ABOUT FANE

Established in 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.

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.

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.

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.
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.

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 affect 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 world's 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.
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 NEOXYMIUM 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.
<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIZE</th>
<th>POWER RATING</th>
<th>MAGNET MATERIAL</th>
<th>VOICE COIL DIAMETER</th>
<th>FREQUENCY RANGE</th>
<th>SPL</th>
<th>FS</th>
<th>XMAX</th>
<th>PAGE</th>
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<tbody>
<tr>
<td>FC-185F01</td>
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<td>900 W (A.E.S.)</td>
<td>Ferrite</td>
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<td>Ferrite Y35</td>
<td>4.0&quot; / 101.6 mm</td>
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<td>500 W (A.E.S.)</td>
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<td>2.5&quot; / 63.5 mm</td>
<td>40 Hz - 3 kHz</td>
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<tr>
<td>SOVEREIGN PRO 8BM</td>
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<td>250 W (A.E.S.)</td>
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### The Neodymium Series

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<th>Model</th>
<th>Size</th>
<th>Power Rating</th>
<th>Magnet Material</th>
<th>Voice Coil Diameter</th>
<th>Frequency Range</th>
<th>SPL</th>
<th>Fs</th>
<th>Xmax</th>
<th>Page</th>
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<tbody>
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### The Sovereign Series

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<th>Model</th>
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<th>Voice Coil Diameter</th>
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<th>SPL</th>
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<td>37 Hz</td>
<td>5 mm</td>
<td>47</td>
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<tr>
<td>SOVEREIGN 15-400LF</td>
<td>15” / 381 mm</td>
<td>400 W (A.E.S.)</td>
<td>Ferrite</td>
<td>2.5” / 63.5 mm</td>
<td>40 Hz - 4 kHz</td>
<td>97 dB</td>
<td>41 Hz</td>
<td>4.6 mm</td>
<td>47</td>
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<tr>
<td>SOVEREIGN 12-500LF</td>
<td>12” / 304.8 mm</td>
<td>500 W (A.E.S.)</td>
<td>Ferrite</td>
<td>2.5” / 63.5 mm</td>
<td>38 Hz - 5 kHz</td>
<td>95 dB</td>
<td>50 Hz</td>
<td>5.5 mm</td>
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<tr>
<td>SOVEREIGN 12-300</td>
<td>12” / 304.8 mm</td>
<td>300 W (A.E.S.)</td>
<td>Ferrite</td>
<td>2.5” / 63.5 mm</td>
<td>45 Hz - 4.5 kHz</td>
<td>97.5 dB</td>
<td>46 Hz</td>
<td>4.5 mm</td>
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<tr>
<td>SOVEREIGN 12-250TC</td>
<td>12” / 304.8 mm</td>
<td>250 W (A.E.S.)</td>
<td>Ferrite</td>
<td>2.0” / 50.8 mm</td>
<td>45 Hz - 17 kHz</td>
<td>100 dB</td>
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<td>3.5 mm</td>
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<td>SOVEREIGN 10-300</td>
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<td>SOVEREIGN 10-125</td>
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<td>96 dB</td>
<td>55 Hz</td>
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<td>50</td>
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<td>8” / 203.2 mm</td>
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<td>Ferrite</td>
<td>2.0” / 50.8 mm</td>
<td>55 Hz - 5 kHz</td>
<td>97 dB</td>
<td>62 Hz</td>
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<tr>
<td>SOVEREIGN 8-125</td>
<td>8” / 203.2 mm</td>
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<td>Ferrite</td>
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<td>93 dB</td>
<td>115 Hz</td>
<td>2.5 mm</td>
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### High Frequency Devices

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<td>Neodymium</td>
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<td>CD-140S</td>
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<td>40 W (A.E.S.)</td>
<td>Ferrite</td>
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<td>Ferrite</td>
<td>1.75” / 44 mm</td>
<td>2 kHz - 18 kHz</td>
<td>106 dB</td>
<td>Aluminium</td>
<td>Titanium</td>
<td>55</td>
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</tbody>
</table>
The FC-185F01 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-185F01 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.

### Electro-Acoustic Specifications

- **Nominal Chassis Diameter:** 18”/ 457.2 mm
- **Impedance:** 8 Ohm
- **Power Handling:** 900 W (A.E.S.)
- **Peak Power (6dB Crest Factor):** 3600 W (A.E.S.)
- **Usable Frequency Range (–6dB):** 30 Hz - 2 kHz
- **Sensitivity:** 96 dB
- **Moving Mass inc. Air Load:** 220 grams
- **Effective Piston Diameter:** 10.5 mm
- **Magnet Weight:** 105.8 oz
- **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 Litr:** 1.190 Litres
- **CMS (mm/N):** 1134 cm²
- **Efficiency %:** 1.65 %
- **Le (1kHz):** 2.90 mH
- **EBP:** 64.29 Hz

### 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 Domes:** Paper
- **Connectors:** Push-button Spring Terminals
- **Polarity:** Positive voltage at red terminal causes forward motion of cone

### 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

### FREQUENCY RESPONSE DATA†

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

- **Input Impedance:**
  - 200 Ohms
  - 100 Ohms
  - 50 Ohms
  - 20 Ohms
  - 10 Ohms
  - 5 Ohms
  - 2 Ohms
  - 1 Ohm

- **Frequency:**
  - 20 Hz
  - 50 Hz
  - 100 Hz
  - 200 Hz
  - 500 Hz
  - 1 kHz
  - 2 kHz
  - 5 kHz
  - 10 kHz
  - 20 kHz

- **Phase Response:**
  - 0°
  - 60°
  - 120°
  - 180°

### Impedance

- **Input Impedance:**
  - 200 Ohms
  - 100 Ohms
  - 50 Ohms
  - 20 Ohms
  - 10 Ohms
  - 5 Ohms
  - 2 Ohms
  - 1 Ohm

- **Frequency:**
  - 20 Hz
  - 50 Hz
  - 100 Hz
  - 200 Hz
  - 500 Hz
  - 1 kHz
  - 2 kHz
  - 5 kHz
  - 10 kHz
  - 20 kHz
The Colossus 18XLS features a 4-inch, inside / outside windings, copper voice coil and is intended for use as a high output bass driver in multi-way systems. The coil is immersed in a symmetric magnetic field that yields increased linearity and lower distortion. This, coupled with laminated silicone suspensions, a large Xmax of 12.5 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. Thanks to advanced thermal management the vented die-cast chassis and increased motor system venting effectively remove heat from the voice coil, resulting in extremely low-power compression. The driver handles 1200 Watts (A.E.S.) continuous coping with peaks in excess of 4800 Watts, exhibiting 97 dB sensitivity over its working band.

**ELECTRO ACOUSTIC SPECIFICATIONS**

- **Nominal Chassis Diameter**: 18" / 457.2 mm
- **Impedance**: 8 Ohm
- **Power Handling**: 1200 W (A.E.S.)
- **Usable Frequency Range -6dB**: 28 Hz - 500 Hz
- **Sensitivity (1 w - 1 m)**: 97 dB
- **Moving Mass inc. Air Load**: 209 grams
- **Maximum Impedance Zmax**: 7.44 Ω
- **Effective Piston Diameter**: 15.43" / 391.92 mm
- **Magnet Weight**: 165.78 oz
- **Magnetic Gap Depth**: 0.47" / 12.00 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 Hz
- **RE Ohms**: 5.2 Ω
- **Qms**: 0.420
- **Qts**: 0.400
- **Vas Litres**: 187.00 Litres
- **Vd Litres**: 1.560 Litres
- **CMS (mm/N)**: 0.090 mm/N
- **BL T/m**: 24.5 T/m
- **Mms (grms)**: 209 grams
- **Xmax (mm)**: 12.5 mm
- **Le (1k Hz)**: 1.50 mH
- **EBP**: 85.71 Hz

**MOUNTING / SHIPPING INFORMATION**

- **Overall Diameter**: 19.1" / 485.14 mm
- **Width Across Flats**: 18" / 457.2 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 7 mm on 468 mm PCD
- **Inner Fixing Holes**: 8x Ø 7 mm on 438.15 mm PCD
- **Depth**: 8.66" / 220.00 mm
- **Weight**: 36.95 lb / 16.76 kg
- **Recommended Enclosure Volume**: 125 - 210 Litres
- **Shipping Weight**: 39.80 lb / 18.05 kg
- **Packaging Carton Dimensions**: (W) 512 (D) [512 (H)] 244 mm

**FREQUENCY RESPONSE DATA**

**IMPEEDANCE**
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
- Minimum Impedance Zmin: 6.5 Ω
- Effective Piston Diameter: 15.43" / 391.92 mm
- Magnet Weight: 145 oz
- 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
- Qts: 0.385
- Vas Ltr: 257.00 Litres
- Vd Ltr: 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 (cm²): 1210 cm²
- Efficiency %: 2.200%
- Le (1k Hz): 1.50 mH
- EBP: 81.68 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 16.425" PCD / 8x Ø 0.275" on 468 mm PCD
- Inner Fixing Holes: 8x Ø 0.275" on 17.25" PCD / 8x Ø 0.275" 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

**FREQUENCY RESPONSE DATA**

$$F = 20 \log_{10} f$$

$$A_p = 20 \log_{10} A$$

**IMPEDEANCE**

$$E = \frac{V}{I}$$

$$P = \frac{V^2}{R}$$

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* 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.
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.

**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
- **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

**MOUNTING / SHIPPING INFORMATION**

- **Overall Diameter**: 19.1" / 485 mm
- **Width Across Flats**: 18" / 457 mm
- **Flange Height**: 0.465" / 11.8 mm
- **Battle Hole Diameter F/M**: 16.53" / 419.86 mm
- **Battle 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 0.275" on 468 mm PCD
- **Inner Fixing Holes**: 8x Ø 0.275" on 17.25" PCD / 8x Ø 0.275" on 438.15 mm PCD
- **Depth**: 7.91" / 201.00 mm
- **Weight**: 27.60 lb / 12.51 kg
- **Recommended Enclosure Volume**: 126 - 400 Litres
- **Shipping Weight**: 28.90 lb / 13.10 kg
- **Packing Carton Dimensions (W) (D) (H)**: 485 (485) (230) mm
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 symmetrical 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.

### 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**: 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
- **Magnet Weight**: 120 oz
- **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)**: 1131 cm2
- **Efficiency %**: 2.300%
- **Le (1kHz)**: 1.99 mH
- **EBP**: 92.18 Hz

### 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
- **Dust Dome**: 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

### 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 16.425” PCD / 8x Ø 7 mm on 466 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

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* 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

- 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.

**ELECTRO ACOUSTIC SPECIFICATIONS**

- Nominal Chassis Diameter: 15" / 381 mm
- Impedance: 4 Ohms / 8 Ohms / 16 Ohm
- Power Handling: 1000 W (A.E.S.)
- Peak Power (8dB Crest Factor): 4000 W (A.E.S.)
- Usable Frequency Range: 30 Hz - 500 Hz
- Sensitivity (1 W - 1 m): 98 dB
- Moving Mass Inc. Air Load: 133 grams
- Minimum Impedance 2m/s: 6.84 Ω
- Effective Piston Diameter: 15.43" / 391.92 mm
- Magnet Weight: 145 oz
- 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

**MOUNTING / SHIPPING INFORMATION**

- Overall Diameter: 16" / 406.4 mm
- Width Across Flats: 15.25" / 387.4 mm
- Flange Height: 0.305" / 7.8 mm
- Battle Hole Diameter F/M: 13.85" / 351.79 mm
- Battle Hole Diameter R/M: 14" / 355.6 mm
- Gasket Supplied: Front & Rear
- Outer Fixing Holes: 4 x Ø 0.281" on 15.5" PCD / 4 x Ø 7.1 mm on 393.7 mm PCD
- Inner Fixing Holes: 8 x Ø 0.281" on 14.56" PCD / 8 x 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

**THIELE SMALL PARAMETERS**

- FS Hz: 36.3 Hz
- RE Ohms: 5.2 Ω
- Qms: 7.700
- Qes: 0.320
- 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 (cm²): 855 cm²
- Efficiency %: 2.140%
- Le (1k Hz): 1.93 mH
- EBP: 113.44 Hz

**FREQUENCY RESPONSE DATA**

- 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 poly cellulose, 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.

**IMPEDEANCE**

* 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.
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.

- 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.

