameter**: 0.25", 6.4mm  
- **Mounting Hole B.C.D.**: 9.66", 245.4mm  
- **Depth**: 4.25", 108mm  
- **Shipping Weight**: 12.2lbs, 5.5kg

**Thiele-Small parameters**
- **Resonant Frequency (fs)**: 66Hz  
- **Impedance (Re)**: 5.42Ω  
- **Coil Inductance (Le)**: 0.74mH  
- **Electromagnetic Q (Qes)**: 0.35  
- **Mechanical Q (Qms)**: 6.53  
- **Total Q (Qts)**: 0.33  
- **Peak Diaphragm Displacement Volume**: 82cc  
- **Mechanical Compliance of Suspension (Cms)**: 0.21mm²/ N  
- **BL Product (BL)**: 13.5 T·M  
- **Diaphragm Mass inc. Airload (Wd)**: 39 grams  
- **Equiv. Resistance of Mechanical Suspension Loss (Rms)**: 2.04N·sec/M  
- **Efficiency Bandwidth Product**: 189  
- **Voice Coil Overhang (Xmax)**: 1.6mm  
- **Surface Area of Cone (Sd)**: 344.9cm²  
- **Impedance at Resonance (Zmax)**: 10Ω  
- **Maximum Mechanical Limit (Xmech)**: 18.80mm

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection  
- Polyamide-imide coated one-layer edgedown 28ga aluminum voice coil for lowest possible mass and maximum sensitivity  
- Ferrite magnet  
- Vented core for increased power handling  
- Premium pressed steel basket for maximum strength  
- Paper cone  
- Rolled cloth cone edge  
- Solid composition paper dust cap

**Performance optimized for midrange in three-way systems and bass-mid in two-way systems. Also suitable for bass guitar, keyboards, club music systems and stage monitors.

---

**Eminence response curves are measured under the following controlled test conditions:**
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated four-layer 29ga aluminum voice coil for maximum low frequency and increased sensitivity
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Rolled cloth cone edge with deep corrugations for increased rigidity and voice coil for maximum power handling
- Four-layer 29ga aluminum thermal protection

Materials of construction

- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P150 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P150 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
**GAMMA 10**

**Materials of construction**
- Kapton coil former
- Polyamide-imide coated one-layer edgeground 28ga aluminum voice coil for lowest possible mass and maximum sensitivity
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap
- For all high power bass applications including bass guitar.
- *16Ω version UK only.

**Nominal Basket Diameter**
- 10", 254mm

**Impedance**
- 8Ω or 16Ω

**Power Rating**
- 350Watts

**Resonance**
- 63Hz

**Usable Frequency Range**
- 60Hz—5kHz

**Sensitivity**
- see page 46

**Magnet Weight**
- 42oz.

**Gap Height**
- 0.375", 9.52mm

**Voice Coil Diameter**
- 2.5", 63.5mm

**Mounting information**

**Recommended Enclosure Volume**
- 30—50 liters

**Overall Diameter**
- 10.09", 256.2mm

**Baffle Hole Diameter**
- 9.05", 229.7mm

**Front Sealing Gasket**
- fitted as standard

**Rear Sealing Gasket**
- fitted as standard

**Mounting Holes Diameter**
- 0.25", 6.4mm

**Mounting Hole B.C.D.**
- 9.66", 245.4mm

**Depth**
- 4.17", 106mm

**Shipping Weight**
- 11lbs., 5kg

**Thiele-Small parameters**

**Resonant Frequency**
- (fs) 63Hz

**Impedance**
- (Re) 5.43Ω

**Coil Inductance**
- (Le) 0.84mH

**Electromagnetic Q**
- (Qeo) 0.54

**Mechanical Q**
- (Qms) 9.04

**Total Q**
- (Qts) 5.1

**Compliance Equivalent Volume**
- (Vas) 36.4 liters

**Peak Diaphragm Displacement Volume**
- 1.29 cu.ft.

**Mechanical Compliance of Suspension**
- (Cms) 0.22mm/N

**BL Product**
- (BL) 10.8 T-M

**Diaphragm Mass inc. Airload**
- (Mms) 29 grams

**Efficiency Bandwidth Product**
- (EBP) 117

**Voice Coil Overhang**
- (Xmax) 1.6mm

**Surface Area of Cone**
- (Sd) 348.9cm²

**Impedance at Resonance**
- (Zmax) 96Ω

**Maximum Mechanical Limit**
- (Xmech) 19.81mm

---

**Beta 15CX**

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 30ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Screened cloth dust cap
- Aluminum horn

**Nominal Basket Diameter**
- 15", 381mm

**Impedance**
- 8Ω

**Power Rating**
- 250Watts

**Resonance**
- 34Hz

**Usable Frequency Range**
- 35Hz—20kHz

**Sensitivity**
- see page 46

**Magnet Weight**
- 38oz.

**Gap Height**
- 0.312", 7.94mm

**Voice Coil Diameter**
- 2", 50.8mm

**Mounting information**

**Recommended Enclosure Volume**
- 54—88 liters

**Overall Diameter**
- 15.15", 384.8mm

**Baffle Hole Diameter**
- 13.77", 349.6mm

**Front Sealing Gasket**
- fitted as standard

**Rear Sealing Gasket**
- fitted as standard

**Mounting Holes Diameter**
- 0.25", 6.4mm

**Mounting Hole B.C.D.**
- 14.56", 369.9mm

**Depth**
- (exc. compression driver) 6.05", 153.6mm

**Shipping Weight**
- 11.2lbs., 5.1kg

**Thiele-Small parameters**

**Resonant Frequency**
- (fs) 34Hz

**Impedance**
- (Re) 5.54Ω

**Coil Inductance**
- (Le) 1.06mH

**Electromagnetic Q**
- (Qeo) 0.58

**Mechanical Q**
- (Qms) 7.68

**Total Q**
- (Qts) 0.54

**Compliance Equivalent Volume**
- (Vas) 366.4 liters

**Peak Diaphragm Displacement Volume**
- 12.94 cu.ft.

**Mechanical Compliance of Suspension**
- (Cms) 0.38mm/N

**BL Product**
- (BL) 10.8 T-M

**Diaphragm Mass inc. Airload**
- (Mms) 57 grams

**Efficiency Bandwidth Product**
- (EBP) 59

**Voice Coil Overhang**
- (Xmax) 3.0mm

**Surface Area of Cone**
- (Sd) 823.7cm²

**Impedance at Resonance**
- (Zmax) 1.58Ω

**Maximum Mechanical Limit**
- (Xmech) 17.78mm
### BETA 15

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 32ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

For all bass applications including bass guitar.

* 4Ω version UK only.

**Nominal Basket Diameter**
15”, 381mm

**Impedance**
4Ω or 8Ω

**Power Rating**
250Watts

**Resonance**
35Hz

**Usable Frequency Range**
35Hz – 4kHz

**Sensitivity**
see page 46

**Magnet Weight**
34oz.

**Gap Height**
0.312”, 7.94mm

**Voice Coil Diameter**
2”, 50.8mm

**Mounting information**

<table>
<thead>
<tr>
<th>Recommended Enclosure Volume</th>
<th>Overall Diameter</th>
<th>Baffle Hole Diameter</th>
<th>Front Sealing Gasket</th>
<th>Rear Sealing Gasket</th>
<th>Mounting Holes Diameter</th>
<th>Mounting Holes B.C.D.</th>
<th>Depth</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ventilated) 106—177 liters</td>
<td>15.15”, 384.8mm</td>
<td>13.77”, 349.6mm</td>
<td>fitted as standard</td>
<td>fitted as standard</td>
<td>0.25”, 6.4mm</td>
<td>14.56”, 369.9mm</td>
<td>6.05”, 153.6mm</td>
<td>1lb., 5kg</td>
</tr>
</tbody>
</table>

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>Impedance (Re)</th>
<th>Coil Inductance (Le)</th>
<th>Electromagnetic Q (Qes)</th>
<th>Mechanical Q (Qms)</th>
<th>Total Q (Qts)</th>
<th>Compliance Equivalent Volume (Vas)</th>
<th>Peak Diaphragm Displacement Volume (Vd)</th>
<th>Mechanical Compliance of Suspension (Cms)</th>
<th>BL Product (BL)</th>
<th>Diaphragm Mass inc. Airload (Mms)</th>
<th>Equiv. Resistance of Mechanical Suspension Loss (Rms)</th>
<th>Efficiency Bandwidth Product (EBP)</th>
<th>Voice Coil Overhang (Xmax)</th>
<th>Impedance at Resonance (Zmax)</th>
<th>Maximum Mechanical Limit (Xmech)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35Hz</td>
<td>6.32Ω</td>
<td>1.10mH</td>
<td>0.63</td>
<td>6.10</td>
<td>0.58</td>
<td>334.6 liters</td>
<td>11.82 cu. ft.</td>
<td>0.35mm/N</td>
<td>11.5 T-M</td>
<td>60 grams</td>
<td>1.61N*sec/M</td>
<td>55</td>
<td>4.0mm</td>
<td>823.7cm</td>
<td>23.16mm</td>
</tr>
</tbody>
</table>

**Shipping Weight**
1lb., 5kg

**Recommended Enclosure Volume**
64—106 liters

**Mounting information**

<table>
<thead>
<tr>
<th>Overall Diameter</th>
<th>Baffle Hole Diameter</th>
<th>Front Sealing Gasket</th>
<th>Rear Sealing Gasket</th>
<th>Mounting Holes Diameter</th>
<th>Mounting Hole B.C.D.</th>
<th>Depth</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.02”, 305.2mm</td>
<td>10.97”, 278.6mm</td>
<td>fitted as standard</td>
<td>fitted as standard</td>
<td>0.25”, 6.4mm</td>
<td>11.63”, 295.3mm</td>
<td>4.47”, 113.5mm</td>
<td>9.6lbs., 4.4kg</td>
</tr>
</tbody>
</table>

