



PROFESSIONAL LOUDSPEAKERS



SOUND IS BEAUTY AND EMOTION

Vibrations moving through the air taking completely the mind. Amplifying these emotions for FaitalPRO is a commitment which goes beyond professionalism. It's an inborn passion: the privilege of working in an environment that IS art, genius and excitement and which is corresponded by FaitalPRO with precisely the same enthusiasm, respect and admiration.

A BIT ABOUT US

Faital's history reflects constant development and growth over the last 50 years. The various milestones that have been achieved since the Company was established in 1958 have allowed it to become an important point of reference in the world markets.

TODAY

In the new millennium, the company enters the North American market and begins to meet local market requirements. Faital consolidates its achievements after almost half a century in business. In order to enter the North American automotive market successfully, the company establishes a commercial office and a new warehouse near New York to provide logistical support to its North American clients. Similarly, to increase its capacity and competitiveness Faital establishes a new manufacturing facility in Hungary and a new sales & logistics center in Hong Kong to support their asian clients. The new millennium also marks the beginning of a diversification strategy for Faital that leads to the development of the FaitalPRO brand. FaitalPRO is a full line of Professional Loudspeakers suitable for use in heavy-duty applications. These products are specifically designed for the Pro-Audio markets and are manufactured to the highest standard of reliability, sound quality and high power handling.

As already mentioned above, the group's growth is the result of an ongoing commitment to achieve a complete understanding of Clients' requirements. Design, manufacturing and product quality control systems are all proactively geared towards Customer Satisfaction. The company's mission is to ensure that the four basic features of Faital products are met: Technology, Quality, Service and Competitiveness.

In this way, Faital can ensure that their products reflect the following:

- Design expertise and innovation supported by technologically advanced manufacturing processes
- Consistent sound quality and reliability
- Effective logistic planning in order to support product distribution and Customer demand.

To hold strong to the original passion for good sound that started the small family-run business, Faital has decided to keep design and production of the FaitalPRO line of loudspeakers in Italy, combining superb craftsmanship with the latest industrial technologies. As a multinational business currently operating in three continents, the company is preparing to face the new challenges of a highly competitive global market where technological development and customer service are increasingly becoming the key factors for success.

1960s



Faital S.p.A. is founded in Milan in 1958 as a small family-run business. At the end of the 60s, Faital becomes one of the main Italian loudspeaker manufacturers, accounting for 40% of national demand. Faital initially manufactures loudspeakers for radios and audio systems and later introduces its products into the market for television amplifier systems. As a result of constant technical and business development, the company gradually expands to cover many areas of industry.

1970s



Faital enters the automotive field and ventures beyond national boundaries with their first European clients. In order to satisfy increasing market demand and their new European clients, in 1974 the company opens a new plant in Chieve, near Crema, Italy.



1980s



The growth trend continues. Faital becomes the official loudspeaker supplier to various car manufacturers. The company undertakes a innovation and technological development process with investments aimed at updating plants and enhancing the areas of R&D and Human Resources. The company commits to TOTAL QUALITY and sets their main objective as "Zero Defects".

1990s



In the early 1990s, Sofaital S.A. is established in France and a new plant is opened, in Argenteuil, near Paris. A few years later, FAITAL contributes to the establishment of a new manufacturing facility in Vacarisses, Spain near Barcelona. With the addition of Sofaital in France and Fabrica Iberica in Spain, the Faital Group becomes the leading European manufacturer of loudspeakers for the automotive industry. The Group considers with increasing interest the possibility of entering the North American market.

HOW WE DO WHAT WE DO

R&D AND MANUFACTURING BY FAITAL

Every FaitalPRO driver is meticulously designed using the latest CAD and FEA modelling techniques. All electro-acoustic and mechanical performances are simulated and then carefully studied by a team of "sound fanatic" engineers. The individual parts of each loudspeaker are directly designed in this way, in order to ensure that the end product will meet the Client's electro-acoustic and environmental requirements and special attention is given to compliance of the finished product with environmental requirements and international standards.

Design

Creating a loudspeaker system involves a combination of design, technology and sensory considerations. Emotions, communicated by listening to an audio system, are the result of a complex process. Faital's Research and Development laboratory is a centre of excellence in the fields of research, planning, development, testing and support for the manufacture of loudspeaker systems.



In the following pages, Faital will take you on a guided tour of the various stages involved in manufacturing its products, which is undoubtedly part of one of the most advanced processes in the industry. You will be able to experience first-hand the commitment, expertise and quality that underline each of our products.

OEM Co-Design

The major component of an audio system is the enjoyment that it transmits to the end user. This is the result of work that begins early on, once design models are ready. Initially customers' requirements are clearly defined. Therefore, Faital works in synergy with the customers right from the beginning. A number of meetings are required with the customer and the other suppliers involved in the project, in order to outline an initial concept of what the loudspeaker system will be like. A work group is set up within Faital, with representatives from all company departments, including design, sales, purchasing, quality, production and logistics. Based on their work, valuable suggestions will be proposed to the customer during the project, as well as strict quality control criteria at each stage of the project. Firstly the type, number and size of loudspeakers in the audio system need to be determined, as well as their position in relation to listeners in a room or in an open environment. The performance of the sound system will largely depend on this positioning, which is often the result of an optimisation based upon the customer design choices and needs.

CAD System

At the design stage, work begins on drawing individual loudspeakers and their specific components using three-dimensional modeling software. In order to do this, both Faital and the customer can use compatible software and quickly exchange files containing the drawings. Faital currently has 8 workstations and is able to carry out drawings using three different CAD systems: CATIA, Autocad and NX. At the same time, an electro-acoustic simulation of the various loudspeakers in development is carried out using "Finite Element Analysis" software based on the required physical and dimensional parameters, this way their acoustic performance can be predicted before they are built in the laboratory. The materials and single components that will be used are also tested using engineering simulation software. Faital has also acquired over the years the ability to create a feedback system that enables the R&D dept to feed actual performance data into the FEA system which in turn is constantly becoming more precise and reliable.



Prototyping

When the process of drawing and defining the technical characteristics of the various parts of the new models designed has been sufficiently consolidated, Faital builds the first version of the loudspeakers. This phase is achieved by the construction of pilot tools or the use of rapid prototyping techniques, such as laser sintering of baskets, so that parts very similar to the final ones can be quickly assembled.

The first prototypes can then be measured to verify that all electrical and acoustic parameters comply with the initial design specifications. At this stage the work-group assigned to the project, co-ordinated by the project leader, can predict reliability problems in the final product using third-generation DFMEA methods. In addition, aspects relating to the industrial manufacturing of individual parts can be assessed, providing an initial outline of production flow and defining any special manufacturing equipment that will be required.

This verification stage is extremely important because, in addition to allowing the required adjustments and changes to be made to the loudspeaker designs, it provides an opportunity to present useful suggestions to the R&D dept or the customer for improving the overall product and the final application.

All problems arising at this point and any changes that need to be made to individual parts are discussed at constant inter-functional progress meetings. This allows to assess their possible impact, both economic and industrial making use of advanced PFMEA's for a detailed reliability evaluation, all the while ensuring that development deadlines are met. At this stage the customer can also be involved so that any changes to the initial technical requirements can be evaluated and agreed upon.

Off Tool Parts

Once this stage has been completed, work can start on the production of final tools and equipment for the manufacture of all parts. Attention is now focused on second-level suppliers and production methods: purchasing, quality of suppliers and production methods, play an important role in this stage. At the proposed production plant an initial review of the manufacturing process for the loudspeaker being developed is carried out. This allows control plans and production flow process to be optimized by clearly identifying process variables. On receiving final of tool parts and equipment, the supplier quality department and the laboratory carry out a key role once again. While the laboratory undertakes manual assembly of all loudspeakers required for the audio system in order to verify their compliance with project specifications, the quality department "certifies" the quality of supplies. This is carried out using the pre-series products in accordance with similar criteria as to that required by the end customer. This process continues even after mass production start up and is based on a continuous performance-monitoring plan.



Acoustic Testing

In addition to instrumental testing, the prototypes produced in the laboratory are also subjected to a series of tests ranging from installation testing to dimensional compatibility, as well as verifying their acoustic performance. Final adjustments could still be possible at this stage by fine tuning and implementing minor changes, this way the final characteristics of the manufactured product can be finally set. Sound is evaluated by tests using instruments and through a series of listening sessions carried out by specially trained engineers. Carefully selected pieces of music are used in order to highlight specific features of the audio system's acoustic performance. The listening tests are also compared with audio recordings that have been made in a reference environment, such as a state of the art listening room.

Pre-Series Production

When the results that have been achieved are considered satisfactory of all technical requirements, a pre-series production is undertaken at the manufacturing plant chosen for the project. This allows for verification that the products manufactured in the final production process comply with the initial project specifications. Pre-series production, which is carried out using the final manufacturing equipment and components on the proposed manufacturing line is also subjected to product and process validation carried out by the R&D laboratory. This marks the beginning of product and process validation both of which aspects are subject to careful quality control. At this point the plant committee, along with the engineers from the R&D laboratory, carries out an initial review of the effectiveness of the production processes that had been previously planned. At this stage a verification is carried out to ensure that process variables are under control, based on accurate measurements and using appropriate statistical methods. Any deviations or problems that are found generate immediate feedback regarding the project, in addition to the necessary corrective action being taken in relation to the product, processes and suppliers.



Validation Testing

The loudspeakers from the pre-series production are also used for validation testing, which is carried out by Faital's R&D dept. The tests used to verify the reliability and performance of loudspeakers during their lifecycle vary enormously from customer to customer and from application to application. Faital, having acquired an invaluable experience in this area, is able to share its know-how with customers by suggesting the most appropriate solutions and methods if needed. Faital has for some time implemented a series of routine activities for the validation process of products; these activities include salt fog tests, life tests, temperature shock, humidity, UV exposure and vibration test either carried out singularly or combined together, as well as all the most advanced electro-acoustic measurements, including linear parameters measurement, large signal identification, thermal behaviour, suspension part measurement and scanning vibrometer systems. All these activities result in a detailed report completing the validation phase.



Production

The project has been completed. From this point on, the production department is responsible for ensuring that production volumes required are met and verified using R@R (Run @ Rate) tests, in accordance with product characteristics set in the project specifications. Production processes are verified and optimized through continuous quality control on the production line. All loudspeakers manufactured by the Faital group are fully checked at the end of the assembly line. Loudspeakers are tested individually also using proprietary computerized equipment, which verifies in real time six electro-acoustic parameters relating to nominal use conditions specific to each product. Defective items are always set aside for careful analysis and possible feedback to the R&D dept. Quality Assurance and the Plant Committee continuously monitor production progress. In the case of non-conformities or deterioration in the level of production rejects, corrective actions, either internal or relating to suppliers, are identified and implemented. In addition, a general management committee oversees the progress of all Faital plants globally, in order to ensure that a uniform level of product quality is achieved wherever a product is manufactured. Most of a product is emotion and Faital ensures the emotion of a perfect sound.

FaitalPRO Products

The use of NdFeB throughout the entire range of FaitalPRO drivers allows for an important weight reduction. In fact, when confronting ferrite and NdFeB magnets with the same magnetic induction in the gap, the results show that NdFeB transducers weigh from 3 to 6 times less than ferrite. This aspect is an evident advantage for manufacturers of speaker boxes allowing them to design products that are easier to move and to implement in projects with simpler structures for speaker support and fixing points. The same concept can be considered for Line Array applications that use numerous transducers in modular blocks. The complete FaitalPRO line of drivers is produced using state of the art materials. Our team of engineers design all acoustical components as well as all hard parts. A special heat dissipation system, designed by our R&D team, allows outstanding power handling capability while improving the drivers' reliability. Cones and suspensions, as well as voice coils, undergo a special treatment in order to provide reliable performance even in the most severe environmental conditions. The specifically selected adhesives and the curing phase during the production process are a guarantee for product reliability and durability. The entire line of FaitalPRO drivers has been tested and verified to withstand the most severe working environments. With this in mind Faital has chosen to carry out life tests in accordance with the severe AES 2 - 1984 Rev.2003. norm. Every FaitalPRO driver is manufactured combining superb craftsmanship with the latest industrial technologies and rigorous tests are constantly performed during quality checks. All driver components are put through continuous visual, mechanical and electrical tests to verify their conformity to the design parameters. This procedure is in place to keep production tolerances within very tight limits ensuring consistency in quality and reliability over time. As quality and environmental protection are of utmost importance to us, Faital has been certified for many years in accordance with the following international standards:

- IATF 16949
- ISO 9001
- ISO 14001



"BEHIND THE SCENES" OF A PROJECT BY FAITAL

The Design of a magnet assembly

The magnet assemblies of all products in the FaitalPRO range are carefully designed to guarantee the nominal performance of each loudspeaker during its lifetime.

Detailed simulations using FEA techniques have allowed evaluations to be made on both flux density as well as thermal equilibrium. The presence of high temperature in the magnet assembly is a result of the voice coil overheating. This, in turn, is linked to the Joule effect produced by the current that circulates in the coil windings on the basis of the power supplied from the source and the electro-acoustical yield of the loudspeakers itself. For this reason a great deal of attention has gone into designing products capable of efficiency (η_{a0}) in the area of 2.70% - 3.00%. Furthermore the magnet assemblies have been conceived to have a double function: guaranteeing performance and, at the same time, contributing and optimizing the coil heat dissipation. This takes place by maximizing the surface area available for heat exchange of the voice coil in the air gap, easing the thermal radiation, and quickly transporting the absorbed energy to the aluminum basket.

Great care has been taken in the design phase to allow for the correct distribution of the magnetic flux within the air gap and avoiding areas of saturation in the iron parts of the magnet assembly itself.

Thermal behaviour of the voice coil

The voice coils have been designed to withstand high temperatures (up to 240° C on the windings) as well as the mechanical stress of the support during normal use. For this reason the material chosen for the former is glass fiber. A special joint has also been designed to ensure that the correct cylindrical shape is maintained. The coil windings are positioned to form two layers, one on the outer surface and the other on the inner surface of the former. This doubles the surface area available for heat exchange from the coil to the magnet assembly.

This way heat dissipation by convection is also made easier. The airways inside the magnet assembly have been studied to make the outward movement of dissipated energy as efficient as possible. This is helped by the geometry of the magnet assembly and the specific structure of the base of the speaker basket itself. The movement of the mobile parts of the speaker allows the hot air to be forced out, especially in the frequency range under 400Hz.

The thermal energy generated by the coil in free air is approximately 2.5 x 108 W/m3. Exceeding this limit during the design phase will certainly result in the destruction of the coil in a real application. This parameter therefore constitutes a fundamental aspect in regards to reliability and has been taken into consideration in the design phase of the magnet assembly and the definition of the maximum power associated with each model of speaker in the range.

The application of energy dissipation techniques is another measure that guarantees the reliability and performance during the products' life.

Electro-acoustical behaviour

FEA analyses allow the dynamic behaviour of a magnet assembly to be studied. In this way it is possible to study the Eddy currents calculating the loss and the impedance. In parallel an analysis is carried out on the compliance and the non-linearity of the spider using specific instruments. Consolidating together the data obtained allows for a final analysis that simulates the behaviour of the loudspeaker at low frequencies. This is carried out using another one of Faital's simulation tools called "Data Processing Engine", allowing for the prediction of resonance frequency, excursion, distortion, and other loudspeaker parameters.

The structural analysis and frequency response, permits the acoustical verification to be completed. This also permits to define, at a design level, all necessary parameters for acoustical optimization.

Experimental tests and reliability

The parameters previously simulated are used as the starting point for a performance verification of all the components that make up a FaitalPRO transducer. Once the speakers are made using definitive production tools Faital carries out an in-depth laboratory activity of each component's performance. The objective is to verify that every product in the FaitalPRO range corresponds to the design parameters.

Particular attention is paid to the verification of:

- Magnetic properties
- Electro-acoustical characteristics
- Mechanical performance
- Climatic and environmental performance
- Reliability and product life

Faital's 50 years of activity has allowed the company to consolidate its experience. Working in markets where defects are calculated in ppm (parts per million) and every product issue causes a series of costs that are much higher than the cost of the individual loudspeaker, Faital has invested in the latest technology and instrumentation allowing this kind of verification to be carried out. Faital's Research & Development Department has at its disposal three anechoic chambers with integrated and computerized instruments capable of satisfying any requirement from the market. When it comes to reliability and products' capabilities to maintain and guarantee the performance for which they were originally designed, Faital's position is to go beyond the standard criteria used and to test all its products with a far greater level of severity. With this in mind Faital has chosen to carry out life tests in accordance with the severe norm AES 2-1984 Rev. 2003, that requires the driver to function in free air for 2 hours at nominal power, powering the unit with DIN filtered Pink Noise. This test is by far more severe than that normally used by our leading competitors who usually test their speakers for a much lower number of hours as well as fitting the speaker in a vented acoustic box. The tests carried out allow Faital to face the Professional Audio market with the guarantee of offering its clients a complete family of transducers that are in line with the highest market standards and that are produced using the most advanced technologies. All the products are designed at Faital's headquarters and main R&D laboratory in S. Donato Milanese, near Milan in Italy. The woofer's production takes place at Faital's Manufacturing plant in Chieve, about 40 Km from the company's headquarters. The compression drivers are produced in Spain near Barcelona in the Vacarisses plant. All of Faital's plants are certified ISO TS16949:2009, ISO 14001:2004, ISO 9001:2008.

FaitalPRO Range

The range comprises a complete series of woofers, compression drivers and horns in every category the market needs be it equipped with Ferrite or Neodymium magnets. These products are only a starting point, in fact Faital's intention is to expand and improve the entire FaitalPRO line of products with the goal of continuing to satisfy even the most demanding clients. In order to achieve this goal Faital will continue to invest in its research R&D and will maintain the production sites updated by continuously applying the latest technologies.



ECO-CONSCIOUS

by Faital

SOLAR ENERGY

THE NEXT STEP FORWARD FOR FAITALPRO!

Pressing on with our environmental efforts, we at Faital added to our already highly technological profile an ecologically conscious approach by harnessing solar power.

The Chieve plant, in the Cremona province, is the location chosen by Faital to install the manufacturing operations for the entire range dedicated to the professional audio world, in other words, the FaitalPRO division. This modern manufacturing facility has constantly sustained technological innovation over time and is now equipped with a powerful photovoltaic system of extremely modern conception which is, above all, **dedicated to energy savings and reducing Faital's Carbon footprint.**

Initially opened in 1978, the Chieve production plant has continuously been updated following and at times even anticipating the most advanced technological trends, including the installation of highly automated production lines, that guarantee the accurate reproduction and consistently high quality of the entire pro-audio range. The Chieve plant roof presented the ideal layout and orientation for the solar panels planned for this project. This new power generation system was designed and built to achieve outstanding production efficiency - thus significant savings – as well as to continue on Faital's pursuit for always more "ecologically conscious" operations and guaranteeing FaitalPRO's ever "greener" signature. In fact, Faital states that on a power level, this new installation is aligned with the global policy for energy savings in terms of consumption and it is not by chance that this photovoltaic system was **designed to cover 40% of the internal energy requirements.** On the other hand, from the increasingly important ecological point of view, the new system will also prevent dumping several tons of harmful CO2 into the atmosphere every year.



The system's installed capacity is 199 KWp with an annual estimated contribution of **210,000 kWh**, equivalent to about 40% of the Chieve plant's current annual consumption. The official data indicate a significant savings of carbon dioxide released into the atmosphere, almost 111,000 kg per year, which means **sparing more than 2,000 metric tons of CO2 emissions** over the next 20 year.

The system was officially activated the last week of June 2012 and the entire installation was completed in a record two months time. In all the setup includes 848 polycrystalline panels (Sovello Pure Power L with 235 Wp each and a guaranteed output for at least 25 years) and eight Delta Solivia 20TL inverters, all Made in Germany.

With a useful life of over 25 years, this system is the latest step forward in **Faital's long term and long established consideration for the safety of the environment.**

ENVIRONMENTAL COMPLIANCE

Over the years Faital has always stayed ahead of the European Union's environmental requirements. Continuous studies and implementation of changes and controls are aimed at guaranteeing a lower impact on the environment of all Faital processes. This led to the attainment of the important and certainly not widely awarded ISO 14001, a certification that is exclusively bestowed on companies that respect very stringent, specifically defined "environmental management requisites" and that is not a requirement but a voluntary act of those who seek coherent, efficient and sustainable improvement in environmental protection matters: a certification with the goal of - "establishing/implementing/actively maintaining/improving a system of sustainable environmental management".

Faital S.p.A. is committed to complying with all applicable laws and regulations, including the European Union's Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS2) directives.

WEEE Directive (2012/19/EU)



The Waste Electrical and Electronic Equipment Directive (WEEE) of the European Parliament and of the Council of July 4th, 2012 applies to companies that manufacture, sell, distribute, recycle or treat electrical and electronic equipment to consumers in the European Union (EU). It covers all large and small household appliances, IT equipment, radio and audio equipment, electrical tools and telecommunications equipment. The Directive aims to reduce the waste arising from electrical and electronic equipment and to improve the environmental performance of all those involved in the life cycle of these products.

RoHS2 Directive (2011/65/EU)

The Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS2) Directive of the European Parliament and of the Council of June 8th, 2011.

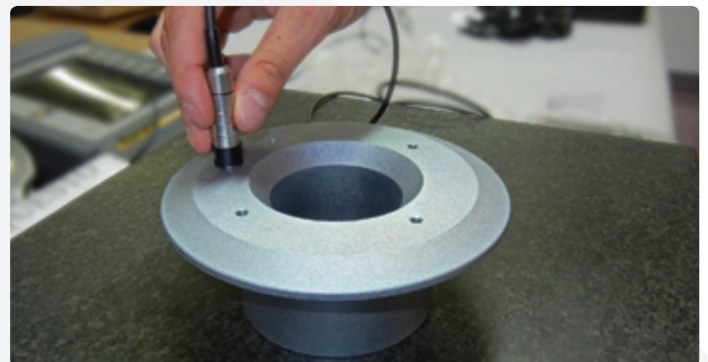
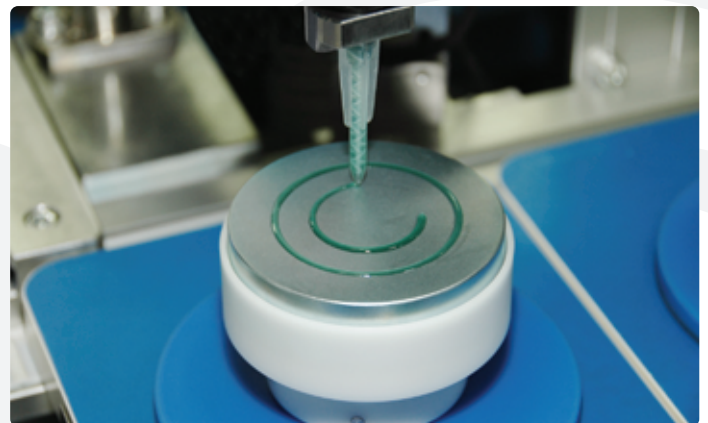
It affects manufacturers, sellers, distributors and recyclers of electrical and electronic equipment containing Lead, Cadmium, Mercury, Hexavalent Chrome, Polybrominated Biphenyl (PBB) and Polybrominated Diphenyl Ether (PBDE).

Therefore the use of these materials is banned in all products sold in Europe.

FaitalPRO has established a number of Project Teams to assess implementation alternatives and to understand the supply chain issues associated with conformance to these Directives.

These teams are working with our suppliers to ensure that RoHS2 compliant materials are provided and do not adversely impact the quality and reliability of our products. In addition, these teams oversee several complex engineering projects to ensure that our manufacturing processes continue to meet our high quality standards after the transition has been made. Material composition data and certification is continuously being collected/updated for all components and parts and are available upon request.

FaitalPRO processes and products fully comply with both the WEEE and the RoHS2 directives.



If you have any specific questions with reference to WEEE or RoHS2 status for any FaitalPRO product or Faital's efforts with respect to complying with WEEE and RoHS2 compliance, please contact your local representative. A full list is available on the FaitalPRO website **www.faitalpro.com**.

PRODUCTS INDEX

LF LOUDSPEAKERS

NEODYMIUM MAGNET
FERRITE MAGNET

MODEL	TYPE	MAX POWER	SENSITIVITY	FREQUENCY RANGE	XMAX	VOICE COIL DIAMETER	FS	EBP	
18XL2000	18" SUBWOOFER	4000 W	97 dB	30÷1600 Hz	16.32 mm	118 mm (4.65 in)	28 Hz	100 Hz	P. 11
18XL1800	18" SUBWOOFER	3200 W	95 dB	30÷1600 Hz	20.17 mm	100 mm (4 in)	29 Hz	69 Hz	P. 12
18XL1600	18" SUBWOOFER	3200 W	98 dB	30÷1500 Hz	12.92 mm	100 mm (4 in)	32 Hz	86 Hz	P. 13
18HW1070	18" SUBWOOFER	3200 W	97 dB	30÷1500 Hz	13 mm	100 mm (4 in)	32 Hz	82 Hz	P. 14
18HP1060	18" SUBWOOFER	2400 W	98 dB	35÷1600 Hz	12.45 mm	100 mm (4 in)	35 Hz	92 Hz	P. 15
18HP1030	18" SUBWOOFER	2400 W	98 dB	35÷1600 Hz	12.45 mm	100 mm (4 in)	35 Hz	81 Hz	P. 15
18HP1022	18" SUBWOOFER	2000 W	98 dB	35÷1600 Hz	9.5 mm	100 mm (4 in)	35 Hz	113 Hz	P. 16
18HP1042	18" SUBWOOFER	2000 W	98 dB	38÷2500 Hz	9 mm	100 mm (4 in)	38 Hz	88 Hz	P. 16
18HP1010	18" SUBWOOFER	2000 W	98 dB	35÷2000 Hz	9.75 mm	100 mm (4 in)	35 Hz	83 Hz	P. 17
18FX600	18" SUBWOOFER	1400 W	99 dB	35÷2500 Hz	11.25 mm	77 mm (3 in)	34 Hz	110 Hz	P. 18
18FH500	18" SUBWOOFER	1200 W	99 dB	30÷3150 Hz	9.25 mm	77 mm (3 in)	30 Hz	83 Hz	P. 19
18FH510	18" SUBWOOFER	1200 W	98 dB	30÷2500 Hz	9.25 mm	77 mm (3 in)	30 Hz	100 Hz	P. 19
15XL1400	15" SUBWOOFER	2800 W	96 dB	40÷2500 Hz	12.9 mm	100 mm (4 in)	38 Hz	112 Hz	P. 20
15XL1200	15" SUBWOOFER	2800 W	95 dB	40÷2000 Hz	12.45 mm	100 mm (4 in)	40 Hz	98 Hz	P. 21
15HP1060	15" SUBWOOFER	2000 W	97 dB	40÷2000 Hz	12.45 mm	100 mm (4 in)	40 Hz	125 Hz	P. 22
15HP1030	15" SUBWOOFER	2000 W	96 dB	40÷2000 Hz	12.45 mm	100 mm (4 in)	40 Hz	114 Hz	P. 22
15HP1020	15" WOOFER	1400 W	98 dB	40÷4000 Hz	9 mm	100 mm (4 in)	40 Hz	143 Hz	P. 23
15HP1010	15" WOOFER	1400 W	96 dB	40÷2500 Hz	9.75 mm	100 mm (4 in)	40 Hz	105 Hz	P. 23
15FX600	15" WOOFER	1400 W	98 dB	40÷3150 Hz	11.25 mm	77 mm (3 in)	38 Hz	136 Hz	P. 24
15FX560	15" MID WOOFER	1400 W	99 dB	40÷4000 Hz	9.42 mm	77 mm (3 in)	38 Hz	123 Hz	P. 25
15FH500	15" WOOFER	1000 W	98 dB	35÷3150 Hz	9.25 mm	77 mm (3 in)	35 Hz	109 Hz	P. 26
15FH520	15" MID WOOFER	1200 W	98 dB	40÷4000 Hz	8.75 mm	77 mm (3 in)	38 Hz	93 Hz	P. 26
15FH510	15" WOOFER	1000 W	98 dB	35÷3150 Hz	9.25 mm	77 mm (3 in)	35 Hz	130 Hz	P. 27
15FH530	15" MID WOOFER	1000 W	97 dB	40÷3150 Hz	9.25 mm	77 mm (3 in)	39 Hz	108 Hz	P. 27
15PR400	15" MID WOOFER	800 W	99 dB	35÷4000 Hz	5.75 mm	77 mm (3 in)	35 Hz	103 Hz	P. 28
12XL1200	12" SUBWOOFER	2800 W	93 dB	50÷2500 Hz	12.45 mm	100 mm (4 in)	50 Hz	116 Hz	P. 29
12HP1060	12" SUBWOOFER	2000 W	95 dB	45÷2500 Hz	12.45 mm	100 mm (4 in)	45 Hz	155 Hz	P. 30
12HP1030	12" SUBWOOFER	2000 W	95 dB	45÷1600 Hz	12.45 mm	100 mm (4 in)	45 Hz	145 Hz	P. 30
12RS1066	12" SUBWOOFER	2000 W	93 dB	45÷2500 Hz	12.45 mm	100 mm (4 in)	42 Hz	124 Hz	P. 31
12HP1020	12" WOOFER	1400 W	97 dB	55÷3150 Hz	9 mm	100 mm (4 in)	55 Hz	196 Hz	P. 32
12HP1010	12" WOOFER	1400 W	96 dB	45÷3150 Hz	9.25 mm	100 mm (4 in)	45 Hz	129 Hz	P. 32
12FX600	12" WOOFER	1400 W	97 dB	50÷3150 Hz	9.90 mm	77 mm (3 in)	48 Hz	192 Hz	P. 33
12FH500	12" WOOFER	1000 W	97 dB	45÷4000 Hz	7.5 mm	77 mm (3 in)	45 Hz	173 Hz	P. 34
12FH520	12" MID WOOFER	1200 W	98 dB	50÷4000 Hz	7.25 mm	77 mm (3 in)	50 Hz	167 Hz	P. 34
12FH510	12" WOOFER	1000 W	98 dB	45÷3150 Hz	7.5 mm	77 mm (3 in)	45 Hz	180 Hz	P. 35
12FH530	12" MID WOOFER	1000 W	98 dB	45÷3150 Hz	7.5 mm	77 mm (3 in)	45 Hz	167 Hz	P. 35
12RS550	12" WOOFER	1000 W	93 dB	45÷2500 Hz	9.25 mm	77 mm (3 in)	42 Hz	108 Hz	P. 36
12PR300	12" MID WOOFER	600 W	99 dB	50÷4000 Hz	4.92 mm	65 mm (2.56 in)	50 Hz	135 Hz	P. 37
12PR320	12" MID WOOFER	600 W	97 dB	45÷5000 Hz	7.37 mm	65 mm (2.56 in)	42 Hz	108 Hz	P. 37
12PR310	12" MID WOOFER	600 W	99 dB	50÷4000 Hz	4.92 mm	65 mm (2.56 in)	54 Hz	132 Hz	P. 38
12PR330	12" MID WOOFER	600 W	99 dB	50÷5000 Hz	4.92 mm	65 mm (2.56 in)	50 Hz	119 Hz	P. 38
10HP1020	10" WOOFER	1400 W	96 dB	60÷2500 Hz	9 mm	100 mm (4 in)	60 Hz	240 Hz	P. 39
10FH500	10" WOOFER	1000 W	96 dB	60÷4000 Hz	7.5 mm	77 mm (3 in)	60 Hz	214 Hz	P. 40
10FH520	10" MID WOOFER	1200 W	97 dB	60÷4000 Hz	7.25 mm	77 mm (3 in)	60 Hz	200 Hz	P. 40
10FH530	10" MID WOOFER	1000 W	97 dB	60÷4000 Hz	7.5 mm	77 mm (3 in)	60 Hz	240 Hz	P. 41
10PR410	10" MID WOOFER	600 W	99 dB	100÷2000 Hz	4.5 mm	65 mm (2.56 in)	60 Hz	273 Hz	P. 42
10PR300	10" MID WOOFER	600 W	98 dB	60÷5000 Hz	4.92 mm	65 mm (2.56 in)	60 Hz	207 Hz	P. 43
10PR320	10" MID WOOFER	600 W	96 dB	50÷4000 Hz	7.37 mm	65 mm (2.56 in)	48 Hz	155 Hz	P. 43

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LF LOUDSPEAKERS

NEODYMIUM MAGNET

FERRITE MAGNET

MODEL	TYPE	MAX POWER	SENSITIVITY	FREQUENCY RANGE	XMAX	VOICE COIL DIAMETER	FS	EBP	
10PR310	10" MID WOOFER	600 W	98 dB	60÷4000 Hz	4.92 mm	65 mm (2.56 in)	60 Hz	167 Hz	P. 44
10PR330	10" MID WOOFER	600 W	96 dB	60÷3150 Hz	7.37 mm	65 mm (2.56 in)	60 Hz	167 Hz	P. 44
10RS350	10" WOOFER	600 W	91 dB	40÷2500 Hz	7.37 mm	65 mm (2.56 in)	40 Hz	100 Hz	P. 45
10FE200	10" MID WOOFER	300 W	96 dB	50÷4500 Hz	4.67 mm	37 mm (1.46 in)	55 Hz	74 Hz	P. 46
8PR200	8" WOOFER	400 W	95 dB	70÷5000 Hz	8.15 mm	52 mm (2 in)	58 Hz	153 Hz	P. 47
8PR210	8" WOOFER	400 W	95 dB	70÷5000 Hz	6.92 mm	52 mm (2 in)	65 Hz	203 Hz	P. 47
8PR155	8" MID RANGE	400 W	97 dB	80÷6300 Hz	3.57 mm	52 mm (2 in)	85 Hz	218 Hz	P. 48
8RS250	8" WOOFER	400 W	93 dB	60÷6300 Hz	6.92 mm	52 mm (2 in)	56 Hz	165 Hz	P. 49
W8N8-150	8" MID WOOFER	300 W	94 dB	80÷6300 Hz	5.52 mm	52 mm (2 in)	76 Hz	129 Hz	P. 50
8FE200	8" MID WOOFER	260 W	95 dB	60÷5000 Hz	4.67 mm	37 mm (1.46 in)	80 Hz	121 Hz	P. 51
6PR150	6" MID RANGE	300 W	97 dB	100÷5000 Hz	2.65 mm	52 mm (2 in)	100 Hz	286 Hz	P. 52
6RS140	6" MID WOOFER	400 W	93 dB	60÷6000 Hz	5.60 mm	44 mm (1.73 in)	65 Hz	241 Hz	P. 53
6PR160	6" MID WOOFER	240 W	95 dB	80÷8000 Hz	5.00 mm	37 mm (1.46 in)	90 Hz	261 Hz	P. 54
6PR122	6" MID RANGE	240 W	97 dB	125÷10000 Hz	2.75 mm	37 mm (1.46 in)	110 Hz	250 Hz	P. 55
6PR110	6" MID RANGE	300 W	96 dB	100÷6000 Hz	2.75 mm	37 mm (1.46 in)	100 Hz	167 Hz	P. 56
6FE200	6" MID WOOFER	260 W	95 dB	85÷6000 Hz	4.67 mm	37 mm (1.46 in)	120 Hz	160 Hz	P. 57
6FE100	6" MID WOOFER	200 W	91 dB	63÷5000 Hz	5.25 mm	32 mm (1.26 in)	61 Hz	102 Hz	P. 58
M5N8-80	5" MID RANGE	160 W	99 dB	180÷8000 Hz	2.75 mm	32 mm (1.26 in)	180 Hz	400 Hz	P. 59
5FE100	5" MID WOOFER	160 W	88 dB	63÷6300 Hz	5.25 mm	32 mm (1.26 in)	65 Hz	135 Hz	P. 60
5FE120	5" MID WOOFER	160 W	88 dB	63÷6300 Hz	5.25 mm	32 mm (1.26 in)	65 Hz	127 Hz	P. 60
4FE32	4" FULL RANGE	60 W	91 dB	90÷20000 Hz	2.73 mm	19 mm (0.75 in)	100 Hz	143 Hz	P. 61
4FE35	4" FULL RANGE	60 W	91 dB	90÷20000 Hz	2.73 mm	19 mm (0.75 in)	100 Hz	96 Hz	P. 61
3FE22	3" FULL RANGE	40 W	91 dB	100÷20000 Hz	1.83 mm	19 mm (0.75 in)	110 Hz	220 Hz	P. 62
3FE25	3" FULL RANGE	40 W	91 dB	100÷20000 Hz	1.83 mm	19 mm (0.75 in)	110 Hz	138 Hz	P. 62

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HF DRIVERS

MODEL	TYPE	MAX POWER	SENSITIVITY	FREQUENCY RANGE	MIN. CROSS. FREQ.	VOICE COIL DIAM.	DIAPHRAGM MATERIAL	SHAPE	
HF2000	2" HF DRIVER	200 W	110 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 64
HF201	2" HF DRIVER	200 W	108 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 65
HF200	2" HF DRIVER	140 W	109 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 66
HF204	2" HF DRIVER	160 W	108 dB	0.5÷18 kHz	0.9 kHz	65 mm (2.56 in)	Ketone Polymer	Dome	P. 67
HF206	2" HF DRIVER	160 W	109 dB	0.5÷18 kHz	0.9 kHz	65 mm (2.56 in)	Ketone Polymer	Dome	P. 67
HF1440	1.4" HF DRIVER	240 W	109 dB	0.5÷20 kHz	0.7 kHz	86 mm (3.4 in)	Ketone Polymer	Annular	P. 68
HF1400	1.4" HF DRIVER	200 W	110 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 69
HF141	1.4" HF DRIVER	200 W	109 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 70
HF148	1.4" HF DRIVER	200 W	109 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 71
HF143	1.4" HF DRIVER	200 W	108 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 72
HF140	1.4" HF DRIVER	140 W	109 dB	0.5÷18 kHz	0.9 kHz	74 mm (2.91 in)	Titanium	Dome	P. 73
HF142	1.4" HF DRIVER	160 W	110 dB	0.7÷18 kHz	0.9 kHz	65 mm (2.56 in)	Ketone Polymer	Dome	P. 74
HF146	1.4" HF DRIVER	160 W	109 dB	0.7÷18 kHz	0.9 kHz	65 mm (2.56 in)	Ketone Polymer	Dome	P. 75
HF146R	1.4" HF DRIVER	160 W	109 dB	0.7÷18 kHz	0.9 kHz	65 mm (2.56 in)	Ketone Polymer	Dome	P. 75
HF144	1.4" HF DRIVER	160 W	109 dB	0.7÷18 kHz	0.9 kHz	65 mm (2.56 in)	Ketone Polymer	Dome	P. 76
HF10AK	1" HF DRIVER	120 W	110 dB	0.8÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Dome	P. 77
HF106	1" HF DRIVER	120 W	110 dB	1.3÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Annular	P. 78
HF107	1" HF DRIVER	140 W	109 dB	1.3÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Annular	P. 78
HF108	1" HF DRIVER	120 W	109 dB	1÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Dome	P. 79
HF108R	1" HF DRIVER	120 W	109 dB	1÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Dome	P. 79

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HF DRIVERS

NEODYMIUM MAGNET

FERRITE MAGNET

MODEL	TYPE	MAX POWER	SENSITIVITY	FREQUENCY RANGE	MIN. CROSS. FREQ.	VOICE COIL DIAM.	DIAPHRAGM MATERIAL	SHAPE	
HF109	1" HF DRIVER	120 W	108 dB	1÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Dome	P. 80
HF103	1" HF DRIVER	120 W	107 dB	1÷20 kHz	1.3 kHz	44 mm (1.73 in)	Ketone Polymer	Dome	P. 80
HF104	1" HF DRIVER	80 W	108 dB	1.5÷20 kHz	1.7 kHz	37 mm (1.46 in)	Ketone Polymer	Annular	P. 81
HF105	1" HF DRIVER	80 W	107 dB	1.4÷20 kHz	1.7 kHz	37 mm (1.46 in)	Ketone Polymer	Annular	P. 81
HF111	1" HF DRIVER	80 W	107 dB	2÷20 kHz	2 kHz	37 mm (1.46 in)	Ketone Polymer	Dome	P. 82
HF102	1" HF DRIVER	60 W	106 dB	1.8÷20 kHz	2.6 kHz	25 mm (0.98 in)	Ketone Polymer	Dome	P. 83
HF100	1" HF DRIVER	60 W	108 dB	1.5÷20 kHz	2 kHz	25 mm (0.98 in)	Ketone Polymer	Dome	P. 83
FD371	FLARED DRIVER	70 W	107 dB	2.6÷20 kHz	2.6 kHz	37 mm (1.46 in)	Ketone Polymer	Annular	P. 84
HMF200	2" MF/HF DRIVER	80 W	108 dB	0.5÷9 kHz	0.5 kHz	37 mm (1.46 in)	Paper	Double Edge Cone	P. 85

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COAXIAL LOUDSPEAKERS

MODEL	TYPE		MAX POWER	SENSITIVITY	FREQUENCY RANGE	MIN. CROSS. FREQ.	VOICE COIL DIAM.	FS	DISPERSION ANGLE	
12HX230	12" COAXIAL	LF HF	500 W 60 W	97 dB 107 dB	55÷20000 Hz	1700 Hz	65 mm (2.56 in) 37 mm (1.46 in)	55 Hz	100°	P. 87
10HX230	10" COAXIAL	LF HF	500 W 60 W	96 dB 107 dB	65÷20000 Hz	1700 Hz	65 mm (2.56 in) 37 mm (1.46 in)	65 Hz	110°	P. 88
8HX200	8" COAXIAL	LF HF	500 W 60 W	95 dB 107 dB	75÷20000 Hz	1700 Hz	65 mm (2.56 in) 37 mm (1.46 in)	76 Hz	90°	P. 89
8HX230	8" COAXIAL	LF HF	500 W 60 W	94 dB 105 dB	70÷20000 Hz	1700 Hz	65 mm (2.56 in) 37 mm (1.46 in)	70 Hz	100°	P. 90
8HX150	8" COAXIAL	LF HF	500 W 30 W	94 dB 104 dB	75÷18000 Hz	1700 Hz	65 mm (2.56 in) 25 mm (1 in)	76 Hz	90°	P. 91
6HX150	6" COAXIAL	LF HF	300 W 30 W	93 dB 104 dB	90÷18000 Hz	1700 Hz	52 mm (2 in) 25 mm (1 in)	88 Hz	90°	P. 92

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HF HORNS

ALUMINUM HORN

PC / ABS HORN

MODEL	TYPE	MATERIAL	PROFILE	COVERAGE	THROAT DIAMETER	DEPTH	
LTH142	1.4" TRACTRIX HORN	PC / ABS	Elliptical Tractrix	60° x 50°	35.6 mm (1.4 in)	233 mm (9.2 in)	P. 94
LTH102	1" TRACTRIX HORN	Aluminum	Elliptical Tractrix	60° x 50°	25.4 mm (1 in)	171.6 mm (6.76 in)	P. 94
STH100	1" TRACTRIX HORN	Aluminum	Elliptical Tractrix	80° x 70°	25.4 mm (1 in)	85.9 mm (3.38 in)	P. 95
WG141	1.4" LINEAR WAVE GUIDE	Aluminum	N / A	110°	35.6 mm (1.4 in)	200 mm (7.9 in)	P. 95
WG101	1" LINEAR WAVE GUIDE	Aluminum	N / A	140°	25.4 mm (1 in)	110 mm (4.33 in)	P. 96



LF

LOUDSPEAKERS

SOUNDS GOOD... ALWAYS WILL

Rigorous tests in our anechoic chambers are constantly performed during design and quality checks. All driver components are put through continuous visual, mechanical and electrical tests to verify their conformity to the design parameters. This procedure is in place to keep production tolerances within very tight limits, thus ensuring consistency in our driver's quality and reliability over time.

18XL2000

18" - 2000 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)
Depth	227 mm (8.94 in)
Flange and gasket Thickness	14 mm (0.55 in)
Net Weight	11.2 kg (24.7 lb)
Shipping Box	490 x 485 x 275 mm
(Single Carton Box)	(19.3 x 19.1 x 10.8 in)
Shipping Weight	12.7 kg (28.0 lb)

NOTES:

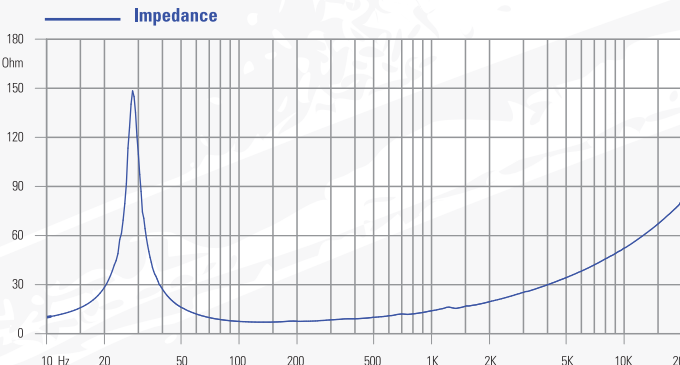
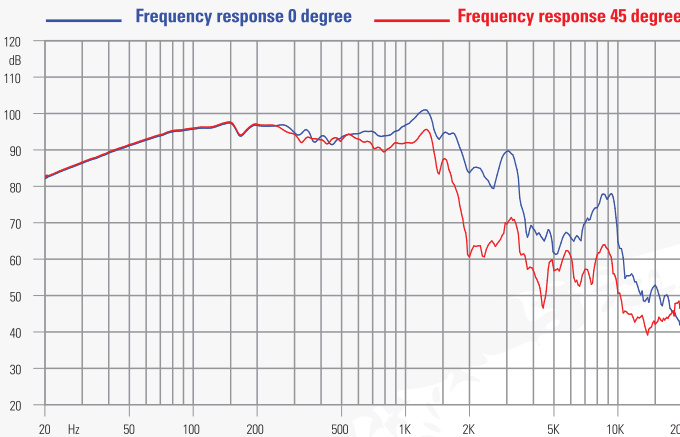
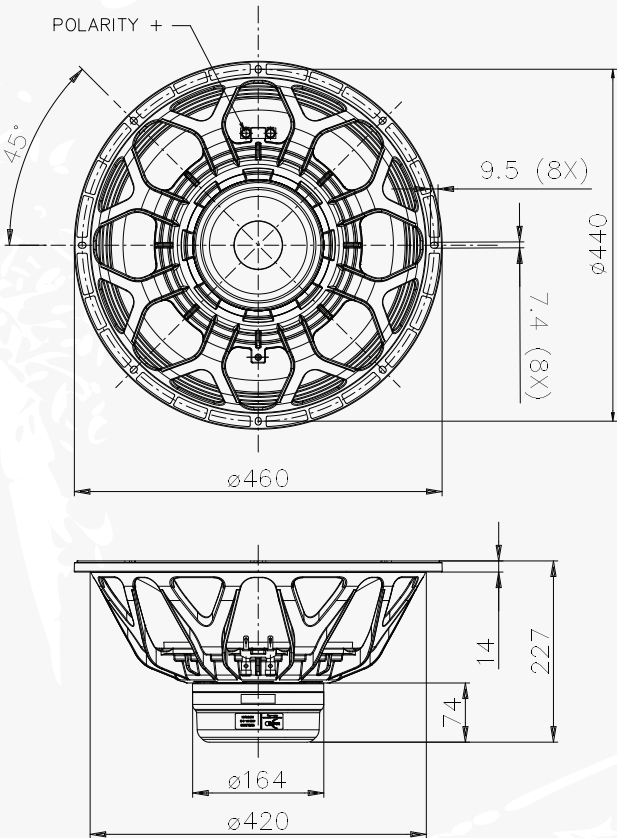
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7 Ω
AES Power Handling (1)	2000 W
Maximum Power Handling (4)	4000 W
Sensitivity (1W/1m)	97 dB
Frequency Range	30÷1600 Hz
Voice Coil Diameter	118 mm (4.65 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	37.3 mm (1.47 in)
Magnetic Gap Depth	14 mm (0.55 in)
Flux Density	1.2 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Double Al Dem. Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	7.3 dm³ (0.258 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	28 Hz
Re	5.3 Ω
Qes	0.28
Qms	10.1
Qts	0.27
Vas	202.4 dm³ (7.15 ft³)
Sd	1124 cm² (174.22 in²)
Xmax (2)	16.32 mm
Xdamage (3)	33 mm
Mms	286.0 g
Bl	30.8 N/A
Le	1.45 mH
Mmd	243.4 g
Cms	0.11 mm/N
Rms	5.0 kg/s
η _o (Eta Zero)	1.54 %
EBP	100 Hz



18XL1800

18" - 1600 W - 95 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)
Depth	233 mm (9.17 in)
Flange and gasket Thickness	14 mm (0.55 in)
Net Weight	10.2 kg (22.5 lb)
Shipping Box	490 x 485 x 275 mm
(Single Carton Box)	(19.3 x 19.1 x 10.8 in)
Shipping Weight	11.7 kg (25.8 lb)

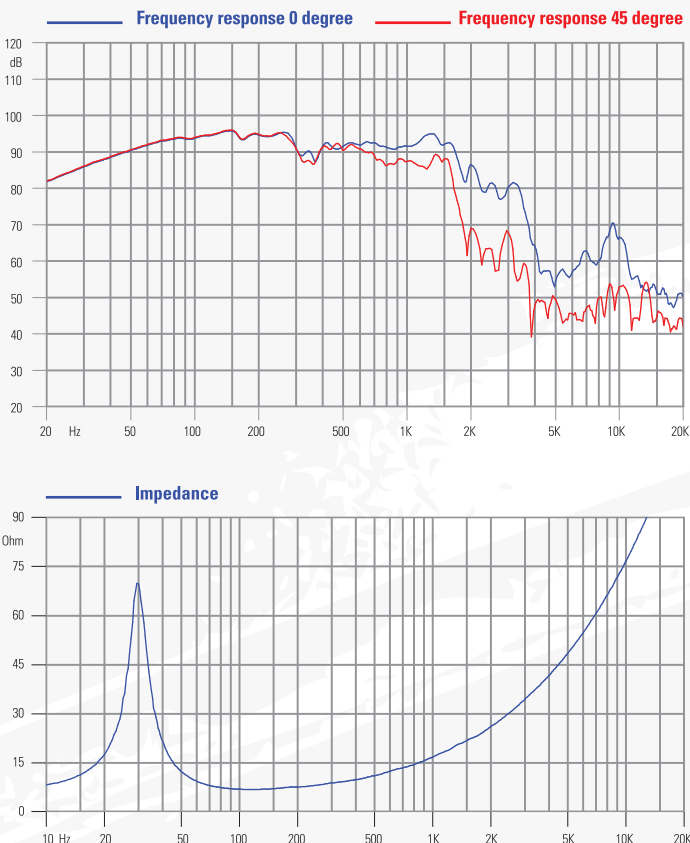
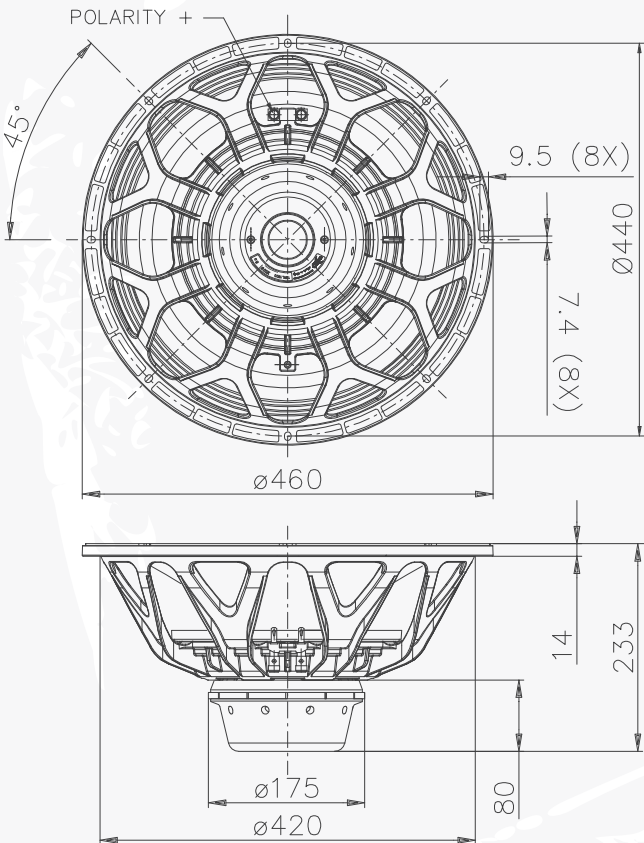
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.7 Ω
AES Power Handling (1)	1600 W
Maximum Power Handling (4)	3200 W
Sensitivity (1W/1m)	95 dB
Frequency Range	30÷1600 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	45 mm (1.77 in)
Magnetic Gap Depth	14 mm (0.55 in)
Flux Density	1.15 T
Magnet	Neodymium Sectors
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	7.3 dm³ (0.258 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	29 Hz
Re	5.35 Ω
Qes	0.42
Qms	9.9
Qts	0.4
Vas	185.8 dm³ (6.56 ft³)
Sd	1093.6 cm² (169.51 in²)
Xmax (2)	20.17 mm
Xdamage (3)	36 mm
Mms	275.0 g
Bl	25.4 N/A
Le	2.04 mH
Mmd	254.5 g
Cms	0.11 mm/N
Rms	5.1 kg/s
η _o (Eta Zero)	1.06 %
EBP	69 Hz



18XL1600

18" - 1600 W - 98 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)
Depth	231 mm (9.09 in)
Flange and gasket Thickness	14 mm (0.55 in)
Net Weight	12.2 kg (26.9 lb)
Shipping Box	490 x 485 x 275 mm
(Single Carton Box)	(19.3 x 19.1 x 10.8 in)
Shipping Weight	13.7 kg (30.2 lb)

NOTES:

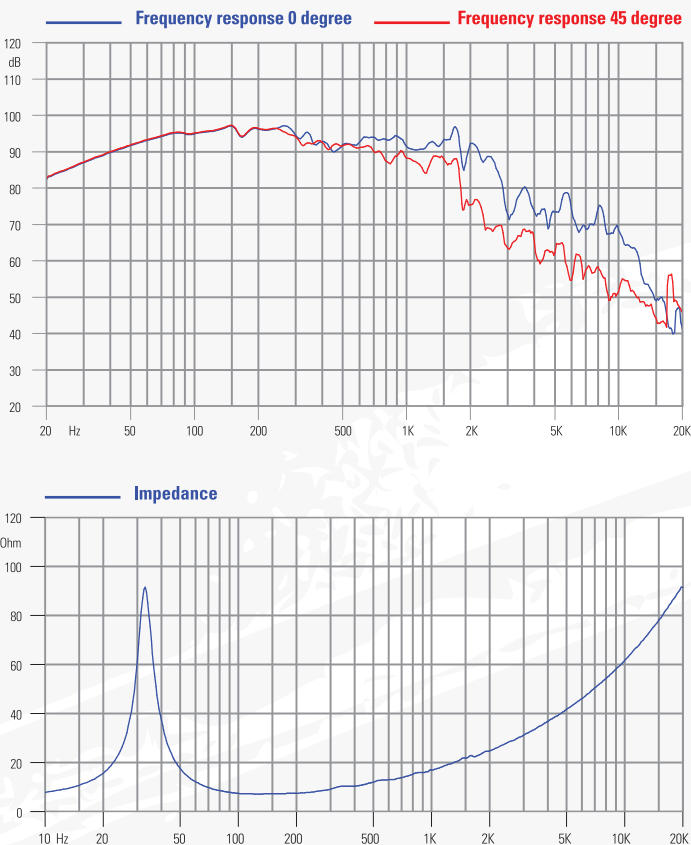
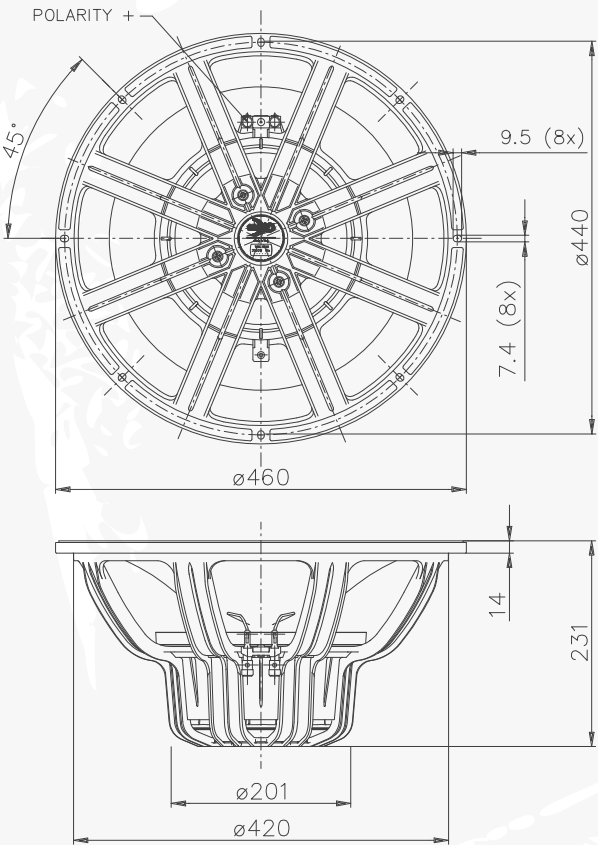
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
- PATENT PENDING

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.4 Ω
AES Power Handling (1)	1600 W
Maximum Power Handling (4)	3200 W
Sensitivity (1W/1m)	98 dB
Frequency Range	30÷1500 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	31 mm (1.22 in)
Magnetic Gap Depth	15.5 mm (0.61 in)
Flux Density	1.05 T
Magnet	Neodymium Slug Crown
Basket Material	Aluminum
Demodulation	Triple Al Dem. Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	7.3 dm³ (0.258 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	32 Hz
Re	5.4 Ω
Qes	0.37
Qms	9.3
Qts	0.36
Vas	184.7 dm³ (6.52 ft³)
Sd	1124 cm² (174.22 in²)
Xmax (2)	12.92 mm
Xdamage (3)	28 mm
Mms	240.0 g
Bl	26.7 N/A
Le	1.45 mH
Mmd	217.0 g
Cms	0.10 mm/N
Rms	5.2 kg/s
η _o (Eta Zero)	1.61 %
EBP	86 Hz



18HW1070

18" - 1600 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)
Depth	223 mm (8.78 in)
Flange and gasket Thickness	14 mm (0.55 in)
Net Weight	14.7 kg (32.4 lb)
Shipping Box	490 x 485 x 275 mm
(Single Carton Box)	(19.3 x 19.1 x 10.8 in)
Shipping Weight	16.2 kg (35.7 lb)

NOTES:

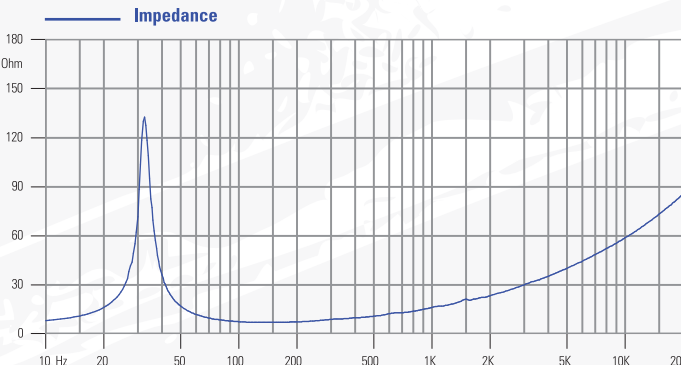
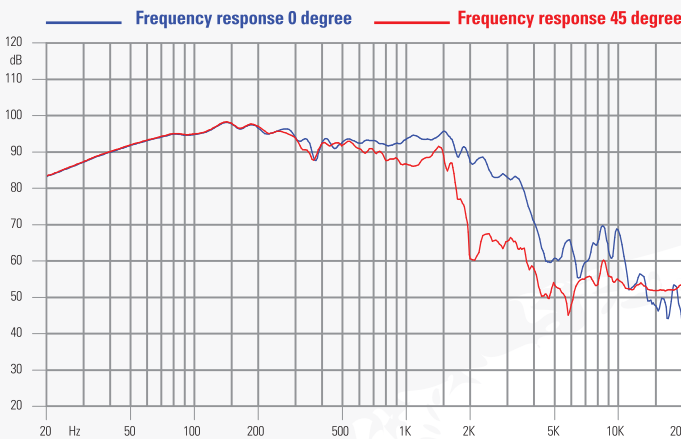
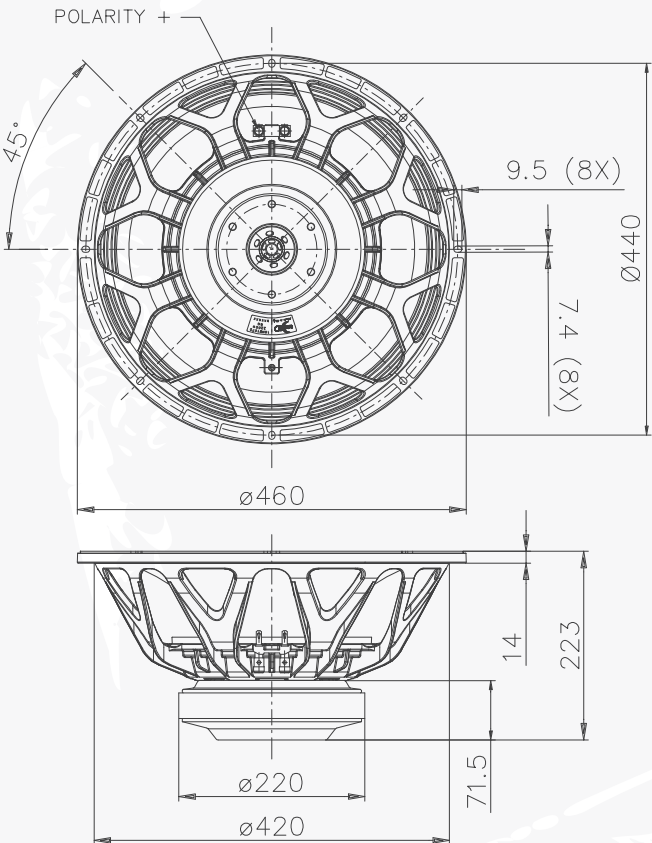
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	1600 W
Maximum Power Handling (4)	3200 W
Sensitivity (1W/1m)	97 dB
Frequency Range	30÷1500 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	31 mm (1.22 in)
Magnetic Gap Depth	15 mm (0.59 in)
Flux Density	1.1 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	Triple Al Dem. Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	7.4 dm³ (0.261 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	32 Hz
Re	5.4 Ω
Qes	0.39
Qms	10.0
Qts	0.37
Vas	171.2 dm³ (6.05 ft³)
Sd	1124 cm² (174.22 in²)
Xmax (2)	13.00 mm
Xdamage (3)	30 mm
Mms	259.0 g
Bl	27.0 N/A
Le	1.68 mH
Mmd	237.7 g
Cms	0.10 mm/N
Rms	5.2 kg/s
η₀ (Eta Zero)	1.41 %
EBP	82 Hz



NEODYMIUM SUBWOOFER

18HP1060

18" - 1200 W - 98 dB

FERRITE SUBWOOFER

18HP1030

18" - 1200 W - 98 dB



NOMINAL SPECIFICATIONS

	18HP1060	18HP1030
Nominal Diameter	460 mm (18 in)	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)	421 mm (16.57 in)
Depth	215 mm (8.46 in)	208.5 mm (8.20 in)
Flange and gasket Thickness	13.9 mm (0.55 in)	13.7 mm (0.54 in)
Net Weight	7.3 kg (16.1 lb)	12.1 kg (26.7 lb)
Shipping Box	503 x 500 x 258 mm	503 x 500 x 258 mm
(Single Carton Box)	(19.8 x 19.7 x 10.2 in)	(19.8 x 19.7 x 10.2 in)
Shipping Weight	8.7 kg (19.2 lb)	13.5 kg (29.8 lb)

- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

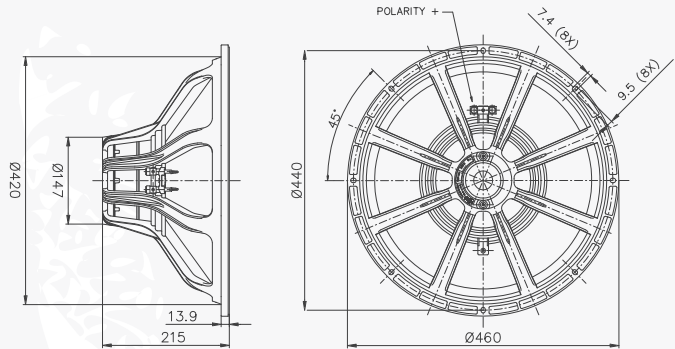
TECHNICAL PARAMETERS

	18HP1060	18HP1030
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.3 Ω	6.5 Ω
AES Power Handling (1)	1200 W	1200 W
Maximum Power Handling (4)	2400 W	2400 W
Sensitivity (1W/1m)	98 dB	98 dB
Frequency Range	35÷1600 Hz	35÷1600 Hz
Voice Coil Diameter	100 mm (4 in)	100 mm (4 in)
Winding Material	Cu	Cu
Former Material	Glass Fiber	Glass Fiber
Winding Depth	28.9 mm (1.14 in)	28.9 mm (1.14 in)
Magnetic Gap Depth	12 mm (0.47 in)	12 mm (0.47 in)
Flux Density	1.22 T	1.1 T
Magnet	Neodymium Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	Aluminum Ring	Aluminum Ring
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	5.3 dm³ (0.187 ft³)	6.5 dm³ (0.230 ft³)
Spider Profile	2x non-adjacent symmetrical variable height waves	2x non-adjacent symmetrical constant height waves

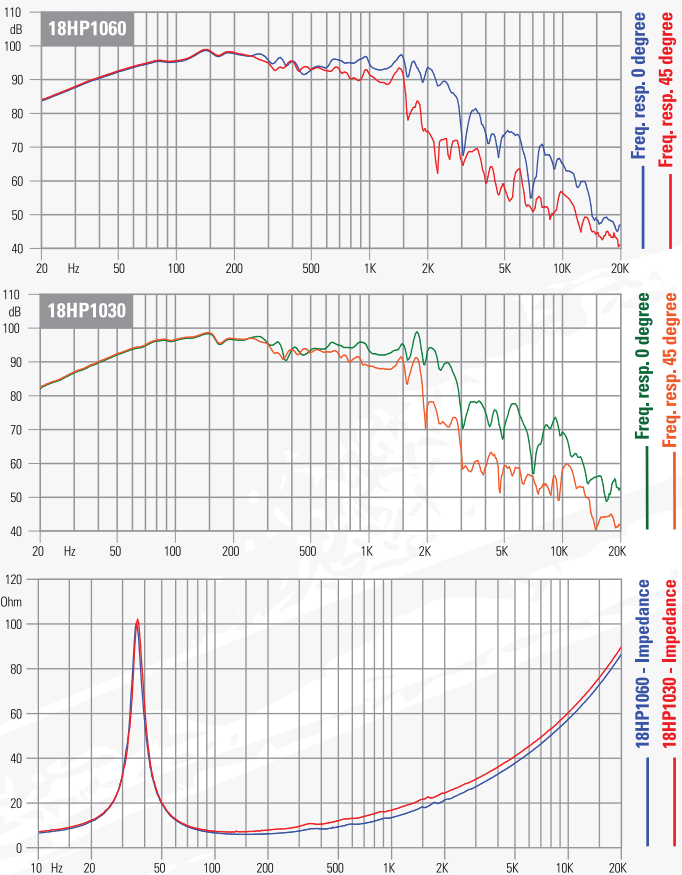
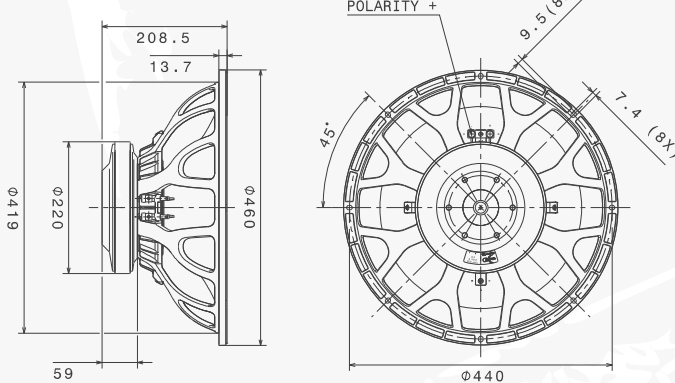
THIELE & SMALL PARAMETERS

	18HP1060	18HP1030
Fs	35 Hz	35 Hz
Re	5 Ω	5 Ω
Qes	0.38	0.43
Qms	11.1	11.6
Qts	0.37	0.41
Vas	175 dm³ (6.18 ft³)	162.1 dm³ (5.72 ft³)
Sd	1124 cm² (174.22 in²)	1124 cm² (174.22 in²)
Xmax (2)	12.45 mm	12.45 mm
Xdamage (3)	21 mm	23.1 mm
Mms	211.8 g	228.6 g
Bl	24.8 N/A	24.3 N/A
Le	1.26 mH	1.48 mH
Mmd	189.1 g	205.8 g
Cms	0.10 mm/N	0.09 mm/N
Rms	4.19 kg/s	4.33 kg/s
η _o (Eta Zero)	1.93 %	1.59 %
EBP	92 Hz	81 Hz

18HP1060



18HP1030



18HP1022

18" - 1000 W - 98 dB

18HP1042

18" - 1000 W - 98 dB



NOMINAL SPECIFICATIONS

	18HP1022	18HP1042
Nominal Diameter	460 mm (18 in)	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)	422 mm (16.61 in)
Depth	202 mm (7.95 in)	202 mm (7.95 in)
Flange and gasket Thickness	14 mm (0.55 in)	14 mm (0.55 in)
Net Weight	6.6 kg (14.6 lb)	6.7 kg (14.8 lb)
Shipping Box	503 x 500 x 258 mm	503 x 500 x 258 mm
(Single Carton Box)	(19.8 x 19.7 x 10.2 in)	(19.8 x 19.7 x 10.2 in)
Shipping Weight	7.8 kg (17.2 lb)	7.8 kg (17.2 lb)

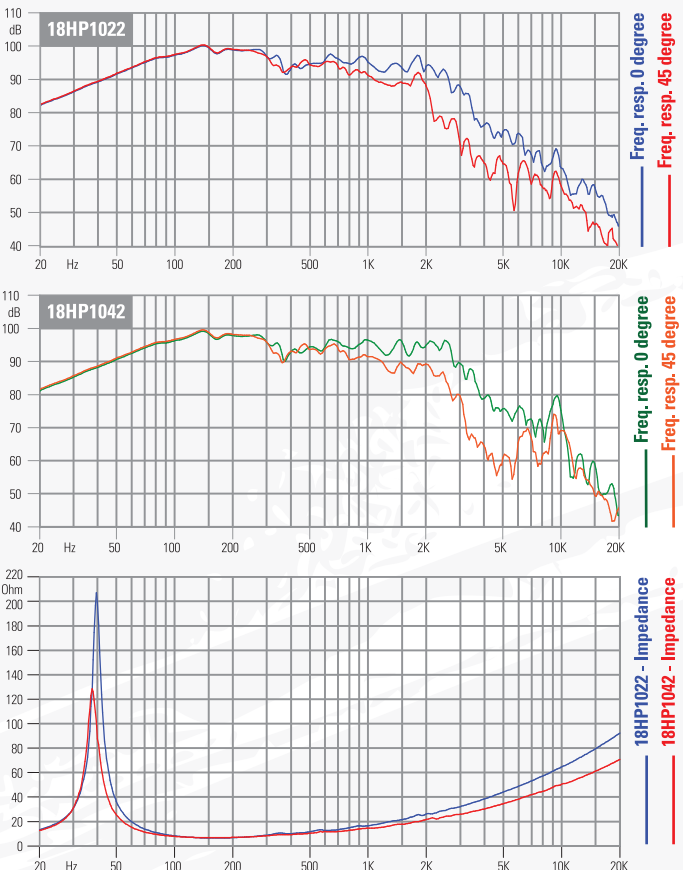
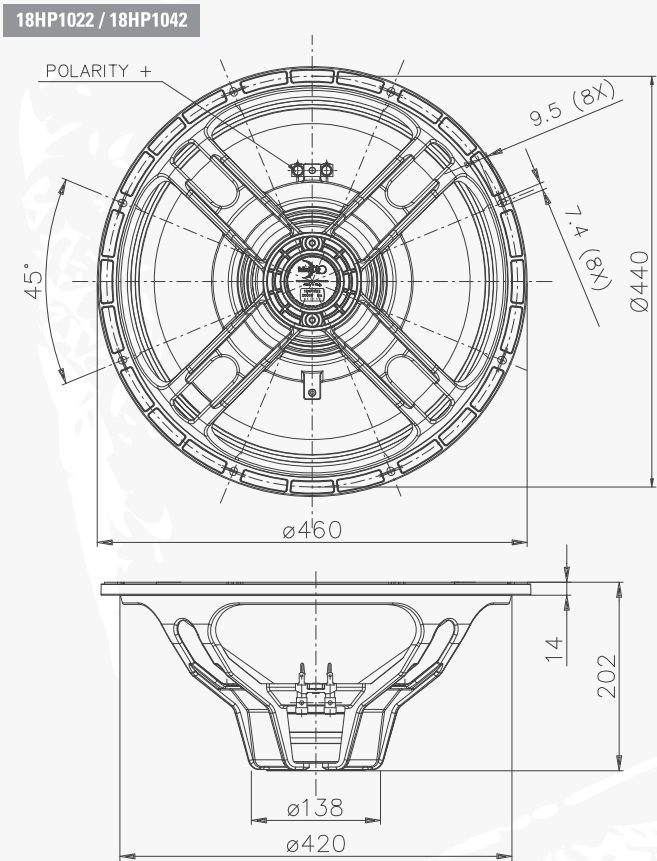
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

	18HP1022	18HP1042
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.5 Ω	6.6 Ω
AES Power Handling (1)	1000 W	1000 W
Maximum Power Handling (4)	2000 W	2000 W
Sensitivity (1W/1m)	98 dB	98 dB
Frequency Range	35÷1600 Hz	38÷2500 Hz
Voice Coil Diameter	100 mm (4 in)	100 mm (4 in)
Winding Material	Cu	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	23 mm (0.91 in)	22 mm (0.87 in)
Magnetic Gap Depth	12 mm (0.47 in)	12 mm (0.47 in)
Flux Density	1.3 T	1.3 T
Magnet	Neodymium Slug	Neodymium Slug
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	5.8 dm³ (0.205 ft³)	5.8 dm³ (0.205 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves	

THIELE & SMALL PARAMETERS

	18HP1022	18HP1042
Fs	35 Hz	38 Hz
Re	5.4 Ω	5.5 Ω
Qes	0.31	0.43
Qms	14.4	10.3
Qts	0.3	0.42
Vas	179 dm³ (6.32 ft³)	151 dm³ (5.33 ft³)
Sd	1124 cm² (174.22 in²)	1124 cm² (174.22 in²)
Xmax (2)	9.50 mm	9.00 mm
Xdamage (3)	17.5 mm	17.5 mm
Mms	207.0 g	187.5 g
Bl	28 N/A	24.5 N/A
Le	1.75 mH	1.26 mH
Mmd	185.7 g	166.2 g
Cms	0.10 mm/N	0.08 mm/N
Rms	3.67 kg/s	4.58 kg/s
η _o (Eta Zero)	2.43 %	2.1 %
EBP	113 Hz	88 Hz



18HP1010

18" - 1000 W - 98 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	421 mm (16.57 in)
Depth	203.5 mm (8.01 in)
Flange and gasket Thickness	13.7 mm (0.54 in)
Net Weight	10.1 kg (22.3 lb)
Shipping Box	503 x 500 x 258 mm
(Single Carton Box)	(19.8 x 19.7 x 10.2 in)
Shipping Weight	11.5 kg (25.4 lb)

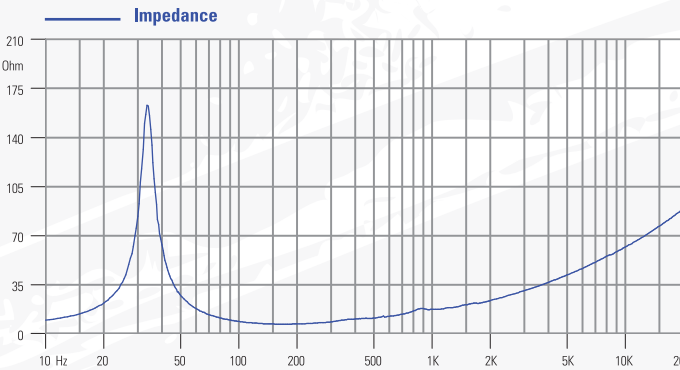
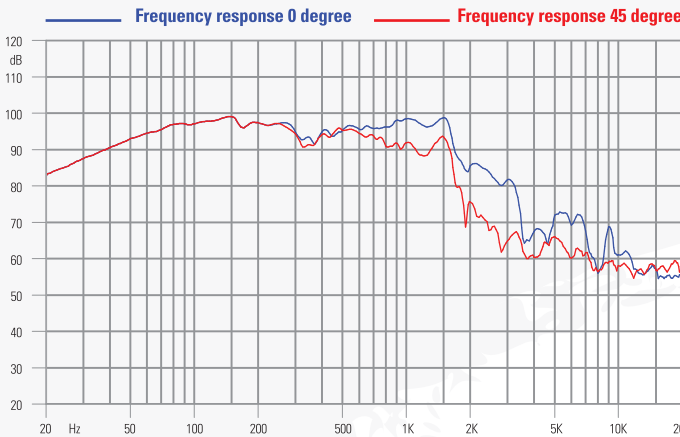
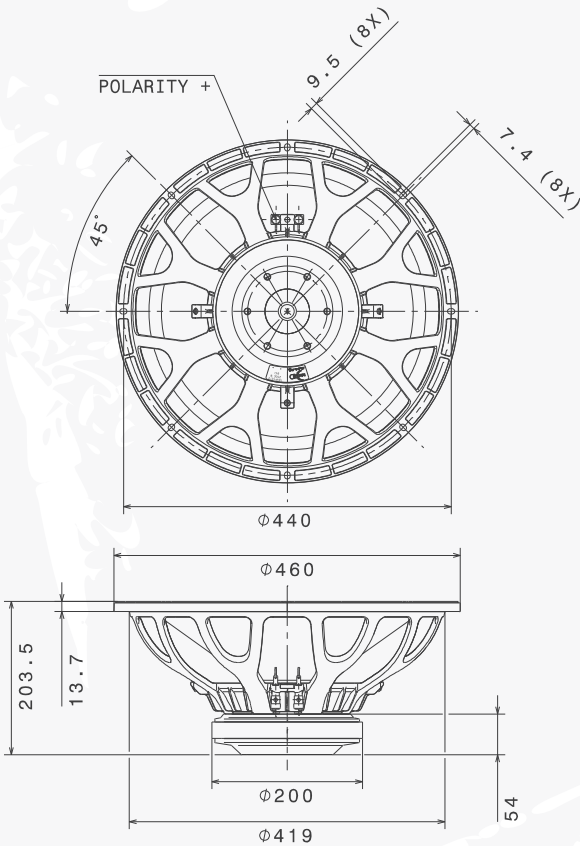
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.9 Ω
AES Power Handling (1)	1000 W
Maximum Power Handling (4)	2000 W
Sensitivity (1W/1m)	98 dB
Frequency Range	35÷2000 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	23 mm (0.91 in)
Magnetic Gap Depth	10.5 mm (0.41 in)
Flux Density	1.05 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	7.1 dm³ (0.251 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	35 Hz
Re	5.3 Ω
Qes	0.42
Qms	7.8
Qts	0.40
Vas	215.3 dm³ (7.60 ft³)
Sd	1134 cm² (175.77 in²)
Xmax (2)	9.75 mm
Xdamage (3)	21.9 mm
Mms	175.2 g
Bl	22 N/A
Le	1.8 mH
Mmd	152.7 g
Cms	0.12 mm/N
Rms	4.94 kg/s
η _o (Eta Zero)	2.13 %
EBP	83 Hz



18FX600

18" - 700 W - 99 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	460 mm (18 in)
Overall Diameter	460 mm (18.11 in)
Bolt Circle Diameter	440 mm (17.32 in)
Baffle Cutout Diameter	422 mm (16.61 in)
Depth	215 mm (8.46 in)
Flange and gasket Thickness	13.9 mm (0.55 in)
Net Weight	6.1 kg (13.4 lb)
Shipping Box	503 x 500 x 258 mm
(Single Carton Box)	(19.8 x 19.7 x 10.2 in)
Shipping Weight	7.5 kg (16.5 lb)

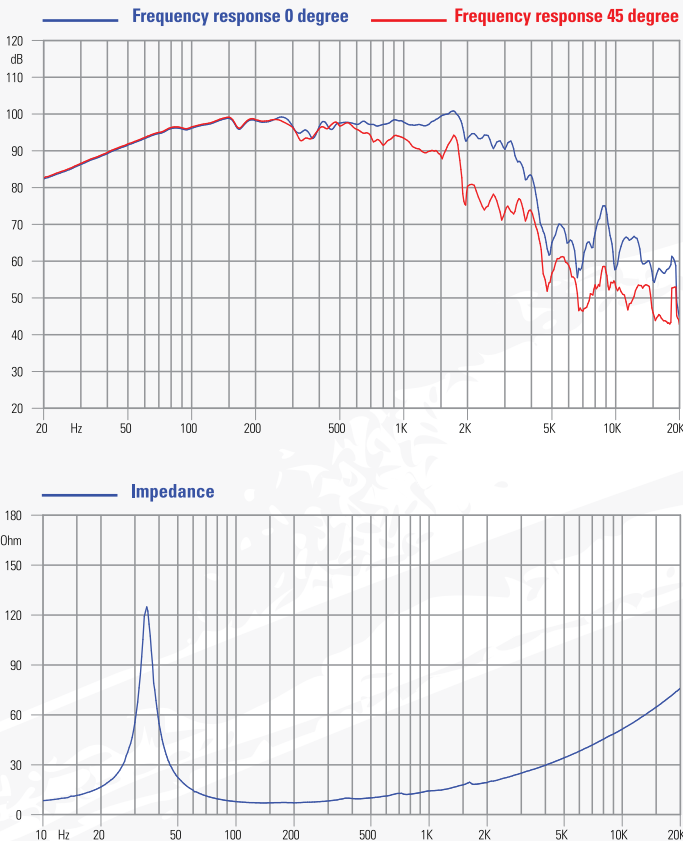
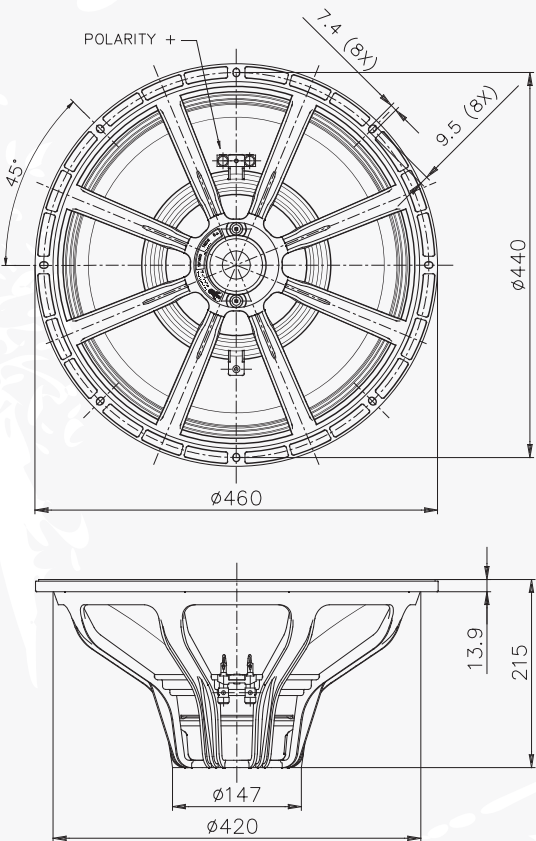
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.3 Ω
AES Power Handling (1)	700 W
Maximum Power Handling (4)	1400 W
Sensitivity (1W/1m)	99 dB
Frequency Range	35÷2500 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	26.5 mm (1.04 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.26 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	5.3 dm³ (0.187 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	34 Hz
Re	5 Ω
Qes	0.31
Qms	9.8
Qts	0.3
Vas	228.4 dm³ (8.07 ft³)
Sd	1134 cm² (175.77 in²)
Xmax (2)	11.25 mm
Xdamage (3)	22.9 mm
Mms	175 g
Bl	24.5 N/A
Le	1.35 mH
Mmd	131.8 g
Cms	0.12 mm/N
Rms	3.81 kg/s
η _o (Eta Zero)	2.8 %
EBP	110 Hz



18FH500

18FH510

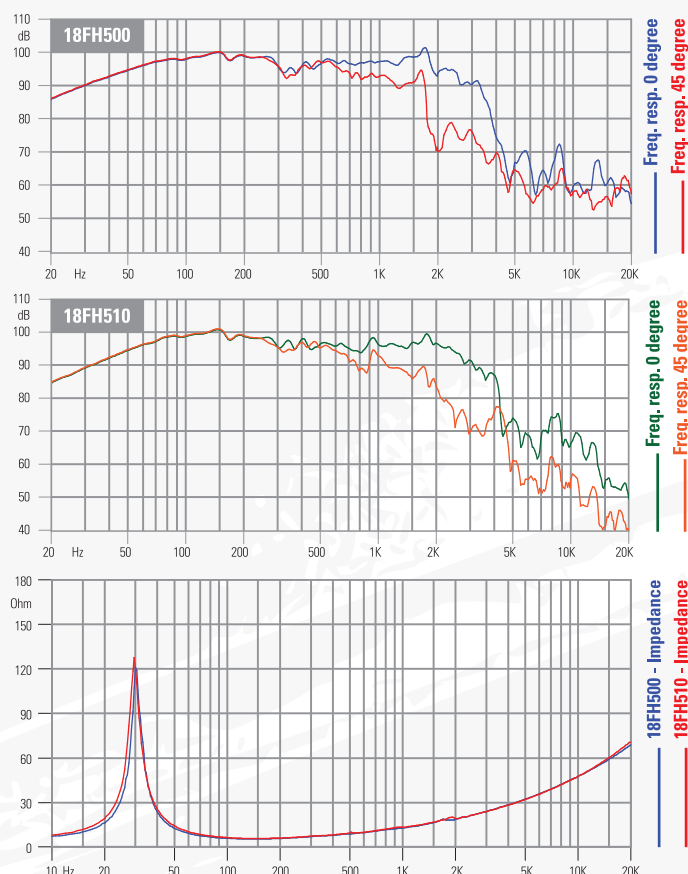
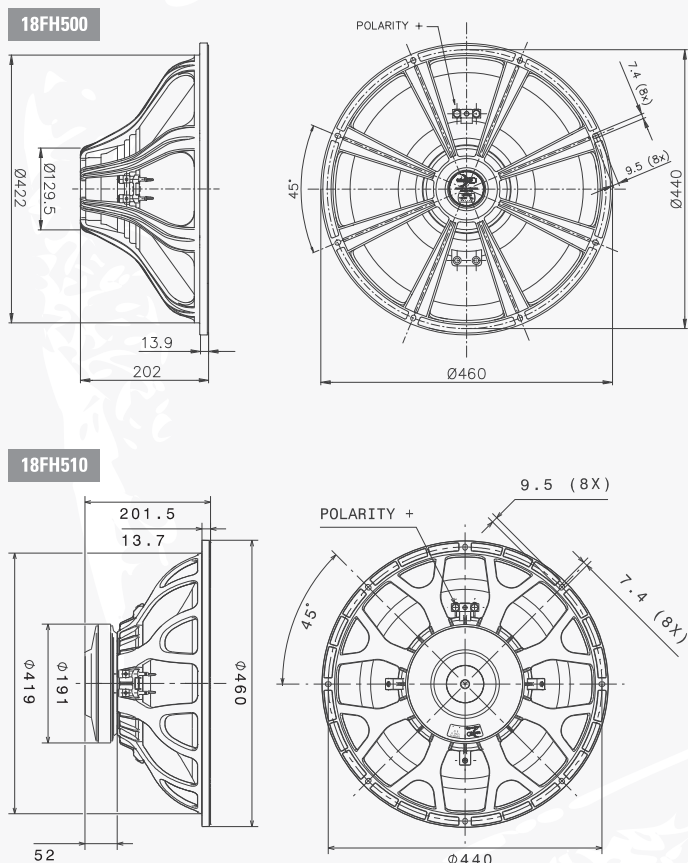
18" - 600 W - 98 dB



THIELE & SMALL PARAMETERS

	18FH500	18FH510
Fs	30 Hz	30 Hz
Re	5.1 Ω	5.1 Ω
Qes	0.36	0.30
Qms	12.5	13.6
Qts	0.35	0.30
Vas	374.8 dm³ (13.24 ft³)	369.4 dm³ (13.05 ft³)
Sd	1134 cm² (175.77 in²)	1134 cm² (175.77 in²)
Xmax (2)	9.25 mm	9.25 mm
Xdamage (3)	17.5 mm	21 mm
Mms	137.0 g	139.0 g
Bl	19 N/A	21 N/A
Le	1.35 mH	1.06 mH
Mmd	114.9 g	116.5 g
Cms	0.21 mm/N	0.22 mm/N
Rms	2.06 kg/s	1.92 kg/s
η _o (Eta Zero)	2.70 %	3.20 %
EBP	83 Hz	100 Hz

PATENT IT2006/000327 (18FH500)



15XL1400

15" - 1400 W - 96 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)
Baffle Cutout Diameter	354 mm (13.94 in)
Depth	217 mm (8.54 in)
Flange and gasket Thickness	14 mm (0.55 in)
Net Weight	11.8 kg (25.9 lb)
Shipping Box	422 x 417 x 264 mm
(Single Carton Box)	(16.6 x 16.4 x 10.4 in)
Shipping Weight	13.5 kg (29.8 lb)

NOTES:

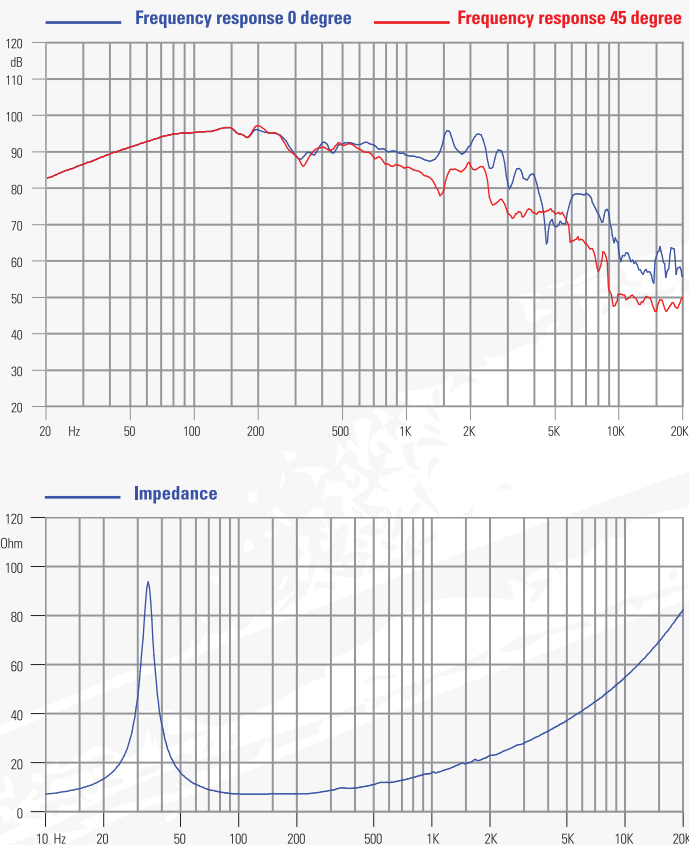
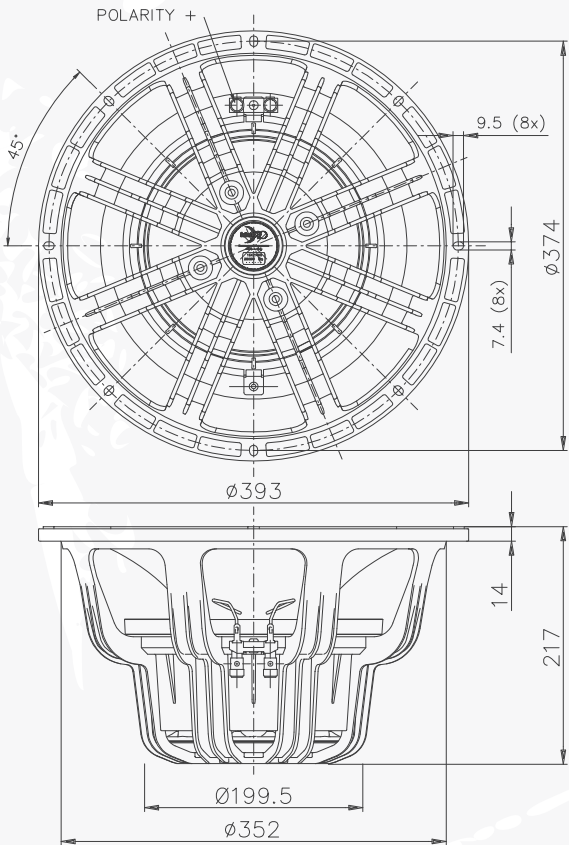
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
- PATENT PENDING

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.4 Ω
AES Power Handling (1)	1400 W
Maximum Power Handling (4)	2800 W
Sensitivity (1W/1m)	96 dB
Frequency Range	40÷2500 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	31 mm (1.22 in)
Magnetic Gap Depth	15.5 mm (0.61 in)
Flux Density	1.05 T
Magnet	Neodymium Slug Crown
Basket Material	Aluminum
Demodulation	Triple AI Dem.
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	6 dm³ (0.212 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	38 Hz
Re	5.4 Ω
Qes	0.34
Qms	10.4
Qts	0.33
Vas	79.7 dm³ (2.81 ft³)
Sd	780 cm² (120.90 in²)
Xmax (2)	12.92 mm
Xdamage (3)	28 mm
Mms	190.0 g
Bl	26.7 N/A
Le	1.6 mH
Mmd	177.7 g
Cms	0.10 mm/N
Rms	4.36 kg/s
η _o (Eta Zero)	1.24 %
EBP	112 Hz



15XL1200

15" - 1400 W - 95 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)
Baffle Cutout Diameter	354 mm (13.94 in)
Depth	194.3 mm (7.65 in)
Flange and gasket Thickness	13.7 mm (0.54 in)
Net Weight	7.3 kg (16.1 lb)
Shipping Box	430 x 427 x 236 mm
(Single Carton Box)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	8.6 kg (19.0 lb)

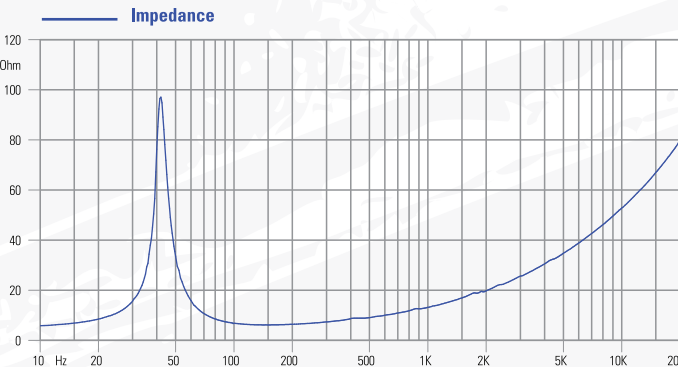
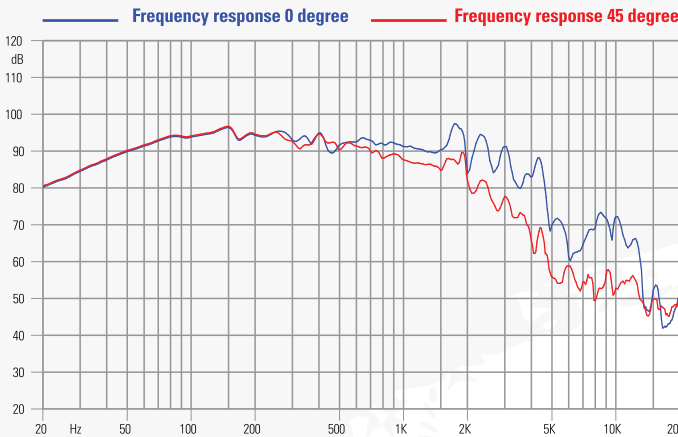
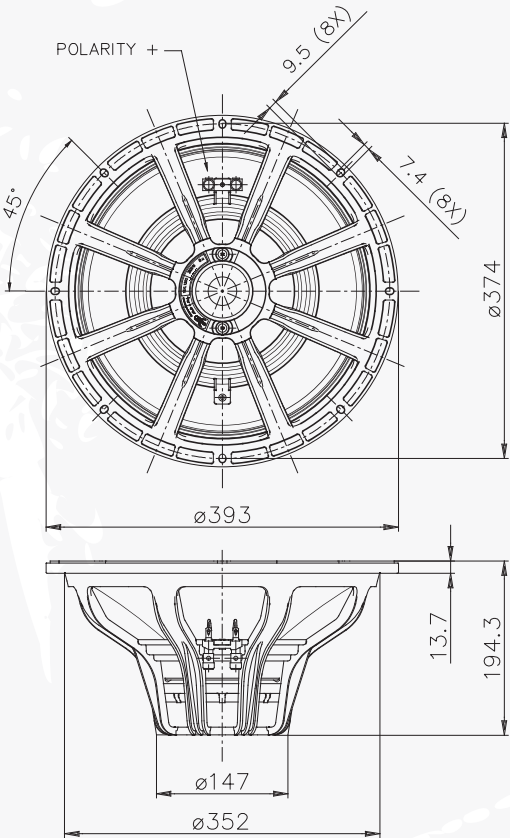
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.4 Ω
AES Power Handling (1)	1400 W
Maximum Power Handling (4)	2800 W
Sensitivity (1W/1m)	95 dB
Frequency Range	40÷2000 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	28.9 mm (1.14 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.1 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	4.1 dm³ (0.145 ft³)
Spider Profile	2x non-adjacent symmetrical variable height waves

THIELE & SMALL PARAMETERS

Fs	40 Hz
Re	5 Ω
Qes	0.41
Qms	10.9
Qts	0.39
Vas	75.9 dm³ (2.68 ft³)
Sd	780 cm² (120.90 in²)
Xmax (2)	12.45 mm
Xdamage (3)	24 mm
Mms	180.0 g
Bl	23.6 N/A
Le	1.34 mH
Mmd	155.4 g
Cms	0.09 mm/N
Rms	4.15 kg/s
η _o (Eta Zero)	1.16 %
EBP	98 Hz



15HP1060

15" - 1000 W - 97 dB

15HP1030

15" - 1000 W - 96 dB



NOMINAL SPECIFICATIONS

	15HP1060	15HP1030
Nominal Diameter	380 mm (15 in)	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)	374 mm (14.72 in)
Baffle Cutout Diameter	354 mm (13.94 in)	354 mm (13.94 in)
Depth	194.3 mm (7.65 in)	188 mm (7.40 in)
Flange and gasket Thickness	13.7 mm (0.54 in)	14 mm (0.55 in)
Net Weight	7.1 kg (15.7 lb)	11.7 kg (25.8 lb)
Shipping Box	430 x 427 x 236 mm	430 x 427 x 236 mm
(Single Box)	(16.9 x 16.8 x 9.3 in)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	8.4 kg (18.5 lb)	12.8 kg (28.2 lb)

NOTES:

- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
(2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
(3) Maximum excursion before permanent damage
(4) Maximum power is defined as 3dB greater than nominal power
(5) Treated Polycotton

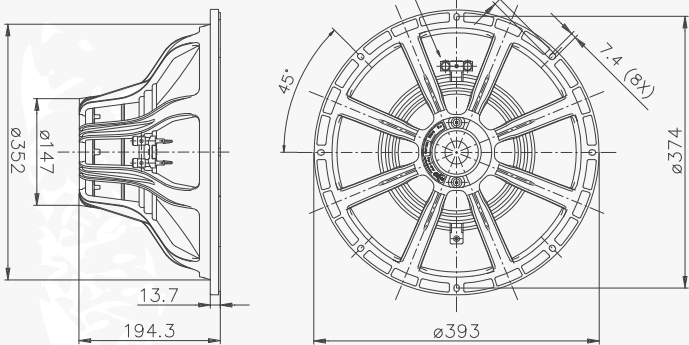
TECHNICAL PARAMETERS

	15HP1060	15HP1030
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	6.7 Ω
AES Power Handling (1)	1000 W	1000 W
Maximum Power Handling (4)	2000 W	2000 W
Sensitivity (1W/1m)	97 dB	96 dB
Frequency Range	40÷2000 Hz	40÷2000 Hz
Voice Coil Diameter	100 mm (4 in)	100 mm (4 in)
Winding Material	Cu	Cu
Former Material	Glass Fiber	Glass Fiber
Winding Depth	28.9 mm (1.14 in)	28.9 mm (1.14 in)
Magnetic Gap Depth	12 mm (0.47 in)	12 mm (0.47 in)
Flux Density	1.22 T	1.1 T
Magnet	Neodymium Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	Aluminum Ring	Aluminum Ring
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	4.1 dm³ (0.145 ft³)	5.1 dm³ (0.180 ft³)
Spider Profile	2x non-adjacent symmetrical variable height waves	

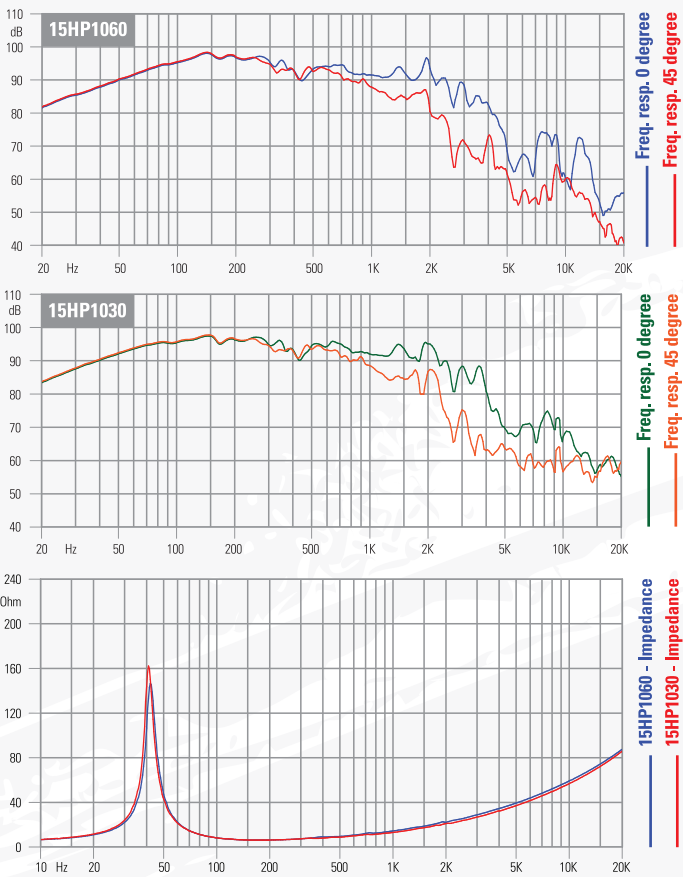
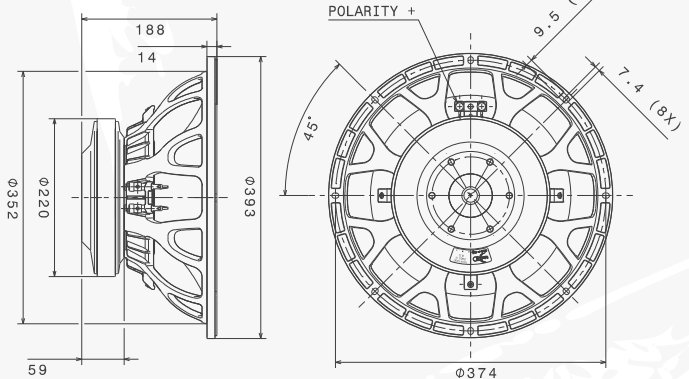
THIELE & SMALL PARAMETERS

	15HP1060	15HP1030
Fs	40 Hz	40 Hz
Re	5 Ω	5 Ω
Qes	0.32	0.35
Qms	11.4	11.8
Qts	0.31	0.34
Vas	87.5 dm³ (3.09 ft³)	82.8 dm³ (2.92 ft³)
Sd	780 cm² (120.90 in²)	780 cm² (120.90 in²)
Xmax (2)	12.45 mm	12.45 mm
Xdamage (3)	21 mm	23.05 mm
Mms	156.3 g	165.0 g
Bl	24.8 N/A	24.3 N/A
Le	1.32 mH	1.4 mH
Mmd	143.9 g	152.6 g
Cms	0.10 mm/N	0.10 mm/N
Rms	3.44 kg/s	3.5 kg/s
η _o (Eta Zero)	1.70 %	1.46 %
EBP	125 Hz	114 Hz

15HP1060



15HP1030



NEODYMIUM WOOFER

15HP1020

15" - 700 W - 98 dB

FERRITE WOOFER

15HP1010

15" - 700 W - 96 dB



NOMINAL SPECIFICATIONS

	15HP1020	15HP1010
Nominal Diameter	380 mm (15 in)	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)	374 mm (14.72 in)
Baffle Cutout Diameter	356 mm (14.02 in)	354 mm (13.94 in)
Depth	181.3 mm (7.14 in)	183 mm (7.20 in)
Flange and gasket Thickness	13.7 mm (0.54 in)	13.3 mm (0.52 in)
Net Weight	6.2 kg (13.6 lb)	9.8 kg (21.5 lb)
Shipping Box	430 x 427 x 236 mm	430 x 427 x 236 mm
(Single Box)	(16.9 x 16.8 x 9.3 in)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	7.2 kg (15.9 lb)	10.8 kg (23.8 lb)

NOTES:

- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
- PATENT IT2006/000327 (15HP1020)

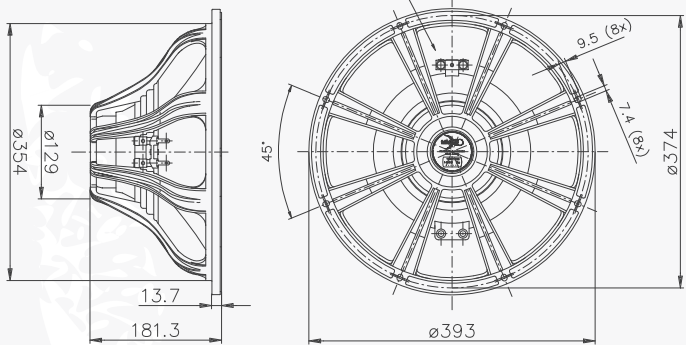
TECHNICAL PARAMETERS

	15HP1020	15HP1010
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.9 Ω	6.9 Ω
AES Power Handling (1)	700 W	700 W
Maximum Power Handling (4)	1400 W	1400 W
Sensitivity (1W/1m)	98 dB	96 dB
Frequency Range	40÷4000 Hz	40÷2500 Hz
Voice Coil Diameter	100 mm (4 in)	100 mm (4 in)
Winding Material	Al	Cu
Former Material	Glass Fiber	Glass Fiber
Winding Depth	22 mm (0.87 in)	23 mm (0.91 in)
Magnetic Gap Depth	12 mm (0.47 in)	10.5 mm (0.41 in)
Flux Density	1.3 T	1.05 T
Magnet	Neodymium Slug	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	3.9 dm ³ (0.138 ft ³)	4.7 dm ³ (0.166 ft ³)
Spider Profile	2x non-adjacent symmetrical constant height waves	

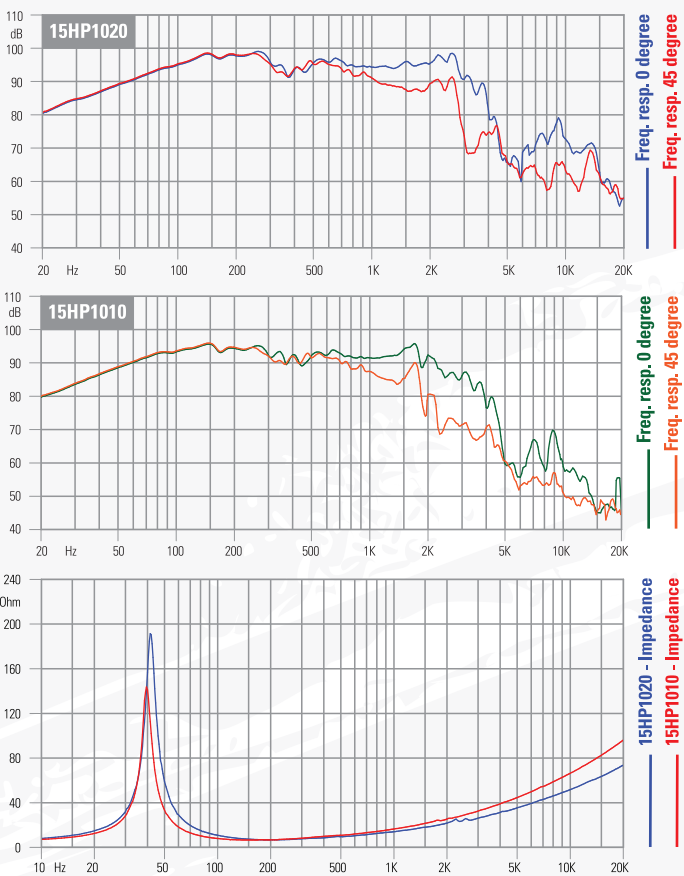
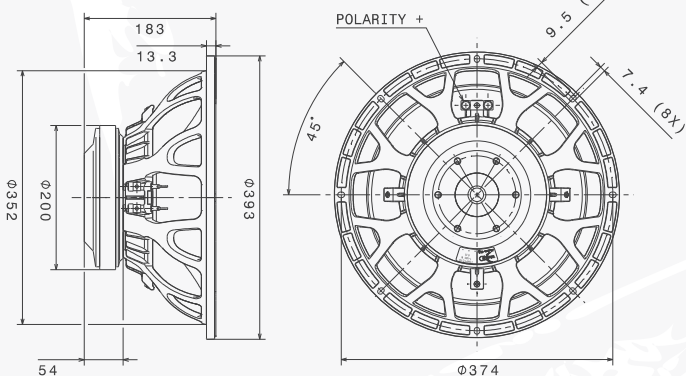
THIELE & SMALL PARAMETERS

	15HP1020	15HP1010
Fs	40 Hz	40 Hz
Re	5.5 Ω	5.3 Ω
Qes	0.28	0.38
Qms	10.2	10.0
Qts	0.27	0.37
Vas	109.6 dm ³ (3.87 ft ³)	93.1 dm ³ (3.29 ft ³)
Sd	759 cm ² (117.65 in ²)	759 cm ² (117.65 in ²)
Xmax (2)	9.00 mm	9.75 mm
Xdamage (3)	16 mm	21.9 mm
Mms	118.0 g	138.9 g
Bl	24.2 N/A	22 N/A
Le	1.2 mH	1.8 mH
Mmd	106.2 g	127.0 g
Cms	0.13 mm/N	0.11 mm/N
Rms	2.9 kg/s	3.49 kg/s
η_L (Eta Zero)	2.45 %	1.50 %
EBP	143 Hz	105 Hz

15HP1020



15HP1010



15FX600

15" - 700 W - 98 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)
Baffle Cutout Diameter	354 mm (13.94 in)
Depth	194.3 mm (7.65 in)
Flange and gasket Thickness	13.7 mm (0.54 in)
Net Weight	5.9 kg (13.0 lb)
Shipping Box	430 x 427 x 236 mm
(Single Carton Box)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	7.2 kg (15.9 lb)

NOTES:

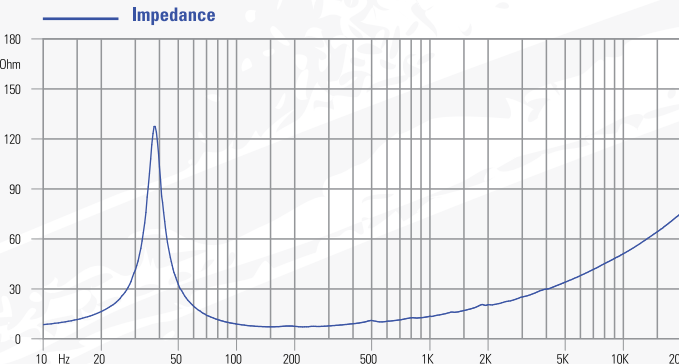
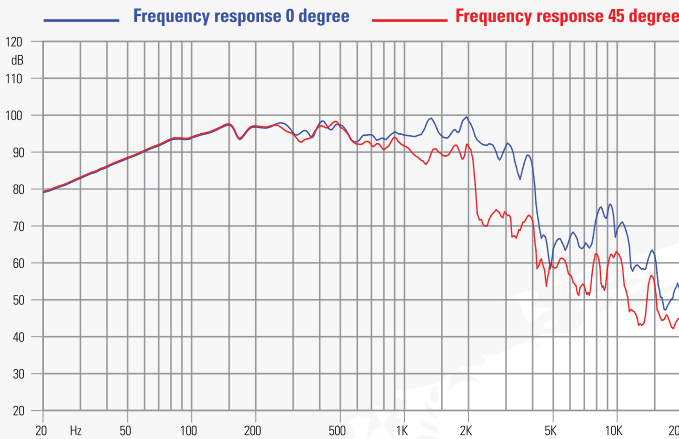
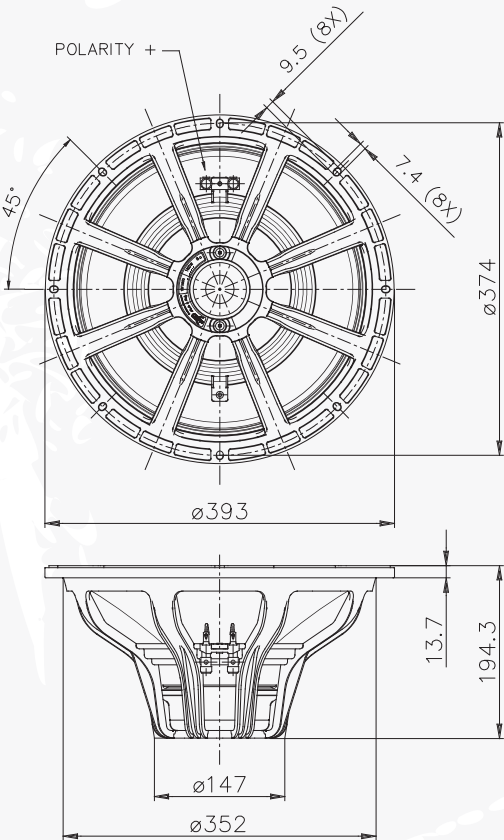
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.4 Ω
AES Power Handling (1)	700 W
Maximum Power Handling (4)	1400 W
Sensitivity (1W/1m)	98 dB
Frequency Range	40÷3150 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	26.5 mm (1.04 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.26 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	4.1 dm³ (0.145 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	38 Hz
Re	5 Ω
Qes	0.28
Qms	6.9
Qts	0.27
Vas	115.4 dm³ (4.08 ft³)
Sd	813 cm² (126.02 in²)
Xmax (2)	11.25 mm
Xdamage (3)	22.9 mm
Mms	142.5 g
Bl	24.5 N/A
Le	1.26 mH
Mmd	116.3 g
Cms	0.12 mm/N
Rms	4.93 kg/s
η _o (Eta Zero)	2.17 %
EBP	136 Hz



15FX560

15" - 700 W - 99 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	380 mm (15 in)
Overall Diameter	418.4/388 mm (16.46/15.28 in)
Bolt Circle Diameter	374 mm (14.72 in)
Baffle Cutout Diameter	354 mm (13.98 in)
Depth	185 mm (7.28 in)
Flange and gasket Thickness	11.5 mm (0.45 in)
Net Weight	7.5 kg (16.5 lb)
Shipping Box	430 x 427 x 236 mm
(Single Carton Box)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	8.6 kg (19.0 lb)

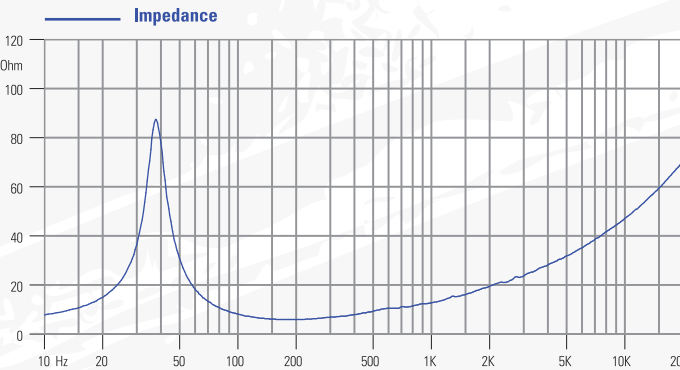
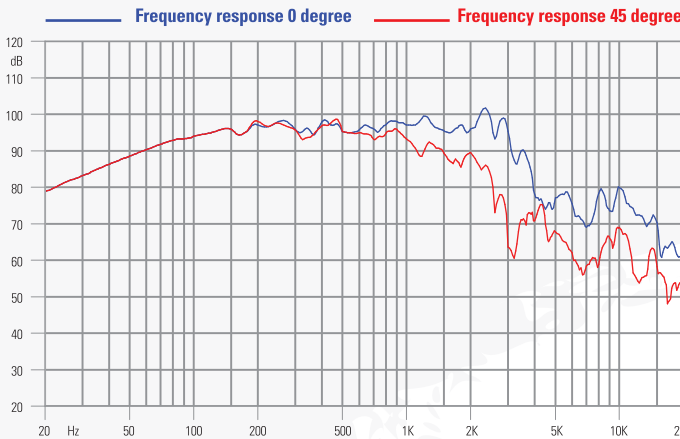
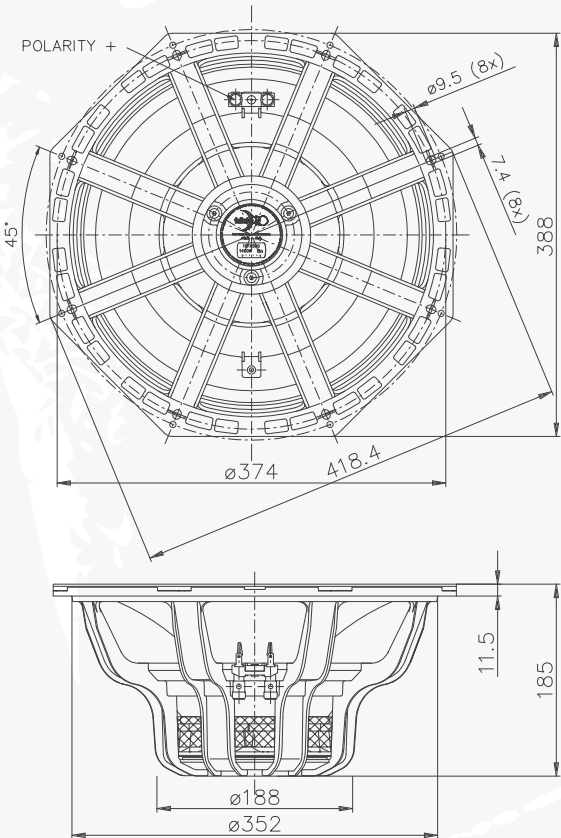
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
- PATENT PENDING