**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**: 40 Hz - 3 kHz
- **Sensitivity (1 w - 1 m)**: 99 dB
- **Moving Mass inc. Air Load**: 10 grams
- **Effective Piston Diameter**: 13.00” / 330.20 mm
- **Magnet Weight**: 120 oz
- **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**: 5.4Ω
- **Qms**: 6.850
- **Qts**: 0.290
- **Qes**: 0.300
- **Us Ltr**: 151.00 Litres
- **Vd Ltrs**: 0.560 Litres
- **Cms (mm/N)**: 0.142 mm/N
- **Le (1k Hz)**: 2.15 mH
- **EBP**: 136.67 Hz

**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

**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 1.1 mm on 393.7 mm PCD
- **Inner Fixing Holes**: 8x Ø 1.1 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

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**FREQUENCY RESPONSE DATA**

- **FREQUENCY RESPONSE DATA T**

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

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**Impedance**

- **Impedance**: 8 Ohm

---

**Recommended Enclosure Volume**

- **Volume**: 75 - 125 Litres
- **Shipping Weight**: 25.50 lb / 11.57 kg
- **Packing Carton Dimensions**: (W) 440 (D) 440 (H) 220 mm
**THE PROFESSIONAL SERIES**

**COLOSSUS 15XB**

SUB BASS DRIVER

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

**ELECTRO ACOUSTIC SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>15” / 381 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>4 Ohm / 8 Ohm / 16 Ohm</td>
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<tr>
<td>Power Handling</td>
<td>800 W (A.E.S.)</td>
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<td>Peak Power (6dB Crest Factor)</td>
<td>3200 W (A.E.S.)</td>
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<td>Usable Frequency Range -6dB</td>
<td>40 Hz - 1 kHz</td>
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<tr>
<td>Sensitivity (1 W - 1 m)</td>
<td>99 dB</td>
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<tr>
<td>Moving Mass Inc. Air Load</td>
<td>108 grams</td>
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<tr>
<td>Minimum Impedance Zmin</td>
<td>7.5 Ω</td>
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<tr>
<td>Effective Piston Diameter</td>
<td>13.03” / 330.96 mm</td>
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<td>Magnet Weight</td>
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<td>Magnetic Gap Depth</td>
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<td>Flux Density</td>
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<td>Coil Winding Height</td>
<td>0.90” / 22.86 mm</td>
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<td>Voice Coil Diameter</td>
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**THEILE SMALL PARAMETERS**

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<tr>
<th>Parameter</th>
<th>Value</th>
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<td>FS Hz</td>
<td>38 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>6.2 Ω</td>
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<tr>
<td>Qms</td>
<td>7.480</td>
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<tr>
<td>Qes</td>
<td>0.336</td>
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<tr>
<td>Qts</td>
<td>0.320</td>
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<tr>
<td>Vas Ltr</td>
<td>168.00 Litres</td>
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<tr>
<td>Vd Litres</td>
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<tr>
<td>CMS (mm/N)</td>
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<tr>
<td>BL T/m</td>
<td>22.08 T/m</td>
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<tr>
<td>Mms (grms)</td>
<td>108 grams</td>
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<tr>
<td>Xmax (mm)</td>
<td>7.5 mm</td>
</tr>
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<td>Sd (cm²)</td>
<td>855.3 cm²</td>
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<tr>
<td>Efficiency %</td>
<td>2.100%</td>
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<tr>
<td>Le (1k Hz)</td>
<td>1.50 mH</td>
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<tr>
<td>EBP</td>
<td>113.10 Hz</td>
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**MOUNTING / SHIPPING INFORMATION**

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

**FREQUENCY RESPONSE DATA†**

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

**IMPEDANCE**

- 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.

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.) continuously 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.
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.

- 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.

**FREQUENCY RESPONSE DATA**

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

**IMPEDEANCE**

**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: 38 Hz - 3.5 kHz
- Sensitivity (1 w - 1 m): 98 dB
- Moving Mass inc. Air Load: 89 grams
- Minimum Impedance: 2.2 Ohm
- Effective Piston Diameter: 13.03” / 330.96 mm
- Magnet Weight: 85 oz
- 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

**MOUNTING / SHIPPING INFORMATION**

- Overall Diameter: 16” / 406.4 mm
- Width Across Flats: 15.25” / 387.35 mm
- Flange Height: 0.30” / 7.62 mm
- Battle Hole Diameter F/M: 13.85” / 351.79 mm
- Battle 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 270 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

**THIELE SMALL PARAMETERS**

- FS Hz: 38 Hz
- RE Ohms: 5.4 Ω
- Qms: 3.520
- 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 (cm²): 850 cm²
- Efficiency %: 2.760%
- Le (1kHz): 1.95 mH
- EBP: 97.44 Hz

**THE PROFESSIONAL SERIES**

**SOVEREIGN PRO 15-600**

**SUB BASS DRIVER**
SOVEREIGN PRO 15-600LF
BASS DRIVER

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

- 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.

**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
- Magnetic Gap Depth: 0.39” / 10.00 mm
- Flux Density: 1.1 Tesla
- 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

**THEILE SMALL PARAMETERS**

- FS Hz: 40 Hz
- RE Ohms: 6.5 Ω
- Qms: 8.800
- Qts: 0.380
- 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 (gms): 89 grams
- Xmax (mm): 6.9 mm
- Sd (cm²): 856 cm²
- Le (1k Hz): 1.85 mH
- Efficiency %: 3.050%
- 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

**FREQUENCY RESPONSE DATA**

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

**IMPEDANCE**

- Impedance Curve

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.
The Sovereign Pro 15-500 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 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 15-500 is designed for use in 75 to 150 Litre ported enclosures. The unit features a 3-inch voice coil with a power handling of 500 Watts and an average sensitivity of 99dB.

- Highly versatile in 2-way ported enclosures.
- High SPL producing fast and punchy bass.
- Smooth extended frequency response.
- High linearity suspension.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.

### Electro Acoustic Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>15” / 381 mm</td>
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<tr>
<td>Impedance</td>
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<td>Power Handling</td>
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<td>Peak Power (6dB Crest Factor)</td>
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<td>Usable Frequency Range -6dB</td>
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<td>Sensitivity (1 w - 1 m)</td>
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<td>Moving Mass inc. Air Load</td>
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<td>Minimum Impedance Zmin</td>
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<tr>
<td>Effective Piston Diameter</td>
<td>13.03” / 330.96 mm</td>
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<td>Magnet Weight</td>
<td>80 oz</td>
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<td>Magnetic Gap Depth</td>
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<td>Flux Density</td>
<td>1 Tesla</td>
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<td>Coil Winding Height</td>
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<td>Voice Coil Diameter</td>
<td>3.0” / 76.2 mm</td>
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### Thiele Small Parameters

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<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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<tbody>
<tr>
<td>FS Hz</td>
<td>40 Hz</td>
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<tr>
<td>RE Ohms</td>
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<td>Qms</td>
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<td>Qts</td>
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<td>Le (1k Hz)</td>
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<tr>
<td>EBP</td>
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### 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: 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.
**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.

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**Electro Acoustic Specifications**

<table>
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**E (V/W) vs Frequency (Hz)**

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

**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 Ltr 0.650 Litres
- CMS (mm/N) 0.212 mm/N
- BL T/m 18 T/m
- Mms (gms) 74 gms
- Xmax (mm) 7.5 mm
- Sd (cm²) 855 cm²
- Efficiency ½ 4.420%
- Le (1kHz) 1.42 mH
- EBP 125.00 Hz

**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 Liner
- Dust Dome: Paper
- Connectors: Push-button Spring Terminals
- Polarity: Positive voltage at red terminal causes forward motion of cone

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**Mounting / Shipping Information**

- Overall Diameter: 16" / 406.4 mm
- Width Across Flats: 15.25" / 387.35 mm
- Flange Height: 0.350" / 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

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* Please enquire about alternative impedances.
* A.E.S. power handling test. Pink noise bandpass filtered at 32 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.
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.**

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**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
- **Effective Piston Diameter**: 10.31" / 261.87 mm
- **Magnet Weight**: 91.71 oz
- **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
- **Qts**: 0.365
- **Qes**: 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 (cm²)**: 530 cm²
- **Efficiency %**: 2.700%
- **Le (1k HZ)**: 1.17 mH
- **EBP**: 139.73 Hz

**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

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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 12BM
SUB BASS DRIVER

- Suitable for horn loaded / bandpass applications producing warm, punchy bass.
- Ideal for two way ported enclosures when combined with Fane high frequency devices.
- Strong rigid cone allowing undistorted bass at high SPL.
- Single roll rubber surround.

The Sovereign Pro 12BM is intended for use in two-way ported enclosures. The driver combined with Fane compression driver and horn offers excellent tonal character throughout its active bandwidth. 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. The Sovereign Pro 12BM is designed for use in 35 to 60 Litre ported enclosures and features a 3 inch voice coil, 500 Watt power handling and 96 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: 40 Hz - 3.5 kHz
- Sensitivity (1 w - 1 m): 95 dB
- Moving Mass inc. Air Load: 86 grams
- Minimum Impedance Zmin: 7.3 Ω
- Effective Piston Diameter: 10.00” / 254.00 mm
- Magnet Weight: 88 oz
- Magnetic Gap Depth: 0.39” / 9.91 mm
- Flux Density: 1.15 Tesla
- Coil Winding Height: 0.73” / 18.54 mm
- Voice Coil Diameter: 3.0” / 76.2 mm

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
- Outer Fixing Holes: 4x Ø 5.5 mm on 317.5 mm PCD
- Inner Fixing Holes: N/A
- Depth: 5.79” / 147.07 mm
- Weight: 19.18 lb / 8.70 kg
- Recommended Enclosure Volume: 30 - 60 Litres
- Shipping Weight: 20.90 lb / 9.48 kg
- Packing Carton Dimensions: (W) 330 (D) 330 (H) 170 mm

THIELE SMALL PARAMETERS

- FS Hz: 41 Hz
- Re Ohms: 3.4 Ω
- Qms: 1.902
- Qes: 0.231
- Qts: 0.206
- Vas Ltrs: 65.33 Litres
- Vd Ltrs: 0.393 Litres
- CMS (mm/N): 0.175 mm/N
- BL T/m: 18 T/m
- Mms (grms): 85 grams
- Xmax (mm): 7.7 mm
- Sd (cm²): 510.6 cm²
- Efficiency %: 1.870%
- Le (1k Hz): 1.89 mH
- EBP: 177.49 Hz

FREQUENCY RESPONSE DATA

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

IMPEDEANCE
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.

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

**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
- 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

**MOUNTING / SHIPPING INFORMATION**

- Overall Diameter: 13” / 330.2 mm
- Width Across Flats: 12.19” / 309.62 mm
- Flange Height: 0.305” / 7.8 mm
- Battle Hole Diameter F/M: 11.03” / 280.16 mm
- Battle 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: 6.56” / 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

**THEILE 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 (cm²): 530 cm²
- Efficiency %: 2.400%
- Le (1k Hz): 2.26 mH
- EBP: 136.55 Hz

**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

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* 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.
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.

### Material Constructions
- **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

### 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
- **Effective Piston Diameter**: 10.24” / 260.09 mm
- **Magnetic Gap Depth**: 0.35” / 9.00 mm
- **Sd (cm²)**: 530 cm²
- **Efficiency %**: 2.71%
- **Le (1k Hz)**: 1.56 mH
- **EBP**: 165.17 Hz
- **Leq (1k Hz)**: 1.35 mH
- **Xmax (mm)**: 5.5 mm
- **Sd (cm²)**: 530 cm²
- **Xmax (mm)**: 5.5 mm
- **Sd (cm²)**: 530 cm²

### 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

### Frequency Response Data
- **Half space response measured in a 975 Litre sealed box.**

### Impedance
- 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.
The Colossus 12XB is intended for use in compact bass cabinet or horn loaded applications. The driver can also be used in two-way ported enclosures combined with Fane compression driver and horn offering excellent coverage with clear detailed reproduction. The unit features die-cast chassis with long throw motor system and high linearity suspension allowing fast solid bass reproduction at high-power levels.

- Suitable for horn loaded / bandpass applications producing hard hitting, punchy bass.
- Exceptional efficiency, power handling and frequency coverage from compact design.
- Rugged die-cast chassis.
- UK manufactured cone offers increased strength, durability and performance.
- Extended usable frequency.

**FREQUENCY RESPONSE DATA†**

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

**IMPEDANCE**

**MOUNTING / SHIPPING INFORMATION**

- Overall Diameter 8.9" / 226 mm
- Width Across Flats 8.25" / 209.5 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 5.71" / 145.00 mm
- Weight 17.00 lb / 7.71 kg
- Recommended Enclosure Volume 25 - 65 Litres
- Shipping Weight 19.00 lb / 8.62 kg
- Packing Carton Dimensions (W) 330 (D) 330 (H) 170 mm

**ELECTRO ACOUSTIC SPECIFICATIONS**

- Nominal Chassis Diameter 12" / 304.8 mm
- Impedance 4 Ohm / 8 Ohm / 16 Ohm
- Power Handling 500 W (A.E.S.)
- Peak Power (6dB Crest Factor) 2000 W (A.E.S.)
- Usable Frequency Range -6dB 45 Hz - 1 kHz
- Sensitivity (1 w - 1 m) 97 dB
- Moving Mass inc. Air Load 70.8 grams
- Minimum Impedance Zmin 6.24 Ω
- Effective Piston Diameter 10.24" / 260.00 mm
- Magnet Weight 105.82 oz
- Magnetic Gap Depth 0.32" / 8.00 mm
- Flux Density 1.1 Tesla
- Coil Winding Height 0.98" / 25.00 mm
- Voice Coil Diameter 3.0" / 76.2 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

**THEILE SMALL PARAMETERS**

- FS Hz 43 Hz
- RE Ohms 5.2 Ω
- Qms 5.810
- Qes 0.254
- Qts 0.244
- Vas Ltr 78.00 Litres
- Vd Litres 0.560 Litres
- CMS (mm/N) 0.196 mm/N
- BL T/m 20 T/m
- Mem (gms) 70.8 grams
- Xmax (mm) 10.5 mm
- Sd (cm²) 531.6 cm²
- Efficiency % 2.316%
- Le (1k Hz) 2.49 mH
- EBP 169.29 Hz

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.