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>Impedance (Re)</th>
<th>Coil Inductance (Le)</th>
<th>Electromagnetic Q (Qes)</th>
<th>Mechanical Q (Qms)</th>
<th>Total Q (Qts)</th>
<th>Compliance Equivalent Volume (Vas)</th>
<th>Peak Diaphragm Displacement Volume (Vd)</th>
<th>Mechanical Compliance of Suspension (Cms)</th>
<th>BL Product (BL)</th>
<th>Diaphragm Mass inc. Airload (Mms)</th>
<th>Equiv. Resistance of Mechanical Suspension Loss (Rms)</th>
<th>Efficiency Bandwidth Product (EBP)</th>
<th>Voice Coil Overhang (Xmax)</th>
<th>Impedance at Resonance (Zmax)</th>
<th>Maximum Mechanical Limit (Xmech)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45Hz</td>
<td>7.37Ω</td>
<td>0.83mH</td>
<td>0.55</td>
<td>6.44</td>
<td>0.51</td>
<td>136.3 liters</td>
<td>4.81 cu. ft.</td>
<td>0.34mm/N</td>
<td>11.7 T-M</td>
<td>36 grams</td>
<td>1.59N*sec/M</td>
<td>83</td>
<td>0.8mm</td>
<td>532.4cm</td>
<td>17.27mm</td>
</tr>
</tbody>
</table>

**Shipping Weight**
9.6lbs., 4.4kg

### BETA 12LT

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 32ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

A twin-cone model for full range compatible with Eminence response curves are measured under the following controlled test conditions:

| All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
| LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall baffle
| 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for maximum defraction
| Hafler P1500 Trans-Nova amplifier
| 2700 cu. ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

**Nominal Basket Diameter**
12”, 304.8mm

**Impedance**
8Ω

**Power Rating**
225Watts

**Resonance**
45Hz

**Usable Frequency Range**
45Hz – 8kHz

**Sensitivity**
see page 46

**Magnet Weight**
38oz.

**Gap Height**
0.312”, 7.94mm

**Voice Coil Diameter**
2”, 50.8mm

**Mounting information**

<table>
<thead>
<tr>
<th>Recommended Enclosure Volume</th>
<th>Overall Diameter</th>
<th>Baffle Hole Diameter</th>
<th>Front Sealing Gasket</th>
<th>Rear Sealing Gasket</th>
<th>Mounting Holes Diameter</th>
<th>Mounting Hole B.C.D.</th>
<th>Depth</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ventilated) 3.75—6.25 cu. ft.</td>
<td>12.02”, 305.2mm</td>
<td>10.97”, 278.6mm</td>
<td>fitted as standard</td>
<td>fitted as standard</td>
<td>0.25”, 6.4mm</td>
<td>11.63”, 295.3mm</td>
<td>4.47”, 113.5mm</td>
<td>9.6lbs., 4.4kg</td>
</tr>
</tbody>
</table>

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>Impedance (Re)</th>
<th>Coil Inductance (Le)</th>
<th>Electromagnetic Q (Qes)</th>
<th>Mechanical Q (Qms)</th>
<th>Total Q (Qts)</th>
<th>Compliance Equivalent Volume (Vas)</th>
<th>Peak Diaphragm Displacement Volume (Vd)</th>
<th>Mechanical Compliance of Suspension (Cms)</th>
<th>BL Product (BL)</th>
<th>Diaphragm Mass inc. Airload (Mms)</th>
<th>Equiv. Resistance of Mechanical Suspension Loss (Rms)</th>
<th>Efficiency Bandwidth Product (EBP)</th>
<th>Voice Coil Overhang (Xmax)</th>
<th>Impedance at Resonance (Zmax)</th>
<th>Maximum Mechanical Limit (Xmech)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45Hz</td>
<td>7.37Ω</td>
<td>0.83mH</td>
<td>0.55</td>
<td>6.44</td>
<td>0.51</td>
<td>136.3 liters</td>
<td>4.81 cu. ft.</td>
<td>0.34mm/N</td>
<td>11.7 T-M</td>
<td>36 grams</td>
<td>1.59N*sec/M</td>
<td>83</td>
<td>0.8mm</td>
<td>532.4cm</td>
<td>17.27mm</td>
</tr>
</tbody>
</table>

**Shipping Weight**
9.6lbs., 4.4kg

**Recommended Enclosure Volume**
64—106 liters

**Mounting information**

<table>
<thead>
<tr>
<th>Overall Diameter</th>
<th>Baffle Hole Diameter</th>
<th>Front Sealing Gasket</th>
<th>Rear Sealing Gasket</th>
<th>Mounting Holes Diameter</th>
<th>Mounting Hole B.C.D.</th>
<th>Depth</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.02”, 305.2mm</td>
<td>10.97”, 278.6mm</td>
<td>fitted as standard</td>
<td>fitted as standard</td>
<td>0.25”, 6.4mm</td>
<td>11.63”, 295.3mm</td>
<td>4.47”, 113.5mm</td>
<td>9.6lbs., 4.4kg</td>
</tr>
</tbody>
</table>

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>Impedance (Re)</th>
<th>Coil Inductance (Le)</th>
<th>Electromagnetic Q (Qes)</th>
<th>Mechanical Q (Qms)</th>
<th>Total Q (Qts)</th>
<th>Compliance Equivalent Volume (Vas)</th>
<th>Peak Diaphragm Displacement Volume (Vd)</th>
<th>Mechanical Compliance of Suspension (Cms)</th>
<th>BL Product (BL)</th>
<th>Diaphragm Mass inc. Airload (Mms)</th>
<th>Equiv. Resistance of Mechanical Suspension Loss (Rms)</th>
<th>Efficiency Bandwidth Product (EBP)</th>
<th>Voice Coil Overhang (Xmax)</th>
<th>Impedance at Resonance (Zmax)</th>
<th>Maximum Mechanical Limit (Xmech)</th>
</tr>
</thead>
<tbody>
<tr>
<td>45Hz</td>
<td>7.37Ω</td>
<td>0.83mH</td>
<td>0.55</td>
<td>6.44</td>
<td>0.51</td>
<td>136.3 liters</td>
<td>4.81 cu. ft.</td>
<td>0.34mm/N</td>
<td>11.7 T-M</td>
<td>36 grams</td>
<td>1.59N*sec/M</td>
<td>83</td>
<td>0.8mm</td>
<td>532.4cm</td>
<td>17.27mm</td>
</tr>
</tbody>
</table>

**Shipping Weight**
9.6lbs., 4.4kg
Hafler P1500 Trans-Nova

- LMS using 0.25” supplied voice coil for improved power-handling and durability
- Ferrite magnet
- Extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Screened cloth dust cap
- Aluminum horn

The Beta 12CX is a coaxial speaker to which a compression driver must be attached. Eminence recommends the PSD2002S-8 and the pxb2:1k6 2-way compression driver.

Materials of construction
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 30g copper voice coil for improved power-handling and durability
- Ferrite magnet
- Extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Screened cloth dust cap
- Aluminum horn

**BETA 12CX**

Nominal Basket Diameter: 12”, 304.8mm
Impedance: 8Ω
Power Rating: 250Wmax
Resonance: 43Hz
Usable Frequency Range*: 45Hz – 20kHz
Sensitivity: see page 46
Gap Height: 38oz.
Magnet Weight: 2.0”, 50.8mm
Voice Coil Diameter: 0.312”, 7.94mm

Mounting information
Recommended Enclosure Volume: (vented) 48—79 liters
Overall Diameter: 12.02”, 305.2mm
Baffle Hole Diameter: 10.97”, 278.6mm
Front Sealing Gasket: fitted as standard
Rear Sealing Gasket: fitted as standard
Mounting Holes Diameter: 0.25”, 6.4mm
Mounting Hole B.C.D.: 11.63”, 295.3mm
Depth: 4.47”, 113.5mm
Shipping Weight: 9.5lbs., 4.3kg

Thiele-Small parameters
- Resonant Frequency (fs): 43Hz
- Impedance (Re): 5.5Ω
- Coil Inductance (Le): 1.01mH
- Electromagnetic Q (Qes): 0.51
- Mechanical Q (Qms): 6.69
- Total Q (Qts): 0.48
- Compliance Equivalent Volume (Vas): 161 liters
- Diaphragm Mass inc. Airload (Mms): 34 grams
- Equivalent Resistance of Mechanical Suspension Loss (Rms): 1.38N*sec/M
- Efficiency Bandwidth Product: (EBP) 83
- Voice Coil Overhang: (Xmax) 3.0mm
- Surface Area of Cone: 532.4cm²
- Impedance at Resonance: 78Ω
- Maximum Mechanical Limit: 20.83mm

**BETA 12**

Nominal Basket Diameter: 12”, 304.8mm
Impedance: 8Ω or 16Ω
Power Rating: 250Wmax
Resonance: 50Hz
Usable Frequency Range: see page 46
Sensitivity: 34Ω
Gap Height: 30.12”, 7.94mm
Voice Coil Diameter: 2.0”, 50.8mm

Mounting information
Recommended Enclosure Volume: 64—106 liters
Overall Diameter: 12.02”, 305.2mm
Baffle Hole Diameter: 10.97”, 278.6mm
Front Sealing Gasket: fitted as standard
Rear Sealing Gasket: fitted as standard
Mounting Holes Diameter: 0.25”, 6.4mm
Mounting Hole B.C.D.: 11.63”, 295.3mm
Depth: 4.47”, 113.5mm
Shipping Weight: 9.2lbs., 4.2kg

Thiele-Small parameters
- Resonant Frequency (fs): 50Hz
- Impedance (Re): 7.07Ω
- Coil Inductance (Le): 0.84mH
- Electromagnetic Q (Qes): 0.57
- Mechanical Q (Qms): 5.82
- Total Q (Qts): 0.51
- Compliance Equivalent Volume (Vas): 114.7 liters
- Diaphragm Mass inc. Airload (Mms): 34 grams
- Equivalent Resistance of Mechanical Suspension Loss (Rms): 1.88N*sec/M
- Efficiency Bandwidth Product: (EBP) 88
- Voice Coil Overhang: (Xmax) 0.8mm
- Surface Area of Cone: 532.4cm²
- Impedance at Resonance: 79Ω
- Maximum Mechanical Limit: 17.91mm

Eminence response curves are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 30ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Screened cloth dust cap
- Aluminum horn

The BETA 10CX is a coaxial speaker to which an HF driver must be attached. Eminence recommends the APT50 and monitoring applications. (see page 45) with this.

