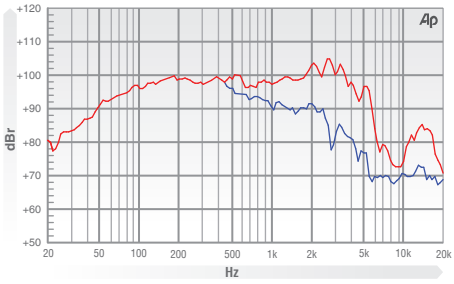
COLOSSUS 12MBN

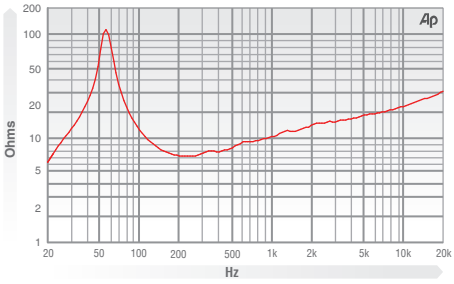
The Colossus 12MBN is intended for use as a very high-output bass mid driver in two-way ported enclosures and also as a bass driver in multi way systems. The unit features a 3 inch 'sandwich' inside and outside windings voice coil driven by a Neodymium non inductive motor system which dramatically reduces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

FREQUENCY RESPONSE DATA*

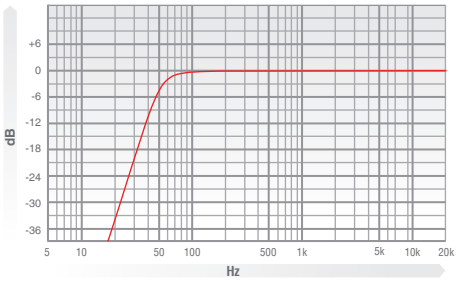


* Half space response measured in a 975 litre sealed box

IMPEDANCE



PREDICTED BASS RESPONSE



** Normalized bass response in 50 litre tuned to 50Hz

ELECTRO ACOUSTIC SPECIFICATIONS

Nominal Chassis Diameter	12"
Impedance	8 Ω
Power Handling	500 w (A.E.S.)
Peak Power (6dB Crest Factor)	2000 w (A.E.S.)
Usable Frequency Range -6dB	45 Hz - 4 kHz
Sensitivity (1 w - 1 m)	98.5 dB
Moving Mass inc. Air Load	58.9 grams
Minimum Impedance Zmin	7 Ω
Effective Piston Diameter	10.24" / 260 mm
Peak Displacement Volume of Cone Vd	0.307 litres
Magnetic Gap Depth	0.39" / 10 mm
Flux Density	1.1 Tesla
Coil Winding Height	0.70" / 18 mm
Voice Coil Diameter	2.5" / 63.5 mm

THIELE SMALL PARAMETERS

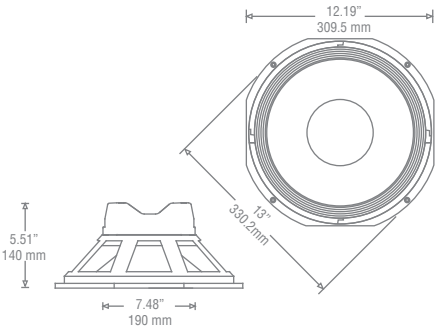
FS Hz	55 Hz
RE Ohms	5.5 Ω
Qms	4.13
Qes	0.438
Qts	0.396
Vas Ltr	63
Vd litres	0.307
CMS (mm/N)	0.142
BL T/m	16
Mms (grms)	58.9
Xmax (mm)	5.5
Sd (cm²)	558.9
Efficiency %	2.3
Le (1k Hz)	1.39 mH

MATERIALS OF CONSTRUCTION

Former Material	Glass Fibre
Voice Coil	Aluminium 'sandwich' inside and outside windings
Magnet Material	Neodymium
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

MOUNTING / SHIPPING INFORMATION

Overall Diameter	13" / 330.2 mm
Width Across Flats	12.19" / 309.5 mm
Flange Height	0.305" / 7.8 mm
Baffle Hole Diameter F/M	11.03" / 281 mm
Baffle Hole Diameter R/M	10.13" / 257 mm
Gasket Supplied	Front & Rear
Fixing Holes	4x 0.218" diam on 12.5 PCD 4x 5.5 mm diam on 317.5 PCD
Depth	5.51" / 140 mm
Weight	9.47 lb / 4.3 kg
Recommended Enclosure Volume	0.88 - 2.83 cu ft / 25 - 80 litres
Shipping Weight	11.68 lb / 5.3 kg
Packing Carton Dimensions	340 x 340 x 222 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 50 Hz and 500 kHz. 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.