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SOVEREIGN PRO 12-500
BASS DRIVER

- 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
Magnetic Gap Depth 0.39" / 10.00 mm
Flux Density 1.1 Tesla
Voice Coil Diameter 3.0" / 76.2 mm

**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 8 x 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

**THIELE SMALL PARAMETERS**

FS Hz 43 Hz
RE Ohms 5.6 Ω
Qms 3.040
Qts 0.314
Vas Litres 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 (cm²) 565 cm²
Efficiency % 2.340%
Le (1k Hz) 1.60 mH
EBP 122.86 Hz

**IMPEDANCE**

- 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.

**FREQUENCY RESPONSE DATA**

† Half space response measured in a 975 Litre sealed box.
The Colossus 12BM 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 bespoke paper pulp 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 450 Watts (A.E.S) continuous, with peak power handling in excess of 1800 Watts. The driver exhibits an average sensitivity of 98 dB and is best used in ported enclosures of 25 to 80 Litres.

- Non inductive motor system reduces distortion.
- Fast dynamic response combined with superior suspension material.
- High BL, 21 T/m.
- UK manufactured cone with optimised 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**: 450 W (A.E.S.)
- **Peak Power**: 1800 W (A.E.S.)
- **Frequency Range**: 40 Hz - 3.5 kHz
- **Sensitivity**: 98 dB
- **Moving Mass**: 65 grams
- **Magnet Weight**: 93 oz
- **Effective Piston Diameter**: 10.24” / 260.09 mm
- **Flux Density**: 1.16 Tesla
- **Voice Coil Diameter**: 3.0” / 76.2 mm

**Thiele Small Parameters**

- **FS Hz**: 43 Hz
- **RE Ohms**: 5.4 Ω
- **Qms**: 5.100
- **Qts**: 0.210
- **Vas Litres**: 89.00 Litres
- **Vd Litres**: 0.330 Litres
- **Sd (cm²)**: 550 cm²
- **Efficiency %**: 3.100%
- **Le (1kHz)**: 2.10 mH
- **EBP**: 195.45 Hz

**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
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.

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.

### 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
- **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

### 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

### 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)**: 540 cm²
- **Efficiency %**: 2.890%
- **Le (1k Hz)**: 1.64 mH
- **EBP**: 122.67 Hz

### 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

### Frequency Response Data
† Half space response measured in a 975 Litre sealed box.

### Impedance

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* 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.
The Sovereign Pro 12-300S 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 12-300S is designed for use in 25 to 80 L horrified enclosures and features a 2.5 inch voice coil, 300 Watt power handling and 97.5 dB sensitivity.

**FREQUENCY RESPONSE DATA**

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Response (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>+120</td>
</tr>
<tr>
<td>50</td>
<td>+110</td>
</tr>
<tr>
<td>100</td>
<td>+100</td>
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<tr>
<td>200</td>
<td>+90</td>
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<tr>
<td>10k</td>
<td>+40</td>
</tr>
<tr>
<td>20k</td>
<td>+30</td>
</tr>
</tbody>
</table>

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

**IMPEDANCE**

<table>
<thead>
<tr>
<th>Impedance (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
</tr>
</tbody>
</table>

**ELECTRO ACOUSTIC SPECIFICATIONS**

- **Nominal Chassis Diameter**: 12” / 304.8 mm
- **Impedance**: 8 Ohm
- **Power Handling**: 300 W (A.E.S.)
- **Peak Power (6dB Crest Factor)**: 1200 W (A.E.S.)
- **Usable Frequency Range**: 45 Hz - 2.5 kHz
- **Sensitivity (1 W - 1 m)**: 97.5 dB
- **Moving Mass inc. Air Load**: 60.68 grams
- **Effective Piston Diameter**: 10.31” / 261.87 mm
- **Magnet Weight**: 56 oz
- **Magnetic Gap Depth**: 0.31” / 7.87 mm
- **Flux Density**: 1.1 Tesla
- **Coil Winding Height**: 0.57” / 14.47 mm
- **Voice Coil Diameter**: 2.5” / 63.5 mm

**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**: 5.31” / 135.00 mm
- **Weight**: 10.25 lb / 4.65 kg
- **Recommended Enclosure Volume**: 0.88 - 2.83 cu ft / 25 - 80 Litres
- **Shipping Weight**: 11.46 lb / 5.20 kg
- **Packing Carton Dimensions**: (W) 330 (D) 330 (H) 170 mm

**THIELE SMALL PARAMETERS**

- **F.S Hz**: 40 Hz
- **RE Ohms**: 5.5 Ω
- **Qms**: 11.680
- **Qts**: 0.330
- **Qes**: 0.320
- **Vas Lit**: 101.26 Litres
- **Vd Litres**: 0.270 Litres
- **CMS (mm/N)**: 0.256 mm/N
- **BL T/m**: 16.02 T/m
- **Mms (grms)**: 60.68 grams
- **Xmax (mm)**: 5.25 mm
- **Sd (cm²)**: 527.7 cm²
- **Efficiency %**: 2.100%
- **Le (1k Hz)**: 1.556 mH
- **EBP**: 121.21 Hz

**MATERIALS OF CONSTRUCTION**

- **Former Material**: Kapton
- **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 ensure 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.**
The Pro 10BM is intended for use in two-way ported enclosures. The driver combined with Fane compression driver and horn offers excellent tonal character throughout its active bandwidth.

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. The Pro 10BM is designed for use in 25 to 40 Litre ported enclosures and features a 2.5 inch voice coil, 400 Watt power handling and 93 dB sensitivity.
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.

- 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.

### 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
- **Minimum Impedance Zmin**: 6.24 Ω
- **Effective Piston Diameter**: 8.19” / 208.02 mm
- **Magnet Weight**: 56 oz
- **Magnetic Gap Depth**: 0.31” / 7.87 mm
- **Flux Density**: 1.1 Tesla
- **Voice Coil Diameter**: 2.5” / 63.5 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

### 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

### 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

### FREQUENCY RESPONSE DATA†

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

### IMPEDANCE

- [Graph showing impedance characteristics]

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† 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**

- **10” / 254 mm**
- **300 W (A.E.S.)**
- **45 Hz - 4 kHz**
- **2.5” / 63.5 mm**
- **98 dB**
- **5.5 mm Xmax**

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

**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
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

**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

**THIELE SMALL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>58 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>5.7 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>6.080</td>
</tr>
<tr>
<td>Qts</td>
<td>0.340</td>
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<tr>
<td>Vas Ltr</td>
<td>41.00 Litres</td>
</tr>
<tr>
<td>Vd Litres</td>
<td>0.208 Litres</td>
</tr>
<tr>
<td>CMS (mm/N)</td>
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</tr>
<tr>
<td>BL T/m</td>
<td>15.3 T/m</td>
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<tr>
<td>Mms (gms)</td>
<td>37 grams</td>
</tr>
<tr>
<td>Xmax (mm)</td>
<td>5.5 mm</td>
</tr>
<tr>
<td>Sd (cm²)</td>
<td>378 cm²</td>
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<tr>
<td>Efficiency %</td>
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<td>Le (1k Hz)</td>
<td>1.68 mH</td>
</tr>
<tr>
<td>EBP</td>
<td>170.59 Hz</td>
</tr>
</tbody>
</table>

**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

**FREQUENCY RESPONSE DATA**

![Frequency Response Chart](chart.png)

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

**IMPEDANCE**

![Impedance Chart](chart.png)

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.
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.

- 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.

**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
- **Magnetic Gap Depth**: 0.31” / 8.00 mm
- **Flux Density**: 1.24 Tesla
- **Coi Winding Height**: 0.47” / 12.00 mm
- **Voice Coil Diameter**: 2.5” / 63.5 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

**Thiele Small Parameters**
- **FSC 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
- **Le (1k Hz)**: 1.45 mH
- **EBP**: 195.80 Hz

**Mounting / Shipping Information**
- **Overall Diameter**: 11.14” / 283 mm
- **Width Across Flats**: 10.35” / 263 mm
- **Flange Height**: 0.305” / 7.8 mm
- **Battle Hole Diameter F/M**: 8.97” / 227.83 mm
- **Battle 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

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

**Impedance**

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*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.
The Sovereign Pro 8BM is intended for use in two-way ported enclosures. The driver combined with Fane compression driver and horn offers excellent tonal character throughout its active bandwidth. The unit features a 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 working band.

The Pro 8BM is designed for use in 15 to 25 Litre ported enclosures and features a 2 inch voice coil, 250 Watt power handling and 93.5 dB sensitivity.

**Electro Acoustic Specifications**

- Nominal Chassis Diameter: 8" / 203.2 mm
- Impedance: 8 Ohm
- Power Handling: 250 W (A.E.S.)
- Peak Power (6dB Crest Factor): 1000 W (A.E.S.)
- Usable Frequency Range -6dB: 50 Hz - 4.5 kHz
- Sensitivity (1 W - 1 m): 93.5 dB
- Moving Mass inc. Air Load: 28 grams
- Minimum Impedance Zmin: 7.44 Ohms
- Effective Piston Diameter: 6.70" / 170.18 mm
- Magnetic Weight: 37 oz
- Magnetic Gap Depth: 0.24" / 6.00 mm
- Flux Density: 1 Tesla
- Voice Coil Diameter: 2.0" / 50.8 mm

**Mounting / Shipping Information**

- Overall Diameter: 8.9 " / 226 mm
- Width Across Flats: 8.25 " / 210 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: 3.56" / 90.30 mm
- Weight: 6.50 lb / 2.95 kg
- Recommended Enclosure Volume: 8 - 23 Litres
- Shipping Weight: 7.00 lb / 3.18 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: Rubber Roll
- Dust Dome: Paper
- Connectors: Push-button Spring Terminals
- Polarity: Positive voltage at red terminal causes forward motion of cone

**Impedance**

**Eichle Small Parameters**

- FS Hz: 52 Hz
- RE Ohms: 6.2 Ohms
- Qms: 49.980
- Ges: 0.314
- Qts: 0.312
- Vas Litr: 23.50 Litres
- Vd Litres: 0.102 Litres
- CMS (mm/N): 0.335 mm/N
- BL T/m: 13.44 T/m
- Mms (grms): 28.6 grams
- Xmax (mm): 4.5 mm
- Sd (cm²): 227 cm²
- Efficiency %: 0.597 mH
- Le (1k Hz): 165.61 Hz
- EB Peak: 1000 W
- EBP: 165.61 Hz

**Frequency Response Data**

† Half space response measured in a 965 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.
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.

**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:** 55 Hz - 5 kHz
- **Sensitivity (1 W - 1 m):** 97 dB
- **Moving Mass inc. Air Load:** 20.7 grams
- **Minimum Impedance:** 7.8 Ω
- **Effective Piston Diameter:** 6.50” / 165.00 mm
- **Magnet Weight:** 34 oz
- **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
- **Minimum Impedance:** 7.8 Ω
- **Effective Piston Diameter:** 6.50” / 165.00 mm
- **Magnet Weight:** 34 oz
- **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
- **Effective Piston Diameter:** 6.50” / 165.00 mm
- **Magnet Weight:** 34 oz
- **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

**Material 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

**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

**Impedance**

- **L0 (pF):** 1.10 pF
- **L1 (pF):** 1.10 pF
- **L2 (pF):** 1.10 pF

**Frequency response data**

- **Fundamental 45° off-axis:**
  - 20 Hz: +120 dB
  - 200 Hz: +110 dB
  - 2 kHz: +100 dB
  - 20 kHz: +90 dB
  - 200 kHz:

**Other specifications**

- **Maximum Linear Excursion:** 5.5 mm
- **Sensitivity:** 97 dB
- **Frequency Response:** 55 Hz - 5 kHz
- **A.E.S. Power Handling:** 225 W
- **Chassis Diameter:** 8” / 203.2 mm
- **Copper Voice Coil:** Good for compact two-way PA cabinets and line array applications.
- **Exceptional efficiency, power handling and frequency coverage from compact design.

Please enquire about alternative impedances.

* 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.
THE PROFESSIONAL SERIES

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

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. Performance is optimised for mid range range singular / multiple use.

- Smooth midband response with extended high frequency range.
- Exceptional power handling from compact dimensions.