The APT50 & pxb2:3k5 2-way crossover supertweeter with the APT3 recommends the APT50 must be attached. Eminence speaker to which an HF driver

**BETA 10CX**

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>10&quot;, 254mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>250W/s</td>
</tr>
<tr>
<td>Resonance</td>
<td>38Hz</td>
</tr>
<tr>
<td>Usable Frequency Range*</td>
<td>35Hz — 20kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>38oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.312&quot;, 7.94mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>5&quot;, 12.7mm</td>
</tr>
</tbody>
</table>

**Mounting information**

- Recommended Enclosure Volume: (vented) 37 — 62 liters
- Overall Diameter: 10.98", 260mm
- Baffle Hole Diameter: 9.05", 229.7mm
- Front Sealing Gasket: fitted as standard
- Rear Sealing Gasket: fitted as standard
- Mounting Hole Diameter: 0.25", 6.4mm
- Mounting Hole B.C.D.: 9.66", 245.6mm
- Depth (exc. compression driver): 3.98", 101.1mm
- Shipping Weight: 8.4lbs., 3.7kg

**Thiele-Small parameters**

- Resonant Frequency (fs): 38Hz
- Impedance: (Re) 5.64Ω
- Coil Inductance: (Le) 0.99mH
- Electromagnetic Q: (Qes) 0.29
- Mechanical Q: (Qms) 10.34
- Total Q: (Qts) 0.29
- Compliance Equivalent Volume: (Vac) 4.63 liters
- Peak Diaphragm Displacement Volume: (Vd) 104cc
- Mechanical Compliance of Suspension: (Cms) 0.79mN/M
- BL Product: (BL) 10.1 T-M
- Diaphragm Mass inc. Airload: (Mms) 22 grams
- Equiv. Resistance of Mechanical Suspension: (Rms) 0.51N*sec/M
- Efficiency Bandwidth Product: (EBP) 131
- Voice Coil Overhang: (Xmax) 3.0mm
- Surface Area of Cone: (Sa) 34.9cm²
- Impedance at Resonance: (Zmax) 204Ω
- Maximum Mechanical Limit: (Xmech) 15.24mm

**BETA 10**

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>10&quot;, 254mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>8Ω or 16Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>250W/s</td>
</tr>
<tr>
<td>Resonance</td>
<td>53Hz</td>
</tr>
<tr>
<td>Usable Frequency Range*</td>
<td>50Hz — 4kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>34oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.312&quot;, 7.94mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>2&quot;, 50.8mm</td>
</tr>
</tbody>
</table>

**Mounting information**

- Recommended Enclosure Volume: (vented) 34—89 liters
- Overall Diameter: 10.11", 256.8mm
- Baffle Hole Diameter: 9.13", 231.8mm
- Front Sealing Gasket: fitted as standard
- Rear Sealing Gasket: fitted as standard
- Mounting Hole Diameter: 0.225", 5.7mm
- Mounting Hole B.C.D.: 9.6", 243.8mm
- Depth: 3.98", 101.1mm
- Shipping Weight: 8.2lbs., 3.7kg

**Thiele-Small parameters**

- Resonant Frequency (fs): 53Hz
- Impedance: (Re) 5.75Ω
- Coil Inductance: (Le) 0.67mH
- Electromagnetic Q: (Qes) 0.52
- Mechanical Q: (Qms) 8.14
- Total Q: (Qts) 0.49
- Compliance Equivalent Volume: (Vac) 60.1 liters
- Peak Diaphragm Displacement Volume: (Vd) 104cc
- Mechanical Compliance of Suspension: (Cms) 0.366mN
- BL Product: (BL) 9.6 T-M
- Diaphragm Mass inc. Airload: (Mms) 25 grams
- Equiv. Resistance of Mechanical Suspension: (Rms) 1.03N*sec/M
- Efficiency Bandwidth Product: (EBP) 103
- Voice Coil Overhang: (Xmax) 3.0mm
- Surface Area of Cone: (Sa) 34.9cm²
- Impedance at Resonance: (Zmax) 96Ω
- Maximum Mechanical Limit: (Xmech) 17.27mm

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LoM using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
### BETA 8CX

**Materials of construction**
- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 30ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Extended core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Screened cloth dust cap
- Aluminum horn

The Beta 8CX is a coaxial speaker to which an HF driver must be attached. Eminence recommends the APT50 super tweeter with the APT3 adaptor (see page 43), and the p2x2.3K 2-way crossover (see page 45) with this unit. With APT:50 & pxb2:3K, the pxb2:3K 2-way crossover and monitoring applications are suitable for vocal P.A., keyboards, club systems, stage monitors and bass guitar.

### BETA 8

**Materials of construction**
- Kapton coil former
- Polyamide-imide coated two-layer 30ga aluminum voice coil for lower mass and increased sensitivity
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

Performance optimized for midrange use between 400Hz and 4kHz in multi-way systems. Also suitable for vocal P.A., keyboards, club systems, stage monitors and bass guitar.

#### Thiele-Small parameters

- **Nominal Basket Diameter**: 8”
- **Impedance**: 8Ω
- **Power Rating**: 250W RMS
- **Resonance**: 54Hz
- **Usable Frequency Range**: 60Hz – 20kHz
- **Sensitivity**: see page 46
- **Magnet Weight**: 38oz.
- **Gap Height**: 0.312”, 7.94mm
- **Voice Coil Diameter**: 2”, 50.8mm

**Mounting Information**
- **Recommended Enclosure Volume**: 8.5 – 15.5 liters
- **Overall Diameter**: 8.24”, 209.2mm
- **Baffle Hole Diameter**: 7.13”, 181mm
- **Front Sealing Gasket**: fitted as standard
- **Rear Sealing Gasket**: fitted as standard
- **Mounting Holes Diameter**: 0.218”, 5.5mm
- **Mounting Hole B.C.D.**: 7.75”, 196.9mm
- **Depth (excl. compression driver)**: 3.5”, 89mm
- **Shipping Weight**: 7.8lbs., 3.6kg

<table>
<thead>
<tr>
<th>Parameter</th>
<th>BETA 8CX</th>
<th>BETA 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nominal Basket Diameter</strong></td>
<td>8”, 203.2mm</td>
<td>8”</td>
</tr>
<tr>
<td><strong>Impedance</strong></td>
<td>8Ω</td>
<td>8Ω</td>
</tr>
<tr>
<td><strong>Power Rating</strong></td>
<td>250W RMS</td>
<td>225W RMS</td>
</tr>
<tr>
<td><strong>Resonance</strong></td>
<td>54Hz</td>
<td>58Hz</td>
</tr>
<tr>
<td><strong>Usable Frequency Range</strong></td>
<td>60Hz–20kHz</td>
<td>55Hz–4kHz</td>
</tr>
<tr>
<td><strong>Sensitivity</strong></td>
<td>see page 46</td>
<td>see page 46</td>
</tr>
<tr>
<td><strong>Magnet Weight</strong></td>
<td>38oz.</td>
<td>34oz.</td>
</tr>
<tr>
<td><strong>Gap Height</strong></td>
<td>0.312”, 7.94mm</td>
<td>0.312”, 7.94mm</td>
</tr>
<tr>
<td><strong>Voice Coil Diameter</strong></td>
<td>2”, 50.8mm</td>
<td>2”, 50.8mm</td>
</tr>
</tbody>
</table>

**Mounting Information**
- **Recommended Enclosure Volume**: 8.5 – 15.5 liters
- **Overall Diameter**: 8.24”, 209.2mm
- **Baffle Hole Diameter**: 7.13”, 181mm
- **Front Sealing Gasket**: fitted as standard
- **Rear Sealing Gasket**: fitted as standard
- **Mounting Holes Diameter**: 0.218”, 5.5mm
- **Mounting Hole B.C.D.**: 7.75”, 196.9mm
- **Depth**: 3.5”, 89mm
- **Shipping Weight**: 7.6lbs., 3.5kg

**Thiele-Small parameters**
- **Resonant Frequency** (fs): 54Hz
- **Impedance** (R): 5.53Ω
- **Coil Inductance** (Le): 0.96mH
- **Electromagnetic Q** (Qes): 0.31
- **Mechanical Q** (Qms): 7.67
- **Total Q** (Qts): 0.30
- **Compliance Equivalent Volume** (Vas): 34.9 liters
- **Peak Diaphragm Displacement Volume** (Vd): 0.62cc
- **Mechanical Compliance of Suspension** (Cms): 0.59mm/N
- **BL Product** (BL): 9.5 T-M
- **Diaphragm Mass Inc. Airload** (Mns): 15 grams
- **Suspension Loss** (Rms): 0.66N*sec/M
- **Efficiency Bandwidth Product** (EBP): 175
- **Voice Coil Overhang** (Xmax): 3.0mm
- **Surface Area of Cone** (Sd): 205.9cm²
- **Impedance at Resonance** (Zmax): 143Ω
- **Maximum Mechanical Limit**: 13.72mm

**Eminence response curves** are measured under the following controlled test conditions:
- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
For all bass applications.

