FANE

# PROFESSIONAL COMPONENT LOUDSPEAKERS

WWW.FANE-INTERNATIONAL.COM

## ABOUT FANE

Established in Yorkshire, England, 1958. Fane has a strong heritage and history in sound engineering excellence. Producing high-quality pro audio transducers. We are trusted and proven to deliver superior sound quality in the most demanding sound reinforcement applications by the world's most famous sound system designers, high quality musical instrument amplification brands and fixed installation companies.

Fane is a wholly British owned company with it's headquarters located in West Yorkshire, England. We are committed to offering products of the highest standard, competitive pricing and support services needed to meet the changing demands of the pro audio market place.

*Our objective is to deliver the world's finest range of professional audio loudspeakers, engineered to offer superior sonic performance.*

## WHAT MAKES FANE LOUDSPEAKERS SO SPECIAL?

No compromises are made on design and component specifications to guarantee only the finest audio performance. Only the highest quality materials sourced from the world's most respected suppliers are used in our quest to produce the perfect transducer solutions.

Designed at our headquarters in the UK, Fane produces a comprehensive range of matchless chassis loudspeakers in the standard diameters, with versatile mounting facilities designed for convenience and security.

In addition to chassis loudspeakers, our professional product range includes an outstanding series of compression drivers specialised to cover the high frequency bandwidths. Devices of innovative design, skilful engineering and superb performance.

Every product represents the cutting edge in acoustic design technology, engineering and material science, optimised performance and outstanding durability coupled with amazing value. Built to a high standard with systematic testing and strict quality controls that ensures performance excellence is retained indefinitely.

# OUR TECHNOLOGIES

## OEM / BESPOKE DRIVER DESIGN

Our manufacturing capabilities allow us to be ultra flexible to the needs of Original Equipment Manufacturers (OEMs). Not only are we able to provide modifications such as specialised coatings to branded solutions from our standard range, we can also implement bespoke solutions based on specific needs, design brief or price points. Our engineering team collaborates closely with our OEM partners to design and develop products that are optimised for their requirements, driving projects from concept through to final production.

Our highly skilled and experienced technical R&D team relies on state-of-the-art, industry standard tools and software for transducer design and evaluation. Combined with extensive listening tests in order to achieve optimum results.

We are able to manufacture custom units that are correct first time, on time, everytime and with the least variation from original specifications. Thanks to our commitment to total product quality, strict production control processes provide total customer confidence in product performance, consistency and value.

## CHASSIS CONSTRUCTION

Optimised in the design process using Finite Element Analysis (FEA) to provide maximum strength, resistance against thermal and other external forces. The majority of Fane chassis are made of high grade die-cast aluminium. Our selected material has the specific advantages of high strength and tensile stress factors, high strength-to weight ratio, low thermal expansion factor, high thermal conductivity factor, non-magnetic, highly resistant to corrosion and finished in high quality black enamel with heat treatment for permanent durability in varying environments.

## FORCED AIR AND ASSISTED COOLING

The active motion of the cone and suspension creates airflow within the motor structure. Optimised air channels and vents are designed into the motor structure and chassis designs. This allows heat to be extracted efficiently by allowing the air flow to be forced through the channels and vents, keeping the voice coil and motor structure temperature under control. This in turn enhances power handling capabilities and minimises power compression effects.

## VOICE COILS AND FORMERS

We have access to many different former and coil materials, each coil is designed with the former characteristics in mind. Not all designs work well with a standard former materials. To optimise designs, in addition to standard copper, various other wire materials and application techniques are specified such as Aluminium, Copper Clad Aluminium Wire (CCAW), Silver, Square Wire, Multi-layer and Edge Winding.

## INSIDE/ OUTSIDE WINDINGS VOICE COILS

Fane have used this technology for a number of years. Not all designs benefit from this method of winding, and again, each product is designed with an optimised voice coil geometry. Inside outside windings offer a balanced coil and increased heat dissipation resulting in lower power compression.

## VENTED VOICE COILS

Vented voice coils are used to minimise air turbulence within the motor and voice coil assembly. The correct spacing, size and position of these vents all effect the efficiency and heat dissipation achieved when this technique is used. Each of our product designs has had special attention in this area during development, a vented coil is only specified if it benefits the optimised design.

## MOTOR ASSEMBLY MATERIALS

Fully optimised, Finite Element Analysis (FEA) motor structure designs ensure the highest possible magnetic flux from minimum mass.

## CONE, SURROUND AND DIAPHRAGM MATERIALS

We work in close collaboration with the worlds leading cone, surround and diaphragm manufacturers, from Germany, UK and USA. This ensures that our products are always designed using the latest and most trusted cone pulp formulas and developments in material technology. Our product designs are optimised with specific cone, surround or diaphragm materials and specifications in mind. If the right component doesn't exist in our extensive arsenal then we will develop one suited to the design requirements.

# OUR TECHNOLOGIES

## SUSPENSION MATERIALS

Suspension systems are a highly important part of our design and development process. By taking the time to ensure the correct materials are used, optimises not only the drivers behaviour and TSP parameters, but also the tonal character of the driver. It is our objective to use materials that are 'well behaved' offering longevity and linearity under extreme pressure. For this reason we have in excess of 10 principle materials we use and trust.

## DOUBLE SILICON SUSPENSION

Consisting of two spiders adhered together with a special silicon mixture. The result is enhanced linear piston action and improved ability to control the moving mass.

## DUAL SUSPENSIONS

Two spiders separated by a spacer ring that provides exceptional mechanical stability and linearity for drivers with larger Xmax travel.

## DEMODULATION RINGS

A single or dual, copper or aluminium ring is placed into the motor structure to better control transient response, reduce intermodulation distortion and extend frequency range.

## SPECIALIST CONE COATINGS

Fane offer a range of cone treatments and coatings that are pre-applied during the cone manufacturing process, these are an integral part of the materials design specification. These coatings offer tonal character changes, dampening, weather proofing, water proofing and fire retardant properties. Coatings applied post-manufacture are also available within our production facility.

## COMPRESSION DRIVER PHASE PLUGS

Individually precision machined and hand assembled. Three slot, optimised geometry phase plug design enhances tonal performance while minimising sound wave cancellations throughout the working bandwidth.

## FERROFLUID

Due to relatively high electrical currents and high cycle speeds, voice coils come under constant thermal and mechanical stress. Ferrofluid dissipates excess heat and also provides dampening properties, acting like a shock absorber, to eliminate excess energy and movement. The advantages are increased power handling with expanded frequency range while retaining smooth and linear operation at the highest output levels.

## POWER RATINGS AND TSP'S

Fane measure power ratings according to the AES standard protocols. Each speaker is tested for 2 hours at rated power over the working bandwidth of the driver, after which the driver should show no appreciable damage. Fane also takes into account the mechanical properties of the driver when classifying power ratings even though the electrical properties of the voice coil can often exceed the rated power of the driver.

## THE PROFESSIONAL SERIES

Representing the flagship range of Fane professional components. Models incorporate many unique features within their design to reduce the temperature in the critical voice coil region, allied with heat dissipation devices to maintain outstanding performance levels and dependability. Aimed at audio professionals seeking loudspeakers capable of handling the highest power levels and delivering outstanding performance across the audio spectrum.

## THE NEODYMIUM SERIES

Delivers the legendary Fane performance in an outstanding lightweight format providing the discerning audio professional with unrivalled portability in applications such as line array in which high power handling and high sensitivity are demanded without compromise.

## THE SOVEREIGN SERIES

Designed for a broad spectrum of sound reinforcement situations. Featuring the heavy duty Fane pressed steel chassis that provides rugged durability and outstanding performance. Carefully selected cone materials give smooth tonal characteristics and extended frequency response. The Sovereign Series represents a versatile answer to the demands of a varied and demanding range of audio applications.

# PRODUCT OVERVIEW

## THE PROFESSIONAL SERIES

| MODEL | SIZE | POWER RATING | MAGNET MATERIAL | VOICE COIL DIAMETER | FREQUENCY RANGE | SPL | FS | XMAX | PAGE |
|---|---|---|---|---|---|---|---|---|---|
| **FC-185F03** | 18” / 457.2 mm | 1300 W (A.E.S.) | Ferrite | 5.0” / 127 mm | 30 Hz - 2 kHz | 96 dB | 36 Hz | 10.5 mm | *7* |
| **COLOSSUS PRIME 18XS** | 18” / 457.2 mm | 1200 W (A.E.S.) | Ferrite Y35 | 4.0” / 101.6 mm | 35 Hz - 500 Hz | 100 dB | 33 Hz | 12 mm | *8* |
| **COLOSSUS 18SB** | 18” / 457.2 mm | 1000 W (A.E.S.) | Ferrite | 4.0” / 101.6 mm | 35 Hz - 2.5 kHz | 100 dB | 36 Hz | 8.25 mm | *9* |
| **COLOSSUS 18XB** | 18” / 457.2 mm | 1000 W (A.E.S.) | Ferrite | 4.0” / 101.6 mm | 35 Hz - 1 kHz | 99 dB | 33 Hz | 7.5 mm | *10* |
| **COLOSSUS PRIME 15XS** | 15” / 381 mm | 1000 W (A.E.S.) | Ferrite Y35 | 4.0” / 101.6 mm | 30 Hz - 500 Hz | 98 dB | 36.3 Hz | 12 mm | *11* |
| **FC-154F01** | 15” / 381 mm | 800 W (A.E.S.) | Ferrite | 4.0” / 101.6 mm | 40 Hz - 3 kHz | 99 dB | 41 Hz | 6.5 mm | *12* |
| **COLOSSUS 15XB** | 15” / 381 mm | 800 W (A.E.S.) | Ferrite | 4.0” / 101.6 mm | 40 Hz - 1 kHz | 99 dB | 38 Hz | 7.5 mm | *13* |
| **SOVEREIGN PRO 15-600** | 15” / 381 mm | 600 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 38 Hz - 3.5 kHz | 98 dB | 38 Hz | 6 mm | *14* |
| **SOVEREIGN PRO 15-600LF** | 15” / 381 mm | 600 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 35 Hz - 3.5 kHz | 98 dB | 40 Hz | 6.9 mm | *15* |
| **FC-153F01** | 15” / 381 mm | 400 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 40 Hz - 4.5 kHz | 100 dB | 40 Hz | 7.5 mm | *16* |
| **FC-123F02** | 12” / 304.8 mm | 550 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 40 Hz - 4 kHz | 98 dB | 51 Hz | 8 mm | *17* |
| **FC-123F01** | 12” / 304.8 mm | 500 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 45 Hz - 3 kHz | 97.5 dB | 34 Hz | 8.5 mm | *18* |
| **COLOSSUS 12MB** | 12” / 304.8 mm | 500 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 40 Hz - 3.5 kHz | 98 dB | 55 Hz | 5.5 mm | *19* |
| **SOVEREIGN PRO 12-500** | 12” / 304.8 mm | 500 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 45 Hz - 4.5 kHz | 97.5 dB | 43 Hz | 6 mm | *20* |
| **SOVEREIGN PRO 12-300** | 12” / 304.8 mm | 300 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 45 Hz - 4.5 kHz | 97.5 dB | 46 Hz | 4.5 mm | *21* |
| **SOVEREIGN PRO 10-300SC** | 10” / 254 mm | 300 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 45 Hz - 4 kHz | 98 dB | 47 Hz | 4.75 mm | *22* |
| **SOVEREIGN PRO 10-300** | 10” / 254 mm | 300 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 45 Hz - 4 kHz | 98 dB | 58 Hz | 5.5 mm | *23* |
| **SOVEREIGN PRO 10M** | 10” / 254 mm | 280 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 200 Hz - 3.5 kHz | 98.5 dB | 56 Hz | 2 mm | *24* |
| **SOVEREIGN PRO 8-225** | 8” / 203.2 mm | 225 W (A.E.S.) | Ferrite | 2.0” / 50.8 mm | 55 Hz - 5 kHz | 97 dB | 62 Hz | 5.5 mm | *25* |
| **STUDIO 5HPM** | 5” / 127 mm | 100 W (A.E.S.) | Ferrite | 1.5” / 38.1 mm | 90 Hz - 7 kHz | 92.5 dB | 164 Hz | 4.5 mm | *26* |
| **STUDIO 5FRK** | 5” / 127 mm | 50 W (A.E.S.) | Ferrite | 1.0” / 25.4 mm | 65 Hz - 7 kHz | 90.5 dB | 58 Hz | 2.41 mm | *27* |

# PRODUCT OVERVIEW

## THE NEODYMIUM SERIES

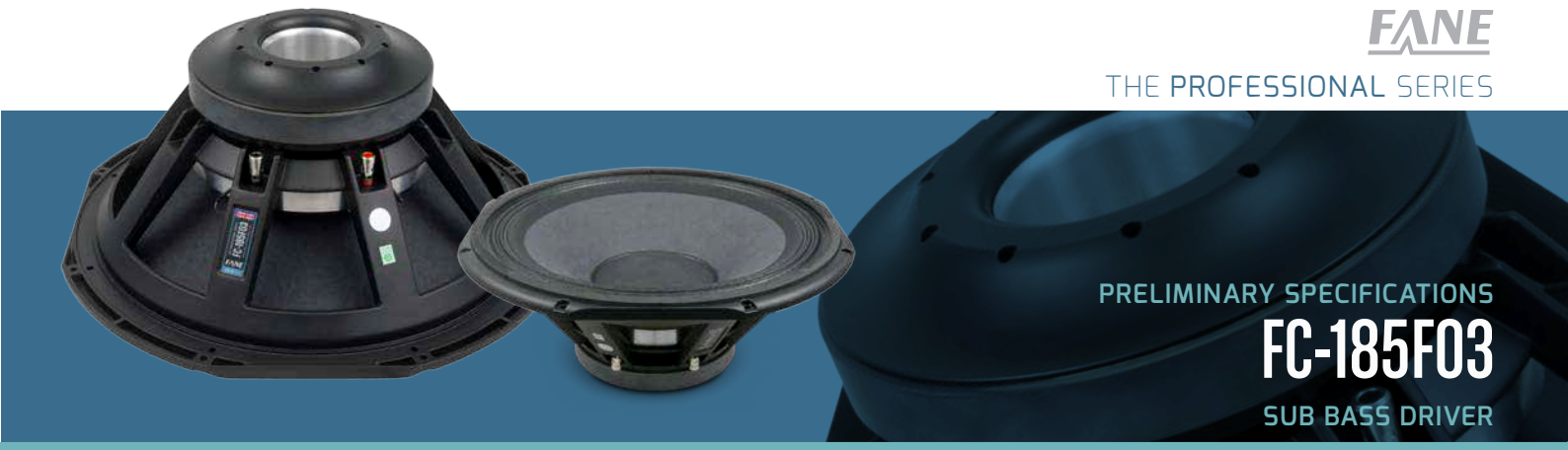
| MODEL | SIZE | POWER RATING | MAGNET MATERIAL | VOICE COIL DIAMETER | FREQUENCY RANGE | SPL | FS | XMAX | PAGE |
|---|---|---|---|---|---|---|---|---|---|
| **FC-185ND01** | 18” / 457.2 mm | 1200 W (A.E.S.) | Neodymium | 5.0” / 127 mm | 30 Hz - 2 kHz | 98.5 dB | 33 Hz | 12 mm | *28* |
| **COLOSSUS 18XBN** | 18” / 457.2 mm | 1000 W (A.E.S.) | Neodymium | 4.0” / 101.6 mm | 35 Hz - 1 kHz | 99 dB | 33 Hz | 7.5 mm | *29* |
| **COLOSSUS 15 -750BMN** | 15” / 381 mm | 750 W (A.E.S.) | Neodymium | 4.0” / 101.6 mm | 40 Hz - 3 kHz | 100 dB | 45 Hz | 7.5 mm | *30* |
| **COLOSSUS 12MBN** | 12” / 304.8 mm | 500 W (A.E.S.) | Neodymium | 3.0” / 76.2 mm | 40 Hz - 4 kHz | 98.5 dB | 55 Hz | 5.5 mm | *31* |

## THE SOVEREIGN SERIES

| MODEL | SIZE | POWER RATING | MAGNET MATERIAL | VOICE COIL DIAMETER | FREQUENCY RANGE | SPL | FS | XMAX | PAGE |
|---|---|---|---|---|---|---|---|---|---|
| **SOVEREIGN 15-600LF** | 15” / 381 mm | 600 W (A.E.S.) | Ferrite | 3.0” / 76.2 mm | 38 Hz - 3.5 kHz | 98.5 dB | 37 Hz | 6.5 mm | *32* |
| **SOVEREIGN 15-400** | 15” / 381 mm | 400 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 40 Hz - 4 kHz | 98.5 dB | 37 Hz | 5 mm | *32* |
| **SOVEREIGN 15-400LF** | 15” / 381 mm | 400 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 40 Hz - 4 kHz | 97 dB | 41 Hz | 4.6 mm | *33* |
| **FC-152F01TC** | 15” / 381 mm | 300 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 50 Hz - 15 kHz | 99 dB | 48 Hz | 3.5 mm | *33* |
| **SOVEREIGN 12-500LF** | 12” / 304.8 mm | 500 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 38 Hz - 5 kHz | 95 dB | 50 Hz | 5.5 mm | *34* |
| **SOVEREIGN 12-300** | 12” / 304.8 mm | 300 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 45 Hz - 4.5 kHz | 97.5 dB | 46 Hz | 4.5 mm | *34* |
| **SOVEREIGN 12-250TC** | 12” / 304.8 mm | 250 W (A.E.S.) | Ferrite | 2.0” / 50.8 mm | 45 Hz - 17 kHz | 100 dB | 50 Hz | 3.5 mm | *35* |
| **SOVEREIGN 10-300** | 10” / 254 mm | 300 W (A.E.S.) | Ferrite | 2.5” / 63.5 mm | 45 Hz - 5 kHz | 97.5 dB | 58 Hz | 5.5 mm | *35* |
| **SOVEREIGN 8-225** | 8” / 203.2 mm | 225 W (A.E.S.) | Ferrite | 2.0” / 50.8 mm | 55 Hz - 5 kHz | 97 dB | 62 Hz | 5.5 mm | *36* |
| **SOVEREIGN 6-100** | 6” / 152.4 mm | 100 W (A.E.S.) | Ferrite | 1.5” / 38.1 mm | 60 Hz - 7 kHz | 93 dB | 115 Hz | 2.5 mm | *36* |

## HIGH FREQUENCY DEVICES

| MODEL | THROAT SIZE | POWER RATING | MAGNET MATERIAL | VOICE COIL DIAMETER | FREQUENCY RANGE | SPL | VOICE COIL MATERIAL | DIAPHRAGM MATERIAL | PAGE |
|---|---|---|---|---|---|---|---|---|---|
| **CD-140** | 1” / 25.4 mm | 40 W (A.E.S.) | Ferrite | 1.75” / 44 mm | 2 kHz - 18 kHz | 105 dB | Aluminium | Titanium | *37* |
| **CD-140S** | 1” / 25.4 mm | 40 W (A.E.S.) | Ferrite | 1.75” / 44 mm | 2 kHz - 18 kHz | 105 dB | Aluminium | Titanium | *37* |
| **CD-131** | 1” / 25.4 mm | 30 W (A.E.S.) | Ferrite | 1.37” / 34.4 mm | 2 kHz - 18 kHz | 106 dB | Aluminium | Titanium | *38* |
| **CD-130** | 1” / 25.4 mm | 30 W (A.E.S.) | Ferrite | 1.37” / 34.4 mm | 2 kHz - 18 kHz | 106 dB | Aluminium | Titanium | *38* |
| **CD-1544N-P** | 1” / 25.4 mm | 50 W (A.E.S.) | Neodymium | 1.75” / 44 mm | 2 kHz - 18 kHz | 105 dB | Aluminium | P.A.R | *39* |
| **CD-150** | 1” / 25.4 mm | 50 W (A.E.S.) | Ferrite | 1.75” / 44 mm | 2 kHz - 18 kHz | 106 dB | Aluminium | Titanium | *39* |



PRELIMINARY SPECIFICATIONS

# FC-185F03

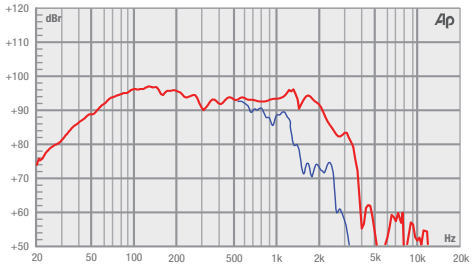
## SUB BASS DRIVER

| 10.5 mm Xmax | 96 dB | 5.0" / 127 mm | 30 Hz - 2 kHz | 1300 W (A.E.S.) | 18" / 457.2 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The FC-185F03 is an efficient high power handling driver specially designed to provide powerful and accurate bass with low distortion and low power compression. The driver exhibits smooth tonal character combined with a fast response time. The FC-185F03 utilises an optimised fibre loaded cone assembly controlled by a fully optimised multi roll surround. The units spaced dual suspension configuration ensures excellent control during large excursions. A fully optimised motor structure built around a high grade Y35 magnet ensures maximum flux yield from compact design and generates the minimum amount of flux modulation. The cast chassis base venting and large motor venting ensures efficient ventilation of the unit to keep power compression to a minimum.

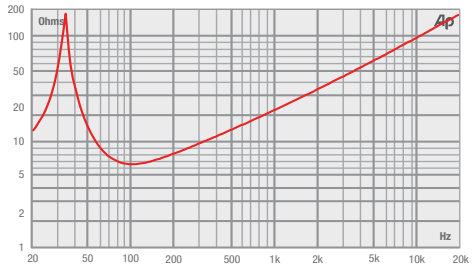
- Optimised, lightweight ferrite design, only weighs 13 Kg.
- New 18-inch optimised, cast aluminium chassis design.
- Long driver excursion. Peak to peak maximum excursion of 52mm.
- High Qts (0.530) for larger enclosure designs.
- Double spaced suspension system for increased linearity.
- Aluminium core motor system heat sink for reduced power compression and regulation of voice coil temperature at optimal levels.
- Suitable for bass reflex or horn loaded designs.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 18" / 457.2 mm |
| Impedance | 8 Ohm |
| Power Handling | 1300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 5200 W (A.E.S.) |
| Usable Frequency Range -6dB | 30 Hz - 2 kHz |
| Sensitivity (1 w - 1 m) | 96 dB |
| Moving Mass inc. Air Load | 220 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 15.68" / 398.27 mm |
| Magnet Weight | 105.8 oz / 2.99 Kg |
| Magnetic Gap Depth | 0.35" / 9.00 mm |
| Flux Density | 0.98 Tesla |
| Coil Winding Height | 0.98" / 25.00 mm |
| Voice Coil Diameter | 5.0" / 127 mm |

## THIELE SMALL PARAMETERS

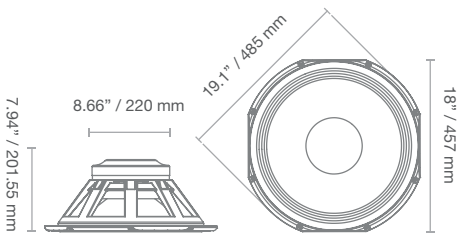
| | |
|---|---|
| FS Hz | 36 Hz |
| RE Ohms | 5.9 Ω |
| Qms | 11.100 |
| Qes | 0.560 |
| Qts | 0.530 |
| Vas Ltr | 205.00 Litres |
| Vd Litres | 1.190 Litres |
| CMS (mm/N) | 0.110 mm/N |
| BL T/m | 20.36 T/m |
| Mms (grms) | 174 grams |
| Xmax (mm) | 10.5 mm |
| Sd ($cm^2$) | 1134 $cm^2$ |
| Efficiency % | 1.65 % |
| Le (1k Hz) | 2.90 mH |
| EBP | 64.29 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 19.1" / 485 mm |
| Width Across Flats | 18" / 457 mm |
| Flange Height | 0.465" / 11.8 mm |
| Baffle Hole Diameter F/M | 16.53" / 419.86 mm |
| Baffle Hole Diameter R/M | 16.33" / 414.78 mm |
| Gasket Supplied | Front |
| Outer Fixing Holes | 8x Ø 0.275" on 18.425" PCD / 8x Ø 7 mm on 468 mm PCD |
| Inner Fixing Holes | 8x Ø 0.275" on 17.25" PCD / 8x Ø 7 mm on 438.15 mm PCD |
| Depth | 7.94" / 201.55 mm |
| Weight | 28.85 lb / 13.09 kg |
| Recommended Enclosure Volume | 60 - 230 Litres |
| Shipping Weight | 31.00 lb / 14.06 kg |
| Packing Carton Dimensions | (W) 495 (D) 495 (H) 255 mm |

## MATERIALS OF CONSTRUCTION

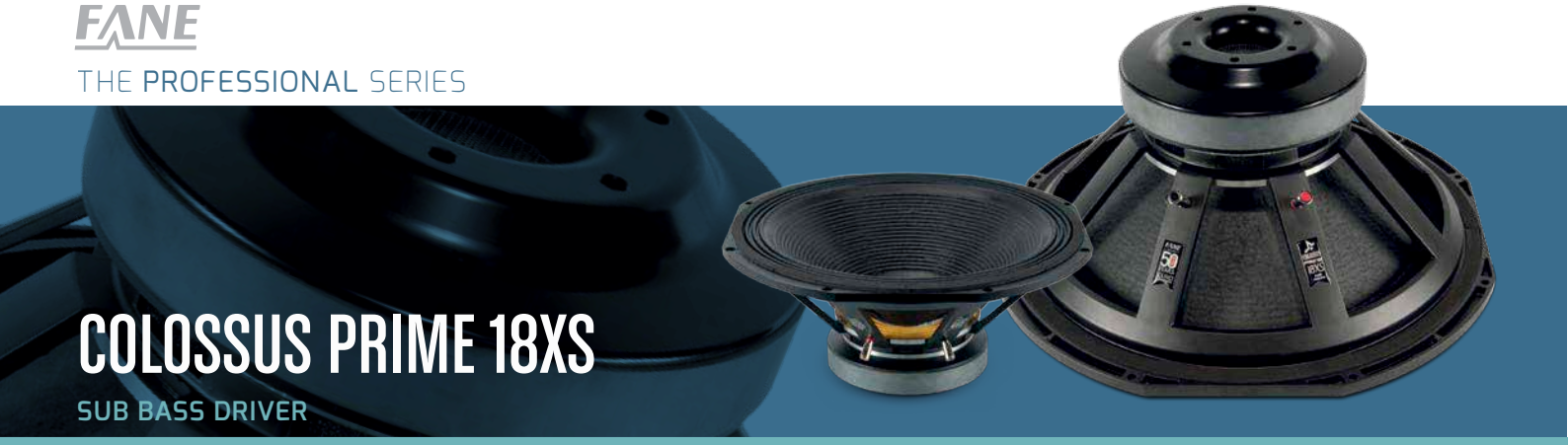
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Neodymium |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 35 Hz and 350 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# COLOSSUS PRIME 18XS

## SUB BASS DRIVER

| 18” / 457.2 mm | 1200 W (A.E.S.) | 35 Hz - 500 Hz | 4.0” / 101.6 mm | 100 dB | 12 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Highest grade Y35 ferrite magnet structure.
- Low interference flux path.
- Aluminium demodulation ring.
- Fibre loaded, UK manufactured cone offering increased strength, durability and performance.
- 64 mm peak to peak maximum linear excursion.
- For bass reflex and scoop enclosure designs. Also works well in horn loaded systems.