**ELECTRO ACOUSTIC SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>5&quot; / 127 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>4 Ohm / 8 Ohm / 16 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>100 W (A.E.S.)</td>
</tr>
<tr>
<td>Peak Power (6dB Crest Factor)</td>
<td>400 W (A.E.S.)</td>
</tr>
<tr>
<td>Usable Frequency Range -6dB</td>
<td>90 Hz - 7 kHz</td>
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<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>92.5 dB</td>
</tr>
<tr>
<td>Moving Mass inc. Air Load</td>
<td>6.6 grams</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>7.7 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>4.20&quot; / 106.68 mm</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>26 oz</td>
</tr>
<tr>
<td>Magnetic Gap Depth</td>
<td>0.23&quot; / 6.00 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1.42 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.51&quot; / 13 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>1.5&quot; / 38.1 mm</td>
</tr>
</tbody>
</table>

**MOUNTING / SHIPPING INFORMATION**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>6&quot; / 152.4 mm</td>
</tr>
<tr>
<td>Width Across Flats</td>
<td>5.25&quot; / 133.35 mm</td>
</tr>
<tr>
<td>Flange Height</td>
<td>0.27&quot; / 6.9 mm</td>
</tr>
<tr>
<td>Baffle Hole Diameter F/M</td>
<td>4.63&quot; / 117.60 mm</td>
</tr>
<tr>
<td>Baffle Hole Diameter R/M</td>
<td>4.50&quot; / 114.3 mm</td>
</tr>
<tr>
<td>Gasket Supplied</td>
<td>Front &amp; Rear</td>
</tr>
<tr>
<td>Outer Fixing Holes</td>
<td>4x Ø 0.218&quot; on 5.468&quot; PCD / 4x Ø 0.5 mm on 13.8 mm PCD</td>
</tr>
<tr>
<td>Inner Fixing Holes</td>
<td>N/A</td>
</tr>
<tr>
<td>Depth</td>
<td>2.75&quot; / 69.65 mm</td>
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<tr>
<td>Weight</td>
<td>3.15 lb / 1.43 kg</td>
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<tr>
<td>Recommended Enclosure Volume</td>
<td>0.07 - 0.36 cu ft / 2 - 10 Litres</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>3.65 lb / 1.66 kg</td>
</tr>
<tr>
<td>Packing Carton Dimensions</td>
<td>(W) 160 [D] 160 [H] 110 mm</td>
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</tbody>
</table>

**MATERIALS OF CONSTRUCTION**

<table>
<thead>
<tr>
<th>Material</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Former Material</td>
<td>Resin Bonded Glass Fibre</td>
</tr>
<tr>
<td>Voice Coil</td>
<td>Polyamide-imide Coated Copper</td>
</tr>
<tr>
<td>Magnet Material</td>
<td>Ferrite</td>
</tr>
<tr>
<td>Chassis</td>
<td>Die-cast Aluminium</td>
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<tr>
<td>Cone</td>
<td>Paper</td>
</tr>
<tr>
<td>Surround / Edge Termination</td>
<td>Polyvinyl Damped Multi Roll Linen</td>
</tr>
<tr>
<td>Dust Dome</td>
<td>Paper</td>
</tr>
<tr>
<td>Connectors</td>
<td>0.125&quot; Tab / Solder</td>
</tr>
<tr>
<td>Polarity</td>
<td>Positive voltage at red terminal causes forward motion of cone</td>
</tr>
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</table>

**THIELE SMALL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>164 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>6.6 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>2.300</td>
</tr>
<tr>
<td>Qes</td>
<td>0.715</td>
</tr>
<tr>
<td>Qts</td>
<td>0.540</td>
</tr>
<tr>
<td>Vas Ltr</td>
<td>1.63 Ltres</td>
</tr>
<tr>
<td>Vd Ltr</td>
<td>0.045 Ltres</td>
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<tr>
<td>CMS (mm/N)</td>
<td>0.148 mm/N</td>
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<tr>
<td>BL T/m</td>
<td>7.92 T/m</td>
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<tr>
<td>Mms (grms)</td>
<td>6.5 grms</td>
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<tr>
<td>Xmax</td>
<td>4.5 mm</td>
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<tr>
<td>Sd (cm²)</td>
<td>88 cm²</td>
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<tr>
<td>Efficiency %</td>
<td>1.030%</td>
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<tr>
<td>Le (1k Hz)</td>
<td>1.19 mH</td>
</tr>
<tr>
<td>EBP</td>
<td>229.37 Hz</td>
</tr>
</tbody>
</table>

**FREQUENCY RESPONSE DATA**

- Half space response measured in a 975 Ltr sealed box.

**IMPEDANCE**

- 4.5 mm Xmax
- Maximum linear excursion

---

* Please enquire about alternative impedances.

* AES 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.
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. Performance is optimised for full-range singular / multiple use.

- Kevlar cone.
- Extended frequency response.

### 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
- **Minimum Impedance Zmin**: 7.7 Ω
- **Effective Piston Diameter**: 4.20” / 106.68 mm
- **Magnet Weight**: 18 oz
- **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

### 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

### THIELE SMALL PARAMETERS

- **FS Hz**: 58 Hz
- **RE Ohms**: 6.2 Ω
- **Qms**: 7.500
- **Qts**: 0.380
- **Qes**: 0.360
- **Vas Ltr**: 10.90 Litres
- **Vd Litres**: 0.022 Litres
- **Sd (cm²)**: 89.74 cm²
- **Xmax (mm)**: 2.41 mm
- **Le (1k Hz)**: 0.882 mH
- **EBP 152.63 Hz**: 6.85 T/m

### MATERIALS OF CONSTRUCTION

- **Former Material**: Resin Bonded Glass Fibre
- **Voice Coil**: Polyamide-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

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* 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.
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 aluminium 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.

Lightweight neodymium motor system.
- Aluminium core heat sink for reduce power compression.
- 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.

**ELECTRO ACOUSTIC SPECIFICATIONS**

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

**THIELE SMALL PARAMETERS**

| FS Hz         | 33 Hz |
| RE Ohms       | 5.6 Ω |
| Qms           | 17.700 |
| Qts           | 0.295 |
| Vars 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 (cm²)      | 1164 cm² |
| Efficiency %  | 2.4% |
| Le (1kHz)     | 2.76 mH |
| EBP           | 110.00 Hz |

**MOUNTING / SHIPPING INFORMATION**

<table>
<thead>
<tr>
<th>Overall Diameter</th>
<th>19.1&quot; / 485 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width Across Flats</td>
<td>18&quot; / 457 mm</td>
</tr>
<tr>
<td>Flange Height</td>
<td>0.465&quot; / 11.8 mm</td>
</tr>
<tr>
<td>Baffle Hole Diameter F/M</td>
<td>16.53&quot; / 419.86 mm</td>
</tr>
<tr>
<td>Baffle Hole Diameter R/M</td>
<td>16.33&quot; / 414.78 mm</td>
</tr>
<tr>
<td>Gasket Supplied</td>
<td>Front</td>
</tr>
<tr>
<td>Outer Fixing Holes</td>
<td>8x Ø 0.275” on 18.425” PCD / 8x Ø 7 mm on 446 mm PCD</td>
</tr>
<tr>
<td>Inner Fixing Holes</td>
<td>8x Ø 0.275” on 17.25” PCD / 8x Ø 7 mm on 438.15 mm PCD</td>
</tr>
<tr>
<td>Depth</td>
<td>8.01&quot; / 203.55 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>25.35 lb / 11.5 Kg</td>
</tr>
<tr>
<td>Recommended Enclosure Volume</td>
<td>60 - 230 Litres</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>25.50 lb / 11.57 kg</td>
</tr>
<tr>
<td>Packing Carton Dimensions</td>
<td>(W) 485 (D) 485 (H) 230 mm</td>
</tr>
</tbody>
</table>

**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

**FREQUENCY RESPONSE DATA**

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

**IMPEDANCE**

- 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 18XT5N**

**BASS DRIVER**

- Nominal Chassis Diameter: 18" / 457.2 mm
- Impedance: 4 Ohm / 8 Ohm / 16 Ohm
- Power Handling: 1200 W (A.E.S.)
- Frequency Response Range: 28 Hz - 2 kHz
- Sensitivity: 98.5 dB (1 W / 1 m)
- Moving Mass inc. Air Load: 216 grams
- Minimum Impedance: 6.9 Ω
- Maximum Impedance: 7.08 Ω
- Effective Piston Diameter: 15.50" / 385.00 mm
- Magnetic Gap Depth: 0.43" / 11.75 mm
- Flux Density: 1.25 Tesla
- Col Winding Height: 1.10" / 30.00 mm
- Voice Coil Diameter: 5.0" / 127 mm

**Electro Acoustic Specifications**

- **FREQUENCY RESPONSE**
  - Half space response measured in a 975 Litre sealed box.

- **IMPEDANCE**
  - Nominal Chassis Diameter: 18" / 457.2 mm
  - Power Handling: 1200 W (A.E.S.)
  - Frequency Response Range: 28 Hz - 2 kHz
  - Sensitivity: 98.5 dB (1 W / 1 m)
  - Moving Mass inc. Air Load: 216 grams
  - Minimum Impedance: 6.9 Ω
  - Maximum Impedance: 7.08 Ω

**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 16.425" 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: 8.70" / 221.00 mm
- Weight: 26.12 lb / 11.85 kg
- Recommended Enclosure Volume: 125 - 400 Litres
- Shipping Weight: 29.76 lb / 13.50 kg
- Packing Carton Dimensions: (H) 275 / (W) 500 (D) 500 / (L) 275 mm

**Materials of Construction**

- Former Material: Glass Fibre
- Voice Coil: Copper - Inside/Outside Windings
- Magnet Material: Neodymium
- Chassis: Die-Cast Aluminium
- Cone: Straight Fibre Loaded Polycellulose Ribbed Cone
- 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

**Thiele Small Parameters**

- FS Hz: 36 Hz
- RE Ohms: 5.6 Ω
- Qms: 0.339
- Qts: 0.339
- Vas Ltr: 185.00 Litres
- Vd Litres: 1.340 Litres
- CMS (mm/N): 0.095 mm/N
- BL T/m: 28.4 T/m
- Xmax (mm): 11.75 mm
- Sd (cm²): 1169 cm²
- Efficiency %: 3.000%
- Le (1k Hz): 2.30 mH
- EBP: 102.86 Hz

**The Colossus 18XT5N** is intended for use as a high output bass driver in multi-way systems and features a 5 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 11.75 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 Colossus 18XT5N exhibits 98.5 dB sensitivity and can deliver bass down to 28 Hz (-6 dB) in a 200 Litre ported enclosure.
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 varied 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.

**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**: 35 Hz - 1 kHz
- **Sensitivity (1 W - 1 m)**: 99 dB
- **Moving Mass inc. Air Load**: 173 grams
- **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
- **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**: 35 Hz - 1 kHz
- **Sensitivity (1 W - 1 m)**: 99 dB
- **Moving Mass inc. Air Load**: 173 grams
- **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

**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 16.425” PCD / 8x Ø 7 mm on 406 mm PCD
- **Inner Fixing Holes**: 8x Ø 0.275” on 17.25” PCD / 8x Ø 7 mm on 436.15 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

**THIELE SMALL PARAMETERS**

- **FS Hz**: 33 Hz
- **RE Ohms**: 6.2 Ω
- **Qms**: 5.770
- **Qts**: 0.337
- **Vas Ltr**: 236.00 Litres
- **Vd Ltr**: 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
- **Efficiency %**: 2.300%
- **Le (1k Hz)**: 1.99 mH
- **EBP**: 92.18 Hz

**IMPEDANCE**

**FREQUENCY RESPONSE DATA**

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Impedance (Ω)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>44.0</td>
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<tr>
<td>400</td>
<td>38.0</td>
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<tr>
<td>1000</td>
<td>32.0</td>
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<tr>
<td>3000</td>
<td>28.0</td>
</tr>
<tr>
<td>10000</td>
<td>24.0</td>
</tr>
</tbody>
</table>

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

---

1. Please enquire about alternative impedances.
2. 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.
3. 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.
The Colossus 18-800N 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 tower distortion. This, coupled with a large Xmax of 8 mm and laminated silicone suspensions, 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 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 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 18-800N exhibits 101 dB sensitivity and can deliver bass down to 35 Hz (-6 dB) in a 200 Litre ported enclosure.

### ELECTRO ACoustIC SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>18” / 457.2 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>800 W (A.E.S.)</td>
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<tr>
<td>Peak Power (6dB Crest Factor)</td>
<td>3200 W (A.E.S.)</td>
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<tr>
<td>Usable Frequency Range -6dB</td>
<td>36 Hz - 2 kHz</td>
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<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>101 dB</td>
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<tr>
<td>Moving Mass inc. Air Load</td>
<td>148 grams</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>6.5 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>14.84” / 376.83 mm</td>
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<tr>
<td>Magnetic Gap Depth</td>
<td>0.43” / 11.00 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1.1 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.87” / 22.00 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>4.0” / 101.6 mm</td>
</tr>
</tbody>
</table>

### FREQUENCY RESPONSE DATA

Half space response measured in a 975 Litre sealed box.