- Solid composition paper
- Cloth cone edge
- Paper cone
- Premium pressed steel
- Vented core for increased power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

For all bass applications.

### Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 31ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

### Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

### ALPHA 15

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>15”, 381mm</th>
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<tbody>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>200Watts</td>
</tr>
<tr>
<td>Resonance</td>
<td>41Hz</td>
</tr>
<tr>
<td>Useable Frequency Range</td>
<td>40Hz – 4kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>25oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.25”, 6.35mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>1.5”, 38.1mm</td>
</tr>
</tbody>
</table>

### Thiele-Small parameters

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>41Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance (Re)</td>
<td>5.8Ω</td>
</tr>
<tr>
<td>Coil Inductance (Le)</td>
<td>0.84mH</td>
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<tr>
<td>Electromagnetic Q (Qes)</td>
<td>1.53</td>
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<tr>
<td>Mechanical Q (Qms)</td>
<td>7.23</td>
</tr>
<tr>
<td>Total Q (Qts)</td>
<td>1.26</td>
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<tr>
<td>Compliance Equivalent Volume (Vas)</td>
<td>260 liters</td>
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<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
<td>326cm</td>
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<tr>
<td>Mechanical Compliance of Suspension (Cms)</td>
<td>0.25 mN/M</td>
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<tr>
<td>BL Product (BL)</td>
<td>7.7 T-M</td>
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<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
<td>59 grams</td>
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<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
<td>2.11 N*sec/M</td>
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<tr>
<td>Efficiency Bandwidth Product (EBP)</td>
<td>27</td>
</tr>
<tr>
<td>Voice Coil Overhang (Xmax)</td>
<td>3.6mm</td>
</tr>
<tr>
<td>Surface Area of Cone (Sd)</td>
<td>856.3cm²</td>
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<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>34Ω</td>
</tr>
<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>16.76mm</td>
</tr>
</tbody>
</table>

### Mounting information

- Recommended Enclosure Volume (vented) | 106—177 liters |
- Overall Diameter | 15.15”, 384.8mm |
- Baffle Hole Diameter | 13.77”, 349.6mm |
- Front Sealing Gasket fitted as standard |
- Rear Sealing Gasket fitted as standard |
- Mounting Holes Diameter | 0.25”, 6.4mm |
- Mounting Hole B.C.D. | 14.56”, 369.9mm |
- Depth | 5.83”, 148mm |
- Shipping Weight | 9lbs., 4.1kg |

### ALPHA 12

<table>
<thead>
<tr>
<th>Nominal Basket Diameter</th>
<th>12”, 304.8mm</th>
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<tbody>
<tr>
<td>Impedance</td>
<td>8Ω</td>
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<tr>
<td>Power Rating</td>
<td>150Watts</td>
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<tr>
<td>Resonance</td>
<td>49Hz</td>
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<tr>
<td>Useable Frequency Range</td>
<td>45Hz – 5kHz</td>
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<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>20oz</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.25”, 6.35mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>1.5”, 38.1mm</td>
</tr>
</tbody>
</table>

### Mounting information

- Recommended Enclosure Volume (vented) | 71—117 liters |
- Overall Diameter | 12.24”, 310.9mm |
- Baffle Hole Diameter | 11.04”, 280.4mm |
- Front Sealing Gasket fitted as standard |
- Rear Sealing Gasket fitted as standard |
- Mounting Holes Diameter | 0.25”, 6.4mm |
- Mounting Hole B.C.D. | 11.63”, 295.3mm |
- Depth | 4.725”, 120mm |
- Shipping Weight | 7lbs., 3.2kg |

### Thiele-Small parameters

<table>
<thead>
<tr>
<th>Resonant Frequency (fs)</th>
<th>49Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance (Re)</td>
<td>6.3Ω</td>
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<tr>
<td>Coil Inductance (Le)</td>
<td>0.79mH</td>
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<td>Electromagnetic Q (Qes)</td>
<td>0.88</td>
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<td>Mechanical Q (Qms)</td>
<td>6.53</td>
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<td>Total Q (Qts)</td>
<td>0.77</td>
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<tr>
<td>Compliance Equivalent Volume (Vas)</td>
<td>121.5 liters</td>
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<tr>
<td>Peak Diaphragm Displacement Volume (Vd)</td>
<td>122cm</td>
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<tr>
<td>Mechanical Compliance of Suspension (Cms)</td>
<td>0.32 mN/M</td>
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<tr>
<td>BL Product (BL)</td>
<td>8.5 T-M</td>
</tr>
<tr>
<td>Diaphragm Mass inc. Airload (Mms)</td>
<td>33 grams</td>
</tr>
<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss (Rms)</td>
<td>1.54 N*sec/M</td>
</tr>
<tr>
<td>Efficiency Bandwidth Product (EBP)</td>
<td>56</td>
</tr>
<tr>
<td>Voice Coil Overhang (Xmax)</td>
<td>2.4mm</td>
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<tr>
<td>Surface Area of Cone (Sd)</td>
<td>519.5cm²</td>
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<tr>
<td>Impedance at Resonance (Zmax)</td>
<td>53Ω</td>
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<tr>
<td>Maximum Mechanical Limit (Xmech)</td>
<td>13.21mm</td>
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</table>

### Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Please ask about alternative impedances which are available by special order.
Materials of construction
• Kapton coil former for increased rigidity and thermal protection
• Polyamide-imide coated two-layer 31ga copper voice coil for improved power-handling and durability
• Ferrite magnet
• Vented cone for increased power handling
• Premium pressed steel basket for maximum strength
• Paper cone
• Cloth cone edge
• Solid composition paper dust cap

Ideal for two-way sound reinforcement systems, keyboards, guitar combos.

Nominal Basket Diameter: 10", 254mm
Impedance: 8Ω
Power Rating: 150W
Resonance: 50Hz
Usable Frequency Range: 45Hz—5kHz
Sensitivity: see page 46
Magnet Weight: 2oz.
Gap Height: 0.25”, 6.35mm
Voice Coil Diameter: 1.5”, 38.1mm

Mounting Information
Recommended Enclosure Volume (vented): 42—71 liters
Overall Diameter: 10.11”, 256.8mm
Baffle Hole Diameter: 9.13”, 231.8mm
Front Sealing Gasket: fitted as standard
Rear Sealing Gasket: fitted as standard
Mounting Holes Diameter: 0.225”, 5.7mm
Mounting Hole B.C.D.: 9.6”, 243.8mm
 Depth: 3.90”, 99mm
Shipping Weight: 5.8lbs., 2.6kg

Thiele-Small parameters
Resonant Frequency: (fs) 50Hz
Impedance: (Re) 5.31Ω
Coil Inductance: (Le) 0.66mH
Electromagnetic Q: (Qems) 0.66
Mechanical Q: (Qms) 5.21
Total Q: (Qts) 0.59
Compliance Equivalent Volume: (Vas) 82.2 liters
Peak Diaphragm Displacement Volume: (Vd) 2.9 cu.ft.
Mechanical Compliance of Suspension: (Cms) 0.46mm/N
BL Product: (BL) 7.5 T-M
Diaphragm Mass inc. Airload: (Mms) 22 grams
Equiv. Resistance of Mechanical Suspension Loss: (Rms) 1.33N/sec/M
Efficiency Bandwidth Product: (EBP) 75
Dynamic Efficiency: (Xmax) 3.22mm
Surface Area of Cone: (Sd) 355.4cm²
Impedance at Resonance: (Zmax) 47Ω
Maximum Mechanical Limit: (Xmech) 18.29mm

Eminence response curves are measured under the following controlled test conditions:
• All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
• LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
• 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
• Hafler P1500 Trans-Nova amplifier
• 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Nominal Basket Diameter: 8”, 203.2mm
Impedance: 8Ω
Power Rating: 125W
Resonance: 545Hz
Usable Frequency Range: 500Hz—5kHz
Sensitivity: see page 46
Magnet Weight: 2oz.
Gap Height: 0.25”, 6.35mm
Voice Coil Diameter: 1.5”, 38.1mm

Mounting Information
Overall Diameter: 8.22”, 208.8mm
Baffle Hole Diameter: 7.19”, 182.5mm
Front Sealing Gasket: fitted as standard
Rear Sealing Gasket: fitted as standard
Mounting Holes Diameter: 0.218”, 5.5mm
Mounting Hole B.C.D.: 7.75”, 196.9mm
Depth: 3.25”, 82mm
Shipping Weight: 5.1lbs., 2.3kg

Thiele-Small parameters
Resonant Frequency: (fs) 545Hz
Impedance: (Re) 7.43Ω
Coil Inductance: (Le) 0.37mH
Electromagnetic Q: (Qems) 2.78
Mechanical Q: (Qms) 8.17
Total Q: (Qts) 2.07
Compliance Equivalent Volume: (Vas) 0.61 liters
Peak Diaphragm Displacement Volume: (Vd) 0.02 cu.ft.
Mechanical Compliance of Suspension: (Cms) 0.01mm/N
BL Product: (BL) 9.1 T-M
Diaphragm Mass inc. Airload: (Mms) 9 grams
Equiv. Resistance of Mechanical Suspension Loss: (Rms) 3.76N/sec/M
Efficiency Bandwidth Product: (EBP) 196
Dynamic Efficiency: (Xmax) 5.9mm
Surface Area of Cone: (Sd) 214.1cm²
Impedance at Resonance: (Zmax) 29Ω
Maximum Mechanical Limit: (Xmech) 9.40mm

Eminence response curves are measured under the following controlled test conditions:
• All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
• LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
• 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
• Hafler P1500 Trans-Nova amplifier
• 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
**Materials of construction**

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated two-layer 31ga copper voice coil for improved power-handling and durability
- Ferrite magnet
- Vented core for increased power handling
- Premium pressed steel basket for maximum strength
- Paper cone
- Cloth cone edge
- Solid composition paper dust cap

Ideal for small P.A. systems, keyboards, guitar combos.