The Prime 18XS is intended for use as a high output bass driver in multi-way systems and features a 4 inch ‘sandwich’ (inside and outside windings) voice coil, immersed in a symmetric magnetic field yielding increased linearity and lower distortion. This, coupled with laminated silicone suspensions, a large Xmax of 12 mm with peak to peak travel of 60 mm, ensures fast accurate bass at high levels of excursion. The cone membrane, manufactured from polycellulose, is much stronger and more durable than conventional paper pulp alternatives. This allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at extreme sound pressure levels. The driver handles 1200 Watts (A.E.S.) continuous and can cope with peaks in excess of 4800 Watts. This is due to advanced thermal management in the form of vented die-cast chassis and increased motor system venting. These measures effectively remove heat from the voice coil, resulting in extremely low-power compression. The Prime 18XS exhibits 100 dB sensitivity and can deliver bass down to 29 Hz (-6 dB) in a 200 Litre ported enclosure.

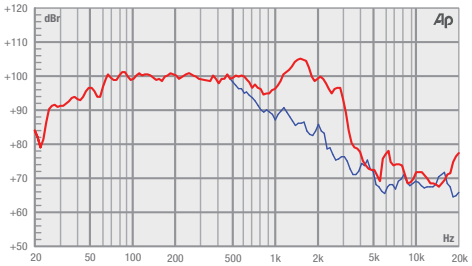
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 18” / 457.2 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 1200 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 4800 W (A.E.S.) |
| Usable Frequency Range -6dB | 35 Hz - 500 Hz |
| Sensitivity (1 w - 1 m) | 100 dB |
| Moving Mass inc. Air Load | 177 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 15.43” / 391.92 mm |
| Magnet Weight | 145 oz / 4.11 Kg |
| Magnetic Gap Depth | 0.43” / 11.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 1.18” / 30.00 mm |
| Voice Coil Diameter | 4.0” / 101.6 mm |

### THIELE SMALL PARAMETERS

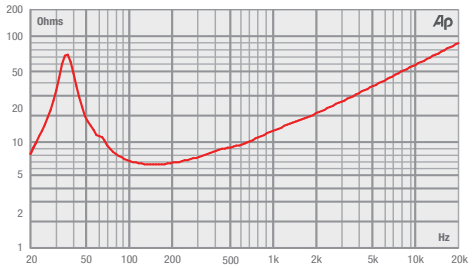
| | |
|---|---|
| FS Hz | 33 Hz |
| RE Ohms | 5.2 Ω |
| Qms | 8.200 |
| Qes | 0.404 |
| Qts | 0.385 |
| Vas Ltr | 257.00 Litres |
| Vd Litres | 1.450 Litres |
| CMS (mm/N) | 0.124 mm/N |
| BL T/m | 22.4 T/m |
| Mms (grms) | 188 grams |
| Xmax (mm) | 12 mm |
| Sd ($cm^2$) | 1210 $cm^2$ |
| Efficiency % | 2.200% |
| Le (1k Hz) | 1.50 mH |
| EBP | 81.68 Hz |

### FREQUENCY RESPONSE DATA†




† Half space response measured in a 975 Litre sealed box.

### IMPEDANCE

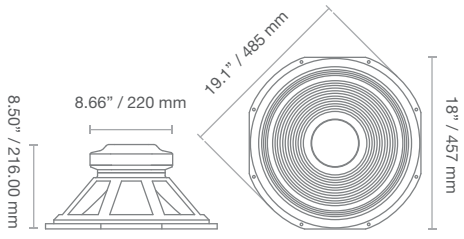



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 19.1” / 485 mm |
| Width Across Flats | 18” / 457 mm |
| Flange Height | 0.465” / 11.8 mm |
| Baffle Hole Diameter F/M | 16.53” / 419.86 mm |
| Baffle Hole Diameter R/M | 16.33” / 414.78 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 0.275” on 18.425” PCD / 8x Ø 7 mm on 468 mm PCD |
| Inner Fixing Holes | 8x Ø 0.275” on 17.25” PCD / 8x Ø 7 mm on 438.15 mm PCD |
| Depth | 8.50” / 216.00 mm |
| Weight | 33.75 lb / 15.30 kg |
| Recommended Enclosure Volume | 4.41 - 14.12 cu ft / 125 - 400 Litres |
| Shipping Weight | 37.45 lb / 17.00 kg |
| Packing Carton Dimensions | (W) 495 (D) 495 (H) 255 mm |

### MATERIALS OF CONSTRUCTION

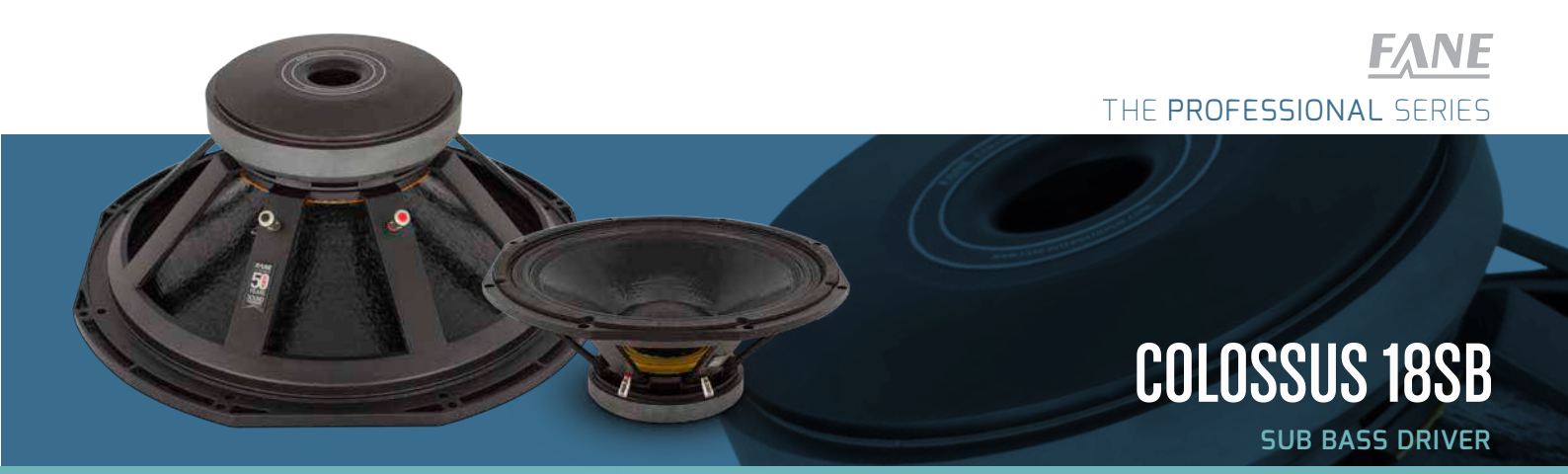
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite Y35 |
| Chassis | Die-cast Aluminium |
| Cone | Straight Fibre Loaded Polycellulose Ribbed Cone |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper (Inverted) |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* Please enquire about alternative impedances.

* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 30 Hz and 300 Hz. Driver mounted in free air, test signal applied at rated power for two hours.

* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.



# COLOSSUS 18SB

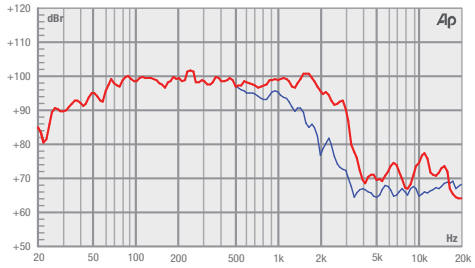
## SUB BASS DRIVER

| 8.25 mm Xmax | 100 dB | 4.0" / 101.6 mm | 35 Hz - 2.5 kHz | 1000 W (A.E.S.) | 18" / 457.2 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Colossus 18SB is intended for use as a high output bass driver in multi-way systems. It features a 4 inch 'sandwich' inside and outside windings voice coil, immersed in a symmetric magnetic field yielding increased linearity and lower distortion. This, coupled with a large Xmax of 8.25 mm and laminated silicone suspension, ensures tight, punchy bass at high levels of excursion. The cone membrane, manufactured from polycellulose, is much stronger and more durable than conventional paper pulp alternatives. This allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at extreme sound pressure levels. The driver handles 1000 Watts (A.E.S.) continuous and can cope with peaks in excess of 4000 Watts. This is due to advanced thermal management in the form of vented die-cast chassis and increased motor system venting. These measures effectively remove heat from the voice coil, resulting in extremely low-power compression. The Colossus 18SB exhibits 100 dB sensitivity and can deliver bass down to 35 Hz (-6 dB) in a 200 Litre ported enclosure.

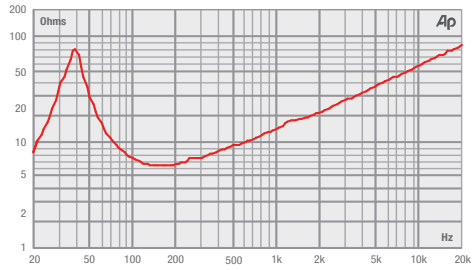
- Fast, accurate bass. Defined, clean and punchy.
- Fibre loaded, UK manufactured cone offering increased strength, durability and performance.
- Delivers bass down to 35 Hz in a 200 Litre ported enclosure.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 18" / 457.2 mm |
| Impedance | 8 Ohm |
| Power Handling | 1000 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 4000 W (A.E.S.) |
| Usable Frequency Range -6dB | 35 Hz - 2.5 kHz |
| Sensitivity (1 w - 1 m) | 100 dB |
| Moving Mass inc. Air Load | 177 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 14.84" / 376.93 mm |
| Magnet Weight | 120 oz / 3.40 Kg |
| Magnetic Gap Depth | 0.43" / 11.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.87" / 22.00 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

## THIELE SMALL PARAMETERS

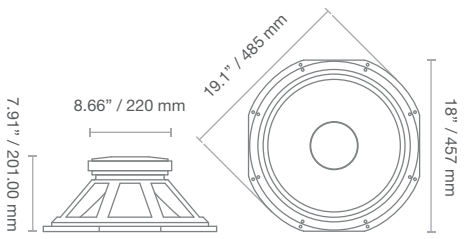
| | |
|---|---|
| FS Hz | 36 Hz |
| RE Ohms | 5.2 Ω |
| Qms | 6.583 |
| Qes | 0.366 |
| Qts | 0.346 |
| Vas Ltr | 199.00 Litres |
| Vd Litres | 0.893 Litres |
| CMS (mm/N) | 0.109 mm/N |
| BL T/m | 24 T/m |
| Mms (grms) | 177.2 grams |
| Xmax (mm) | 8.25 mm |
| Sd ($cm^2$) | 1134 $cm^2$ |
| Efficiency % | 2.490% |
| Le (1k Hz) | 2.23 mH |
| EBP | 98.36 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 19.1" / 485 mm |
| Width Across Flats | 18" / 457 mm |
| Flange Height | 0.465" / 11.8 mm |
| Baffle Hole Diameter F/M | 16.53" / 419.86 mm |
| Baffle Hole Diameter R/M | 16.33" / 414.78 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 0.275" on 18.425" PCD / 8x Ø 7 mm on 468 mm PCD |
| Inner Fixing Holes | 8x Ø 0.275" on 17.25" PCD / 8x Ø 7 mm on 438.15 mm PCD |
| Depth | 7.91" / 201.00 mm |
| Weight | 27.60 lb / 12.51 kg |
| Recommended Enclosure Volume | 4.41 - 14.12 cu ft / 125 - 400 Litres |
| Shipping Weight | 28.90 lb / 13.10 kg |
| Packing Carton Dimensions | (W) 485 (D) 485 (H) 230 mm |

## MATERIALS OF CONSTRUCTION

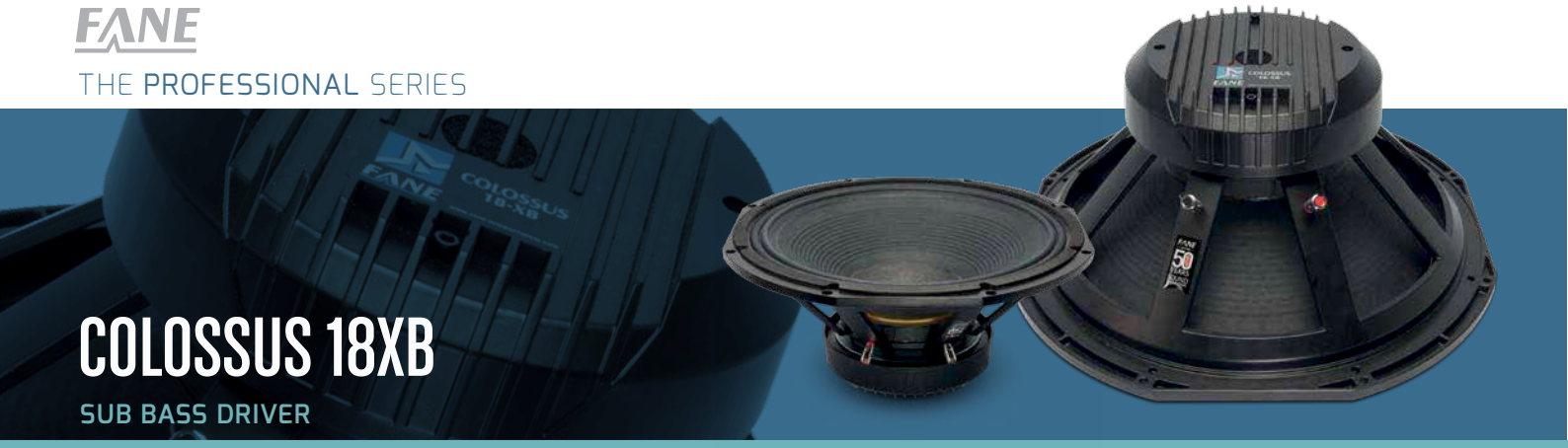
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Polycellulose |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 30 Hz and 300 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# COLOSSUS 18XB

## SUB BASS DRIVER

| 18" / 457.2 mm | 1000 W (A.E.S.) | 35 Hz - 1 kHz | 4.0" / 101.6 mm | 99 dB | 7.5 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

The Colossus 18XB is intended for use as a high output sub-bass driver either singly or in multi-way systems. The unit features a 4 inch 'sandwich' inside and outside windings voice coil, immersed in a symmetric magnetic field and centralized by using two suspensions in a dual arrangement to maintain ultra linearity and stability at high excursions. The heavily ribbed straight-sided paper cone membrane is reinforced with high-strength composite fibres to resist deformation under extreme loads. The driver handles 1000 Watts (A.E.S.) continuous and can cope with peaks in excess of 4000 Watts. This is due to advanced thermal management in the form of a vented die-cast chassis and motor system using an internal heat sink coupled to a large vaned heat sink mounted on the rear of the unit. These measures effectively remove heat from the voice coil resulting in extremely low-power compression. The Colossus 18XB is designed for use in 100 to 250 Litre ported enclosures.

- Deep, warm, well controlled bass reproduction.
- High BL factor 25.9 T/m.
- Ribbed, fibre loaded, UK manufactured ribbed straight sided cone for increased strength, durability and performance.

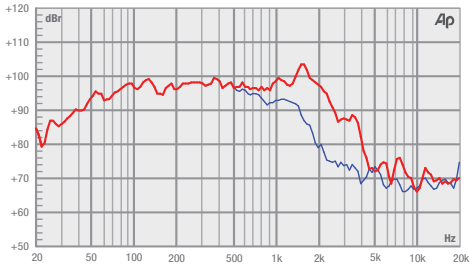
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 18" / 457.2 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 1000 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 4000 W (A.E.S.) |
| Usable Frequency Range -6dB | 35 Hz - 1 kHz |
| Sensitivity (1 w - 1 m) | 99 dB |
| Moving Mass inc. Air Load | 173 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 15.03" / 381.76 mm |
| Magnet Weight | 120 oz / 3.40 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.2 Tesla |
| Coil Winding Height | 0.90" / 23.00 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

### THIELE SMALL PARAMETERS

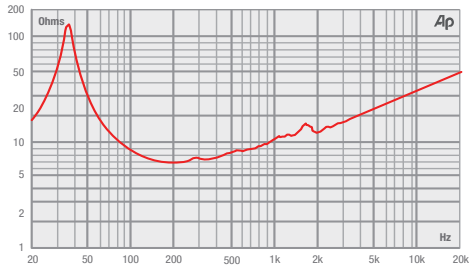
| | |
|---|---|
| FS Hz | 33 Hz |
| RE Ohms | 6.5 Ω |
| Qms | 5.770 |
| Qes | 0.358 |
| Qts | 0.337 |
| Vas Ltr | 236.00 Litres |
| Vd Litres | 0.803 Litres |
| CMS (mm/N) | 0.130 mm/N |
| BL T/m | 25.9 T/m |
| Mms (grms) | 173 grams |
| Xmax (mm) | 7.5 mm |
| Sd ($cm^2$) | 1131 $cm^2$ |
| Efficiency % | 2.300% |
| Le (1k Hz) | 1.99 mH |
| EBP | 92.18 Hz |

### FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

### IMPEDANCE

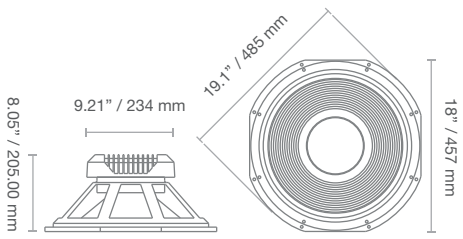



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 19.1" / 485 mm |
| Width Across Flats | 18" / 457 mm |
| Flange Height | 0.465" / 11.8 mm |
| Baffle Hole Diameter F/M | 16.53" / 419.86 mm |
| Baffle Hole Diameter R/M | 16.33" / 414.78 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 0.275" on 18.425" PCD / 8x Ø 7 mm on 468 mm PCD |
| Inner Fixing Holes | 8x Ø 0.275" on 17.25" PCD / 8x Ø 7 mm on 438.15 mm PCD |
| Depth | 8.05" / 205.00 mm |
| Weight | 31.29 lb / 14.20 kg |
| Recommended Enclosure Volume | 3.53 - 8.82 cu ft / 125 - 400 Litres |
| Shipping Weight | 35.26 lb / 16.00 kg |
| Packing Carton Dimensions | (W) 512 (D) 512 (H) 244 mm |

### MATERIALS OF CONSTRUCTION

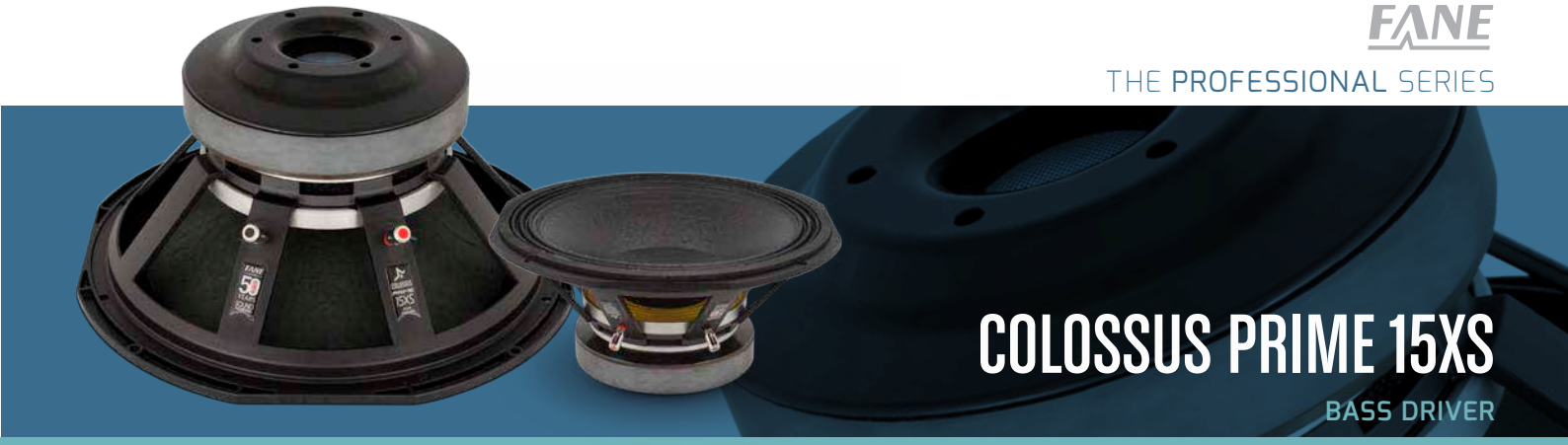
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Straight Polycellulose Ribbed Cone |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 30 Hz and 300 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# COLOSSUS PRIME 15XS

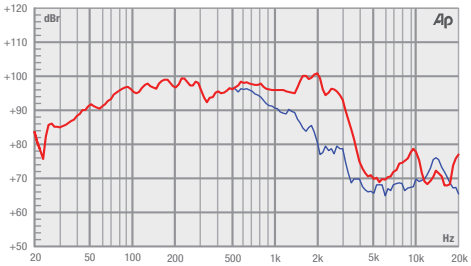
## BASS DRIVER

| 12 mm Xmax | 98 dB | 4.0" / 101.6 mm | 30 Hz - 500 Hz | 1000 W (A.E.S.) | 15" / 381 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Prime 15XS is intended for use as a high output bass driver in multi-way systems and features a 4 inch 'sandwich' (inside and outside windings) voice coil, immersed in a symmetric magnetic field yielding increased linearity and lower distortion. This, coupled with laminated silicone suspensions, a large Xmax of 12 mm with peak to peak travel of 60 mm, ensures fast accurate bass at high levels of excursion. The cone membrane, manufactured from polycellulose, is much stronger and more durable than conventional paper pulp alternatives. This allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at extreme sound pressure levels. The driver handles 1200 Watts (A.E.S.) continuous and can cope with peaks in excess of 4800 Watts. This is due to advanced thermal management in the form of vented die-cast chassis and increased motor system venting. These measures effectively remove heat from the voice coil, resulting in extremely low-power compression. The Prime 15XS exhibits 98 dB sensitivity and can deliver bass down to 29 Hz (-6 dB) in a 200 Litre ported enclosure.