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	700 W
Maximum Power Handling (4)	1400 W
Sensitivity (1W/1m)	99 dB
Frequency Range	40÷4000 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	23.5 mm (0.93 in)
Magnetic Gap Depth	14 mm (0.55 in)
Flux Density	1.1 T
Magnet	Neodymium Slug Crown
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	4.1 dm³ (0.145 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	38 Hz
Re	5.2 Ω
Qes	0.31
Qms	6.8
Qts	0.30
Vas	143 dm³ (5.05 ft³)
Sd	813 cm² (126.02 in²)
Xmax (2)	9.42 mm
Xdamage (3)	21.8 mm
Mms	115.0 g
Bl	21.5 N/A
Le	0.64 mH
Mmd	100.7 g
Cms	0.15 mm/N
Rms	4.06 kg/s
η _o (Eta Zero)	2.47 %
EBP	123 Hz



NEODYMIUM WOOFER

15FH500

15" - 500 W - 98 dB

NEODYMIUM MID WOOFER

15FH520

15" - 600 W - 98 dB



NOMINAL SPECIFICATIONS

	15FH500	15FH520
Nominal Diameter	380 mm (15 in)	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)	374 mm (14.72 in)
Baffle Cutout Diameter	356 mm (14.02 in)	356 mm (14.02 in)
Depth	181.3 mm (7.14 in)	181.3 mm (7.14 in)
Flange and gasket Thickness	13.7 mm (0.54 in)	13.7 mm (0.54 in)
Net Weight	4.3 kg (9.5 lb)	4.6 kg (10.1 lb)
Shipping Box	430 x 427 x 236 mm	430 x 427 x 236 mm
(Single Box)	(16.9 x 16.8 x 9.3 in)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	5.4 kg (11.9 lb)	5.7 kg (12.6 lb)

NOTES:
(1) 2 Hours Test According to AES 2-1984 Rev. 2003
(2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
(3) Maximum excursion before permanent damage
(4) Maximum power is defined as 3dB greater than nominal power
(5) Treated Polycotton
PATENT IT2006/000327 (15FH500)

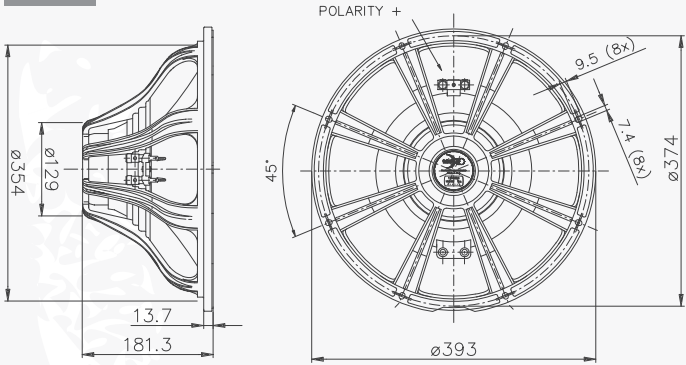
TECHNICAL PARAMETERS

	15FH500	15FH520
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6 Ω	6.9 Ω
AES Power Handling (1)	500 W	600 W
Maximum Power Handling (4)	1000 W	1200 W
Sensitivity (1W/1m)	98 dB	98 dB
Frequency Range	35÷3150 Hz	40÷4000 Hz
Voice Coil Diameter	77 mm (3 in)	77 mm (3 in)
Winding Material	Cu	Cu
Former Material	Glass Fiber	Glass Fiber
Winding Depth	22 mm (0.87 in)	21.5 mm (0.85 in)
Magnetic Gap Depth	10.5 mm (0.41 in)	12 mm (0.47 in)
Flux Density	1.2 T	1.1 T
Magnet	Neodymium Slug	Neodymium Slug
Basket Material	Aluminum	Aluminum
Demodulation	No	Aluminum Ring
Cone Surround (5)	M-Roll	Triple Roll
NET Air Volume filled by Loudspeaker	3.4 dm³ (0.120 ft³)	3.4 dm³ (0.120 ft³)
Spider Profile	1x variable height waves	

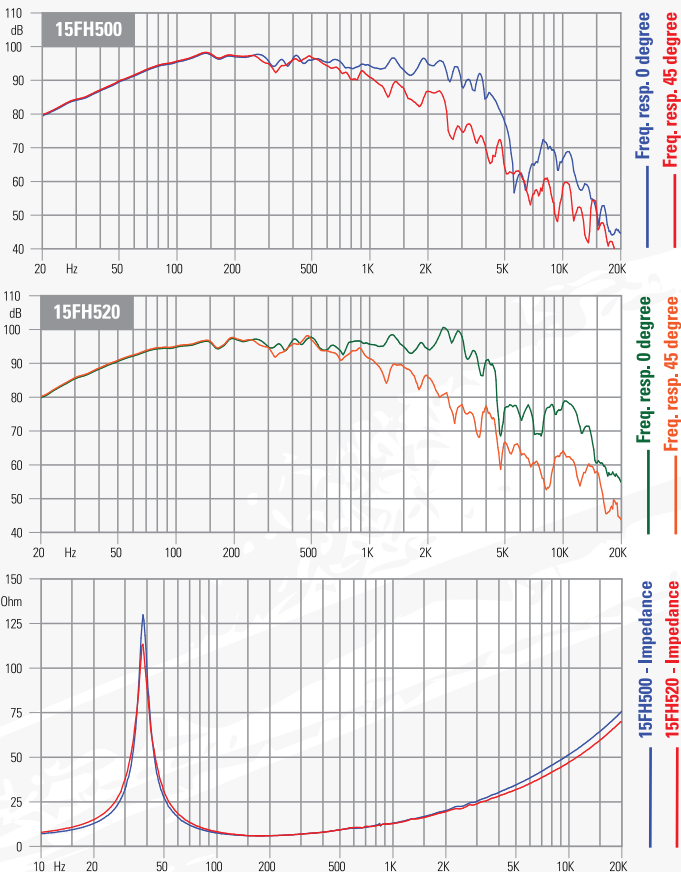
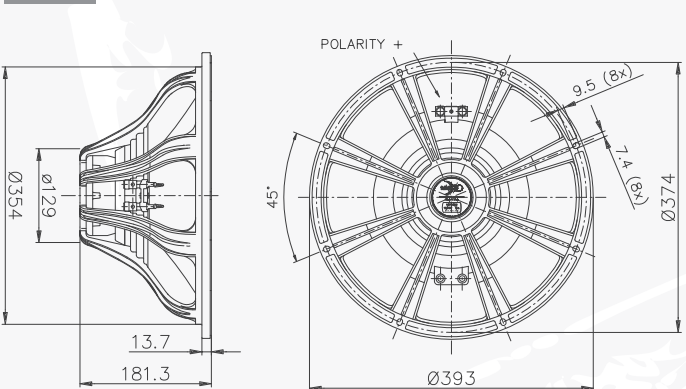
THIELE & SMALL PARAMETERS

	15FH500	15FH520
Fs	35 Hz	38 Hz
Re	5.1 Ω	5.6 Ω
Qes	0.32	0.41
Qms	10.4	10.1
Qts	0.31	0.40
Vas	180.5 dm³ (6.37 ft³)	156.6 dm³ (5.53 ft³)
Sd	800 cm² (124.00 in²)	813 cm² (126.02 in²)
Xmax (2)	9.25 mm	8.75 mm
Xdamage (3)	16 mm	16 mm
Mms	104.0 g	105.0 g
Bl	19.2 N/A	18.4 N/A
Le	1.3 mH	0.89 mH
Mmd	89.7 g	92.0 g
Cms	0.20 mm/N	0.16 mm/N
Rms	2.2 kg/s	2.5 kg/s
η _o (Eta Zero)	2.38 %	2.00 %
EBP	109 Hz	93 Hz

15FH500



15FH520



FERRITE WOOFER

15FH510

15" - 500 W - 98 dB

FERRITE MID WOOFER

15FH530

15" - 500 W - 97 dB



NOMINAL SPECIFICATIONS

	15FH510	15FH530
Nominal Diameter	380 mm (15 in)	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)	374 mm (14.72 in)
Baffle Cutout Diameter	354 mm (13.94 in)	354 mm (13.94 in)
Depth	180 mm (7.09 in)	180 mm (7.09 in)
Flange and gasket Thickness	13.1 mm (0.52 in)	13.1 mm (0.52 in)
Net Weight	8.4 kg (18.5 lb)	8.5 kg (18.7 lb)
Shipping Box	430 x 427 x 236 mm	430 x 427 x 236 mm
(Single Box)	(16.9 x 16.8 x 9.3 in)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	9.5 kg (20.9 lb)	9.6 kg (21.2 lb)

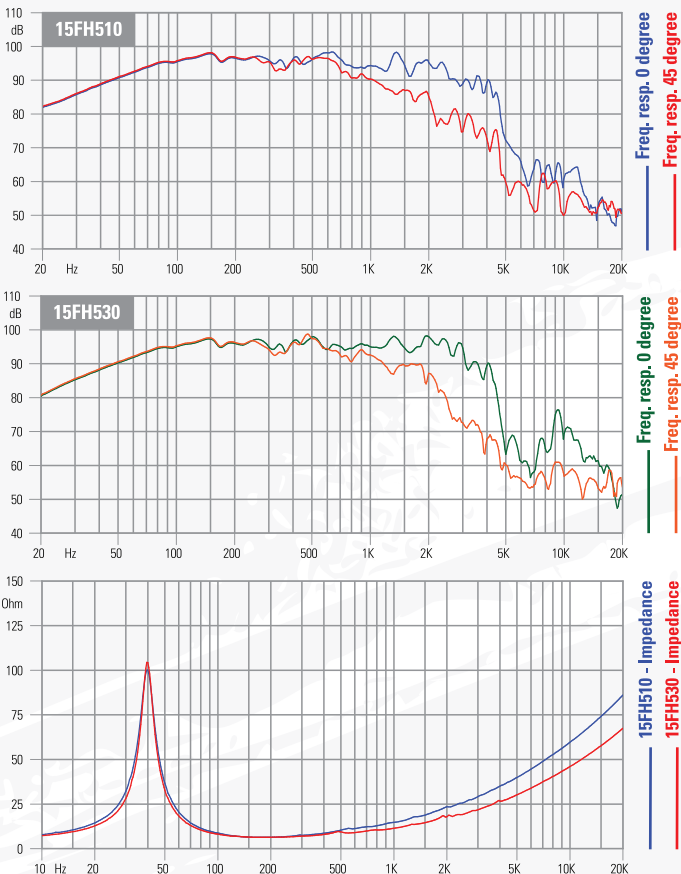
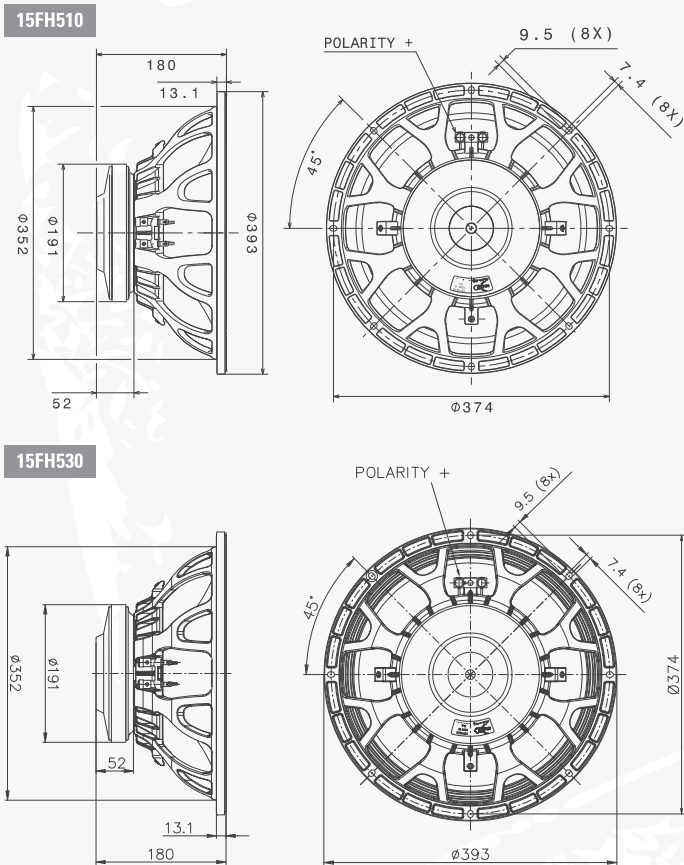
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

	15FH510	15FH530
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.3 Ω	6.7 Ω
AES Power Handling (1)	500 W	500 W
Maximum Power Handling (4)	1000 W	1000 W
Sensitivity (1W/1m)	98 dB	97 dB
Frequency Range	35÷3150 Hz	40÷3150 Hz
Voice Coil Diameter	77 mm (3 in)	77 mm (3 in)
Winding Material	Cu	Cu
Former Material	Glass Fiber	Glass Fiber
Winding Depth	22 mm (0.87 in)	22 mm (0.87 in)
Magnetic Gap Depth	10.5 mm (0.41 in)	10.5 mm (0.41 in)
Flux Density	1.2 T	1.2 T
Magnet	Ferrite Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	No	Aluminum Ring
Cone Surround (5)	M-Roll	Triple Roll
NET Air Volume filled by Loudspeaker	4.1 dm³ (0.145 ft³)	4.1 dm³ (0.145 ft³)
Spider Profile	1x variable height waves	

THIELE & SMALL PARAMETERS

	15FH510	15FH530
Fs	35 Hz	39 Hz
Re	5.1 Ω	5.1 Ω
Qes	0.27	0.36
Qms	10.7	8.9
Qts	0.27	0.35
Vas	173.8 dm³ (6.14 ft³)	126.4 dm³ (4.46 ft³)
Sd	800 cm² (124.00 in²)	813 cm² (126.02 in²)
Xmax (2)	9.25 mm	9.25 mm
Xdamage (3)	16 mm	16 mm
Mms	108.0 g	123.5 g
Bl	21 N/A	20.7 N/A
Le	1.4 mH	1.1 mH
Mmd	95.2 g	110.7 g
Cms	0.19 mm/N	0.13 mm/N
Rms	2.2 kg/s	3.4 kg/s
η _o (Eta Zero)	2.60 %	2.02 %
EBP	130 Hz	108 Hz



15PR400

15" - 400 W - 99 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	380 mm (15 in)
Overall Diameter	393 mm (15.47 in)
Bolt Circle Diameter	374 mm (14.72 in)
Baffle Cutout Diameter	356 mm (14.02 in)
Depth	165 mm (6.50 in)
Flange and gasket Thickness	13.1 mm (0.52 in)
Net Weight	3.6 kg (7.9 lb)
Shipping Box	430 x 427 x 236 mm
(Single Carton Box)	(16.9 x 16.8 x 9.3 in)
Shipping Weight	4.7 kg (10.4 lb)

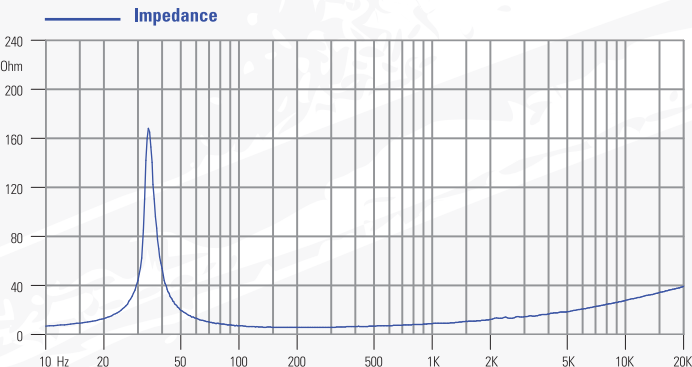
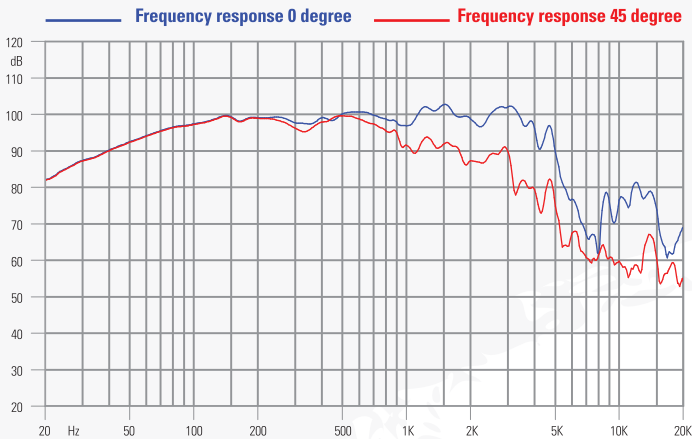
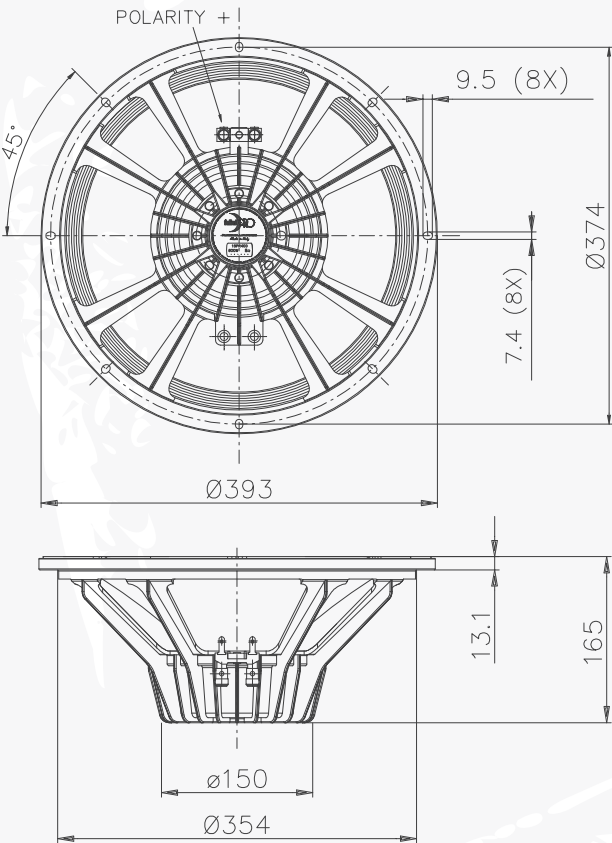
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	5.9 Ω
AES Power Handling (1)	400 W
Maximum Power Handling (4)	800 W
Sensitivity (1W/1m)	99 dB
Frequency Range	35÷4000 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	15 mm (0.59 in)
Magnetic Gap Depth	10.5 mm (0.41 in)
Flux Density	1.15 T
Magnet	Neodymium Slug
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	Accordion (4 waves)
NET Air Volume filled by Loudspeaker	3.7 dm³ (0.131 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	35 Hz
Re	5.1 Ω
Qes	0.34
Qms	6.0
Qts	0.32
Vas	223 dm³ (7.88 ft³)
Sd	805 cm² (124.78 in²)
Xmax (2)	5.75 mm
Xdamage (3)	15.5 mm
Mms	85.2 g
Bl	16.7 N/A
Le	0.75 mH
Mmd	72.5 g
Cms	0.24 mm/N
Rms	3.11 kg/s
η _o (Eta Zero)	2.71 %
EBP	103 Hz



12XL1200

12" - 1400 W - 93 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)
Depth	168.75 mm (6.64 in)
Flange and gasket Thickness	12.45 mm (0.49 in)
Net Weight	6.8 kg (15.0 lb)
Shipping Box	350 x 346 x 216 mm
(Single Carton Box)	(13.8 x 13.6 x 8.5 in)
Shipping Weight	7.5 kg (16.5 lb)

NOTES:

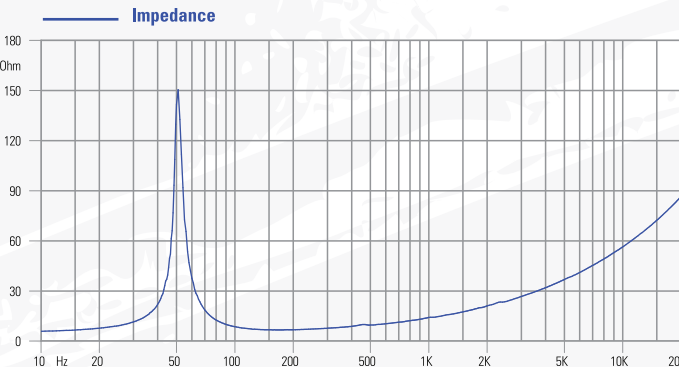
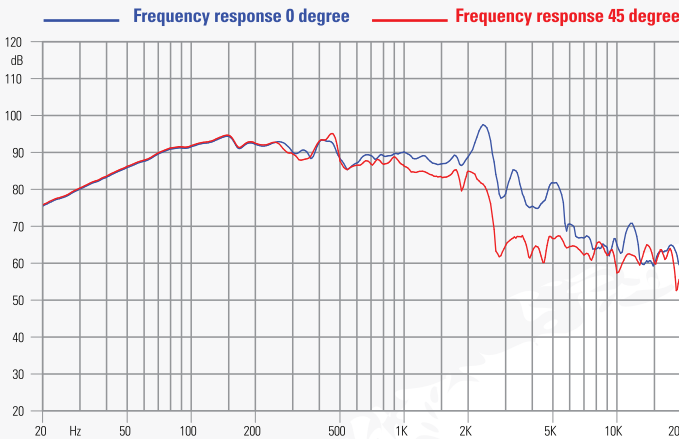
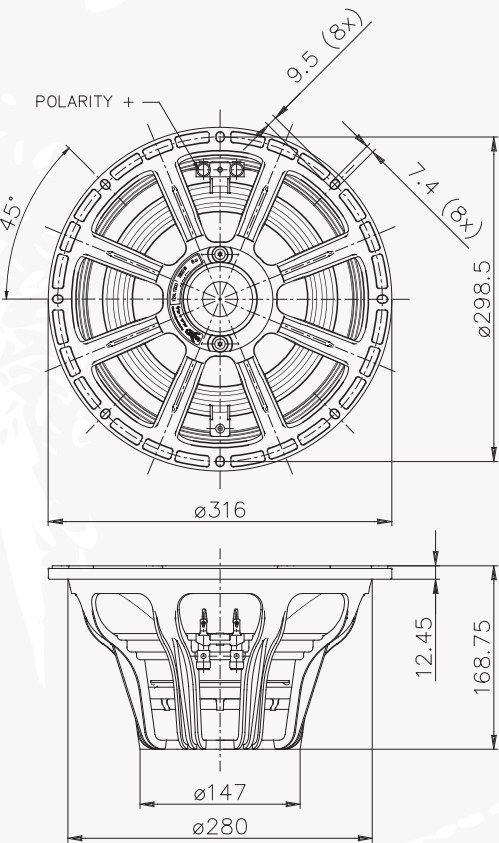
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	1400 W
Maximum Power Handling (4)	2800 W
Sensitivity (1W/1m)	93 dB
Frequency Range	50÷2500 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	28.9 mm (1.14 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.1 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	2.9 dm³ (0.102 ft³)
Spider Profile	2x non-adjacent symmetrical variable height waves

THIELE & SMALL PARAMETERS

Fs	50 Hz
Re	5 Ω
Qes	0.43
Qms	14.8
Qts	0.42
Vas	20.8 dm³ (0.73 ft³)
Sd	469 cm² (72.70 in²)
Xmax (2)	12.45 mm
Xdamage (3)	24 mm
Mms	152 g
Bl	23.6 N/A
Le	1.3 mH
Mmd	140.5 g
Cms	0.07 mm/N
Rms	3.23 kg/s
η _o (Eta Zero)	0.59 %
EBP	116 Hz



NEODYMIUM SUBWOOFER

12HP1060

12" - 1000 W - 95 dB

FERRITE SUBWOOFER

12HP1030

12" - 1000 W - 95 dB



NOMINAL SPECIFICATIONS

	12HP1060	12HP1030
Nominal Diameter	300 mm (12 in)	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)	282 mm (11.10 in)
Depth	168.75 mm (6.64 in)	147 mm (5.79 in)
Flange and gasket Thickness	12.45 mm (0.49 in)	12 mm (0.47 in)
Net Weight	6.6 kg (14.6 lb)	11.1 kg (24.5 lb)
Shipping Box	350 x 346 x 216 mm	350 x 346 x 190 mm
(Single Box)	(13.8 x 13.6 x 8.5 in)	(13.8 x 13.6 x 7.5 in)
Shipping Weight	7.3 kg (16.1 lb)	11.8 kg (26.0 lb)

- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

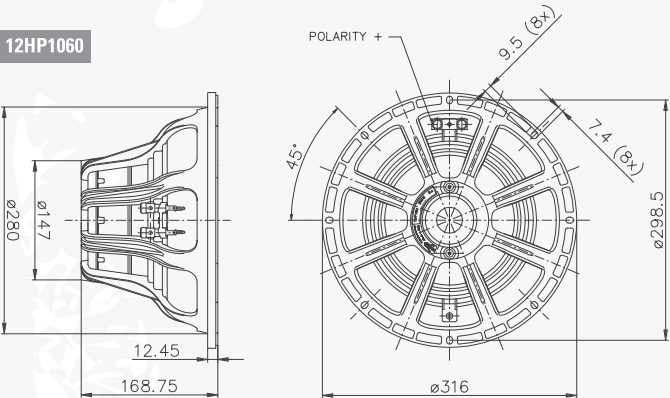
TECHNICAL PARAMETERS

	12HP1060	12HP1030
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.5 Ω	6.7 Ω
AES Power Handling (1)	1000 W	1000 W
Maximum Power Handling (4)	2000 W	2000 W
Sensitivity (1W/1m)	95 dB	95 dB
Frequency Range	45÷2500 Hz	45÷1600 Hz
Voice Coil Diameter	100 mm (4 in)	100 mm (4 in)
Winding Material	Cu	Cu
Former Material	Glass Fiber	Glass Fiber
Winding Depth	28.9 mm (1.14 in)	28.9 mm (1.14 in)
Magnetic Gap Depth	12 mm (0.47 in)	12 mm (0.47 in)
Flux Density	1.22 T	1.1 T
Magnet	Neodymium Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	Aluminum Ring	Aluminum Ring
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	2.9 dm³ (0.102 ft³)	3.7 dm³ (0.131 ft³)
Spider Profile	2x non-adjacent symmetrical variable height waves	

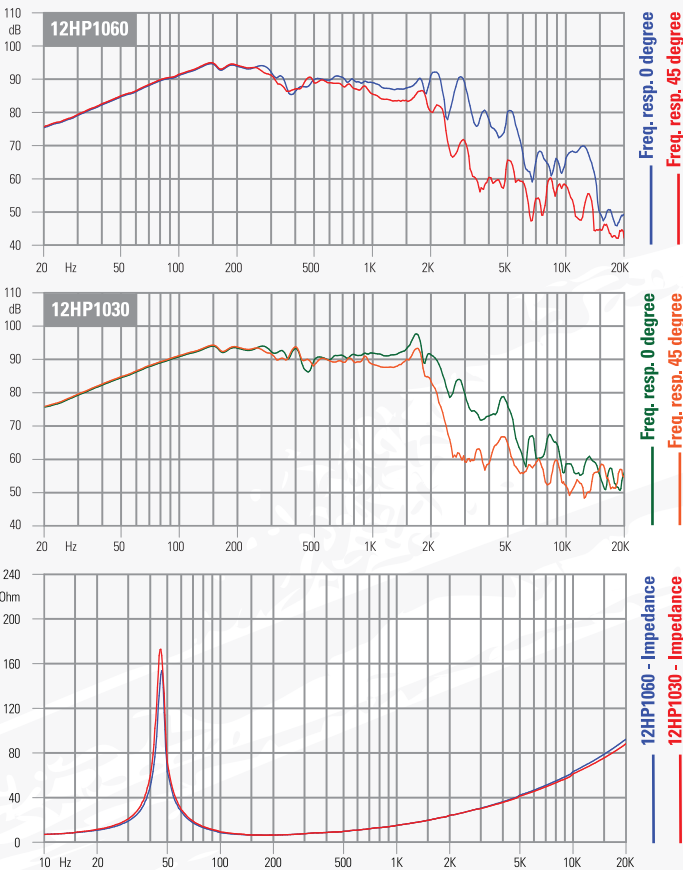
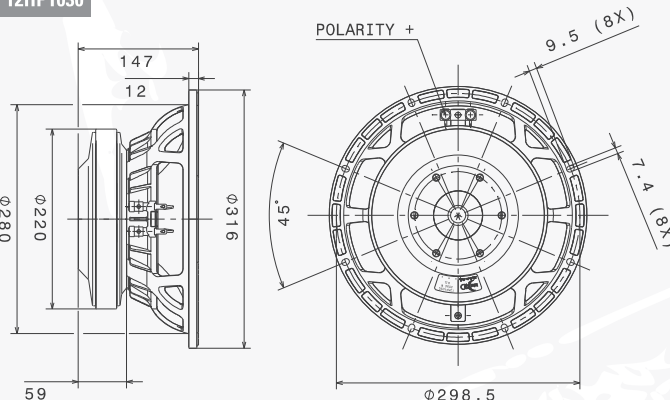
THIELE & SMALL PARAMETERS

	12HP1060	12HP1030
Fs	45 Hz	45 Hz
Re	5 Ω	5 Ω
Qes	0.29	0.31
Qms	12.1	13.8
Qts	0.28	0.30
Vas	30.8 dm³ (1.09 ft³)	29.9 dm³ (1.06 ft³)
Sd	469 cm² (72.70 in²)	469 cm² (72.70 in²)
Xmax (2)	12.45 mm	12.45 mm
Xdamage (3)	21 mm	20.5 mm
Mms	126.9 g	130.5 g
Bl	24.8 N/A	24.3 N/A
Le	1.38 mH	1.35 mH
Mmd	121.1 g	124.7 g
Cms	0.10 mm/N	0.09 mm/N
Rms	2.96 kg/s	2.7 kg/s
η _e (Eta Zero)	0.93 %	0.85 %
EBP	155 Hz	145 Hz

12HP1060



12HP1030



12RS1066

12" - 1000 W - 93 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)
Depth	176.5 mm (6.95 in)
Flange and gasket Thickness	20.2 mm (0.80 in)
Net Weight	6.6 kg (14.6 lb)
Shipping Box	350 x 346 x 216 mm
(Single Carton Box)	(13.8 x 13.6 x 8.5 in)
Shipping Weight	7.3 kg (16.1 lb)

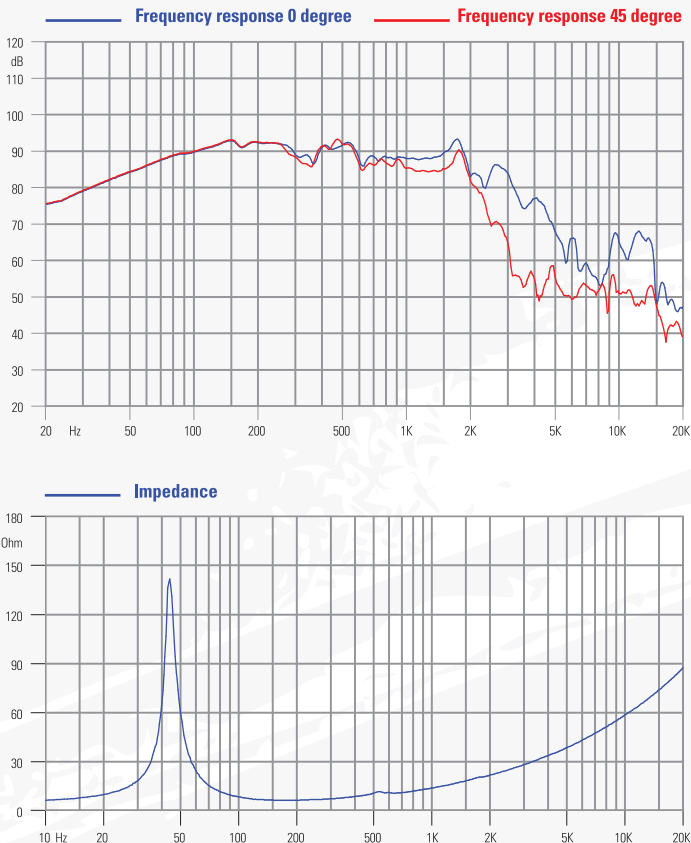
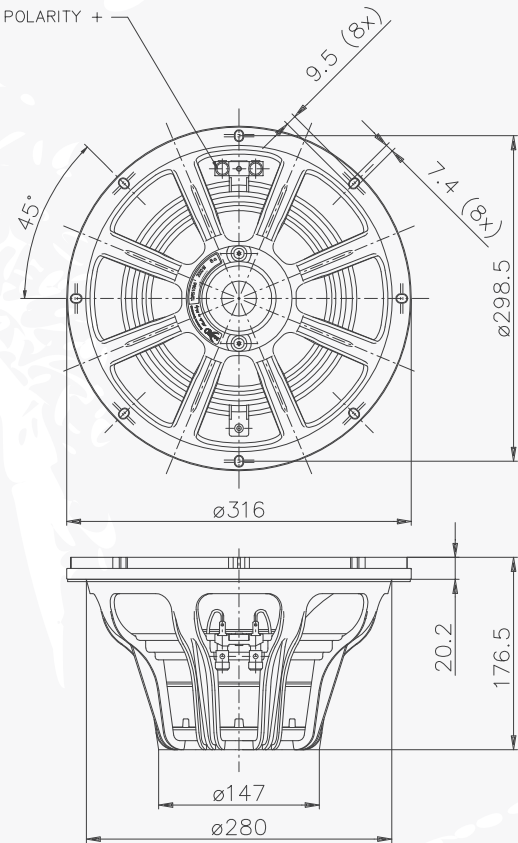
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) NBR (Rubber)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	1000 W
Maximum Power Handling (4)	2000 W
Sensitivity (1W/1m)	93 dB
Frequency Range	45÷2500 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	28.9 mm (1.14 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.22 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	2.9 dm³ (0.102 ft³)
Spider Profile	2x non-adjacent symmetrical variable height waves

THIELE & SMALL PARAMETERS

Fs	42 Hz
Re	5 Ω
Qes	0.34
Qms	13.9
Qts	0.33
Vas	29.5 dm³ (1.04 ft³)
Sd	476 cm² (73.78 in²)
Xmax (2)	12.45 mm
Xdamage (3)	20.5 mm
Mms	156.5 g
Bl	24.8 N/A
Le	1.35 mH
Mmd	149.7 g
Cms	0.09 mm/N
Rms	2.97 kg/s
η _o (Eta Zero)	0.63 %
EBP	124 Hz



NEODYMIUM WOOFER

12HP1020

12" - 700 W - 97 dB

FERRITE WOOFER

12HP1010

12" - 700 W - 96 dB



NOMINAL SPECIFICATIONS

	12HP1020	12HP1010
Nominal Diameter	300 mm (12 in)	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)	298.5 mm (11.75 in)
Baffle Cutout Diameter	284 mm (11.18 in)	282 mm (11.10 in)
Depth	155.75 mm (6.13 in)	142 mm (5.59 in)
Flange and gasket Thickness	12.45 mm (0.49 in)	12 mm (0.47 in)
Net Weight	5.8 kg (12.8 lb)	9.2 kg (20.3 lb)
Shipping Box	350 x 346 x 216 mm	350 x 346 x 190 mm
(Single Box)	(13.8 x 13.6 x 8.5 in)	(13.8 x 13.6 x 7.5 in)
Shipping Weight	6.5 kg (14.3 lb)	10 kg (22.0 lb)

- NOTES:**
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

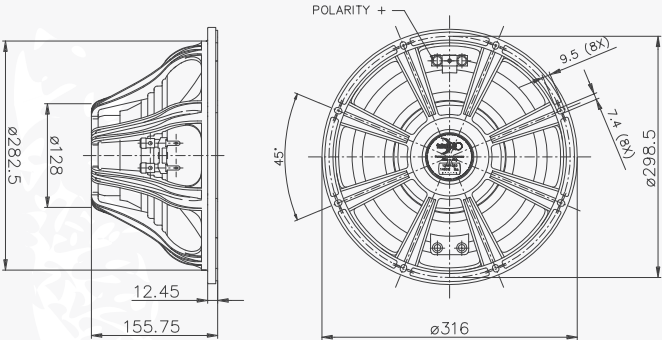
TECHNICAL PARAMETERS

	12HP1020	12HP1010
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	7.1 Ω	7 Ω
AES Power Handling (1)	700 W	700 W
Maximum Power Handling (4)	1400 W	1400 W
Sensitivity (1W/1m)	97 dB	96 dB
Frequency Range	55÷3150 Hz	45÷3150 Hz
Voice Coil Diameter	100 mm (4 in)	100 mm (4 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	22 mm (0.87 in)	22 mm (0.87 in)
Magnetic Gap Depth	12 mm (0.47 in)	10.5 mm (0.41 in)
Flux Density	1.3 T	1.05 T
Magnet	Neodymium Slug	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	M-Roll	M-Roll
NET Air Volume filled by Loudspeaker	2.8 dm³ (0.099 ft³)	3.3 dm³ (0.117 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves	

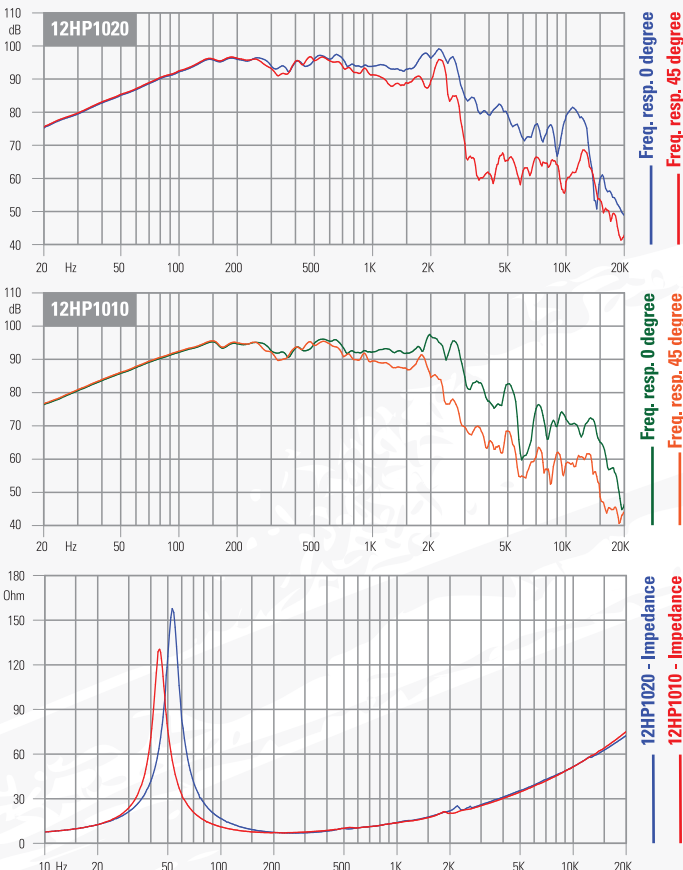
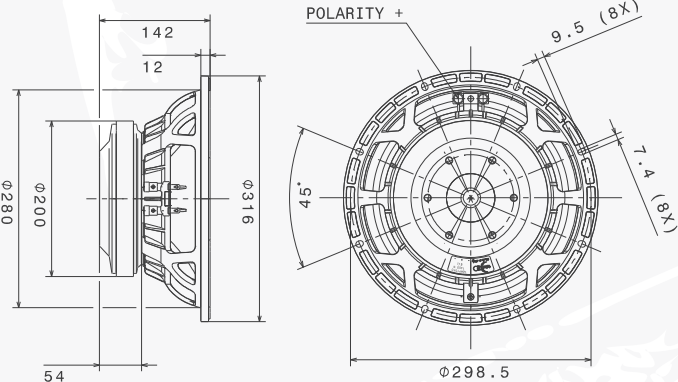
THIELE & SMALL PARAMETERS

	12HP1020	12HP1010
Fs	55 Hz	45 Hz
Re	5.5 Ω	5.5 Ω
Qes	0.28	0.35
Qms	9.4	9.4
Qts	0.27	0.33
Vas	33.7 dm³ (1.19 ft³)	50 dm³ (1.77 ft³)
Sd	494 cm² (76.57 in²)	496 cm² (76.88 in²)
Xmax (2)	9.00 mm	9.25 mm
Xdamage (3)	16 mm	21.9 mm
Mms	86.0 g	87.2 g
Bl	24.3 N/A	19.8 N/A
Le	1.1 mH	1.33 mH
Mmd	79.3 g	80.5 g
Cms	0.09 mm/N	0.14 mm/N
Rms	3.16 kg/s	2.62 kg/s
η _e (Eta Zero)	1.97 %	1.28 %
EBP	196 Hz	129 Hz

12HP1020



12HP1010



12FX600

12" - 700 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)
Depth	168.75 mm (6.64 in)
Flange and gasket Thickness	12.45 mm (0.49 in)
Net Weight	5.5 kg (12.1 lb)
Shipping Box	350 x 346 x 216 mm
(Single Carton Box)	(13.8 x 13.6 x 8.5 in)
Shipping Weight	6.2 kg (13.7 lb)

NOTES:

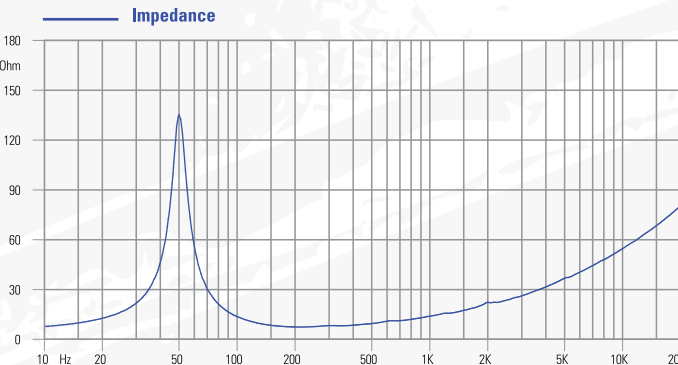
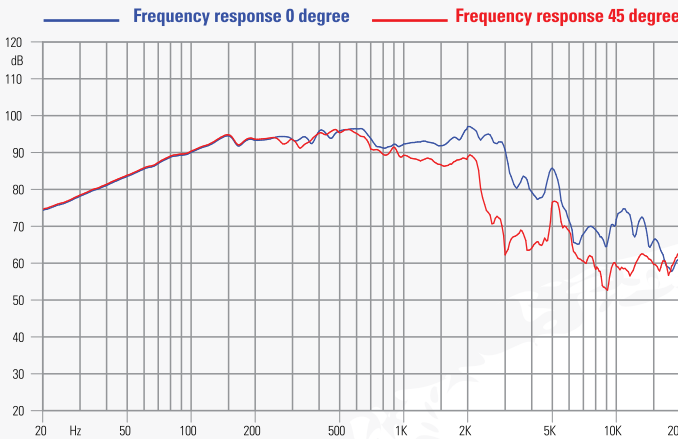
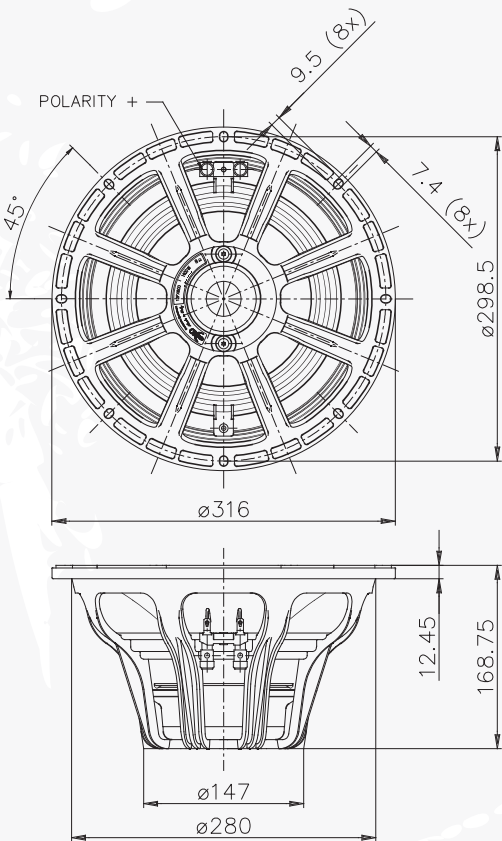
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	700 W
Maximum Power Handling (4)	1400 W
Sensitivity (1W/1m)	97 dB
Frequency Range	50÷3150 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	23.8 mm (0.94 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.26 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	2.9 dm³ (0.102 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	48 Hz
Re	5.3 Ω
Qes	0.25
Qms	6.88
Qts	0.24
Vas	39 dm³ (1.38 ft³)
Sd	500 cm² (77.50 in²)
Xmax (2)	9.90 mm
Xdamage (3)	24.1 mm
Mms	100 g
Bl	25.3 N/A
Le	1.34 mH
Mmd	87.4 g
Cms	0.10 mm/N
Rms	4.57 kg/s
η _o (Eta Zero)	1.68 %
EBP	192 Hz



12FH500

12" - 500 W - 97 dB

12FH520

12" - 600 W - 98 dB



NOMINAL SPECIFICATIONS

	12FH500	12FH520
Nominal Diameter	300 mm (12 in)	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)	298.5 mm (11.75 in)
Baffle Cutout Diameter	284 mm (11.18 in)	284 mm (11.18 in)
Depth	155.75 mm (6.13 in)	155.75 mm (6.13 in)
Flange and gasket Thickness	12.45 mm (0.49 in)	12.45 mm (0.49 in)
Net Weight	3.9 kg (8.6 lb)	4.2 kg (9.3 lb)
Shipping Box	350 x 346 x 216 mm	350 x 346 x 216 mm
(Single Box)	(13.8 x 13.6 x 8.5 in)	(13.8 x 13.6 x 8.5 in)
Shipping Weight	5 kg (11.0 lb)	5 kg (11.0 lb)

- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton
- PATENT IT2006/000327 (12FH500)

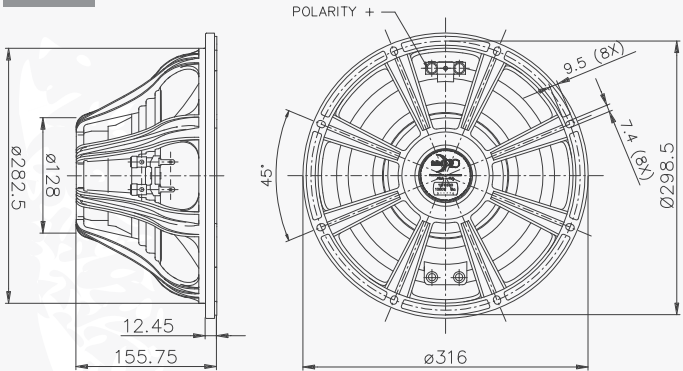
TECHNICAL PARAMETERS

	12FH500	12FH520
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	6.3 Ω
AES Power Handling (1)	500 W	600 W
Maximum Power Handling (4)	1000 W	1200 W
Sensitivity (1W/1m)	97 dB	98 dB
Frequency Range	45÷4000 Hz	50÷4000 Hz
Voice Coil Diameter	77 mm (3 in)	77 mm (3 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	18.5 mm (0.73 in)	18.5 mm (0.73 in)
Magnetic Gap Depth	10.5 mm (0.41 in)	12 mm (0.47 in)
Flux Density	1.2 T	1.1 T
Magnet	Neodymium Slug	Neodymium Slug
Basket Material	Aluminum	Aluminum
Demodulation	No	Aluminum Ring
Cone Surround (5)	M-Roll	Triple Roll
NET Air Volume filled by Loudspeaker	2.3 dm³ (0.081 ft³)	2.4 dm³ (0.085 ft³)
Spider Profile	1x variable height waves	

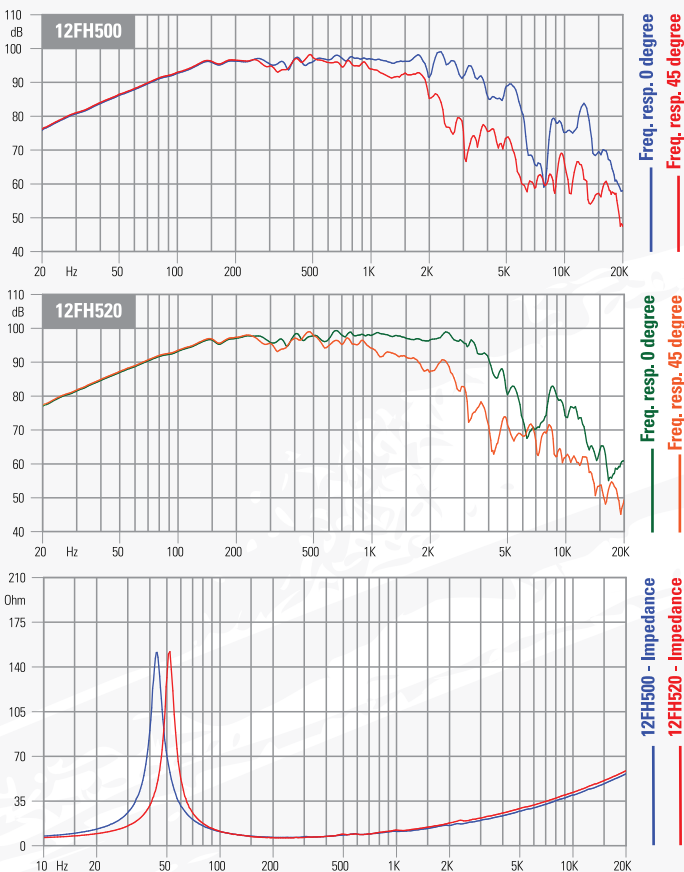
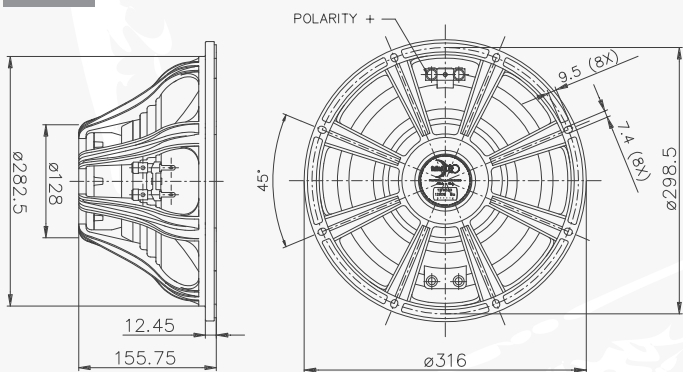
THIELE & SMALL PARAMETERS

	12FH500	12FH520
Fs	45 Hz	50 Hz
Re	5.1 Ω	5.1 Ω
Qes	0.26	0.30
Qms	6.9	11.1
Qts	0.25	0.29
Vas	75.1 dm³ (2.65 ft³)	64.2 dm³ (2.27 ft³)
Sd	487 cm² (75.49 in²)	500 cm² (77.50 in²)
Xmax (2)	7.50 mm	7.25 mm
Xdamage (3)	21.55 mm	19.5 mm
Mms	56.0 g	56.0 g
Bl	17.5 N/A	17.3 N/A
Le	0.83 mH	0.74 mH
Mmd	50.0 g	49.7 g
Cms	0.22 mm/N	0.18 mm/N
Rms	2.29 kg/s	1.58 kg/s
η _e (Eta Zero)	2.50 %	2.60 %
EBP	173 Hz	167 Hz

12FH500



12FH520



12FH510

12" - 500 W - 98 dB

12FH530

12" - 500 W - 98 dB



NOMINAL SPECIFICATIONS

	12FH510	12FH530
Nominal Diameter	300 mm (12 in)	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)	282 mm (11.10 in)
Depth	140 mm (5.51 in)	140 mm (5.51 in)
Flange and gasket Thickness	12 mm (0.47 in)	12 mm (0.47 in)
Net Weight	7.8 kg (17.2 lb)	7.9 kg (17.4 lb)
Shipping Box	350 x 346 x 190 mm	350 x 346 x 190 mm
(Single Box)	(13.8 x 13.6 x 7.5 in)	(13.8 x 13.6 x 7.5 in)
Shipping Weight	8.7 kg (19.2 lb)	8.7 kg (19.2 lb)

- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

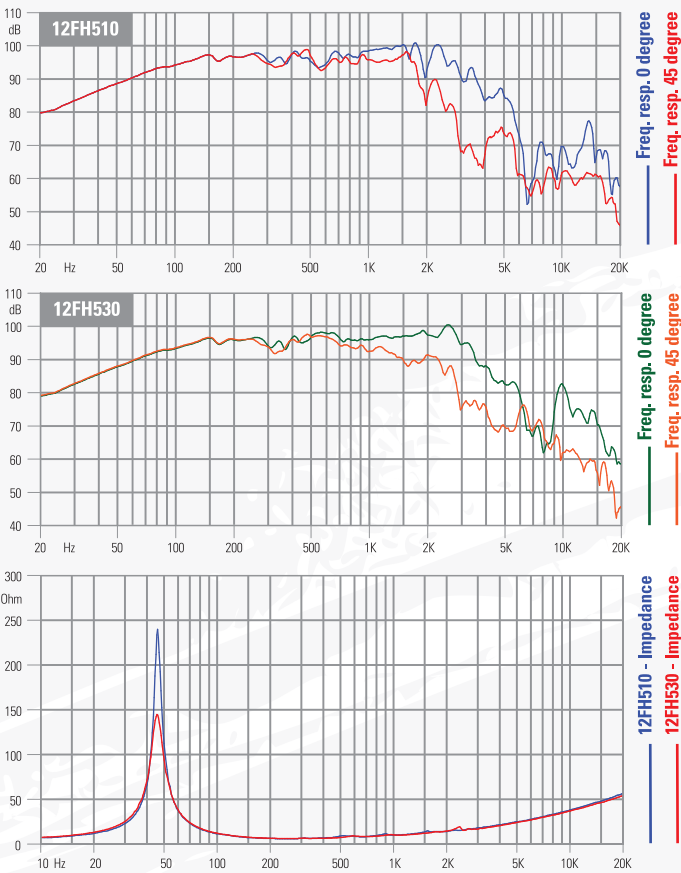
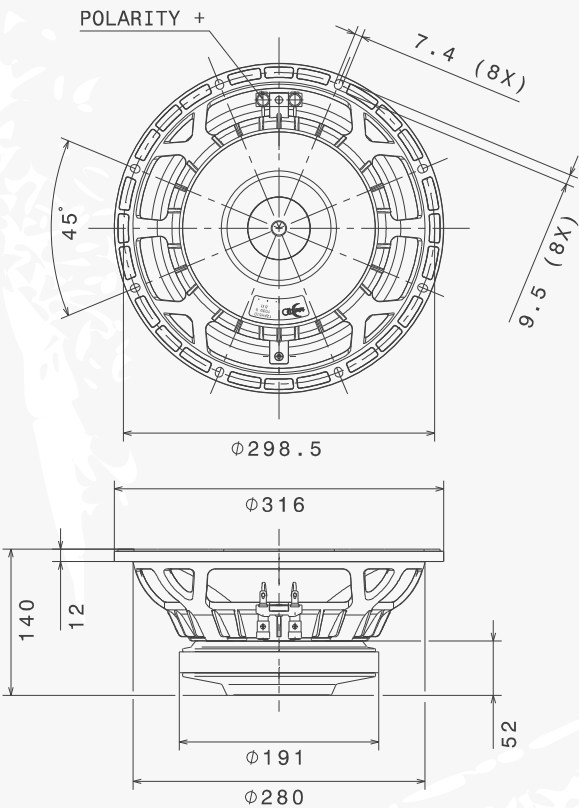
TECHNICAL PARAMETERS

	12FH510	12FH530
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	6.4 Ω
AES Power Handling (1)	500 W	500 W
Maximum Power Handling (4)	1000 W	1000 W
Sensitivity (1W/1m)	98 dB	98 dB
Frequency Range	45÷3150 Hz	45÷3150 Hz
Voice Coil Diameter	77 mm (3 in)	77 mm (3 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	18.5 mm (0.73 in)	18.5 mm (0.73 in)
Magnetic Gap Depth	10.5 mm (0.41 in)	10.5 mm (0.41 in)
Flux Density	1.2 T	1.2 T
Magnet	Ferrite Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	No	Aluminum Ring
Cone Surround (5)	M-Roll	M-Roll
NET Air Volume filled by Loudspeaker	2.9 dm³ (0.102 ft³)	2.9 dm³ (0.102 ft³)
Spider Profile	1x variable height waves	

THIELE & SMALL PARAMETERS

	12FH510	12FH530
Fs	45 Hz	45 Hz
Re	5.1 Ω	5.1 Ω
Qes	0.25	0.27
Qms	10.9	6.4
Qts	0.24	0.26
Vas	69.6 dm³ (2.46 ft³)	63 dm³ (2.22 ft³)
Sd	489 cm² (75.80 in²)	489 cm² (75.80 in²)
Xmax (2)	7.50 mm	7.50 mm
Xdamage (3)	21.5 mm	21.5 mm
Mms	61.0 g	67.0 g
Bl	18.9 N/A	18.9 N/A
Le	0.9 mH	0.8 mH
Mmd	54.9 g	55.3 g
Cms	0.20 mm/N	0.19 mm/N
Rms	1.58 kg/s	2.9 kg/s
ηe (Eta Zero)	2.50 %	2.10 %
EBP	180 Hz	167 Hz

12FH510 / 12FH530



12RS550

12" - 500 W - 93 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)
Depth	145.1 mm (5.71 in)
Flange and gasket Thickness	17.1 mm (0.67 in)
Net Weight	8.1 kg (17.9 lb)
Shipping Box	350 x 346 x 216 mm
(Single Carton Box)	(13.8 x 13.6 x 8.5 in)
Shipping Weight	8.8 kg (19.4 lb)

NOTES:

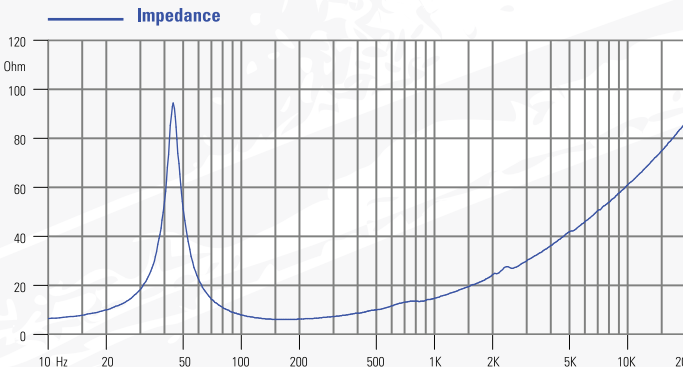
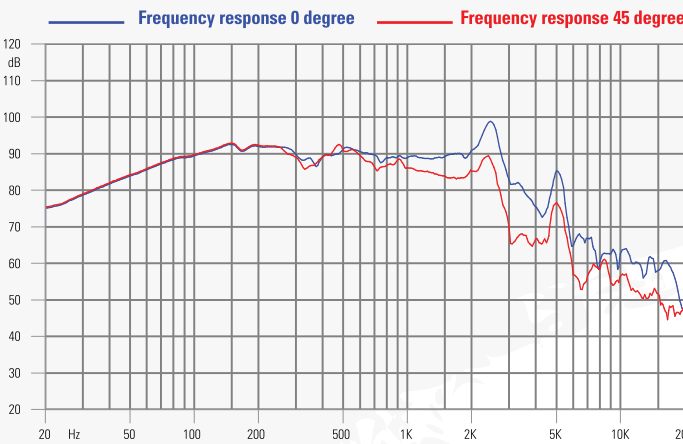
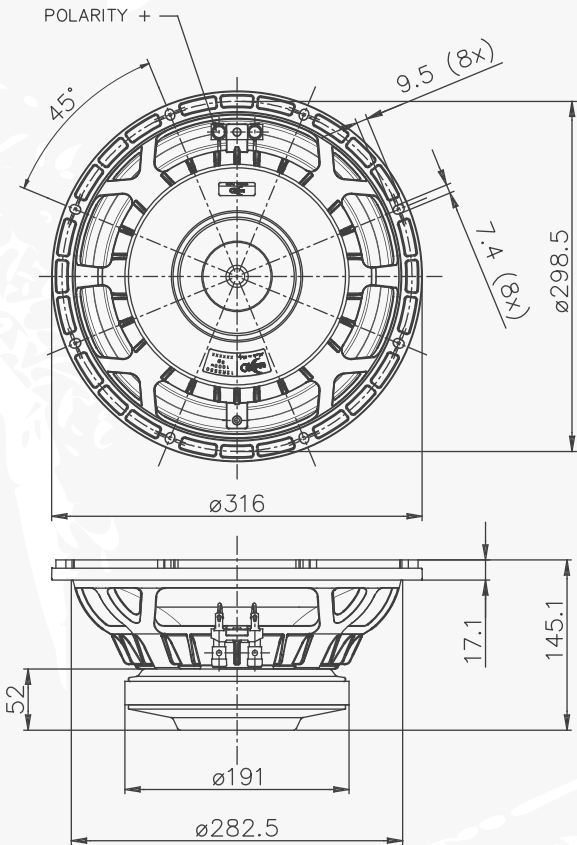
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) NBR (Rubber)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.3 Ω
AES Power Handling (1)	500 W
Maximum Power Handling (4)	1000 W
Sensitivity (1W/1m)	93 dB
Frequency Range	45÷2500 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	22 mm (0.87 in)
Magnetic Gap Depth	10.5 mm (0.41 in)
Flux Density	1.2 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	2.9 dm³ (0.102 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	42 Hz
Re	5.1 Ω
Qes	0.39
Qms	6.9
Qts	0.37
Vas	43.5 dm³ (1.54 ft³)
Sd	512.8 cm² (79.48 in²)
Xmax (2)	9.25 mm
Xdamage (3)	20 mm
Mms	123 g
Bl	20.5 N/A
Le	1.5 mH
Mmd	109.9 g
Cms	0.12 mm/N
Rms	4.77 kg/s
η _o (Eta Zero)	0.8 %
EBP	108 Hz