<table>
<thead>
<tr>
<th>Name</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Basket Diameter</td>
<td>8&quot;, 203.2mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Rating</td>
<td>125W/sq ft</td>
</tr>
<tr>
<td>Resonance</td>
<td>767Hz</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>65Hz—5kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>see page 46</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>230z</td>
</tr>
<tr>
<td>Gap Height</td>
<td>0.25&quot;, 6.35mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>1.5&quot;, 38.1mm</td>
</tr>
</tbody>
</table>

**Mounting information**

- Recommended Enclosure Volume: 31—51 liters
- Overall Diameter: 2.24", 209.2mm
- Baffle Hole Diameter: 2.13", 181mm
- Front Sealing Gasket: fitted as standard
- Rear Sealing Gasket: fitted as standard
- Mounting Holes Diameter: 0.218", 5.5mm
- Mounting Hole B.C.D.: 7.75", 196.9mm
- Depth: 3.58", 91mm
- Shipping Weight: 5.1lbs., 2.3kg

**Thiele-Small parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonant Frequency</td>
<td>767Hz</td>
</tr>
<tr>
<td>Impedance</td>
<td>5.27Ω</td>
</tr>
<tr>
<td>Coil Inductance</td>
<td>0.65mH</td>
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<tr>
<td>Electromagnetic Q</td>
<td>0.60</td>
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<td>Mechanical Q</td>
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<td>Total Q</td>
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<tr>
<td>Compliance Equivalent Volume</td>
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<tr>
<td>Peak Diaphragm Displacement Volume</td>
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<td>Mechanical Compliance of Suspension</td>
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<tr>
<td>BL Product</td>
<td>9.0 T-M</td>
</tr>
<tr>
<td>Diaphragm Mass inc. Airload</td>
<td>20 grams</td>
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<tr>
<td>Equiv. Resistance of Mechanical Suspension Loss</td>
<td>2.06N*sec/M</td>
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<tr>
<td>Efficiency Bandwidth Product</td>
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<td>Voice Coil Overhang</td>
<td>3.2mm</td>
</tr>
<tr>
<td>Maximum Mechanical Limit</td>
<td>14.22mm</td>
</tr>
</tbody>
</table>

**Eminence response curves**

- Measured under the following controlled test conditions:
  - All speakers are tested at 1W 1m using a variety of test set-ups for the appropriate impedance
  - LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
  - 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
  - Hafler P1500 Trans-Nova amplifier

- All speakers are tested at 1W 1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25" supplied microphone (software calibrated) mounted 1m from wall baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2700 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)
FULL STRENGTH
LESS WEIGHT

The price fall of neodymium heralds one of the most significant developments in the loudspeaker designer’s quest for ever greater power density. Transducers that exploit this amazing lightweight magnetic material are now affordable to manufacture in volume. Indeed, we anticipate that neodymium may come to replace ferrite magnets in the majority of transducers.

Eminence has explored many other avenues in the pursuit of power density, often taking a ‘bigger picture’ view of how whole systems are configured and used. Marrying this thinking and experience with neodymium has created a superior neodymium loudspeaker series: Eminence Deltalite™.

In one particular area Eminence has led the world: resisting and handling high thermal loads while maintaining high sensitivities. Eminence expertise in the discipline of heat resilience and dissipation tackles the one weakness of neodymium: its tendency to lose magnetic strength when subjected to high temperatures. Once a conventional neodymium transducer has suffered heat fatigue, it is permanently damaged.

Eminence Deltalite™ transducers employ a heatsink with a center phasor (similar to the mighty Eminence Magnum® Series) that cools the motor structure and smooths the speaker response. With high-grade Eminence voice coils, this lightweight transducer series is rated at a substantial 300W. Finite element analysis has been conducted on the Deltalite™ motor structure to maximize motor strength yet maintain a symmetrical design for extremely low distortion.

Compared with an equivalent ferrite magnet transducer in the Eminence range, a Deltalite™ is around half the weight and the price is similar. The Deltalite™ baskets and the performance characteristics have been developed to enable existing enclosure designs to be easily converted to Deltalite™. Eminence Deltalite™ transducers are available in custom specifications and a 2" voice coil version is scheduled.
Materials of construction

- Kapton coil former for increased rigidity and thermal protection
- Polyamide-imide coated edgewound aluminum voice coil with BeCu lead-outs for durability, increased sensitivity, and power handling
- Neodymium magnet
- Polyamide-imide coated materials of construction
- Kapton coil former for durability, increased sensitivity, and power handling
- Neodymium magnet for substantial weight reduction
- Lightweight die-cast aluminum basket for rigidity
- Paper cone
- Rolled cloth cone edge with deep corrugations for extended Xmax
- Aluminum phase/heat sink to transfer heat from the motor structure and smooth response
- Screened cloth dust cap for enhanced cooling and protection

Eminence response curves are measured under the following controlled test conditions:

- All speakers are tested at 1W/1m using a variety of test set-ups for the appropriate impedance
- LMS using 0.25” supplied microphone (software calibrated) mounted 1m from wall/baffle
- 2ft. x 2ft. baffle is built into the wall with the speaker mounted flush against a steel ring for minimum defraction
- Hafler P1500 Trans-Nova amplifier
- 2500 cu.ft. chamber with fiberglass on all six surfaces (three with custom-made wedges)

Please ask about alternative impedances which are available by special order.
The B15 is an affordable replacement offering punchy mids and earthshaking lows. Designed for the bass player wanting a high power driver with awesome tonal characteristics. Great for 1x15 combos or 2x15 enclosures.

LEGEND B15

Eminence Guitar Legends are specially designed for electric guitar amplifiers. Tuned by skilled ears, these hand-built specials feature a range of materials and ideas from nearly 40 years experience. Models such as the LEGEND B15, 121 and MODELING 12 are state of the art designs which meet the modern-day demand for power handling while other models feature vintage magnet and cone materials to recreate the traditional sounds of lead and jazz guitar.

The most difficult aspect of presenting a guitar speaker to the world is being able to describe its tonal characteristics. Your choice of guitar speakers is at least as important as your choice of pickups or strings. Just as you customize a guitar to suit your sound, so too can you customize — or ‘hot rod’ — your combo with Eminence loudspeakers.

Eminence is fortunate to have one of the foremost authorities on guitar and amplifier tone in the music industry as an endorsing artist.

Greg Martin

Greg Martin is a master of home cooked Southern-style Rock, Blues, Country and Rockabilly guitar. Along with his band, The Kentucky HeadHunters, he has helped reshape the face of country music.

To date the HeadHunters have released 6 albums, winning countless awards and Grammies. In 1992 Greg filled in for injured Lynnyrd Skynyrd guitarist Ed King. The HeadHunters have also collaborated with the great Johnnie Johnson on a stellar rockin' blues CD “That'll Work!”. Johnnie was inducted into the Rock'n'Roll Hall of Fame this year by Rolling Stone Keith Richards. Greg will soon release a Gospel Blues CD with former Wet Willie singer Jimmy Hall entitled “The Revelators”.

Eminence chose several amps and guitars for this tonal analysis to make sure that you get the most realistic descriptions possible. Each description was derived from using the gear listed below in various combinations:

**Guitars:** 1960 Fender Stratocaster and a re-issue Les Paul with Tom Holmes pickups.

**Amps:** 1965 Fender Vibroverb; Fender "The Twin"; T35 Top Hat Head with 4-6V6 tubes; 1973 Marshall Non-Master Volume Head with 2-EL34 tubes.

**LEGEND B15**

**Impedance**

- 8Ω

**Power Rating**

- 300W RMS

**Voice Coil Diameter**

- 3", 76.2mm

**Coil Material**

- Aluminum

**Flat / Round**

- Round

**Former Material**

- Kapton

**Basket Type**

- Stamped

**Surround Material**

- Cloth

**Dust Cap Material**

- Paper

**Magnet Weight**

- 95oz.

**Usable Bandwidth (Fs to -3dB)**

- 48Hz—4kHz

**SPL**

- 102dB

**Re**

- 8.55Ω

**Le**

- 0.51mH

**Xmax**

- 0.3mm

**Sd**

- 856.3cm²

**Mounting Information**

- Nominal Basket Diameter: 15.16", 384.9mm

- Baffle Hole Diameter: 13.77", 349.6mm

- Mounting Holes Diameter: 0.25", 6.4mm

- Mounting Hole B.C.D: 14.56", 369.9mm

- Depth: 6.2", 157mm

- Shipping Weight: 21.6lbs., 9.8kg

The B15 is an affordable replacement offering punchy mids and earthshaking lows. Designed for the bass player wanting a high power driver with awesome tonal characteristics. Great for 1x15 combos or 2x15 enclosures.
**LEGEND 151**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance*</td>
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<tr>
<td>Power Rating</td>
<td>150W</td>
</tr>
<tr>
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<tr>
<td>Dust Cap Material</td>
<td>Zerette</td>
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<tr>
<td>Magnet Weight</td>
<td>30oz.</td>
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<tr>
<td>Usable Bandwidth (Fs to -3dB)</td>
<td>80Hz—5kHz</td>
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<tr>
<td>SPL</td>
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<td>Re</td>
<td>7.16Ω</td>
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</tr>
<tr>
<td>Sd</td>
<td>823.7cm²</td>
</tr>
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</table>

**Mounting Information**

- Nominal Basket Diameter: 15.15", 384.8mm
- Baffle Hole Diameter: 13.77", 349.6mm
- Mounting Holes Diameter: 0.25", 6.4mm
- Mounting Hole B.C.D: 14.56", 369.9mm
- Depth: 6.1", 154mm
- Shipping Weight: 14.3lbs., 6.5kg

Excellent for use in combos, lending a tremendous raw bottom end and reproducing those tight slapping mids. This is one of Greg Martin’s favorites! Greg tried the Legend 151 in a Vibroverb. This speaker and a Strat are very clean and smooth. Often a clean speaker lacks bottom end, but this Legend provides some serious “meat”. A Strat and a Legend 151 are perfect for the player wanting a “BB King Blues” tone. With the Les Paul, it is still a real clean sound, but the top end is mellow and singing. If you crank it up, you’ll have no problem getting the speaker to break up. Greg recommends this speaker for a “Delta Blues” sound. Greg compares this speaker to some of the old JBL guitar speakers that have been popular for so many years.