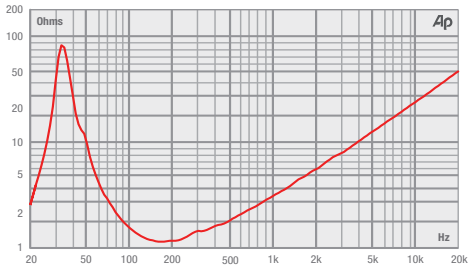
- Highest grade Y35 ferrite magnet structure.
- Fibre loaded, UK manufactured cone offering increased strength, durability and performance.
- Low interference flux path.
- Aluminium demodulation ring.
- 60 mm peak to peak maximum linear excursion.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 1000 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 4000 W (A.E.S.) |
| Usable Frequency Range -6dB | 30 Hz - 500 Hz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 133 grams |
| Minimum Impedance Zmin | 6.84 Ω |
| Effective Piston Diameter | 15.43" / 391.92 mm |
| Magnet Weight | 145 oz / 4.11 Kg |
| Magnetic Gap Depth | 0.43" / 11.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 1.18" / 30.00 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

## THIELE SMALL PARAMETERS

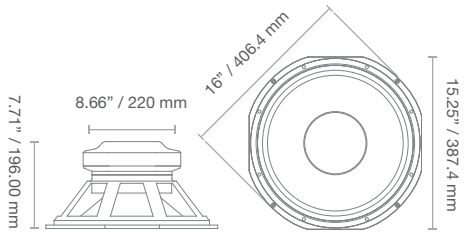
| | |
|---|---|
| FS Hz | 36.3 Hz |
| RE Ohms | 5.2 Ω |
| Qms | 7.700 |
| Qes | 0.320 |
| Qts | 0.310 |
| Vas Ltr | 149.70 Litres |
| Vd Litres | 1.010 Litres |
| CMS (mm/N) | 0.147 mm/N |
| BL T/m | 22.1 T/m |
| Mms (grms) | 133 grams |
| Xmax (mm) | 12 mm |
| Sd ($cm^2$) | 855 $cm^2$ |
| Efficiency % | 2.140% |
| Le (1k Hz) | 1.93 mH |
| EBP | 113.44 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16" / 406.4 mm |
| Width Across Flats | 15.25" / 387.4 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 13.85" / 351.79 mm |
| Baffle Hole Diameter R/M | 14" / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.281" on 15.5" PCD / 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8 x Ø 0.281" on 14.56" PCD / 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 7.71" / 196.00 mm |
| Weight | 28.00 lb / 12.70 kg |
| Recommended Enclosure Volume | 2.47 - 4.41 cu ft / 70 - 125 Litres |
| Shipping Weight | 30.45 lb / 13.80 kg |
| Packing Carton Dimensions | (W) 430 (D) 430 (H) 230 mm |

## MATERIALS OF CONSTRUCTION

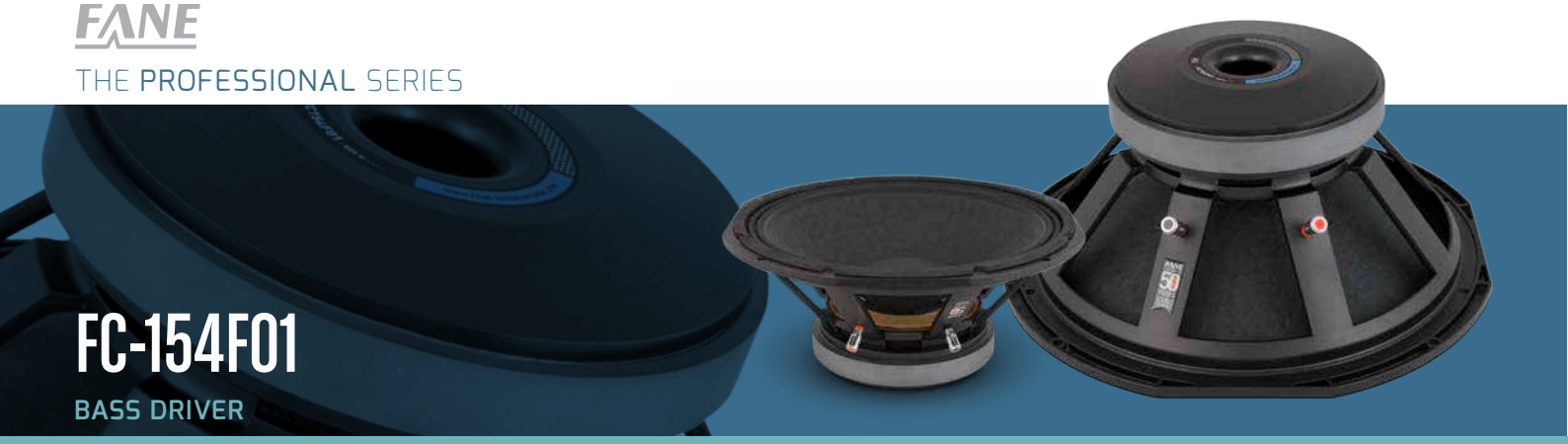
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite Y35 |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Polycellulose |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper (Inverted) |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 30 Hz and 300 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# FC-154F01

## BASS DRIVER

| 15" / 381 mm | 800 W (A.E.S.) | 40 Hz - 3 kHz | 4.0" / 101.6 mm | 99 dB | 6.5 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | CCAW- INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- High SPL and attack for 2 - way ported enclosures.
- Suitable for horn loaded bass applications.
- Suitable for bass reflex applications.
- Dynamic, smooth detailed bass reproduction.
- Inside/ outside CCAW voice coil windings.
- Waterproof cone.

The FC-154F01 is intended for use in two-way ported enclosures or as an high output bass driver in multi-way systems. The unit features a 4 inch 'sandwich' inside and outside windings voice coil driven by a non-inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane is state of the art material that allows the driver to combine high sensitivity with the structural integrity required to produce undistorted frequencies at high output levels. The mechanical and electrical properties of the unit have been carefully optimised to allow extended low frequency output up to its rated power handling of 800 Watts (A.E.S) continuous, with peak power handling in excess of 3200 Watts. The driver exhibits an average sensitivity of 99 dB working band and is best used in ported enclosures of 45 to 125 Litres. The FC-154F01 can deliver bass down to 40 Hz (-3dB), 30 Hz (-6dB) in a tuned 125 Ltr ported enclosure.

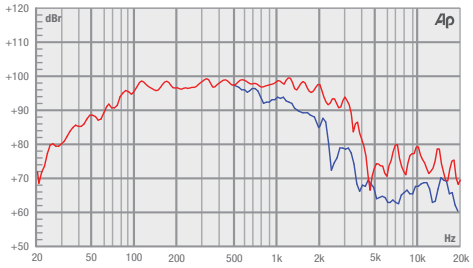
## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 800 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 3200 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 3 kHz |
| Sensitivity (1 w - 1 m) | 99 dB |
| Moving Mass inc. Air Load | 10 grams |
| Minimum Impedance Zmin | 7.3 Ω |
| Effective Piston Diameter | 13.00" / 330.20 mm |
| Magnet Weight | 120 oz / 3.40 Kg |
| Magnetic Gap Depth | 0.43" / 11.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.75" / 19.05 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

## THIELE SMALL PARAMETERS

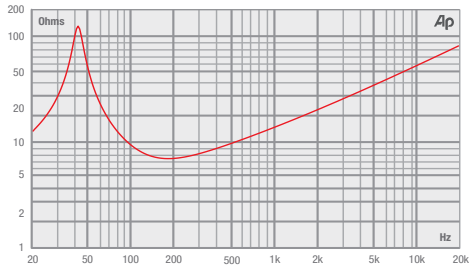
| | |
|---|---|
| FS Hz | 41 Hz |
| RE Ohms | 5.4 Ω |
| Qms | 6.850 |
| Qes | 0.300 |
| Qts | 0.290 |
| Vas Ltr | 151.00 Litres |
| Vd Litres | 0.560 Litres |
| CMS (mm/N) | 0.142 mm/N |
| BL T/m | 22.5 T/m |
| Mms (grms) | 106 grams |
| Xmax (mm) | 6.5 mm |
| Sd ($cm^2$) | 866 $cm^2$ |
| Efficiency % | 3.340% |
| Le (1k Hz) | 2.15 mH |
| EBP | 136.67 Hz |

## FREQUENCY RESPONSE DATA†




† *Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE

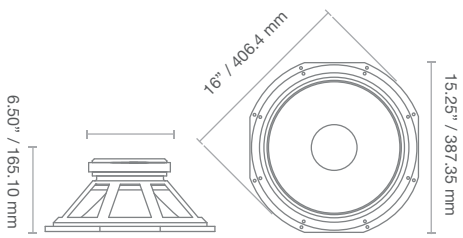



## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16" / 406.4 mm |
| Width Across Flats | 15.25" / 387.35 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 13.85" / 351.79 mm |
| Baffle Hole Diameter R/M | 14" / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 6.50" / 165.10 mm |
| Weight | 22.48 lb / 10.20 kg |
| Recommended Enclosure Volume | 75 - 125 Litres |
| Shipping Weight | 25.50 lb / 11.57 kg |
| Packing Carton Dimensions | (W) 440 (D) 440 (H) 220 mm |

## MATERIALS OF CONSTRUCTION

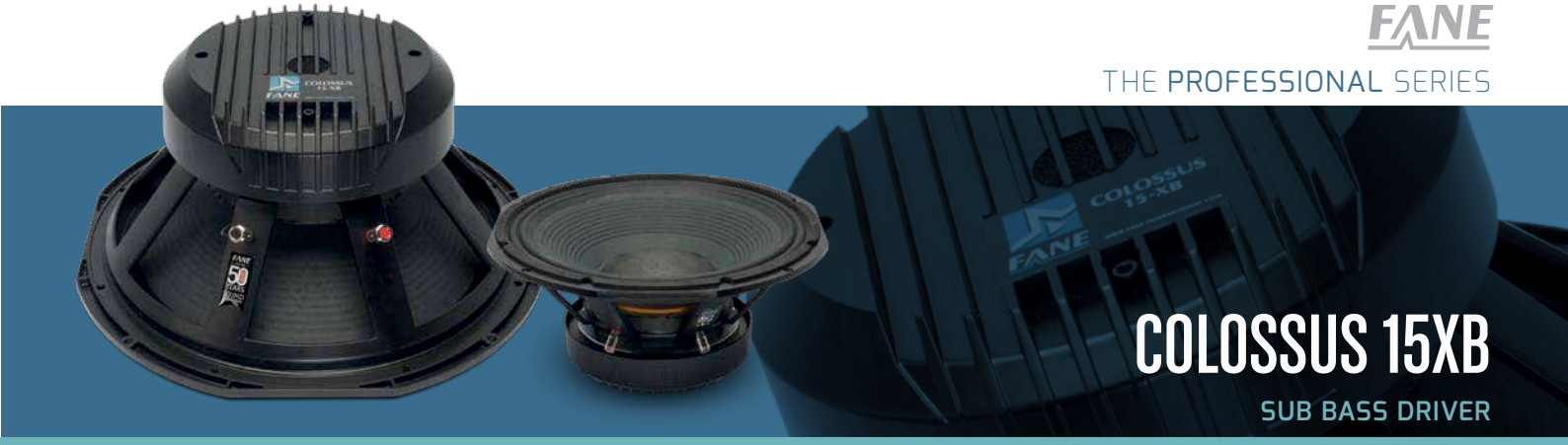
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | CCAW- Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Polycellulose |
| Surround / Edge Termination | Polyvinyl Damped Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# COLOSSUS 15XB

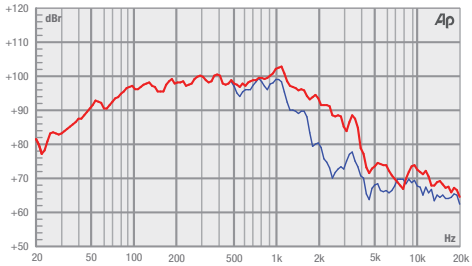
## SUB BASS DRIVER

| 7.5 mm Xmax | 99 dB | 4.0" / 101.6 mm | 40 Hz - 1 kHz | 800 W (A.E.S.) | 15" / 381 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Colossus 15XB is intended for use as a high output sub-bass driver either singly or in multi-way systems. The unit features a 4 inch 'sandwich' inside and outside windings voice coil immersed in a symmetric magnetic field and centralized by using two suspensions in a dual arrangement to maintain ultra linearity and stability at high excursions. The heavily ribbed straight-sided paper cone membrane is reinforced with high-strength composite fibres to resist deformation under extreme loads. The driver handles 800 Watts (A.E.S.) continuous and can cope with peaks in excess of 3200 Watts. This is due to advanced thermal management in the form of a vented die-cast chassis and motor system using an internal heat sink coupled to a large vaned heat sink mounted on the rear of the unit. These measures effectively remove heat from the voice coil resulting in extremely low-power compression. The Colossus 15XB is designed for use in 70 to 150 Litre ported enclosures.

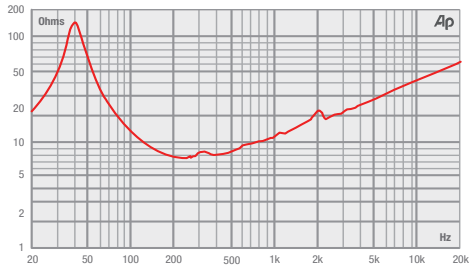
- Deep, warm, well controlled bass.
- Heavily ribbed, fibre loaded, UK manufactured straight sided cone for increased strength, durability and performance.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 800 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 3200 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 1 kHz |
| Sensitivity (1 w - 1 m) | 99 dB |
| Moving Mass inc. Air Load | 108 grams |
| Minimum Impedance Zmin | 7.5 Ω |
| Effective Piston Diameter | 13.03" / 330.96 mm |
| Magnet Weight | 120 oz / 3.40 Kg |
| Magnetic Gap Depth | 0.39" / 9.90 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.90" / 22.86 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

## THIELE SMALL PARAMETERS

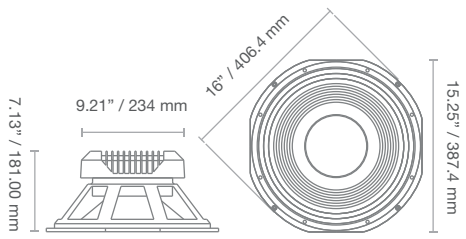
| | |
|---|---|
| FS Hz | 38 Hz |
| RE Ohms | 6.2 Ω |
| Qms | 7.480 |
| Qes | 0.336 |
| Qts | 0.320 |
| Vas Ltr | 168.00 Litres |
| Vd Litres | 0.641 Litres |
| CMS (mm/N) | 0.162 mm/N |
| BL T/m | 22.08 T/m |
| Mms (grms) | 108 grams |
| Xmax (mm) | 7.5 mm |
| Sd ($cm^2$) | 855.3 $cm^2$ |
| Efficiency % | 2.100% |
| Le (1k Hz) | 1.50 mH |
| EBP | 113.10 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16" / 406.4 mm |
| Width Across Flats | 15.25" / 387.4 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 13.85" / 351.79 mm |
| Baffle Hole Diameter R/M | 14" / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.281" on 15.5" PCD / 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8x Ø 0.281" on 14.56" PCD / 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 7.13" / 181.00 mm |
| Weight | 27.28 lb / 12.40 kg |
| Recommended Enclosure Volume | 2.47 - 5.29 cu ft / 70 - 150 Litres |
| Shipping Weight | 30.58 lb / 13.90 kg |
| Packing Carton Dimensions | (W) 440 (D) 440 (H) 220 mm |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Straight Polycellulose Ribbed Cone |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 40 Hz and 400 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# SOVEREIGN PRO 15-600

## SUB BASS DRIVER

| 15” / 381 mm | 600 W (A.E.S.) | 38 Hz - 3.5 kHz | 3.0” / 76.2 mm | 98 dB | 6 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | COPPER VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Highly versatile in 2-way ported enclosures.
- Good bass, smooth mid range.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.
- Especially suited for horn loaded, band pass and small size bass reflex applications.

The Sovereign Pro 15-600 offers excellent linear response and well controlled bass reproduction down to 40 Hz. This makes the unit especially suitable for horn-loaded applications, band-pass enclosures and small size bass reflex systems. The 15-600 is a very good solution for two or three way systems when high BL and maximum punch is required.

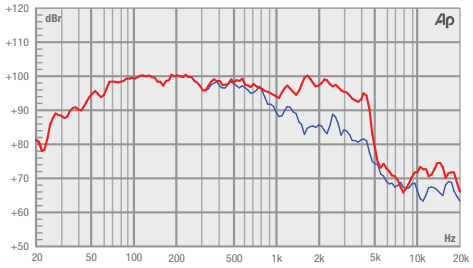
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15” / 381 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 600 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2400 W (A.E.S.) |
| Usable Frequency Range -6dB | 38 Hz - 3.5 kHz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 89 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 13.03” / 330.96 mm |
| Magnet Weight | 85 oz / 2.4 Kg |
| Magnetic Gap Depth | 0.39” / 10.00 mm |
| Flux Density | 1 Tesla |
| Coil Winding Height | 0.70” / 18.00 mm |
| Voice Coil Diameter | 3.0” / 76.2 mm |

### THIELE SMALL PARAMETERS

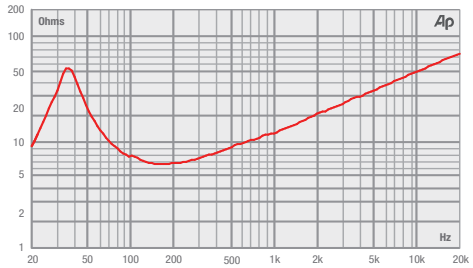
| | |
|---|---|
| FS Hz | 38 Hz |
| RE Ohms | 5.4 Ω |
| Qms | 3.520 |
| Qes | 0.390 |
| Qts | 0.351 |
| Vas Ltr | 201.00 Litres |
| Vd Litres | 0.513 Litres |
| CMS (mm/N) | 0.196 mm/N |
| BL T/m | 17.5 T/m |
| Mms (grms) | 89.5 grams |
| Xmax (mm) | 6 mm |
| Sd ($cm^2$) | 850 $cm^2$ |
| Efficiency % | 2.760% |
| Le (1k Hz) | 1.95 mH |
| EBP | 97.44 Hz |

### FREQUENCY RESPONSE DATA†




† *Half space response measured in a 975 Litre sealed box.*

### IMPEDANCE

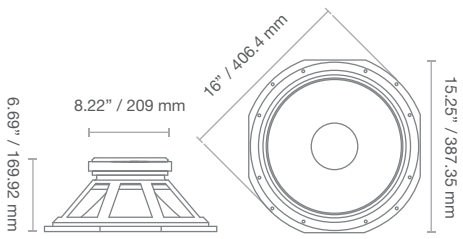



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16” / 406.4 mm |
| Width Across Flats | 15.25” / 387.35 mm |
| Flange Height | 0.30” / 7.62 mm |
| Baffle Hole Diameter F/M | 13.85” / 351.79 mm |
| Baffle Hole Diameter R/M | 14” / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.281” on 15.5” PCD / 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8x Ø 0.281” on 14.56” PCD / 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 6.69” / 169.92 mm |
| Weight | 17.52 lb / 7.95 kg |
| Recommended Enclosure Volume | 2.64 - 5.29 cu ft / 75 - 150 Litres |
| Shipping Weight | 20.05 lb / 9.10 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 210 mm |

### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Polycellulose |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 40 Hz and 400 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# SOVEREIGN PRO 15-600LF

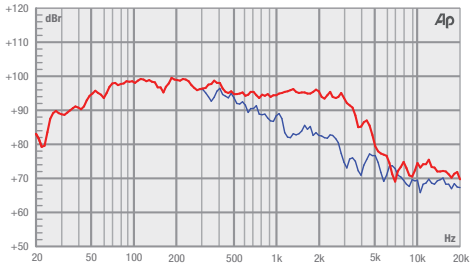
## BASS DRIVER

| 6.9 mm Xmax | 98 dB | 3.0" / 76.2 mm | 35 Hz - 3.5 kHz | 600 W (A.E.S.) | 15" / 381 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Sovereign Pro 15-600LF is intended for use in two-way ported enclosures, such as the classic bass driver plus horn tweeter or compression driver format. The unit features a die-cast chassis with long throw motor system and long throw surround allowing solid bass reproduction at high-power levels. The driver exhibits a smooth frequency response to give a balanced tonal characteristic when properly matched to appropriate high-frequency drivers. The Sovereign Pro 15-600LF can also be used in ported bass enclosures to deliver tight accurate bass down to 40 Hz. The unit features a 3-inch voice coil with a power handling of 600 Watts and an average sensitivity of 98 dB.

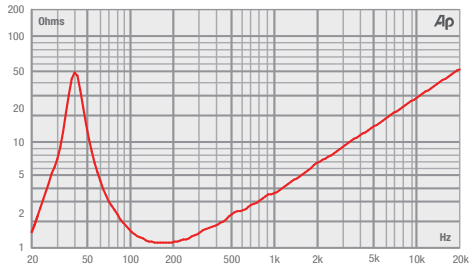
- Highly versatile in 2-way ported enclosures.
- Smooth frequency response.
- Delivers tight accurate bass down to 40 Hz.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.

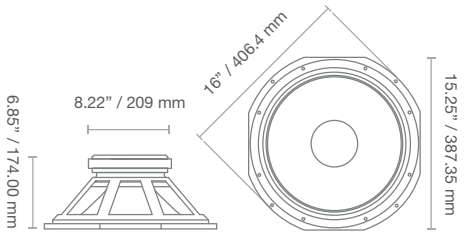
## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 600 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2400 W (A.E.S.) |
| Usable Frequency Range -6dB | 35 Hz - 3.5 kHz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 89 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 13.03" / 330.96 mm |
| Magnet Weight | 100 oz / 2.83 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.75" / 19.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16" / 406.4 mm |
| Width Across Flats | 15.25" / 387.35 mm |
| Flange Height | 0.30" / 7.62 mm |
| Baffle Hole Diameter F/M | 13.85" / 351.79 mm |
| Baffle Hole Diameter R/M | 14" / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.281" on 15.5" PCD / 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8x Ø 0.281" on 14.56" PCD / 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 6.85" / 174.00 mm |
| Weight | 20.49 lb / 9.30 kg |
| Recommended Enclosure Volume | 2.64 - 5.29 cu ft / 75 - 150 Litres |
| Shipping Weight | 23.03 lb / 10.45 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 225 mm |

## THIELE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 40 Hz |
| RE Ohms | 6.5 Ω |
| Qms | 8.800 |
| Qes | 0.380 |
| Qts | 0.370 |
| Vas Ltr | 188.00 Litres |
| Vd Litres | 0.590 Litres |
| CMS (mm/N) | 0.180 mm/N |
| BL T/m | 19.7 T/m |
| Mms (grms) | 89 grams |
| Xmax (mm) | 6.9 mm |
| Sd ($cm^2$) | 856 $cm^2$ |
| Efficiency % | 3.050% |
| Le (1k Hz) | 1.85 mH |
| EBP | 105.26 Hz |

## MATERIALS OF CONSTRUCTION

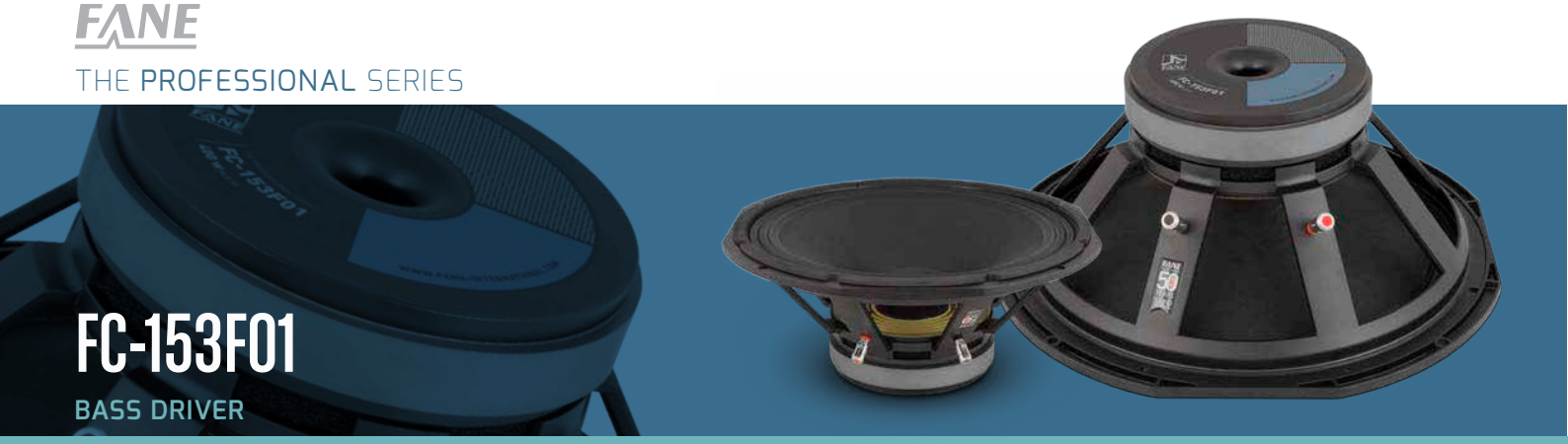
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |



* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 40 Hz and 400 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# FC-153F01

## BASS DRIVER

| 15" / 381 mm | 400 W (A.E.S.) | 40 Hz - 4.5 kHz | 3.0" / 76.2 mm | 100 dB | 7.5 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | CCAW - INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Versatile unit for 2-way ported enclosures.
- Dynamic, smooth detailed bass reproduction.
- Extended frequency range usable to 4.5 kHz.
- Copper shorting ring.
- Inside/ outside CCAW voice coil windings.
- Waterproof cone.
- Optimised for warm tonal character.

The FC-153F01 is intended for use in two-way ported enclosures. The unit features a 3 inch 'sandwich' inside and outside windings voice coil driven by a non-inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane is state of the art material that allows the driver to combine high sensitivity with the structural integrity required to produce undistorted frequencies at high output levels. The mechanical and electrical properties of the unit have been carefully optimised to allow extended low frequency output up to its rated power handling of 400 Watts (A.E.S) continuous, with peak power handling in excess of 1600 Watts. The unit offers excellent extension up to 4.5 kHz. The driver exhibits an average sensitivity of 100 dB working band and is best used in ported enclosures of 45 to 90 Litres.