### IMPEdANCE

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>Impedance (Ohms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Hz</td>
<td>27.6 Ohms</td>
</tr>
<tr>
<td>100 Hz</td>
<td>25.1 Ohms</td>
</tr>
<tr>
<td>200 Hz</td>
<td>24.5 Ohms</td>
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<tr>
<td>500 Hz</td>
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<tr>
<td>1k Hz</td>
<td>23.7 Ohms</td>
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<td>2k Hz</td>
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<tr>
<td>10k Hz</td>
<td>23.4 Ohms</td>
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<tr>
<td>20k Hz</td>
<td>23.3 Ohms</td>
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### MOUNTING / SHIPPING INFORMATION

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>19.1” / 485 mm</td>
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<tr>
<td>Width Across Flats</td>
<td>18” / 457.2 mm</td>
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<tr>
<td>Flange Height</td>
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<tr>
<td>Battle Hole Diameter F/M</td>
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<tr>
<td>Battle Hole Diameter R/M</td>
<td>16.33” / 414.78 mm</td>
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<tr>
<td>Gasket Supplied</td>
<td>Front &amp; Rear</td>
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<tr>
<td>Outer Fixing Holes</td>
<td>8x Ø 0.275” on 16.425” PCD / 8x Ø 7 mm on 468 mm PCD</td>
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<tr>
<td>Inner Fixing Holes</td>
<td>8x Ø 0.275” on 17.25” PCD / 8x Ø 7 mm on 438.15 mm PCD</td>
</tr>
<tr>
<td>Depth</td>
<td>7.79” / 198.00 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>16.10 lb / 7.55 kg</td>
</tr>
<tr>
<td>Recommended Enclosure Volume</td>
<td>441 - 14.12 cu ft / 125 - 400 Litres</td>
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<tr>
<td>Shipping Weight</td>
<td>22.00 lb / 9.55 kg</td>
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<tr>
<td>Packing Carton Dimensions</td>
<td>(W) 485 (D) 485 (H) 230 mm</td>
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</table>

### THIELE SMALL PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>38 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>5.2 Ω</td>
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<tr>
<td>Qms</td>
<td>5.270</td>
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<tr>
<td>Qes</td>
<td>0.325</td>
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<tr>
<td>Qts</td>
<td>0.306</td>
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<tr>
<td>Vas Ltr</td>
<td>217.00 Ltr</td>
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<tr>
<td>Vd Ltr</td>
<td>0.950 Ltr</td>
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<tr>
<td>CMS (mm/N)</td>
<td>0.120 mm/N</td>
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<tr>
<td>BL T/m</td>
<td>24 T/m</td>
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<tr>
<td>Mms (grms)</td>
<td>148 grms</td>
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<tr>
<td>Xmax (mm)</td>
<td>8 mm</td>
</tr>
<tr>
<td>St (cm²)</td>
<td>1133 cm²</td>
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<tr>
<td>Efficiency ᵇ</td>
<td>3.500%</td>
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<tr>
<td>Le (1k Hz)</td>
<td>1.96 mH</td>
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<tr>
<td>EBP</td>
<td>116.92 Hz</td>
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### MATERIALS OF CONSTRUCTION

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

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.
THE NEODYMIUM SERIES

COLOSSUS 15-750BMN
BASS, BASS/ MID DRIVER

- 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 polypropylene, 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 Ohm
- **Effective Piston Diameter**: 5.59” / 142 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
- **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 (cm²)**: 866 cm²
- **Le (1k Hz)**: 1.69 mH
- **EBP**: 155.17 Hz
- **Efficiency %**: 3.800%

### 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) x (D) x (H)**: 410 x 410 x 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**: Polyvinyldi 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

### FREQUENCY RESPONSE DATA

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

### IMPEDANCE

**The Colossus 15-750BMN**
The Sovereign Pro 15-600N is intended for use in high power two-way ported enclosures and as a high output bass driver in multi-way systems. It features a 3 inch ‘sandwich’ inside and outside windings voice coil immersed in a symmetric magnetic field yielding increased linearity and lower distortion at high excursion levels. The driver handles 600 Watts (A.E.S) continuous and can cope with peaks in excess of 2400 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 sovereign Pro 15-600N exhibits an average sensitivity of 99 dB and can deliver bass down to 40 Hz (-6 dB) in a 125 Litre ported enclosure.

The Sovereign Pro 15-600N is intended for use in high power two-way ported enclosures and as a high output bass driver in multi-way systems. It features a 3 inch ‘sandwich’ inside and outside windings voice coil immersed in a symmetric magnetic field yielding increased linearity and lower distortion at high excursion levels. The driver handles 600 Watts (A.E.S) continuous and can cope with peaks in excess of 2400 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 sovereign Pro 15-600N exhibits an average sensitivity of 99 dB and can deliver bass down to 40 Hz (-6 dB) in a 125 Litre ported enclosure.

The Sovereign Pro 15-600N is intended for use in high power two-way ported enclosures and as a high output bass driver in multi-way systems. It features a 3 inch ‘sandwich’ inside and outside windings voice coil immersed in a symmetric magnetic field yielding increased linearity and lower distortion at high excursion levels. The driver handles 600 Watts (A.E.S) continuous and can cope with peaks in excess of 2400 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 sovereign Pro 15-600N exhibits an average sensitivity of 99 dB and can deliver bass down to 40 Hz (-6 dB) in a 125 Litre ported enclosure.

The Sovereign Pro 15-600N is intended for use in high power two-way ported enclosures and as a high output bass driver in multi-way systems. It features a 3 inch ‘sandwich’ inside and outside windings voice coil immersed in a symmetric magnetic field yielding increased linearity and lower distortion at high excursion levels. The driver handles 600 Watts (A.E.S) continuous and can cope with peaks in excess of 2400 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 sovereign Pro 15-600N exhibits an average sensitivity of 99 dB and can deliver bass down to 40 Hz (-6 dB) in a 125 Litre ported enclosure.
The Colossus 12MBN is intended for use as a very high output bass-mid driver in two-way порted 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 polypropylene, 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 порted enclosures of 25 to 80 Litres.
The Sovereign Pro 12-350N is intended for use as a medium output mid bass driver in ported enclosures and line array systems. The 2.5 inch voice coil is driven by a neodymium non inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane is much stronger and more durable than conventional paper pulps and allows the driver to combine high sensitivity with the excellent structural integrity required to produce undistorted midband frequency output up to its rated power handling of 350 Watts (A.E.S) continuous, with peak power handling in excess of 1400 Watts. The driver exhibits an average sensitivity of 97.5 dB and is best used in ported enclosures of 25 to 80 Litres.

- Lightweight neodymium magnet assembly.
- Weighs only 3.7 kg.
- Ideal for line array applications.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.

**Electro Acoustic Specifications**

- **Nominal Chassis Diameter**: 12” / 304.8 mm
- **Impedance**: 8 Ohm
- **Power Handling**: 350 W (A.E.S.)
- **Peak Power (6dB Crest Factor)**: 1400 W (A.E.S.)
- **Usable Frequency Range** -6dB: 50 Hz - 4.5 kHz
- **Sensitivity (1 w - 1 m)**: 97.5 dB
- **Moving Mass inc. Air Load**: 45 grams
- **Minimum Impedance Zmin**: 6.84 Ω
- **Effective Piston Diameter**: 10.31” / 261.87 mm
- **Magnetic Gap Depth**: 0.39” / 10.00 mm
- **Flux Density**: 1 Tesla
- **Col Winding Height**: 0.70” / 18.00 mm
- **Voice Coil Diameter**: 2.5” / 63.5 mm

**Thiele Small Parameters**

- **FIS Hz**: 55 Hz
- **RE Ohms**: 5.75 Ω
- **Qms**: 3.900
- **Qes**: 0.710
- **Qts**: 0.600
- **Vas Ltr**: 77.00 Litres
- **Vd Litres**: 0.240 Litres
- **CMS (mm/N)**: 0.186 mm/N
- **Efficiency %**: 1.890%
- **Le (1k Hz)**: 1.64 mH
- **EBP**: 77.46 Hz

**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 Dbl. Half Roll PVC
- **Dust Dome**: Solid Paper
- **Connectors**: Push-button Spring Terminals
- **Polarity**: Positive voltage at red terminal causes forward motion of cone

**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**: 5.35” / 136.00 mm
- **Weight**: 8.15 lb / 3.70 kg
- **Recommended Enclosure Volume**: 0.88 – 2.83 cu ft / 25 – 80 Litres
- **Shipping Weight**: 9.40 lb / 4.26 kg
- **Packing Carton Dimensions**: (W) 330 (D) 330 (H) 170 mm

**Impedance**

![Impedance Graph]

**Frequency Response Data**

![Frequency Response Graph]

† Half space response measured in a 975 Litre sealed box.
The Colossus 12BMN 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 voice coil driven by a non-inductive motor system which dramatically reduces third-harmonic and intermodulation distortion. The cone membrane, manufactured from bespoke paper pulp 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 450 Watts (A.E.S) continuous, with peak power handling in excess of 1800 Watts. The driver exhibits an average sensitivity of 99 dB and is best used in ported enclosures of 25 to 80 Litres.

**ELECTRO ACOUSTIC SPECIFICATIONS**

- **Nominal Chassis Diameter**: 12" / 304.8 mm
- **Impedance**: 4 Ohm / 8 Ohm / 16 Ohm
- **Power Handling**: 450 W (A.E.S.)
- **Peak Power (6dB Crest Factor)**: 1800 W (A.E.S.)
- **Usable Frequency Range**: 40 Hz - 3.5 kHz
- **Sensitivity (1 w - 1 m)**: 99 dB
- **Moving Mass inc. Air Load**: 65 grams
- **Minimum Impedance Zmin**: 7.5 Ω
- **Effective Piston Diameter**: 5.53" / 140.60 mm
- **Magnetic Gap Depth**: 0.31" / 8.00 mm
- **Flux Density**: 1.16 Tesla
- **Coil Winding Height**: 0.78" / 20.00 mm
- **Voice Coil Diameter**: 3.0" / 76.2 mm

**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
- **Recommended Enclosure Volume**: 0.88 - 2.83 cu ft / 25 - 80 Litres
- **Shipping Weight**: 11.02 lb / 5.00 kg
- **Packing Carton Dimensions**: (W) 330 (D) 330 (H) 170 mm

**MATERIALS OF CONSTRUCTION**

- **Former Material**: Glass Fibre
- **Voice Coil**: Copper
- **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

**FREQUENCY RESPONSE DATA**

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

**IMPEDANCE**

<table>
<thead>
<tr>
<th>Impedance</th>
<th>Ohms</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Ohm</td>
<td>5.4</td>
</tr>
<tr>
<td>8 Ohm</td>
<td>4.8</td>
</tr>
<tr>
<td>16 Ohm</td>
<td>4.8</td>
</tr>
</tbody>
</table>

* Please enquire about alternative impedances.
* AES 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.
Exceptional efficiency, power handling and frequency coverage from a compact and lightweight unit. The Sovereign Pro 8MN provides high output and low distortion from 90Hz to 5kHz with smooth tonal character. Ideal for small format line array or dedicated mid unit in multi-way system configuration.

- Suitable for line array and small sealed enclosures.
- 2" Voice coil mid range unit driven by a lightweight neodymium motor system.
- Weighs only 1.95 Kg.
- Exceptional efficiency, power handling and frequency coverage from compact design.
- High output and low distortion from 90 Hz to 5 kHz.
- Rugged die-cast chassis.
- Extended usable frequency.

**Electro Acoustic Specifications**

- **Nominal Chassis Diameter**: 8" / 203.2 mm
- **Impedance**: 4 Ohm / 8 Ohm / 16 Ohm
- **Power Handling**: 250 W (A.E.S.)
- **Peak Power (6dB Crest Factor)**: 1000 W (A.E.S.)
- **Usable Frequency Range -6dB**: 90 Hz - 5 kHz
- **Sensitivity (1 w - 1 m)**: 99 dB
- **Moving Mass inc. Air Load**: 21.76 grams
- **Minimum Impedance Zmin**: 7 Ω
- **Effective Piston Diameter**: 6.46" / 164.08 mm
- **Magnetic Gap Depth**: 0.35" / 9.00 mm
- **Flux Density**: 1.1 Tesla
- **Coil Winding Height**: 0.47" / 12.00 mm
- **Voice Coil Diameter**: 2.0" / 50.8 mm
- **Impedance**: 80 Hz
- **RE Ohms**: 5.5 Ω
- **Qms**: 8.860
- **Qes**: 0.410
- **Qts**: 0.400
- **Vas Ltr**: 13.62 Litres
- **Vd Litres**: 0.080 Litres
- **CMS (mm/N)**: 0.188 mm/N
- **BL T/m**: 12.5 T/m
- **Mms (grms)**: 21.56 grams
- **Efficiency %**: 1.750%
- **Le (1k Hz)**: 1.13 mH
- **EBP**: 195.12 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**: 4.30 lb / 1.95 kg
- **Recommended Enclosure Volume**: 1.5 - 5 Litres
- **Shipping Weight**: 5.20 lb / 2.36 kg
- **Packing Carton Dimensions**: (W) 235 (D) 235 (H) 130 mm

**Materials of Construction**

- **Former Material**: Glass Fibre
- **Voice Coil**: CCAW
- **Magnet Material**: Neodymium
- **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

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* 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 15-600LF

- 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.

