Challenger
SERIES

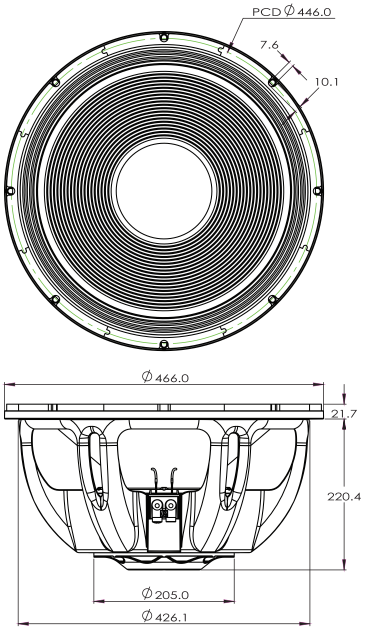
# C18-650EL v4

*Ferrite Magnet Die-cast Chassis Driver*

## Features

- 4” Very Large Format Voice Coil
- 4800 Watts Peak Power Handling
- Active Balanced Cooling Ferrite Magnetics
- Precision Rectangular Ribbon Wire Geometry
- Double silicone suspension Integrated
- Demodulation Rings
- Die Cast Aluminum Chassis

The P Audio C18-650EL V4 is a high output low frequency transducer. The C18-650EL V4 is an upgraded design that features many of P Audio’s new technologies and performance upgrades. The 18 inch (457mm) diameter piston will produce extremely high sound pressure levels at very low frequencies and is ideal for high level deep bass and sub woofer response in both live sound and recorded music venues. The transducer uses high energy ferrite magnetics to achieve a very high acoustic output to weight ratio. The C18-650EL V4 employs a large 4 inch (99.3 mm) diameter voice coil that provides an AES rated 2400 watts of continuous power handling and a full 4800 watts of peak rated power handling when sufficient amplifier headroom is available. The transducer is optimized for use in properly tuned vented enclosures and will provide maximal reliability when both a vented enclosure and active high pass filtering are employed. The C18-650EL V4 utilizes P Audio’s Auto Balanced Cooling (ABC) technology to not only improve transducer power handling and reliability but to also increase power compression performance by carefully balancing and directing airflow to critical areas. The voice coil design is a bobbin wound geometry with P Audio’s rectangular wire technology to improve conversion efficiency and provide a large crosssectional area for superior cooling. The transducer employs magnetic flux demodulation devices in the structure to increase fidelity and sonic accuracy. The system suspension has been designed specifically for high linear displacement and extended low frequency response. The double spider design further enhances system mechanical control and reliability. The cone has been treated with a conformal coating designed to provide additional mechanical damping and moisture resistance. The transducer chassis is a die cast aluminum design that insures a very high degree of structural integrity




## General Specifications

| | |
|---|---|
| Nominal Diameter | 457 mm (18 in) |
| Nominal Impedance | 8 Ω |
| Nominal Power Handling | 1200 W(AES) |
| Continuous Program Power Capacity | 2400 W |
| Sensitivity | 96 dB |
| Frequency Range | 35-1000 Hz |
| Voice Coil Diameter | 99.3 mm (4 in) |
| Voice Coil Material | Flat Aluminium Wire |
| Former Material | Glass fiber |
| Effective Piston Diameter | 395.9 mm (15.6 in) |
| Flux Density | 0.98 T |

## Physical Information

| | |
|---|---|
| Magnet Material | Ferrite |
| Basket Material | Aluminium |
| Surround Material | Cloth |
| Cone Material | Paper |
| Dust Cap Material | Paper |
| Spider Material | Double Silicone |
| Gasket | EVA |
| Pole Design | T-Pole |
| Woofer Cone Treatment | Treatment |

## Parameters

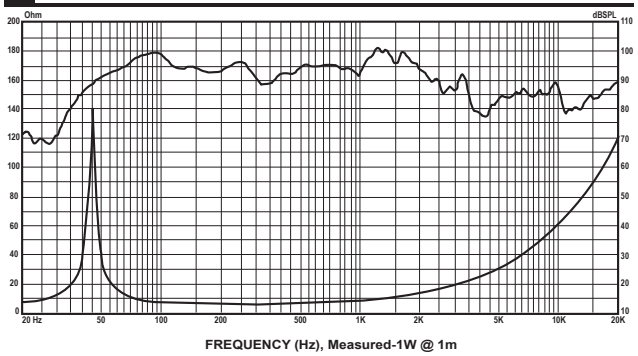
| | | | |
|---|---|---|---|
| Fs | 35 Hz | Vas | 127.044 lT |
| Re | 6.1 Ω | Sd | 1195 $cm^2$ |
| Qms | 15.784 | Le | 0.96 mH |
| Qes | 0.706 | Eff ($\eta_0$) | 1.56 % |
| Qts | 0.676 | Cms | 62.651 uM/N |
| BL | 22.122 Tm | Xmax | 7 mm |
| Mms | 201.172 g | Hag | 15 mm |
| Mmd | 177.419 g | Hvc | 29 mm |

## Mounting and Shipping Info

| | |
|---|---|
| Diameter | 466.0 mm (18.35 in) |
| Baffle Cutout Diameter | 427.0 mm (16.80 in) |
| Mounting Hole Diameter | 446.0 mm (17.56 in) |
| Bolt Circle Diameter | 8 x Ø (7.6 x 10) mm |
| Depth | 220 mm (8.6 in) |
| Flange and Gasket Thickness | 21.7 mm (0.8 in) |
| Net Weight | 14.18 kg |
| Shipping Units | 1 |
| Shipping Weight | 16.04 kg |
| Shipping Box | 500 x 500 x 287 mm |

**Recone Kit** Model Number

## Frequency response and Impedance curve




FREQUENCY (Hz), Measured-1W @ 1m

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