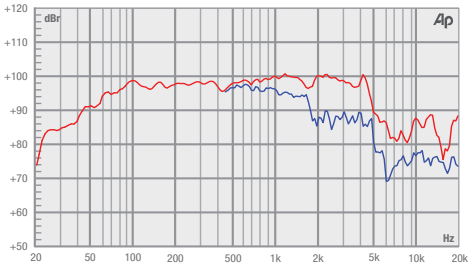
## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 400 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1600 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 4.5 kHz |
| Sensitivity (1 w - 1 m) | 100 dB |
| Moving Mass inc. Air Load | 74 grams |
| Minimum Impedance Zmin | 7.3 Ω |
| Effective Piston Diameter | 13.00" / 330.20 mm |
| Magnet Weight | 93 oz / 2.6 Kg |
| Magnetic Gap Depth | 0.35" / 9.00 mm |
| Flux Density | 1.2 Tesla |
| Coil Winding Height | 0.75" / 19.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

## THIELE SMALL PARAMETERS

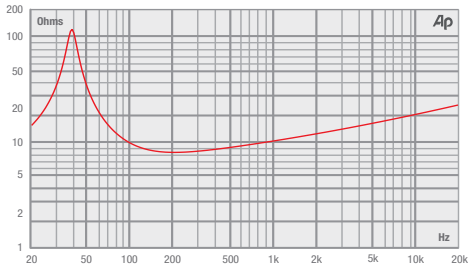
| | |
|---|---|
| FS Hz | 40 Hz |
| RE Ohms | 5.5 Ω |
| Qms | 6.550 |
| Qes | 0.320 |
| Qts | 0.310 |
| Vas Ltr | 220.00 Litres |
| Vd Litres | 0.650 Litres |
| CMS (mm/N) | 0.212 mm/N |
| BL T/m | 18 T/m |
| Mms (grms) | 74 grams |
| Xmax (mm) | 7.5 mm |
| Sd ($cm^2$) | 855 $cm^2$ |
| Efficiency % | 4.420% |
| Le (1k Hz) | 1.42 mH |
| EBP | 125.00 Hz |

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE

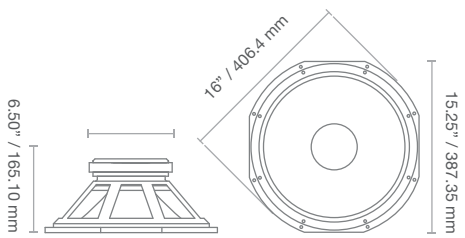



## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16" / 406.4 mm |
| Width Across Flats | 15.25" / 387.35 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 13.85" / 351.79 mm |
| Baffle Hole Diameter R/M | 14" / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 6.50" / 165.10 mm |
| Weight | 17.86 lb / 8.10 kg |
| Recommended Enclosure Volume | 40 - 65 Litres |
| Shipping Weight | 19.50 lb / 8.85 kg |
| Packing Carton Dimensions | (W) 440 (D) 440 (H) 220 mm |

## MATERIALS OF CONSTRUCTION

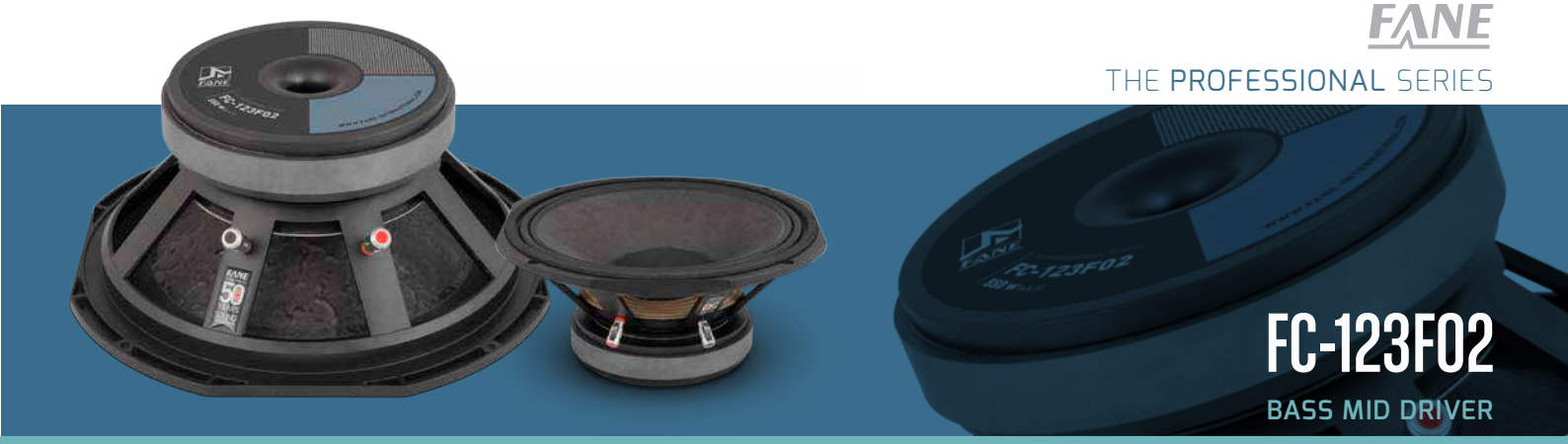
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | CCAW - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# FC-123F02

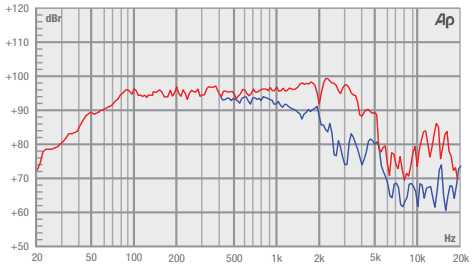
## BASS MID DRIVER

| 8 mm Xmax | 98 dB | 3.0" / 76.2 mm | 40 Hz - 4 kHz | 550 W (A.E.S.) | 12" / 304.8 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | CCAW - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The FC-123F02 is intended for use as a very high output bass mid driver in two-way ported enclosures and also as a bass driver in multi-way systems. The unit features a 3 inch 'sandwich' inside and outside windings voice coil driven by a non-inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane is state of the art material that allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at high output levels. The mechanical and electrical properties of the unit have been carefully optimised to allow extended low frequency output up to its rated power handling of 550 Watts (A.E.S) continuous, with peak power handling in excess of 2200 Watts. The driver exhibits an average sensitivity of 98 dB and is best used in ported enclosures of 25 to 80 Litres.

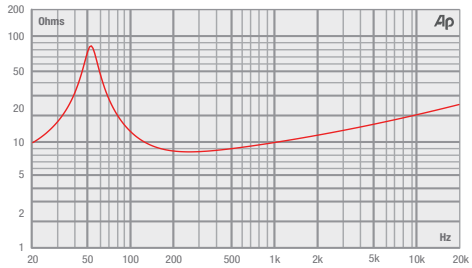
- Versatile unit for bass applications or 2-way ported enclosures.
- Dynamic, smooth detailed bass reproduction.
- Extended frequency range.
- Copper shorting ring.
- Inside/ outside CCAW voice coil windings.
- Optimised for warm tonal character.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 550 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2200 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 4 kHz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 52 grams |
| Minimum Impedance Zmin | 8.4 Ω |
| Effective Piston Diameter | 10.31" / 261.87 mm |
| Magnet Weight | 91.71 oz / 2.59 Kg |
| Magnetic Gap Depth | 0.35" / 9.00 mm |
| Flux Density | 1.16 Tesla |
| Coil Winding Height | 0.75" / 19.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

## THIELE SMALL PARAMETERS

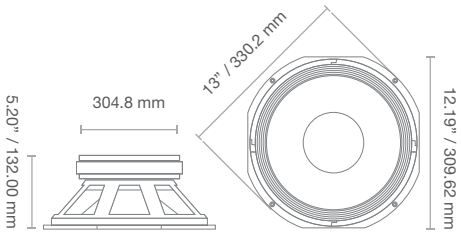
| | |
|---|---|
| FS Hz | 51 Hz |
| RE Ohms | 5.6 Ω |
| Qms | 5.100 |
| Qes | 0.365 |
| Qts | 0.341 |
| Vas Ltr | 76.00 Litres |
| Vd Litres | 0.420 Litres |
| CMS (mm/N) | 0.191 mm/N |
| BL T/m | 16 T/m |
| Mms (grms) | 51 grams |
| Xmax (mm) | 8 mm |
| Sd ($cm^2$) | 530 $cm^2$ |
| Efficiency % | 2.700% |
| Le (1k Hz) | 1.17 mH |
| EBP | 139.73 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 13" / 330.2 mm |
| Width Across Flats | 12.19" / 309.62 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 11.03" / 280.16 mm |
| Baffle Hole Diameter R/M | 10.13" / 257.30 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 5.5 mm on 317.5 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.20" / 132.00 mm |
| Weight | 17.20 lb / 7.80 kg |
| Recommended Enclosure Volume | 25 - 50 Litres |
| Shipping Weight | 19.18 lb / 8.70 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | CCAW - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# FC-123F01

## SUB BASS DRIVER

| 12" / 304.8 mm | 500 W (A.E.S.) | 45 Hz - 3 kHz | 3.0" / 76.2 mm | 97.5 dB | 8.5 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | COPPER VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Versatile unit for bass applications or 2-way ported enclosures.
- Optimised for warm tonal character.
- Long throw motor structure.

The FC-123F01 is intended for use in two-way ported enclosures. The unit features die-cast chassis with long throw motor system and high linearity suspension allowing solid bass reproduction at high-power levels. The specially formulated cone pulp allows this driver to give a warm and smooth response throughout the bass frequency range and delivers well balanced tonal characteristics when properly matched to appropriate high-frequency drivers. The FC-123F01 is designed for use in 25 to 70 Litre ported enclosures and features a 3 inch copper voice coil delivering 500 Watt power handling and 97.5 dB sensitivity.

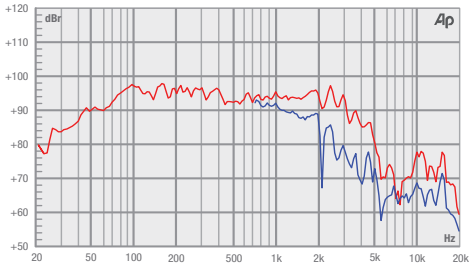
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 500 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2000 W (A.E.S.) |
| Usable Frequency Range -6dB | 45 Hz - 3 kHz |
| Sensitivity (1 w - 1 m) | 97.5 dB |
| Moving Mass inc. Air Load | 63 grams |
| Minimum Impedance Zmin | 7.2 Ω |
| Effective Piston Diameter | 261.87" / 6651.50 mm |
| Magnet Weight | 42.32 oz / 1.19 Kg |
| Magnetic Gap Depth | 0.35" / 9.00 mm |
| Flux Density | 1 Tesla |
| Coil Winding Height | 0.79" / 20.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

### THIELE SMALL PARAMETERS

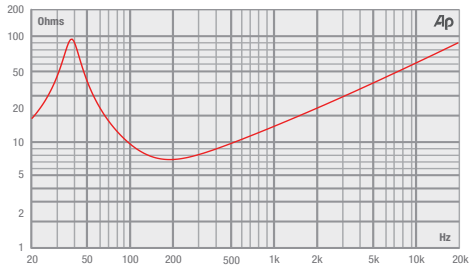
| | |
|---|---|
| FS Hz | 34 Hz |
| RE Ohms | 5.4 Ω |
| Qms | 4.320 |
| Qes | 0.249 |
| Qts | 0.235 |
| Vas Ltr | 110.00 Litres |
| Vd Litres | 0.450 Litres |
| CMS (mm/N) | 0.276 mm/N |
| BL T/m | 18.3 T/m |
| Mms (grms) | 63 grams |
| Xmax (mm) | 8.5 mm |
| Sd ($cm^2$) | 530 $cm^2$ |
| Efficiency % | 2.400% |
| Le (1k Hz) | 2.26 mH |
| EBP | 136.55 Hz |

### FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

### IMPEDANCE

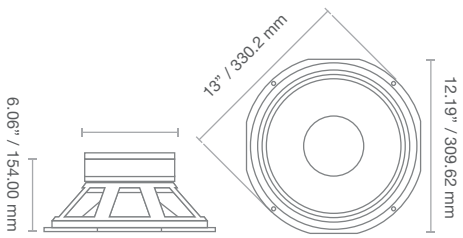



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 13" / 330.2 mm |
| Width Across Flats | 12.19" / 309.62 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 11.03" / 280.16 mm |
| Baffle Hole Diameter R/M | 10.13" / 257.30 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 5.5 mm on 317.5 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 6.06" / 154.00 mm |
| Weight | 16.76 lb / 7.60 kg |
| Recommended Enclosure Volume | 25 - 50 Litres |
| Shipping Weight | 18.08 lb / 8.20 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

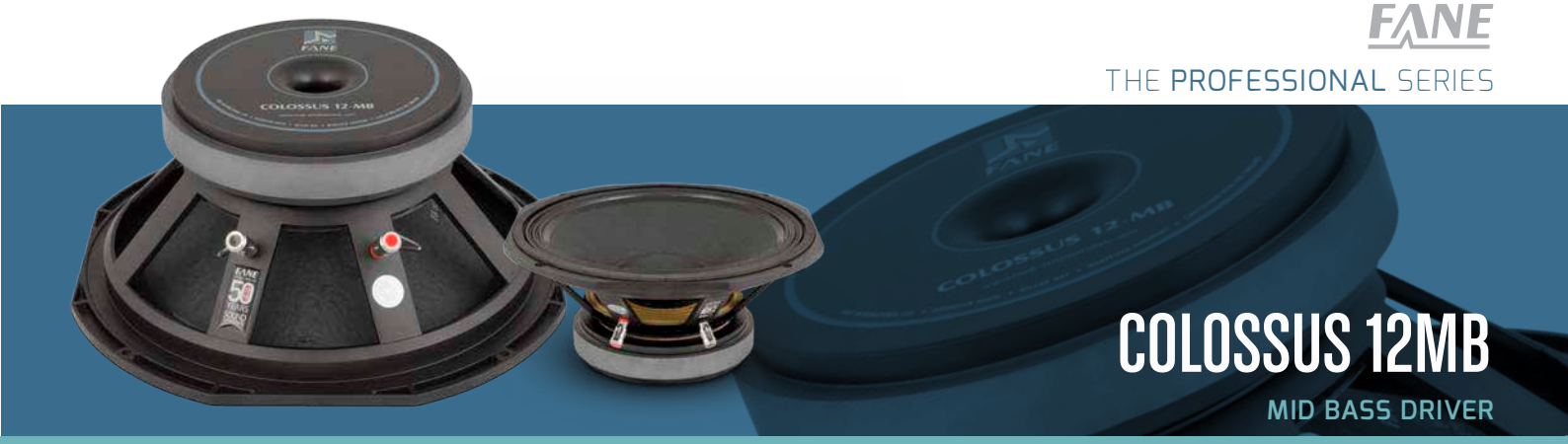





* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# COLOSSUS 12MB

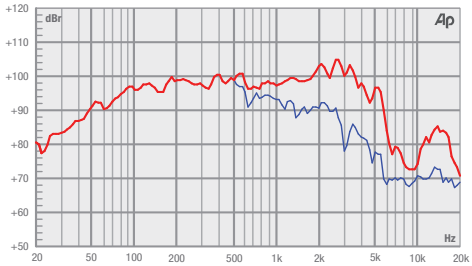
## MID BASS DRIVER

| 5.5 mm Xmax | 98 dB | 3.0" / 76.2 mm | 40 Hz - 3.5 kHz | 500 W (A.E.S.) | 12" / 304.8 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | ALUMINIUM - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Colossus 12MB is intended for use as a very high output mid bass driver in two-way ported enclosures and also as a bass driver in multi-way systems. The unit features a 3 inch 'sandwich' inside and outside windings voice coil driven by a non-inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane, manufactured from polycellulose, is much stronger and more durable than conventional paper pulp alternatives. This allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at high output levels. The mechanical and electrical properties of the unit have been carefully optimised to allow extended low frequency output up to its rated power handling of 500 Watts (A.E.S) continuous, with peak power handling in excess of 2000 Watts. The driver exhibits an average sensitivity of 98 dB and is best used in ported enclosures of 25 to 80 Litres.

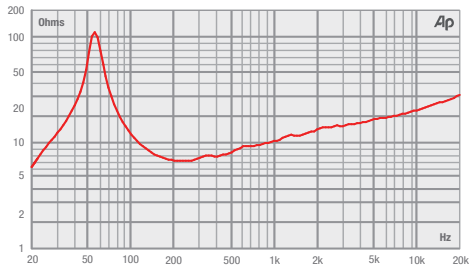
- High SPL.
- Fast and dynamic driver producing punchy bass.
- Extended frequency range.
- Aluminium demodulation ring.
- Copper shorting ring.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 500 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2000 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 3.5 kHz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 59 grams |
| Minimum Impedance Zmin | 7.5 Ω |
| Effective Piston Diameter | 10.24" / 260.09 mm |
| Magnet Weight | 93 oz / 2.63 Kg |
| Magnetic Gap Depth | 0.35" / 9.00 mm |
| Flux Density | 1.16 Tesla |
| Coil Winding Height | 0.70" / 18.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

## THIELE SMALL PARAMETERS

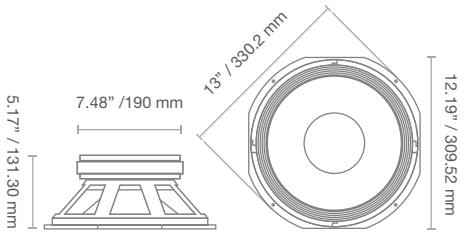
| | |
|---|---|
| FS Hz | 55 Hz |
| RE Ohms | 5.5 Ω |
| Qms | 2.050 |
| Qes | 0.333 |
| Qts | 0.286 |
| Vas Ltr | 56.00 Litres |
| Vd Litres | 0.290 Litres |
| CMS (mm/N) | 0.142 mm/N |
| BL T/m | 18.3 T/m |
| Mms (grms) | 59 grams |
| Xmax (mm) | 5.5 mm |
| Sd ($cm^2$) | 530 $cm^2$ |
| Efficiency % | 2.710% |
| Le (1k Hz) | 1.56 mH |
| EBP | 165.17 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 13" / 330.2 mm |
| Width Across Flats | 12.19" / 309.52 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 11.03" / 280.16 mm |
| Baffle Hole Diameter R/M | 10.13" / 257.30 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 12.5" PCD / 4x Ø 5.5 mm on 317.5 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.17" / 131.30 mm |
| Weight | 17.10 lb / 7.80 kg |
| Recommended Enclosure Volume | 0.88 - 2.83 cu ft / 25 - 80 Litres |
| Shipping Weight | 20.20 lb / 9.20 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 178 mm |

## MATERIALS OF CONSTRUCTION

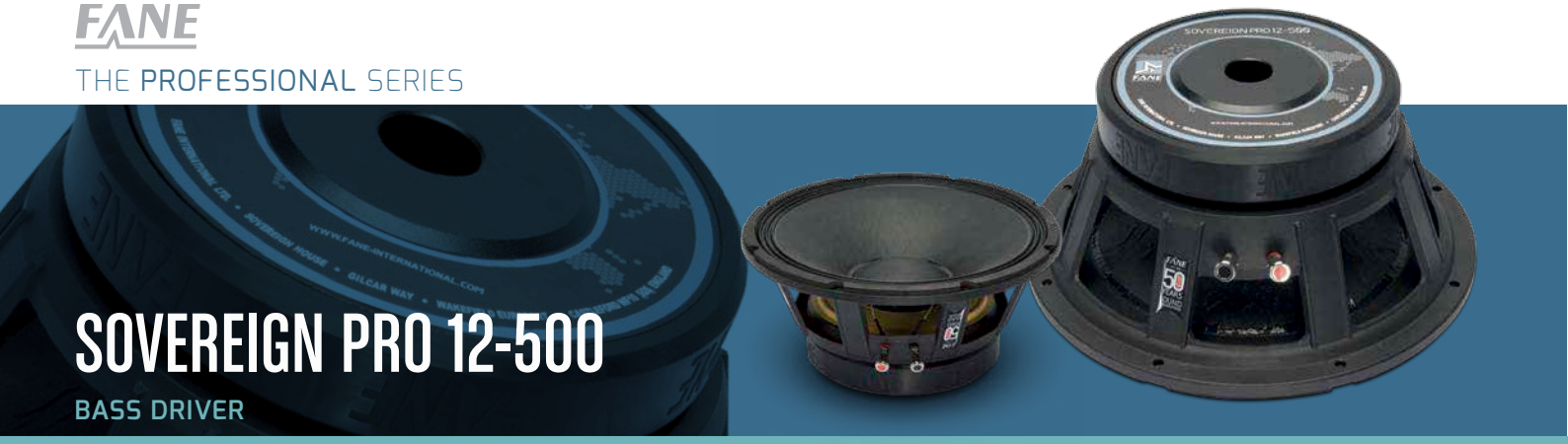
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Aluminium - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Polycellulose |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# SOVEREIGN PRO 12-500

## BASS DRIVER

| 12" / 304.8 mm | 500 W (A.E.S.) | 45 Hz - 4.5 kHz | 3.0" / 76.2 mm | 97.5 dB | 6 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | CCAW - INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Deep bass, good mid range with extended frequency range.
- High linearity suspension.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.

The Sovereign Pro 12-500 is intended for use in two-way ported enclosures. The driver features a rugged die-cast chassis combined with long throw motor system and high linearity suspension allowing solid bass reproduction at high power levels. The driver exhibits a smooth frequency response that delivers a balanced tonal characteristic when properly matched with the appropriate high-frequency device. The Sovereign Pro 12-500 is intended for use in ported enclosures with volumes of 35 to 75 Litres and features a 3 inch 'sandwich' inside and outside windings voice coil capable of delivering 500 watts power. The driver has an average sensitivity of 97.5 dB across its working band width.

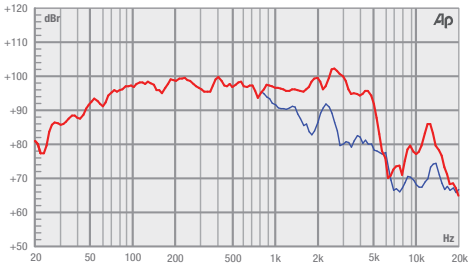
## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 500 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2000 W (A.E.S.) |
| Usable Frequency Range -6dB | 45 Hz - 4.5 kHz |
| Sensitivity (1 w - 1 m) | 97.5 dB |
| Moving Mass inc. Air Load | 43 grams |
| Minimum Impedance Zmin | 6.84 Ω |
| Effective Piston Diameter | 10.31" / 261.87 mm |
| Magnet Weight | 80 oz / 2.26 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.70" / 18.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

## THIELE SMALL PARAMETERS

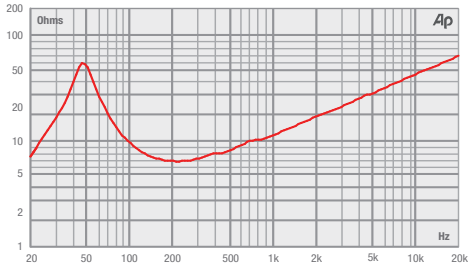
| | |
|---|---|
| FS Hz | 43 Hz |
| RE Ohms | 5.6 Ω |
| Qms | 3.040 |
| Qes | 0.350 |
| Qts | 0.314 |
| Vas Ltr | 107.00 Litres |
| Vd Litres | 0.339 Litres |
| CMS (mm/N) | 0.236 mm/N |
| BL T/m | 16 T/m |
| Mms (grms) | 58 grams |
| Xmax (mm) | 6 mm |
| Sd ($cm^2$) | 565 $cm^2$ |
| Efficiency % | 2.340% |
| Le (1k Hz) | 1.60 mH |
| EBP | 122.86 Hz |

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE

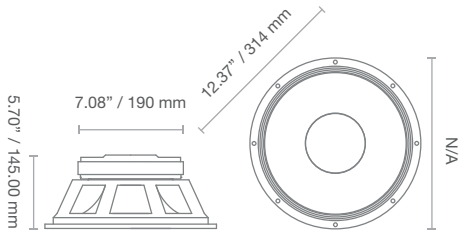



## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 12.37" / 314 mm |
| Width Across Flats | N/A |
| Flange Height | 0.339" / 8.61 mm |
| Baffle Hole Diameter F/M | 11.13" / 282.70 mm |
| Baffle Hole Diameter R/M | N/A |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 7.0 mm on 11.5" / 294 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.70" / 145.00 mm |
| Weight | 16.50 lb / 7.50 kg |
| Recommended Enclosure Volume | 1.23 - 2.64 cu ft / 35 - 75 Litres |
| Shipping Weight | 17.63 lb / 8.00 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 178 mm |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | CCAW - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*


# SOVEREIGN PRO 12-300

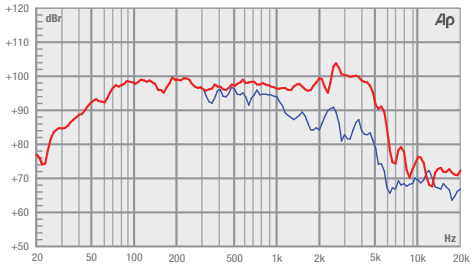
## BASS DRIVER

| 4.5 mm Xmax | 97.5 dB | 2.5" / 63.5 mm | 45 Hz - 4.5 kHz | 300 W (A.E.S.) | 12" / 304.8 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Sovereign Pro 12-300 is intended for use in two-way ported enclosures, such as the classic bass driver plus horn tweeter or compression driver format. The unit features die-cast chassis with long throw motor system and high linearity suspension allowing solid bass reproduction at high-power levels. The driver exhibits smooth frequency response to give a balanced tonal characteristic when properly matched to appropriate high-frequency drivers. The Sovereign Pro 12-300 is designed for use in 25 to 80 Litre ported enclosures and features a 2.5 inch voice coil, 300 Watt power handling and 97.5 dB sensitivity.