SOVEREIGN 15-500

- High power woofer with outstanding SPL output.
- For use in 2-way pro sound applications.
- Ideally suited for medium to large vented enclosures.
- Works well in a sealed box as a mid/bass driver or as a floor wedge.
- Great for bass guitar in vented cabs.
- Optimised cone pulp offering increased strength, durability and performance.

ELECTRO ACoustIC SPECIFICATIONS

<table>
<thead>
<tr>
<th>Dimension</th>
<th>SOVEREIGN 15-600LF</th>
<th>SOVEREIGN 15-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>15&quot; / 381 mm</td>
<td>15&quot; / 381 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
<td>4 Ohm / 8 Ohm / 16 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>500 W (A.E.S.)</td>
<td>600 W (A.E.S.)</td>
</tr>
<tr>
<td>Peak Power (6dB Crest Factor)</td>
<td>2000 W (A.E.S.)</td>
<td>2400 W (A.E.S.)</td>
</tr>
<tr>
<td>Usable Fq. Range -6dB</td>
<td>40 Hz - 4 kHz</td>
<td>38 Hz - 3.5 kHz</td>
</tr>
<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>98.5 dB</td>
<td>98.5 dB</td>
</tr>
<tr>
<td>Moving Mass inc. Air Load</td>
<td>82.39 grams</td>
<td>62.39 grams</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>7 Ω</td>
<td>7 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>15.03&quot; / 381.76 mm</td>
<td>15.03&quot; / 381.76 mm</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>95 oz</td>
<td>90 oz</td>
</tr>
<tr>
<td>Magnetic Gap Depth</td>
<td>0.39&quot; / 10.00 mm</td>
<td>0.39&quot; / 10.00 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>0.97 Tesla</td>
<td>0.97 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.74&quot; / 19.00 mm</td>
<td>0.74&quot; / 19.00 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3.0&quot; / 76.2 mm</td>
<td>3.0&quot; / 76.2 mm</td>
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THEILE SMALL PARAMETERS

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>SOVEREIGN 15-600LF</th>
<th>SOVEREIGN 15-500</th>
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</thead>
<tbody>
<tr>
<td>EBPO (Hz)</td>
<td>100.00 Hz</td>
<td>89.37 Hz</td>
</tr>
<tr>
<td>Le (1k Hz)</td>
<td>2.19 mH</td>
<td>1.52 mH</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>2.900%</td>
<td>2.830%</td>
</tr>
<tr>
<td>Sd (cm²)</td>
<td>855 cm²</td>
<td>855 cm²</td>
</tr>
<tr>
<td>Xmax (mm)</td>
<td>3.45 mm</td>
<td>3.45 mm</td>
</tr>
<tr>
<td>Mms (grms)</td>
<td>97.65 grams</td>
<td>97.65 grams</td>
</tr>
<tr>
<td>EBP</td>
<td>100.00 Hz</td>
<td>99.37 Hz</td>
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FREQUENCY RESPONSE DATA

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

MOUNTING / SHIPPING INFO

<table>
<thead>
<tr>
<th>Dimension</th>
<th>SOVEREIGN 15-600LF</th>
<th>SOVEREIGN 15-500</th>
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</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>15&quot; / 381 mm</td>
<td>15&quot; / 381 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>17.96 lb / 8.15 kg</td>
<td>17.96 lb / 8.15 kg</td>
</tr>
<tr>
<td>Depth</td>
<td>6.65&quot; / 168.91 mm</td>
<td>6.65&quot; / 168.91 mm</td>
</tr>
<tr>
<td>Recommended Enclosure Volume</td>
<td>50 - 125 Litres</td>
<td>50 - 125 Litres</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>20.17 lb / 9.40 kg</td>
<td>20.17 lb / 9.40 kg</td>
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<tr>
<td>Dimensions (W) 410 (D) 410 (H)</td>
<td>210 mm</td>
<td>210 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm / 16 Ohm / 32 Ohm</td>
<td>8 Ohm / 16 Ohm / 32 Ohm</td>
</tr>
<tr>
<td>Minimum Frequency</td>
<td>35 Hz</td>
<td>38 Hz</td>
</tr>
<tr>
<td>Maximum Frequency</td>
<td>3.5 kHz</td>
<td>3.5 kHz</td>
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</table>

MATERIALS OF CONSTRUCTION

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

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THEILE SMALL PARAMETERS

<table>
<thead>
<tr>
<th>Frequency (Hz)</th>
<th>SOVEREIGN 15-500</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBPO (Hz)</td>
<td>89.37 Hz</td>
</tr>
<tr>
<td>Le (1k Hz)</td>
<td>1.52 mH</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>2.830%</td>
</tr>
<tr>
<td>Sd (cm²)</td>
<td>855 cm²</td>
</tr>
<tr>
<td>Xmax (mm)</td>
<td>3.45 mm</td>
</tr>
<tr>
<td>Mms (grms)</td>
<td>97.65 grams</td>
</tr>
<tr>
<td>EBP</td>
<td>100.00 Hz</td>
</tr>
</tbody>
</table>

FREQUENCY RESPONSE DATA

- Half space response measured in a 975 Litre sealed box.
THE MATERIALS OF CONSTRUCTION

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

MOUNTING / SHIPPING INFO

Overall Diameter 15" / 381 mm
Width Across Flats N/A
Flange Height 0.35" / 8.89 mm
Baffle Hole Diameter F/M 13.85" / 351.79 mm
Baffle Hole Diameter R/M 13.85" / 351.79 mm
Gasket Supplied Front & Rear
Outer Fixing Holes 8 x Ø 0.35 mm on 33.6 mm PCD
Inner Fixing Holes N/A
Depth 6.37" / 161.79 mm
Weight 12.34 lb / 5.60 kg
Recommended Enclosure Volume 210.00 litres
Shipping Weight 14.55 lb / 6.60 kg

Enclosure Volume

Depth 6.61" / 167.89 mm
Weight 12.34 lb / 5.60 kg
Recommended Enclosure Volume 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 Litr 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
Sd (cm²) 8.53 cm²
Efficiency % 1.980%
Le (1k Hz) 2.08 mH
EBP 115.63 Hz

ELECTRO ACOUSTIC SPECIFICATIONS

Nominal Chassis Diameter 15" / 381 mm
Impedance 8 Ohm
Power Handling 400 W (A.E.S.)
Peak Power (8dB Crest Factor) 1600 W (A.E.S.)
Usable Fs, 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 Ohm
Effective Piston Diameter 15.03" / 381.76 mm
Magnet Weight 56 oz
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

THE SOVEREIGN SERIES

SOVEREIGN 15-400LF - BASS DRIVER

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

SOVEREIGN 15-400 - BASS/ MID RANGE DRIVER

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

THEILE SMALL PARAMETERS

FS Hz 37 Hz
RE Ohms 5.2 Ω
Qms 6.500
Qes 0.320
Qts 0.305
Vas Litr 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
Sd (cm²) 8.53 cm²
Efficiency % 3.210%
Le (1k Hz) 1.60 mH
EBP 115.63 Hz

ELECTRO ACOUSTIC SPECIFICATIONS

Nominal Chassis Diameter 15" / 381 mm
Impedance 8 Ohm
Power Handling 400 W (A.E.S.)
Peak Power (8dB Crest Factor) 1600 W (A.E.S.)
Usable Fs, 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 Ohm
Effective Piston Diameter 15.03" / 381.76 mm
Magnet Weight 56 oz
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

THE SOVEREIGN SERIES

SOVEREIGN 15-400LF - BASS DRIVER

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

SOVEREIGN 15-400 - BASS/ MID RANGE DRIVER

High power driver designed for use in 2 way pro-sound applications.
Ideal for small seated floor wedges or medium sized vented boxes.
Also suitable for monitors or bass guitar.
Optimised cone pulp offering increased strength, durability and performance.
SOVEREIGN 12-300

BASS DRIVER

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

SOVEREIGN 12-500LF

BASS DRIVER

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

THE SOVEREIGN SERIES

ELECTRO ACOUSTIC SPECIFICATIONS

<table>
<thead>
<tr>
<th>SOVEREIGN 12-300</th>
<th>BASS/ MID RANGE DRIVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>12” / 304.8 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>500 W (A.E.S.)</td>
</tr>
<tr>
<td>Peak Power (6dB Crest Factor)</td>
<td>2000 W (A.E.S.)</td>
</tr>
<tr>
<td>Usable Fq. Range -6dB</td>
<td>38 Hz - 5 kHz</td>
</tr>
<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>95 dB</td>
</tr>
<tr>
<td>Moving Mass inc. Air Load</td>
<td>75 grams</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>7.4 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>10.67” / 271.01 mm</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>56 oz</td>
</tr>
<tr>
<td>Magnetic Gap Depth</td>
<td>0.39” / 10.00 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>0.97 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.74” / 19.00 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>2.5” / 63.5 mm</td>
</tr>
</tbody>
</table>

THEILE SMALL PARAMETERS

<table>
<thead>
<tr>
<th>SOVEREIGN 12-300</th>
<th>BASS/ MID RANGE DRIVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>50 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>5.9 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>7.900</td>
</tr>
<tr>
<td>Qes</td>
<td>0.530</td>
</tr>
<tr>
<td>Qrs</td>
<td>0.510</td>
</tr>
<tr>
<td>Vas Ltr</td>
<td>66.00 litres</td>
</tr>
<tr>
<td>Vd litres</td>
<td>0.298 litres</td>
</tr>
<tr>
<td>CMS (mm/N)</td>
<td>0.140 mm/N</td>
</tr>
<tr>
<td>BL T/m</td>
<td>16.37 T/m</td>
</tr>
<tr>
<td>Mms (gms)</td>
<td>75 grams</td>
</tr>
<tr>
<td>Xmax (mm)</td>
<td>5.5 mm</td>
</tr>
<tr>
<td>Sd (cm²)</td>
<td>576.1 cm²</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>1.600%</td>
</tr>
<tr>
<td>Le (1k Hz)</td>
<td>2.36 mH</td>
</tr>
<tr>
<td>EBPs</td>
<td>94.34 Hz</td>
</tr>
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</table>

MATERIALS OF CONSTRUCTION

Former Material | Glass Fibre |
Voice Coil | Copper |
Magnet Material | Ferrite |
Chassis | Pressed Steel |
Cone | Straight Polycellulose Ribbed Cone |

FREQUENCY RESPONSE DATA

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

IMPEDANCE

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 | 8 x 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 | 30 - 75 Litres |
Shipping Weight | 12.89 lb / 5.85 kg |
Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

SOVEREIGN 12-500LF

BASS DRIVER

Electro acoustic specifications.

THEILE SMALL PARAMETERS

<table>
<thead>
<tr>
<th>SOVEREIGN 12-500LF</th>
<th>BASS DRIVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>46 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>5.75 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>5.200</td>
</tr>
<tr>
<td>Qes</td>
<td>0.375</td>
</tr>
<tr>
<td>Qrs</td>
<td>0.350</td>
</tr>
<tr>
<td>Vas Ltr</td>
<td>110.00 litres</td>
</tr>
<tr>
<td>Vd litres</td>
<td>0.240 litres</td>
</tr>
<tr>
<td>CMS (mm/N)</td>
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<tr>
<td>BL T/m</td>
<td>14 T/m</td>
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<td>Mms (gms)</td>
<td>43 grams</td>
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<td>Xmax (mm)</td>
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<td>Sd (cm²)</td>
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<tr>
<td>Efficiency %</td>
<td>2.750%</td>
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<tr>
<td>Le (1k Hz)</td>
<td>1.64 mH</td>
</tr>
<tr>
<td>EBPs</td>
<td>122.67 Hz</td>
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</table>

MATERIALS OF CONSTRUCTION

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

FREQUENCY RESPONSE DATA

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

IMPEDANCE

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 | 8 x 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 | 30 - 75 Litres |
Shipping Weight | 12.89 lb / 5.85 kg |
Packing Carton Dimensions | (W) 330 (D) 330 (H) 170 mm |

* 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.
**THE SOVEREIGN SERIES**