12PR300

12" - 300 W - 99 dB

12PR320

12" - 300 W - 97 dB



NOMINAL SPECIFICATIONS

	12PR300	12PR320
Nominal Diameter	300 mm (12 in)	300 mm (12 in)
Overall Diameter	315.2 mm (12.4 in)	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)	298.5 mm (11.75 in)
Baffle Cutout Diameter	283 mm (11.14 in)	282 mm (11.10 in)
Depth	140.6 mm (5.54 in)	120 mm (4.72 in)
Flange and gasket Thickness	12.1 mm (0.48 in)	12 mm (0.47 in)
Net Weight	2.5 kg (5.5 lb)	2.75 kg (6.1 lb)
Shipping Box	350 x 346 x 216 mm	350 x 346 x 190 mm
(Single Box)	(13.8 x 13.6 x 8.5 in)	(13.8 x 13.6 x 7.5 in)
Shipping Weight	3.25 kg (7.2 lb)	3.4 kg (7.5 lb)

NOTES:

(1) 2 Hours Test According to AES 2-1984 Rev, 2003

(2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$

(3) Maximum excursion before permanent damage

(4) Maximum power is defined as 3dB greater than nominal power

(5) Treated Polycotton

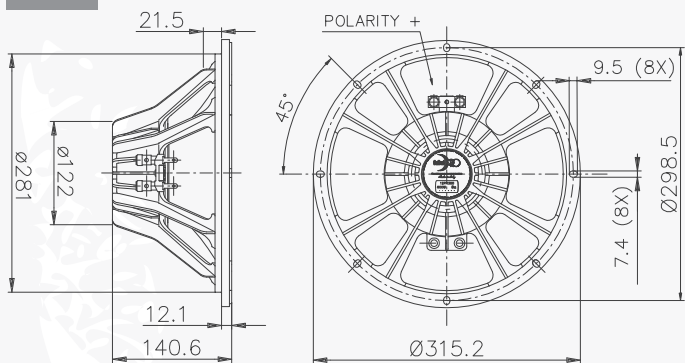
TECHNICAL PARAMETERS

	12PR300	12PR320
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.2 Ω	6.4 Ω
AES Power Handling (1)	300 W	300 W
Maximum Power Handling (4)	600 W	600 W
Sensitivity (1W/1m)	99 dB	97 dB
Frequency Range	50÷5000 Hz	45÷5000 Hz
Voice Coil Diameter	65 mm (2.56 in)	65 mm (2.56 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	12.5 mm (0.49 in)	17.4 mm (0.69 in)
Magnetic Gap Depth	8 mm (0.31 in)	8 mm (0.31 in)
Flux Density	1.25 T	1.2 T
Magnet	Neodymium Slug	Neodymium Slug
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	M-Roll	Triple Roll
NET Air Volume filled by Loudspeaker	1.9 dm ³ (0.067 ft ³)	1.9 dm ³ (0.067 ft ³)
Spider Profile	1x variable height waves	

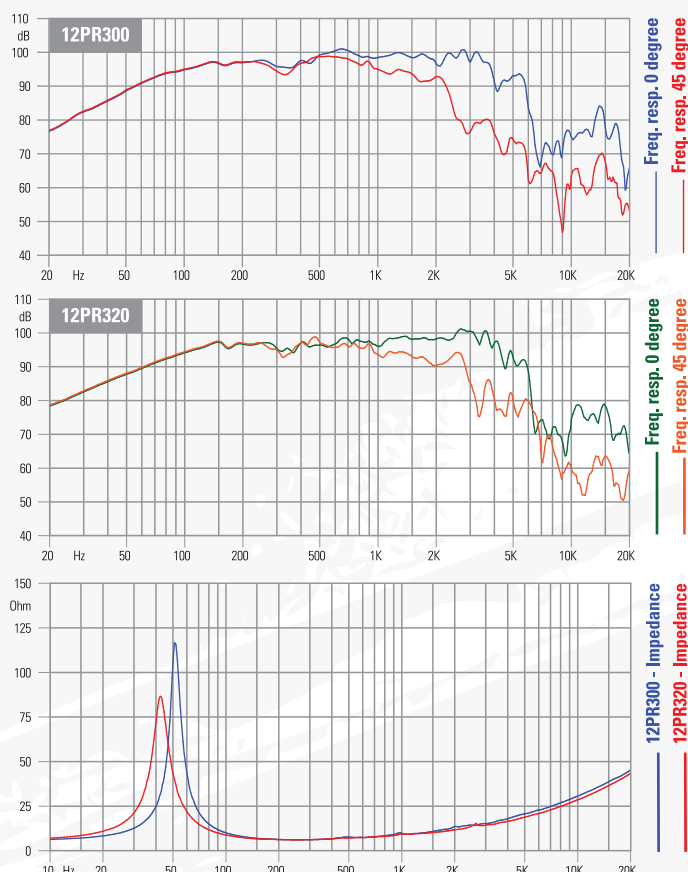
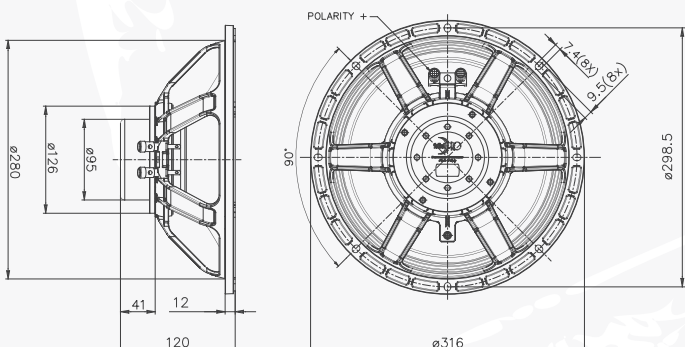
THIELE & SMALL PARAMETERS

	12PR300	12PR320
Fs	50 Hz	42 Hz
Re	5.4 Ω	5.3 Ω
Qes	0.37	0.39
Qms	9.9	7.8
Qts	0.36	0.37
Vas	79.2 dm ³ (2.8 ft ³)	94.8 dm ³ (3.35 ft ³)
Sd	489 cm ² (75.80 in ²)	489 cm ² (75.80 in ²)
Xmax (2)	4.92 mm	7.37 mm
Xdamage (3)	14 mm	17 mm
Mms	43.4 g	51.4 g
Bl	14.1 N/A	13.5 N/A
Le	0.42 mH	0.67 mH
Mmd	36.6 g	39.3 g
Cms	0.23 mm/N	0.28 mm/N
Rms	1.37 kg/s	1.74 kg/s
η_e (Eta Zero)	2.60 %	1.73 %
EBP	135 Hz	108 Hz

12PR300



12PR320



12PR310

12" - 300 W - 99 dB

12PR330

12" - 300 W - 98 dB



NOMINAL SPECIFICATIONS

	12PR310	12PR330
Nominal Diameter	300 mm (12 in)	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)	282 mm (11.10 in)
Depth	135 mm (5.31 in)	135 mm (5.31 in)
Flange and gasket Thickness	12 mm (0.47 in)	12 mm (0.47 in)
Net Weight	4.3 kg (9.5 lb)	4.3 kg (9.5 lb)
Shipping Box	350 x 346 x 190 mm	350 x 346 x 190 mm
(Single Box)	(13.8 x 13.6 x 7.5 in)	(13.8 x 13.6 x 7.5 in)
Shipping Weight	5 kg (11.0 lb)	5 kg (11.0 lb)

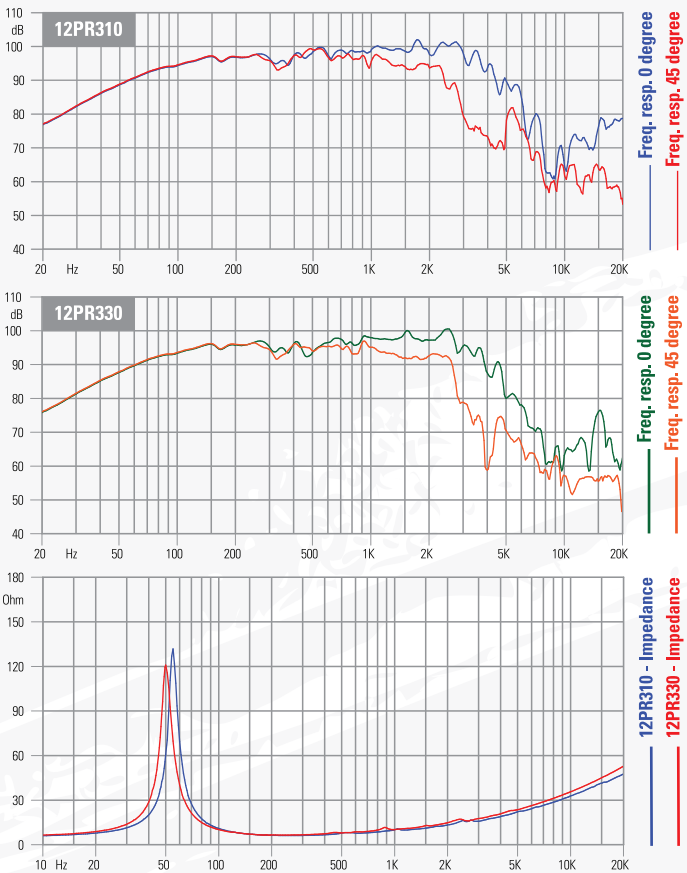
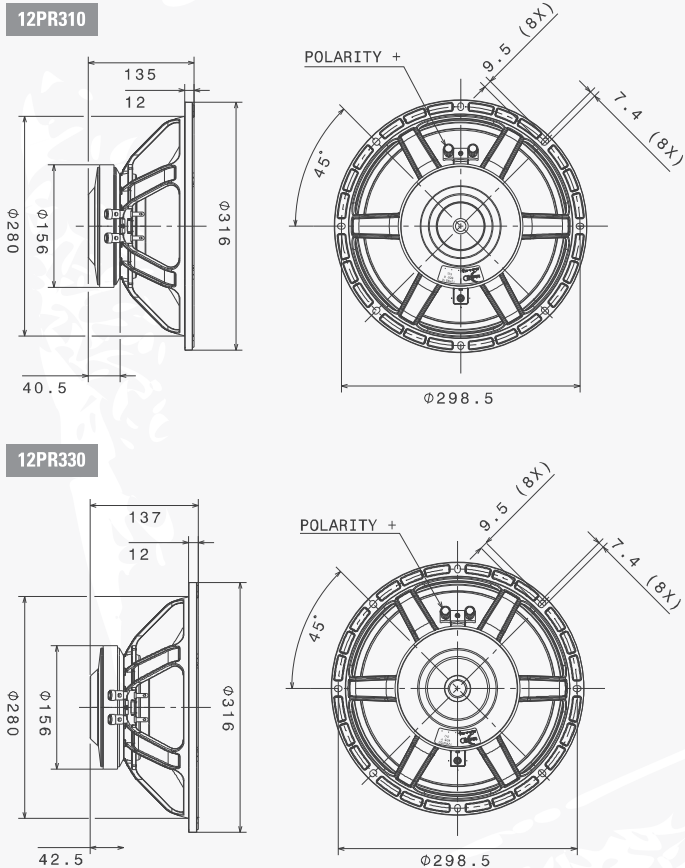
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev, 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

	12PR310	12PR330
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.7 Ω	6.6 Ω
AES Power Handling (1)	300 W	300 W
Maximum Power Handling (4)	600 W	600 W
Sensitivity (1W/1m)	99 dB	98 dB
Frequency Range	50÷4000 Hz	50÷4000 Hz
Voice Coil Diameter	65 mm (2.56 in)	65 mm (2.56 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	12.5 mm (0.49 in)	17.4 mm (0.69 in)
Magnetic Gap Depth	8 mm (0.31 in)	8 mm (0.31 in)
Flux Density	1.2 T	1.2 T
Magnet	Ferrite Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	M-Roll	M-Roll
NET Air Volume filled by Loudspeaker	1.9 dm³ (0.067 ft³)	1.9 dm³ (0.067 ft³)
Spider Profile	1x variable height waves	

THIELE & SMALL PARAMETERS

	12PR310	12PR330
Fs	54 Hz	50 Hz
Re	5.4 Ω	5.3 Ω
Qes	0.41	0.42
Qms	11.6	10.9
Qts	0.40	0.4
Vas	62.8 dm³ (2.22 ft³)	67.7 dm³ (2.39 ft³)
Sd	489 cm² (75.80 in²)	489 cm² (75.80 in²)
Xmax (2)	4.92 mm	7.37 mm
Xdamage (3)	15.25 mm	15.25 mm
Mms	46.9 g	50.8 g
Bl	14.4 N/A	14.2 N/A
Le	0.61 mH	0.76 mH
Mmd	40.1 g	38.6 g
Cms	0.18 mm/N	0.20 mm/N
Rms	1.37 kg/s	1.46 kg/s
ηe (Eta Zero)	2.32 %	1.96 %
EBP	132 Hz	119 Hz



10HP1020

10" - 700 W - 96 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)
Baffle Cutout Diameter	232 mm (9.13 in)
Depth	141.3 mm (5.56 in)
Flange and gasket Thickness	12.5 mm (0.49 in)
Net Weight	5.2 kg (11.5 lb)
Shipping Box	294 x 290 x 203 mm
(Single Carton Box)	(11.6 x 11.4 x 8.0 in)
Shipping Weight	5.8 kg (12.8 lb)

NOTES:

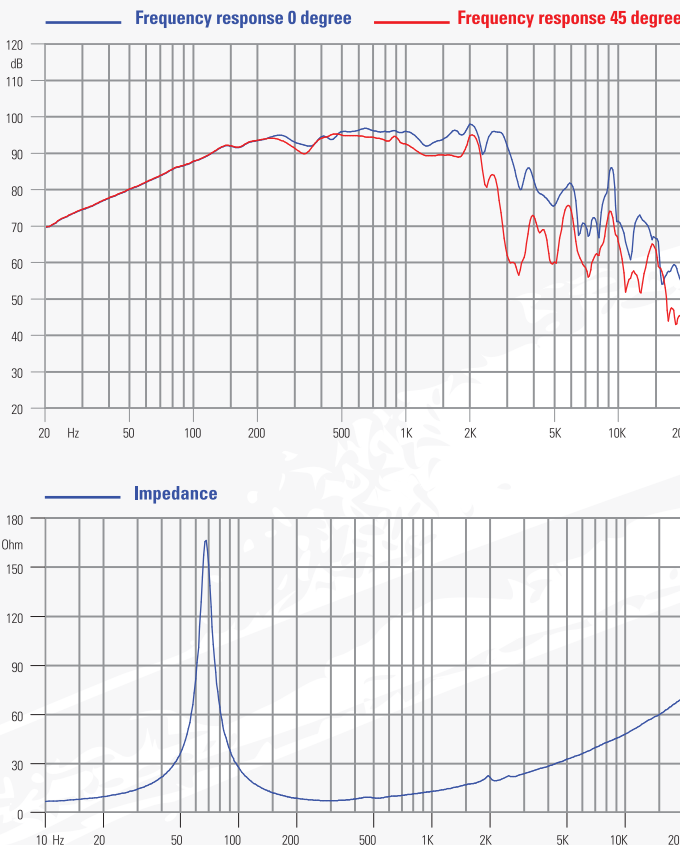
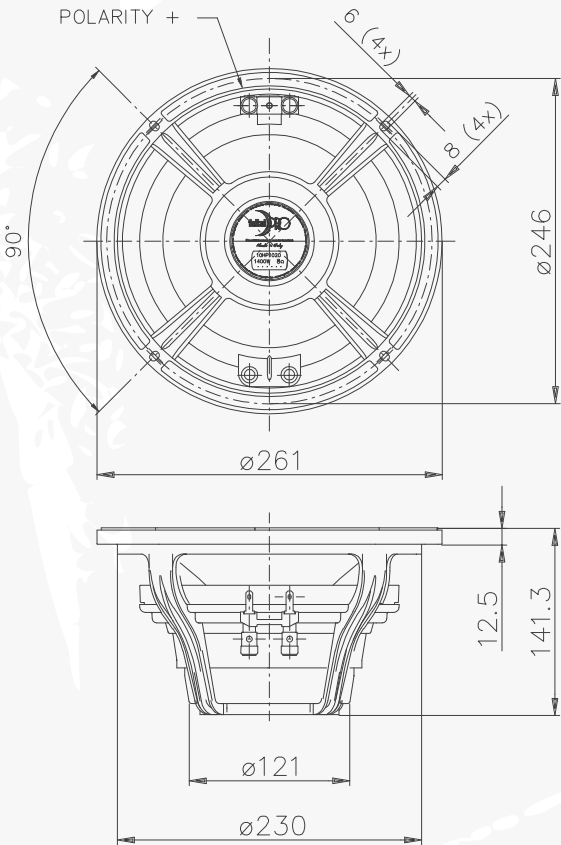
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton
PATENT IT2006/000327

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.3 Ω
AES Power Handling (1)	700 W
Maximum Power Handling (4)	1400 W
Sensitivity (1W/1m)	96 dB
Frequency Range	60÷2500 Hz
Voice Coil Diameter	100 mm (4 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	22 mm (0.87 in)
Magnetic Gap Depth	12 mm (0.47 in)
Flux Density	1.3 T
Magnet	Neodymium Slug
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	M-Roll
NET Air Volume filled by Loudspeaker	2.2 dm³ (0.078 ft³)
Spider Profile	2x non-adjacent symmetrical constant height waves

THIELE & SMALL PARAMETERS

Fs	60 Hz
Re	5.5 Ω
Qes	0.25
Qms	6.5
Qts	0.24
Vas	13.7 dm³ (0.48 ft³)
Sd	315 cm² (48.83 in²)
Xmax (2)	9.00 mm
Xdamage (3)	12.5 mm
Mms	72.5 g
Bl	24.5 N/A
Le	0.85 mH
Mmd	69.0 g
Cms	0.10 mm/N
Rms	4.2 kg/s
η _o (Eta Zero)	1.14 %
EBP	240 Hz



NEODYMIUM WOOFER

10FH500

10" - 500 W - 96 dB

NEODYMIUM MID WOOFER

10FH520

10" - 600 W - 97 dB



NOMINAL SPECIFICATIONS

	10FH500	10FH520
Nominal Diameter	250 mm (10 in)	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)	246 mm (9.69 in)
Baffle Cutout Diameter	232 mm (9.13 in)	232 mm (9.13 in)
Depth	141.3 mm (5.56 in)	141.3 mm (5.56 in)
Flange and gasket Thickness	12.5 mm (0.49 in)	12.5 mm (0.49 in)
Net Weight	3.4 kg (7.5 lb)	3.7 kg (8.2 lb)
Shipping Box	294 x 290 x 203 mm	294 x 290 x 203 mm
(Single Box)	(11.6 x 11.4 x 8.0 in)	(11.6 x 11.4 x 8.0 in)
Shipping Weight	4 kg (8.8 lb)	4.3 kg (9.5 lb)

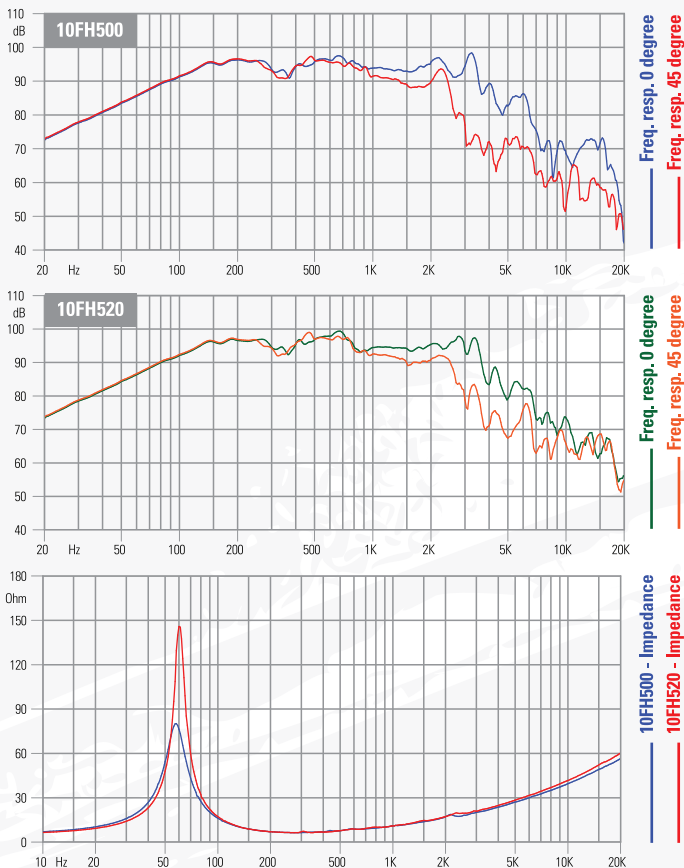
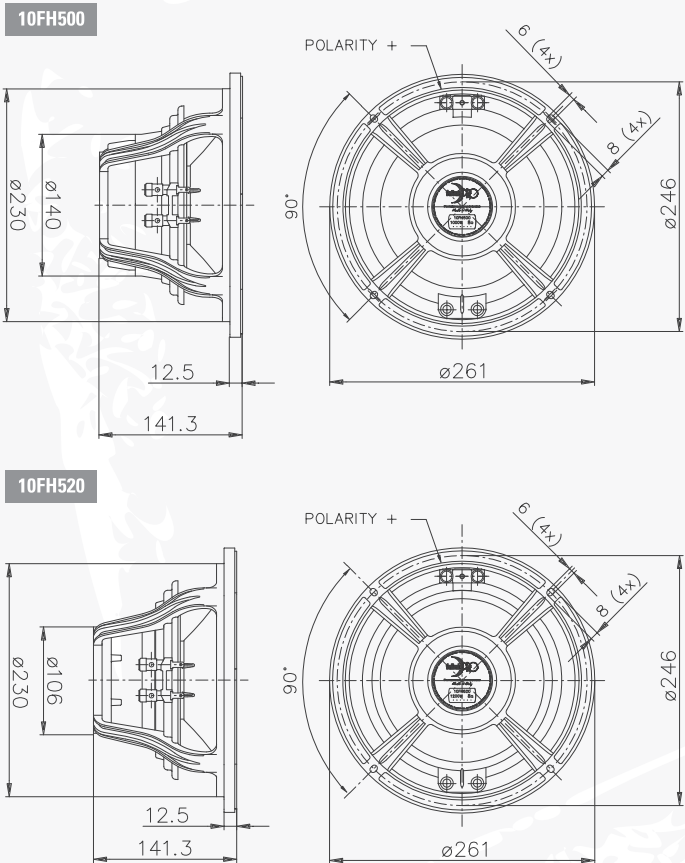
NOTES:
(1) 2 Hours Test According to AES 2-1984 Rev. 2003
(2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
(3) Maximum excursion before permanent damage
(4) Maximum power is defined as 3dB greater than nominal power
(5) Treated Polycotton
PATENT IT2006/000327 (10FH500)

TECHNICAL PARAMETERS

	10FH500	10FH520
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	6 Ω
AES Power Handling (1)	500 W	600 W
Maximum Power Handling (4)	1000 W	1200 W
Sensitivity (1W/1m)	96 dB	97 dB
Frequency Range	60÷4000 Hz	60÷4000 Hz
Voice Coil Diameter	77 mm (3 in)	77 mm (3 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	18.5 mm (0.73 in)	18.5 mm (0.73 in)
Magnetic Gap Depth	10.5 mm (0.41 in)	12 mm (0.47 in)
Flux Density	1.2 T	1.1 T
Magnet	Neodymium Slug	Neodymium Slug
Basket Material	Aluminum	Aluminum
Demodulation	No	Aluminum Ring
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	1.6 dm³ (0.057 ft³)	1.7 dm³ (0.060 ft³)
Spider Profile	1x constant height waves	1x variable height waves

THIELE & SMALL PARAMETERS

	10FH500	10FH520
Fs	60 Hz	60 Hz
Re	5.1 Ω	5.1 Ω
Qes	0.28	0.30
Qms	3.3	11.1
Qts	0.26	0.29
Vas	22.9 dm³ (0.81 ft³)	20.5 dm³ (0.72 ft³)
Sd	328 cm² (50.84 in²)	321 cm² (49.76 in²)
Xmax (2)	7.50 mm	7.25 mm
Xdamage (3)	12.5 mm	19.5 mm
Mms	47.0 g	50.3 g
Bl	17.9 N/A	18 N/A
Le	0.85 mH	0.9 mH
Mmd	44.8 g	47.0 g
Cms	0.15 mm/N	0.14 mm/N
Rms	5.4 kg/s	1.7 kg/s
η _e (Eta Zero)	1.70 %	1.44 %
EBP	214 Hz	200 Hz



10FH530

10" - 500 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)
Baffle Cutout Diameter	230 mm (9.06 in)
Depth	130 mm (5.12 in)
Flange and gasket Thickness	11.5 mm (0.45 in)
Net Weight	7.5 kg (16.5 lb)
Shipping Box	294 x 290 x 203 mm
(Single Carton Box)	(11.6 x 11.4 x 8.0 in)
Shipping Weight	8 kg (17.6 lb)

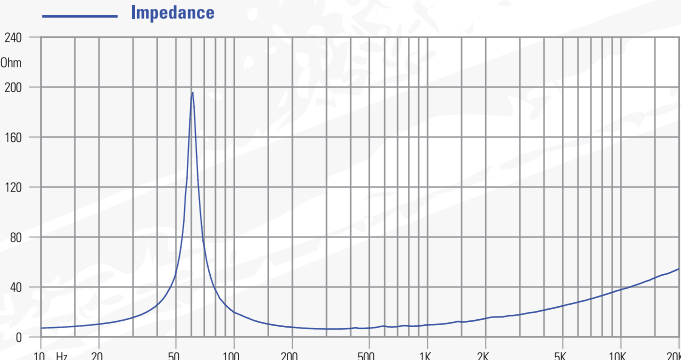
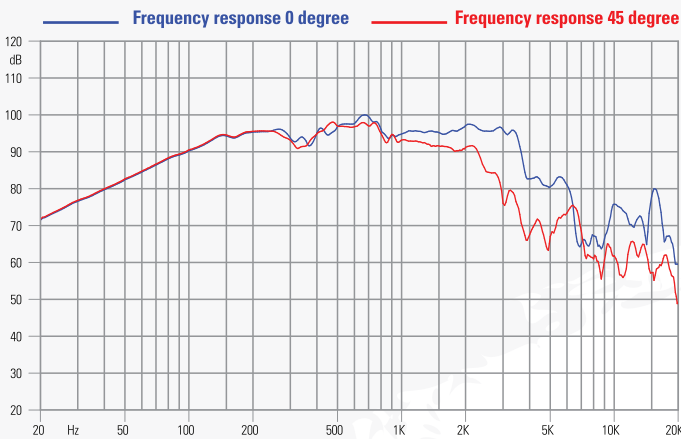
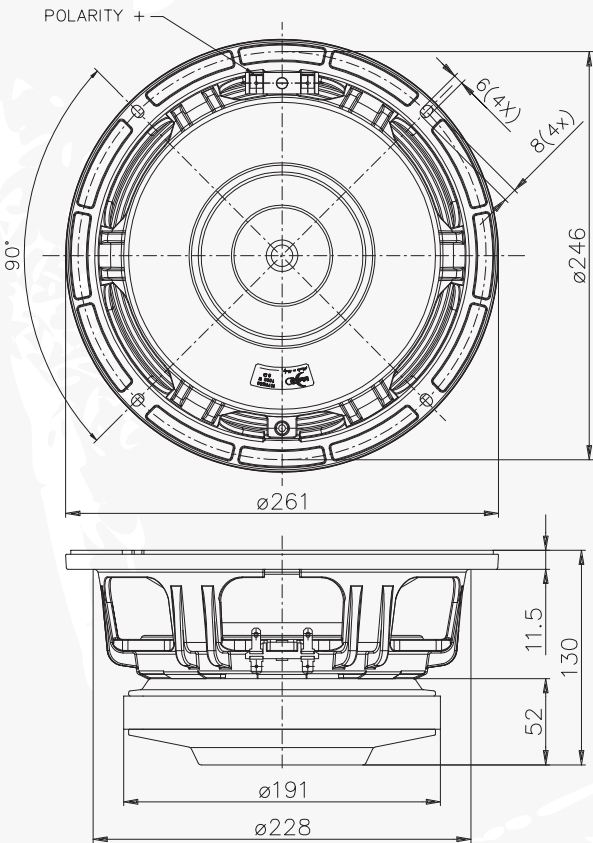
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.4 Ω
AES Power Handling (1)	500 W
Maximum Power Handling (4)	1000 W
Sensitivity (1W/1m)	97 dB
Frequency Range	60÷4000 Hz
Voice Coil Diameter	77 mm (3 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	18.5 mm (0.73 in)
Magnetic Gap Depth	10.5 mm (0.41 in)
Flux Density	1.2 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	2 dm³ (0.071 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	60 Hz
Re	5.1 Ω
Qes	0.25
Qms	12.4
Qts	0.25
Vas	20.4 dm³ (0.72 ft³)
Sd	321 cm² (49.76 in²)
Xmax (2)	7.50 mm
Xdamage (3)	18.8 mm
Mms	50.3 g
Bl	19.5 N/A
Le	0.8 mH
Mmd	47.0 g
Cms	0.14 mm/N
Rms	1.53 kg/s
η _o (Eta Zero)	1.70 %
EBP	240 Hz



10PR410

10" - 300 W - 99 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)
Baffle Cutout Diameter	230 mm (9.06 in)
Depth	131 mm (5.16 in)
Flange and gasket Thickness	11.5 mm (0.45 in)
Net Weight	7.5 kg (16.6 lb)
Shipping Box	294 x 290 x 203 mm
(Single Carton Box)	(11.6 x 11.4 x 8.0 in)
Shipping Weight	8.1 kg (17.9 lb)

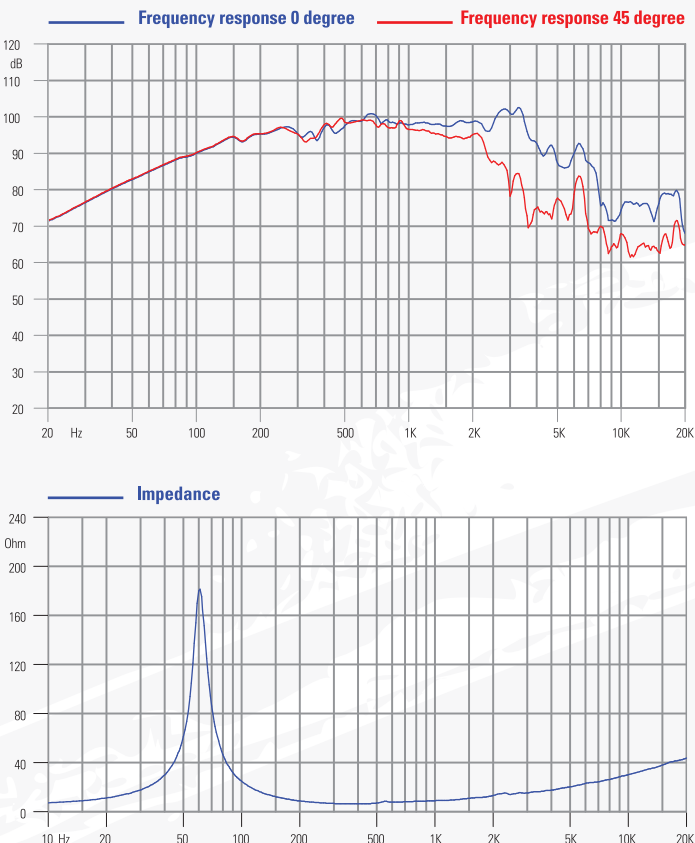
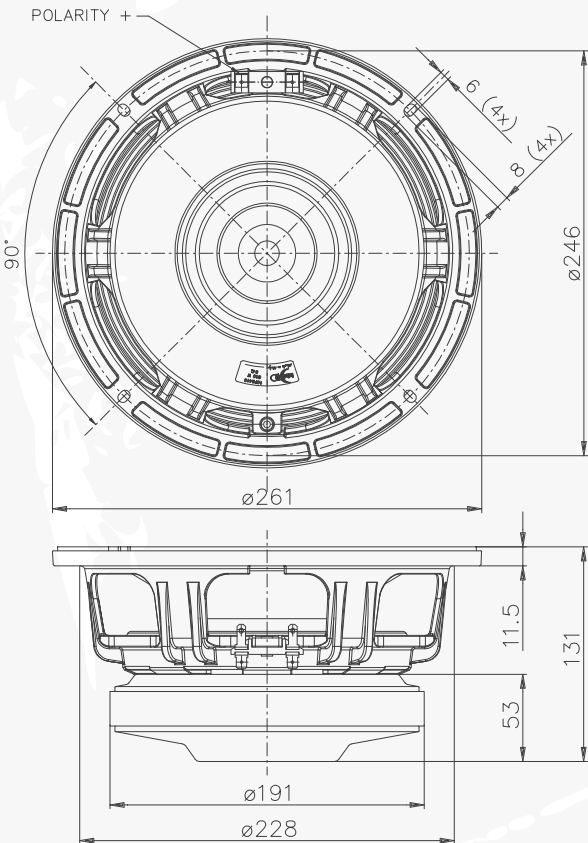
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth) / 2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.8 Ω
AES Power Handling (1)	300 W
Maximum Power Handling (4)	600 W
Sensitivity (1W/1m)	99 dB
Frequency Range	100÷2000 Hz
Voice Coil Diameter	65 mm (2.56 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	12.5 mm (0.49 in)
Magnetic Gap Depth	10.5 mm (0.41 in)
Flux Density	1.3 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Accordion (4 Waves)
NET Air Volume filled by Loudspeaker	2 dm³ (0.070 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	60 Hz
Re	5.4 Ω
Qes	0.22
Qms	8.7
Qts	0.21
Vas	27.6 dm³ (0.97 ft³)
Sd	317.8 cm² (49.26 in²)
Xmax (2)	4.50 mm
Xdamage (3)	12.2 mm
Mms	36.5 g
Bl	18.5 N/A
Le	0.6 mH
Mmd	33.3 g
Cms	0.19 mm/N
Rms	1.59 kg/s
η₀ (Eta Zero)	2.67 %
EBP	273 Hz



10PR300

10" - 300 W - 98 dB

10PR320

10" - 300 W - 96 dB



NOMINAL SPECIFICATIONS

	10PR300	10PR320
Nominal Diameter	250 mm (10 in)	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)	246 mm (9.69 in)
Baffle Cutout Diameter	232 mm (9.13 in)	230 mm (9.06 in)
Depth	115.3 mm (4.54 in)	110 mm (4.33 in)
Flange and gasket Thickness	12.2 mm (0.48 in)	12 mm (0.47 in)
Net Weight	2.3 kg (5.1 lb)	2.55 kg (5.6 lb)
Shipping Box	294 x 290 x 203 mm	282 x 280 x 140 mm
(Single Box)	(11.6 x 11.4 x 8.0 in)	(11.1 x 11.0 x 5.5 in)
Shipping Weight	2.8 kg (6.16 lb)	3.1 kg (6.8 lb)

NOTES:

(1) 2 Hours Test According to AES 2-1984 Rev. 2003

(2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$

(3) Maximum excursion before permanent damage

(4) Maximum power is defined as 3dB greater than nominal power

(5) Treated Polycotton

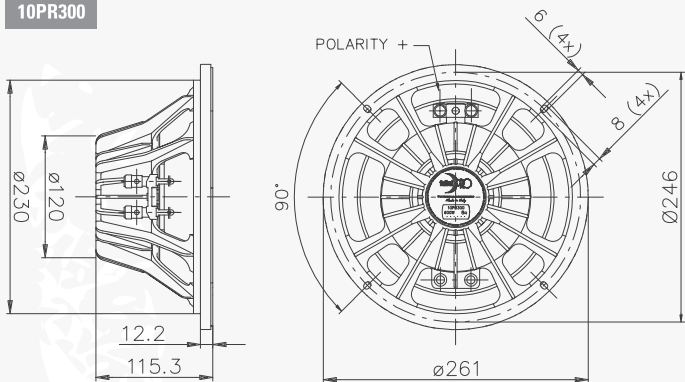
TECHNICAL PARAMETERS

	10PR300	10PR320
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	6.4 Ω
AES Power Handling (1)	300 W	300 W
Maximum Power Handling (4)	600 W	600 W
Sensitivity (1W/1m)	98 dB	96 dB
Frequency Range	60÷5000 Hz	50÷4000 Hz
Voice Coil Diameter	65 mm (2.56 in)	65 mm (2.56 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	12.5 mm (0.49 in)	17.4 mm (0.69 in)
Magnetic Gap Depth	8 mm (0.31 in)	8 mm (0.31 in)
Flux Density	1.25 T	1.2 T
Magnet	Neodymium Slug	Neodymium Slug
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	M-Roll	Triple Roll
NET Air Volume filled by Loudspeaker	1.3 dm ³ (0.046 ft ³)	1.3 dm ³ (0.046 ft ³)
Spider Profile	1x variable height waves	

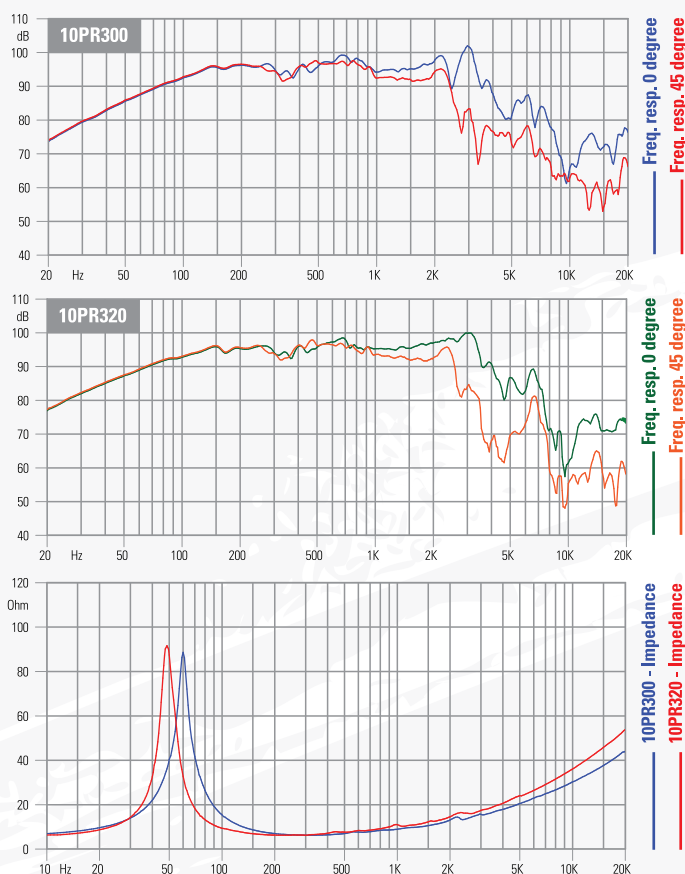
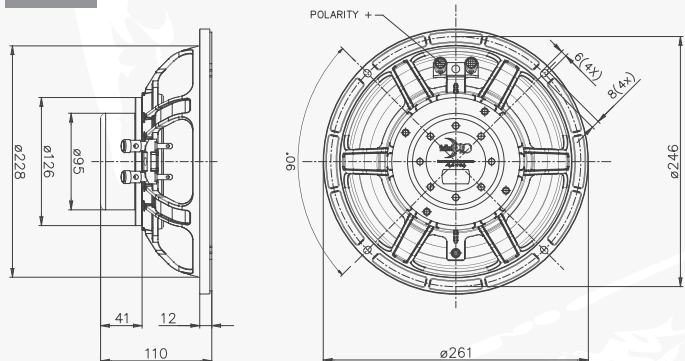
THIELE & SMALL PARAMETERS

	10PR300	10PR320
Fs	60 Hz	48 Hz
Re	5.4 Ω	5.3 Ω
Qes	0.29	0.31
Qms	5.8	4.6
Qts	0.27	0.29
Vas	36.7 dm ³ (1.30 ft ³)	45.9 dm ³ (1.62 ft ³)
Sd	322 cm ² (49.91 in ²)	321 cm ² (49.76 in ²)
Xmax (2)	4.92 mm	7.37 mm
Xdamage (3)	14 mm	17 mm
Mms	28.2 g	35.0 g
Bl	14.1 N/A	13.5 N/A
Le	0.6 mH	0.57 mH
Mmd	24.9 g	28.5 g
Cms	0.25 mm/N	0.31 mm/N
Rms	1.83 kg/s	2.31 kg/s
η_e (Eta Zero)	2.67 %	1.60 %
EBP	207 Hz	155 Hz

10PR300



10PR320



10PR310

10" - 300 W - 98 dB

10PR330

10" - 300 W - 96 dB



NOMINAL SPECIFICATIONS

	10PR310	10PR330
Nominal Diameter	250 mm (10 in)	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)	246 mm (9.69 in)
Baffle Cutout Diameter	230 mm (9.13 in)	230 mm (9.06 in)
Depth	109 mm (4.29 in)	111 mm (4.37 in)
Flange and gasket Thickness	12 mm (0.47 in)	12 mm (0.47 in)
Net Weight	4.1 kg (9.0 lb)	4.1 kg (9.0 lb)
Shipping Box	282 x 280 x 140 mm	282 x 280 x 140 mm
(Single Box)	(11.1 x 11.0 x 5.5 in)	(11.1 x 11.0 x 5.5 in)
Shipping Weight	4.7 kg (10.4 lb)	4.7 kg (10.4 lb)

- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev, 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

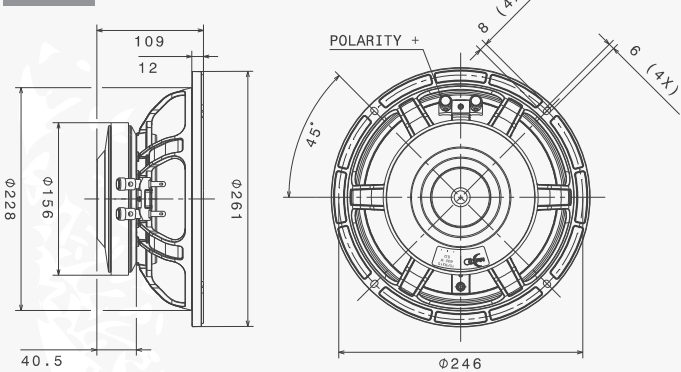
TECHNICAL PARAMETERS

	10PR310	10PR330
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.6 Ω	6.6 Ω
AES Power Handling (1)	300 W	300 W
Maximum Power Handling (4)	600 W	600 W
Sensitivity (1W/1m)	98 dB	96 dB
Frequency Range	60÷4000 Hz	60÷3150 Hz
Voice Coil Diameter	65 mm (2.56 in)	65 mm (2.56 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	12.5 mm (0.49 in)	17.4 mm (0.69 in)
Magnetic Gap Depth	8 mm (0.31 in)	8 mm (0.31 in)
Flux Density	1.2 T	1.2 T
Magnet	Ferrite Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	No	No
Cone Surround (5)	M-Roll	M-Roll
NET Air Volume filled by Loudspeaker	1.3 dm³ (0.046 ft³)	1.3 dm³ (0.046 ft³)
Spider Profile	1x variable height waves	

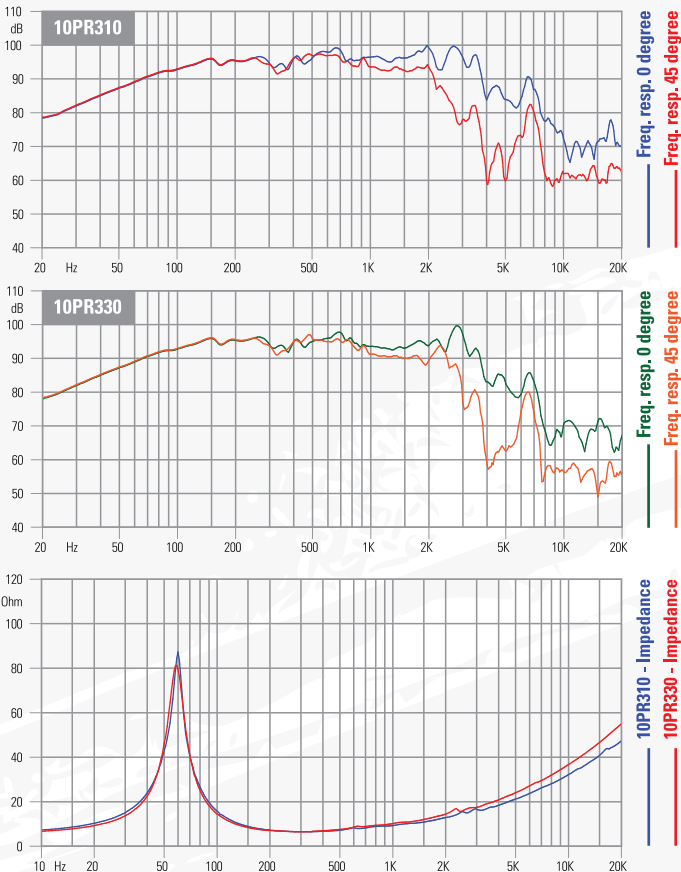
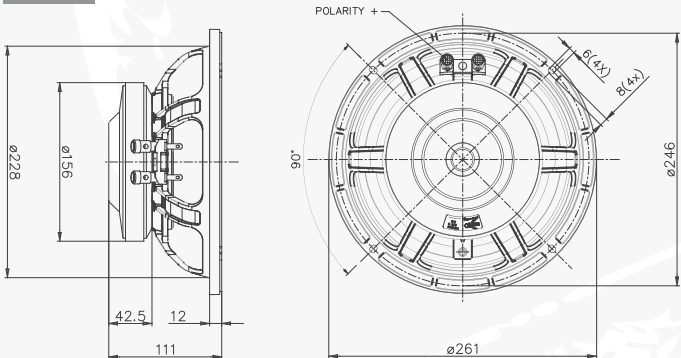
THIELE & SMALL PARAMETERS

	10PR310	10PR330
Fs	60 Hz	60 Hz
Re	5.4 Ω	5.3 Ω
Qes	0.36	0.36
Qms	5.7	4.6
Qts	0.34	0.33
Vas	28 dm³ (0.99 ft³)	28.3 dm³ (1.00 ft³)
Sd	322 cm² (49.91 in²)	322 cm² (49.91 in²)
Xmax (2)	4.92 mm	7.37 mm
Xdamage (3)	15.25 mm	15.25 mm
Mms	36.9 g	36.5 g
Bl	14.4 N/A	14.3 N/A
Le	0.64 mH	0.64 mH
Mmd	33.6 g	33.2 g
Cms	0.19 mm/N	0.19 mm/N
Rms	2.44 kg/s	2.99 kg/s
η _e (Eta Zero)	1.63 %	1.67 %
EBP	167 Hz	167 Hz

10PR310



10PR330



10RS350

10" - 300 W - 91 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)
Baffle Cutout Diameter	230 mm (9.06 in)
Depth	116.5 mm (4.59 in)
Flange and gasket Thickness	17.1 mm (0.67 in)
Net Weight	4.2 kg (9.3 lb)
Shipping Box	282 x 280 x 140 mm
(Single Carton Box)	(11.1 x 11.0 x 5.5 in)
Shipping Weight	4.8 kg (10.6 lb)

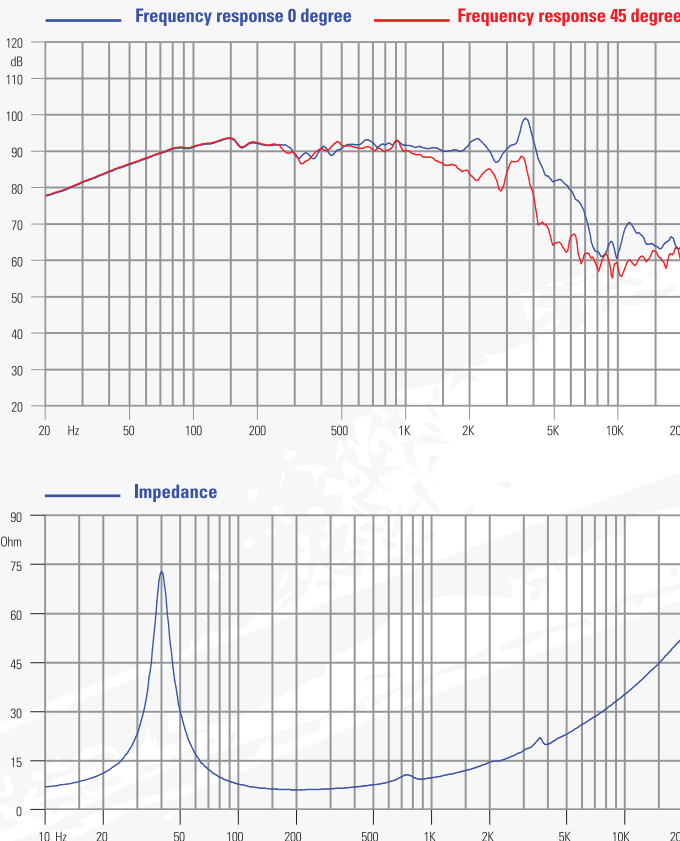
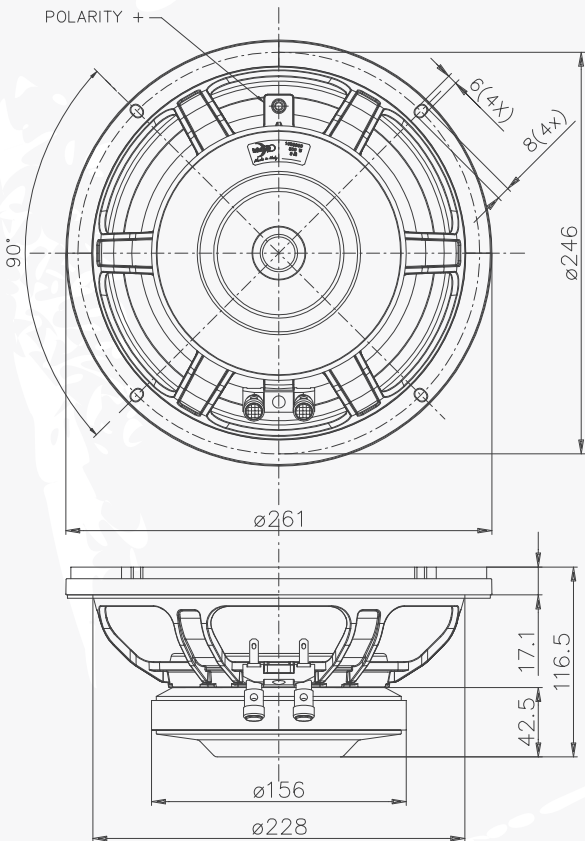
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) NBR (Rubber)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6 Ω
AES Power Handling (1)	300 W
Maximum Power Handling (4)	600 W
Sensitivity (1W/1m)	91 dB
Frequency Range	40÷2500 Hz
Voice Coil Diameter	65 mm (2.56 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	17.4 mm (0.69 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1.2 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	1.4 dm³ (0.049 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	40 Hz
Re	5.3 Ω
Qes	0.4
Qms	5.2
Qts	0.37
Vas	39.5 dm³ (1.39 ft³)
Sd	322 cm² (49.91 in²)
Xmax (2)	7.37 mm
Xdamage (3)	17.4 mm
Mms	59 g
Bl	14 N/A
Le	0.95 mH
Mmd	55.7 g
Cms	0.27 mm/N
Rms	3.53 kg/s
η _o (Eta Zero)	0.61 %
EBP	100 Hz



10FE200

10" - 150 W - 96 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	250 mm (10 in)
Overall Diameter	256.8 mm (10.11 in)
Bolt Circle Diameter	243.8 mm (9.60 in)
Baffle Cutout Diameter	233.8 mm (9.20 in)
Depth	102 mm (4.02 in)
Flange and gasket Thickness	8 mm (0.31 in)
Net Weight	2.2 kg (4.9 lb)
Shipping Box	282 x 280 x 140 mm
(Single Carton Box)	(11.1 x 11.0 x 5.5 in)
Shipping Weight	2.6 kg (5.7 lb)

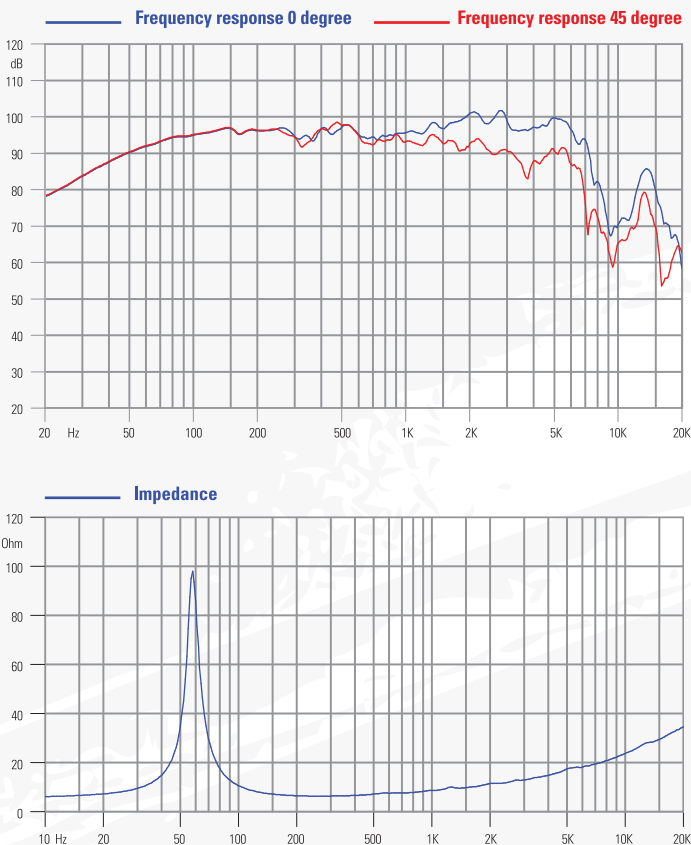
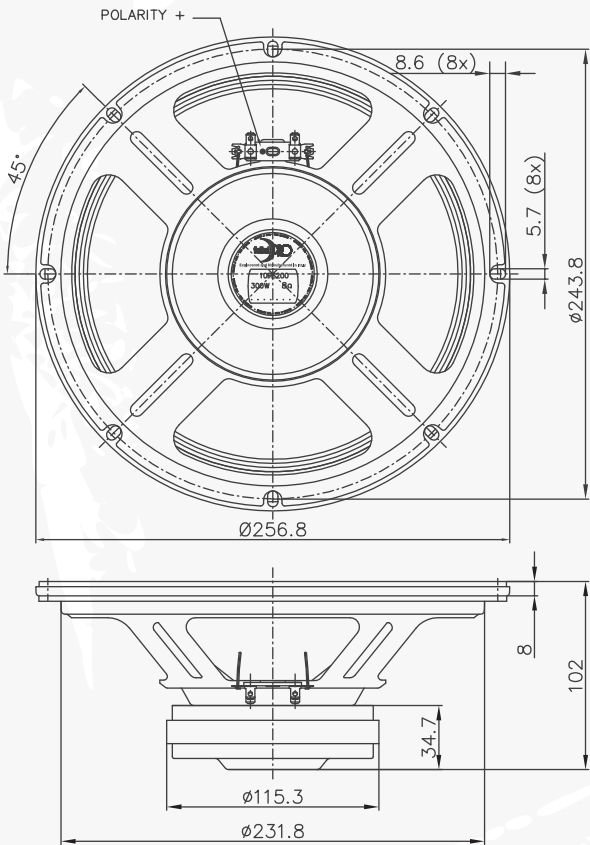
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.2 Ω
AES Power Handling (1)	150 W
Maximum Power Handling (4)	300 W
Sensitivity (1W/1m)	96 dB
Frequency Range	50÷4500 Hz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Winding Depth	12 mm (0.47 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1 T
Magnet	Ferrite Ring
Basket Material	Steel
Demodulation	No
Cone Surround (5)	Accordion (4 Waves)
NET Air Volume filled by Loudspeaker	0.6 dm³ (0.021 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	55 Hz
Re	5.9 Ω
Qes	0.74
Qms	11.3
Qts	0.70
Vas	53.4 dm³ (1.89 ft³)
Sd	332 cm² (51.46 in²)
Xmax (2)	4.67 mm
Xdamage (3)	10.4 mm
Mms	24.5 g
Bl	8.2 N/A
Le	0.42 mH
Mmd	21.2 g
Cms	0.34 mm/N
Rms	0.75 kg/s
η₀ (Eta Zero)	1.16 %
EBP	74 Hz



NEODYMIUM WOOFER

8PR200

8" - 200 W - 95 dB

FERRITE WOOFER

8PR210

8" - 200 W - 95 dB



NOMINAL SPECIFICATIONS

	8PR200	8PR210
Nominal Diameter	200 mm (8 in)	200 mm (8 in)
Overall Diameter	223.75/207.9 mm (8.81/8.18 in)	223.75/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)	183 mm (7.20 in)
Depth	116.7 mm (4.59 in)	98.5 mm (3.88 in)
Flange and gasket Thickness	10.7 mm (0.42 in)	10.8 mm (0.43 in)
Net Weight	2.1 kg (4.6 lb)	4.3 kg (9.5 lb)
Shipping Box	235 x 235 x 155 mm	235 x 235 x 155 mm
(Single Carton Box)	(9.3 x 9.3 x 6.1 in)	(9.3 x 9.3 x 6.1 in)
Shipping Weight	2.5 kg (5.5 lb)	4.6 kg (10.1 lb)