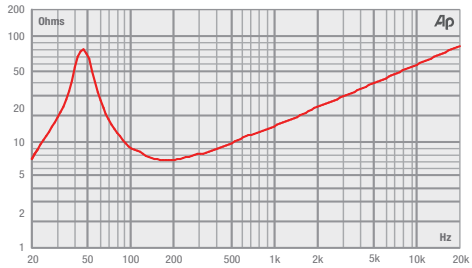
- Highly versatile in 2-way ported enclosures.
- Smooth extended frequency response.
- Good bass and mid range performance.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1200 W (A.E.S.) |
| Usable Frequency Range -6dB | 45 Hz - 4.5 kHz |
| Sensitivity (1 w - 1 m) | 97.5 dB |
| Moving Mass inc. Air Load | 43 grams |
| Minimum Impedance Zmin | 6.84 Ω |
| Effective Piston Diameter | 10.31" / 261.87 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.70" / 18.00 mm |
| Voice Coil Diameter | 2.5" / 63.5 mm |

## THIELE SMALL PARAMETERS

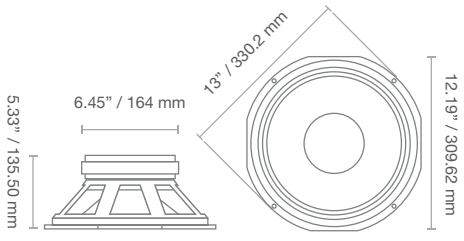
| | |
|---|---|
| FS Hz | 46 Hz |
| RE Ohms | 5.75 Ω |
| Qms | 5.200 |
| Qes | 0.375 |
| Qts | 0.350 |
| Vas Ltr | 114.00 Litres |
| Vd Litres | 0.240 Litres |
| CMS (mm/N) | 0.278 mm/N |
| BL T/m | 14.8 T/m |
| Mms (grms) | 43 grams |
| Xmax (mm) | 4.5 mm |
| Sd ($cm^2$) | 540 $cm^2$ |
| Efficiency % | 2.890% |
| Le (1k Hz) | 1.64 mH |
| EBP | 122.67 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 13" / 330.2 mm |
| Width Across Flats | 12.19" / 309.62 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 11.03" / 280.16 mm |
| Baffle Hole Diameter R/M | 10.13" / 257.30 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 12.5" PCD / 4x Ø 5.5 mm on 317.5 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.33" / 135.50 mm |
| Weight | 11.46 lb / 5.20 kg |
| Recommended Enclosure Volume | 0.88 - 2.83 cu ft / 25 - 80 Litres |
| Shipping Weight | 12.89 lb / 5.85 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

## MATERIALS OF CONSTRUCTION

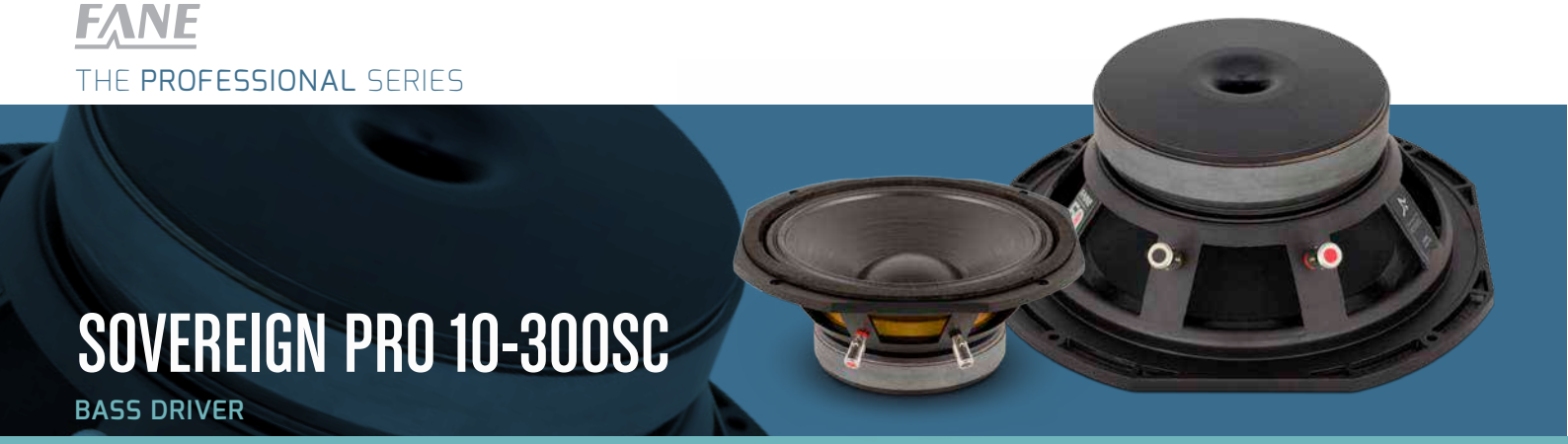
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# SOVEREIGN PRO 10-300SC

## BASS DRIVER

| 10” / 254 mm | 300 W (A.E.S.) | 45 Hz - 4 kHz | 2.5” / 63.5 mm | 98 dB | 4.75 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | CCAW VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Highly versatile in 2-way ported enclosures.
- Warm and smooth response throughout the bass frequency range.
- Optimised cone pulp offering increased strength, durability and performance.
- Specially formulated damping coating.
- Perfect for full range KTV systems.

The Sovereign Pro 10-300SC is intended for use in two-way ported enclosures such as the classic bass driver plus horn tweeter or compression driver format. The unit features die-cast chassis with long throw motor system and high linearity suspension allowing solid bass reproduction at high-power levels. The specially formulated cone pulp allows this driver to give a warm and smooth response throughout the bass frequency range and delivers well balanced tonal characteristics when properly matched to appropriate high-frequency drivers. The Sovereign Pro 10-300SC is designed for use in 25 to 50 Litre ported enclosures and features a 2.5 inch voice coil, 300 Watt power handling and 98 dB sensitivity.

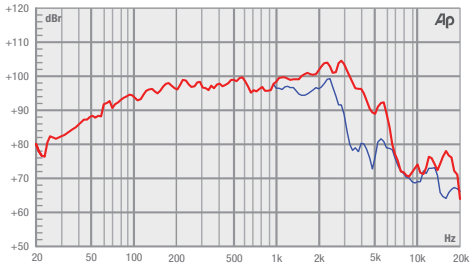
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 10” / 254 mm |
| Impedance | 8 Ohm |
| Power Handling | 300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1200 W (A.E.S.) |
| Usable Frequency Range -6dB | 45 Hz - 4 kHz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 46.8 grams |
| Minimum Impedance Zmin | 6.24 Ω |
| Effective Piston Diameter | 8.19” / 208.02 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.31” / 7.87 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.53” / 13.46 mm |
| Voice Coil Diameter | 2.5” / 63.5 mm |

### THIELE SMALL PARAMETERS

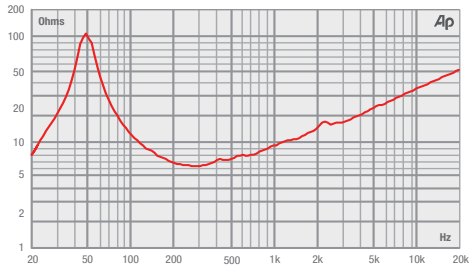
| | |
|---|---|
| FS Hz | 47 Hz |
| RE Ohms | 5.5 Ω |
| Qms | 10.130 |
| Qes | 0.340 |
| Qts | 0.330 |
| Vas Ltr | 45.43 Litres |
| Vd Litres | 0.172 Litres |
| CMS (mm/N) | 0.245 mm/N |
| BL T/m | 14.8 T/m |
| Mms (grms) | 46.8 grams |
| Xmax (mm) | 4.75 mm |
| Sd ($cm^2$) | 361 $cm^2$ |
| Efficiency % | 1.700% |
| Le (1k Hz) | 1.27 mH |
| EBP | 138.24 Hz |

### FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

### IMPEDANCE

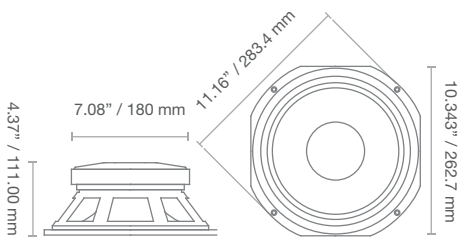



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 11.16” / 283.4 mm |
| Width Across Flats | 10.343” / 262.7 mm |
| Flange Height | 0.305” / 7.8 mm |
| Baffle Hole Diameter F/M | 8.97” / 227.83 mm |
| Baffle Hole Diameter R/M | N/A |
| Gasket Supplied | Rear |
| Outer Fixing Holes | 4x Ø 0.218” on 10.625” PCD / 4x Ø 5.5 mm on 270 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 4.37” / 111.00 mm |
| Weight | 10.14 lb / 4.60 kg |
| Recommended Enclosure Volume | 0.88 - 1.76 cu ft / 25 - 50 Litres |
| Shipping Weight | 11.35 lb / 5.15 kg |
| Packing Carton Dimensions | (W) 275 (D) 275 (H) 150 mm |

### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Kapton |
| Voice Coil | CCAW |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*


# SOVEREIGN PRO 10-300

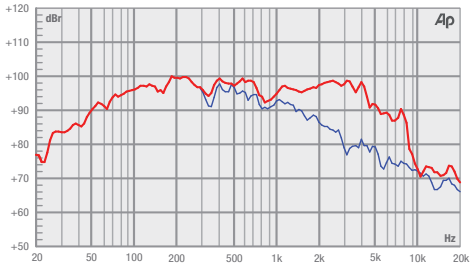
## BASS DRIVER

| 5.5 mm Xmax | 98 dB | 2.5" / 63.5 mm | 45 Hz - 4 kHz | 300 W (A.E.S.) | 10" / 254 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Sovereign Pro 10-300 is intended for use in two-way ported enclosures such as the classic bass driver plus horn tweeter or compression driver format. The unit features die-cast chassis with long throw motor system and high linearity suspension allowing solid bass reproduction at high-power levels. This driver delivers a smooth and balanced response throughout its frequency range and delivers well balanced tonal characteristics when properly matched to appropriate high-frequency drivers. The Sovereign Pro 10-300 is designed for use in 14 to 40 litre ported enclosures and features a 2.5 inch sandwich voice coil capable of 300 Watt power handling and 98 dB sensitivity.

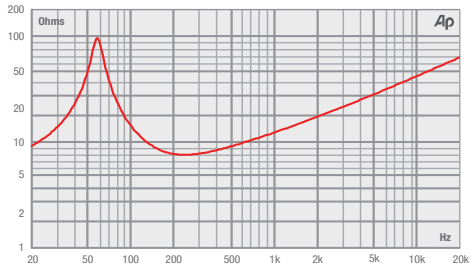
- Smooth and balanced response.
- High linearity suspension.
- Long throw motor structure 5.5 mm Xmax.

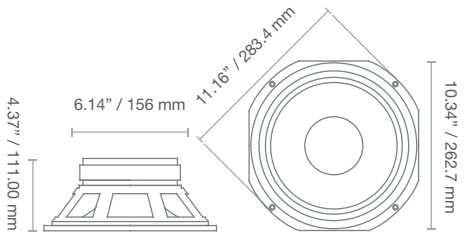
## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 10" / 254 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1200 W (A.E.S.) |
| Usable Frequency Range -6dB | 45 Hz - 4 kHz |
| Sensitivity (1 w - 1 m) | 98 dB |
| Moving Mass inc. Air Load | 37 grams |
| Minimum Impedance Zmin | 6.8 Ω |
| Effective Piston Diameter | 8.46" / 214.88 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.70" / 18.00 mm |
| Voice Coil Diameter | 2.5" / 63.5 mm |

## THIELE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 58 Hz |
| RE Ohms | 5.7 Ω |
| Qms | 6.080 |
| Qes | 0.340 |
| Qts | 0.320 |
| Vas Ltr | 41.00 Litres |
| Vd Litres | 0.208 Litres |
| CMS (mm/N) | 0.211 mm/N |
| BL T/m | 15.3 T/m |
| Mms (grms) | 37 grams |
| Xmax (mm) | 5.5 mm |
| Sd ($cm^2$) | 378 $cm^2$ |
| Efficiency % | 2.360% |
| Le (1k Hz) | 1.68 mH |
| EBP | 170.59 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 11.16" / 283.4 mm |
| Width Across Flats | 10.34" / 262.7 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 8.97" / 227.83 mm |
| Baffle Hole Diameter R/M | N/A |
| Gasket Supplied | Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 10.625" PCD / 4x Ø 5.5 mm on 270 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 4.37" / 111.00 mm |
| Weight | 11.02 lb / 5.00 kg |
| Recommended Enclosure Volume | 0.49 - 1.41 cu ft / 14 - 40 Litres |
| Shipping Weight | 12.56 lb / 5.70 kg |
| Packing Carton Dimensions | (W) 275 (D) 275 (H) 150 mm |

## MATERIALS OF CONSTRUCTION

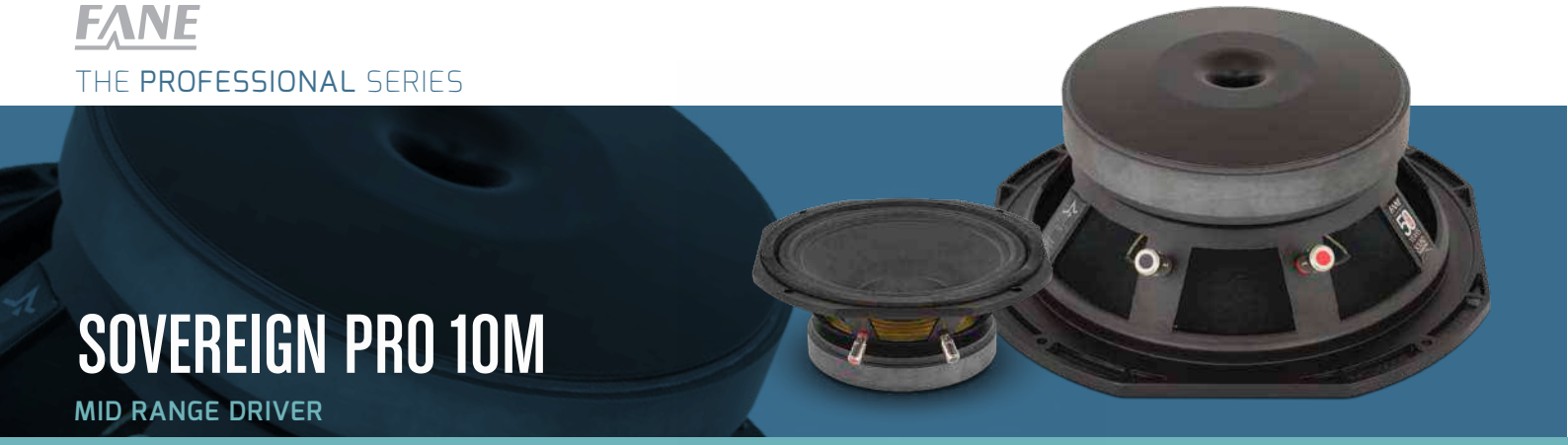
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |



* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# SOVEREIGN PRO 10M

## MID RANGE DRIVER

| 10" / 254 mm | 280 W (A.E.S.) | 200 Hz - 3.5 kHz | 2.5" / 63.5 mm | 98.5 dB | 2 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | ALUMINIUM - INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Smooth mid range response.
- Output levels up to 124dB.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.
- Suitable for line array applications.

The Sovereign Pro 10M is designed as a dedicated mid range driver delivering high output, low distortion from 200 Hz to 3.5 kHz. The 2.5" voice coil driver' benefits from an average sensitivity of 98.5 dB throughout the units active operating range. This combined with an A.E.S power handling of 280 watts ensures perfect mid range reproduction for the most demanding applications. The large magnet structure and cast aluminium frame ensure efficient heat dissipation and gives the Sovereign Pro 10M low power compression and maximum output levels of up to 124 dB. The Sovereign Pro 10M is best suited to sealed enclosures 5 to 15 Litres.

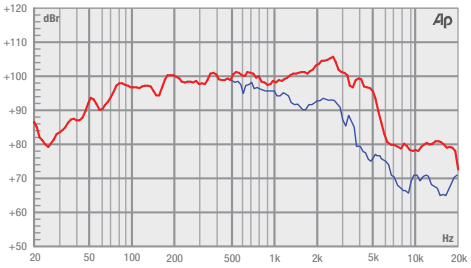
## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 10" / 254 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 280 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1120 W (A.E.S.) |
| Usable Frequency Range -6dB | 200 Hz - 3.5 kHz |
| Sensitivity (1 w - 1 m) | 98.5 dB |
| Moving Mass inc. Air Load | 37 grams |
| Minimum Impedance Zmin | 7 Ω |
| Effective Piston Diameter | 8.19" / 208.02 mm |
| Magnet Weight | 78 oz / 2.11 Kg |
| Magnetic Gap Depth | 0.31" / 8.00 mm |
| Flux Density | 1.24 Tesla |
| Coil Winding Height | 0.47" / 12.00 mm |
| Voice Coil Diameter | 2.5" / 63.5 mm |

## THIELE SMALL PARAMETERS

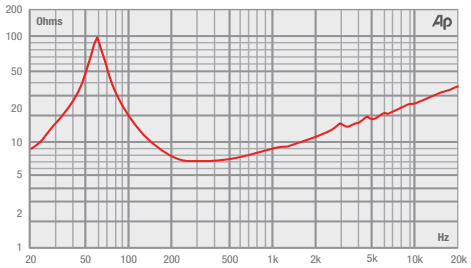
| | |
|---|---|
| FS Hz | 56 Hz |
| RE Ohms | 5.6 Ω |
| Qms | 4.900 |
| Qes | 0.286 |
| Qts | 0.270 |
| Vas Ltr | 37.00 Litres |
| Vd Litres | 0.068 Litres |
| CMS (mm/N) | 0.231 mm/N |
| BL T/m | 15.8 T/m |
| Mms (grms) | 35 grams |
| Xmax (mm) | 2 mm |
| Sd ($cm^2$) | 340 $cm^2$ |
| Efficiency % | 2.460% |
| Le (1k Hz) | 1.45 mH |
| EBP | 195.80 Hz |

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE

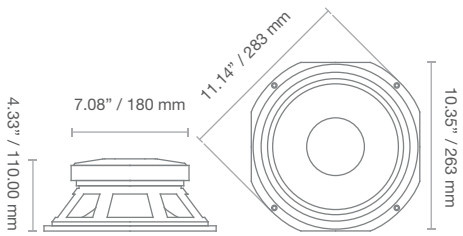



## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 11.14" / 283 mm |
| Width Across Flats | 10.35" / 263 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 8.97" / 227.83 mm |
| Baffle Hole Diameter R/M | N/A |
| Gasket Supplied | Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 10.625" PCD / 4x Ø 5.5 mm on 270 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 4.33" / 110.00 mm |
| Weight | 13.34 lb / 6.05 kg |
| Recommended Enclosure Volume | 0.17 - 0.52 cu ft / 5- 15 Litres |
| Shipping Weight | 14.77 lb / 6.70 kg |
| Packing Carton Dimensions | (W) 275 (D) 275 (H) 150 mm |

## MATERIALS OF CONSTRUCTION

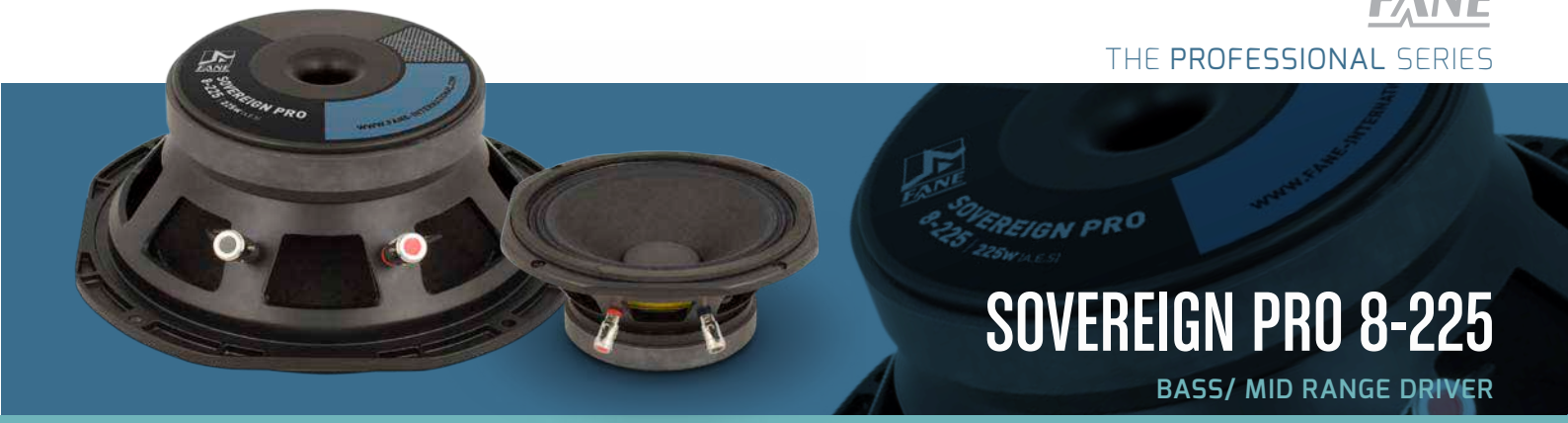
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Aluminium - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Half Roll Linen |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 100 Hz and 1000 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*




# SOVEREIGN PRO 8-225

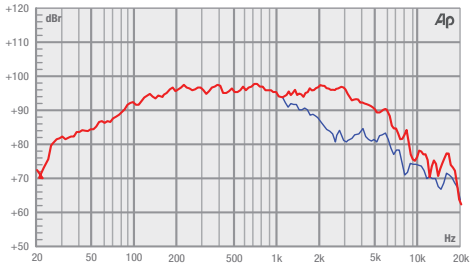
## BASS/ MID RANGE DRIVER

| 5.5 mm Xmax | 97 dB | 2.0" / 50.8 mm | 55 Hz - 5 kHz | 225 W (A.E.S.) | 8" / 203.2 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Sovereign Po 8-225 is a very versatile unit offering excellent coverage for use in traditional compact 2 way ported enclosures. The driver can also be used as a mid range unit in small sealed enclosures as part of a larger multi-way system. When used in small format line array it offers excellent vocal coverage and coherence.

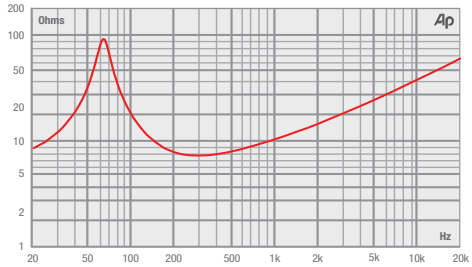
- Good for compact two-way PA cabinets and line array applications.
- Midrange in small sealed enclosures.
- Exceptional efficiency, power handling and frequency coverage from compact design.
- High output and low distortion from 55 Hz to 5 kHz.
- Rugged die-cast chassis.
- Smooth and refined tone with extended usable frequency.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 965 Litre sealed box. Blue Line = fundamental 45° off-axis.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 8" / 203.2 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 225 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 900 W (A.E.S.) |
| Usable Frequency Range -6dB | 55 Hz - 5 kHz |
| Sensitivity (1 w - 1 m) | 97 dB |
| Moving Mass inc. Air Load | 20.7 grams |
| Minimum Impedance Zmin | 7.8 Ω |
| Effective Piston Diameter | 6.50" / 165.00 mm |
| Magnet Weight | 34 oz / 0.96 Kg |
| Magnetic Gap Depth | 0.31" / 8.00 mm |
| Flux Density | 1 Tesla |
| Coil Winding Height | 0.59" / 15.00 mm |
| Voice Coil Diameter | 2.0" / 50.8 mm |

## THIELE SMALL PARAMETERS

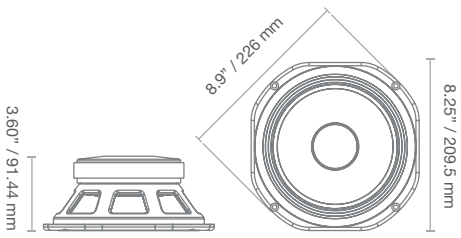
| | |
|---|---|
| FS Hz | 62 Hz |
| RE Ohms | 6.1 Ω |
| Qms | 4.300 |
| Qes | 0.420 |
| Qts | 0.380 |
| Vas Ltr | 22.00 Litres |
| Vd Litres | 0.118 Litres |
| CMS (mm/N) | 0.318 mm/N |
| BL T/m | 11 T/m |
| Mms (grms) | 20.69 grams |
| Xmax (mm) | 5.5 mm |
| Sd (cm²) | 220 cm² |
| Efficiency % | 1.250% |
| Le (1k Hz) | 1.20 mH |
| EBP | 147.62 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 8.9" / 226 mm |
| Width Across Flats | 8.25" / 209.5 mm |
| Flange Height | 0.28" / 7 mm |
| Baffle Hole Diameter F/M | 7.33" / 186 mm |
| Baffle Hole Diameter R/M | N/A |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 5.5 mm on 214 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 3.60" / 91.44 mm |
| Weight | 6.90 lb / 3.13 kg |
| Recommended Enclosure Volume | 20 - 35 Litres |
| Shipping Weight | 8.50 lb / 3.86 kg |
| Packing Carton Dimensions | (W) 235 (D) 235 (H) 130 mm |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 55 Hz and 550 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# STUDIO 5HPM

## FULL RANGE DRIVER

| 5" / 127 mm | 100 W (A.E.S.) | 90 Hz - 7 kHz | 1.5" / 38.1 mm | 92.5 dB | 4.5 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | POLYAMID-IMIDE COATED COPPER VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- 100 W (A.E.S.) Power handling.
- 1.5" Polyamid-imide coated, copper voice coil.
- Smooth midband response with extended high frequency range.
- Exceptional power handling from compact dimensions.
- Ideal for compact two-way and multiway systems.

The Studio 5HPM is a 5-inch woofer that offers exceptional power handling and frequency coverage from compact dimensions. Primarily for full-range sound reinforcement and because of extended frequency response is also suited to multi-unit PA systems.