The speaker is particularly well suited for applications in Fender amplifiers. Put it in a Pro Reverb and you’ve got yourself a Vibroverb.

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**LEGEND 121**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Impedance*</td>
<td>8Ω or 16Ω**</td>
</tr>
<tr>
<td>Power Rating</td>
<td>150W</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>2&quot;, 50.8mm</td>
</tr>
<tr>
<td>Coil Material</td>
<td>Copper</td>
</tr>
<tr>
<td>Flat / Round</td>
<td>Round</td>
</tr>
<tr>
<td>Former Material</td>
<td>Kapton</td>
</tr>
<tr>
<td>Basket Type</td>
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<td>Dust Cap Material</td>
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<td>Magnet Weight</td>
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<tr>
<td>Usable Bandwidth (Fs to -3dB)</td>
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<td>SPL</td>
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<td>0.8mH</td>
</tr>
<tr>
<td>Sd</td>
<td>506.7cm²</td>
</tr>
</tbody>
</table>

**Mounting Information**

- Nominal Basket Diameter: 12.02", 305.2mm
- Baffle Hole Diameter: 10.97", 278.6mm
- Mounting Holes Diameter: 0.25", 6.4mm
- Mounting Hole B.C.D: 11.63", 295.3mm
- Depth: 4.5", 114mm
- Shipping Weight: 9.6lbs., 4.4kg

Warm, rich low end, smooth mids and very loud. Greg tried this speaker in 2x12 applications both in “The Twin” and with the Marshall Head, using Strat and Les Paul guitars.

With a Les Paul and The Twin the speaker is very mellow before it breaks up. It delivers more high end than the Legend V12 and has more headroom. With a Strat it is pure Fender! Greg recommends this combination for a “Traditional Blues” sound and for Jazz, Funk, Country or other applications where you need a big, fat, clean sound!

In the 2x12 Marshall application, the Legend 121 is exceptionally clear. Greg suggests that this is a good combination for Heavy Metal or rhythm applications where lots of headroom is desired. The Legend 121 is a great replacement or upgrade!

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**LEGEND M12**

<table>
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<tr>
<th>Feature</th>
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<tbody>
<tr>
<td>Impedance*</td>
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</tr>
<tr>
<td>Power Rating</td>
<td>1200W</td>
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<td>Coil Material</td>
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<tr>
<td>Flat / Round</td>
<td>Round</td>
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<tr>
<td>Former Material</td>
<td>Kapton</td>
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<tr>
<td>Basket Type</td>
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<td>Dust Cap Material</td>
<td>Zerette</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>38oz.</td>
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<tr>
<td>Usable Bandwidth (Fs to -3dB)</td>
<td>80Hz—5kHz</td>
</tr>
<tr>
<td>SPL</td>
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<td>Re</td>
<td>6.36Ω</td>
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<td>Le</td>
<td>0.59mH</td>
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<td>Xmax</td>
<td>0.8mH</td>
</tr>
<tr>
<td>Sd</td>
<td>506.7cm²</td>
</tr>
</tbody>
</table>

**Mounting Information**

- Nominal Basket Diameter: 12.02", 305.2mm
- Baffle Hole Diameter: 10.97", 278.6mm
- Mounting Holes Diameter: 0.25", 6.4mm
- Mounting Hole B.C.D: 11.63", 295.3mm
- Depth: 6.06", 154mm
- Shipping Weight: 9.6lbs., 4.4kg

With a Kapton bobbin, a British manufactured cone, and a power rating of 120W, this driver will get your sound out in front of the band with style. The balanced tonal characteristics and extended power handling capabilities of the M12 make it a great choice for Rock and Metal guitarists.

The M12 works well in various combinations, but one of the best is in a 4x12 configuration powered by a Marshall head and playing a Les Paul. The speaker delivers a real tight, well defined tone with a nice sting on the top end. The mids and lows are very smooth too. The M12 is definitely a cleaner and brighter speaker than the GB12 or the V12. Greg compares this speaker to some of the old JBL guitar speakers that have been popular for so many years.

If you need a well-balanced “British” sound with some bite and power handling, this speaker would be a great choice for you.

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* Please ask about alternative impedances which are available by special order. ** Only available in the UK.
LEGEND V12

Impedance* 8Ω or 16Ω
Power Rating 1200W
Voice Coil Diameter 1.75”, 44.5mm
Coil Material Copper
Flat / Round Kochtan
Former Material Paper
Basket Type Stamped
Surround Material Paper
Dust Cap Material Felt
Magnet Weight 38oz.
Usable Bandwidth (Fs to -3dB) 80Hz—4.5kHz
SPL 100dB
Re 6.73Ω
Xmax 0.8mm
Sd 519.5cm²

Mounting Information
Nominal Basket Diameter 12.02”, 305.2mm
Baffle Hole Diameter 10.97”, 278.6mm
Mounting Holes Diameter 0.25”, 6.4mm
Mounting Hole B.C.D 11.63”, 295.3mm
Depth 6.06”, 154mm
Shipping Weight 9.4lbs., 4.4kg

Surely a favorite! The V12 exhibits very tight definition along with lots of volume and rich, tonal harmonic balance. A British manufactured cone gives characteristics suitable for many styles.

This is a perfect speaker in high power combos for jazz and rock. However, a pair of V12’s in “The Twin” makes for a good rock and blues combination when playing a Les Paul. The speakers have a very “British” sound but are much more mellow than some British counterparts. When playing a Strat through this set up, it sounds less “British”—the tone is smooth and creamy. Great for Country or Jazz if you want that Albert Lee tone.

A British-made cone and Eminence technology combined in this model yield super cool definition with lots of punch. This is Greg Martin’s favorite speaker! He has four of them in a Marshall cabinet. The GB12 is less muddy and has a tighter top end than original Greenbacks. The improved definition is apparent even when playing with distortion. A Strat, “The Twin” and a pair of Legend GB12s. This combination makes use of the British and American speaker tonal characteristics. Remember the Doobie Brothers?

In 2x12 applications using “The Twin” or a Marshall, the speaker has a smooth tone and response curve, but it can really cut through the mix. Superb classic Blues tones prevail. It exhibits less low end than the 121 or the GB12.

This speaker is also an awesome choice for 4x12 cabinets. Eminence highly recommends considering a pair of Legend 125s with a pair of Legend GB12s. This combination makes use of the great top end of the 125 and the great low end of the GB12 for a cabinet with lots of guts! It is perfect for delivering crunchy, southern rock tones or grunge and metal.

LEGEND GB12

Impedance* 8Ω or 16Ω
Power Rating 500W
Voice Coil Diameter 1.75”, 44.5mm
Coil Material Copper
Flat / Round Kochtan
Former Material Paper
Basket Type Stamped
Surround Material Zuraete
Dust Cap Material Zeraete
Magnet Weight 38oz.
Usable Bandwidth (Fs to -3dB) 80Hz—5.5kHz
SPL 101dB
Re 6.71Ω
Le 0.64mH
Xmax 0.8mm
Sd 506.7cm²

Mounting Information
Nominal Basket Diameter 12.02”, 305.2mm
Baffle Hole Diameter 10.97”, 278.6mm
Mounting Holes Diameter 0.25”, 6.4mm
Mounting Hole B.C.D 11.63”, 295.3mm
 Depth 6.06”, 154mm
Shipping Weight 9.6lbs., 4.3kg

LEGEND 125

Impedance* 8Ω or 16Ω
Power Rating 750W
Voice Coil Diameter 1.5”, 38.1mm
Coil Material Copper
Flat / Round Kochtan
Former Material Paper
Basket Type Stamped
Surround Material Paper
Dust Cap Material Paper
Magnet Weight 34oz.
Usable Bandwidth (Fs to -3dB) 80Hz—5kHz
SPL 99dB
Re 7.44Ω
Le 0.70mH
Xmax 0.5mm
Sd 506.7cm²

Mounting Information
Nominal Basket Diameter 12.02”, 305.2mm
Baffle Hole Diameter 10.97”, 278.6mm
Mounting Holes Diameter 0.25”, 6.4mm
Mounting Hole B.C.D 11.63”, 295.3mm
 Depth 4.9”, 124mm
Shipping Weight 9.4lbs., 4.3kg

Pure Vintage! Used in reissues of some of your favorites. Greg states that this speaker is the epitome of the Great American Rock and Roll tone incorporating the best of standard British and American speaker tonal characteristics. Remember the Doobie Brothers?

In 2x12 applications using “The Twin” or a Marshall, the speaker has a smooth tone and response curve, but it can really cut through the mix. Superb classic Blues tones prevail. It exhibits less low end than the 121 or the GB12.