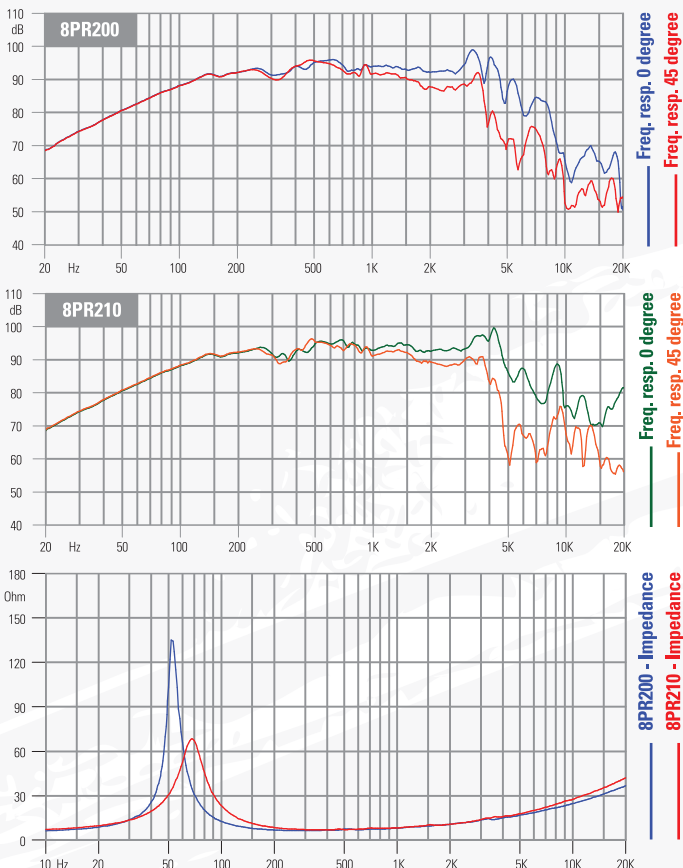
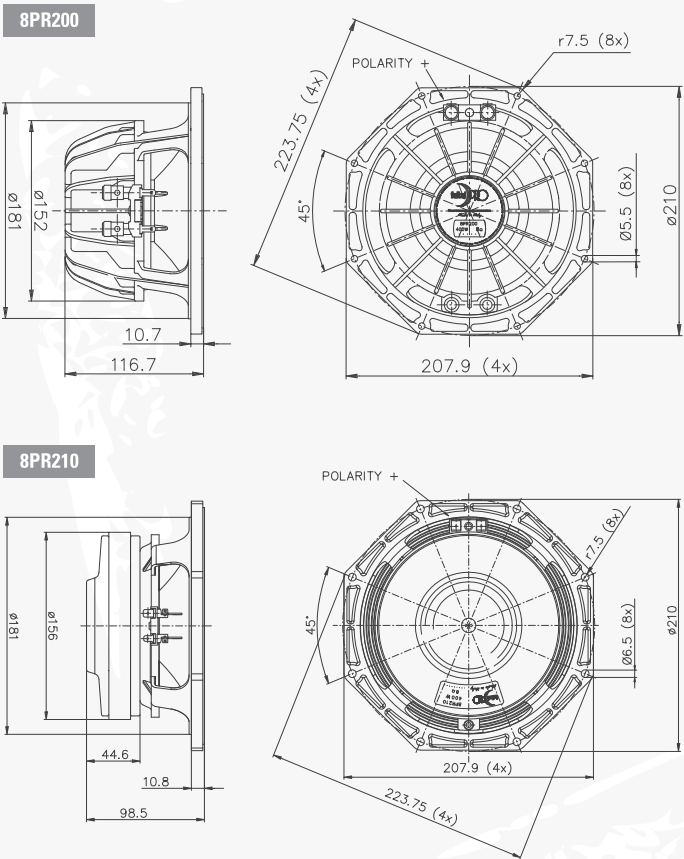
- NOTES:**
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Poly cotton

TECHNICAL PARAMETERS

	8PR200	8PR210
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	7 Ω
AES Power Handling (1)	200 W	200 W
Maximum Power Handling (4)	400 W	400 W
Sensitivity (1W/1m)	95 dB	95 dB
Frequency Range	70÷5000 Hz	70÷5000 Hz
Voice Coil Diameter	52 mm (2 in)	52 mm (2 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Glass Fiber
Winding Depth	19.3 mm (0.76 in)	16.5 mm (0.65 in)
Magnetic Gap Depth	9 mm (0.35 in)	8 mm (0.31 in)
Flux Density	1.15 T	1.3 T
Magnet	Neodymium Ring	Ferrite Ring
Basket Material	Aluminum	Aluminum
Demodulation	Aluminum Ring	Aluminum Ring
Cone Surround (5)	Triple Roll	Triple Roll
NET Air Volume filled by Loudspeaker	1 dm³ (0.035 ft³)	1.06 dm³ (0.037 ft³)
Spider Profile	1x variable height waves	

THIELE & SMALL PARAMETERS

	8PR200	8PR210
Fs	58 Hz	65 Hz
Re	5.1 Ω	5.7 Ω
Qes	0.38	0.32
Qms	9.4	3.1
Qts	0.36	0.29
Vas	15.1 dm³ (0.53 ft³)	12.9 dm³ (0.46 ft³)
Sd	196 cm² (30.38 in²)	196 cm² (30.38 in²)
Xmax (2)	8.15 mm	6.92 mm
Xdamage (3)	13.5 mm	15.7 mm
Mms	27.2 g	25.3 g
Bl	11.5 N/A	13.5 N/A
Le	0.55 mH	0.46 mH
Mmd	25.6 g	23.7 g
Cms	0.28 mm/N	0.24 mm/N
Rms	1.04 kg/s	3.38 kg/s
η _o (Eta Zero)	0.76 %	1.06 %
EBP	153 Hz	203 Hz



8PR155

8" - 200 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	223.7/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)
Depth	98.5 mm (3.88 in)
Flange and gasket Thickness	10.8 mm (0.43 in)
Net Weight	4.3 kg (9.5 lb)
Shipping Box	235 x 235 x 155 mm
(Single Carton Box)	(9.3 x 9.3 x 6.1 in)
Shipping Weight	4.6 kg (10.1 lb)

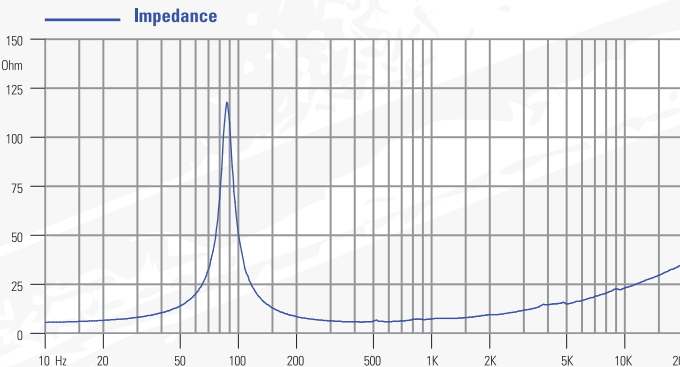
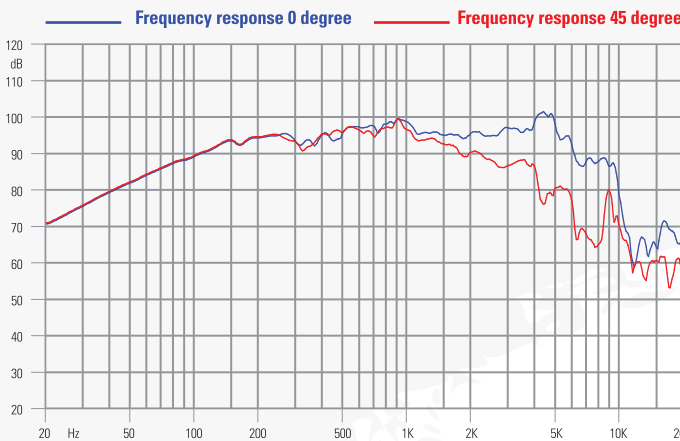
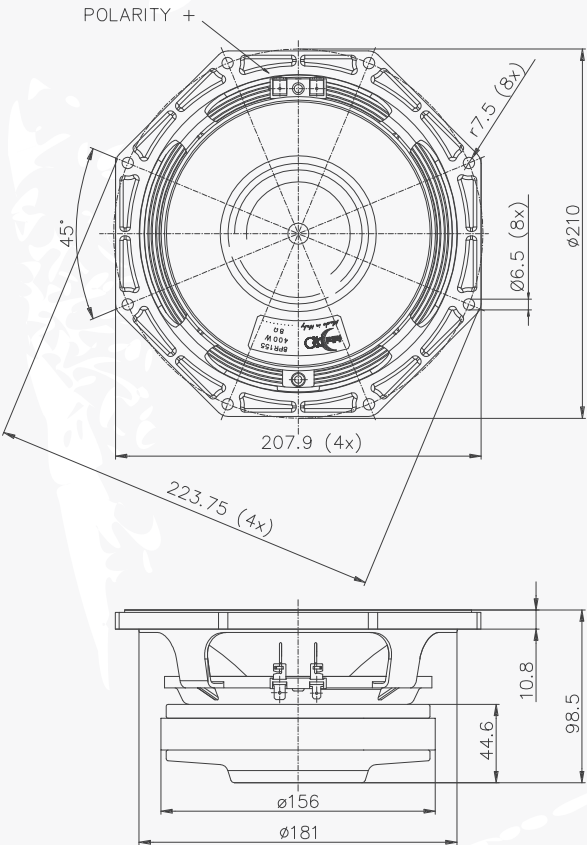
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.3 Ω
AES Power Handling (1)	200 W
Maximum Power Handling (4)	400 W
Sensitivity (1W/1m)	97 dB
Frequency Range	80-6300 Hz
Voice Coil Diameter	52 mm (2 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	9.8 mm (0.39 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1.3 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	1.06 dm³ (0.037 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	85 Hz
Re	5.3 Ω
Qes	0.39
Qms	8.8
Qts	0.37
Vas	8.7 dm³ (0.31 ft³)
Sd	207 cm² (32.09 in²)
Xmax (2)	3.57 mm
Xdamage (3)	10.65 mm
Mms	24.5 g
Bl	13.4 N/A
Le	0.41 mH
Mmd	22.8 g
Cms	0.14 mm/N
Rms	1.48 kg/s
η₀ (Eta Zero)	1.35 %
EBP	218 Hz



8RS250

8" - 200 W - 93 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	223.75/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)
Depth	108 mm (4.25 in)
Flange and gasket Thickness	15.3 mm (0.60 in)
Net Weight	4.4 kg (9.7 lb)
Shipping Box	235 x 235 x 155 mm
(Single Carton Box)	(9.3 x 9.3 x 6.1 in)
Shipping Weight	4.7 kg (10.4 lb)

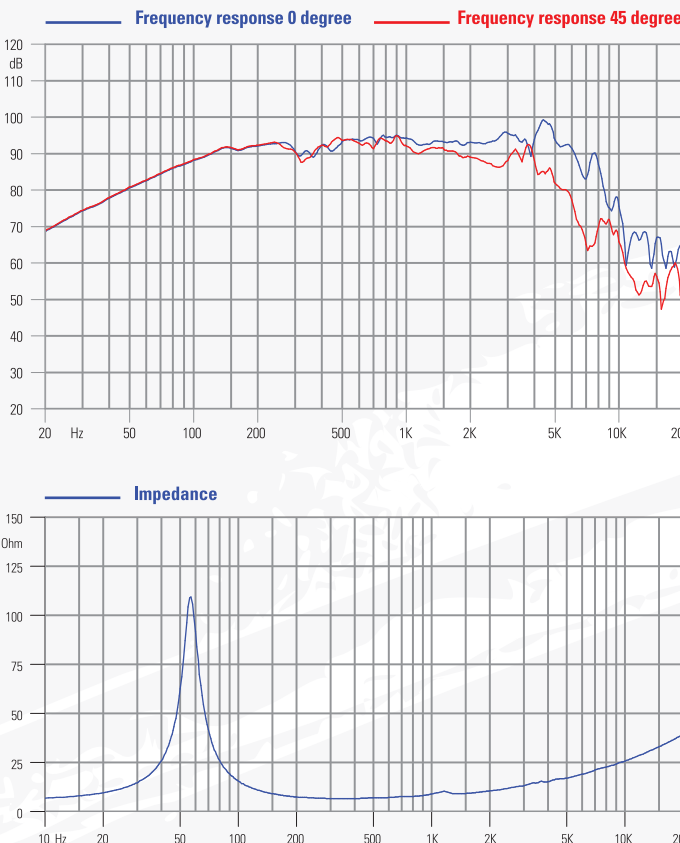
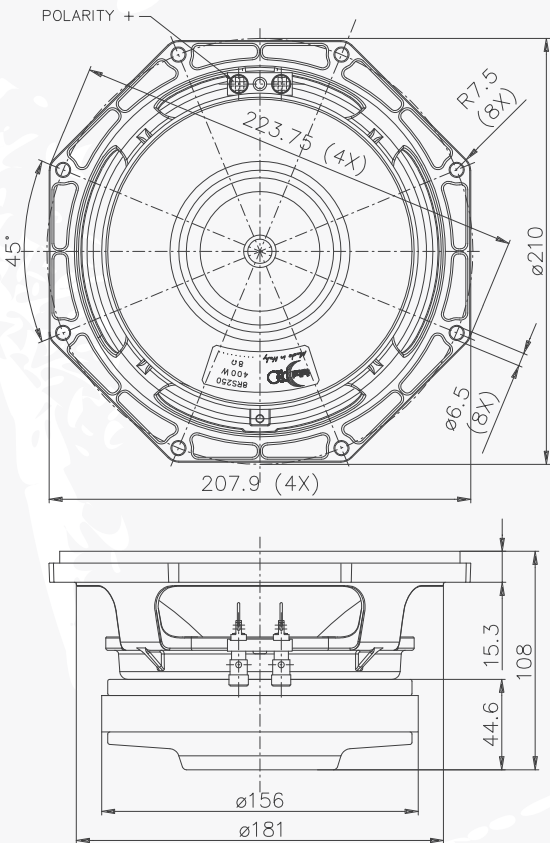
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) NBR (Rubber)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7 Ω
AES Power Handling (1)	200 W
Maximum Power Handling (4)	400 W
Sensitivity (1W/1m)	93 dB
Frequency Range	60-6300 Hz
Voice Coil Diameter	52 mm (2 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	16.5 mm (0.65 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1.3 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	1.17 dm³ (0.041 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	56 Hz
Re	5.7 Ω
Qes	0.34
Qms	5.7
Qts	0.32
Vas	16 dm³ (0.57 ft³)
Sd	207 cm² (32.09 in²)
Xmax (2)	6.92 mm
Xdamage (3)	15.7 mm
Mms	30.6 g
Bl	13.5 N/A
Le	0.35 mH
Mmd	28.9 g
Cms	0.26 mm/N
Rms	1.89 kg/s
η₀ (Eta Zero)	0.81 %
EBP	165 Hz



W8N8-150

8" - 150 W - 94 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	223.75/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)
Depth	116.7 mm (4.59 in)
Flange and gasket Thickness	10.7 mm (0.42 in)
Net Weight	1.7 kg (3.7 lb)
Shipping Box	235 x 235 x 155 mm
(Single Carton Box)	(9.3 x 9.3 x 6.1 in)
Shipping Weight	2.6 kg (5.7 lb)

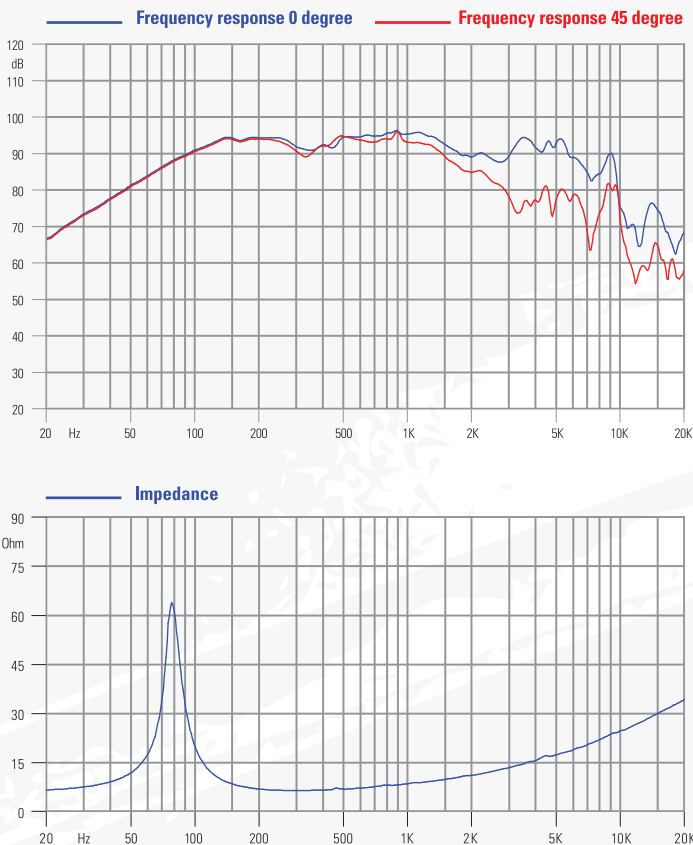
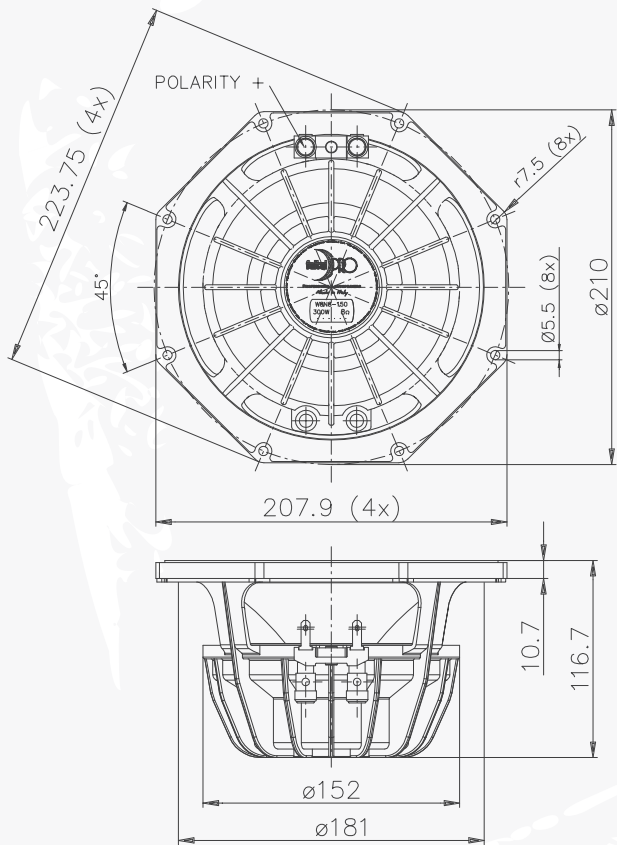
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	150 W
Maximum Power Handling (4)	300 W
Sensitivity (1W/1m)	94 dB
Frequency Range	80-6300 Hz
Voice Coil Diameter	52 mm (2 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	13.7 mm (0.54 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1 T
Magnet	Neodymium Slug
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	M-Roll
NET Air Volume filled by Loudspeaker	1 dm³ (0.035 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	76 Hz
Re	5.8 Ω
Qes	0.59
Qms	4.7
Qts	0.53
Vas	12.6 dm³ (0.44 ft³)
Sd	206 cm² (31.93 in²)
Xmax (2)	5.52 mm
Xdamage (3)	12 mm
Mms	20.9 g
Bl	9.9 N/A
Le	0.55 mH
Mmd	19.4 g
Cms	0.20 mm/N
Rms	2.11 kg/s
η _e (Eta Zero)	0.91 %
EBP	129 Hz



8FE200

8" - 130 W - 95 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	209.2 mm (8.24 in)
Bolt Circle Diameter	196.9 mm (7.75 in)
Baffle Cutout Diameter	178 mm (7.01 in)
Depth	89 mm (3.50 in)
Flange and gasket Thickness	8 mm (0.31 in)
Net Weight	2.2 kg (4.7 lb)
Shipping Box	227 x 224 x 113 mm
(Single Carton Box)	(8.9 x 8.8 x 4.4 in)
Shipping Weight	3 kg (6.6 lb)

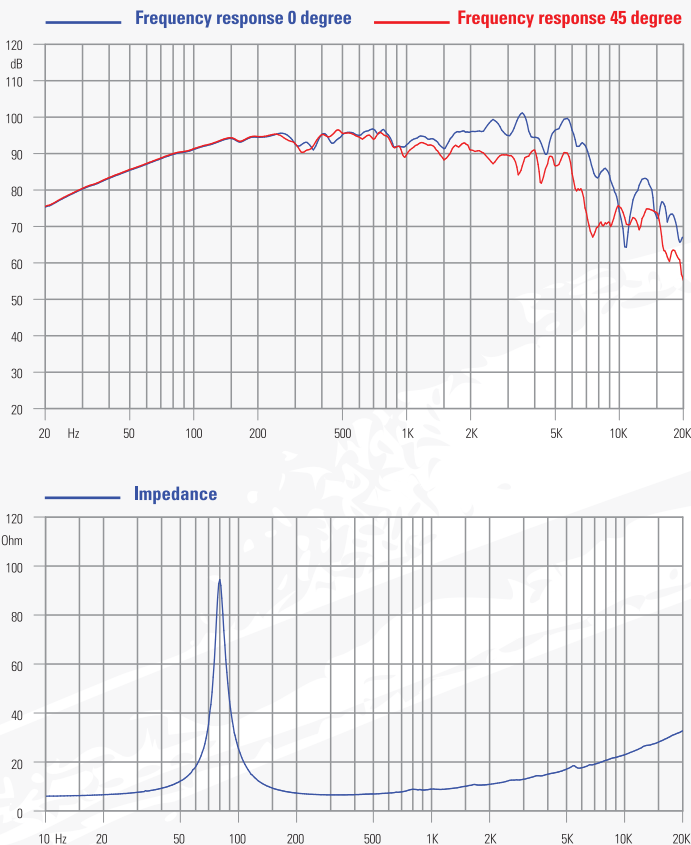
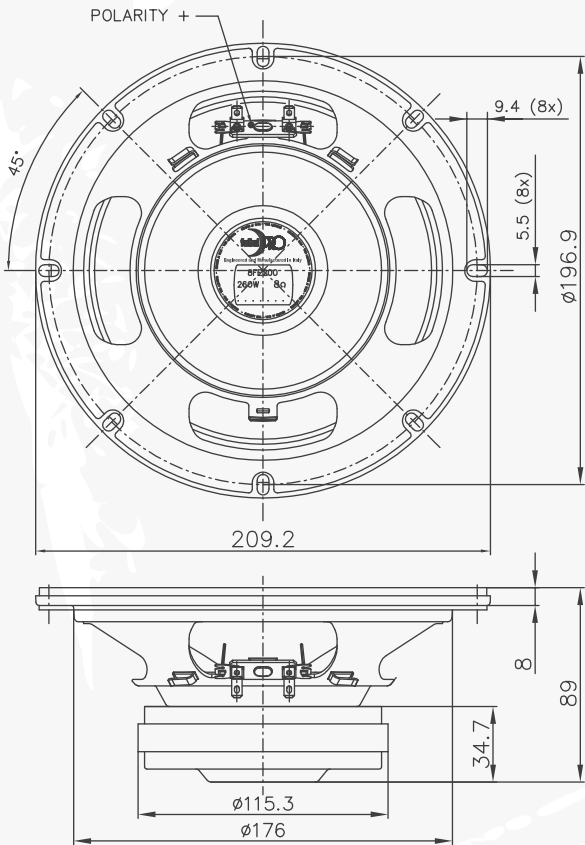
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.8 Ω
AES Power Handling (1)	130 W
Maximum Power Handling (4)	260 W
Sensitivity (1W/1m)	95 dB
Frequency Range	60÷5000 Hz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Winding Depth	12 mm (0.47 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1 T
Magnet	Ferrite Ring
Basket Material	Steel
Demodulation	No
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	0.6 dm³ (0.021 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	80 Hz
Re	5.9 Ω
Qes	0.66
Qms	13.0
Qts	0.63
Vas	13.6 dm³ (0.48 ft³)
Sd	191 cm² (29.61 in²)
Xmax (2)	4.67 mm
Xdamage (3)	10.4 mm
Mms	15.0 g
Bl	8.2 N/A
Le	0.44 mH
Mmd	13.5 g
Cms	0.26 mm/N
Rms	0.6 kg/s
η _o (Eta Zero)	1.02 %
EBP	121 Hz



6PR150

6" - 150 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	186.5/162 mm (7.34/6.37 in)
Bolt Circle Diameter	172 mm (6.77 in)
Baffle Cutout Diameter	147 mm (5.78 in)
Depth	89 mm (3.50 in)
Flange and gasket Thickness	9.3 mm (0.37 in)
Net Weight	1.4 kg (3.1 lb)
Shipping Box	195 x 195 x 141 mm
(Single Carton Box)	(7.7 x 7.7 x 5.6 in)
Shipping Weight	1.6 kg (3.5 lb)

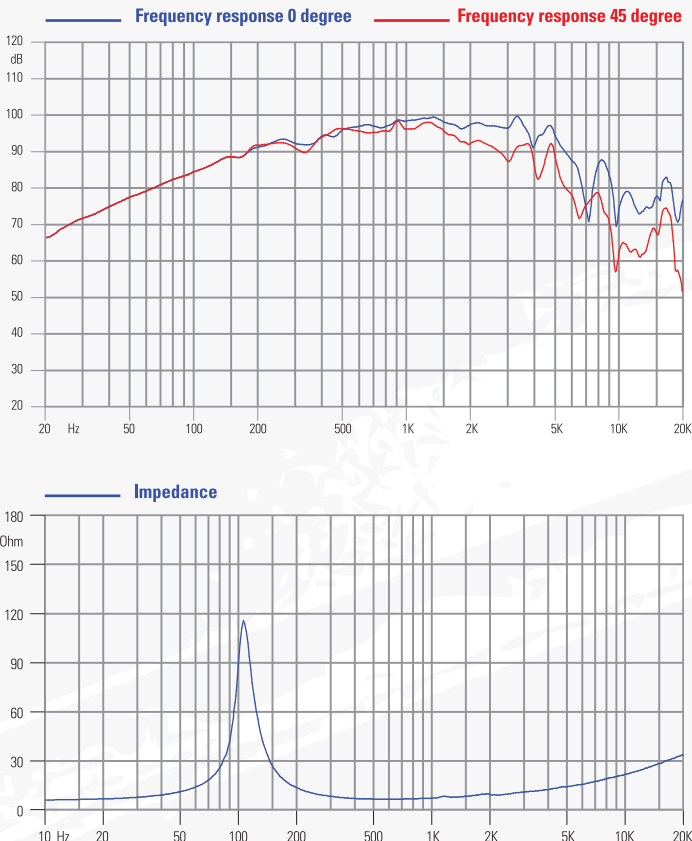
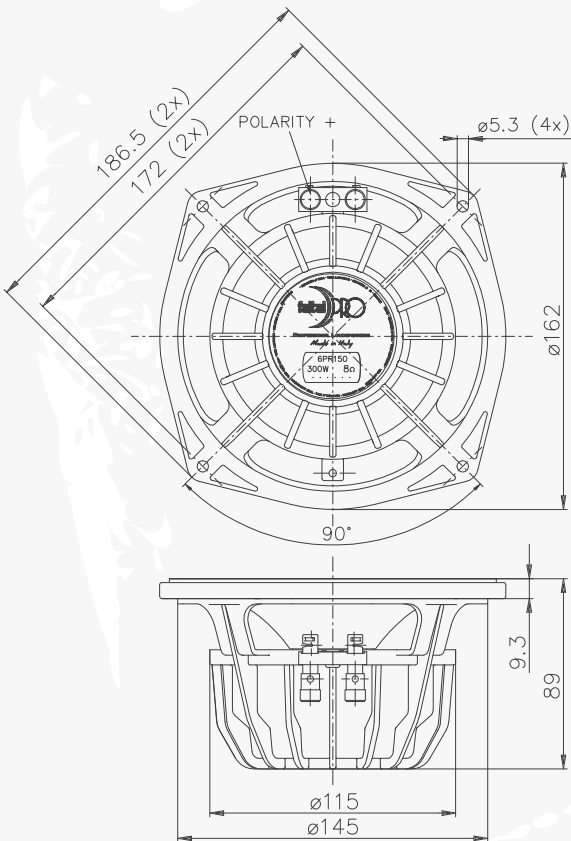
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.6 Ω
AES Power Handling (1)	150 W
Maximum Power Handling (4)	300 W
Sensitivity (1W/1m)	97 dB
Frequency Range	100÷5000 Hz
Voice Coil Diameter	52 mm (2 in)
Winding Material	Cu
Former Material	Glass Fiber
Winding Depth	7.3 mm (0.29 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1.35 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	0.6 dm³ (0.021 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	100 Hz
Re	5.5 Ω
Qes	0.35
Qms	8.8
Qts	0.33
Vas	4.4 dm³ (0.16 ft³)
Sd	129 cm² (20.00 in²)
Xmax (2)	2.65 mm
Xdamage (3)	11.6 mm
Mms	13.5 g
Bl	11.6 N/A
Le	0.28 mH
Mmd	12.7 g
Cms	0.19 mm/N
Rms	0.96 kg/s
η₀ (Eta Zero)	1.24 %
EBP	286 Hz



6RS140

6" - 200 W - 93 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	186.5/162 mm (7.34/6.37 in)
Bolt Circle Diameter	172 mm (6.77 in)
Baffle Cutout Diameter	147 mm (5.79 in)
Depth	76 mm (2.99 in)
Flange and gasket Thickness	11 mm (0.43 in)
Net Weight	1.2 kg (2.6 lb)
Shipping Box	190 x 185 x 103 mm
(Single Carton Box)	(7.5 x 7.3 x 4.1 in)
Shipping Weight	1.3 kg (2.9 lb)

NOTES:

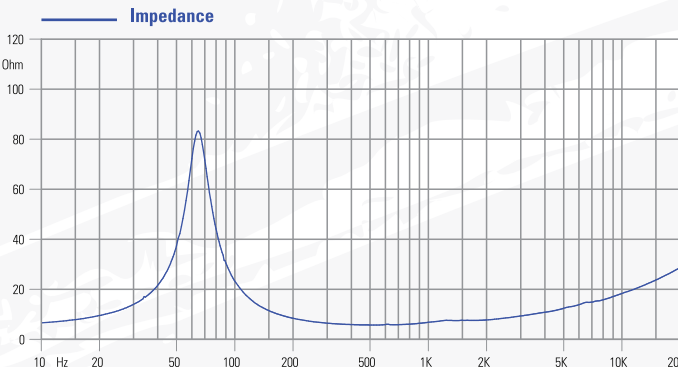
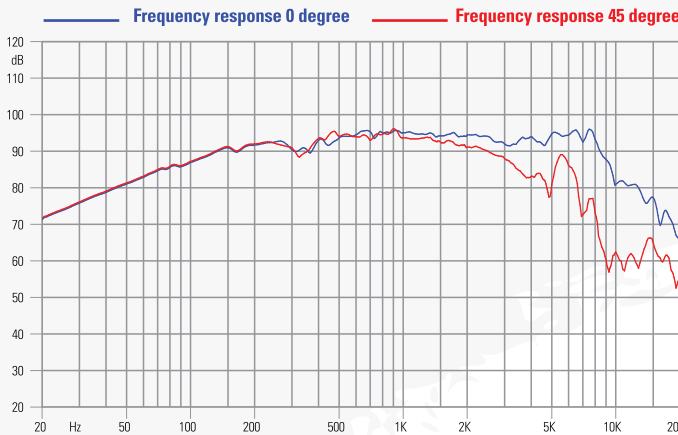
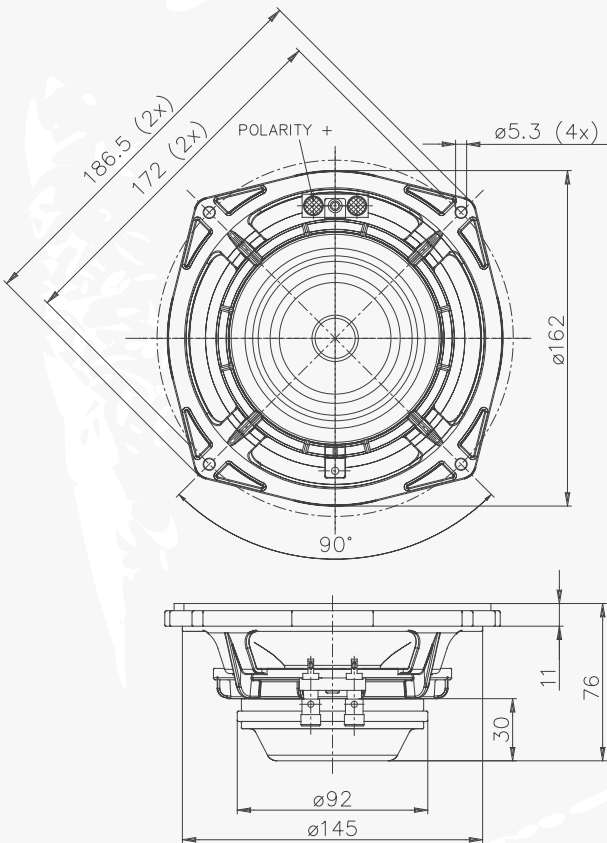
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) NBR (Rubber)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.3 Ω
AES Power Handling (1)	200 W
Maximum Power Handling (4)	400 W
Sensitivity (1W/1m)	93 dB
Frequency Range	60÷6000 Hz
Voice Coil Diameter	44 mm (1.73 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	13.2 mm (0.52 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1.5 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	0.37 dm³ (0.013 ft³)
Spider Profile	1x variable height waves

THIELE & SMALL PARAMETERS

Fs	65 Hz
Re	5.3 Ω
Qes	0.28
Qms	5.8
Qts	0.27
Vas	8 dm³ (0.28 ft³)
Sd	122.6 cm² (19.00 in²)
Xmax (2)	5.60 mm
Xdamage (3)	11.6 mm
Mms	16.0 g
Bl	11 N/A
Le	0.28 mH
Mmd	14.5 g
Cms	0.37 mm/N
Rms	1.12 kg/s
η _e (Eta Zero)	0.75 %
EBP	232 Hz



6PR160

6" - 120 W - 95 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	186.5/162 mm (7.34/6.37 in)
Bolt Circle Diameter	172 mm (6.77 in)
Baffle Cutout Diameter	147 mm (5.79 in)
Depth	73 mm (2.87 in)
Flange and gasket Thickness	9 mm (0.35 in)
Net Weight	1 kg (2.2 lb)
Shipping Box	190 x 185 x 103 mm
(Single Carton Box)	(7.5 x 7.3 x 4.1 in)
Shipping Weight	1.1 kg (2.4 lb)

NOTES:

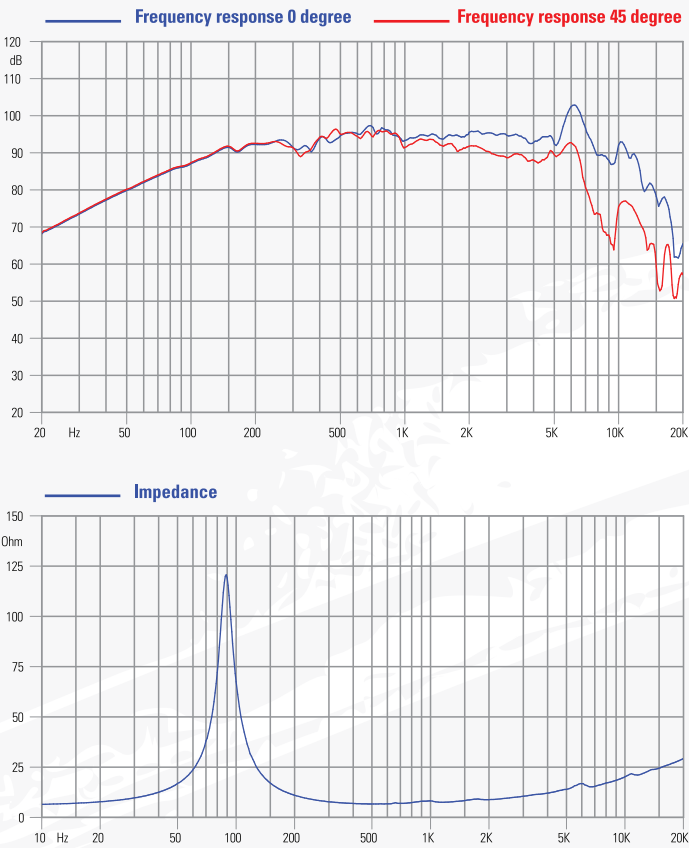
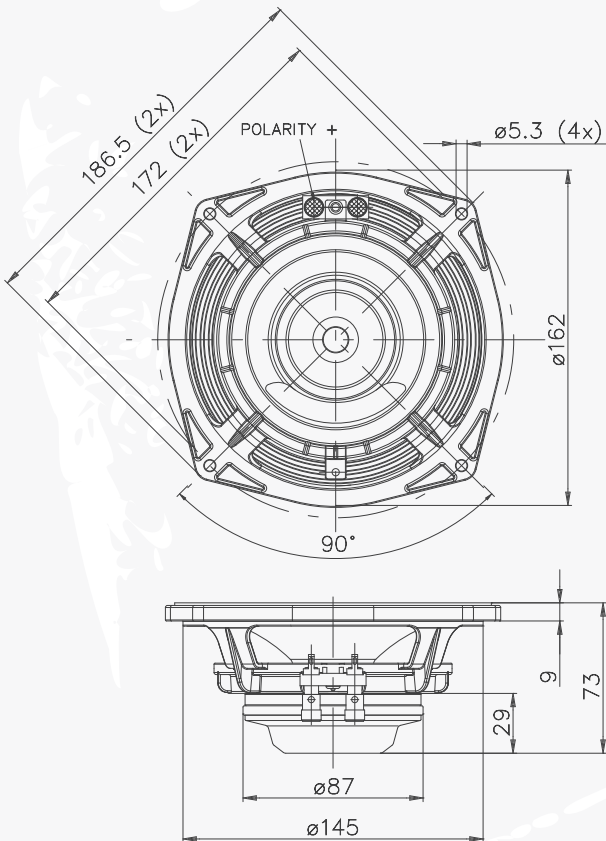
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7 Ω
AES Power Handling (1)	120 W
Maximum Power Handling (4)	240 W
Sensitivity (1W/1m)	95 dB
Frequency Range	80÷8000 Hz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Glass Fiber
Winding Depth	12 mm (0.47 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1.6 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Triple Roll
NET Air Volume filled by Loudspeaker	0.37 dm³ (0.013 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	90 Hz
Re	5.9 Ω
Qes	0.35
Qms	6.6
Qts	0.33
Vas	4.86 dm³ (0.17 ft³)
Sd	117 cm² (18.14 in²)
Xmax (2)	5.00 mm
Xdamage (3)	11.6 mm
Mms	12.5 g
Bl	11 N/A
Le	0.28 mH
Mmd	10.6 g
Cms	0.25 mm/N
Rms	1.07 kg/s
η₀ (Eta Zero)	1.00 %
EBP	261 Hz



6PR122

6" - 120 W - 97 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	186.5/162 mm (7.34/6.37 in)
Bolt Circle Diameter	172 mm (6.77 in)
Baffle Cutout Diameter	147 mm (5.79 in)
Depth	78 mm (3.07 in)
Flange and gasket Thickness	9.5 mm (0.37 in)
Net Weight	1.3 kg (2.9 lb)
Shipping Box	190 x 185 x 103 mm
(Single Carton Box)	(7.5 x 7.3 x 4.1 in)
Shipping Weight	1.5 kg (3.3 lb)

NOTES:

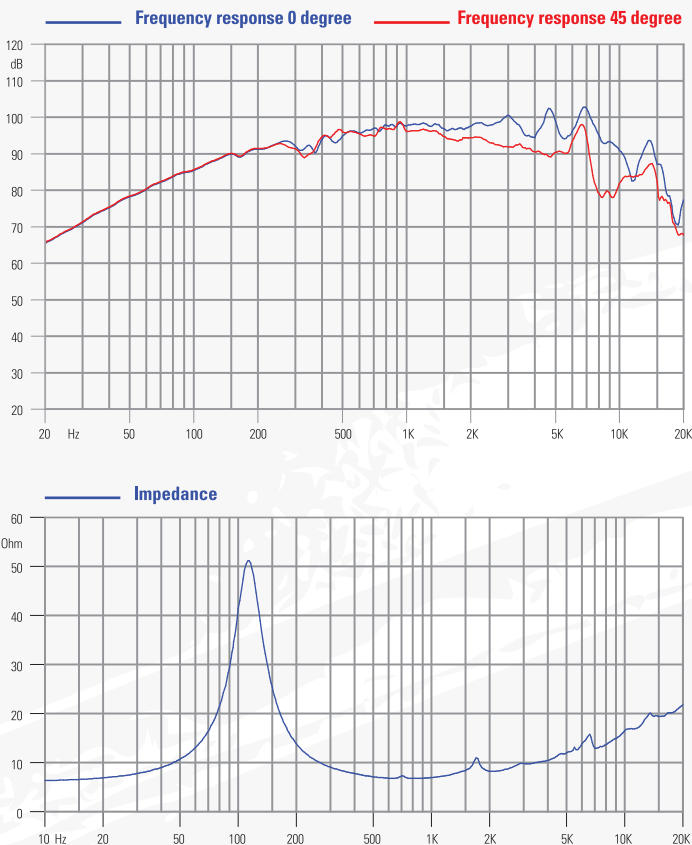
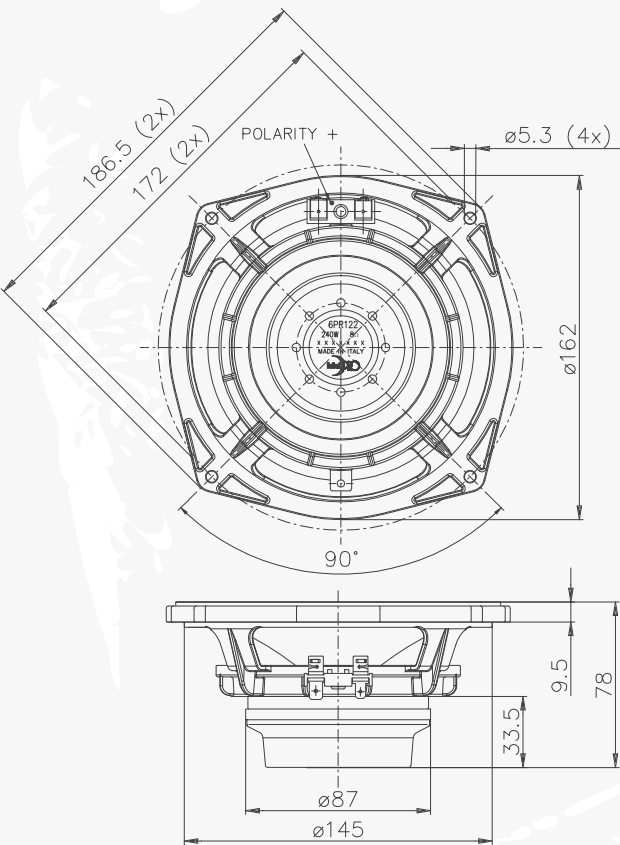
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.8 Ω
AES Power Handling (1)	120 W
Maximum Power Handling (4)	240 W
Sensitivity (1W/1m)	97 dB
Frequency Range	125÷10000 Hz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Winding Depth	7.5 mm (0.30 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1.6 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	Aluminum Ring
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	0.38 dm³ (0.013 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	110 Hz
Re	6 Ω
Qes	0.44
Qms	3.3
Qts	0.39
Vas	4.2 dm³ (0.15 ft³)
Sd	129 cm² (20.00 in²)
Xmax (2)	2.75 mm
Xdamage (3)	11.6 mm
Mms	11.7 g
Bl	10.5 N/A
Le	0.15 mH
Mmd	10.9 g
Cms	0.18 mm/N
Rms	2.42 kg/s
η₀ (Eta Zero)	1.22 %
EBP	250 Hz



6PR110

6" - 150 W - 96 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	186.5/162 mm (7.34/6.37 in)
Bolt Circle Diameter	172 mm (6.77 in)
Baffle Cutout Diameter	147 mm (5.79 in)
Depth	80 mm (3.15 in)
Flange and gasket Thickness	9.5 mm (0.37 in)
Net Weight	2.2 kg (4.9 lb)
Shipping Box	190 x 185 x 103 mm
(Single Carton Box)	(7.5 x 7.3 x 4.1 in)
Shipping Weight	2.4 kg (5.3 lb)

NOTES:

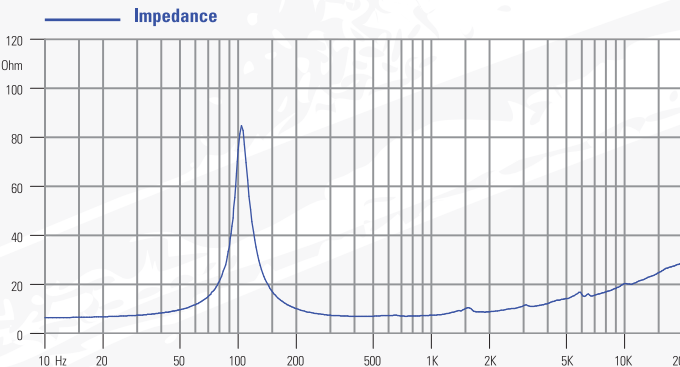
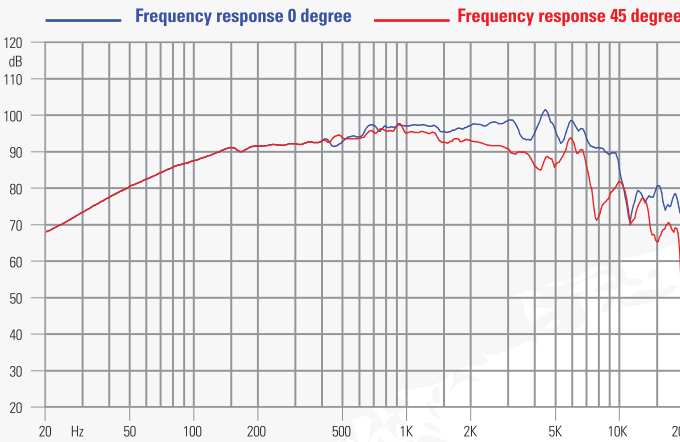
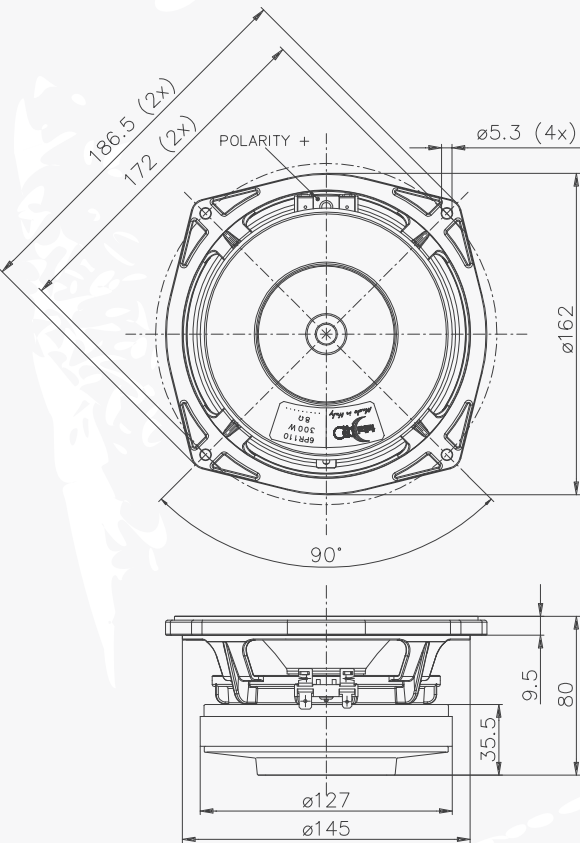
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7 Ω
AES Power Handling (1)	150 W
Maximum Power Handling (4)	300 W
Sensitivity (1W/1m)	96 dB
Frequency Range	100÷6000 Hz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Winding Depth	7.5 mm (0.30 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1.35 T
Magnet	Ferrite Ring
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	0.7 dm³ (0.025 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	100 Hz
Re	6 Ω
Qes	0.60
Qms	4.2
Qts	0.50
Vas	5 dm³ (0.18 ft³)
Sd	129 cm² (20.00 in²)
Xmax (2)	2.75 mm
Xdamage (3)	11.6 mm
Mms	12.0 g
Bl	8.5 N/A
Le	0.22 mH
Mmd	11.2 g
Cms	0.20 mm/N
Rms	1.8 kg/s
η _o (Eta Zero)	0.80 %
EBP	167 Hz



6FE200

6" - 130 W - 95 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	167.4 mm (6.59 in)
Bolt Circle Diameter	154 mm (6.06 in)
Baffle Cutout Diameter	144 mm (5.67 in)
Depth	77 mm (3.03 in)
Flange and gasket Thickness	8 mm (0.31 in)
Net Weight	2 kg (4.4 lb)
Shipping Box	190 x 185 x 103 mm
(Single Carton Box)	(7.5 x 7.3 x 4.1 in)
Shipping Weight	2.2 kg (4.9 lb)

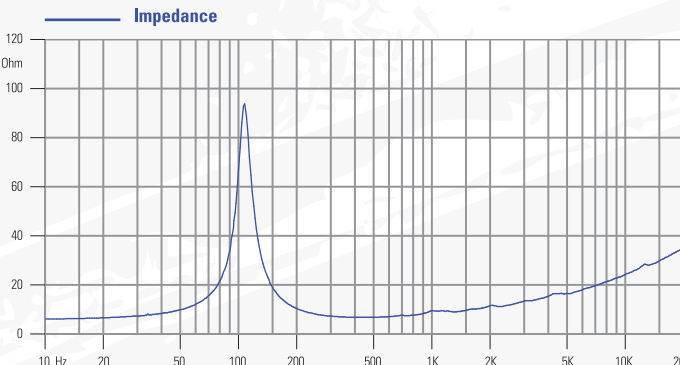
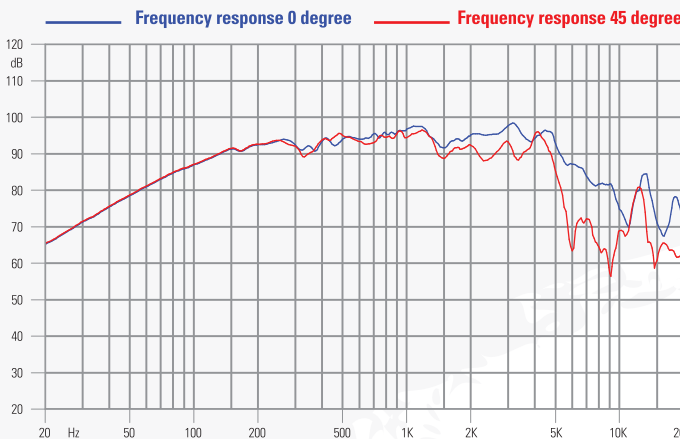
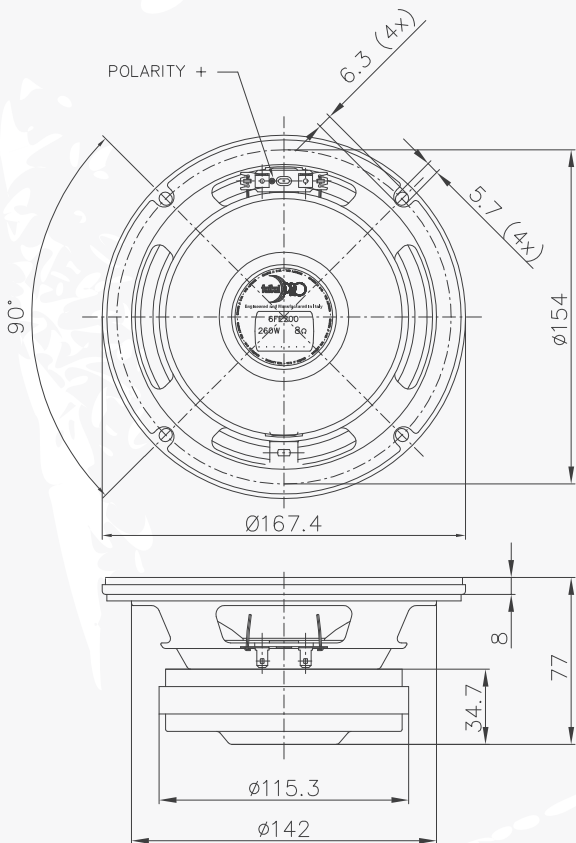
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.8 Ω
AES Power Handling (1)	130 W
Maximum Power Handling (4)	260 W
Sensitivity (1W/1m)	95 dB
Frequency Range	85-6000 Hz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Winding Depth	12 mm (0.47 in)
Magnetic Gap Depth	8 mm (0.31 in)
Flux Density	1 T
Magnet	Ferrite Ring
Basket Material	Steel
Demodulation	No
Cone Surround (5)	M-Roll
NET Air Volume filled by Loudspeaker	0.45 dm³ (0.016 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	120 Hz
Re	5.9 Ω
Qes	0.75
Qms	6.2
Qts	0.67
Vas	3.0 dm³ (0.11 ft³)
Sd	118 cm² (18.29 in²)
Xmax (2)	4.67 mm
Xdamage (3)	10.4 mm
Mms	11.5 g
Bl	8.2 N/A
Le	0.4 mH
Mmd	11.1 g
Cms	0.15 mm/N
Rms	1.4 kg/s
η _o (Eta Zero)	0.67 %
EBP	160 Hz



6FE100

6" - 100 W - 91 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	181.2/164 mm (7.13/6.46 in)
Bolt Circle Diameter	167 mm (6.57 in)
Baffle Cutout Diameter	147 mm (5.79 in)
Depth	84.5 mm (3.33 in)
Flange and gasket Thickness	8 mm (0.31 in)
Net Weight	1.2 kg (2.6 lb)
Shipping Box	393 x 380 x 128 mm
(Single Carton Box - 4 units)	(15.5 x 15.0 x 5.0 in)
Shipping Weight (4 units)	5.6 kg (12.3 lb)

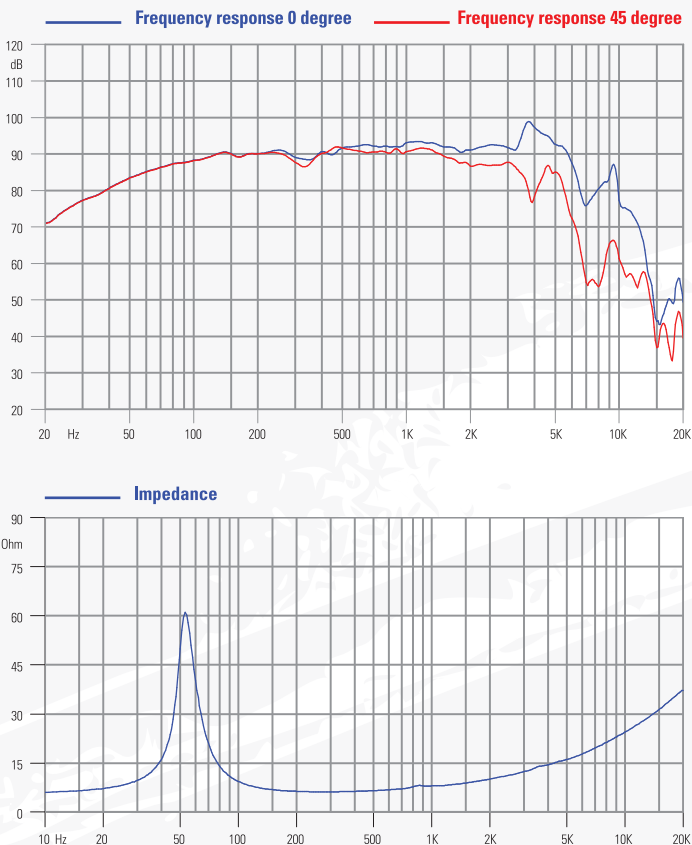
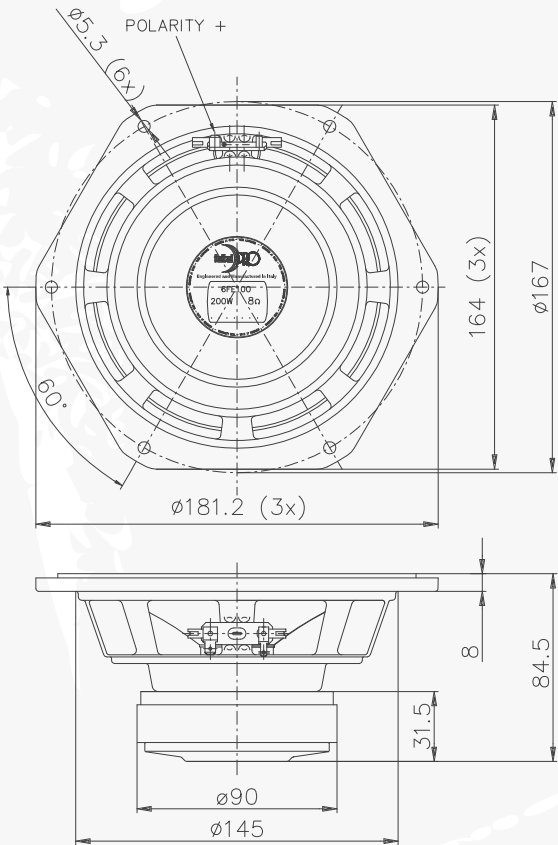
NOTES:
(1) 2 Hours Test According to AES 2-1984 Rev. 2003
(2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
(3) Maximum excursion before permanent damage
(4) Maximum power is defined as 3dB greater than nominal power
(5) NBR (Rubber)
Packaged and sold in multiples of 4 units

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	5.9 Ω
AES Power Handling (1)	100 W
Maximum Power Handling (4)	200 W
Sensitivity (1W/1m)	91 dB
Frequency Range	63÷5000 Hz
Voice Coil Diameter	32 mm (1.26 in)
Winding Material	Cu
Former Material	Kapton
Winding Depth	12.5 mm (0.49 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1 T
Magnet	Ferrite Ring
Basket Material	Steel
Demodulation	Aluminum Ring
Cone Surround (5)	Half Roll
NET Air Volume filled by Loudspeaker	0.4 dm³ (0.014 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	61 Hz
Re	5.4 Ω
Qes	0.60
Qms	6.0
Qts	0.54
Vas	14.1 dm³ (0.50 ft³)
Sd	143 cm² (22.16 in²)
Xmax (2)	5.25 mm
Xdamage (3)	13.15 mm
Mms	14.0 g
Bl	6.8 N/A
Le	0.5 mH
Mmd	13.0 g
Cms	0.48 mm/N
Rms	0.90 kg/s
η _o (Eta Zero)	0.50 %
EBP	102 Hz



M5N8-80

5" - 80 W - 99 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	130 mm (5 in)
Overall Diameter	153/140 mm (6.02/5.51 in)
Bolt Circle Diameter	139 mm (5.47 in)
Baffle Cutout Diameter	129 mm (5.08 in)
Depth	80.2 mm (3.16 in)
Flange and gasket Thickness	8.8 mm (0.35 in)
Net Weight	950 g (2.1 lb)
Shipping Box	165 x 160 x 103 mm
(Single Carton Box)	(6.5 x 6.3 x 4.1 in)
Shipping Weight	1.2 kg (2.7 lb)

NOTES:

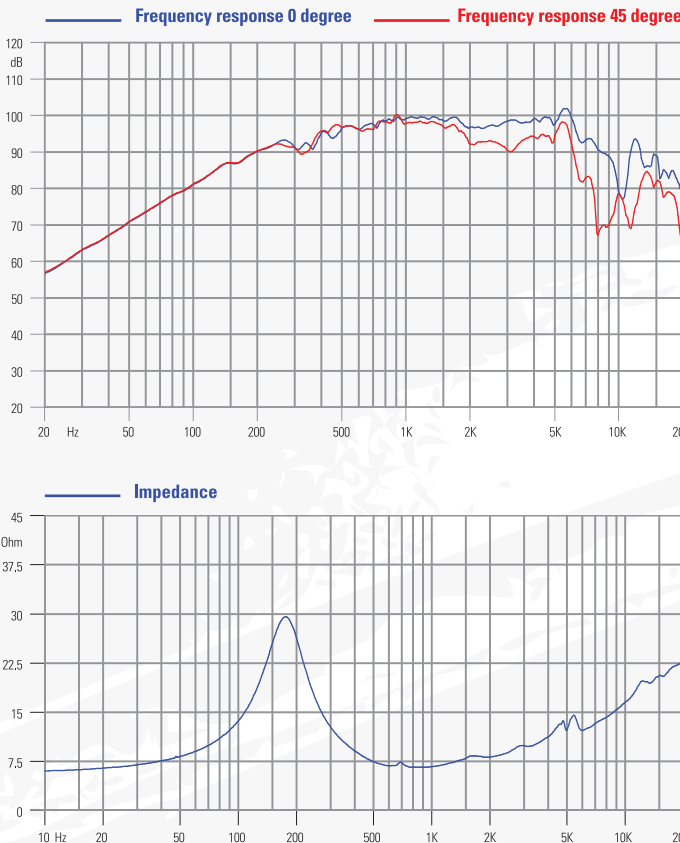
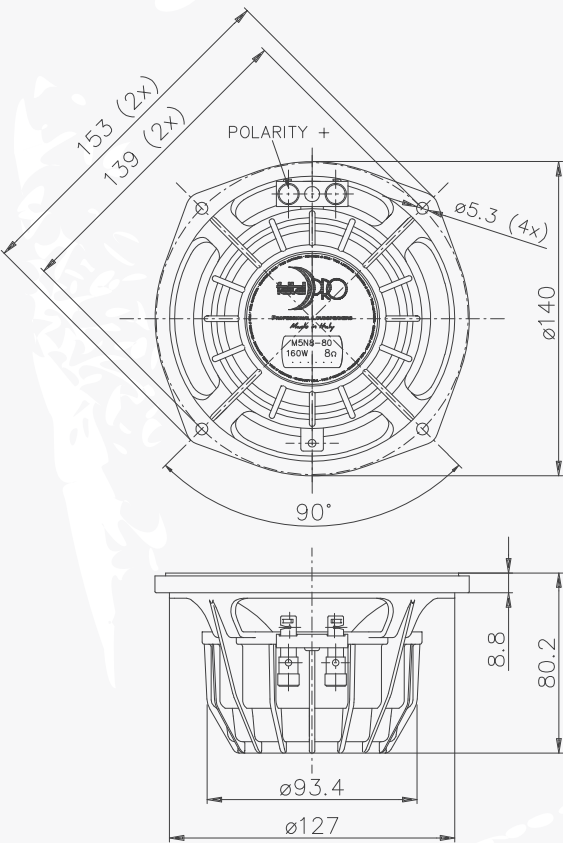
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) Treated Polycotton

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.5 Ω
AES Power Handling (1)	80 W
Maximum Power Handling (4)	160 W
Sensitivity (1W/1m)	99 dB
Frequency Range	180÷8000 Hz
Voice Coil Diameter	32 mm (1.26 in)
Winding Material	Al
Former Material	Kapton
Winding Depth	7.5 mm (0.30 in)
Magnetic Gap Depth	6 mm (0.24 in)
Flux Density	1.65 T
Magnet	Neodymium Ring
Basket Material	Aluminum
Demodulation	No
Cone Surround (5)	M-Roll
NET Air Volume filled by Loudspeaker	0.6 dm³ (0.021 ft³)
Spider Profile	1x constant height waves

THIELE & SMALL PARAMETERS

Fs	180 Hz
Re	5.5 Ω
Qes	0.45
Qms	1.9
Qts	0.36
Vas	0.4 dm³ (0.01 ft³)
Sd	94.2 cm² (14.60 in²)
Xmax (2)	2.75 mm
Xdamage (3)	15.2 mm
Mms	6.8 g
Bl	9.6 N/A
Le	0.22 mH
Mmd	6.3 g
Cms	0.11 mm/N
Rms	4 kg/s
η _o (Eta Zero)	1.83 %
EBP	400 Hz



5FE100

5FE120

5" - 80 W - 88 dB

5" - 80 W - 88 dB



NOMINAL SPECIFICATIONS

	5FE100	5FE120
Nominal Diameter	130 mm (5 in)	130 mm (5 in)
Overall Diameter	144.8/124.5 mm (5.7/4.9 in)	144.8/124.5 mm (5.7/4.9 in)
Bolt Circle Diameter	133 mm (5.24 in)	133 mm (5.24 in)
Baffle Cutout Diameter	114 mm (4.49 in)	114 mm (4.49 in)
Depth	71.5 mm (2.81 in)	71.5 mm (2.81 in)
Flange and gasket Thickness	6.5 mm (0.25 in)	6.5 mm (0.25 in)
Net Weight	1.1 kg (2.5 lb)	1.13 kg (2.5 lb)
Shipping Box	302 x 275 x 186 mm	302 x 275 x 186 mm
(Single Box - 8 units)	(11.9 x 10.8 x 7.3 in)	(11.9 x 10.8 x 7.3 in)
Shipping Weight (8 units)	10.1 kg (22.3 lb)	10.2 kg (22.5 lb)

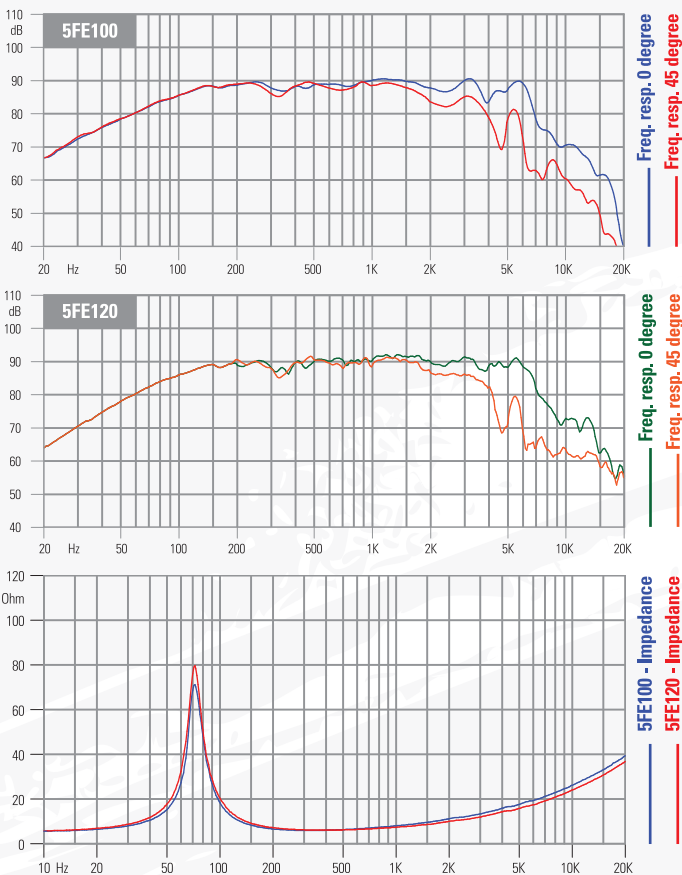
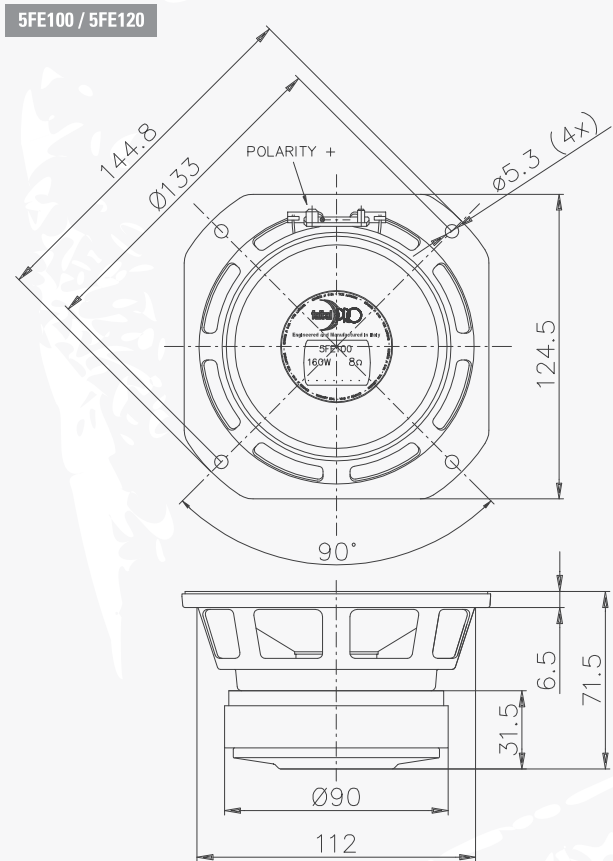
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
- (3) Maximum excursion before permanent damage
- (4) Maximum power is defined as 3dB greater than nominal power
- (5) NBR (Rubber)
- Packaged and sold in multiples of 8 units

TECHNICAL PARAMETERS

	5FE100	5FE120
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.3 Ω	6.2 Ω
AES Power Handling (1)	80 W	80 W
Maximum Power Handling (4)	160 W	160 W
Sensitivity (1W/1m)	88 dB	88 dB
Frequency Range	63÷6300 Hz	63÷6300 Hz
Voice Coil Diameter	32 mm (1.26 in)	32 mm (1.26 in)
Winding Material	Cu	Cu
Former Material	Kapton	Kapton
Winding Depth	12.5 mm (0.49 in)	12.5 mm (0.49 in)
Magnetic Gap Depth	6 mm (0.24 in)	6 mm (0.24 in)
Flux Density	1 T	1 T
Magnet	Ferrite Ring	Ferrite Ring
Basket Material	Steel	Steel
Demodulation	No	Aluminum Ring
Cone Surround (5)	Half Roll	Half Roll
NET Air Volume filled by Loudspeaker	0.3 dm³ (0.011 ft³)	0.3 dm³ (0.011 ft³)
Spider Profile	1x constant height waves	

THIELE & SMALL PARAMETERS

	5FE100	5FE120
Fs	65 Hz	65 Hz
Re	5.4 Ω	5.4 Ω
Qes	0.48	0.51
Qms	8.2	7.4
Qts	0.46	0.47
Vas	5.2 dm³ (0.18 ft³)	4.9 dm³ (0.17 ft³)
Sd	79.8 cm² (12.37 in²)	79.8 cm² (12.37 in²)
Xmax (2)	5.25 mm	5.25 mm
Xdamage (3)	9.5 mm	9.5 mm
Mms	10.5 g	11.0 g
Bl	6.9 N/A	6.9 N/A
Le	0.53 mH	0.41 mH
Mmd	10.1 g	10.9 g
Cms	0.57 mm/N	0.55 mm/N
Rms	0.52 kg/s	0.6 kg/s
η _o (Eta Zero)	0.28 %	0.25 %
EBP	135 Hz	127 Hz



4FE32

4" - 30 W - 91 dB

4FE35

4" - 30 W - 91 dB



NOMINAL SPECIFICATIONS

	4FE32	4FE35
Nominal Diameter	100 mm (4 in)	100 mm (4 in)
Overall Diameter	129.85/100.5 mm (5.11/3.96 in)	129.85/100.5 mm (5.11/3.96 in)
Bolt Circle Diameter	115.26 mm (4.54 in)	115.26 mm (4.54 in)
Baffle Cutout Diameter	91.5 mm (3.60 in)	91.5 mm (3.60 in)
Depth	49.8 mm (1.96 in)	58.3 mm (2.30 in)
Flange and gasket Thickness	7.2 mm (0.28 in)	7.2 mm (0.28 in)
Net Weight	270 g (0.6 lb)	570 g (1.3 lb)
Shipping Box	225 x 225 x 150 mm	225 x 225 x 150 mm
(Single Box - 8 units)	(8.9 x 8.9 x 5.9 in)	(8.9 x 8.9 x 5.9 in)
Shipping Weight (8 units)	2.8 kg (6.2 lb)	5 kg (11.0 lb)

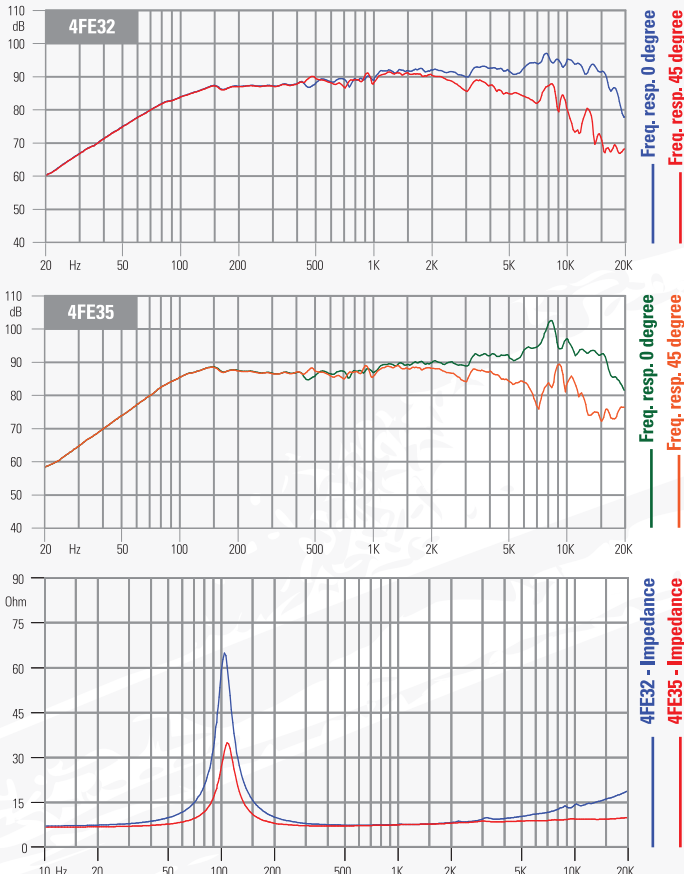
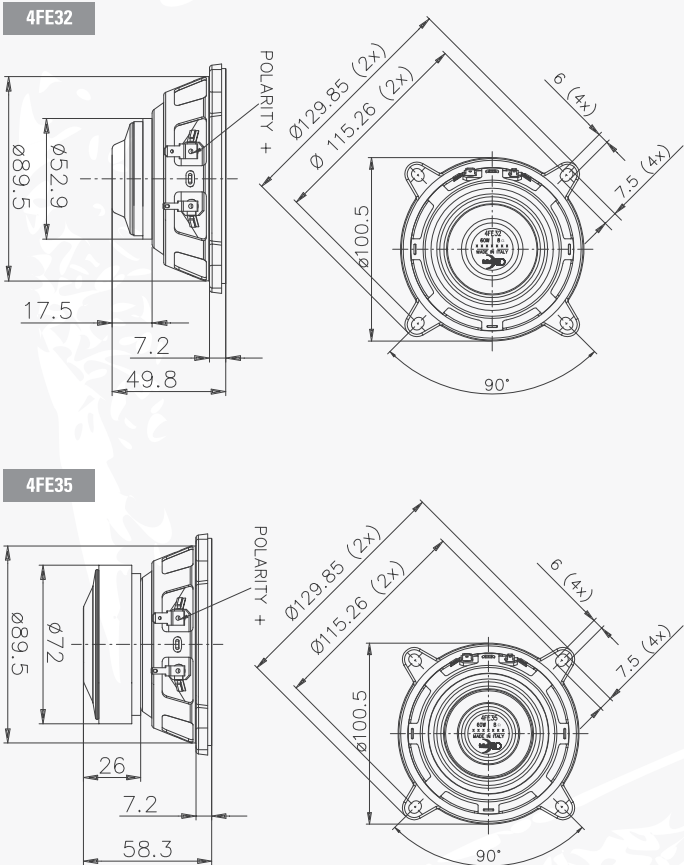
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) NBR (Rubber)
- Packaged and sold in multiples of 8 units

TECHNICAL PARAMETERS

	4FE32	4FE35
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	7 Ω	7.2 Ω
AES Power Handling (1)	30 W	30 W
Maximum Power Handling (4)	60 W	60 W
Sensitivity (1W/1m)	91 dB	91 dB
Frequency Range	90÷20000 Hz	90÷20000 Hz
Voice Coil Diameter	19 mm (0.75 in)	19 mm (0.75 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Winding Depth	6.8 mm (0.27 in)	6.8 mm (0.27 in)
Magnetic Gap Depth	4 mm (0.16 in)	4 mm (0.16 in)
Flux Density	1.4 T	1.1 T
Magnet	Neodymium Ring	Ferrite Ring
Basket Material	Steel	Steel
Demodulation	No	Copper Cap
Cone Surround (5)	Half Roll	Half Roll
NET Air Volume filled by Loudspeaker	0.075 dm³ (0.003 ft³)	0.150 dm³ (0.005 ft³)
Spider Profile	1x constant height waves	

THIELE & SMALL PARAMETERS

	4FE32	4FE35
Fs	100 Hz	100 Hz
Re	6.5 Ω	6.5 Ω
Qes	0.70	1.04
Qms	4.9	4.2
Qts	0.60	0.84
Vas	2 dm³ (0.07 ft³)	2 dm³ (0.07 ft³)
Sd	48 cm² (7.44 in²)	48 cm² (7.44 in²)
Xmax (2)	2.73 mm	2.73 mm
Xdamage (3)	6.8 mm	6.8 mm
Mms	4.2 g	3.9 g
Bl	4.8 N/A	3.9 N/A
Le	0.18 mH	0.1 mH
Mmd	3.9 g	3.7 g
Cms	0.60 mm/N	0.65 mm/N
Rms	0.5 kg/s	0.6 kg/s
η _o (Eta Zero)	0.25 %	0.19 %
EBP	143 Hz	96 Hz



NEODYMIUM FULL RANGE

3FE22

3" - 20 W - 91 dB

FERRITE FULL RANGE

3FE25

3" - 20 W - 91 dB



NOMINAL SPECIFICATIONS

	3FE22	3FE25
Nominal Diameter	80 mm (3 in)	80 mm (3 in)
Overall Diameter	105.6/81 mm (4.16/3.19 in)	105.6/81 mm (4.16/3.19 in)
Bolt Circle Diameter	92 mm (3.62 in)	92 mm (3.62 in)
Baffle Cutout Diameter	73.6 mm (2.90 in)	73.6 mm (2.90 in)
Depth	46 mm (1.81 in)	54.5 mm (2.15 in)
Flange and gasket Thickness	6.5 mm (0.26 in)	6.5 mm (0.26 in)
Net Weight	240 g (0.53 lb)	545 g (1.20 lb)
Shipping Box	285 x 285 x 255 mm	285 x 285 x 255 mm
(Single Box - 36 units)	(11.2 x 11.2 x 10.0 in)	(11.2 x 11.2 x 10.0 in)
Shipping Weight (36 units)	10 kg (22.0 lb)	20.8 kg (45.9 lb)

NOTES:

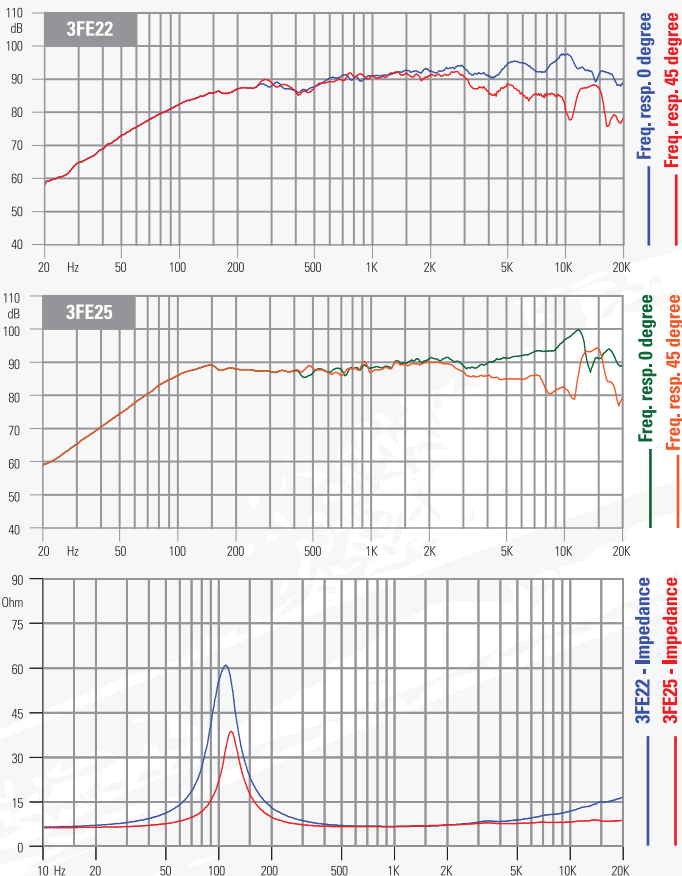
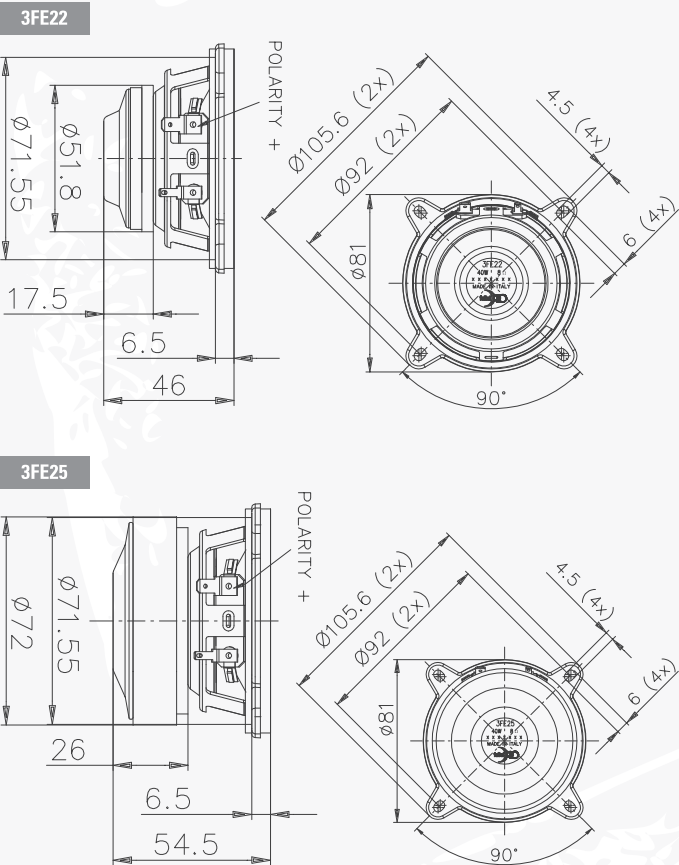
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) NBR (Rubber)
- Packaged and sold in multiples of 36 units

TECHNICAL PARAMETERS

	3FE22	3FE25
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.7 Ω	6.2 Ω
AES Power Handling (1)	20 W	20 W
Maximum Power Handling (4)	40 W	40 W
Sensitivity (1W/1m)	91 dB	91 dB
Frequency Range	100÷20000 Hz	100÷20000 Hz
Voice Coil Diameter	19 mm (0.75 in)	19 mm (0.75 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Winding Depth	5 mm (0.20 in)	5 mm (0.20 in)
Magnetic Gap Depth	4 mm (0.16 in)	4 mm (0.16 in)
Flux Density	1.4 T	1.1 T
Magnet	Neodymium Ring	Ferrite Ring
Basket Material	Steel	Steel
Demodulation	No	Copper Cap
Cone Surround (5)	Half Roll	Half Roll
NET Air Volume filled by Loudspeaker	0.060 dm³ (0.002 ft³)	0.125 dm³ (0.004 ft³)
Spider Profile	1x constant height waves	

THIELE & SMALL PARAMETERS

	3FE22	3FE25
Fs	110 Hz	110 Hz
Re	6.2 Ω	6.2 Ω
Qes	0.50	0.80
Qms	5.0	4.1
Qts	0.47	0.7
Vas	1.10 dm³ (0.04 ft³)	1.13 dm³ (0.04 ft³)
Sd	30.2 cm² (4.68 in²)	30.2 cm² (4.68 in²)
Xmax (2)	1.83 mm	1.83 mm
Xdamage (3)	7.3 mm	7.9 mm
Mms	2.5 g	2.4 g
Bl	4.5 N/A	3.6 N/A
Le	0.15 mH	0.07 mH
Mmd	2.4 g	2.3 g
Cms	0.85 mm/N	0.87 mm/N
Rms	0.35 kg/s	0.4 kg/s
η _{Lo} (Eta Zero)	0.28 %	0.18 %
EBP	220 Hz	138 Hz



HF DRIVERS

TECHNOLOGY AND PASSION

Every FaitalPRO driver is meticulously designed using the latest CAD, 3D and FEA modelling techniques. Every electro-acoustic and mechanical performance is simulated and then carefully designed by a team of engineers whose only passion is sound. We put the most advanced technologies and materials at your service.

HF2000

2" - 100 W - 110 dB



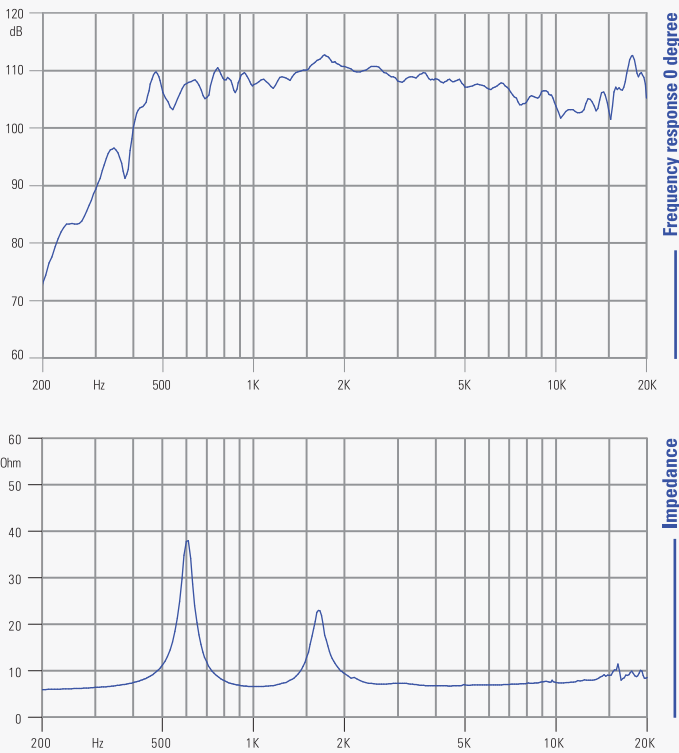
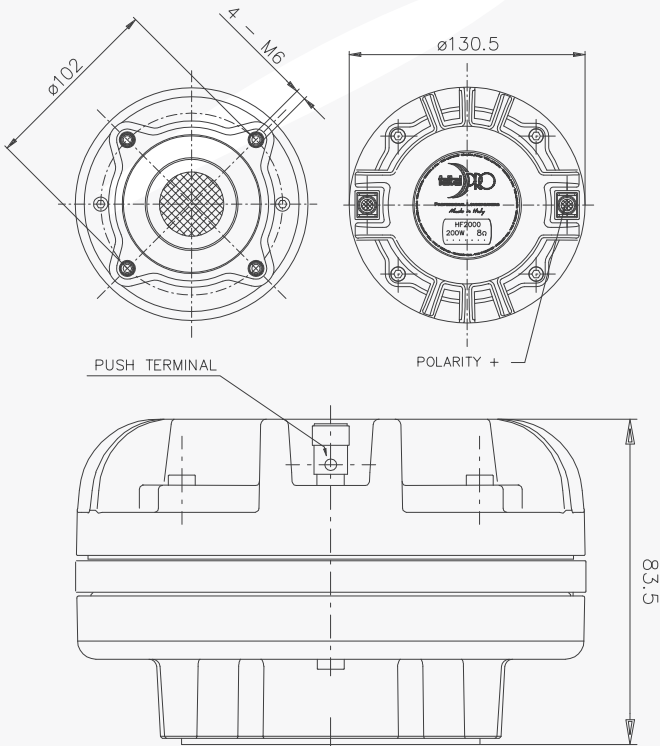
NOMINAL SPECIFICATIONS

Throat Diameter	50.8 mm (2 in)
Overall Diameter	130.5 mm (5.14 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	83.5 mm (3.29 in)
Net Weight	2.67 kg (5.9 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.9 kg (6.4 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.2 Ω
AES Power above 0.9 kHz (1)	100 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	200 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	110 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	3.2 mm (0.13 in)
Flux Density	1.9 T
Magnet	Neodymium Ring
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	30° Conical
NET Air Volume filled by HF Driver	0.6 dm³ (0.021 ft³)

- NOTES:** Driver mounted on a 2" 90° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF201

2" - 100 W - 108 dB



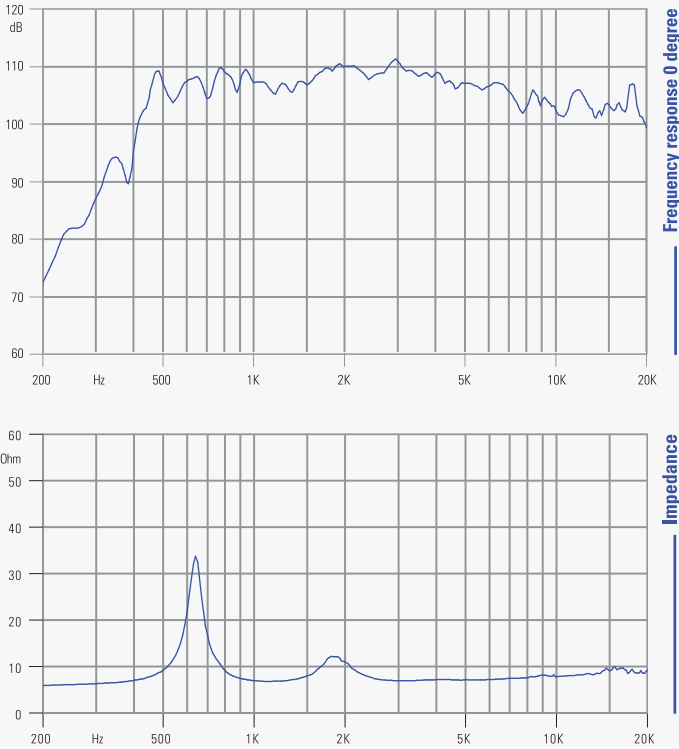
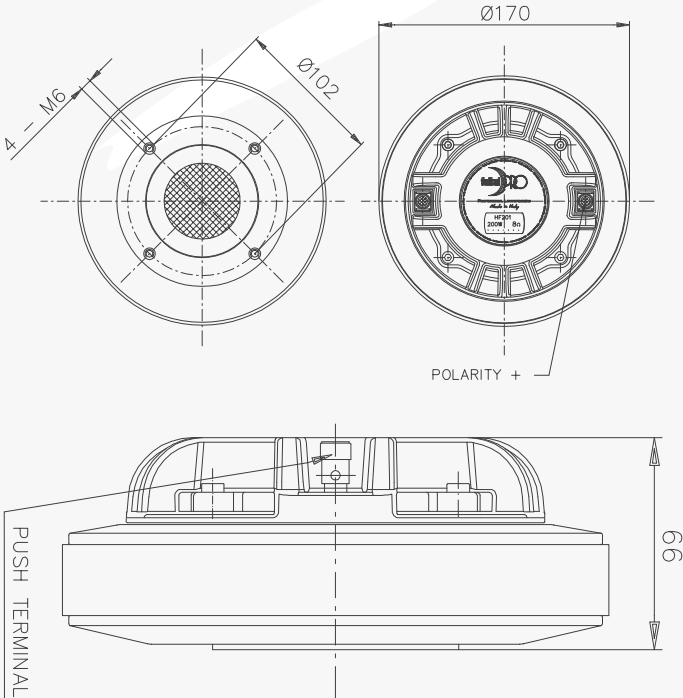
NOMINAL SPECIFICATIONS

Throat Diameter	50.8 mm (2 in)
Overall Diameter	170 mm (6.69 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	66 mm (2.60 in)
Net Weight	4.6 kg (10.2 lb)
Shipping Box	195 x 195 x 141 mm
(Single Carton Box)	(7.7 x 7.7 x 5.6 in)
Shipping Weight	4.8 kg (10.6 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.2 Ω
AES Power above 0.9 kHz (1)	100 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	200 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	108 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	3.2 mm (0.13 in)
Flux Density	1.7 T
Magnet	Ferrite Ring
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	36° Conical
NET Air Volume filled by HF Driver	1.05 dm³ (0.037 ft³)

- NOTES:** Driver mounted on a 2" 90° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF200

2" - 70 W - 109 dB



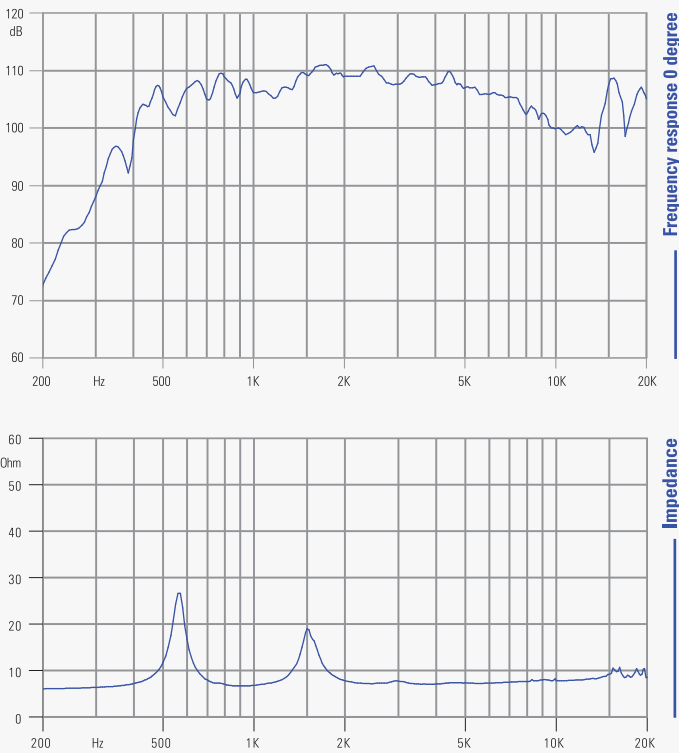
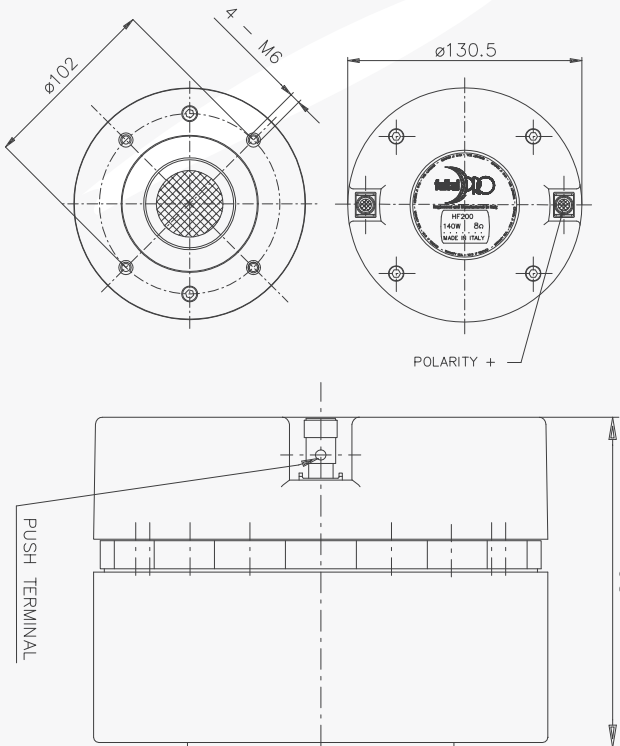
NOMINAL SPECIFICATIONS

Throat Diameter	50.8 mm (2 in)
Overall Diameter	130.5 mm (5.14 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	95 mm (3.74 in)
Net Weight	3.2 kg (7.1 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	3.4 kg (7.5 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	5.8 Ω
AES Power above 0.9 kHz (1)	70 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	140 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	109 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	2.8 mm (0.11 in)
Flux Density	1.8 T
Magnet	Neodymium Slug Crown
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	24° Conical
NET Air Volume filled by HF Driver	1.10 dm³ (0.039 ft³)

- NOTES:** Driver mounted on a 2" 90° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF204

2" - 80 W - 108 dB

HF206

2" - 80 W - 109 dB



NOMINAL SPECIFICATIONS

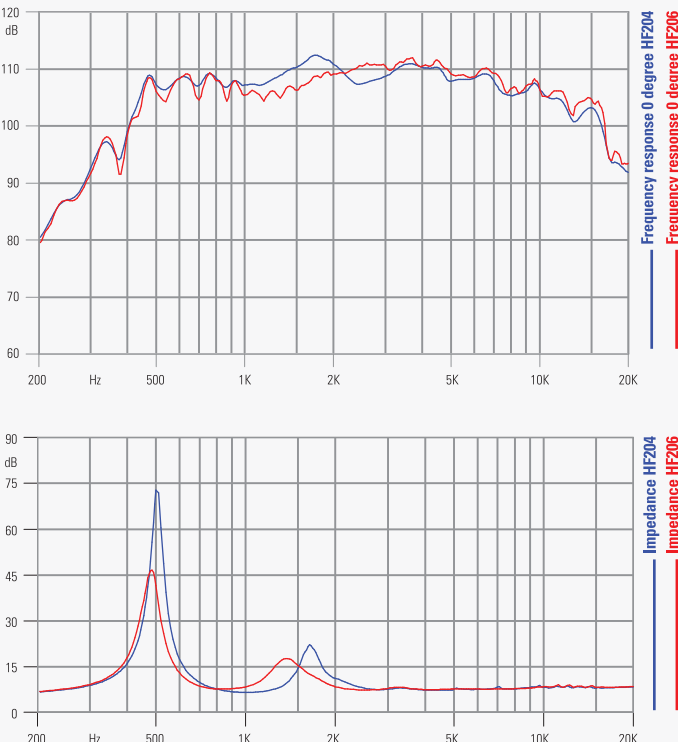
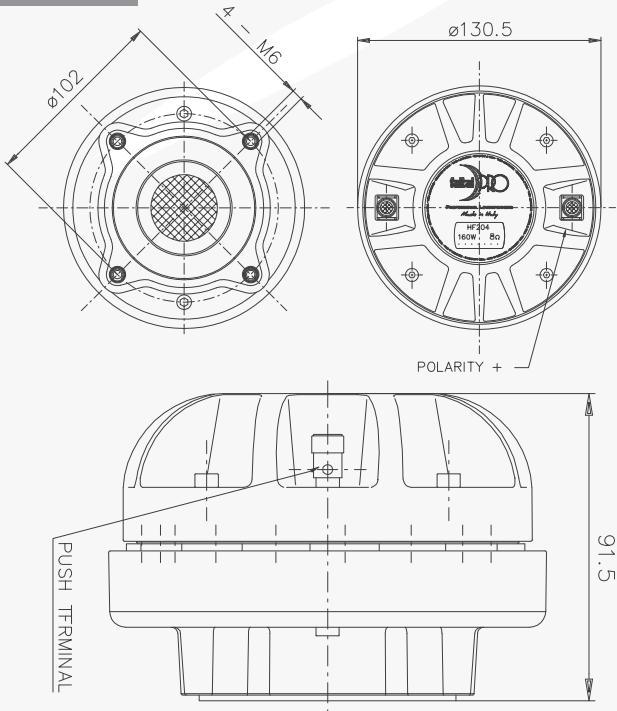
	HF204	HF206
Throat Diameter	50.8 mm (2 in)	50.8 mm (2 in)
Overall Diameter	130.5 mm (5.14 in)	130.5 mm (5.14 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)	102 mm (4.02 in)
Depth	91.5 mm (3.60 in)	91.5 mm (3.60 in)
Net Weight	2.3 kg (5.1 lb)	2.3 kg (5.1 lb)
Shipping Box	185 x 170 x 122 mm	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.6 kg (5.7 lb)	2.6 kg (5.7 lb)

- NOTES:** Driver mounted on a 2" 90° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.

TECHNICAL PARAMETERS

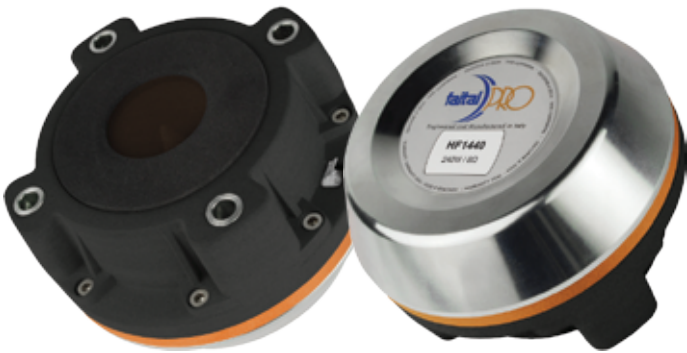
	HF204	HF206
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	7.2 Ω	7.4 Ω
AES Power above 0.9 kHz (1)	80 W	80 W
AES Power above 0.65 kHz (1)	40 W	40 W
Maximum Power above 0.9 kHz (2)	160 W	160 W
Maximum Power above 0.65 kHz (2)	80 W	80 W
Minimum Crossover Frequency (3)	0.9 kHz	0.9 kHz
Sensitivity (1W/1m) (4)	108 dB	109 dB
Frequency Range	0.5÷18 kHz	0.5÷18 kHz
Voice Coil Diameter	65 mm (2.56 in)	65 mm (2.56 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Dome	Dome
Winding Depth	3 mm (0.12 in)	3 mm (0.12 in)
Magnetic Gap Depth	4.2 mm (0.17 in)	4.2 mm (0.17 in)
Flux Density	1.7 T	1.7 T
Magnet	Neodymium Slug Crown	Neodymium Slug Crown
Re	5.5 Ω	5.5 Ω
Phase Plug Design	Annular	Annular
Exit Angle (5)	30° Conical	30° Conical
NET Air Volume filled by HF Driver	0.75 dm³ (0.026 ft³)	0.75 dm³ (0.026 ft³)

HF204 / HF206



HF1440

1.4" - 120 W - 109 dB



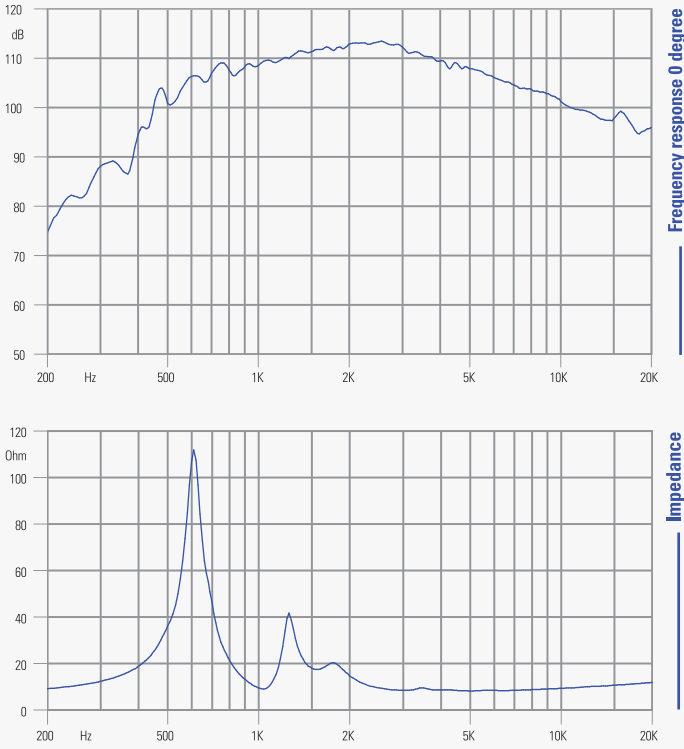
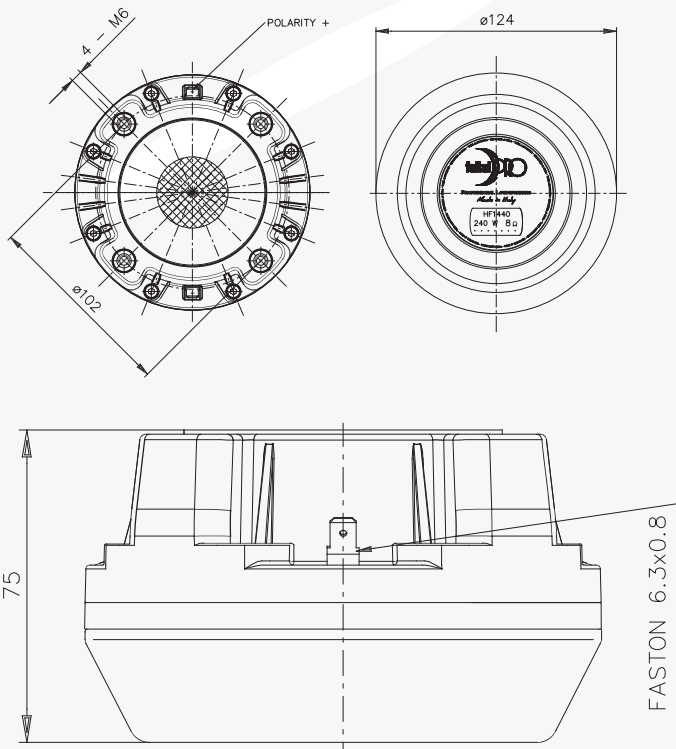
NOMINAL SPECIFICATIONS

Throat Diameter	35.8 mm (1.4 in)
Overall Diameter	124 mm (4.9 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	75 mm (3 in)
Net Weight	2.1 kg (4.5 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.4 kg (5.3 lb)

- NOTES:** Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The driver's exit coincides with the end of the phase plug, there is no adaptation throat.

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	8.3 Ω
AES Power Handling (1)	120 W
Maximum Power Handling (2)	240 W
Minimum Crossover Frequency (3)	0.7 kHz
Sensitivity (1W/1m) (4)	109 dB
Frequency Range	0.5÷20 kHz
Voice Coil Diameter	86 mm (3.4 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Ketone Polymer
Diaphragm Shape	Annular
Winding Depth	3.6 mm (0.14 in)
Magnetic Gap Depth	4 mm (0.16 in)
Flux Density	2.2 T
Magnet	Neodymium Ring
Re	6.8 Ω
Phase Plug Design	Radial
Exit Angle (5)	Combined Exit
NET Air Volume filled by HF Driver	0.55 dm³ (0.019 ft³)



HF1400

1.4" - 100 W - 110 dB



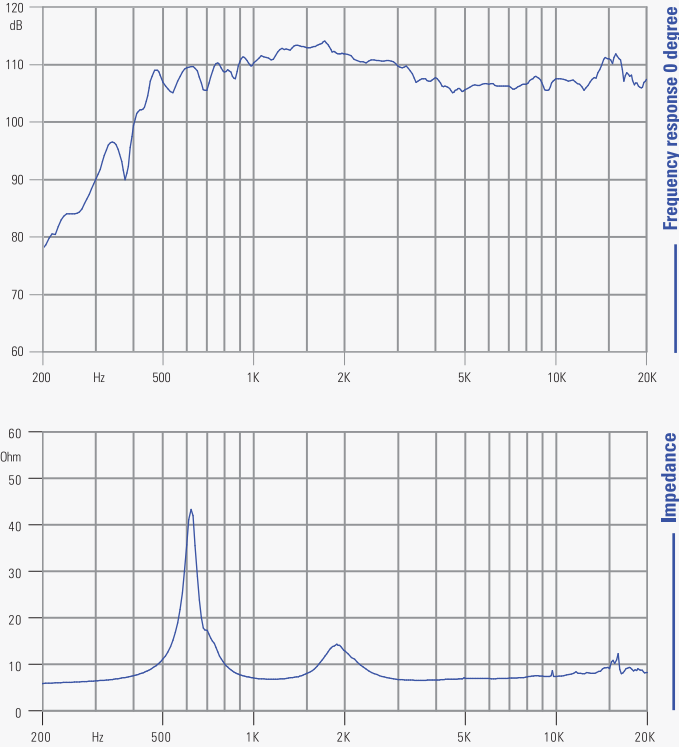
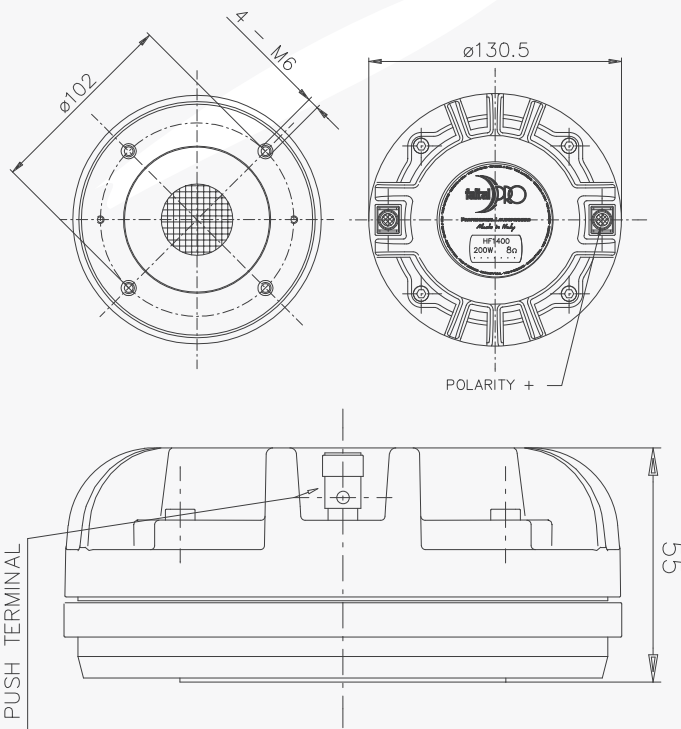
NOMINAL SPECIFICATIONS

Throat Diameter	35.6 mm (1.4 in)
Overall Diameter	130.5 mm (5.14 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	55 mm (2.17 in)
Net Weight	2.43 kg (5.4 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.7 kg (6.0 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.2 Ω
AES Power above 0.9 kHz (1)	100 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	200 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	110 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	3.2 mm (0.13 in)
Flux Density	1.9 T
Magnet	Neodymium Ring
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	12° Conical
NET Air Volume filled by HF Driver	0.45 dm³ (0.016 ft³)

- NOTES:** Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF141

1.4” - 100 W - 109 dB

NOMINAL SPECIFICATIONS

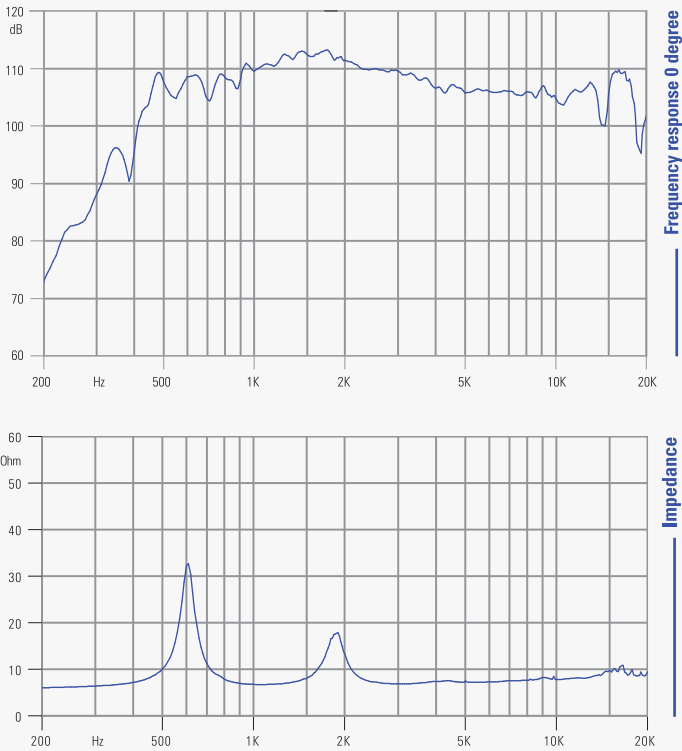
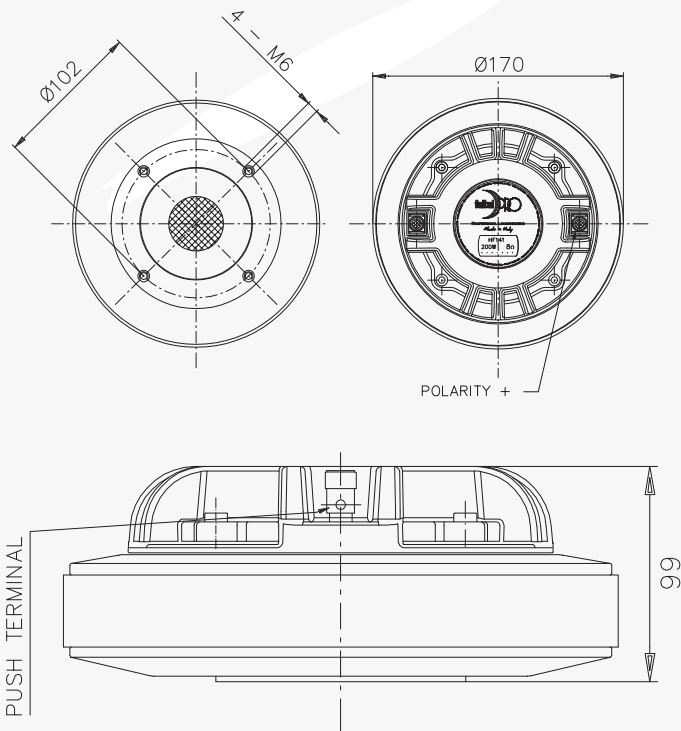
Throat Diameter	35.6 mm (1.4 in)
Overall Diameter	170 mm (6.69 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	66 mm (2.60 in)
Net Weight	4.7 kg (10.4 lb)
Shipping Box	195 x 195 x 141 mm
(Single Carton Box)	(7.7 x 7.7 x 5.6 in)
Shipping Weight	4.9 kg (10.8 lb)

- NOTES:** Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The phase plug is recessed from the driver’s exit which is at the end of a conical adaptation horn.



TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.2 Ω
AES Power above 0.9 kHz (1)	100 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	200 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	109 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	3.2 mm (0.13 in)
Flux Density	1.7 T
Magnet	Ferrite Ring
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	6° Conical
NET Air Volume filled by HF Driver	1.05 dm³ (0.037 ft³)



HF148

1.4" - 100 W - 109 dB



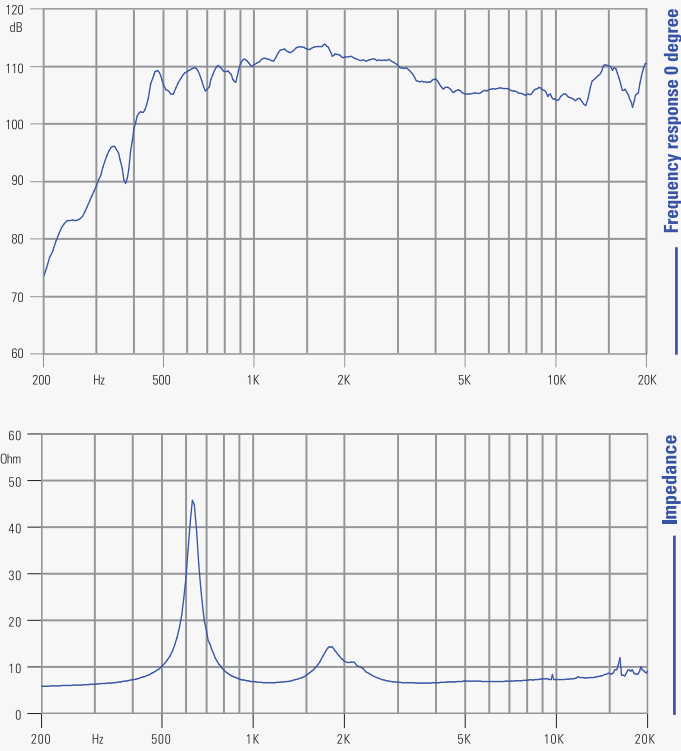
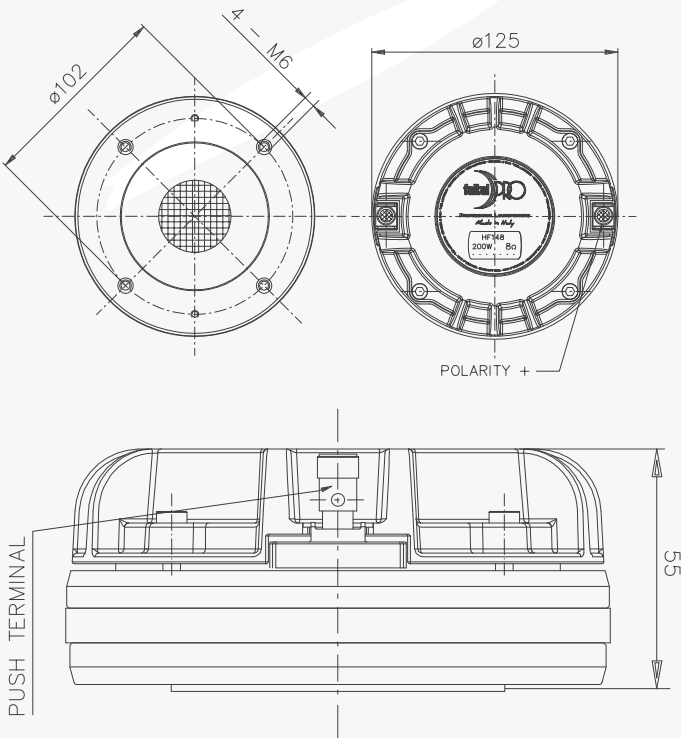
NOMINAL SPECIFICATIONS

Throat Diameter	35.6 mm (1.4 in)
Overall Diameter	125 mm (4.92 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	55 mm (2.17 in)
Net Weight	2.32 kg (5.1 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.6 kg (5.7 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7.2 Ω
AES Power above 0.9 kHz (1)	100 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	200 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	109 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	3.2 mm (0.13 in)
Flux Density	1.75 T
Magnet	Neodymium Ring
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	12° Conical
NET Air Volume filled by HF Driver	0.45 dm³ (0.016 ft³)

- NOTES: Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF143

1.4” - 100 W - 108 dB



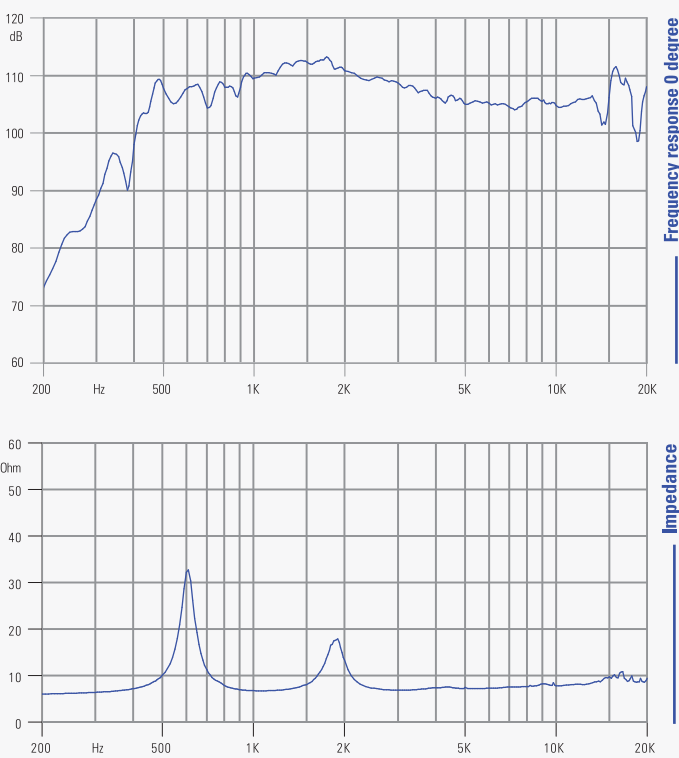
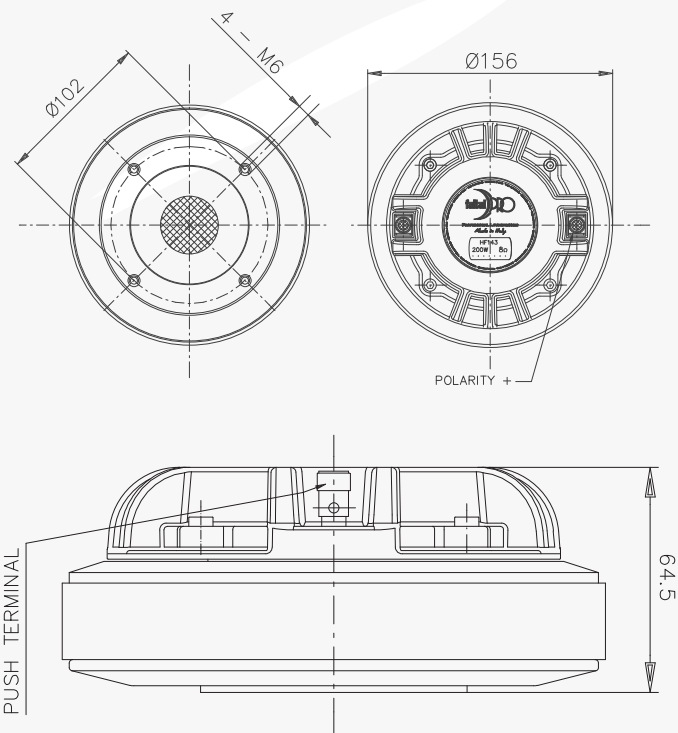
NOMINAL SPECIFICATIONS

Throat Diameter	35,6 mm (1.4 in)
Overall Diameter	156 mm (6.14 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	64.5 mm (2.54 in)
Net Weight	4.0 kg (8.8 lb)
Shipping Box	195 x 195 x 141 mm
(Single Carton Box)	(7.7 x 7.7 x 5.6 in)
Shipping Weight	4.2 kg (9.3 lb)

TECHNICAL PARAMETERS

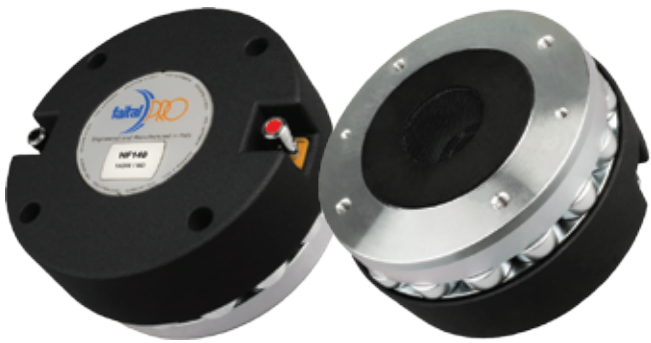
Nominal Impedance	8 Ω
Minimum Impedance	6.9 Ω
AES Power above 0.9 kHz (1)	100 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	200 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	108 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	3.2 mm (0.13 in)
Flux Density	1.6 T
Magnet	Ferrite Ring
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	6° Conical
NET Air Volume filled by HF Driver	0.73 dm³ (0.026 ft³)

- NOTES:** Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF140

1.4" - 70 W - 109 dB



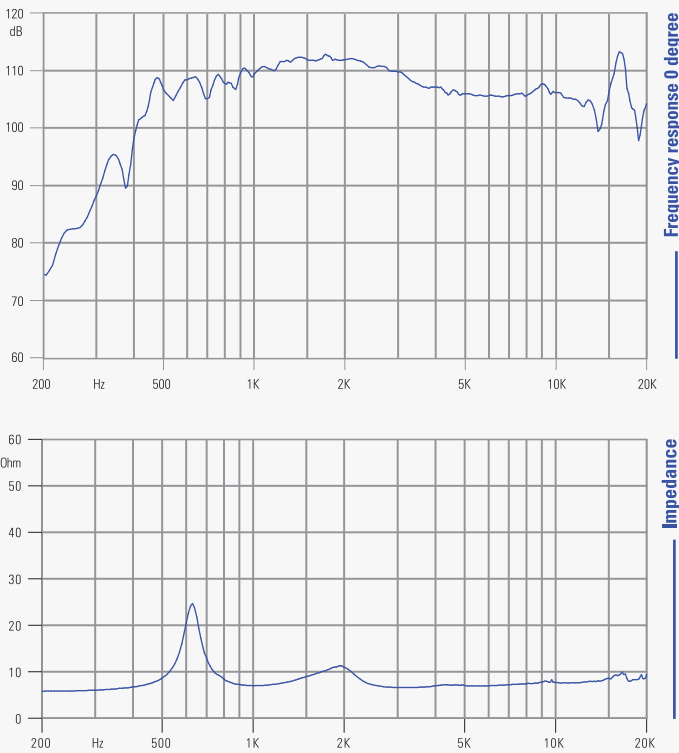
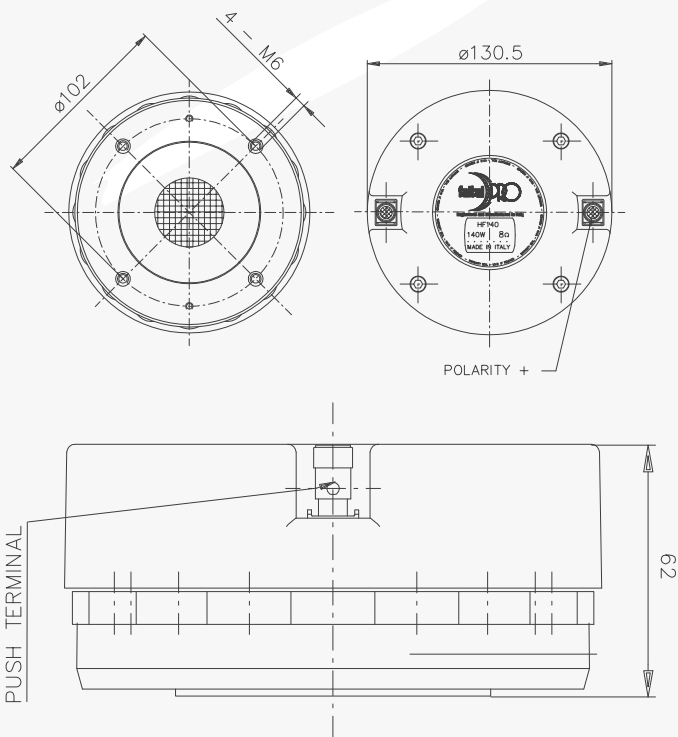
NOMINAL SPECIFICATIONS

Throat Diameter	35.6 mm (1.4 in)
Overall Diameter	130.5 mm (5.14 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	62 mm (2.44 in)
Net Weight	2.9 kg (6.4 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	3.1 kg (6.8 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.3 Ω
AES Power above 0.9 kHz (1)	70 W
AES Power above 0.65 kHz (1)	50 W
Maximum Power above 0.9 kHz (2)	140 W
Maximum Power above 0.65 kHz (2)	100 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	109 dB
Frequency Range	0.5÷18 kHz
Voice Coil Diameter	74 mm (2.91 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Titanium
Diaphragm Shape	Dome
Winding Depth	2.35 mm (0.09 in)
Magnetic Gap Depth	2.8 mm (0.11 in)
Flux Density	1.8 T
Magnet	Neodymium Slug Crown
Re	5.6 Ω
Phase Plug Design	Annular
Exit Angle (5)	7° Conical
NET Air Volume filled by HF Driver	0.7 dm³ (0.025 ft³)

- NOTES: Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF142

1.4" - 80 W - 110 dB



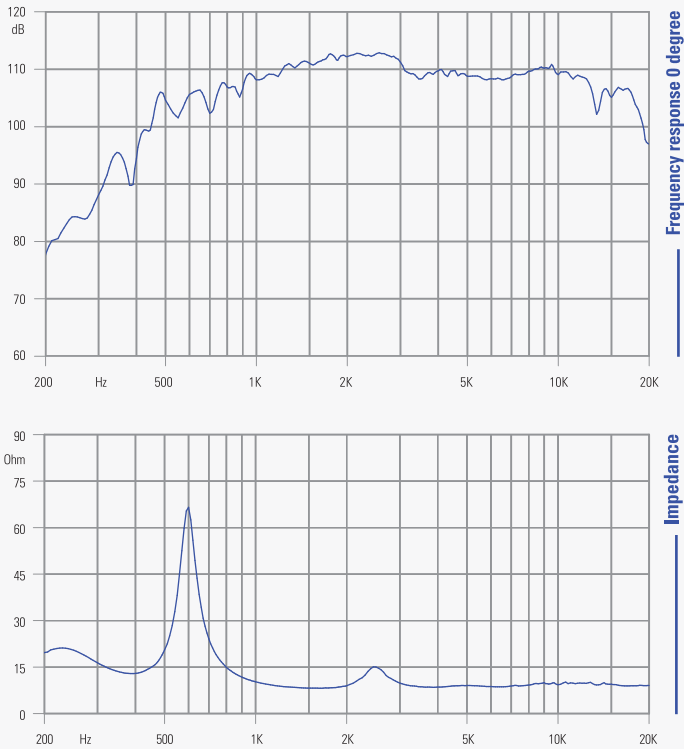
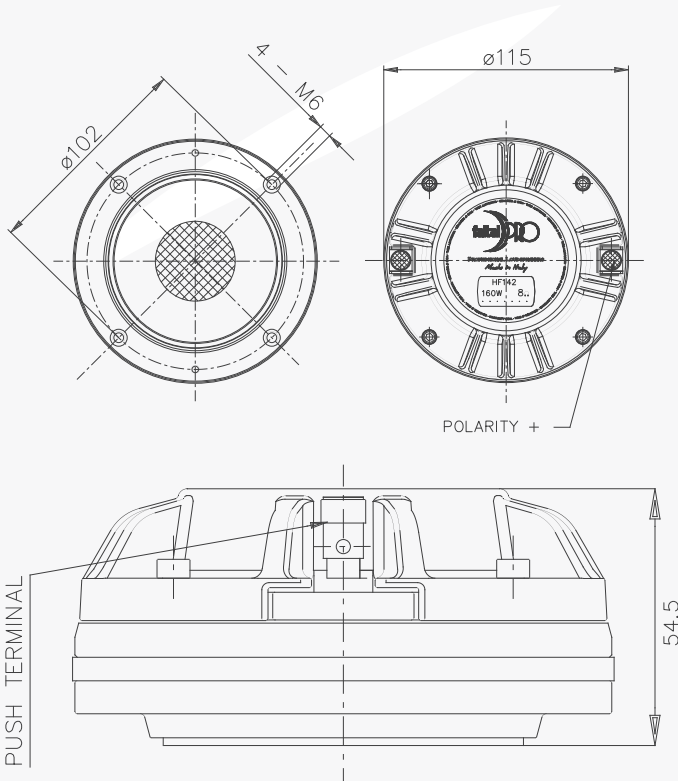
NOMINAL SPECIFICATIONS

Throat Diameter	35.6 mm (1.4 in)
Overall Diameter	115 mm (4.53 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	54.5 mm (2.15 in)
Net Weight	1.64 kg (3.6 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	1.95 kg (4.3 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	8.4 Ω
AES Power above 0.9 kHz (1)	80 W
AES Power above 0.65 kHz (1)	25 W
Maximum Power above 0.9 kHz (2)	160 W
Maximum Power above 0.65 kHz (2)	50 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	110 dB
Frequency Range	0.7÷18 kHz
Voice Coil Diameter	65 mm (2.56 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Ketone Polymer
Diaphragm Shape	Dome
Winding Depth	2.1 mm (0.08 in)
Magnetic Gap Depth	4.2 mm (0.17 in)
Flux Density	1.8 T
Magnet	Neodymium Ring
Re	6.7 Ω
Phase Plug Design	Annular
Exit Angle (5)	29° Conical
NET Air Volume filled by HF Driver	0.4 dm³ (0.014 ft³)

- NOTES:** Driver mounted on FaitalPRO LTH142 horn
- Perforated suspension for acoustic tuning
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF146

1.4" - 80 W - 109 dB

HF146R ⁽⁶⁾

1.4" - 80 W - 109 dB



NOMINAL SPECIFICATIONS

	HF146	HF146R ⁽⁶⁾
Throat Diameter	35.6 mm (1.4 in)	35.6 mm (1.4 in)
Overall Diameter	123 mm (4.84 in)	123 mm (4.84 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)	102 mm (4.02 in)
Depth	63.5 mm (2.5 in)	63.5 mm (2.5 in)
Net Weight	2 kg (4.4 lb)	2 kg (4.4 lb)
Shipping Box	185 x 170 x 122 mm	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.3 kg (5.1 lb)	2.3 kg (5.1 lb)

TECHNICAL PARAMETERS

	HF146	HF146R ⁽⁶⁾
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.8 Ω	7.1 Ω
AES Power above 0.9 kHz ⁽¹⁾	80 W	80 W
AES Power above 0.65 kHz ⁽¹⁾	40 W	25 W
Maximum Power above 0.9 kHz ⁽²⁾	160 W	160 W
Maximum Power above 0.65 kHz ⁽²⁾	80 W	50 W
Minimum Crossover Frequency ⁽³⁾	0.9 kHz	0.9 kHz
Sensitivity ^(1W/1m) ⁽⁴⁾	109 dB	109 dB
Frequency Range	0.7÷18 kHz	0.7÷18 kHz
Voice Coil Diameter	65 mm (2.56 in)	65 mm (2.56 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Dome	Dome
Winding Depth	3 mm (0.12 in)	3 mm (0.12 in)
Magnetic Gap Depth	4.2 mm (0.17 in)	4.2 mm (0.17 in)
Flux Density	1.7 T	1.7 T
Magnet	Neodymium Slug Crown	Neodymium Slug Crown
Re	5.5 Ω	5.5 Ω
Phase Plug Design	Annular	Annular
Exit Angle ⁽⁵⁾	29° Conical	29° Conical
NET Air Volume filled by HF Driver	0.55 dm³ (0.019 ft³)	0.55 dm³ (0.026 ft³)

NOTES: Driver mounted on FaitalPRO LTH142 horn

(1) 2 Hours Test According to AES 2-1984 Rev. 2003

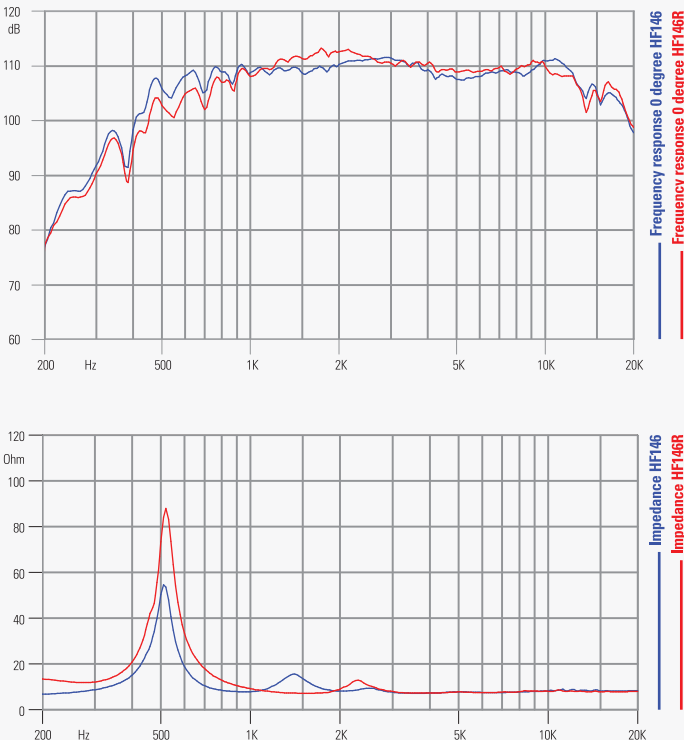
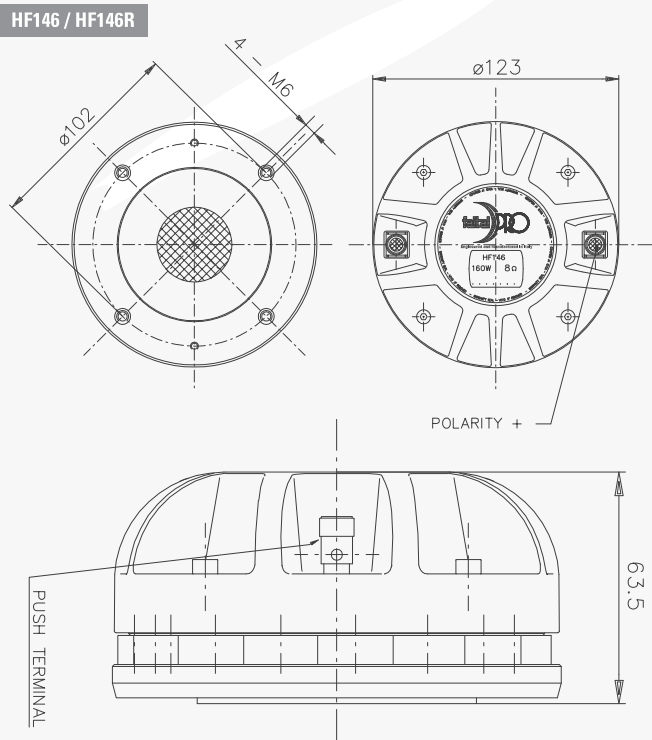
(2) Maximum power is defined as 3 dB greater than nominal power.

(3) 12 dB/oct or higher slope high-pass filter.

(4) Averaged within the frequency range.

(5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.

(6) Perforated suspension for acoustic tuning.



HF144

1.4" - 80 W - 109 dB



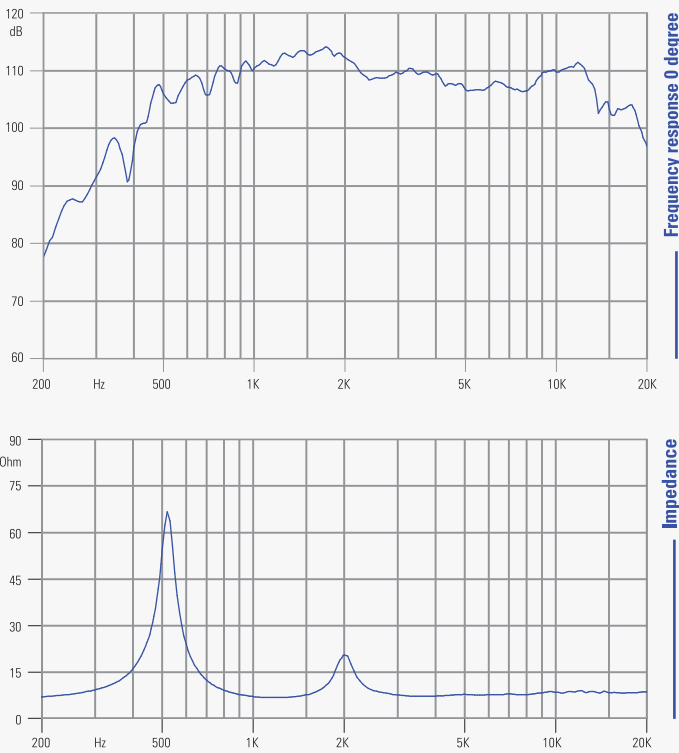
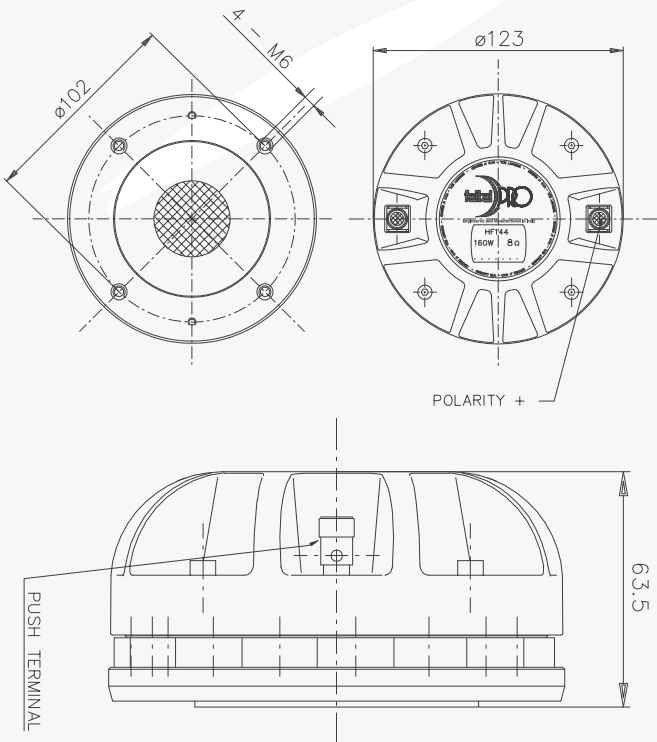
NOMINAL SPECIFICATIONS

Throat Diameter	35.6 mm (1.4 in)
Overall Diameter	123 mm (4.84 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	63.5 mm (2.5 in)
Net Weight	2 kg (4.4 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	2.3 kg (5.1 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.8 Ω
AES Power above 0.9 kHz (1)	80 W
AES Power above 0.65 kHz (1)	40 W
Maximum Power above 0.9 kHz (2)	160 W
Maximum Power above 0.65 kHz (2)	80 W
Minimum Crossover Frequency (3)	0.9 kHz
Sensitivity (1W/1m) (4)	109 dB
Frequency Range	0.7÷18 kHz
Voice Coil Diameter	65 mm (2.56 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Ketone Polymer
Diaphragm Shape	Dome
Winding Depth	3 mm (0.12 in)
Magnetic Gap Depth	4.2 mm (0.17 in)
Flux Density	1.7 T
Magnet	Neodymium Slug Crown
Re	5.5 Ω
Phase Plug Design	Annular
Exit Angle (5)	29° Conical
NET Air Volume filled by HF Driver	0.55 dm³ (0.019 ft³)

- NOTES: Driver mounted on FaitalPRO LTH142 horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



HF10AK

1" - 60 W - 110 dB



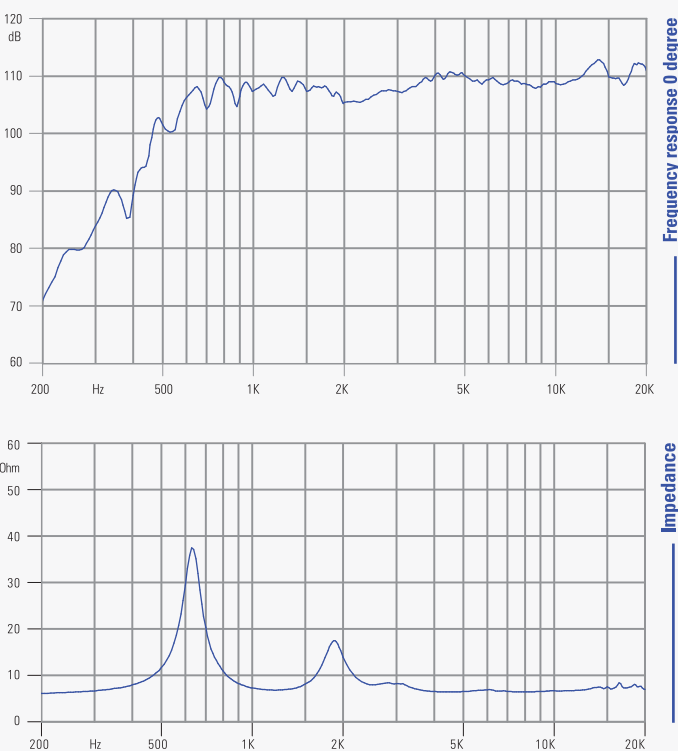
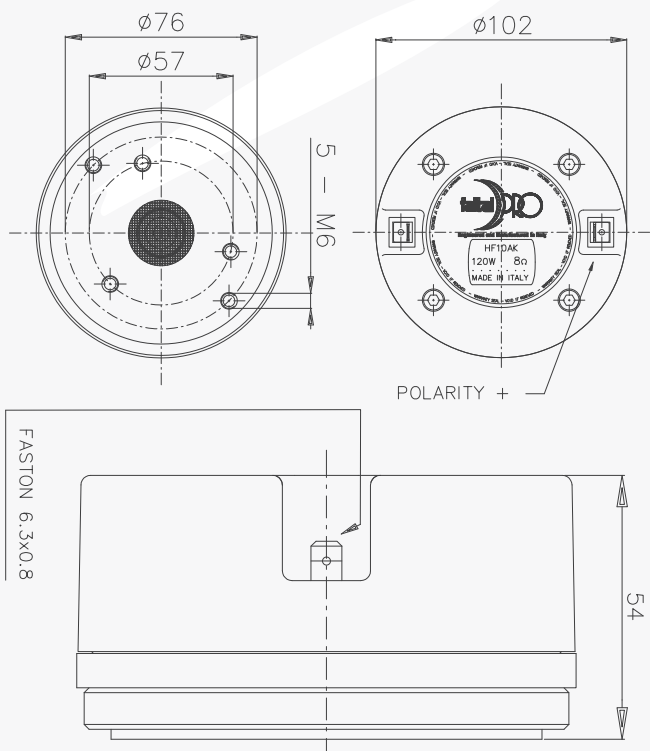
NOMINAL SPECIFICATIONS

Throat Diameter	25.4 mm (1 in)
Overall Diameter	102 mm (4.02 in)
180° Mounting Holes Diameter (2xM6)	76 mm (2.99 in)
120° Mounting Holes Diameter (3xM6)	57 mm (2.24 in)
Depth	54 mm (2.13 in)
Net Weight	1.4 kg (3.1 lb)
Shipping Box	147 x 130 x 82 mm
(Single Carton Box)	(5.8 x 5.1 x 3.2 in)
Shipping Weight	1.5 kg (3.3 lb)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.6 Ω
AES Power Handling (1)	60 W
Maximum Power Handling (2)	120 W
Minimum Crossover Frequency (3)	1.3 kHz
Sensitivity (1W/1m) (4)	110 dB
Frequency Range	0.8÷20 kHz
Voice Coil Diameter	44 mm (1.73 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Ketone Polymer
Diaphragm Shape	Dome
Winding Depth	1.9 mm (0.07 in)
Magnetic Gap Depth	2.65 mm (0.10 in)
Flux Density	1.9 T
Magnet	Neodymium Ring
Re	5.8 Ω
Phase Plug Design	Annular
Exit Angle (5)	21° Conical
NET Air Volume filled by HF Driver	0.35 dm³ (0.012 ft³)



NEODYMIUM HF DRIVER

HF106

1" - 60 W - 110 dB

FERRITE HF DRIVER

HF107

1" - 70 W - 109 dB



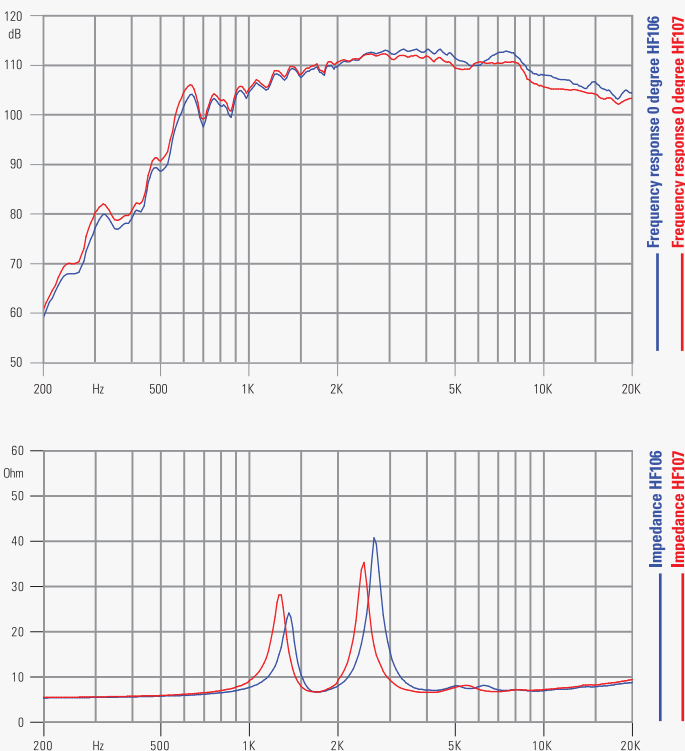
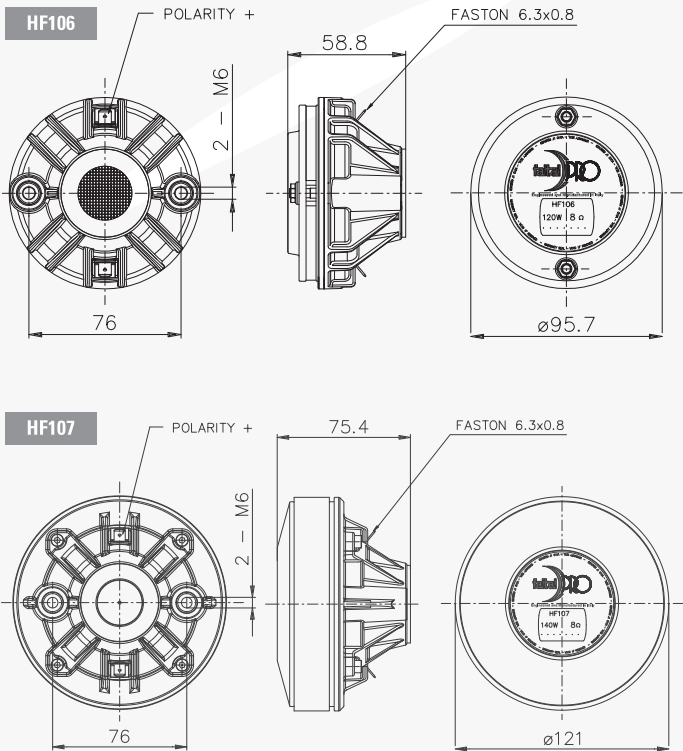
NOMINAL SPECIFICATIONS

	HF106	HF107
Throat Diameter	25.4 mm (1 in)	25.4 mm (1 in)
Overall Diameter	95.7 mm (3.77 in)	121 mm (4.76 in)
180° Mounting Holes Diameter (2xM6)	76 mm (2.99 in)	76 mm (2.99 in)
Depth	58.8 mm (2.31 in)	75.4 mm (2.97 in)
Net Weight	1.1 kg (2.3 lb)	2.5 kg (5.5 lb)
Shipping Box	147 x 130 x 82 mm	185 x 170 x 122 mm
(Single Carton Box)	(5.8 x 5.1 x 3.2 in)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	1.4 kg (3.1 lb)	2.7 kg (5.8 lb)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The driver's exit coincides with the end of the phase plug, there is no adaptation throat.

TECHNICAL PARAMETERS

	HF106	HF107
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	7 Ω	6.8 Ω
AES Power Handling (1)	60 W	70 W
Maximum Power Handling (2)	120 W	140 W
Minimum Crossover Frequency (3)	1.3 kHz	1.3 kHz
Sensitivity (1W/1m) (4)	110 dB	109 dB
Frequency Range	1.3÷20 kHz	1.3÷20 kHz
Voice Coil Diameter	44 mm (1.73 in)	44 mm (1.73 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Annular	Annular
Winding Depth	2.3 mm (0.09 in)	2.3 mm (0.09 in)
Magnetic Gap Depth	2.6 mm (0.10 in)	2.6 mm (0.10 in)
Flux Density	2.1 T	1.9 T
Magnet	Neodymium Ring	Ferrite Ring
Re	5.4 Ω	5.4 Ω
Phase Plug Design	Annular	Annular
Exit Angle (5)	Combined Exit	Combined Exit
NET Air Volume filled by HF Driver	0.25 dm³ (0.009 ft³)	0.5 dm³ (0.018 ft³)



HF108

1" - 60 W - 109 dB

HF108R⁽⁶⁾

1" - 60 W - 109 dB



NOMINAL SPECIFICATIONS

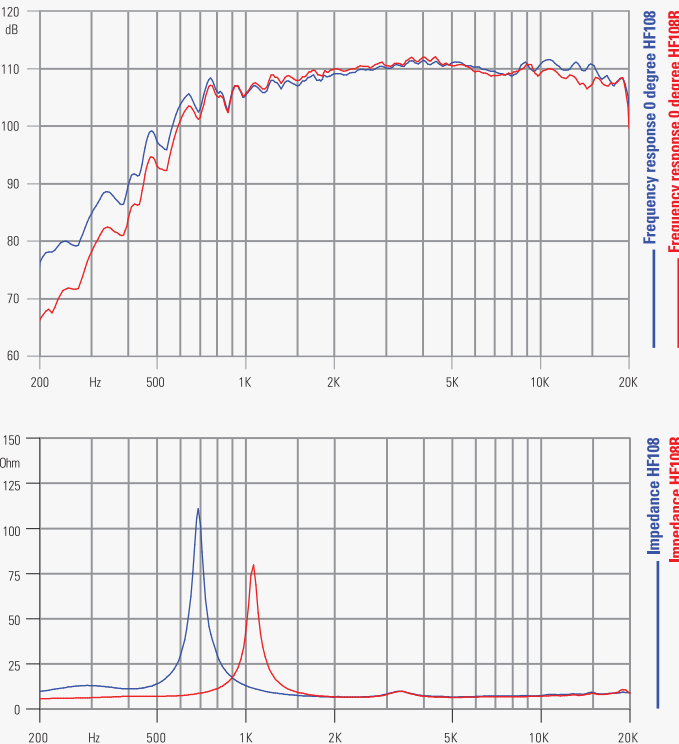
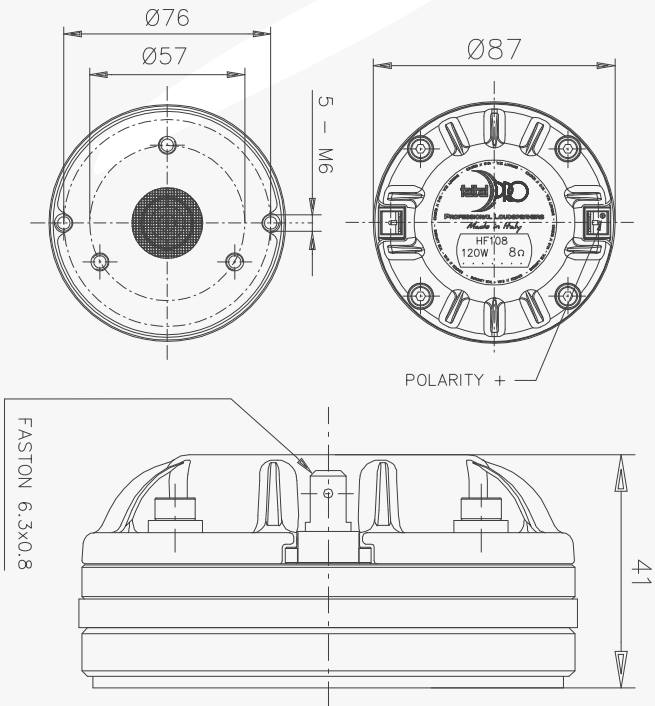
	HF108	HF108R ⁽⁶⁾
Throat Diameter	25.4 mm (1 in)	25.4 mm (1 in)
Overall Diameter	87 mm (3.43 in)	87 mm (3.43 in)
180° Mounting Holes Diameter (2xM6)	76 mm (2.99 in)	76 mm (2.99 in)
Depth	41 mm (1.61 in)	41 mm (1.61 in)
Net Weight	800 g (1.8 lb)	800 g (1.8 lb)
Shipping Box	147 x 130 x 82 mm	147 x 130 x 82 mm
(Single Carton Box)	(5.8 x 5.1 x 3.2 in)	(5.8 x 5.1 x 3.2 in)
Shipping Weight	1.2 kg (2.6 lb)	1.2 kg (2.6 lb)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1)** 2 Hours Test According to AES 2-1984 Rev. 2003
- (2)** Maximum power is defined as 3 dB greater than nominal power.
- (3)** 12 dB/oct or higher slope high-pass filter.
- (4)** Averaged within the frequency range.
- (5)** The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.
- (6)** Perforated suspension for acoustic tuning and tighter clamping.

TECHNICAL PARAMETERS

	HF108	HF108R ⁽⁶⁾
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.8 Ω	6.5 Ω
AES Power Handling ⁽¹⁾	60 W	60 W
Maximum Power Handling ⁽²⁾	120 W	120 W
Minimum Crossover Frequency ⁽³⁾	1.3 kHz	1.3 kHz
Sensitivity ^(1W/1m) ⁽⁴⁾	109 dB	109 dB
Frequency Range	1÷20 kHz	1÷20 kHz
Voice Coil Diameter	44 mm (1.73 in)	44 mm (1.73 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Dome	Dome
Winding Depth	2.3 mm (0.09 in)	2.3 mm (0.09 in)
Magnetic Gap Depth	2.85 mm (0.11 in)	2.85 mm (0.11 in)
Flux Density	2.1 T	2.1 T
Magnet	Neodymium Ring	Neodymium Ring
Re	5.8 Ω	5.8 Ω
Phase Plug Design	Annular	Annular
Exit Angle ⁽⁵⁾	31° Conical	31° Conical
NET Air Volume filled by HF Driver	0.195 dm³ (0.007 ft³)	0.195 dm³ (0.007 ft³)

HF108 / HF108R



HF109

1" - 60 W - 108 dB

HF103

1" - 60 W - 107 dB



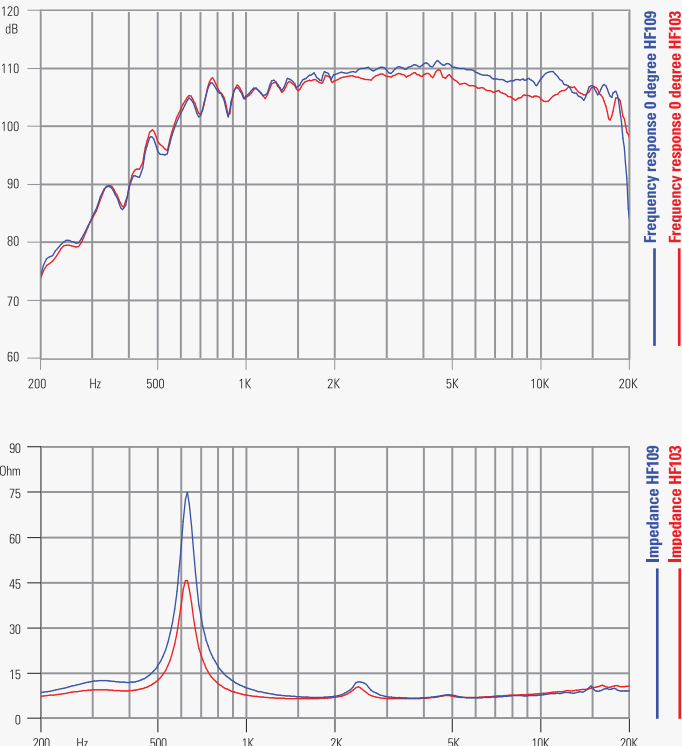
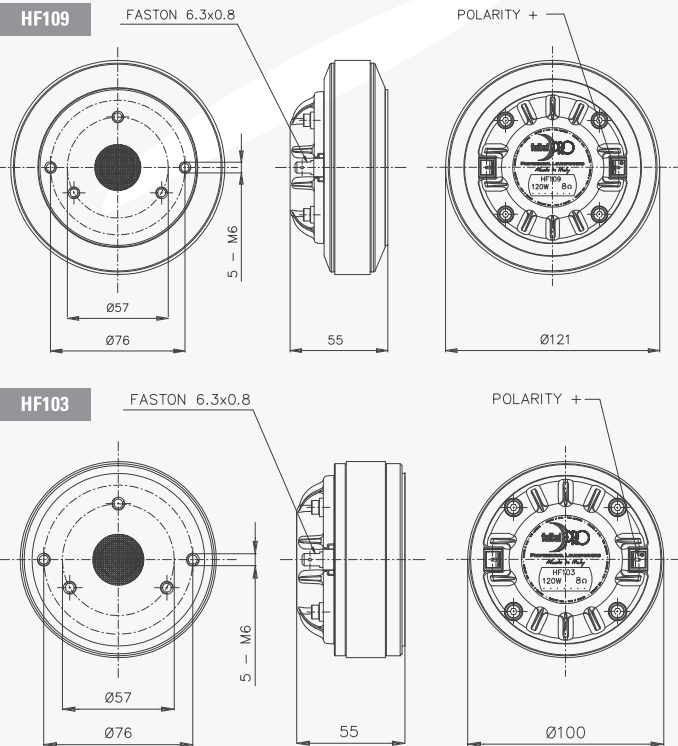
NOMINAL SPECIFICATIONS

	HF109	HF103
Throat Diameter	25.4 mm (1 in)	25.4 mm (1 in)
Overall Diameter	121 mm (4.76 in)	100 mm (3.94 in)
180° Mounting Holes Diameter (2xM6)	76 mm (2.99 in)	76 mm (2.99 in)
Depth	55 mm (2.17 in)	55 mm (2.17 in)
Net Weight	2.2 kg (4.9 lb)	1.3 kg (2.9 lb)
Shipping Box	185 x 170 x 102 mm	147 x 130 x 82 mm
(Single Carton Box)	(7.3 x 6.7 x 4.0 in)	(5.8 x 5.1 x 3.2 in)
Shipping Weight	2.5 kg (5.5 lb)	1.6 kg (3.5 lb)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.

TECHNICAL PARAMETERS

	HF109	HF103
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.8 Ω	6.8 Ω
AES Power Handling (1)	60 W	60 W
Maximum Power Handling (2)	120 W	120 W
Minimum Crossover Frequency (3)	1.3 kHz	1.3 kHz
Sensitivity (1W/1m) (4)	108 dB	107 dB
Frequency Range	1÷20 kHz	1÷20 kHz
Voice Coil Diameter	44 mm (1.73 in)	44 mm (1.73 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Dome	Dome
Winding Depth	2.3 mm (0.09 in)	2.3 mm (0.09 in)
Magnetic Gap Depth	2.85 mm (0.11 in)	2.85 mm (0.11 in)
Flux Density	1.8 T	1.5 T
Magnet	Ferrite Ring	Ferrite Ring
Re	5.8 Ω	5.8 Ω
Phase Plug Design	Annular	Annular
Exit Angle (5)	13° Conical	13° Conical
NET Air Volume filled by HF Driver	0.43 dm³ (0.015 ft³)	0.33 dm³ (0.011 ft³)



NEODYMIUM HF DRIVER

HF104

1" - 40 W - 108 dB

FERRITE HF DRIVER

HF105

1" - 40 W - 107 dB



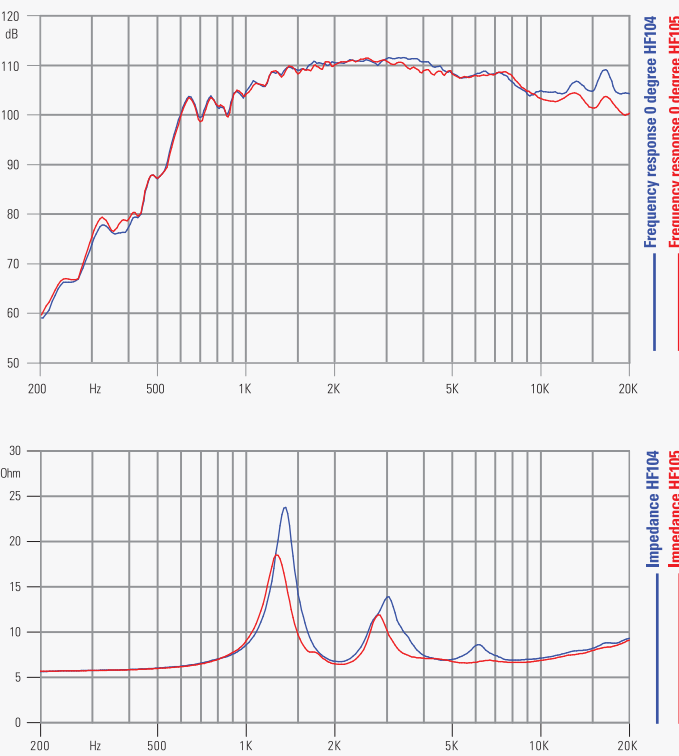
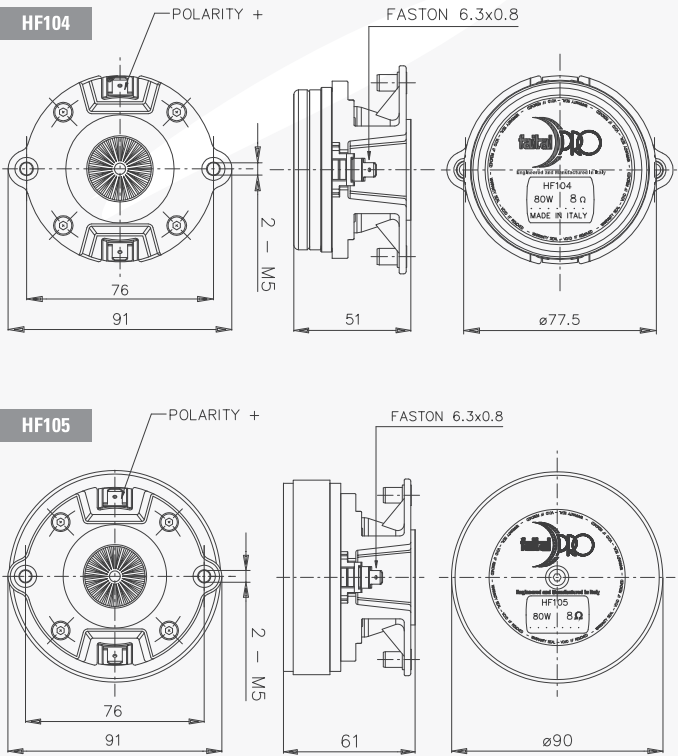
NOMINAL SPECIFICATIONS

	HF104	HF105
Throat Diameter	25.4 mm (1 in)	25.4 mm (1 in)
Overall Diameter	91 mm (3.58 in)	91 mm (3.58 in)
180° Mounting Holes Diameter (2xM5)	76 mm (2.99 in)	76 mm (2.99 in)
Depth	51 mm (2.01 in)	61 mm (2.40 in)
Net Weight	670 g (1.5 lb)	1.1 kg (2.4 lb)
Shipping Box	98 x 90 x 64 mm	147 x 130 x 82 mm
(Single Carton Box)	(3.9 x 3.5 x 2.5 in)	(5.8 x 5.1 x 3.2 in)
Shipping Weight	700 g (1.5 lb)	1.2 kg (2.7 lb)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) Maximum power is defined as 3 dB greater than nominal power.
 - (3) 12 dB/oct or higher slope high-pass filter.
 - (4) Averaged within the frequency range.
 - (5) The driver's exit coincides with the end of the phase plug, there is no adaptation throat.

TECHNICAL PARAMETERS

	HF104	HF105
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.9 Ω	6.7 Ω
AES Power Handling (1)	40 W	40 W
Maximum Power Handling (2)	80 W	80 W
Minimum Crossover Frequency (3)	1.7 kHz	1.7 kHz
Sensitivity (1W/1m) (4)	108 dB	107 dB
Frequency Range	1.5÷20 kHz	1.4÷20 kHz
Voice Coil Diameter	37 mm (1.46 in)	37 mm (1.46 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Annular	Annular
Winding Depth	2.1 mm (0.08 in)	2.1 mm (0.08 in)
Magnetic Gap Depth	2.6 mm (0.10 in)	2.6 mm (0.10 in)
Flux Density	1.85 T	1.5 T
Magnet	Neodymium Ring	Ferrite Ring
Re	5.5 Ω	5.5 Ω
Phase Plug Design	Radial	Radial
Exit Angle (5)	Combined Exit	Combined Exit
NET Air Volume filled by HF Driver	0.16 dm³ (0.006 ft³)	0.26 dm³ (0.009 ft³)



HF111

1" - 40 W - 107 dB



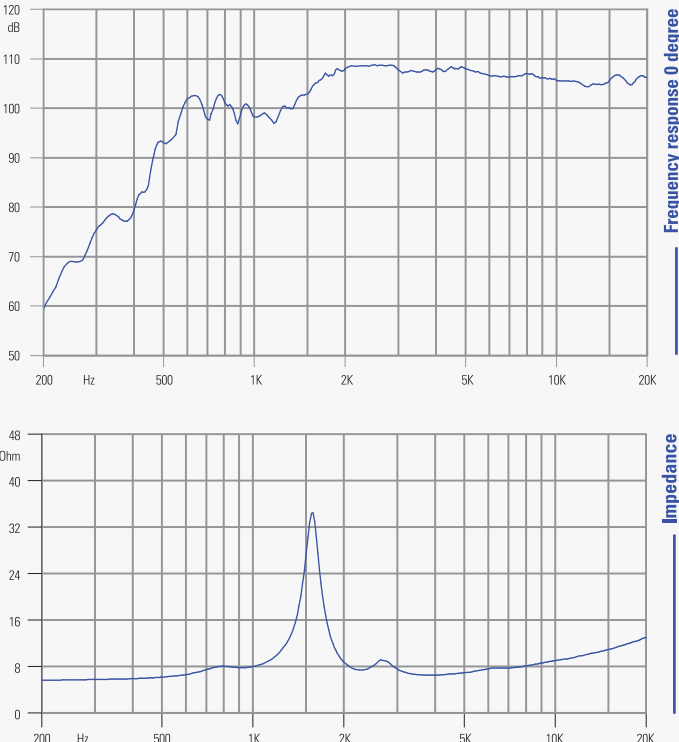
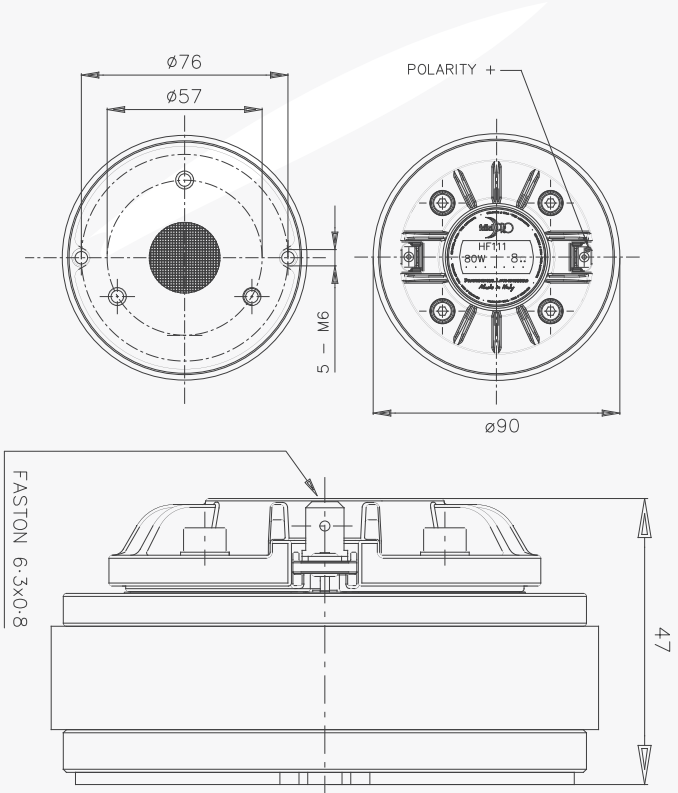
NOMINAL SPECIFICATIONS

Throat Diameter	25.4 mm (1 in)
Overall Diameter	90 mm (3.54 in)
180° Mounting Holes Diameter (2xM6)	76 mm (2.99 in)
Depth	47 mm (1.85 in)
Net Weight	1.05 kg (2.3 lb)
Shipping Box	147 x 130 x 82 mm
(Single Carton Box)	(5.8 x 5.1 x 3.2 in)
Shipping Weight	1.3 kg (2.9 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.6 Ω
AES Power Handling (1)	40 W
Maximum Power Handling (2)	80 W
Minimum Crossover Frequency (3)	2 kHz
Sensitivity (1W/1m) (4)	107 dB
Frequency Range	2÷20 kHz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Ketone Polymer
Diaphragm Shape	Dome
Winding Depth	2.2 mm (0.09 in)
Magnetic Gap Depth	2.4 mm (0.09 in)
Flux Density	1.6 T
Magnet	Ferrite Ring
Re	5.5 Ω
Phase Plug Design	Annular
Exit Angle (5)	18° Conical
NET Air Volume filled by HF Driver	0.225 dm³ (0.008 ft³)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.



NEODYMIUM HF DRIVER

HF102⁽⁶⁾

1" - 30 W - 106 dB

FERRITE HF DRIVER

HF100

1" - 30 W - 108 dB



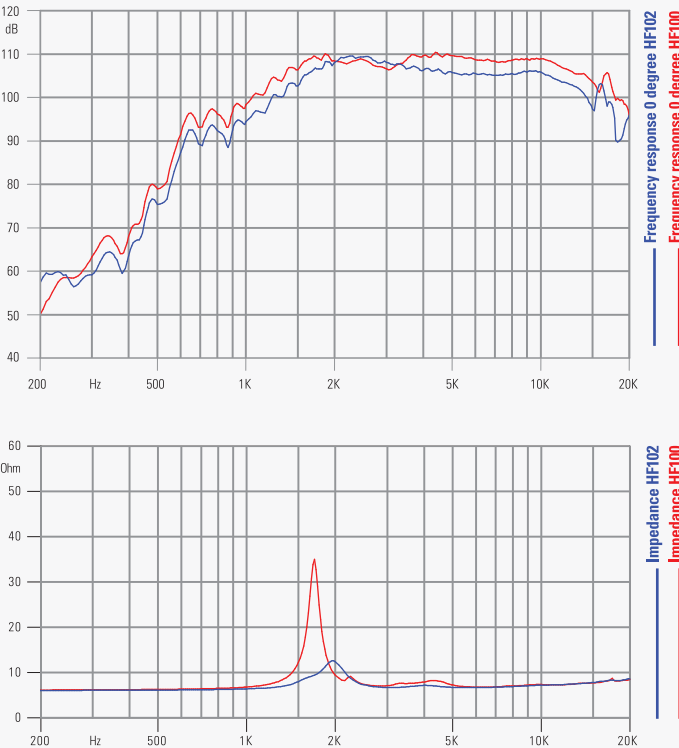
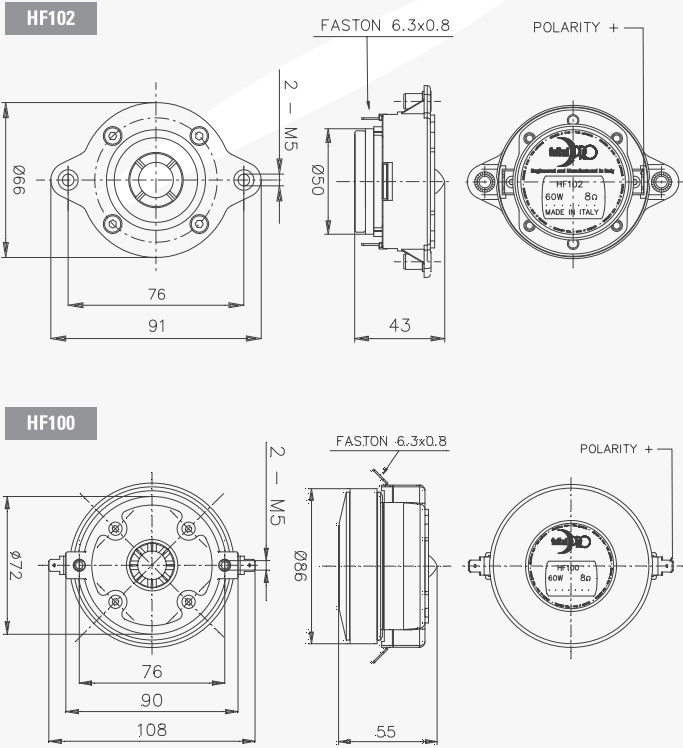
NOMINAL SPECIFICATIONS

	HF102 (6)	HF100
Throat Diameter	25.4 mm (1 in)	25.4 mm (1 in)
Overall Diameter	91 mm (3.58 in)	108 mm (4.02 in)
180° Mounting Holes Diameter (2xM6)	76 mm (2.99 in)	76 mm (2.99 in)
Depth	43 mm (1.69 in)	55 mm (2.17 in)
Net Weight	300 g (0.7 lb)	830 g (1.8 lb)
Shipping Box	98 x 90 x 64 mm	147 x 130 x 82 mm
(Single Carton Box)	(3.9 x 3.5 x 2.5 in)	(5.8 x 5.1 x 3.2 in)
Shipping Weight	330 g (0.7 lb)	862 g (1.90 lb)

- NOTES:** Driver mounted on a 1" 50° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The phase plug is recessed from the driver's exit which is at the end of a conical adaptation horn.
- (6) Ferrofluid added in air gap.