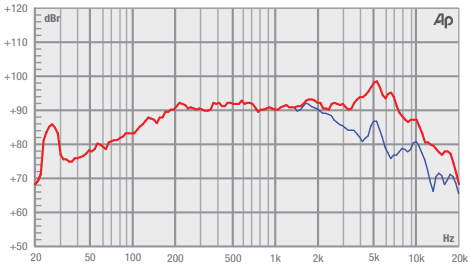
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 5" / 127 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 100 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 400 W (A.E.S.) |
| Usable Frequency Range -6dB | 90 Hz - 7 kHz |
| Sensitivity (1 w - 1 m) | 92.5 dB |
| Moving Mass inc. Air Load | 6.5 grams |
| Minimum Impedance Zmin | 7.7 Ω |
| Effective Piston Diameter | 4.20" / 106.68 mm |
| Magnet Weight | 26 oz / 0.73 Kg |
| Magnetic Gap Depth | 0.23" / 6.00 mm |
| Flux Density | 1.42 Tesla |
| Coil Winding Height | 0.51" / 13 mm |
| Voice Coil Diameter | 1.5" / 38.1 mm |

### THIELE SMALL PARAMETERS

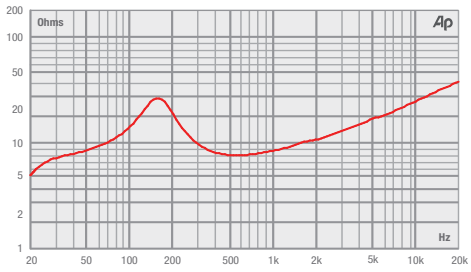
| | |
|---|---|
| FS Hz | 164 Hz |
| RE Ohms | 6.6 Ω |
| Qms | 2.300 |
| Qes | 0.715 |
| Qts | 0.540 |
| Vas Ltr | 1.63 Litres |
| Vd Litres | 0.045 Litres |
| CMS (mm/N) | 0.148 mm/N |
| BL T/m | 7.92 T/m |
| Mms (grms) | 6.5 grams |
| Xmax (mm) | 4.5 mm |
| Sd ($cm^2$) | 88 $cm^2$ |
| Efficiency % | 1.030% |
| Le (1k Hz) | 1.19 mH |
| EBP | 229.37 Hz |

### FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

### IMPEDANCE

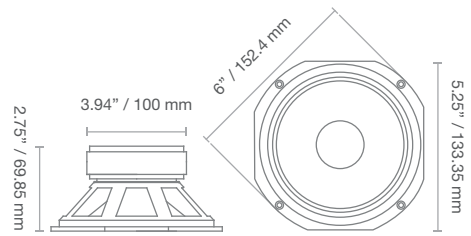



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 6" / 152.4 mm |
| Width Across Flats | 5.25" / 133.35 mm |
| Flange Height | 0.27" / 6.9 mm |
| Baffle Hole Diameter F/M | 4.63" / 117.60 mm |
| Baffle Hole Diameter R/M | 4.50" / 114.3 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 5.468" PCD / 4x Ø 5.5 mm on 138.8 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 2.75" / 69.85 mm |
| Weight | 3.15 lb / 1.43 kg |
| Recommended Enclosure Volume | 0.07 - 0.35 cu ft / 2 - 10 Litres |
| Shipping Weight | 3.65 lb / 1.66 kg |
| Packing Carton Dimensions | (W) 160 (D) 160 (H) 110 mm |

### MATERIALS OF CONSTRUCTION

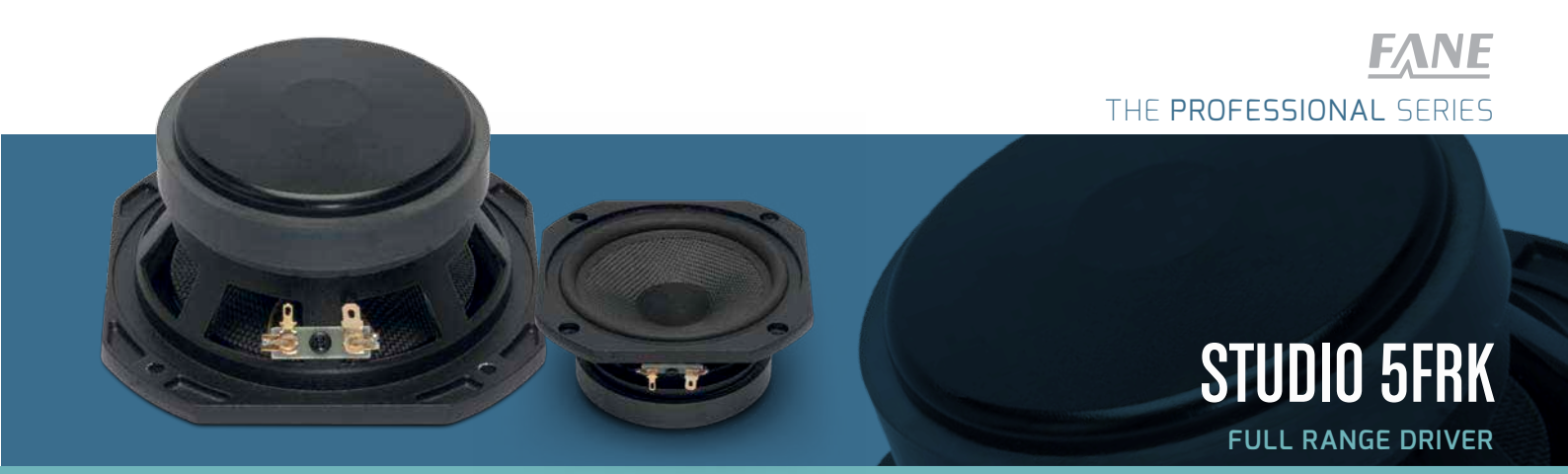
| | |
|---|---|
| Former Material | Resin Bonded Glass Fibre |
| Voice Coil | Polyamid-imide Coated Copper |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll Linen |
| Dust Dome | Paper |
| Connectors | 0.125" Tab / Solder |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# STUDIO 5FRK

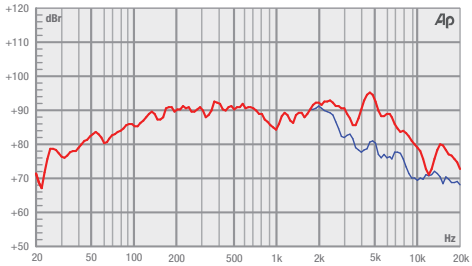
## FULL RANGE DRIVER

| 2.5 mm Xmax | 90.5 dB | 1.0" / 25.4 mm | 65 Hz - 7 kHz | 50 W (A.E.S.) | 5" / 127 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | POLYAMID-IMIDE COATED COPPER VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Studio 5FRK is a 5-inch woofer that offers exceptional efficiency, power handling and frequency coverage from compact dimensions. Primarily for full range sound reinforcement and because of extended frequency response is also suited to multi-unit PA systems.

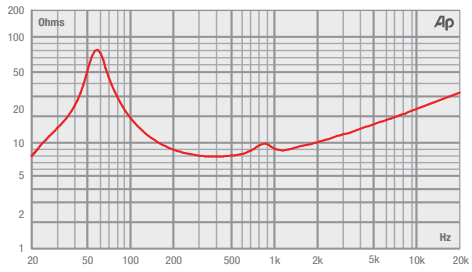
- 50 W (A.E.S.) Power Handling
- 1" Polyamid-imide coated, copper voice coil.
- Kevlar cone.
- Extended frequency response.
- Ideal for compact two-way and multiway systems.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 5" / 127 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 50 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 200 W (A.E.S.) |
| Usable Frequency Range -6dB | 65 Hz - 7 kHz |
| Sensitivity (1 w - 1 m) | 90.5 dB |
| Moving Mass inc. Air Load | 7.9 grams |
| Minimum Impedance Zmin | 7.7 Ω |
| Effective Piston Diameter | 4.20" / 106.68 mm |
| Magnet Weight | 18 oz / 0.51 Kg |
| Magnetic Gap Depth | 0.25" / 6.35 mm |
| Flux Density | 1.42 Tesla |
| Coil Winding Height | 0.31" / 8.00 mm |
| Voice Coil Diameter | 1.0" / 25.4 mm |

## THIELE SMALL PARAMETERS

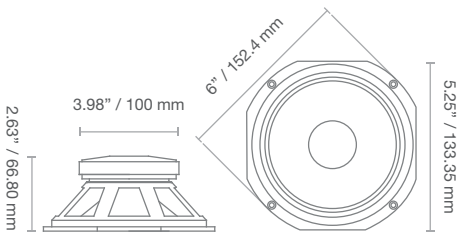
| | |
|---|---|
| FS Hz | 58 Hz |
| RE Ohms | 6.2 Ω |
| Qms | 7.500 |
| Qes | 0.380 |
| Qts | 0.360 |
| Vas Ltr | 10.90 Litres |
| Vd Litres | 0.022 Litres |
| CMS (mm/N) | 0.953 mm/N |
| BL T/m | 6.85 T/m |
| Mms (grms) | 7.9 grams |
| Xmax (mm) | 2.41 mm |
| Sd ($cm^2$) | 89.74 $cm^2$ |
| Efficiency % | 0.600% |
| Le (1k Hz) | 0.882 mH |
| EBP | 152.63 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 6" / 152.4 mm |
| Width Across Flats | 5.25" / 133.35 mm |
| Flange Height | 0.27" / 6.9 mm |
| Baffle Hole Diameter F/M | 4.63" / 117.60 mm |
| Baffle Hole Diameter R/M | 4.50" / 114.3 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 5.468" PCD / 4x Ø 5.5 mm on 138.8 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 2.63" / 66.80 mm |
| Weight | 3.10 lb / 1.37 kg |
| Recommended Enclosure Volume | 0.07 - 0.35 cu ft / 2 - 10 Litres |
| Shipping Weight | 3.10 lb / 1.37 kg |
| Packing Carton Dimensions | (W) 160 (D) 160 (H) 110 mm |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Resin Bonded Glass Fibre |
| Voice Coil | Polyamid-imide Coated Copper |
| Magnet Material | Ferrite |
| Chassis | Die-cast Aluminium |
| Cone | Kevlar |
| Surround / Edge Termination | Rubber Roll |
| Dust Dome | Linen |
| Connectors | 0.125" Tab / Solder |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# FC-185ND01

## SUB BASS DRIVER

| 18" / 457.2 mm | 1200 W (A.E.S.) | 30 Hz - 2 kHz | 5.0" / 127 mm | 98.5 dB | 12 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | COPPER VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Lightweight neodymium motor system.
- Aluminium core motor system heat sink for reduced power compression and regulation of voice coil temperature at optimal levels.
- Peak to Peak maximum excursion of 52mm.
- New 18-inch optimised, cast aluminium chassis design.
- Long driver excursion.
- High BL factor for controlled, fast, accurate low frequencies.
- Double spaced suspension system for increased linearity at high excursion.
- Suitable for bass reflex or horn loaded designs.

The FC-185ND01 is an efficient high power handling driver specially designed to provide powerful and accurate bass with low distortion and low power compression. The driver exhibits smooth tonal character combined with an ultra fast response time. The FC-185ND01 utilises an optimised fibre loaded cone assembly controlled by a fully optimised multi roll surround. The units spaced dual suspension configuration ensures excellent control during large excursions. A fully optimised motor structure built around a unique aluminum core ensures maximum flux yield from compact design and generates the minimum amount of flux modulation. The cast chassis base venting and large motor venting ensures efficient ventilation of the unit to keep power compression to a minimum.

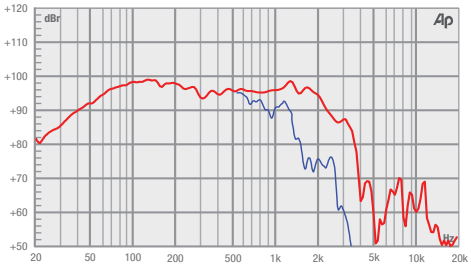
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 18" / 457.2 mm |
| Impedance | 8 Ohm |
| Power Handling | 1200 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 4800 W (A.E.S.) |
| Usable Frequency Range -6dB | 30 Hz - 2 kHz |
| Sensitivity (1 w - 1 m) | 98.5 dB |
| Moving Mass inc. Air Load | 220 grams |
| Minimum Impedance Zmin | 6.5 Ω |
| Effective Piston Diameter | 15.68" / 398.27 mm |
| Magnetic Gap Depth | 0.47" / 12.00 mm |
| Flux Density | 1.2 Tesla |
| Coil Winding Height | 1.10" / 28.00 mm |
| Voice Coil Diameter | 5.0" / 127 mm |

### THIELE SMALL PARAMETERS

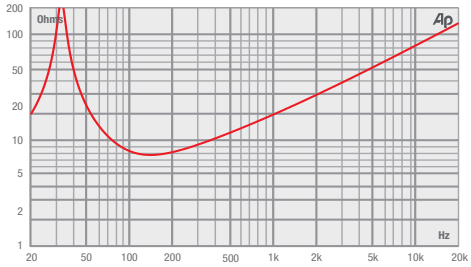
| | |
|---|---|
| FS Hz | 33 Hz |
| RE Ohms | 5.6 Ω |
| Qms | 17.700 |
| Qes | 0.300 |
| Qts | 0.295 |
| Vas Ltr | 203.00 Litres |
| Vd Litres | 1.350 Litres |
| CMS (mm/N) | 0.106 mm/N |
| BL T/m | 29.4 T/m |
| Mms (grms) | 220 grams |
| Xmax (mm) | 12 mm |
| Sd ($cm^2$) | 1164 $cm^2$ |
| Efficiency % | 2.4% |
| Le (1k Hz) | 2.76 mH |
| EBP | 110.00 Hz |

### FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

### IMPEDANCE

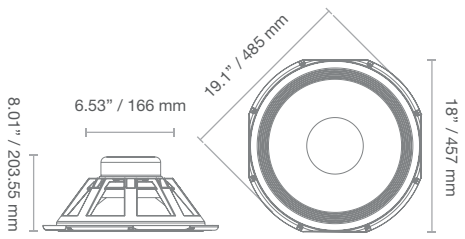



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 19.1" / 485 mm |
| Width Across Flats | 18" / 457 mm |
| Flange Height | 0.465" / 11.8 mm |
| Baffle Hole Diameter F/M | 16.53" / 419.86 mm |
| Baffle Hole Diameter R/M | 16.33" / 414.78 mm |
| Gasket Supplied | Front |
| Outer Fixing Holes | 8x Ø 0.275" on 18.425" PCD / 8x Ø 7 mm on 468 mm PCD |
| Inner Fixing Holes | 8x Ø 0.275" on 17.25" PCD / 8x Ø 7 mm on 438.15 mm PCD |
| Depth | 8.01" / 203.55 mm |
| Weight | 25.35 lb / 11.5 Kg |
| Recommended Enclosure Volume | 60 - 230 Litres |
| Shipping Weight | 25.50 lb / 11.57 kg |
| Packing Carton Dimensions | (W) 485 (D) 485 (H) 230 mm |

### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Neodymium |
| Chassis | Die-cast Aluminium |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 35 Hz and 350 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# COLOSSUS 18XBN

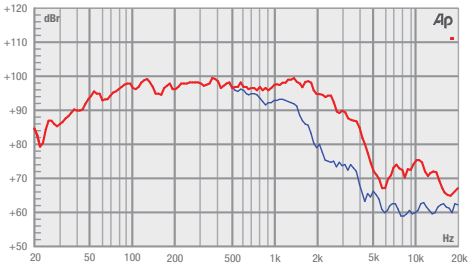
## SUB BASS DRIVER

| 7.5 mm Xmax | 99 dB | 4.0" / 101.6 mm | 35 Hz - 1 kHz | 1000 W (A.E.S.) | 18" / 457.2 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Colossus 18XBN is intended for use as a high output sub-bass driver either singly or in multi-way systems. The unit features a 4 inch 'sandwich' inside and outside windings voice coil, immersed in a symmetric magnetic field and centralized by using two suspensions in a dual arrangement to maintain ultra linearity and stability at high excursions. The heavily ribbed straight-sided paper cone membrane is reinforced with high-strength composite fibres to resist deformation under extreme loads. The driver handles 1000 Watts (A.E.S.) continuous and can cope with peaks in excess of 4000 Watts. This is due to advanced thermal management in the form of a vented die-cast chassis and motor system using an internal heat sink coupled to a large vaned heat sink mounted on the rear of the unit. These measures effectively remove heat from the voice coil resulting in extremely low-power compression. The Colossus 18XBN is designed for use in 100 to 250 Litre ported enclosures.

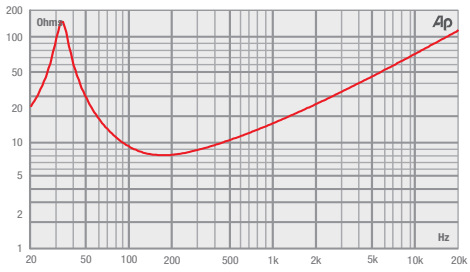
- Lightweight neodymium magnet assembly.
- Weighs only 7.95 kg.
- Ribbed, fibre loaded, UK manufactured cone offering increased strength, durability and performance.
- New advanced suspension materials offering superior mechanical and acoustic performance.

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE




## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 18" / 457.2 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 1000 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 4000 W (A.E.S.) |
| Usable Frequency Range -6dB | 35 Hz - 1 kHz |
| Sensitivity (1 w - 1 m) | 99 dB |
| Moving Mass inc. Air Load | 173 grams |
| Minimum Impedance Zmin | 7.9 Ω |
| Effective Piston Diameter | 15.03" / 381.76 mm |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.2 Tesla |
| Coil Winding Height | 0.90" / 23.00 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

## THIELE SMALL PARAMETERS

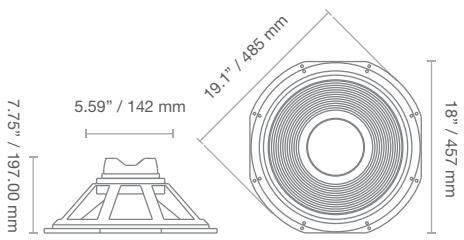
| | |
|---|---|
| FS Hz | 33 Hz |
| RE Ohms | 6.2 Ω |
| Qms | 5.770 |
| Qes | 0.358 |
| Qts | 0.337 |
| Vas Ltr | 236.00 Litres |
| Vd Litres | 0.803 Litres |
| CMS (mm/N) | 0.130 mm/N |
| BL T/m | 25.9 T/m |
| Mms (grms) | 173 grams |
| Xmax (mm) | 7.5 mm |
| Sd ($cm^2$) | 1131 $cm^2$ |
| Efficiency % | 2.300% |
| Le (1k Hz) | 1.99 mH |
| EBP | 92.18 Hz |

## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 19.1" / 485 mm |
| Width Across Flats | 18" / 457 mm |
| Flange Height | 0.465" / 11.8 mm |
| Baffle Hole Diameter F/M | 16.53" / 419.86 mm |
| Baffle Hole Diameter R/M | 16.33" / 414.78 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 0.275" on 18.425" PCD / 8x Ø 7 mm on 468 mm PCD |
| Inner Fixing Holes | 8x Ø 0.275" on 17.25" PCD / 8x Ø 7 mm on 438.15 mm PCD |
| Depth | 7.75" / 197.00 mm |
| Weight | 17.52 lb / 7.95 kg |
| Recommended Enclosure Volume | 3.53 - 8.82 cu ft / 100 - 250 Litres |
| Shipping Weight | 21.05 lb / 9.55 kg |
| Packing Carton Dimensions | (W) 485 (D) 485 (H) 230 mm |

## MATERIALS OF CONSTRUCTION

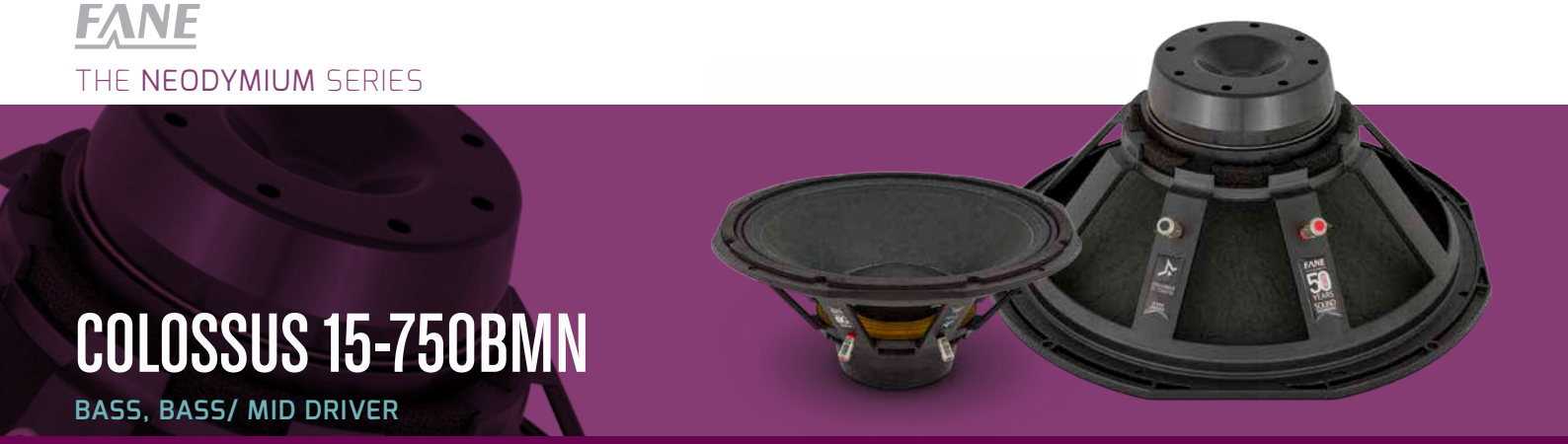
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Neodymium |
| Chassis | Die-cast Aluminium |
| Cone | Straight Polycellulose Ribbed Cone |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 30 Hz and 300 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*



# COLOSSUS 15-750BMN

## BASS, BASS/ MID DRIVER

| 15" / 381 mm | 750 W (A.E.S.) | 40 Hz - 3 kHz | 4.0" / 101.6 mm | 100 dB | 7.5 mm Xmax |
|---|---|---|---|---|---|
| CHASSIS DIAMETER | AES POWER HANDLING | FREQUENCY RESPONSE | COPPER - INSIDE/ OUTSIDE WINDINGS VOICE COIL | SENSITIVITY (1W/ 1m) | MAXIMUM LINEAR EXCURSION |

- Lightweight neodymium magnet assembly.
- Weighs only 6.8 kg.
- Tight accurate bass.
- Fibre loaded, UK manufactured cone offering increased strength, durability and performance.
- FEA optimised magnet assembly allowing high force factor and excursion capability.

The Colossus 15-750BMN is intended for use in high-power two-way ported enclosures and as a high output bass, bass/mid driver in multi-way systems. It features a 4 inch voice coil immersed in a symmetric magnetic field yielding increased linearity and lower distortion at high excursion levels. The cone membrane, manufactured from polycellulose, is much stronger and more durable than conventional paper pulp alternatives. This allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at high output levels. The driver handles 750 Watts (A.E.S) continuous and can cope with peaks in excess of 300 Watts. This is due to advanced thermal management in the form of vented die-cast chassis and motor system. The Colossus 15-750BMN exhibits an average sensitivity of 100 dB and can deliver bass down to 40 Hz (-6 dB) in a 125 Litre ported enclosure.

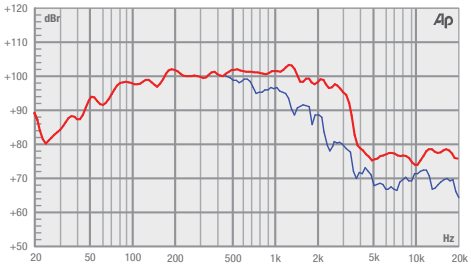
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 750 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 3000 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 3 kHz |
| Sensitivity (1 w - 1 m) | 100 dB |
| Moving Mass inc. Air Load | 109 grams |
| Minimum Impedance Zmin | 7.5 Ω |
| Effective Piston Diameter | 13.03" / 331.00 mm |
| Magnetic Gap Depth | 0.43" / 11.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.75" / 22.00 mm |
| Voice Coil Diameter | 4.0" / 101.6 mm |

### THIELE SMALL PARAMETERS

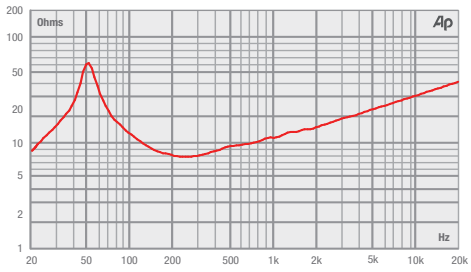
| | |
|---|---|
| FS Hz | 45 Hz |
| RE Ohms | 5.5 Ω |
| Qms | 3.970 |
| Qes | 0.290 |
| Qts | 0.270 |
| Vas Ltr | 127.00 Litres |
| Vd Litres | 0.650 Litres |
| CMS (mm/N) | 0.119 mm/N |
| BL T/m | 24.5 T/m |
| Mms (grms) | 109 grams |
| Xmax (mm) | 7.5 mm |
| Sd ($cm^2$) | 866 $cm^2$ |
| Efficiency % | 3.800% |
| Le (1k Hz) | 1.69 mH |
| EBP | 155.17 Hz |

### FREQUENCY RESPONSE DATA†




† Half space response measured in a 975 Litre sealed box.

### IMPEDANCE

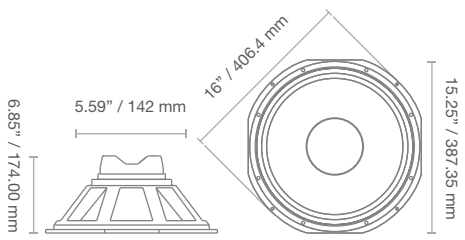



### MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 16" / 406.4 mm |
| Width Across Flats | 15.25" / 387.35 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 13.85" / 351.79 mm |
| Baffle Hole Diameter R/M | 14" / 355.6 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.281" on 15.5" PCD / 4x Ø 7.1 mm on 393.7 mm PCD |
| Inner Fixing Holes | 8x Ø 0.281" on 14.56" PCD / 8x Ø 7.1 mm on 370 mm PCD |
| Depth | 6.85" / 174.00 mm |
| Weight | 14.99 lb / 6.80 kg |
| Recommended Enclosure Volume | 2.47 - 4.41 cu ft / 70 - 125 Litres |
| Shipping Weight | 17.41 lb / 7.90 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 210 mm |

### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Neodymium |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Polycellulose |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* Please enquire about alternative impedances.

* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 40 Hz and 400 Hz. Driver mounted in free air, test signal applied at rated power for two hours.

* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# COLOSSUS 12MBN

## BASS/ MID RANGE DRIVER

| 5.5 mm Xmax | 98.5 dB | 3.0" / 76.2 mm | 40 Hz - 4 kHz | 500 W (A.E.S.) | 12" / 304.8 mm |
|---|---|---|---|---|---|
| MAXIMUM LINEAR EXCURSION | SENSITIVITY (1W/ 1m) | ALUMINIUM - INSIDE/ OUTSIDE WINDINGS VOICE COIL | FREQUENCY RESPONSE | AES POWER HANDLING | CHASSIS DIAMETER |

The Colossus 12MBN is intended for use as a very high output bass-mid driver in two-way ported enclosures and also as a bass driver in multi-way systems. The unit features a 3 inch 'sandwich' inside and outside windings voice coil driven by a Neodymium non inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane, manufactured from polycellulose, is much stronger and more durable than conventional paper pulp alternatives. This allows the driver to combine high sensitivity with the structural integrity required to produce undistorted low frequencies at high output levels. The mechanical and electrical properties of the unit have been carefully optimised to allow extended low frequency output up to its rated power handling of 500 Watts (A.E.S) continuous, with peak power handling in excess of 2000 Watts. The driver exhibits an average sensitivity of 98.5 dB and is best used in ported enclosures of 25 to 80 Litres.