### MOUNTING / SHIPPING INFO

<table>
<thead>
<tr>
<th>Dimension</th>
<th>SOVEREIGN 12-250TC</th>
<th>SOVEREIGN 10-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>12” / 304.8 mm</td>
<td>10” / 254 mm</td>
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<tr>
<td>Width Across Flats</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Flange Height</td>
<td>0.27” / 6.9 mm</td>
<td>0.50” / 12.7 mm</td>
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<tr>
<td>Baffle Hole Dia. F/M</td>
<td>11.25” / 285.75 mm</td>
<td>10.31” / 261.87</td>
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<tr>
<td>Baffle Hole Dia. R/M</td>
<td>11.25” / 285.75 mm</td>
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<tr>
<td>Gasket Supplied</td>
<td>Front &amp; Rear</td>
<td>Front &amp; Rear</td>
</tr>
<tr>
<td>Outer Fixing Holes</td>
<td>8x Ø 0.5 mm on 11.75” / 298 mm PCD</td>
<td>10.57 lb / 4.80 kg</td>
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<tr>
<td>Inner Fixing Holes</td>
<td>N/A</td>
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<tr>
<td>Depth</td>
<td>5.43” / 137.92 mm</td>
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<td>Weight</td>
<td>9.47 lb / 4.30 kg</td>
<td>N/A</td>
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<td>Recommended</td>
<td>1.55 - 2.64 cu ft / Enclosure Volume 30 - 75 Litres</td>
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<tr>
<td>Shipping Weight</td>
<td>11.35 lb / 5.15 kg</td>
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<tr>
<td>Packing Carton</td>
<td>(W) 330 (D) 330 (H) 170 mm</td>
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### MATERIALS OF CONSTRUCTION

<table>
<thead>
<tr>
<th>Former Material</th>
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<th>Glass Fibre</th>
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<td>Voice Coil</td>
<td>Copper Clad Aluminium Wire</td>
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<tr>
<td>Magnet Material</td>
<td>Ferrite</td>
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<tr>
<td>Chassis</td>
<td>Pressed Steel</td>
<td>Pressed Steel</td>
</tr>
<tr>
<td>Cone</td>
<td>Paper</td>
<td>Paper</td>
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### THEILE SMALL PARAMETERS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 12-250TC</th>
<th>SOVEREIGN 10-300</th>
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</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>50 Hz</td>
<td>58 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>7.2 Ω</td>
<td>5.7 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>7.600</td>
<td>6.080</td>
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<tr>
<td>Qes</td>
<td>0.720</td>
<td>0.330</td>
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<tr>
<td>Qts</td>
<td>0.640</td>
<td>0.313</td>
</tr>
<tr>
<td>Viat</td>
<td>78.06 litres</td>
<td>41.00 litres</td>
</tr>
<tr>
<td>Vd litres</td>
<td>0.165 litres</td>
<td>0.208 litres</td>
</tr>
<tr>
<td>CMS (mm/N)</td>
<td>0.195 mm/N</td>
<td>0.211 mm/N</td>
</tr>
<tr>
<td>BL T/m</td>
<td>13 T/m</td>
<td>15.3 T/m</td>
</tr>
<tr>
<td>Mms (grms)</td>
<td>52 grms</td>
<td>37 grms</td>
</tr>
<tr>
<td>Xmax (mm)</td>
<td>3.5 mm</td>
<td>5.5 mm</td>
</tr>
<tr>
<td>Sid (cm²)</td>
<td>303.9 cm²</td>
<td>378 cm²</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>1.300%</td>
<td>2.360%</td>
</tr>
<tr>
<td>Le (1k Hz)</td>
<td>1.56 mH</td>
<td>1.68 mH</td>
</tr>
<tr>
<td>EBP</td>
<td>69.44 Hz</td>
<td>175.76 Hz</td>
</tr>
</tbody>
</table>

### ELECTRO ACOUSTIC SPECIFICATIONS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 12-250TC</th>
<th>SOVEREIGN 10-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>12” / 304.8 mm</td>
<td>10” / 254 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
<td>4 Ohm / 8 Ohm / 16 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>250 W (A.E.S.)</td>
<td>300 W (A.E.S.)</td>
</tr>
<tr>
<td>Peak Power (dB crest Factor)</td>
<td>1200 W (A.E.S.)</td>
<td></td>
</tr>
<tr>
<td>Usable Fq. Range -6dB</td>
<td>45 Hz - 17 kHz</td>
<td>45 Hz - 17 kHz</td>
</tr>
<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>100 dB</td>
<td>97.5 dB</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>7.4 Ω</td>
<td>6.8 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>10.31” / 261.87 mm</td>
<td>8.46” / 214.88 mm</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>56 oz</td>
<td>56 oz</td>
</tr>
<tr>
<td>Magnetic Gap Depth</td>
<td>0.39” / 10.00 mm</td>
<td>0.39” / 10.00 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1 Tesla</td>
<td>1 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.43” / 10.92 mm</td>
<td>0.43” / 10.92 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>2.5” / 63.5 mm</td>
<td>2.5” / 63.5 mm</td>
</tr>
</tbody>
</table>

### IMPEDANCE

![Impedance Graph](image)

### FREQUENCY RESPONSE DATA

![Frequency Response Graph](image)

---

1. Please ensure about alternative impedances.
2. 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.
3. 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.
4. 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.
5. 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.

---

**THE SOVEREIGN SERIES**

- **SOVEREIGN 12-250TC**
  - **FULL RANGE DRIVER**
  - Medium power 12” twin cone model.
  - Suits 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.

- **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.
SOVEREIGN 10-125
BASS DRIVER

- Medium-power driver suitable for use as a mid/bass driver in sealed boxes and in medium-sized vented boxes as a woofer.
- Ideal for bass guitar in vented designs.
- Optimised cone pulp offering increased strength, durability and performance.

**ELECTRO ACOUSTIC SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 10-125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>10&quot; / 254 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>125 W (A.E.S.)</td>
</tr>
<tr>
<td>Peak Power (6dB Crest</td>
<td>500 W (A.E.S.)</td>
</tr>
<tr>
<td>Factor)</td>
<td></td>
</tr>
<tr>
<td>Usable Fq. Range -6dB</td>
<td>50 Hz - 6 kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>96 dB</td>
</tr>
<tr>
<td>Moving Mass inc. Air Load</td>
<td>31 grams</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>7.6 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>8.46&quot; / 214.88 mm</td>
</tr>
<tr>
<td>Magnetic Weight</td>
<td>20 oz</td>
</tr>
<tr>
<td>Magnetic Gap Depth</td>
<td>0.23&quot; / 5.84 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.51&quot; / 12.95 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>1.5&quot; / 38.1 mm</td>
</tr>
</tbody>
</table>

**THEILE SMALL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 10-125</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>55 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>6.6 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>6.290</td>
</tr>
<tr>
<td>Qes</td>
<td>0.710</td>
</tr>
<tr>
<td>Qrs</td>
<td>0.650</td>
</tr>
<tr>
<td>Vas Ltr</td>
<td>50.00 litres</td>
</tr>
<tr>
<td>Vs litres</td>
<td>0.183 litres</td>
</tr>
<tr>
<td>CMS (mm/N)</td>
<td>0.270 mm/N</td>
</tr>
<tr>
<td>BL / Tm</td>
<td>10 / 7 Tm</td>
</tr>
<tr>
<td>Mms (gms)</td>
<td>31 gms</td>
</tr>
<tr>
<td>Xmax (mm)</td>
<td>5 mm</td>
</tr>
<tr>
<td>Sd (cm²)</td>
<td>363.5 cm²</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>1.250%</td>
</tr>
<tr>
<td>Le (1/Hz)</td>
<td>1.47 mH</td>
</tr>
<tr>
<td>EBP</td>
<td>77.46 Hz</td>
</tr>
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</table>

**MOUNTING / SHIPPING INFO**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 10-125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>10.15&quot; / 257.81 mm</td>
</tr>
<tr>
<td>Width Across Flats</td>
<td>N/A</td>
</tr>
<tr>
<td>Flange Height</td>
<td>0.27&quot; / 6.9 mm</td>
</tr>
<tr>
<td>Baffle Hole Diam. F/M</td>
<td>9.21&quot; / 233.93 mm</td>
</tr>
<tr>
<td>Gasket Supplied</td>
<td>Front &amp; Rear</td>
</tr>
<tr>
<td>Outer Fixing Holes</td>
<td>4x Ø 6.5 mm on 7.7&quot; / 197.8 mm PCB</td>
</tr>
<tr>
<td>Inner Fixing Holes</td>
<td>N/A</td>
</tr>
<tr>
<td>Depth</td>
<td>4.05&quot; / 102.87 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4.39 lb / 1.95 kg</td>
</tr>
<tr>
<td>Recommended</td>
<td>0.88 - 1.76 cu ft / 25 - 50 litres</td>
</tr>
<tr>
<td>Enclosure Volume</td>
<td>0.275 (D) / 1.50 (H)</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>5.51 lb / 2.50 kg</td>
</tr>
<tr>
<td>Packing Carton Dimensions</td>
<td>(W) 275 (D) / 275 (H)</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 8-225</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Chassis Diameter</td>
<td>8&quot; / 203.2 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>225 W (A.E.S.)</td>
</tr>
<tr>
<td>Peak Power (6dB Crest</td>
<td>900 W (A.E.S.)</td>
</tr>
<tr>
<td>Factor)</td>
<td></td>
</tr>
<tr>
<td>Usable Fq. Range -6dB</td>
<td>55 Hz - 6 kHz</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>97 dB</td>
</tr>
<tr>
<td>Moving Mass inc. Air Load</td>
<td>20 grams</td>
</tr>
<tr>
<td>Minimum Impedance Zmin</td>
<td>7.6 Ω</td>
</tr>
<tr>
<td>Effective Piston Diameter</td>
<td>6.49&quot; / 164.99 mm</td>
</tr>
<tr>
<td>Magnetic Weight</td>
<td>34 oz</td>
</tr>
<tr>
<td>Magnetic Gap Depth</td>
<td>0.31&quot; / 7.87 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1 Tesla</td>
</tr>
<tr>
<td>Coil Winding Height</td>
<td>0.59&quot; / 14.98 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>2.0&quot; / 50.8 mm</td>
</tr>
</tbody>
</table>

**THEILE SMALL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 8-225</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS Hz</td>
<td>62 Hz</td>
</tr>
<tr>
<td>RE Ohms</td>
<td>6.1 Ω</td>
</tr>
<tr>
<td>Qms</td>
<td>4.300</td>
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<tr>
<td>Qes</td>
<td>0.420</td>
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<tr>
<td>Qrs</td>
<td>0.380</td>
</tr>
<tr>
<td>Vas Ltr</td>
<td>22.00 litres</td>
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<tr>
<td>Vs litres</td>
<td>0.085 litres</td>
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<tr>
<td>CMS (mm/N)</td>
<td>0.340 mm/N</td>
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<tr>
<td>BL / Tm</td>
<td>11 Tm</td>
</tr>
<tr>
<td>Mms (gms)</td>
<td>20.69 gms</td>
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<tr>
<td>Xmax (mm)</td>
<td>5.5 mm</td>
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<tr>
<td>Sd (cm²)</td>
<td>213 cm²</td>
</tr>
<tr>
<td>Efficiency %</td>
<td>1.250%</td>
</tr>
<tr>
<td>Le (1/Hz)</td>
<td>1.47 mH</td>
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<tr>
<td>EBP</td>
<td>147.62 Hz</td>
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**MOUNTING / SHIPPING INFO**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 8-225</th>
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<tbody>
<tr>
<td>Overall Diameter</td>
<td>8.18&quot; / 207.77 mm</td>
</tr>
<tr>
<td>Width Across Flats</td>
<td>N/A</td>
</tr>
<tr>
<td>Flange Height</td>
<td>0.27&quot; / 6.9 mm</td>
</tr>
<tr>
<td>Baffle Hole Diam. F/M</td>
<td>7.24&quot; / 183.89 mm</td>
</tr>
<tr>
<td>Gasket Supplied</td>
<td>Front &amp; Rear</td>
</tr>
<tr>
<td>Outer Fixing Holes</td>
<td>8x Ø 9.5 mm on 7.7&quot; / 197.8 mm PCB</td>
</tr>
<tr>
<td>Inner Fixing Holes</td>
<td>N/A</td>
</tr>
<tr>
<td>Depth</td>
<td>3.74&quot; / 94.99 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>6.06 lb / 2.75 kg</td>
</tr>
<tr>
<td>Recommended</td>
<td>0.70 - 1.23 cu ft / 20 - 35 litres</td>
</tr>
<tr>
<td>Enclosure Volume</td>
<td>0.70 cu ft</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>6.94 lb / 3.15 kg</td>
</tr>
<tr>
<td>Packing Carton Dimensions</td>
<td>(W) 235 (D) / 235 (H) 130 mm</td>
</tr>
</tbody>
</table>

---

*Please ensure 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 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 sealed boxes and as a mid/ bass driver in vented boxes.
- Optimised cone pulp offering increased strength, durability and performance.

**THEIL SMALL PARAMETERS**

**SOVEREIGN 8-125 | BASS/ MID RANGE DRIVER**

- Medium-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.