This speaker is also an awesome choice for 4x12 cabinets. Eminence highly recommends considering a pair of Legend 125s with a pair of Legend GB12s. This combination makes use of the great top end of the 125 and the great low end of the GB12 for a cabinet with lots of guts! It is perfect for delivering crunchy, southern rock tones or grunge and metal.
This new addition to the Legend family has been one of the most widely used guitar speakers in the music industry in the past few years. The tone is colored very little by the cone in this speaker making it the perfect choice for any modeling amplifier application. If you want Metal, Rock, Country, Blues, or Jazz, just dial it in on your amp and let it do the work. This speaker will answer accordingly!

This new addition to the Legend family has also made regular appearances in some of your favorite amplifiers. Unlike the MODELING 12, this speaker has a personality all its own. The cone in this speaker comes from one of America's finest cone vendors and represents just how awesome the tone can be from a 100% American speaker! The FS12 works extremely well in 1x12 and 2x12 combos where chorus, phasor, and flange effects are used. Many amplifiers that come with such effects options use this speaker as the standard.

You've definitely heard this one before! Inspired by the success of the 10" ALNICO (Legend 102), this version gives a 12" alternative. The ALNICO is famous for its warm Bluesy tone. Eminence is producing the paper bobbin model (20W) in an authentic blue frame. The Kapton bobbin model (35W) is available in the standard black frame — it is ideal as a replacement or for extending power handling capabilities in vintage boxes. Expect a much thinner tone and a lot less body from these vintage reissues. These speakers were designed to recreate the "Jensen" tone from years ago. They make great replacements in lower power vintage amplifiers.

Greg Martin played a 4x12 and a 2x12 with the Vibroverb and the Top hat. The Vibroverb was the best combination. The speaker breaks up quickly and has a very nice high end. The paper bobbin version lends a slightly warmer tone.

* Please ask about alternative impedances which are available by special order.
When you need a little extra power, this model is perfect as a general replacement. It has been and continues to be original equipment in many of your favorites. Lots of punch and crunch!

This is Greg's favorite 10". He has them loaded in his Super Reverb! He suggests using this speaker in recording studios as well as in 4x10 cabinets for live gigs. Greg describes the tone as very 'jangly' with a meaty low-end and lots of honk. It would be a perfect speaker for anyone playing Country, Blues or Rockabilly. This speaker works well with Rickenbacker guitars, a Super Reverb or a Super.

The best Eminence all-purpose, broad bandwidth, bass guitar speaker! This unit exhibits lots of punch and is great for Pop and Slap Bass, Jazz and Rock’n’Roll. The efficiency of the whizzer cone eliminates the need for a tweeter. This speaker is an ideal replacement or upgrade for bass players.

Eminence has been producing this ALNICO model for some of the world’s finest amplifier manufacturers for years. Even more popular than its ALNICO sister, the 122, this classic lends that warm blues tone that has helped in making many of its users legendary. We rate the paper bobbin at 20W (blue frame) and the new Kapton version (black frame) at 35W. Like the 12" ALNICO, this speaker was created for lower power, vintage amplifier applications where a thinner 'Jensen" tone is desired. Make that old amp new again, or take a new one and make it sound old!
**LEGEND BP102**

- **Impedance**: 8Ω
- **Power Rating**: 200W RMS
- **Voice Coil Diameter**: 2", 50.8mm
- **Coil Material**: Copper
- **Flat / Round**: Round
- **Former Material**: Kapton
- **Basket Type**: Stamped
- **Surround Material**: Kapton
- **Dust Cap Material**: Stamped
- **Magnet Weight**: 38oz.
- **Usable Bandwidth (Fs to -3dB)**: 40Hz—3.5kHz
- **SPL**: 91dB
- **Re**: 5.54Ω
- **Le**: 1.27mH
- **Xmax**: 6.2mm
- **Sd**: 334.5cm²

**Mounting Information**
- **Nominal Basket Diameter**: 10.08", 256.0mm
- **Baffle Hole Diameter**: 9.09", 229.9mm
- **Mounting Holes Diameter**: 0.25", 6.4mm
- **Mounting Hole B.C.D**: 9.6", 245.6mm
- **Depth**: 4.25", 108.0mm
- **Shipping Weight**: 8.7 lbs., 4.0kg

**Legend 875**

- **Impedance**: 4Ω
- **Power Rating**: 75W RMS
- **Voice Coil Diameter**: 1.5", 38.1mm
- **Coil Material**: Copper
- **Flat / Round**: Round
- **Former Material**: Kapton
- **Basket Type**: Stamped
- **Surround Material**: Paper
- **Dust Cap Material**: Paper
- **Magnet Weight**: 16oz.
- **Usable Bandwidth (Fs to -3dB)**: 78Hz—6kHz
- **SPL**: 95dB
- **Re**: 3.88Ω
- **Le**: 0.34mH
- **Xmax**: 1.3mm
- **Sd**: 214.1cm²

**Mounting Information**
- **Nominal Basket Diameter**: 8.24", 209.2mm
- **Baffle Hole Diameter**: 7.13", 181mm
- **Mounting Holes Diameter**: 0.21", 5.5mm
- **Mounting Hole B.C.D**: 7.75", 196.9mm
- **Depth**: 3.58", 91mm
- **Shipping Weight**: 8.7 lbs., 4.0kg

**Legend 675**

- **Impedance**: 4Ω
- **Power Rating**: 75W RMS
- **Voice Coil Diameter**: 1.5", 38.1mm
- **Coil Material**: Copper
- **Flat / Round**: Round
- **Former Material**: Kapton
- **Basket Type**: Stamped
- **Surround Material**: Paper
- **Dust Cap Material**: Paper
- **Magnet Weight**: 16oz.
- **Usable Bandwidth (Fs to -3dB)**: 180Hz—4.5kHz
- **SPL**: 94dB
- **Re**: 3.84Ω
- **Le**: 0.17mH
- **Xmax**: 0.0mm
- **Sd**: 133.1cm²

**Mounting Information**
- **Nominal Basket Diameter**: 6.59", 167.4mm
- **Baffle Hole Diameter**: 5.65", 143.5mm
- **Mounting Holes Diameter**: 0.225", 5.7mm
- **Mounting Hole B.C.D**: 6.06", 154mm
- **Depth**: 2.795", 71mm
- **Shipping Weight**: 4.2lbs., 2kg

*Please ask about alternative impedances which are available by special order.*

Back by popular demand! The Legend BP 102 has been a staple product for many bass guitar wonders over the past 10 years. Eminence has had so many requests for this speaker, we couldn’t refuse to put it in our catalog. This is a favorite for 3x, 4x, and 8x10 cabinets! Don’t let the sensitivity fool you, this speaker will really punch out the bass with authority. It also works great as a mid in PA applications or in a three-way bass cabinet.

Greg nicknamed this speaker “The Buckaroo” because of its exceptionally clean, country tone. It has exceptional low end for an 8" speaker and sounds great through most amps with most popular guitars. Powered by Marshall with some distortion, it delivers a cool, raspy Georgia Satellites tone.

Back by popular request, Eminence is now offering an affordable, all purpose 8Ω speaker great for practice amps, portable amps, and as a replacement in some of your vintage favorites.

Greg really liked this speaker in a closed cabinet with the Marshall amp and Strat. It offers a Clapton “After Midnight” tone that would be great for the recording studio. The speaker exhibits lots of top end and is fatter than you would expect from a 6". It is very, very clean!
COMPONENTS
HF DRIVERS

Developed for totally ‘Eminence-loaded’ cabinets, these HF products achieve extraordinary levels of audio performance with the same unrivaled reliability that you demand of Eminence bass and midrange transducers. Engineering for esoteric HF performance challenges transducer designers with the opposing objectives of power handling and sensitivity. Even when this is resolved, the Eminence criteria for manufacturing consistency and reliability are even tougher to meet. Practical ingenuity and a mastery of materials created the 1” PSD:2002 compression driver which achieves unprecedented performance and reliability.

Perhaps most astonishing of all is that while diaphragms can be easily field-replaced, replacement of complete units costs less than a diaphragm for some less reliable and over-engineered alternatives.

The APT high-power super-tweeters possess extraordinary sensitivity from a phenolic diaphragm that has unique stiffness and damping properties. By fluid-cooling the voice coil, increased power handling, controlled low frequency behavior and long-term reliability are assured.

COMPRESSOR DRIVER PSD:2002

This 1” throat Eminence compression driver is a bolt-on format.

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<thead>
<tr>
<th>Throat size</th>
<th>1”, 25.4mm</th>
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<tbody>
<tr>
<td>Impedance</td>
<td>8Ω or 16Ω</td>
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<tr>
<td>Power rating</td>
<td>80W rms</td>
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<td>(EIA426B specification, 1.6kHz @ 18dB)</td>
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<td>Resonance</td>
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<td>Usable Frequency Range</td>
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<td>Voice Coil Diameter</td>
<td>3 x M6 on 2.25” BHC</td>
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NOTE: Please be sure to specify mounting preference when ordering these items.

COMPRESSORS

AFT:2
Flange-to-screw adaptor

AFT:3
Supertweeter to screw-thread horn flare

AFT:4
Supertweeter to flange horn flare
This 1” throat Eminence compression driver is a screw-on format. 

**NOTE:** Please be sure to specify mounting preference when ordering these items.

**COMPRESSION DRIVER PSD:2002S**

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<th>Specification</th>
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<td>(EIA426B specification, 1.6kHz @ 18dB)</td>
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</table>

**Impedance**

- 8Ω or 16Ω

**Power rating**

- 80Wrms

**Resonance**

- 550Hz

**Usable Frequency Range**

- 1.5kHz – 20kHz

**Sensitivity (1mW in plane wave tube)**

- 105dB

**Magnet Weight**

- 34oz.