- Lightweight neodymium magnet assembly.
- Weighs only 4.3 kg.
- Fast and dynamic driver producing punchy bass.
- Extended frequency range.
- Aluminium demodulation ring.
- Copper shorting Ring.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.
- Good for line array applications.

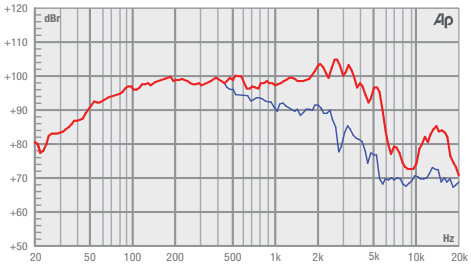
## ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 500 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2000 W (A.E.S.) |
| Usable Frequency Range -6dB | 40 Hz - 4 kHz |
| Sensitivity (1 w - 1 m) | 98.5 dB |
| Moving Mass inc. Air Load | 59 grams |
| Minimum Impedance Zmin | 7.5 Ω |
| Effective Piston Diameter | 10.24" / 260.09 mm |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.70" / 18.00 mm |
| Voice Coil Diameter | 3.0" / 76.2 mm |

## THIELE SMALL PARAMETERS

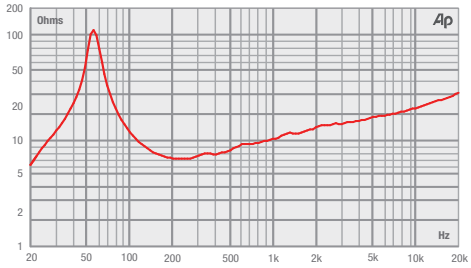
| | |
|---|---|
| FS Hz | 55 Hz |
| RE Ohms | 5.5 Ω |
| Qms | 4.130 |
| Qes | 0.438 |
| Qts | 0.396 |
| Vas Ltr | 56.00 Litres |
| Vd Litres | 0.296 Litres |
| CMS (mm/N) | 0.142 mm/N |
| BL T/m | 16.6 T/m |
| Mms (grms) | 59 grams |
| Xmax (mm) | 5.5 mm |
| Sd ($cm^2$) | 530 $cm^2$ |
| Efficiency % | 2.300% |
| Le (1k Hz) | 1.39 mH |
| EBP | 125.57 Hz |

## FREQUENCY RESPONSE DATA†




*† Half space response measured in a 975 Litre sealed box.*

## IMPEDANCE

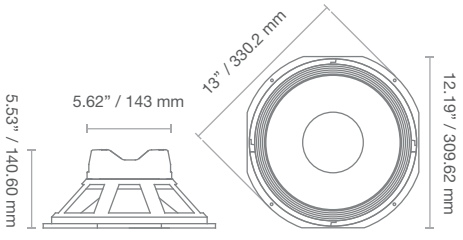



## MOUNTING / SHIPPING INFORMATION

| | |
|---|---|
| Overall Diameter | 13" / 330.2 mm |
| Width Across Flats | 12.19" / 309.62 mm |
| Flange Height | 0.305" / 7.8 mm |
| Baffle Hole Diameter F/M | 11.03" / 280.16 mm |
| Baffle Hole Diameter R/M | 10.13" / 257.30 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 0.218" on 12.5" PCD / 4x Ø 5.5 mm on 317.5 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.53" / 140.60 mm |
| Weight | 9.47 lb / 4.30 kg |
| Recommended Enclosure Volume | 0.88 - 2.83 cu ft / 25 - 80 Litres |
| Shipping Weight | 11.68 lb / 5.30 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

## MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Aluminium - Inside/ Outside Windings |
| Magnet Material | Neodymium |
| Chassis | Die-cast Aluminium |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Solid Paper |
| Connectors | Push-button Spring Terminals |
| Polarity | Positive voltage at red terminal causes forward motion of cone |




* *Please enquire about alternative impedances.*

* *A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.*

* *Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.*

# SOVEREIGN 15-600LF

## BASS DRIVER

- High power woofer with outstanding SPL output.
- For use in pro-sound applications.
- Ideally suited for medium to large vented enclosures.
- Great for ported bass enclosures.
- Optimised cone pulp offering increased strength, durability and performance.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15” / 381 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 600 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2400 W (A.E.S.) |
| Usable Fq. Range -6dB | 38 Hz - 3.5 kHz |
| Sensitivity (1 w - 1 m) | 98.5 dB |
| Moving Mass inc. Air Load | 82.39 grams |
| Minimum Impedance Zmin | 7 Ω |
| Effective Piston Diameter | 15.03” / 381.76 mm |
| Magnet Weight | 95 oz / 2.6 Kg |
| Magnetic Gap Depth | 0.39” / 10.00 mm |
| Flux Density | 0.97 Tesla |
| Coil Winding Height | 0.74” / 19.00 mm |
| Voice Coil Diameter | 3.0” / 76.2 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 37 Hz |
| RE Ohms | 5.4 Ω |
| Qms | 6.280 |
| Qes | 0.414 |
| Qts | 0.389 |
| Vas Ltr | 236.00 litres |
| Vd litres | 0.556 litres |
| CMS (mm/N) | 0.228 mm/N |
| BL T/m | 15.9 T/m |
| Mms (grms) | 81 grams |
| Xmax (mm) | 6.5 mm |
| Sd ($cm^2$) | 855 $cm^2$ |
| Efficiency % | 2.830% |
| Le (1k Hz) | 1.52 mH |
| EBP | 89.37 Hz |

### MOUNTING / SHIPPING INFO

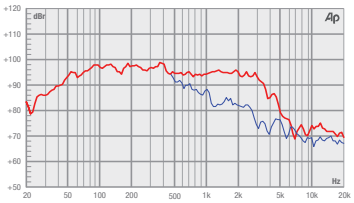
| | |
|---|---|
| Overall Diameter | 15” / 381 mm |
| Width Across Flats | N/A |
| Flange Height | 0.35” / 8.89 mm |
| Baffle Hole Diam. F/M | 13.85” / 351.79 mm |
| Baffle Hole Diam. R/M | 13.85” / 351.79 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 6.35 mm on 14.56” / 369.2 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 6.65” / 168.91 mm |
| Weight | 17.96 lb / 8.15 kg |
| Recommended Enclosure Volume | 1.76 - 4.41 cu ft / 50 - 125 Litres |
| Shipping Weight | 20.17 lb / 9.40 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 210 mm |

### MATERIALS OF CONSTRUCTION

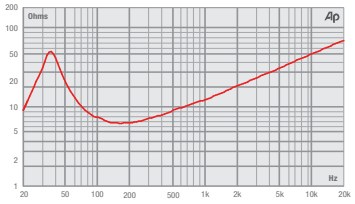
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Curvilinear Paper |

| | |
|---|---|
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Poly Cotton |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

FREQUENCY RESPONSE DATA†




IMPEDANCE




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 40 Hz and 400 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.



# SOVEREIGN 15-400

## BASS/ MID RANGE DRIVER

- High power driver designed for use in 2 way pro-sound applications.
- Ideally suited for small sealed floor wedges or medium sized vented boxes.
- Also suitable for monitors or bass guitar.
- Optimised cone pulp offering increased strength, durability and performance.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15” / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 400 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1600 W (A.E.S.) |
| Usable Fq. Range -6dB | 40 Hz - 4 kHz |
| Sensitivity (1 w - 1 m) | 98.5 dB |
| Moving Mass inc. Air Load | 70 grams |
| Minimum Impedance Zmin | 6.2 Ω |
| Effective Piston Diameter | 15.03” / 381.76 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39” / 9.90 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.62” / 15.74 mm |
| Voice Coil Diameter | 2.5” / 63.5 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 37 Hz |
| RE Ohms | 5.2 Ω |
| Qms | 6.500 |
| Qes | 0.320 |
| Qts | 0.305 |
| Vas Ltr | 210.00 litres |
| Vd litres | 0.450 litres |
| CMS (mm/N) | 0.202 mm/N |
| BL T/m | 17.6 T/m |
| Mms (grms) | 70 grams |
| Xmax (mm) | 5 mm |
| Sd ($cm^2$) | 855.3 $cm^2$ |
| Efficiency % | 3.210% |
| Le (1k Hz) | 1.60 mH |
| EBP | 115.63 Hz |

### MOUNTING / SHIPPING INFO

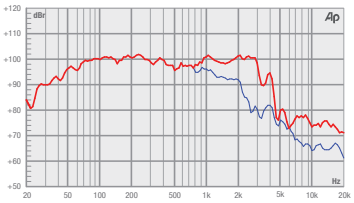
| | |
|---|---|
| Overall Diameter | 15” / 381 mm |
| Width Across Flats | N/A |
| Flange Height | 0.35” / 8.89 mm |
| Baffle Hole Diam. F/M | 13.85” / 351.79 mm |
| Baffle Hole Diam. R/M | 13.85” / 351.79 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 6.35 mm on 14.56” / 369.2 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 6.37” / 161.79 mm |
| Weight | 11.46 lb / 5.20 kg |
| Recommended Enclosure Volume | 2.11 - 4.41 cu ft / 60 - 125 Litres |
| Shipping Weight | 14.21 lb / 6.45 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 210 mm |

### MATERIALS OF CONSTRUCTION

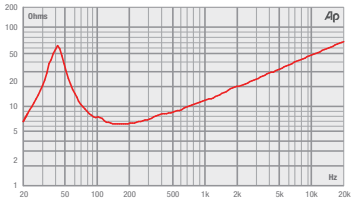
| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Curvilinear Paper |

| | |
|---|---|
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

FREQUENCY RESPONSE DATA†




IMPEDANCE




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# SOVEREIGN 15-400LF

## BASS DRIVER

- High power driver designed for 2 way pro-sound applications.
- Ideally suited for small sealed floor wedges or medium sized vented enclosures.
- Can be used for monitors or bass guitar applications.
- Optimised cone pulp offering increased strength, durability and performance.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 15" / 381 mm |
| Width Across Flats | N/A |
| Flange Height | 0.35" / 8.89 mm |
| Baffle Hole Diam. F/M | 13.85" / 351.79 mm |
| Baffle Hole Diam. R/M | 13.85" / 351.79 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 6.35 mm on 14.56" / 369.2 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 6.61" / 167.89 mm |
| Weight | 12.34 lb / 5.60 kg |
| Recommended Enclosure Volume | 2.11 - 4.41 cu ft / 60 - 125 Litres |
| Shipping Weight | 14.55 lb / 6.60 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 210 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 41 Hz |
| RE Ohms | 5.8 Ω |
| Qms | 7.600 |
| Qes | 0.620 |
| Qts | 0.570 |
| Vas Ltr | 210.00 litres |
| Vd litres | 0.516 litres |
| CMS (mm/N) | 0.202 mm/N |
| BL T/m | 13.52 T/m |
| Mms (grms) | 74.6 grams |
| Xmax (mm) | 4.6 mm |
| Sd (cm²) | 855.3 cm² |
| Efficiency % | 1.980% |
| Le (1k Hz) | 2.08 mH |
| EBP | 66.13 Hz |

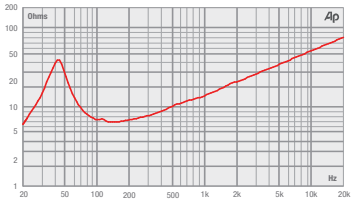
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 400 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1600 W (A.E.S.) |
| Usable Fq. Range -6dB | 40 Hz - 4 kHz |
| Sensitivity (1 w - 1 m) | 97 dB |
| Moving Mass inc. Air Load | 74.6 grams |
| Minimum Impedance Zmin | 7.2 Ω |
| Effective Piston Diameter | 15.03" / 381.76 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 0.97 Tesla |
| Coil Winding Height | 0.74" / 19.00 mm |
| Voice Coil Diameter | 2.5" / 63.5 mm |

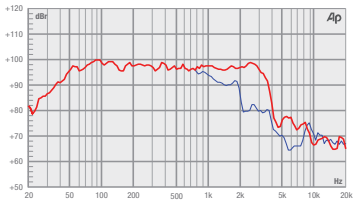
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

IMPEDANCE




FREQUENCY RESPONSE DATA†




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.



# FC-152F01TC

## FULL RANGE DRIVER

- Medium power 15" triple cone model.
- Unrivaled extended frequency range, working up to 15 kHz.
- Suited for full range output in compact PA systems.
- Ideal for house of worship installations.
- Optimised cone pulp offers increased strength, durability and performance.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 15" / 381 mm |
| Width Across Flats | N/A |
| Flange Height | 0.35" / 8.89 mm |
| Baffle Hole Diam. F/M | 13.85" / 351.79 mm |
| Baffle Hole Diam. R/M | 13.85" / 351.79 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 6.35 mm on 14.56" / 369.2 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 6.37" / 161.80 mm |
| Weight | 11.03 lb / 5.00 kg |
| Recommended Enclosure Volume | 75 Ltr Closed box / 80 Ltr Vented, tuned to 55 Hz |
| Shipping Weight | 13.60 lb / 6.17 kg |
| Packing Carton Dimensions | (W) 410 (D) 410 (H) 210 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 48 Hz |
| RE Ohms | 5.2 Ω |
| Qms | 9.892 |
| Qes | 0.753 |
| Qts | 0.700 |
| Vas Ltr | 203.00 litres |
| Vd litres | 0.290 litres |
| CMS (mm/N) | 0.196 mm/N |
| BL T/m | 11 T/m |
| Mms (grms) | 56 grams |
| Xmax (mm) | 3.5 mm |
| Sd (cm²) | 855 cm² |
| Efficiency % | 2.900% |
| Le (1k Hz) | 0.165 mH |
| EBP | 63.74 Hz |

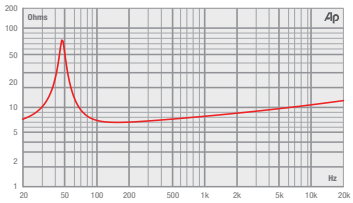
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 15" / 381 mm |
| Impedance | 8 Ohm |
| Power Handling | 300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1200 W (A.E.S.) |
| Usable Fq. Range -6dB | 50 Hz - 15 kHz |
| Sensitivity (1 w - 1 m) | 99 dB |
| Moving Mass inc. Air Load | 56 grams |
| Minimum Impedance Zmin | 7.2 Ω |
| Effective Piston Diameter | 15.03" / 381.76 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.32" / 8.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.37" / 9.40 mm |
| Voice Coil Diameter | 2.0" / 50.8 mm |

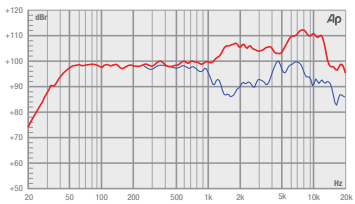
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Kapton |
| Voice Coil | Copper Clad Aluminium Wire |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Curvilinear Ribbed Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll Poly. Cotton |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

IMPEDANCE




FREQUENCY RESPONSE DATA†




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 55 Hz and 550 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# SOVEREIGN 12-500LF

## BASS DRIVER

- High power bass driver ideally suited for use in 2 way ported enclosures.
- Optimised cone pulp offering increased strength, durability and performance.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12” / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 500 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 2000 W (A.E.S.) |
| Usable Fq. Range -6dB | 38 Hz - 5 kHz |
| Sensitivity (1 w - 1 m) | 95 dB |
| Moving Mass inc. Air Load | 75 grams |
| Minimum Impedance Zmin | 7.4 Ω |
| Effective Piston Diameter | 10.67” / 271.01 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39” / 10.00 mm |
| Flux Density | 0.97 Tesla |
| Coil Winding Height | 0.74” / 19.00 mm |
| Voice Coil Diameter | 2.5” / 63.5 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 50 Hz |
| RE Ohms | 5.9 Ω |
| Qms | 7.500 |
| Qes | 0.530 |
| Qts | 0.510 |
| Vas Ltr | 66.00 litres |
| Vd litres | 0.298 litres |
| CMS (mm/N) | 0.140 mm/N |
| BL T/m | 16.37 T/m |
| Mms (grms) | 75 grams |
| Xmax (mm) | 5.5 mm |
| Sd (cm²) | 576.1 cm² |
| Efficiency % | 1.500% |
| Le (1k Hz) | 2.36 mH |
| EBP | 94.34 Hz |

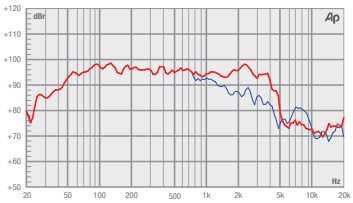
### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 12” / 304.8 mm |
| Width Across Flats | N/A |
| Flange Height | 0.27” / 6.9 mm |
| Baffle Hole Diam. F/M | 11.25” / 285.75 mm |
| Baffle Hole Diam. R/M | 11.25” / 285.75 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 7.0 mm on 11.75” / 298 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.69” / 144.52 mm |
| Weight | 11.02 lb / 5.00 kg |
| Recommended Enclosure Volume | 1.05 - 2.64 cu ft / 30 - 75 Litres |
| Shipping Weight | 12.89 lb / 5.85 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

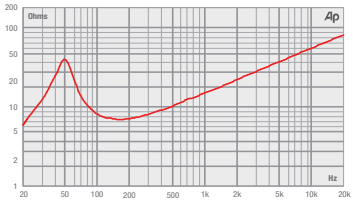
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Straight Polycellulose Ribbed Cone |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

FREQUENCY RESPONSE DATA†




IMPEDANCE




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 40 Hz and 400 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# SOVEREIGN 12-300

## BASS/ MID RANGE DRIVER

- Medium-power driver.
- For use as a bass/ mid woofer in medium sized vented enclosures or as a mid in small sealed designs.
- Optimised cone pulp offering increased strength, durability and performance.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12” / 304.8 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1200 W (A.E.S.) |
| Usable Fq. Range -6dB | 45 Hz - 4.5 kHz |
| Sensitivity (1 w - 1 m) | 97.5 dB |
| Moving Mass inc. Air Load | 43 grams |
| Minimum Impedance Zmin | 6.84 Ω |
| Effective Piston Diameter | 10.31” / 261.87 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39” / 10.00 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.70” / 18.00 mm |
| Voice Coil Diameter | 2.5” / 63.5 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 46 Hz |
| RE Ohms | 5.75 Ω |
| Qms | 5.200 |
| Qes | 0.375 |
| Qts | 0.350 |
| Vas Ltr | 110.00 litres |
| Vd litres | 0.240 litres |
| CMS (mm/N) | 0.278 mm/N |
| BL T/m | 14 T/m |
| Mms (grms) | 43 grams |
| Xmax (mm) | 4.5 mm |
| Sd (cm²) | 530 cm² |
| Efficiency % | 2.750% |
| Le (1k Hz) | 1.64 mH |
| EBP | 122.67 Hz |

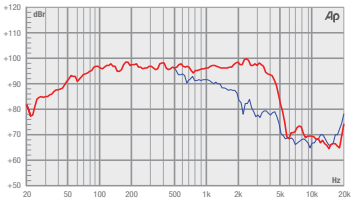
### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 12” / 304.8 mm |
| Width Across Flats | N/A |
| Flange Height | 0.27” / 6.9 mm |
| Baffle Hole Diam. F/M | 11.25” / 285.75 mm |
| Baffle Hole Diam. R/M | 11.25” / 285.75 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 7.0 mm on 11.75” / 298 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.43” / 137.92 mm |
| Weight | 11.02 lb / 5.00 kg |
| Recommended Enclosure Volume | 1.05 - 2.64 cu ft / 30 -75 Litres |
| Shipping Weight | 12.89 lb / 5.85 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

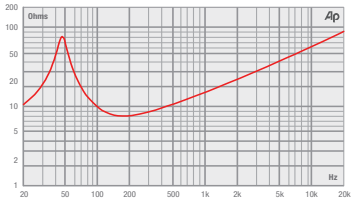
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

FREQUENCY RESPONSE DATA†




IMPEDANCE




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# SOVEREIGN 12-250TC

## FULL RANGE DRIVER

- Medium power 12" twin cone model.
- Suited for full range output in compact PA systems.
- Unrivalled extended frequency range, working up to 17 kHz.
- Ideal for house of worship installations.
- Optimised cone pulp offering increased strength, durability and performance.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 12" / 304.8 mm |
| Width Across Flats | N/A |
| Flange Height | 0.27" / 6.9 mm |
| Baffle Hole Diam. F/M | 11.25" / 285.75 mm |
| Baffle Hole Diam. R/M | 11.25" / 285.75 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 7.0 mm on 11.75" / 298 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 5.43" / 137.92 mm |
| Weight | 9.47 lb / 4.30 kg |
| Recommended Enclosure Volume | 1.05 - 2.64 cu ft / 30 -75 Litres |
| Shipping Weight | 11.35 lb / 5.15 kg |
| Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 50 Hz |
| RE Ohms | 7.2 Ω |
| Qms | 7.600 |
| Qes | 0.720 |
| Qts | 0.640 |
| Vas Ltr | 78.06 litres |
| Vd litres | 0.165 litres |
| CMS (mm/N) | 0.195 mm/N |
| BL T/m | 13 T/m |
| Mms (grms) | 52 grams |
| Xmax (mm) | 3.5 mm |
| Sd ($cm^2$) | 530.9 $cm^2$ |
| Efficiency % | 1.300% |
| Le (1k Hz) | 1.56 mH |
| EBP | 69.44 Hz |

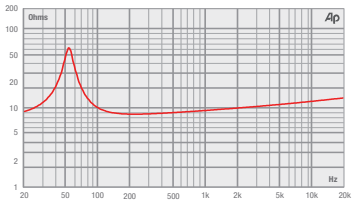
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 12" / 304.8 mm |
| Impedance | 8 Ohm |
| Power Handling | 250 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1000 W (A.E.S.) |
| Usable Fq. Range -6dB | 45 Hz - 17 kHz |
| Sensitivity (1 w - 1 m) | 100 dB |
| Moving Mass inc. Air Load | 52 grams |
| Minimum Impedance Zmin | 7.4 Ω |
| Effective Piston Diameter | 10.31" / 261.87 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.31" / 7.87 mm |
| Flux Density | 1.1 Tesla |
| Coil Winding Height | 0.43" / 10.92 mm |
| Voice Coil Diameter | 2.0" / 50.8 mm |

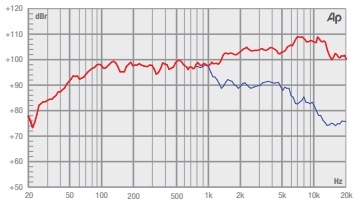
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper Clad Aluminium Wire |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

IMPEDANCE




FREQUENCY RESPONSE DATA†




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 50 Hz and 500 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.