**THEILE SMALL PARAMETERS**

- **IMPEDANCE**

- **FREQUENCY RESPONSE DATA**

**ELECTRO ACOUSTIC SPECIFICATIONS**

**MOUNTING / SHIPPING INFO**

**THEILE SMALL PARAMETERS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>SOVEREIGN 6-100</th>
<th>SOVEREIGN 8-125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>6.5&quot; / 165.1 mm</td>
<td>8&quot; / 203.2 mm</td>
</tr>
<tr>
<td>Width Across Flats</td>
<td>N/A</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Flange Height</td>
<td>0.27&quot; / 6.9 mm</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Baffle Hole Diameter</td>
<td>5.78&quot; / 146.81 mm</td>
<td>125 W (A.E.S.)</td>
</tr>
<tr>
<td>Gasket Supplied</td>
<td>Front &amp; Rear</td>
<td>100 W (A.E.S.)</td>
</tr>
<tr>
<td>Inner Fixing Holes</td>
<td>N/A</td>
<td>400 W (A.E.S.)</td>
</tr>
<tr>
<td>Depth</td>
<td>2.20&quot; / 55.88 mm</td>
<td>60 Hz - 7 kHz</td>
</tr>
<tr>
<td>Weight</td>
<td>3.61 lbs / 1.65 kg</td>
<td>Sensitivity (1 w - 1 m)</td>
</tr>
<tr>
<td>Recommended Enclosure Volume</td>
<td>0.35 - 0.70 cu ft / 10 - 25 litres</td>
<td>0.032 litres</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>4.29 lbs / 1.95 kg</td>
<td>CMS (mm/N)</td>
</tr>
<tr>
<td>Packing Carton Dimensions</td>
<td>(W) 205 (D) 205 (H) 135 mm</td>
<td>BL T/m</td>
</tr>
</tbody>
</table>

**MATERIALS OF CONSTRUCTION**

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

**IMPEDEANCE**

**FREQUENCY RESPONSE DATA**

- 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 Freq. Range -6dB: 60 Hz - 7 kHz
- Minimum Impedance Zmin: 7.6 Ohm
- Effective Piston Diameter: 6.49" / 164.99 mm
- Magnetic Weight: 20 oz
- Magnetic Gap Depth: 0.23" / 5.84 mm
- Flux Density: 1.1 Tesla
- Coil Winding Height: 0.51" / 12.95 mm
- Voice Coil Diameter: 1.5" / 38.1 mm

- Nominal Chassis Diameter: 8" / 203.2 mm
- Impedance: 8 Ohm
- Power Handling: 125 W (A.E.S.)
- Peak Power (6dB Crest Factor): 500 W (A.E.S.)
- Usable Freq. Range -6dB: 60 Hz - 7 kHz
- Minimum Impedance Zmin: 7 Ohm
- Effective Piston Diameter: 5.15" / 130.81 mm
- Magnetic Weight: 19 grams
- Magnetic Gap Depth: 0.25" / 6.35 mm
- Flux Density: 1 Tesla
- Coil Winding Height: 0.39" / 10.00 mm
- Voice Coil Diameter: 1.5" / 38.1 mm

*Please enquire about alternative impedances.

Note: 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. 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. 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.
The CD-314 1.4” exit compression driver is the ultimate choice for professional high performance applications such as two way high power enclosures. Advanced engineering and manufacturing methods make this the ideal solution when seeking high performance and long term reliability.

The CD-314 is perfect for high level professional touring applications as well as high level fixed installation.

---

**CD-314N COMPRESSION DRIVER**

- 1.4” Exit, neodymium magnet compression driver.
- 3.15” / 80 mm Copper clad aluminum voice coil.
- Titanium diaphragm with optimized depression array surround.
- 75 Wrms (AES standard).

The perfect driver for professional high performance applications such as two way high power enclosures. Advanced engineering and manufacturing methods have produced an extremely reliable and wide bandwidth device. The neodymium motor system produces a very high efficiency weight and size ratio. This makes the CD-314-N ideal for high level professional touring applications as well as high level fixed installation.

---

![Image of CD-314 Compression Driver](image1.jpg)

**ELECTRO ACoustIC SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Sound Channel / Throat Size</th>
<th>1.4” / 35.6 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>75 W (A.E.S.)</td>
</tr>
<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>106 dB</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>700 Hz - 18 kHz</td>
</tr>
<tr>
<td>Rec. X-over Frequency Filtered at 18dB/Octave</td>
<td>1.2 kHz</td>
</tr>
<tr>
<td>Effective Diaphragm Diameter</td>
<td>3.15” / 80 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3.15” / 80 mm</td>
</tr>
<tr>
<td>Voice Coil DC Resistance</td>
<td>5 Ω</td>
</tr>
<tr>
<td>Max Diaphragm Displacement</td>
<td>0.032” / 0.8 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1.5 Tesla</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>45 oz</td>
</tr>
</tbody>
</table>

**MOUNTING / SHIPPING INFO**

- Overall Diameter: 6.2” / 158 mm
- Depth: 3.14” / 80 mm
- Weight: 9.70 lb / 4.4 kg
- Shipping Weight: 9.92 lb / 4.4 kg
- Packing Carton Dimensions: 4x M6 on 101.6 mm / 4” PCD
- Bolt Fixing Hole Dimensions and Qty.: 4x M6 on 101.6 mm / 4” PCD
- Connector: Push Button Spring Terminals
- Polarity: Positive voltage at red/ positive terminal causes positive pressure at throat exit.

---

![Image of CD-314 Compression Driver](image2.jpg)

**ELECTRO ACoustIC SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Sound Channel / Throat Size</th>
<th>1.4” / 35.6 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance</td>
<td>8 Ohm</td>
</tr>
<tr>
<td>Power Handling</td>
<td>75 W (A.E.S.)</td>
</tr>
<tr>
<td>Sensitivity (1 w - 1 m)</td>
<td>106 dB</td>
</tr>
<tr>
<td>Usable Frequency Range</td>
<td>700 Hz - 18 kHz</td>
</tr>
<tr>
<td>Rec. X-over Frequency Filtered at 18dB/Octave</td>
<td>1.2 kHz</td>
</tr>
<tr>
<td>Effective Diaphragm Diameter</td>
<td>3.15” / 80 mm</td>
</tr>
<tr>
<td>Voice Coil Diameter</td>
<td>3.15” / 80 mm</td>
</tr>
<tr>
<td>Voice Coil DC Resistance</td>
<td>5 Ω</td>
</tr>
<tr>
<td>Max Diaphragm Displacement</td>
<td>0.032” / 0.8 mm</td>
</tr>
<tr>
<td>Flux Density</td>
<td>1.7 Tesla</td>
</tr>
<tr>
<td>Magnet Weight</td>
<td>60 oz</td>
</tr>
</tbody>
</table>

**MOUNTING / SHIPPING INFO**

- Overall Diameter: 6.2” / 158 mm
- Depth: 2.6” / 68 mm
- Weight: 7.72 lb / 3.5 kg
- Shipping Weight: 8.37 lb / 3.8 kg
- Packing Carton Dimensions: (W) 165 (D) 165 (H) 92 mm
- Bolt Fixing Hole Dimensions and Qty.: 4x M6 on 101.6 mm / 4” PCD
- Connector: Push Button Spring Terminals
- Polarity: Positive voltage at red/ positive terminal causes positive pressure at throat exit.

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**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.

**IMPDANCE**

- 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.
**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

**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
- **Packaging Carton Dimensions**: 3x M6 ø 57.15 mm PCD / 2x M6 ø 76.2 mm PCD
- **Bolt Fixing Hole Dimensions and Qty.**
- **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
- **Packaging Carton Dimensions**: 3x M6 ø 57.15 mm PCD / 2x M6 ø 76.2 mm PCD
- **Bolt Fixing Hole Dimensions and Qty.**

**MATERIALS OF CONSTRUCTION**

- **Former Material**: Polyamide
- **Voice Coil Material**: Aluminium
- **Diaphragm Material**: Titanium
- **Surround / Edge**: Double Sinusoidal Roll
- **Termination**: Titanium
- **Magnet Material**: Ferrite
- **Connectors**: 6.3 mm Spade

**POLARITY**

- Positive voltage at red/ positive terminal causes positive pressure at throat exit.

**PERFORMANCE SPECIFICATIONS**

- **Frequency Response Measurement**: Taken on axis with 1w signal at distance of 1m using custom horn with 80° x 60° coverage.

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*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.
**HIGH FREQUENCY DEVICES**

**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.

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**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.

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**ELECTRO ACOUSTIC SPECIFICATIONS**

**CD-130**

- **Sound Channel / Throat Size:** 1” / 25.4 mm
- **Impedance:** 8 Ohm
- **Power Handling:** 30 W (AES)
- **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
- **Magnet Weight:** oz

**Sound Channel / Throat Size:** 1” / 25.4 mm

**Impedance:** 8 Ohm

**Power Handling:** 30 W (AES)

**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

**Magnet Weight:** oz

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**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
- **Packaging Carton:** (W) 95 (D) 95 (H) 71 mm
- **Bolt Fixing Hole Dimensions and Qty.:** 4x M6 on 76.2 mm / 3” PC3

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**IMPEDANCE**

- **Polarity**
  - Positive voltage at red/ positive terminal causes positive pressure at throat exit.

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**FREQUENCY RESPONSE DATA**

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**MATERIALS OF CONSTRUCTION**

**CD-130**

- **Former Material:** Polyamide
- **Voice Coil Material:** Aluminium
- **Diaphragm Material:** Titanium
- **Surround / Edge:** Double Sinusoidal Roll
- **Termination:** Titanium
- **Magnet Material:** Ferrite
- **Connectors:** Push Button Spring Terminals

**CD-131**

- **Former Material:** Polyamide
- **Voice Coil Material:** Aluminium
- **Diaphragm Material:** Titanium
- **Surround / Edge:** Double Sinusoidal Roll
- **Termination:** Titanium
- **Magnet Material:** Ferrite
- **Connectors:** Push Button Spring Terminals

---

**Packing Carton**

- **Depth:** 1.73” / 44 mm
- **Overall Diameter:** 3.54” / 90 mm

---

**Shipping Weight**

- **2.16 lb / 0.98 kg**

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**Weight**

- **2 lb / 0.91 kg**

---

**Dimensions and Qty.**

- **Bolt Fixing Hole**
  - **Dimensions:** 3" PCD
  - **4x M6 on 76.2 mm**

---

**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
- **Packaging Carton:** (W) 95 (D) 95 (H) 71 mm
- **Bolt Fixing Hole Dimensions and Qty.:** Screw Fit

---

**IMPEDANCE**

- **Polarity**
  - Positive voltage at red/ positive terminal causes positive pressure at throat exit.

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**FREQUENCY RESPONSE DATA**

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**MATERIALS OF CONSTRUCTION**

**CD-131**

- **Former Material:** Polyamide
- **Voice Coil Material:** Aluminium
- **Diaphragm Material:** Titanium
- **Surround / Edge:** Double Sinusoidal Roll
- **Termination:** Titanium
- **Magnet Material:** Ferrite
- **Connectors:** Push Button Spring Terminals

**CD-130**

- **Former Material:** Polyamide
- **Voice Coil Material:** Aluminium
- **Diaphragm Material:** Titanium
- **Surround / Edge:** Double Sinusoidal Roll
- **Termination:** Titanium
- **Magnet Material:** Ferrite
- **Connectors:** Push Button Spring Terminals

---

**Packing Carton**

- **Depth:** 1.73” / 44 mm
- **Overall Diameter:** 3.54” / 90 mm

---

**Shipping Weight**

- **2.16 lb / 0.98 kg**

---

**Weight**

- **2 lb / 0.91 kg**

---

**Dimensions and Qty.**

- **Bolt Fixing Hole**
  - **Dimensions:** 3" PCD
  - **4x M6 on 76.2 mm**

---

**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
- **Packaging Carton:** (W) 95 (D) 95 (H) 71 mm
- **Bolt Fixing Hole Dimensions and Qty.:** Screw Fit

---

**IMPEDANCE**

- **Polarity**
  - Positive voltage at red/ positive terminal causes positive pressure at throat exit.

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**FREQUENCY RESPONSE DATA**

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**MATERIALS OF CONSTRUCTION**

**CD-130**

- **Former Material:** Polyamide
- **Voice Coil Material:** Aluminium
- **Diaphragm Material:** Titanium
- **Surround / Edge:** Double Sinusoidal Roll
- **Termination:** Titanium
- **Magnet Material:** Ferrite
- **Connectors:** Push Button Spring Terminals

**CD-131**

- **Former Material:** Polyamide
- **Voice Coil Material:** Aluminium
- **Diaphragm Material:** Titanium
- **Surround / Edge:** Double Sinusoidal Roll
- **Termination:** Titanium
- **Magnet Material:** Ferrite
- **Connectors:** Push Button Spring Terminals

---

**Packing Carton**

- **Depth:** 1.73” / 44 mm
- **Overall Diameter:** 3.54” / 90 mm

---

**Shipping Weight**

- **2.16 lb / 0.98 kg**

---

**Weight**

- **2 lb / 0.91 kg**

---

**Dimensions and Qty.**

- **Bolt Fixing Hole**
  - **Dimensions:** 3" PCD
  - **4x M6 on 76.2 mm**
**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

**MATERIALS OF CONSTRUCTION**

- **Former Material**: Polyamide
- **Voice Coil Material**: Aluminium
- **Diaphragm Material**: PAR
- **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.

**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

**IMPEDANCE**

- Frequency response measurement taken on axis with 1w signal at distance of 1m using custom horn with 80° x 60° coverage.

**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.