TECHNICAL PARAMETERS

	HF102 (6)	HF100
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	7 Ω	7 Ω
AES Power Handling (1)	30 W	30 W
Maximum Power Handling (2)	60 W	60 W
Minimum Crossover Frequency (3)	2.6 kHz	2 kHz
Sensitivity (1W/1m) (4)	106 dB	108 dB
Frequency Range	1.8÷20 kHz	1.5÷20 kHz
Voice Coil Diameter	25 mm (0.98 in)	25 mm (0.98 in)
Winding Material	Al	Al
Former Material	Kapton	Kapton
Diaphragm Material	Ketone Polymer	Ketone Polymer
Diaphragm Shape	Dome	Dome
Winding Depth	1.7 mm (0.07 in)	1.7 mm (0.07 in)
Magnetic Gap Depth	2 mm (0.08 in)	2 mm (0.08 in)
Flux Density	1.3 T	1.7 T
Magnet	Neodymium Ring	Ferrite Ring
Re	6 Ω	6 Ω
Phase Plug Design	Radial	Radial
Exit Angle (5)	9° Conical	9° Conical
NET Air Volume filled by HF Driver	0.1 dm³ (0.004 ft³)	0.25 dm³ (0.009 ft³)



FD371

37 mm - 35 W - 107 dB



NOMINAL SPECIFICATIONS

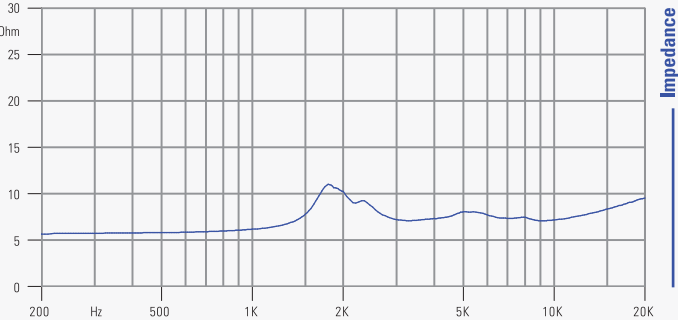
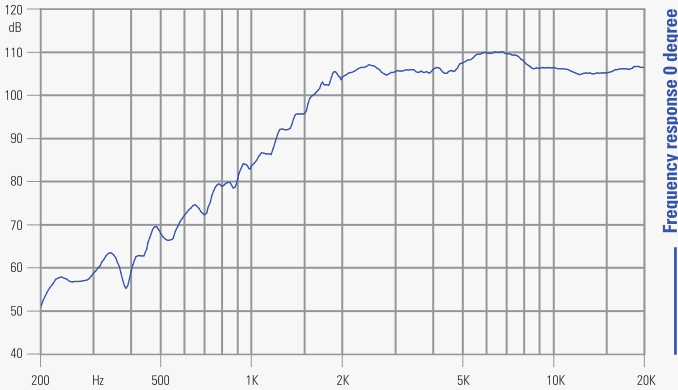
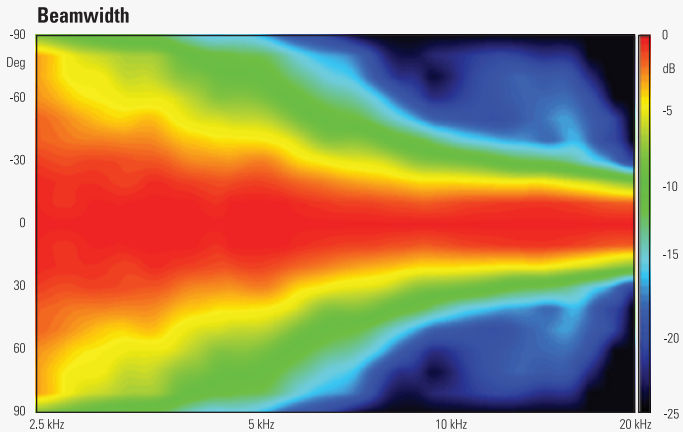
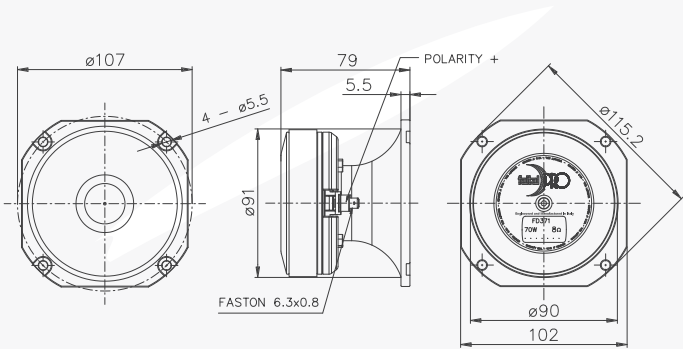
Overall Diameter	115.2/102 mm (4.54/4.0 in)
Bolt Circle Diameter	107 mm (4.21 in)
Baffle Cutout Diameter	91 mm (3.58 in)
Depth	79 mm (3.11 in)
Flange and gasket Thickness	5.5 mm (0.22 in)
Net Weight	1.25 kg (2.8 lb)
Shipping Box	150 x 123 x 102 mm
(Single Carton Box)	(5.9 x 4.8 x 4.0 in)
Shipping Weight	1.3 kg (2.9 lb)

NOTES:

- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	6.6 Ω
AES Power Handling (1)	35 W
Maximum Power Handling (2)	70 W
Minimum Crossover Frequency (3)	2.6 kHz
Sensitivity (1W/1m) (4)	107 dB
Frequency Range	2.6÷20 kHz
Dispersion Angle	40°
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Ketone Polymer
Diaphragm Shape	Annular
Winding Depth	2.1 mm (0.08 in)
Magnetic Gap Depth	2.6 mm (0.10 in)
Flux Density	1.5 T
Magnet	Ferrite Ring
Re	5.5 Ω
Exit Angle	N/A
NET Air Volume filled by HF Driver	0.3 dm³ (0.011 ft³)



HMF200

2" - 40 W - 108 dB



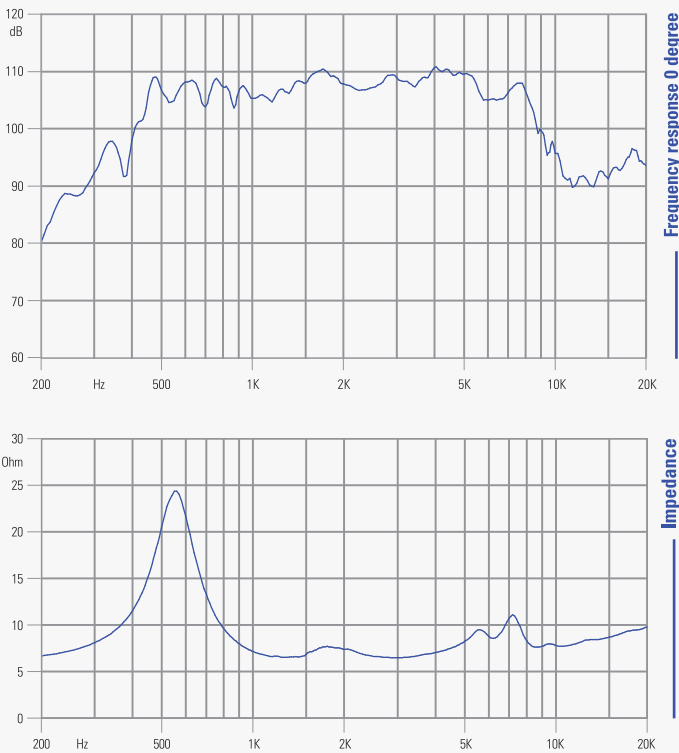
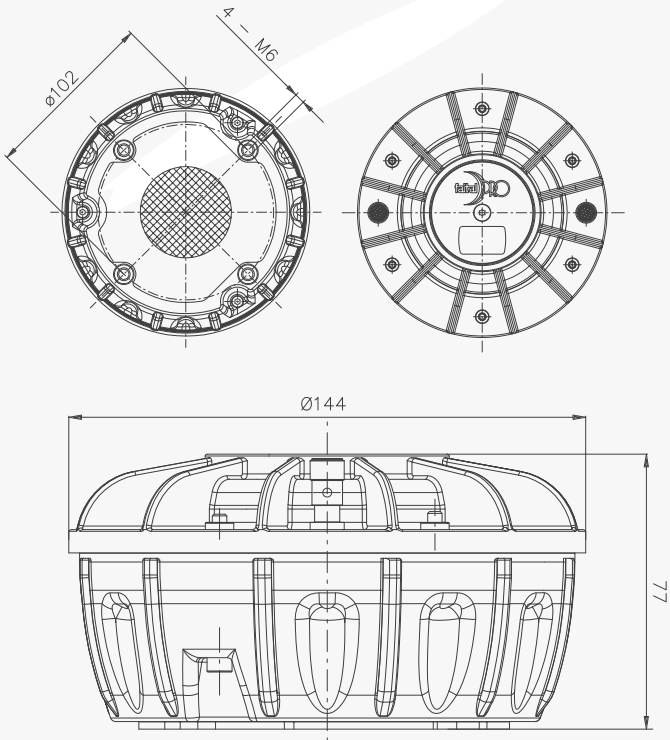
NOMINAL SPECIFICATIONS

Throat Diameter	50.8 mm (2 in)
Overall Diameter	144 mm (5.67 in)
90° Mounting Holes Diameter (4xM6)	102 mm (4.02 in)
Depth	77 mm (3.03 in)
Net Weight	1.65 kg (3.6 lb)
Shipping Box	185 x 170 x 122 mm
(Single Carton Box)	(7.3 x 6.7 x 4.8 in)
Shipping Weight	1.9 kg (4.2 lb)

TECHNICAL PARAMETERS

Nominal Impedance	8 Ω
Minimum Impedance	7 Ω
AES Power Handling (1)	40 W
Maximum Power Handling (2)	80 W
Minimum Crossover Frequency (3)	0.5 kHz
Sensitivity (1W/1m) (4)	108 dB
Frequency Range	0.5÷9 kHz
Voice Coil Diameter	37 mm (1.46 in)
Winding Material	Al
Former Material	Kapton
Diaphragm Material	Paper
Diaphragm Shape	Double Edge Cone
Winding Depth	2.6 mm (0.10 in)
Magnetic Gap Depth	3.6 mm (0.14 in)
Flux Density	2.1 T
Magnet	Neodymium Ring
Re	5.5 Ω
Phase Plug Design	Annular
Exit Angle	Combined Exit
NET Air Volume filled by HF Driver	1.25 dm³ (0.044 ft³)

- NOTES:** Driver Mounted on a 2" 90° x 40° Al horn
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
- (2) Maximum power is defined as 3 dB greater than nominal power.
- (3) 12 dB/oct or higher slope high-pass filter.
- (4) Averaged within the frequency range.
- (5) The driver's exit coincides with the end of the phase plug, there is no adaptation throat.



COAXIAL LOUDSPEAKERS

QUALITY AND RELIABILITY

FaitalPRO is a complete line of high power neodymium drivers suitable for use in heavy duty applications. Our products are specifically engineered for professional applications and are industrialized and manufactured to the highest standards of components' quality, reliability, high power handling, sturdiness and acoustic quality. FaitalPRO won't settle for less.

12HX230

LF 12" - 250 W - 97 dB
HF 30 W - 107 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	300 mm (12 in)
Overall Diameter	316 mm (12.44 in)
Bolt Circle Diameter	298.5 mm (11.75 in)
Baffle Cutout Diameter	282 mm (11.10 in)
Depth	162 mm (6.38 in)
Flange and gasket Thickness	12 mm (0.47 in)
Net Weight	5.2 kg (11.5 lb)
Shipping Box	350 x 346 x 190 mm
(Single Carton Box)	(13.8 x 13.6 x 8.5 in)
Shipping Weight	5.7 kg (12.6 lb)

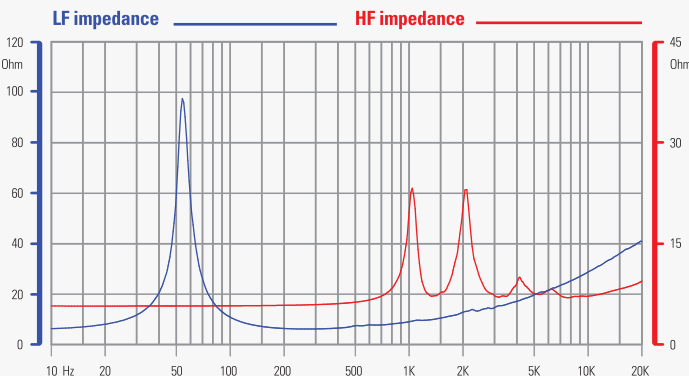
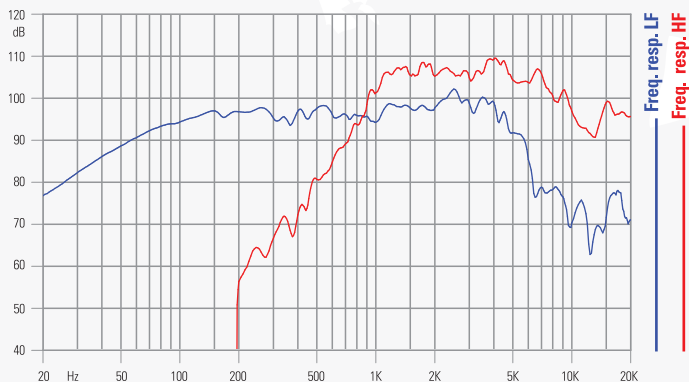
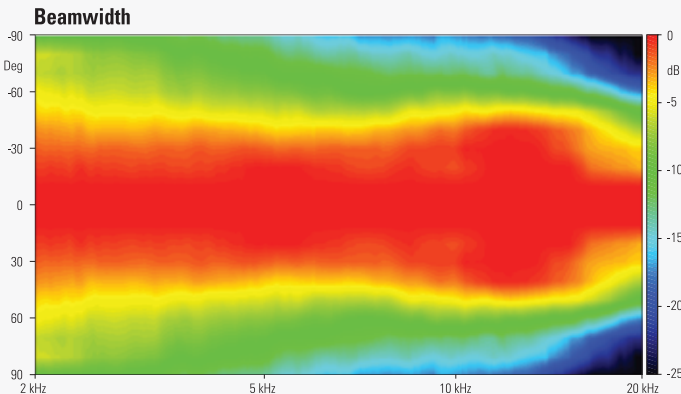
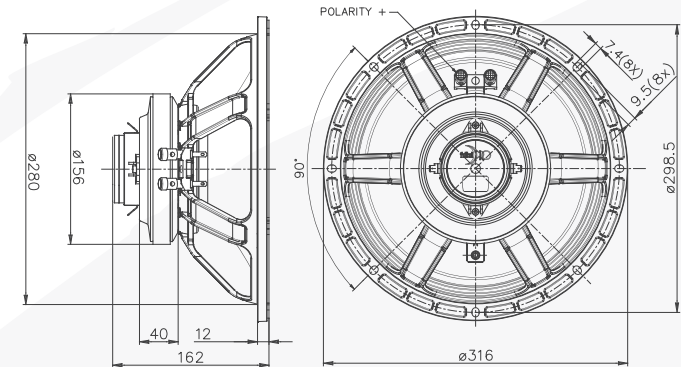
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
 - (6) 12 dB/oct or higher slope high-pass filter
 - (7) HF sensitivity averaged within the frequency range

TECHNICAL PARAMETERS

	LF	HF
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	7 Ω
AES Power Handling (1)	250 W	30 W
Maximum Power Handling (4)	500 W	60 W
Sensitivity (1W/1m) (7)	97 dB	107 dB
Frequency Range	55÷5000 Hz	1500÷20000 Hz
Voice Coil Diameter	65 mm (2.56 in)	37 mm (1.46 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Kapton
Winding Depth	17.4 mm (0.69 in)	2.1 mm (0.08 in)
Magnetic Gap Depth	8 mm (0.31 in)	2.6 mm (0.10 in)
Flux Density	1.15 T	1.85 T
Min. Crossover Frequency (6)	-	1.7 kHz
Dispersion Angle	-	100°
Diaphragm Material	-	Ketone Polymer
Diaphragm Shape	-	Annular
Magnet	Ferrite Ring	Neodymium Ring
Basket Material	Aluminum	-
Demodulation	Aluminum Ring	-
Cone Surround (5)	Triple Roll	-
NET Air Volume filled by Loudspeaker	1.9 dm³ (0.067 ft³)	-
Spider Profile	1x variable height waves	-

THIELE & SMALL PARAMETERS

Fs	55 Hz
Re [LF]	5.3 Ω
Re [HF]	5.5 Ω
Qes	0.46
Qms	7.4
Qts	0.44
Vas	56.6 dm³ (2.00 ft³)
Sd	489 cm² (75.80 in²)
Xmax (2)	7.37 mm
Xdamage (3)	15.25 mm
Mms	50.2 g
Bl	14.1 N/A
Le	0.62 mH
Mmd	38.0 g
Cms	0.17 mm/N
Rms	2.34 kg/s
η _e (Eta Zero)	1.98 %
EBP	120 Hz



10HX230

LF 10" - 250 W - 96 dB
HF 30 W - 107 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	250 mm (10 in)
Overall Diameter	261 mm (10.28 in)
Bolt Circle Diameter	246 mm (9.69 in)
Baffle Cutout Diameter	230 mm (9.06 in)
Depth	136.5 mm (5.37 in)
Flange and gasket Thickness	12 mm (0.47 in)
Net Weight	5 kg (11.0 lb)
Shipping Box	282 x 280 x 140 mm
(Single Carton Box)	(11.1 x 11.0 x 5.5 in)
Shipping Weight	5.4 kg (11.9 lb)

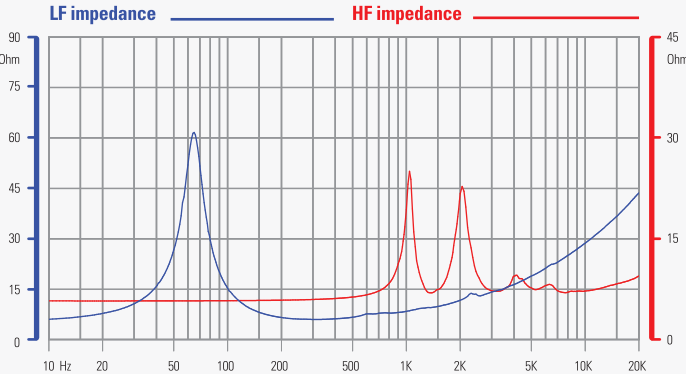
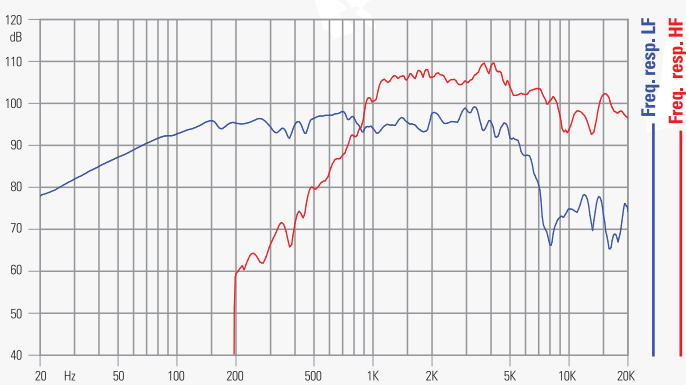
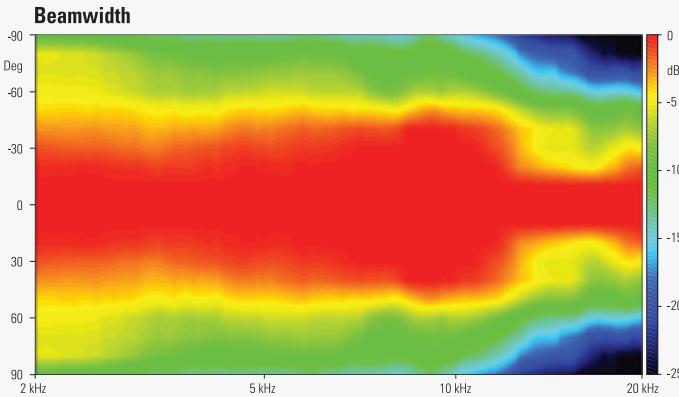
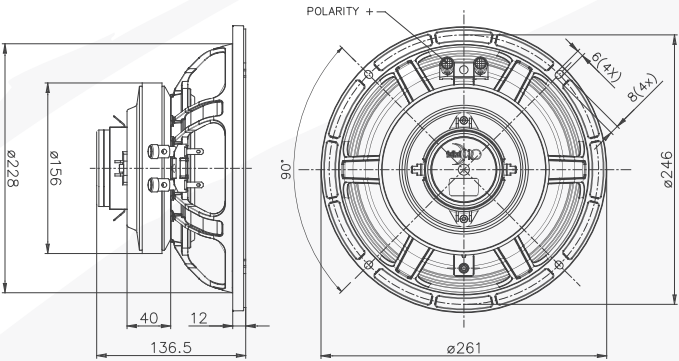
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
 - (6) 12 dB/oct or higher slope high-pass filter
 - (7) HF sensitivity averaged within the frequency range

TECHNICAL PARAMETERS

	LF	HF
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.4 Ω	6.9 Ω
AES Power Handling (1)	250 W	30 W
Maximum Power Handling (4)	500 W	60 W
Sensitivity (1W/1m) (7)	96 dB	107 dB
Frequency Range	65-4000 Hz	1500-20000 Hz
Voice Coil Diameter	65 mm (2.56 in)	37 mm (1.46 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Kapton
Winding Depth	17.4 mm (0.69 in)	2.1 mm (0.08 in)
Magnetic Gap Depth	8 mm (0.31 in)	2.6 mm (0.10 in)
Flux Density	1.15 T	1.85 T
Min. Crossover Frequency (6)	-	1.7 kHz
Dispersion Angle	-	110°
Diaphragm Material	-	Ketone Polymer
Diaphragm Shape	-	Annular
Magnet	Ferrite Ring	Neodymium Ring
Basket Material	Aluminum	-
Demodulation	Aluminum Ring	-
Cone Surround (5)	Triple Roll	-
NET Air Volume filled by Loudspeaker	1.3 dm³ (0.046 ft³)	-
Spider Profile	1x variable height waves	-

THIELE & SMALL PARAMETERS

Fs	65 Hz
Re [LF]	5.3 Ω
Re [HF]	5.5 Ω
Qes	0.37
Qms	5.8
Qts	0.35
Vas	25.8 dm³ (0.91 ft³)
Sd	321 cm² (49.76 in²)
Xmax (2)	7.37 mm
Xdamage (3)	15.25 mm
Mms	34.0 g
Bl	14.1 N/A
Le	0.54 mH
Mmd	27.5 g
Cms	0.18 mm/N
Rms	2.39 kg/s
η _e (Eta Zero)	1.86 %
EBP	176 Hz



8HX200

LF 8" - 250 W - 95 dB
HF 30 W - 107 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	223.75/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)
Depth	110.7 mm (4.36 in)
Flange and gasket Thickness	10.7 mm (0.42 in)
Net Weight	2.7 kg (6.0 lb)
Shipping Box	227 x 224 x 132 mm
(Single Carton Box)	(8.9 x 8.8 x 5.2 in)
Shipping Weight	3.4 kg (7.5 lb)

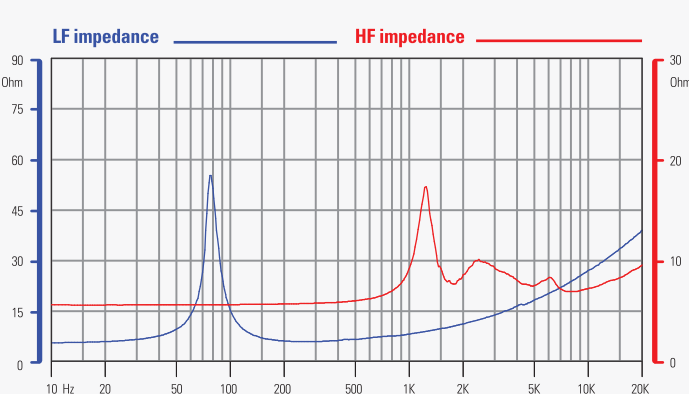
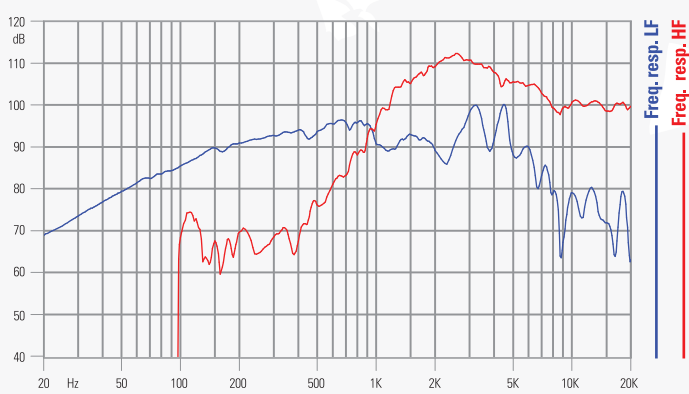
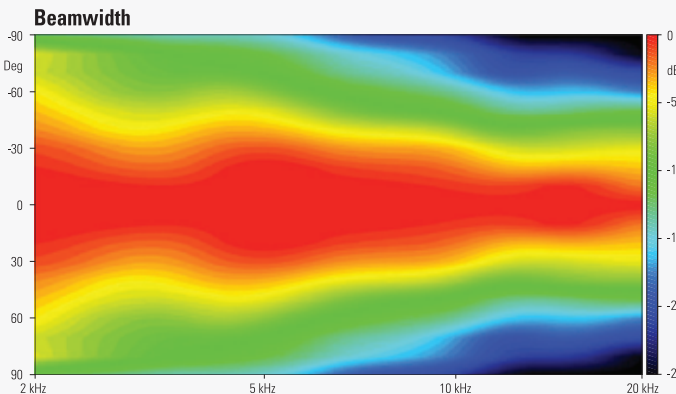
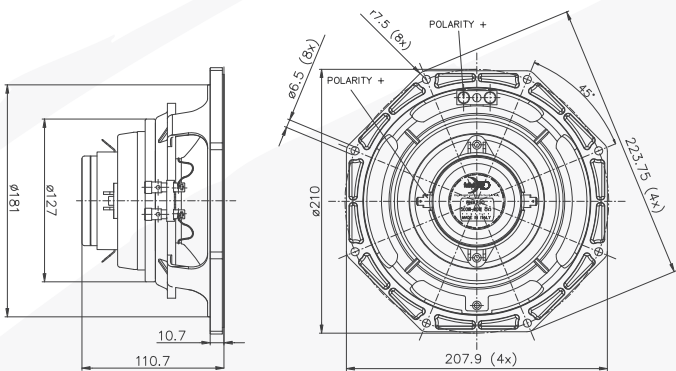
- NOTES:**
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
 - (6) 12 dB/oct or higher slope high-pass filter
 - (7) HF sensitivity averaged within the frequency range

TECHNICAL PARAMETERS

	LF	HF
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.6 Ω	6.9 Ω
AES Power Handling (1)	250 W	30 W
Maximum Power Handling (4)	500 W	60 W
Sensitivity (1W/1m) (7)	95 dB	107 dB
Frequency Range	75÷4000 Hz	1500÷20000 Hz
Voice Coil Diameter	65 mm (2.56 in)	37 mm (1.46 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Kapton
Winding Depth	12.5 mm (0.49 in)	2.1 mm (0.08 in)
Magnetic Gap Depth	8 mm (0.31 in)	2.6 mm (0.10 in)
Flux Density	1.2 T	1.85 T
Min. Crossover Frequency (6)	-	1.7 kHz
Dispersion Angle	-	90°
Diaphragm Material	-	Ketone Polymer
Diaphragm Shape	-	Annular
Magnet	Neodymium Ring	Neodymium Ring
Basket Material	Aluminum	-
Demodulation	Aluminum Ring	-
Cone Surround (5)	Triple Roll	-
NET Air Volume filled by Loudspeaker	0.8 dm³ (0.028 ft³)	-
Spider Profile	1x constant height waves	-

THIELE & SMALL PARAMETERS

Fs	76 Hz
Re [LF]	5.5 Ω
Re [HF]	5.5 Ω
Qes	0.31
Qms	10.5
Qts	0.30
Vas	11.9 dm³ (0.42 ft³)
Sd	205 cm² (31.8 in²)
Xmax (2)	4.92 mm
Xdamage (3)	10.2 mm
Mms	22.0 g
Bl	13.8 N/A
Le	0.51 mH
Mmd	20.3 g
Cms	0.20 mm/N
Rms	1 kg/s
η_e (Eta Zero)	1.67 %
EBP	245 Hz



8HX230

LF 8" - 250 W - 94 dB
HF 30 W - 105 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	223.75/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)
Depth	126.5 mm (4.98 in)
Flange and gasket Thickness	10.7 mm (0.42 in)
Net Weight	4.7 kg (10.4 lb)
Shipping Box	235 x 235 x 155 mm
(Single Carton Box)	(9.3 x 9.3 x 6.1 in)
Shipping Weight	5 kg (11.0 lb)

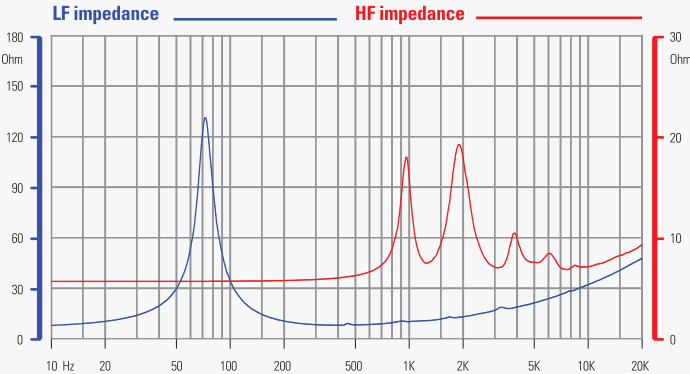
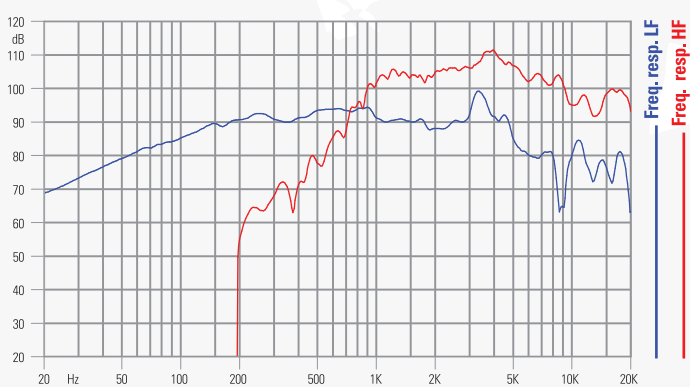
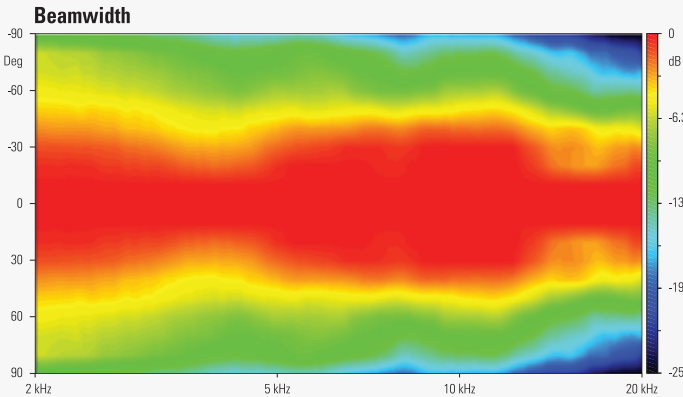
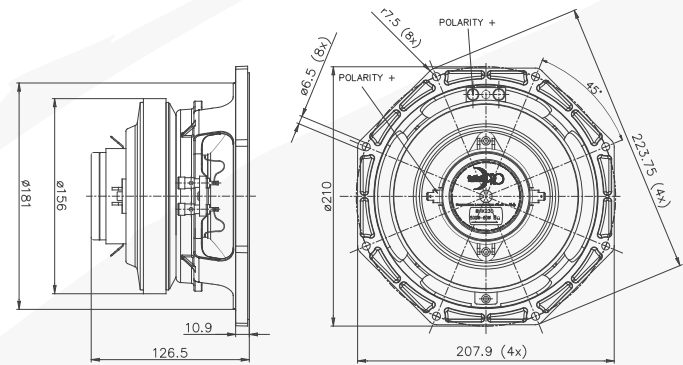
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
 - (6) 12 dB/oct or higher slope high-pass filter
 - (7) HF sensitivity averaged within the frequency range

TECHNICAL PARAMETERS

	LF	HF
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	8 Ω	7 Ω
AES Power Handling (1)	250 W	30 W
Maximum Power Handling (4)	500 W	60 W
Sensitivity (1W/1m) (7)	94 dB	105 dB
Frequency Range	70÷4000 Hz	1200÷20000 Hz
Voice Coil Diameter	65 mm (2.56 in)	37 mm (1.46 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Kapton
Winding Depth	15 mm (0.59 in)	2.1 mm (0.08 in)
Magnetic Gap Depth	8 mm (0.31 in)	2.6 mm (0.10 in)
Flux Density	1.12 T	1.85 T
Min. Crossover Frequency (6)	-	1.7 kHz
Dispersion Angle	-	100°
Diaphragm Material	-	Ketone Polymer
Diaphragm Shape	-	Annular
Magnet	Ferrite Ring	Neodymium Ring
Basket Material	Aluminum	-
Demodulation	Aluminum Ring	-
Cone Surround (5)	Triple Roll	-
NET Air Volume filled by Loudspeaker	1 dm³ (0.035 ft³)	-
Spider Profile	1x variable height waves	-

THIELE & SMALL PARAMETERS

Fs	70 Hz
Re [LF]	6.5 Ω
Re [HF]	5.5 Ω
Qes	0.38
Qms	7.4
Qts	0.36
Vas	8 dm³ (0.28 ft³)
Sd	205 cm² (31.8 in²)
Xmax (2)	6.17 mm
Xdamage (3)	15.5 mm
Mms	23.6 g
Bl	15.1 N/A
Le	0.57 mH
Mmd	20.3 g
Cms	0.14 mm/N
Rms	1.79 kg/s
η _e (Eta Zero)	1.42 %
EBP	184 Hz



8HX150

LF 8" - 250 W - 94 dB

HF 15 W - 104 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	200 mm (8 in)
Overall Diameter	223.75/207.9 mm (8.81/8.18 in)
Bolt Circle Diameter	210 mm (8.27 in)
Baffle Cutout Diameter	183 mm (7.20 in)
Depth	111.7 mm (4.40 in)
Flange and gasket Thickness	10.7 mm (0.42 in)
Net Weight	3.6 kg (7.9 lb)
Shipping Box	227 x 224 x 132 mm
(Single Carton Box)	(8.9 x 8.8 x 5.2 in)
Shipping Weight	4.3 kg (9.5 lb)

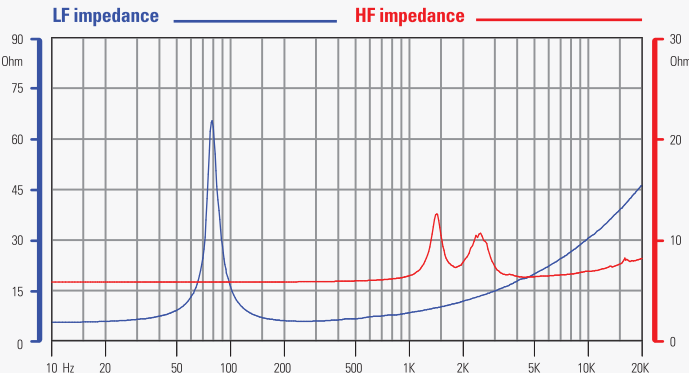
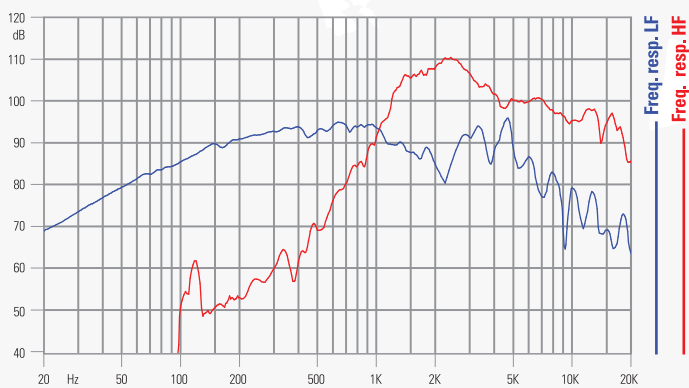
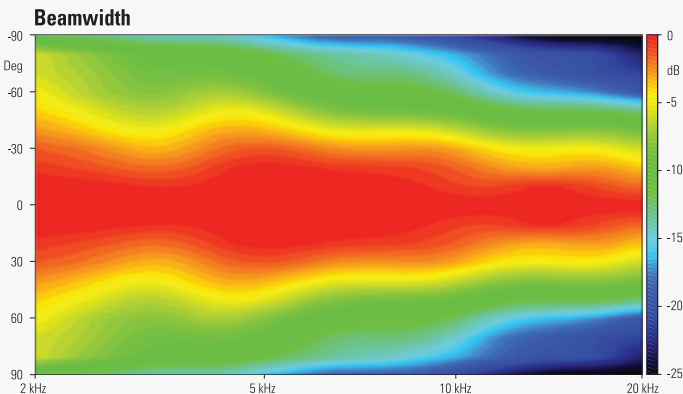
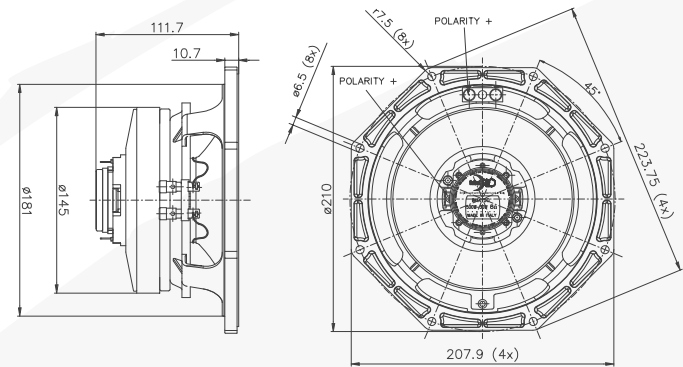
- NOTES:**
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
 - (6) 12 dB/oct or higher slope high-pass filter
 - (7) HF sensitivity averaged within the frequency range

TECHNICAL PARAMETERS

	LF	HF
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6.6 Ω	6.3 Ω
AES Power Handling (1)	250 W	15 W
Maximum Power Handling (4)	500 W	30 W
Sensitivity (1W/1m) (7)	94 dB	104 dB
Frequency Range	75÷4000 Hz	1500÷18000 Hz
Voice Coil Diameter	65 mm (2.56 in)	25 mm (1 in)
Winding Material	Al	Al
Former Material	Glass Fiber	Kapton
Winding Depth	12.5 mm (0.49 in)	1.7 mm (0.07 in)
Magnetic Gap Depth	8 mm (0.31 in)	2 mm (0.08 in)
Flux Density	1 T	1.3 T
Min. Crossover Frequency (6)	-	1.7 kHz
Dispersion Angle	-	90°
Diaphragm Material	-	Ketone Polymer
Diaphragm Shape	-	Dome
Magnet	Ferrite Ring	Neodymium Ring
Basket Material	Aluminum	-
Demodulation	No	-
Cone Surround (5)	Triple Roll	-
NET Air Volume filled by Loudspeaker	0.96 dm³ (0.034 ft³)	-
Spider Profile	1x constant height waves	-

THIELE & SMALL PARAMETERS

Fs	76 Hz
Re [LF]	5.5 Ω
Re [HF]	6 Ω
Qes	0.43
Qms	9.5
Qts	0.42
Vas	11.7 dm³ (0.41 ft³)
Sd	205 cm² (31.8 in²)
Xmax (2)	4.92 mm
Xdamage (3)	10.2 mm
Mms	22.3 g
Bl	11.6 N/A
Le	0.51 mH
Mmd	20.6 g
Cms	0.20 mm/N
Rms	1.1 kg/s
η _o (Eta Zero)	1.15 %
EBP	177 Hz



6HX150

LF 6" - 150 W - 93 dB
HF 15 W - 104 dB



NOMINAL SPECIFICATIONS

Nominal Diameter	160 mm (6 in)
Overall Diameter	186.5/162 mm (7.34/6.37 in)
Bolt Circle Diameter	172 mm (6.77 in)
Baffle Cutout Diameter	147 mm (5.79 in)
Depth	95 mm (3.74 in)
Flange and gasket Thickness	9.3 mm (0.37 in)
Net Weight	1.3 kg (2.9 lb)
Shipping Box	202 x 202 x 134 mm
(Single Carton Box)	(8.0 x 8.0 x 5.3 in)
Shipping Weight	2.8 kg (6.2 lb)

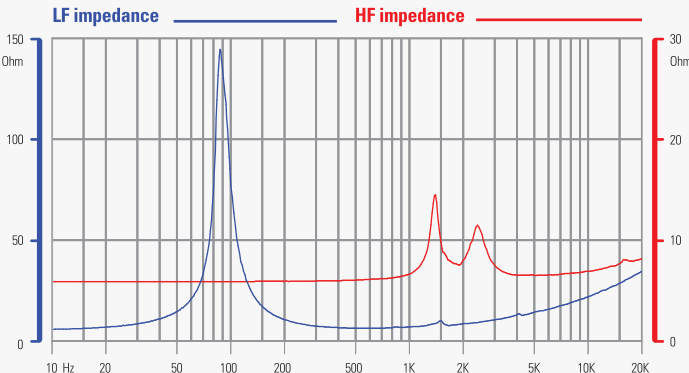
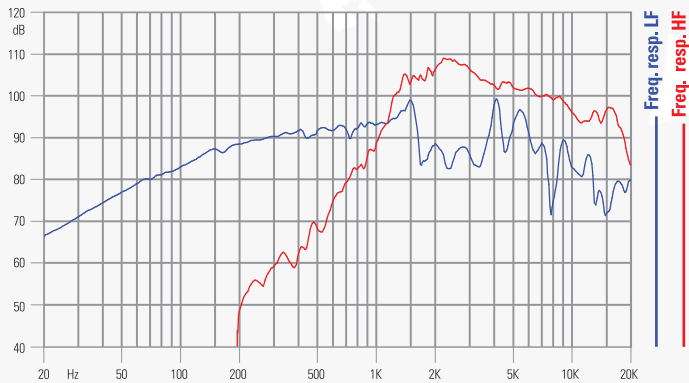
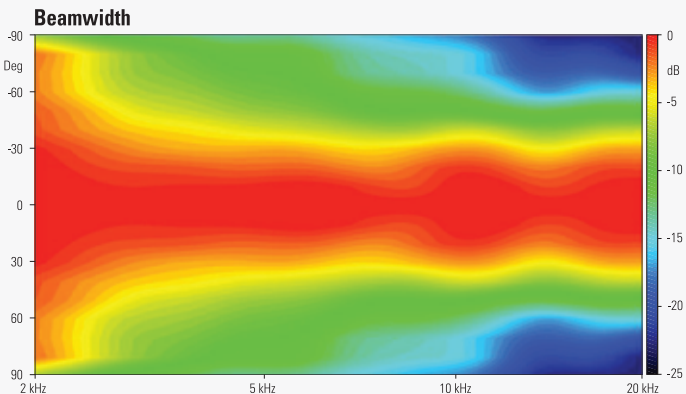
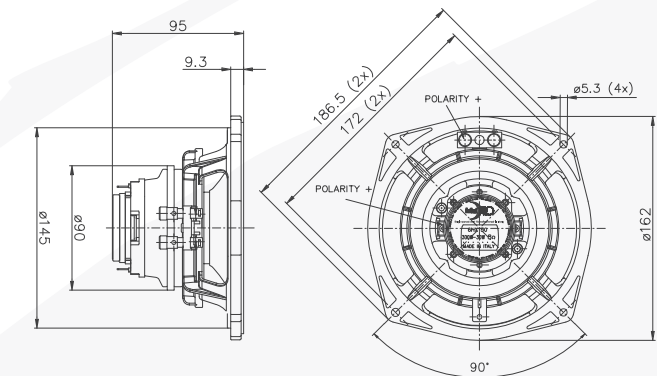
- NOTES:
- (1) 2 Hours Test According to AES 2-1984 Rev. 2003
 - (2) $X_{max} = [(Winding\ Depth - magnetic\ gap\ depth)/2] + (magnetic\ gap\ depth / 3)$
 - (3) Maximum excursion before permanent damage
 - (4) Maximum power is defined as 3dB greater than nominal power
 - (5) Treated Polycotton
 - (6) 12 dB/oct or higher slope high-pass filter
 - (7) HF sensitivity averaged within the frequency range

TECHNICAL PARAMETERS

	LF	HF
Nominal Impedance	8 Ω	8 Ω
Minimum Impedance	6 Ω	6.3 Ω
AES Power Handling (1)	150 W	15 W
Maximum Power Handling (4)	300 W	30 W
Sensitivity (1W/1m) (7)	93 dB	104 dB
Frequency Range	90-5000 Hz	1500-18000 Hz
Voice Coil Diameter	52 mm (2 in)	25 mm (1 in)
Winding Material	Cu	Al
Former Material	Glass Fiber	Kapton
Winding Depth	10.7 mm (0.42 in)	1.7 mm (0.07 in)
Magnetic Gap Depth	6 mm (0.24 in)	2 mm (0.08 in)
Flux Density	1.35 T	1.3 T
Min. Crossover Frequency (6)	-	1.7 kHz
Dispersion Angle	-	90°
Diaphragm Material	-	Ketone Polymer
Diaphragm Shape	-	Dome
Magnet	Neodymium Ring	Neodymium Ring
Basket Material	Aluminum	-
Demodulation	Aluminum Ring	-
Cone Surround (5)	Half Roll	-
NET Air Volume filled by Loudspeaker	0.6 dm³ (0.021 ft³)	-
Spider Profile	1x constant height waves	-

THIELE & SMALL PARAMETERS

Fs	88 Hz
Re [LF]	5.5 Ω
Re [HF]	6 Ω
Qes	0.35
Qms	8.3
Qts	0.33
Vas	5.60 dm³ (0.20 ft³)
Sd	130 cm² (20.15 in²)
Xmax (2)	4.35 mm
Xdamage (3)	10.15 mm
Mms	14 g
Bl	12 N/A
Le	0.64 mH
Mmd	13.3 g
Cms	0.20 mm/N
Rms	1 kg/s
η _L (Eta Zero)	1.22 %
EBP	251 Hz



HF HORNS

PRODUCTION AND AVAILABILITY

Faital's 50 years experience in loudspeaker manufacturing means that every FaitalPRO driver is manufactured combining superb craftsmanship with the latest automation and industrial technologies. All our products are completely designed and manufactured in Italy. Quality and on time delivery are top priorities for our team.

PC/ABS HF HORN

LTH142



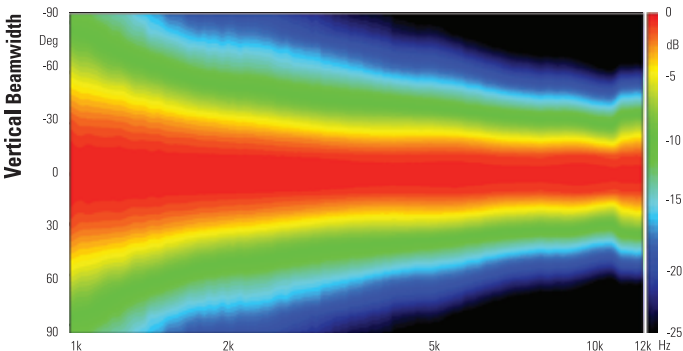
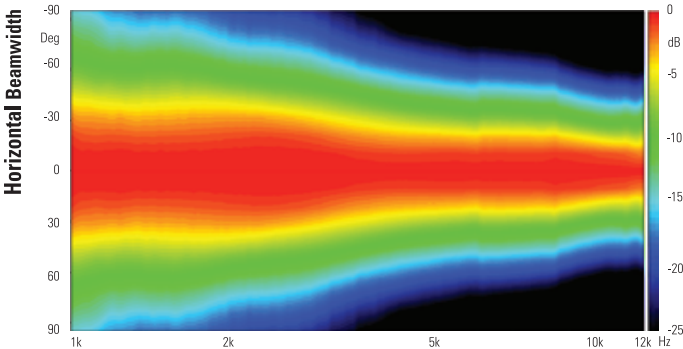
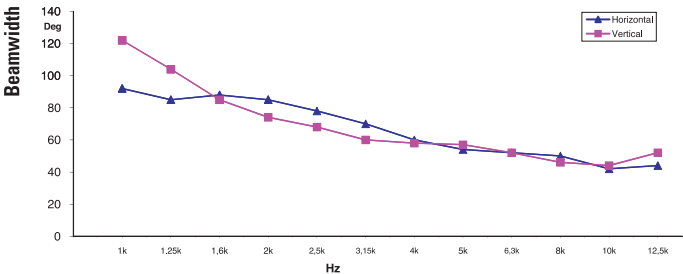
1.4" - TRACRIX

NOMINAL SPECIFICATIONS

Throat Diameter	35.6 mm (1.4 in)
Frequency Range	0.5÷18 kHz
Recommended Crossover Frequency (1)	0.8 kHz
Horizontal Nominal Coverage (-6 dB) (2)	60°
Vertical Nominal Coverage (-6 dB) (2)	50°
Directivity Index (2)(3)	9.5 dB
Material	PC/ABS
Mouth Height	240 mm (9.5 in)
Mouth Width	350 mm (13.8 in)
Depth	233 mm (9.2 in)
Mouth Mounting Holes (4x)	6.5 mm (0.26 in)
Net Weight	890 g (1.96 lb)
Shipping Box	380 x 255 x 245 mm
(Single Carton Box)	(15.0 x 10.0 x 9.6 in)
Shipping Weight	1.44 kg (3.17 lb)
NET Air Volume filled by HF Horn	2.5 dm³ (0.088 ft³)

NOTES:

- (1) 4π sr acoustic loading
- (2) Average value in frequency range: 2÷16 kHz
- (3) Average value on horizontal and vertical planes



ALUMINUM HF HORN

LTH102



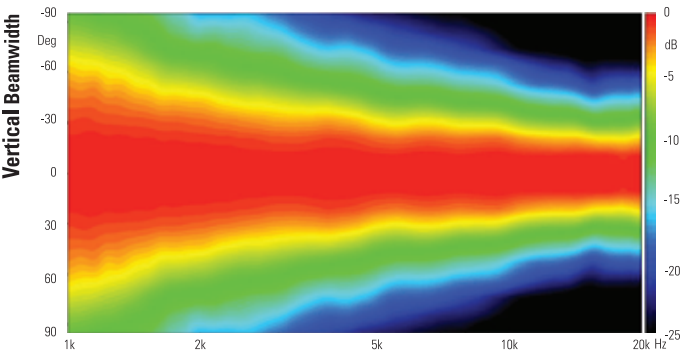
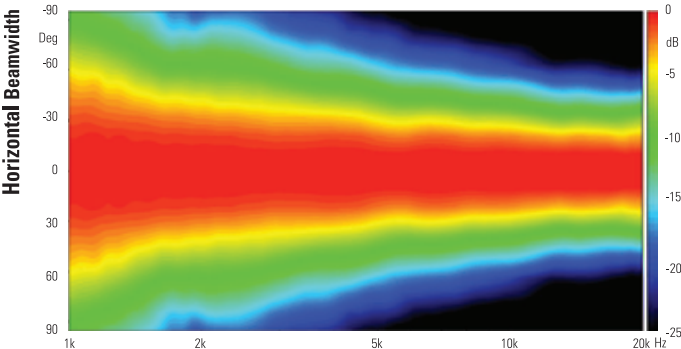
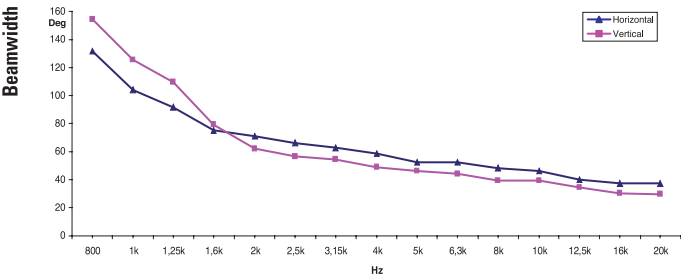
1" - TRACRIX

NOMINAL SPECIFICATIONS

Throat Diameter	25.4 mm (1 in)
Frequency Range	0.8÷20 kHz
Recommended Crossover Frequency (1)	1 kHz
Horizontal Nominal Coverage (-6 dB) (2)	60°
Vertical Nominal Coverage (-6 dB) (2)	50°
Directivity Index (2)(3)	9.5 dB
Material	Al
Mouth Height	189 mm (7.44 in)
Mouth Width	235 mm (9.25 in)
Depth	171.6 mm (6.76 in)
Mouth Mounting Holes (4x)	6.5 mm (0.26 in)
Net Weight	1.2 kg (2.65 lb)
Shipping Box	268 x 207 x 185 mm
(Single Carton Box)	(10.55 x 8.15 x 7.28 in)
Shipping Weight	1.45 kg (3.20 lb)
NET Air Volume filled by HF Horn	1.1 dm³ (0.039 ft³)

NOTES:

- (1) 4π sr acoustic loading
- (2) Average value in frequency range: 2÷16 kHz
- (3) Average value on horizontal and vertical planes



ALUMINUM HF HORN

STH100



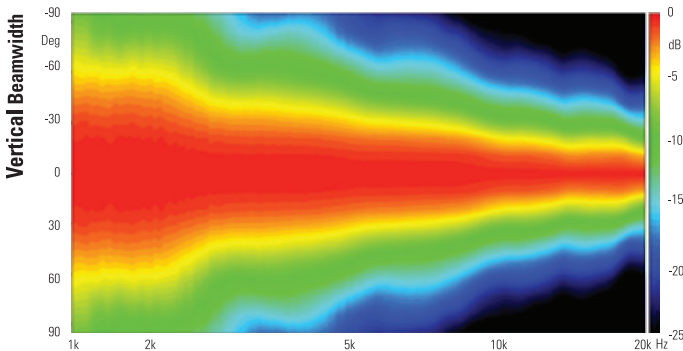
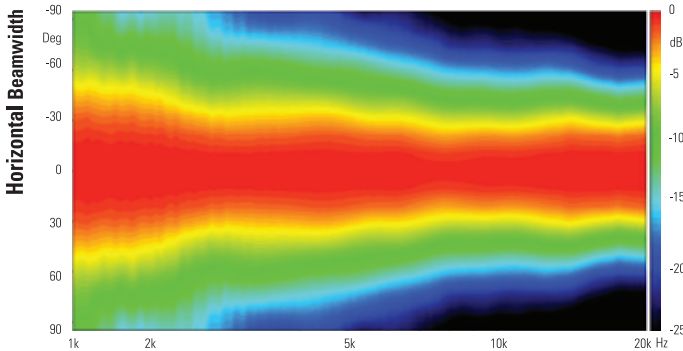
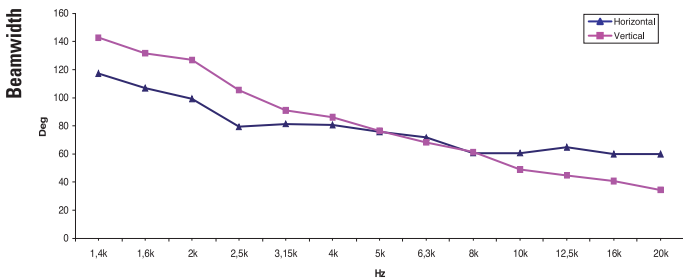
1" - TRACTRIX

NOMINAL SPECIFICATIONS

Throat Diameter	25.4 mm (1 in)
Frequency Range	1÷20 kHz
Recommended Crossover Frequency (1)	1.4 kHz
Horizontal Nominal Coverage (-6 dB) (2)	80°
Vertical Nominal Coverage (-6 dB) (2)	70°
Directivity Index (2)(3)	8 dB
Material	Al
Mouth Height	120 mm (4.72 in)
Mouth Width	180 mm (7.09 in)
Depth	85.9 mm (3.38 in)
Mouth Mounting Holes (4x)	6.5 mm (0.26 in)
Net Weight	460 g (1.01 lb)
Shipping Box	208 x 135 x 107mm
(Single Carton Box)	(8.19 x 5.31 x 4.21 in)
Shipping Weight	567 g (1.25 lb)
NET Air Volume filled by HF Horn	0.4 dm³ (0.014 ft³)

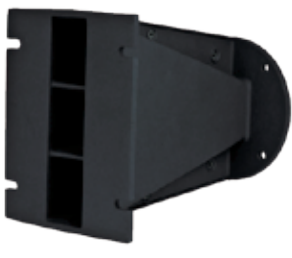
NOTES:

- (1) 4π sr acoustic loading
- (2) Average value in frequency range: 2÷16 kHz
- (3) Average value on horizontal and vertical planes



ALUMINUM HF HORN

WG141



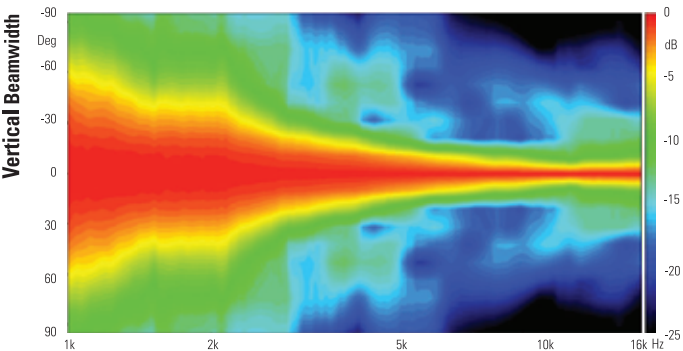
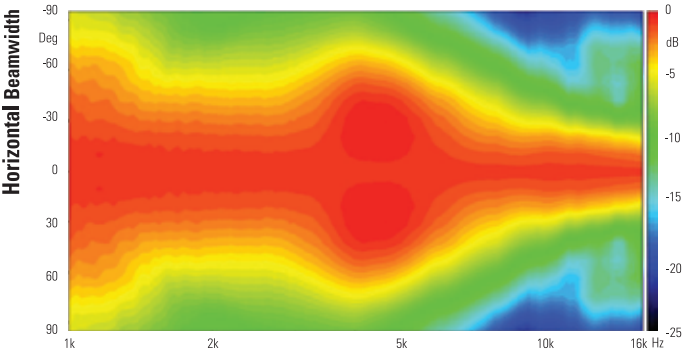
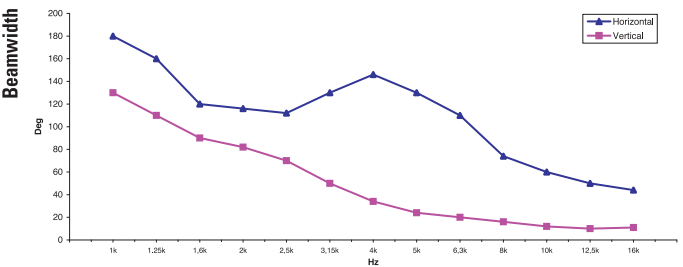
1.4" - WAVE GUIDE

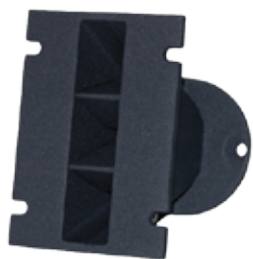
NOMINAL SPECIFICATIONS

Throat Diameter	36.5 mm (1.4 in)
Frequency Range	0.8÷20 kHz
Recommended Crossover Frequency (1)	0.8 kHz
Horizontal Nominal Coverage (-6 dB) (2)	110°
Material	Al
Mouth Height	163 mm (6.4 in)
Mouth Width	130 mm (5.1 in)
Depth	200 mm (7.9 in)
Mouth Mounting Holes (4x)	7 mm (0.28 in)
Net Weight	1.4 kg (3.1 lb)
Shipping Box	232 x 179 x 142 mm
(Single Carton Box)	(9.1 x 7.0 x 5.6 in)
Shipping Weight	1.65 kg (3.6 lb)
NET Air Volume filled by HF Horn	1.0 dm³ (0.035 ft³)

NOTES:

- (1) 4π sr acoustic loading
 - (2) Average value in frequency range: 2÷16 kHz
- Sold only in combination with a FaitalPRO 1.4" HF Driver





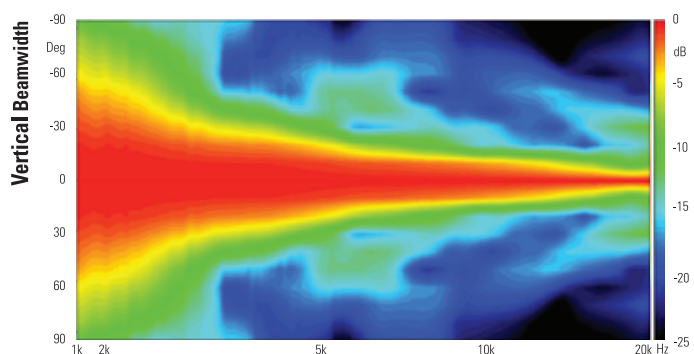
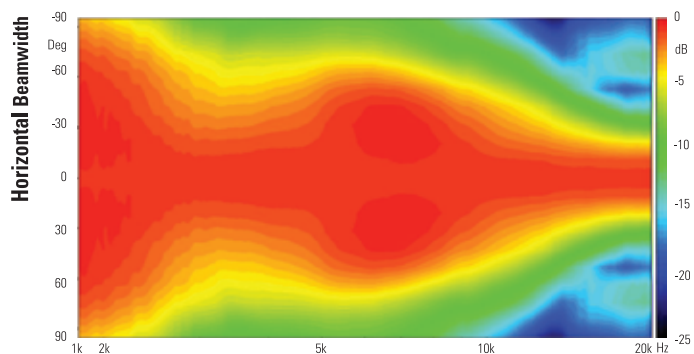
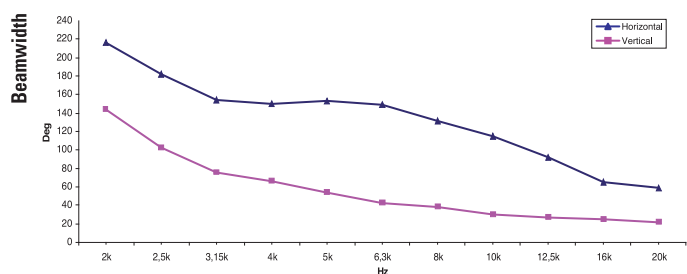
NOMINAL SPECIFICATIONS

Throat Diameter	25.4 mm (1 in)
Frequency Range	1÷20 kHz
Recommended Crossover Frequency (1)	1.6 kHz
Horizontal Nominal Coverage (-6 dB) (2)	140°
Material	Al
Mouth Height	122.3 mm (4.81 in)
Mouth Width	86 mm (3.39 in)
Depth	110 mm (4.33 in)
Mouth Mounting Holes (4x)	6.5 mm (0.26 in)
Net Weight	480 g (1.06 lb)
Shipping Box	150 x 123 x 102 mm
(Single Carton Box)	(5.91 x 4.84 x 4.02 in)
Shipping Weight	500 g (1.10 lb)
NET Air Volume filled by HF Horn	0.35 dm³ (0.012 ft³)

(1) 4π sr acoustic loading

(2) Average value in frequency range: 2÷16 kHz

Sold only in combination with a FaitalPRO 1" HF Driver



NOTES

NOTES

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