# SOVEREIGN 10-300

## BASS/ MID RANGE DRIVER

- Intended for use in 2 way ported enclosures such as the classic bass driver plus horn tweeter or compression driver format.
- Exhibits a smooth frequency response.
- Designed for use in 15-40 Litre ported enclosures.
- Inside/ outside windings 2.5" voice coil.
- Optimised cone pulp offering increased strength, durability and performance.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 10.15" / 257.81 mm |
| Width Across Flats | N/A |
| Flange Height | 0.27" / 6.9 mm |
| Baffle Hole Diam. F/M | 9.21" / 233.93 mm |
| Baffle Hole Diam. R/M | 9.21" / 233.93 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 6.5 mm on 9.72" / 246.88 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 4.44" / 112.77 mm |
| Weight | 10.57 lb / 4.80 kg |
| Recommended Enclosure Volume | 0.88 - 1.76 cu ft / 25 - 50 Litres |
| Shipping Weight | 10.57 lb / 4.80 kg |
| Packing Carton Dimensions | (W) 275 (D) 275 (H) 150 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 58 Hz |
| RE Ohms | 5.7 Ω |
| Qms | 6.080 |
| Qes | 0.330 |
| Qts | 0.313 |
| Vas Ltr | 41.00 litres |
| Vd litres | 0.208 litres |
| CMS (mm/N) | 0.211 mm/N |
| BL T/m | 15.3 T/m |
| Mms (grms) | 37 grams |
| Xmax (mm) | 5.5 mm |
| Sd ($cm^2$) | 378 $cm^2$ |
| Efficiency % | 2.360% |
| Le (1k Hz) | 1.68 mH |
| EBP | 175.76 Hz |

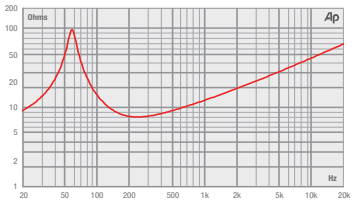
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 10" / 254 mm |
| Impedance | 4 Ohm / 8 Ohm / 16 Ohm |
| Power Handling | 300 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 1200 W (A.E.S.) |
| Usable Fq. Range -6dB | 45 Hz - 5 kHz |
| Sensitivity (1 w - 1 m) | 97.5 dB |
| Moving Mass inc. Air Load | 37 grams |
| Minimum Impedance Zmin | 6.8 Ω |
| Effective Piston Diameter | 8.46" / 214.88 mm |
| Magnet Weight | 56 oz / 1.58 Kg |
| Magnetic Gap Depth | 0.39" / 10.00 mm |
| Flux Density | 1 Tesla |
| Coil Winding Height | 0.70" / 18.00 mm |
| Voice Coil Diameter | 2.5" / 63.5 mm |

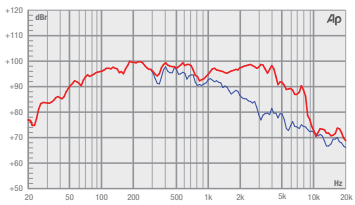
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper - Inside/ Outside Windings |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Curvilinear Paper |
| Surround / Edge Termination | Polyvinyl Damped Multi Roll. Poly Cotton |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

IMPEDANCE




FREQUENCY RESPONSE DATA†




† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 45 Hz and 450 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# SOVEREIGN 8-225

## BASS/ MID RANGE DRIVER

- High power driver ideal for use in pro-sound applications.
- Works well as a mid in small sealed boxes and as a mid/ bass driver in vented boxes.
- Optimised cone pulp offering increased strength, durability and performance.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 8” / 203.2 mm |
| Impedance | 8 Ohm |
| Power Handling | 225 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 900 W (A.E.S.) |
| Usable Fq. Range -6dB | 55 Hz - 5 kHz |
| Sensitivity (1 w - 1 m) | 97 dB |
| Moving Mass inc. Air Load | 20 grams |
| Minimum Impedance Zmin | 7.6 Ω |
| Effective Piston Diameter | 6.49” / 164.99 mm |
| Magnet Weight | 34 oz / 0.96 Kg |
| Magnetic Gap Depth | 0.31” / 7.87 mm |
| Flux Density | 1 Tesla |
| Coil Winding Height | 0.59” / 14.98 mm |
| Voice Coil Diameter | 2.0” / 50.8 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 62 Hz |
| RE Ohms | 6.1 Ω |
| Qms | 4.300 |
| Qes | 0.420 |
| Qts | 0.380 |
| Vas Ltr | 22.00 litres |
| Vd litres | 0.085 litres |
| CMS (mm/N) | 0.340 mm/N |
| BL T/m | 11 T/m |
| Mms (grms) | 20.69 grams |
| Xmax (mm) | 5.5 mm |
| Sd ($cm^2$) | 213 $cm^2$ |
| Efficiency % | 1.250% |
| Le (1k Hz) | 1.47 mH |
| EBP | 147.62 Hz |

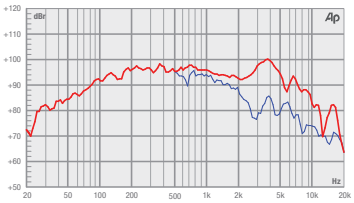
### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 8.18” / 207.77 mm |
| Width Across Flats | N/A |
| Flange Height | 0.27” / 6.9 mm |
| Baffle Hole Diam. F/M | 7.24” / 183.89 mm |
| Baffle Hole Diam. R/M | 7.24” / 183.89 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 8x Ø 5.5 mm on 7.79” / 197.8 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 3.74” / 94.99 mm |
| Weight | 6.06 lb / 2.75 kg |
| Recommended Enclosure Volume | 0.70 - 1.23 cu ft / 20 - 35 Litres |
| Shipping Weight | 6.94 lb / 3.15 kg |
| Packing Carton Dimensions | (W) 235 (D) 235 (H) 130 mm |

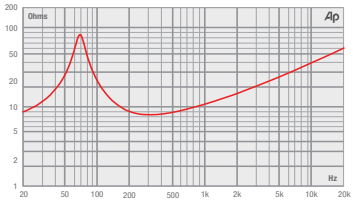
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

FREQUENCY RESPONSE DATA†



IMPEDANCE



† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave with cutoff frequencies of 60 Hz and 600 Hz. Driver mounted in free air, test signal applied at rated power for two hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# SOVEREIGN 6-100

## BASS/ MID RANGE DRIVER

- Medium-power driver ideal for use in pro-sound applications.
- Works well as a mid range driver in a small sealed box or as a mid/ bass driver in vented boxes.
- Optimised cone pulp offering increased strength, durability and performance.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Nominal Chassis Diameter | 6” / 152.4 mm |
| Impedance | 8 Ohm |
| Power Handling | 100 W (A.E.S.) |
| Peak Power (6dB Crest Factor) | 400 W (A.E.S.) |
| Usable Fq. Range -6dB | 60 Hz - 7 kHz |
| Sensitivity (1 w - 1 m) | 93 dB |
| Moving Mass inc. Air Load | 23.94 grams |
| Minimum Impedance Zmin | 7 Ω |
| Effective Piston Diameter | 5.15” / 130.81 mm |
| Magnet Weight | 20 oz / 0.56 Kg |
| Magnetic Gap Depth | 0.23” / 6.00 mm |
| Flux Density | 1 Tesla |
| Coil Winding Height | 0.39” / 10.00 mm |
| Voice Coil Diameter | 1.5” / 38.1 mm |

### THEILE SMALL PARAMETERS

| | |
|---|---|
| FS Hz | 115 Hz |
| RE Ohms | 6.9 Ω |
| Qms | 12.800 |
| Qes | 0.670 |
| Qts | 0.640 |
| Vas Ltr | 2.20 litres |
| Vd litres | 0.032 litres |
| CMS (mm/N) | 0.080 mm/N |
| BL T/m | 13.25 T/m |
| Mms (grms) | 23.94 grams |
| Xmax (mm) | 2.5 mm |
| Sd ($cm^2$) | 139.2 $cm^2$ |
| Efficiency % | 0.500% |
| Le (1k Hz) | 1.15 mH |
| EBP | 171.64 Hz |

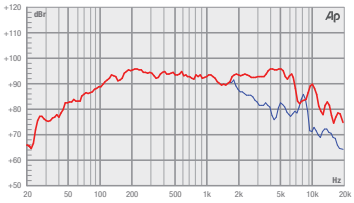
### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 6.5” / 165.1 mm |
| Width Across Flats | N/A |
| Flange Height | 0.27” / 6.9 mm |
| Baffle Hole Diam. F/M | 5.78” / 146.81 mm |
| Baffle Hole Diam. R/M | 5.78” / 146.81 mm |
| Gasket Supplied | Front & Rear |
| Outer Fixing Holes | 4x Ø 5.9 mm on 6.14” / 155.96 mm PCD |
| Inner Fixing Holes | N/A |
| Depth | 2.20” / 55.88 mm |
| Weight | 3.63 lb / 1.65 kg |
| Recommended Enclosure Volume | 0.35 - 0.70 cu ft / 10 - 20 Litres |
| Shipping Weight | 4.29 lb / 1.95 kg |
| Packing Carton Dimensions | (W) 205 (D) 205 (H) 135 mm |

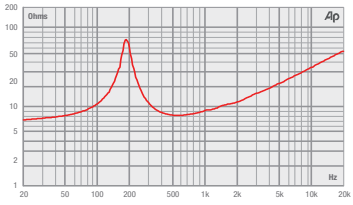
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Glass Fibre |
| Voice Coil | Copper |
| Magnet Material | Ferrite |
| Chassis | Pressed Steel |
| Cone | Paper |
| Surround / Edge Termination | Polyvinyl Damped Dbl. Half Roll Linen |
| Dust Dome | Paper |
| Connectors | Solder Tag |
| Polarity | Positive voltage at red terminal causes forward motion of cone |

FREQUENCY RESPONSE DATA†



IMPEDANCE



† Half space response measured in a 975 Litre sealed box.

* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 12 dB per octave. Driver mounted in free air, test signal applied at rated power for 2 hours.
* Please note that the frequency response measurements are supplied for comparison only and are not a measure of the low frequency performance which may be achieved in a fully optimised system.

# CD-140

## COMPRESSION DRIVER

- 1" Exit ferrite magnet compression driver.
- 1.75" / 43 mm Copper clad aluminium voice coil.
- Titanium diaphragm with double sinusoidal roll surround (titanium).
- 40 Wrms (AES standard).
- Copper inductance ring for extended response.
- Ferrofluid cooled.
- Self aligning diaphragm for easy field replacement.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 4" / 102 mm |
| Depth | 1.97" / 51 mm |
| Weight | 3.4 lb / 1.54 kg |
| Shipping Weight | 3.6 lb / 1.64 kg |
| Packing Carton Dimensions | (W) 95 (D) 95 (H) 71 mm |
| Bolt Fixing Hole Dimensions and Qty. | 3x M6 on 57.15 mm PCD / 2x M6 on 76.2 mm PCD |

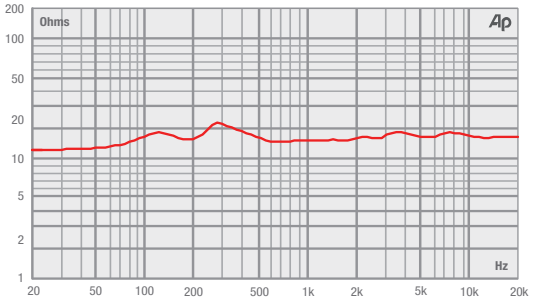
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Polyamide |
| Voice Coil Material | Aluminium |
| Diaphragm Material | Titanium |
| Surround / Edge Termination | Double Sinusoidal Roll Titanium |
| Magnet Material | Ferrite |
| Connectors | 6.3 mm Spade |
| Polarity | Positive voltage at red/ positive terminal causes positive pressure at throat exit. |

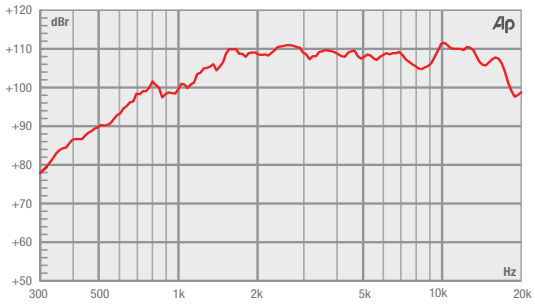
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Sound Channel / Throat Size | 1" / 25.4 mm |
| Impedance | 8 Ohm / 16 Ohm |
| Power Handling | 40 W (A.E.S.) |
| Sensitivity (1 w - 1 m) | 105 dB |
| Usable Frequency Range | 2 kHz - 18 kHz |
| Rec. X-over Frequency Filtered at 18dB/ Octave | 3.5 kHz |
| Effective Diaphragm Diameter | 1.75" / 44 mm |
| Voice Coil Diameter | 1.75" / 44 mm |
| Voice Coil DC Resistance | 6.2 /10.5 Ω |
| Max Diaphragm Displacement | 0.016" / 0.4 mm |
| Flux Density | 1.35 Tesla |
| Magnet Weight | 16 oz / 0.45 Kg |

### IMPEDANCE




### FREQUENCY RESPONSE DATA†




* *Please enquire about alternative impedances.*
* *Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 80° x 60° coverage.*



# CD-140S

## COMPRESSION DRIVER

- 1" exit ferrite magnet compression driver with screw fitting.
- 1.75" / 43 mm Copper clad aluminium voice coil.
- Titanium diaphragm with double sinusoidal roll surround (titanium).
- 40 Wrms (AES standard).
- Copper inductance ring for extended response.
- Ferrofluid cooled.
- Self aligning diaphragm for easy field replacement.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 4" / 102 mm |
| Depth | 1.97" / 51 mm |
| Weight | 3.4 lb / 1.54 kg |
| Shipping Weight | 3.6 lb / 1.64 kg |
| Packing Carton Dimensions | (W) 95 (D) 95 (H) 71 mm |
| Bolt Fixing Hole Dimensions and Qty. | Screw Fit |

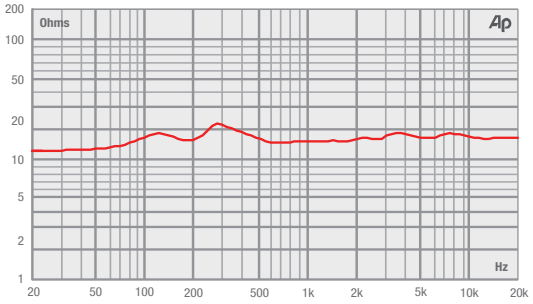
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Polyamide |
| Voice Coil Material | Aluminium |
| Diaphragm Material | Titanium |
| Surround / Edge Termination | Double Sinusoidal Roll Titanium |
| Magnet Material | Ferrite |
| Connectors | 6.3 mm Spade |
| Polarity | Positive voltage at red/ positive terminal causes positive pressure at throat exit. |

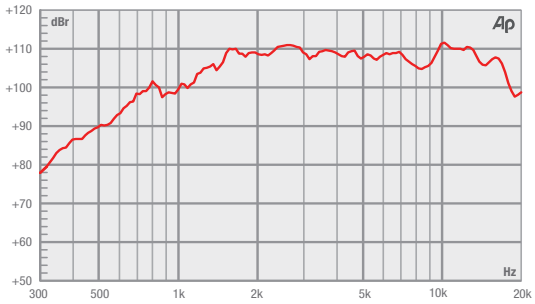
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Sound Channel / Throat Size | 1" / 25.4 mm |
| Impedance | 8 Ohm / 16 Ohm |
| Power Handling | 40 W (A.E.S.) |
| Sensitivity (1 w - 1 m) | 105 dB |
| Usable Frequency Range | 2 kHz - 18 kHz |
| Rec. X-over Frequency Filtered at 18dB/ Octave | 3.5 kHz |
| Effective Diaphragm Diameter | 1.75" / 44 mm |
| Voice Coil Diameter | 1.75" / 44 mm |
| Voice Coil DC Resistance | 6.2 / 10.5 Ω |
| Max Diaphragm Displacement | 0.032" / 0.8 mm |
| Flux Density | 1.35 Tesla |
| Magnet Weight | 16 oz / 0.45 Kg |

### IMPEDANCE




### FREQUENCY RESPONSE DATA†




* *Please enquire about alternative impedances.*
* *Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 80° x 60° coverage.*

# CD-131

## COMPRESSION DRIVER

- 1" Industry standard exit.
- 1.375" / 34.4 mm Aluminium voice coil.
- Titanium Diaphragm.
- 30 W (AES).

The CD-131 is a 1 inch (25.4mm) small format diaphragm compression driver.

The 1 inch (25.4mm) exit is an industry standard. The CD131 combines high BL and a very lightweight diaphragm assembly, producing high output that offers extended bandwidth and a well defined frequency response to 18 kHz.

The driver has a rated low frequency response limit of 2 kHz and has a smooth response throughout its bandwidth.

The CD131 features an industry standard bolt on mounting system that is ideally matched to commercially available bolt on horns.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Sound Channel / Throat Size | 1" / 25.4 mm |
| Impedance | 8 Ohm |
| Power Handling | 30 W (A.E.S.) |
| Sensitivity (1 w - 1 m) | 106 dB |
| Usable Frequency Range | 2 kHz - 18 kHz |
| Rec. X-over Frequency Filtered at 18dB/ Octave | above 2 kHz |
| Effective Diaphragm Diameter | 1.33" / 34mm |
| Voice Coil Diameter | 1.375" / 34.4 mm |
| Voice Coil DC Resistance | 6.43 Ω |
| Max Diaphragm Displacement | 0.011" / 0.3 mm |
| Flux Density | 1.25 Tesla |

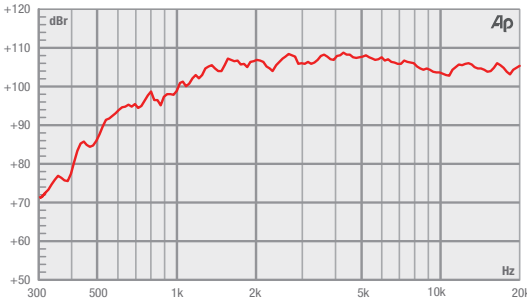
### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 3.54" / 90 mm |
| Depth | 1.73" / 44 mm |
| Weight | 2 lb / 0.91 kg |
| Shipping Weight | 2.16 lb / 0.98 kg |
| Packing Carton Dimensions | (W) 95 (D) 95 (H) 71 mm |
| Bolt Fixing Hole Dimensions and Qty. | 4x M6 on 76.2 mm / 3" PCD |

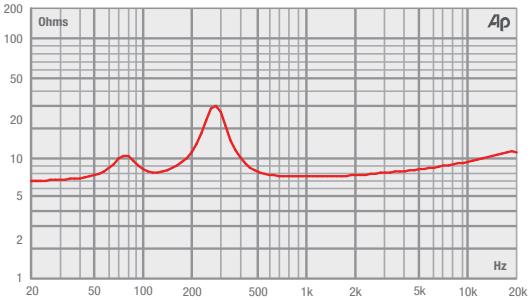
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Polyamide |
| Voice Coil Material | Aluminium |
| Diaphragm Material | Titanium |
| Surround / Edge Termination | Double Sinusoidal Roll Titanium |
| Magnet Material | Ferrite |
| Connectors | Push Button Spring Terminals |
| Polarity | Positive voltage at red/ positive terminal causes positive pressure at throat exit. |

### FREQUENCY RESPONSE DATA†




### IMPEDANCE




* Please enquire about alternative impedances.
* Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 90° x 40° coverage.



# CD-130

## COMPRESSION DRIVER

- 1" Industry standard exit.
- 1.375" / 34.4 mm Aluminium voice coil.
- Titanium diaphragm.
- 30 W (AES).
- Screw fit mounting.

The CD-130 is a 1 inch (25.4mm) small format diaphragm compression driver.

The 1 inch (25.4mm) exit is an industry standard. The CD130 combines high BL and a very lightweight diaphragm assembly, producing high output that offers extended bandwidth and well defined frequency response to 18 kHz.

The driver has a rated low frequency response limit of 2 kHz and has a smooth response throughout its bandwidth.

The CD130 features an industry standard screw fit mounting system that is ideally matched to commercially available female screw thread horns.

### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Sound Channel / Throat Size | 1" / 25.4 mm |
| Impedance | 8 Ohm |
| Power Handling | 30 W (A.E.S.) |
| Sensitivity (1 w - 1 m) | 106 dB |
| Usable Frequency Range | 2 kHz - 18 kHz |
| Rec. X-over Frequency Filtered at 18dB/ Octave | above 2 kHz |
| Effective Diaphragm Diameter | 1.33" / 34mm |
| Voice Coil Diameter | 1.375" / 34.4 mm |
| Voice Coil DC Resistance | 6.43 Ω |
| Max Diaphragm Displacement | 0.011" / 0.3 mm |
| Flux Density | 1.25 Tesla |

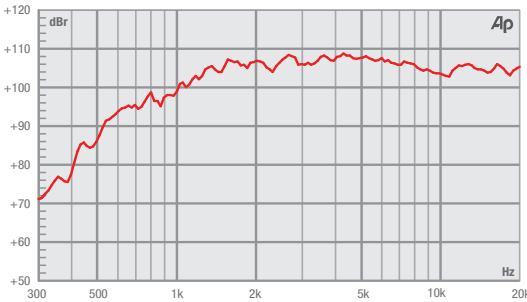
### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 3.54" / 90 mm |
| Depth | 1.73" / 44 mm |
| Weight | 2 lb / 0.91 kg |
| Shipping Weight | 2.16 lb / 0.98 kg |
| Packing Carton Dimensions | (W) 95 (D) 95 (H) 71 mm |
| Bolt Fixing Hole Dimensions and Qty. | Screw Fit |

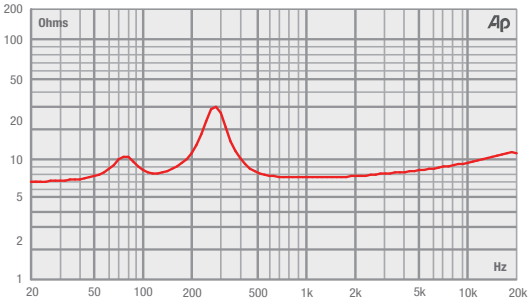
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Polyamide |
| Voice Coil Material | Aluminium |
| Diaphragm Material | Titanium |
| Surround / Edge Termination | Double Sinusoidal Roll Titanium |
| Magnet Material | Ferrite |
| Connectors | Push Button Spring Terminals |
| Polarity | Positive voltage at red/ positive terminal causes positive pressure at throat exit |

### FREQUENCY RESPONSE DATA†




### IMPEDANCE




* Please enquire about alternative impedances.
* Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 90° x 40° coverage.

# CD-1544N-P

## COMPRESSION DRIVER

- 1" Exit neodymium magnet compression driver.
- 1.75" / 44 mm Copper clad aluminium voice coil.
- P.A.R diaphragm with flat surround (PAR).
- 50 Wrms (AES standard).
- Copper inductance ring for extended response.
- Ferrofluid cooled.
- Self aligning diaphragm for easy field replacement.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 4.17" / 106 mm |
| Depth | 2.16" / 55 mm |
| Weight | 3.52 lb / 1.6 kg |
| Shipping Weight | 3.6 lb / 1.64 kg |
| Packing Carton Dimensions | (W) 120 (D) 120 (H) 71 mm |
| Bolt Fixing Hole Dimensions and Qty. | 2x M6 on 76.2 mm / 3" PCD |

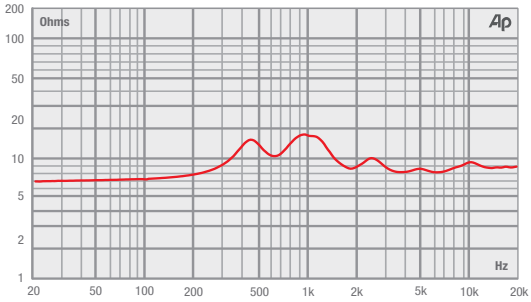
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Sound Channel / Throat Size | 1" / 25.4 mm |
| Impedance | 8 Ohm/ 16 Ohm |
| Power Handling | 50 W (A.E.S.) |
| Sensitivity (1 w - 1 m) | 105 dB |
| Usable Frequency Range | 2 kHz - 18 kHz |
| Rec. X-over Frequency Filtered at 18dB/ Octave | 2.5 kHz |
| Effective Diaphragm Diameter | 1.75" / 44 mm |
| Voice Coil Diameter | 1.75" / 44 mm |
| Voice Coil DC Resistance | 6.2 Ω |
| Max Diaphragm Displacement | 0.016" / 0.4 mm |
| Flux Density | 1.4 Tesla |

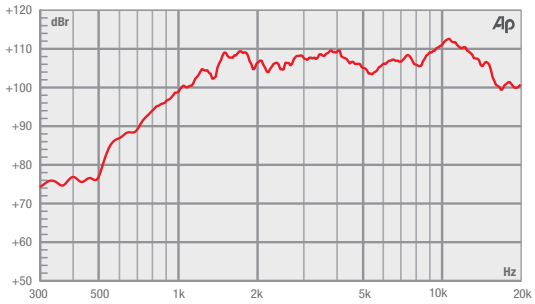
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Polyamide |
| Voice Coil Material | Aluminium |
| Diaphragm Material | P.A.R |
| Surround / Edge Termination | Flat Membrane |
| Magnet Material | Neodymium |
| Connectors | 6.3 mm Spade |
| Polarity | Positive voltage at red/ positive terminal causes positive pressure at throat exit. |

### IMPEDANCE




### FREQUENCY RESPONSE DATA*




* *Please enquire about alternative impedances.*
* *Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 80° x 60°coverage.*



# CD-150

## COMPRESSION DRIVER

- 1" Exit ferrite magnet compression driver.
- 1.75" / 43 mm copper clad aluminium voice coil.
- Titanium diaphragm with double sinusoidal roll surround (titanium).
- 50 Wrms (AES standard).
- Copper inductance ring for extended response.
- Ferrofluid cooled.
- Also available for OEMs with an aluminium diaphragm option.

### MOUNTING / SHIPPING INFO

| | |
|---|---|
| Overall Diameter | 5.27" / 133.85 mm |
| Depth | 2.48" / 63 mm |
| Weight | 6.5 lb / 2.97 kg |
| Shipping Weight | 6.8 lb / 3.1 kg |
| Packing Carton Dimensions | (W) 160 (D) 180 (H) 150 mm |
| Bolt Fixing Hole Dimensions and Qty. | 3x M6 on 57.15 mm PCD / 2x M6 on 76.2 mm PCD |

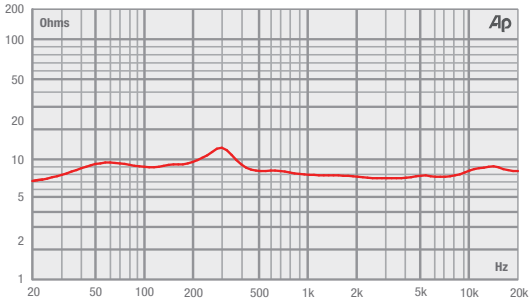
### ELECTRO ACOUSTIC SPECIFICATIONS

| | |
|---|---|
| Sound Channel / Throat Size | 1" / 25.4 mm |
| Impedance | 8 Ohm/ 16 Ohm |
| Power Handling | 50 W (A.E.S.) |
| Sensitivity (1 w - 1 m) | 106 dB |
| Usable Frequency Range | 2 kHz - 18 kHz |
| Rec. X-over Frequency Filtered at 18dB/ Octave | 3.5 kHz |
| Effective Diaphragm Diameter | 1.75" / 44 mm |
| Voice Coil Diameter | 1.75" / 44 mm |
| Voice Coil DC Resistance | 6.2 / 10.5 Ω |
| Max Diaphragm Displacement | 0.016" / 0.4 mm |
| Flux Density | 1.65 Tesla |
| Magnet Weight | 39 oz / 1.10 Kg |

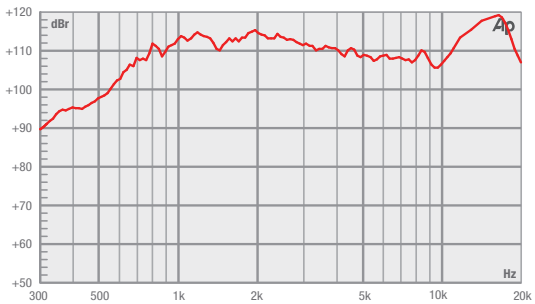
### MATERIALS OF CONSTRUCTION

| | |
|---|---|
| Former Material | Polyamide |
| Voice Coil Material | Aluminium |
| Diaphragm Material | Titanium |
| Surround / Edge Termination | Double Sinusoidal Roll Titanium |
| Magnet Material | Ferrite |
| Connectors | 4.8 mm Spade |
| Polarity | Positive voltage at red/ positive terminal causes positive pressure at throat exit. |

### IMPEDANCE




### FREQUENCY RESPONSE DATA*




* *Please enquire about alternative impedances.*
* *Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 90° x 40° coverage.*


FIND OUT MORE ONLINE
WWW.FANE-INTERNATIONAL.COM

FANE INTERNATIONAL LIMITED
Sovereign House | Gilcar Way | Wakefield Europort | Castleford | WF10 5QS | United Kingdom
Tel: +44 (0)1924 224618 | Email: info@fane-international.com

http://www.facebook.com/FANEGB http://twitter.com/FANE_INT_LTD

© 2017. Fane International Ltd.
Fane International Ltd operates a policy of continuous product development and reserves the right to change specification at any time without notice.
Any specifications or product images in this document are correct at the time of publication.

220517