

Preliminary Information

colossus 12B



The Colossus 12B is intended for use as a high output bass driver in ported enclosures. The unit features a die cast aluminium chassis & glass fibre composite 3 inch voice coil. The carbon and Kevlar reinforced cone membrane is much stiffer and stronger than conventional paper pulp alternatives. This allows the driver 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 400 Watts (A.E.S continuous). The driver exhibits an average sensitivity of 95 dB and is best used in ported enclosures of 40 to 100 litres.

Electro mechanical specifications

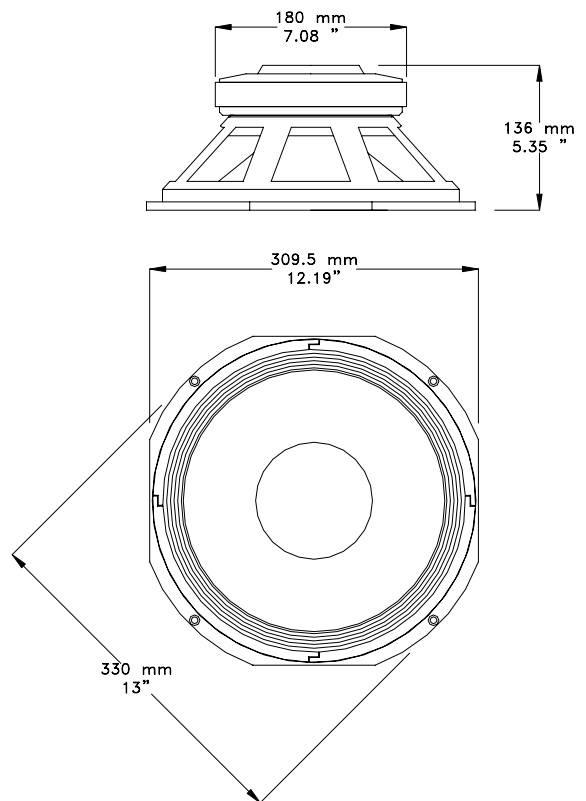
Nominal Chassis Diameter	12 inch/305 mm
Impedance	8 Ω
Power Handling	400 (A.E.S.) ₁
Usable Frequency Range (-6 dB)	35 Hz-1.5 kHz
Average Sensitivity (in above range) 1W/1m	95 dB
Resonance	45 Hz
Moving Mass inc. Air Load	80 grams
BL Product (Newtons/amp)	18.45
Minimum Impedance (Z _{min})	6 Ω
Effective Piston Diameter	10.24 inch/260 mm
Flux Density	1 Tesla
Magnetic Gap Depth	0.31 inch/8 mm
Coil Winding Height	0.95 inch/24 mm
Magnet Weight	70 oz/2.0 kg
Maximum Cone Displacement	0.70 inch/18 mm
Voice Coil Diameter	3.0 inch/77 mm

Construction materials

Coil Former	Fibreglass
Voice Coil Material	Copper
Magnet	Ferrite
Chassis	Die Cast Aluminium
Cone Curvilinear	Carbon & Kevlar Reinforced Paper
Surround/Edge Termination	Polyvinyl Damped Multi Roll Linen
Dust Dome	Polyvinyl Damped Solid Paper
Connectors	Blade Solder Terminals
Polarity	Positive voltage at red terminal causes forward motion of cone

Mounting information

Overall Diameter	13 inch/330.2 mm
Width Across Flats	12.19 inch/309.5 mm
Flange Thickness	0.305 inch/7.8 mm
Baffle Hole Diameter, Front Mount	11.03 inch/281 mm
Baffle Hole Diameter, Rear Mount	10.13 inch/257 mm
Gasket Supplied	Front & Rear
Fixing Holes	4 x 0.218 inch diam on 12.5 PCD
	4 x 5.5 mm diam on 317.5 PCD
Depth	5.35 inch/136 mm
Weight	14.3 lb/6.5 kg
Recommended Enclosure Volume	1.40-3.53 cu ft/40-100 litres
Volume Displaced by Driver	0.10 cu ft/2.8 litres
Shipping Weight	17.4 lb/7.9 kg
Packing Carton Dimensions	340 x 340 x 222 mm



Thiele-Small parameters

Resonant Frequency f _s	47 Hz
D.C Resistance R _e	4.9 Ω
Q _{ts}	0.336
Q _{es}	0.345
Q _{ms}	12.55
M _{ms} (grams)	80
C _{ms} (microns per Newton)	143
BL Product	18.45 Tesla metres
V _{as}	56 litres
Reference Efficiency no	1.65 %
Piston Area S _d	0.053 M ²
X _{max}	8.0 mm