**Voice Coil Diameter**

- 2", 51mm

**Voice Coil Former**

- Kapton

**Diaphragm Material**

- Titanium

**Mounting Information**

<table>
<thead>
<tr>
<th>Overall Diameter</th>
<th>5 25”, 133mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth</td>
<td>2 2”, 56mm</td>
</tr>
</tbody>
</table>

**Mounting Thread (PSD:2002S)**

- 1 3/8” 18 NEF ext.

**SUPERTWEETER APT:50**

**NOTE:** Using an Eminence PX Series crossover may slightly increase power handling capabilities.

<table>
<thead>
<tr>
<th>Specification</th>
<th>8Ω</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td></td>
</tr>
<tr>
<td>Power rating</td>
<td></td>
</tr>
<tr>
<td>(18dB/octave)</td>
<td></td>
</tr>
</tbody>
</table>

**Impedance**

- 8Ω

**Power rating**

- 45Wtms @ 3.5kHz

**Resonance**

- 250Hz

**Usable Frequency Range**

- 3.5kHz to 20kHz

**Sensitivity (1W@1m mounted to test horn)**

- 105dB

**Diaphragm Material**

- Phenolic

**Le**

- 0.15mH

**Re**

- 6.3Ω

**Depth**

- 1.57", 40mm

**Weight**

- 1.5lbs, 682g

**SUPERTWEETER OPTIONS**

<table>
<thead>
<tr>
<th>Dispersion</th>
<th>Dimensions</th>
<th>Cut-out</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>APT:80</td>
<td>80° conical</td>
<td>3.4&quot; x 3.4&quot;, 87mm x 87mm</td>
<td>2.9&quot;, 73.6mm</td>
<td>1.6lbs, 727g</td>
</tr>
<tr>
<td>APT:130</td>
<td>90° conical</td>
<td>Ø 3.15&quot;, 80mm</td>
<td>2.9&quot;, 73.6mm</td>
<td>1.7lbs, 772g</td>
</tr>
<tr>
<td>APT:150</td>
<td>7.5&quot; x 4.5&quot;, 131mm x 114mm</td>
<td>6.7&quot; x 3.4&quot;, 170mm x 86mm</td>
<td>4.5&quot;, 114.3mm</td>
<td>2lbs, 909g</td>
</tr>
<tr>
<td>APT:200</td>
<td>80 x 90</td>
<td>5.9&quot; x 5.9&quot;, 150mm x 150mm</td>
<td>4.25&quot; x 4.5&quot;, 108mm x 114mm</td>
<td>5.1&quot;, 129.5mm</td>
</tr>
</tbody>
</table>
These horn flares are the perfect complement to Eminence compression drivers. Each is manufactured from the highest quality materials to obtain a fine balance of strength, durability, and weight savings. They look great too! All Eminence horn flares were designed to work with one of our HF devices such as the PSD:2002.
Designed to work in high-power cabinets, px crossovers are technically superior passive filters available as board-only or complete with fitted hardware for a smart, economical ‘factory-fit’ finish.

Designed and built for Eminence, px crossovers feature advanced circuit design to both preserve the crossover and your HF drivers.

A common crossover problem is L-PAD failure brought about by winding burnout when maximum attenuation is prolonged. Full attenuation concentrates the maximum voltage drop in a small winding area - a potentially damaging state even with high-power L-PAD devices.

In px crossovers, current is limited when the HF level control is set to ‘0’ on its scale (max. -9dB attenuation). A secondary benefit of the design is to form a voltage divider across the HF driver. The High-Pass Protection uses custom-built aerospace lamps as positive temperature coefficient series varistors.

The tungsten filaments effectively track the program material, dynamically maintaining a safe maximum current level to the HF driver without introducing distortion. This circuitry provides smooth 3:1 analog compression during input overload conditions over 250W RMS.

At full drive level approaching clipping, the electrical attenuation to the protected HF driver is -4.5dB. In every way, Eminence px crossovers are a technically superior product.

### PX SERIES

**PROFESSIONAL CROSSOVERS**

<table>
<thead>
<tr>
<th>Type</th>
<th>px250</th>
<th>pxb250</th>
<th>pxb500</th>
<th>pxb1k6</th>
<th>pxb3k5</th>
<th>pxb5k0</th>
<th>px21k6</th>
<th>px23k5</th>
<th>px25k0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinet Ready*</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Crossover Frequency</td>
<td>250Hz</td>
<td>250Hz</td>
<td>500Hz</td>
<td>1.6kHz</td>
<td>3.5kHz</td>
<td>5kHz</td>
<td>1.6kHz</td>
<td>3.5kHz</td>
<td>5kHz</td>
</tr>
<tr>
<td>Impedance</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Handling</td>
<td>600W RMS</td>
<td>600W RMS</td>
<td>600W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
</tr>
<tr>
<td>HF Level</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
<td>±9dB</td>
</tr>
<tr>
<td>Mounting cut-out</td>
<td>3.875” x 6”</td>
<td>3.875” x 6”</td>
<td>3.875” x 6”</td>
<td>98.4 x 152.4mm</td>
<td>98.4 x 152.4mm</td>
<td>98.4 x 152.4mm</td>
<td>98.4 x 152.4mm</td>
<td>98.4 x 152.4mm</td>
<td>98.4 x 152.4mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>pxb2:500</th>
<th>pxb2:800</th>
<th>pxb2:1k6</th>
<th>pxb2:3k5</th>
<th>pxb2:5k0</th>
<th>pxb3:1k6</th>
<th>pxb3:3k5</th>
<th>pxb3:5k0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinet Ready*</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Crossover Frequency</td>
<td>500Hz</td>
<td>800Hz</td>
<td>1.6kHz</td>
<td>3.5kHz</td>
<td>5kHz</td>
<td>500Hz/1.6kHz</td>
<td>500Hz/3.5kHz</td>
<td>500Hz/5kHz</td>
</tr>
<tr>
<td>Impedance</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
<td>8Ω</td>
</tr>
<tr>
<td>Power Handling</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
<td>400W RMS</td>
</tr>
<tr>
<td>HF Level</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

* Picture at top of page shows Cabinet-ready PX crossover (left) and Board-only PX crossover (right).
The end result is you gave up efficiency but you were doing much more work. The key with loudspeaker selection is to choose the loudspeaker that offers you what you need in terms of low-frequency reproduction, but has the best sensitivity in its class.

Loudspeaker manufacturers follow different rules when obtaining this information. You cannot necessarily compare like for like when looking at the sensitivities of different manufacturers’ loudspeakers. Most manufacturers determine sensitivity by putting the speaker in a baffle and measuring the sound pressure level at one meter, with 1W of input power across the frequency response curve. The problem is that one manufacturer may place the microphone one meter from the dust cap of the speaker and gain a distinct advantage over the manufacturer who placed the microphone one meter from the baffle board. The Eminence method is to measure with the microphone one meter from the baffle board. We then take the frequency response curve and points across what we have specified as the usable frequency range to obtain the average sound pressure level (SPL). Eminence believes this method is extremely accurate and represents exactly what you can expect from the transducer in a specific application.

Although sensitivity is important, be sure not to buy your transducer based on efficiency alone. You must be willing to compromise to get your ideal combination of low-frequency reproduction and sensitivity. If you have lots of power, you can have efficiency alone. You must be willing to compromise to get your ideal combination of efficiency and sensitivity. If you have lots of power, you can have awesome low-frequency reproduction and maintain lots of volume from a speaker with a model that is 3dB more sensitive.

As a comparison, think of an automobile. If all you do with your car is drive a few miles to work each day, you can probably get by with a small, efficient compact car that has less than 100 horsepower. On the other hand, maybe you carpool and carry six other people to work with you. In that case, you need a larger, more powerful car.

### Sensitivity Guide

<table>
<thead>
<tr>
<th>Power Rating</th>
<th>200Hz SPL (dB)</th>
<th>300Hz SPL (dB)</th>
<th>400Hz SPL (dB)</th>
<th>500Hz SPL (dB)</th>
<th>600Hz SPL (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROFESSIONAL SERIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnum 10 650Watts</td>
<td>97.5</td>
<td>97.5</td>
<td>97.5</td>
<td>98.0</td>
<td>98.0</td>
</tr>
<tr>
<td>Delta Pro 10 500Watts</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
</tr>
<tr>
<td><strong>AMERICAN ORIGINALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kappa 12 650Watts</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
</tr>
<tr>
<td>Beta 12 750Watts</td>
<td>96.0</td>
<td>96.0</td>
<td>96.0</td>
<td>96.0</td>
<td>96.0</td>
</tr>
<tr>
<td><strong>DELTA/LITE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DeltaLite 125Watts</td>
<td>97.5</td>
<td>97.5</td>
<td>97.5</td>
<td>98.0</td>
<td>98.0</td>
</tr>
<tr>
<td>DeltaLite 150Watts</td>
<td>97.5</td>
<td>97.5</td>
<td>97.5</td>
<td>98.0</td>
<td>98.0</td>
</tr>
<tr>
<td><strong>LEGEND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legend 12 750Watts</td>
<td>94.0</td>
<td>94.0</td>
<td>94.0</td>
<td>94.0</td>
<td>94.0</td>
</tr>
<tr>
<td>Legend 15 1000Watts</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
<td>95.0</td>
</tr>
<tr>
<td><strong>HIGH FREQUENCY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSD-2000</td>
<td>96.0</td>
<td>96.0</td>
<td>96.0</td>
<td>96.0</td>
<td>96.0</td>
</tr>
</tbody>
</table>

1. Frequency range published represents the usable frequency range that the transducer is capable of reproducing within a useful sensitivity range. 2. Power rating is derived using an EIA 426A noise source and test standard. All tests were conducted for 8 hours in a free-air, non-temperature controlled environment.