

THE NEODYMIUM SERIES COLOSSUS 12MBN

BASS / MID RANGE DRIVER



12" / 304.8 mm
CHASSIS DIAMETER

500 w (A.E.S.)
POWER HANDLING

98.5 dB
SENSITIVITY (1w / 1m)

40 Hz - 4 kHz
FREQUENCY RESPONSE

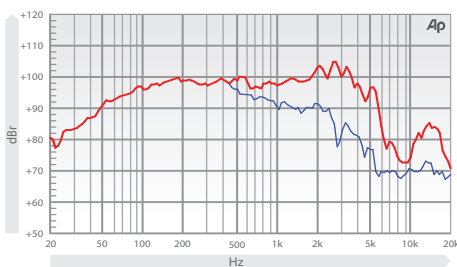
3.0" / 76.2 mm
ALUMINIUM - INSIDE / OUTSIDE
WINDINGS VOICE COIL

Designed for use in 25-80
litre ported enclosures

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

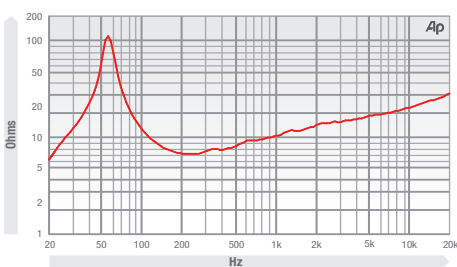
- Lightweight neodymium magnet assembly.
- Weighs only 4.3 kg.
- High SPL.
- Fast and dynamic driver producing punchy bass.
- Extended frequency range.
- Aluminium demodulation ring.
- Copper Shorting Ring.
- UK manufactured cone with optimised pulp offering increased strength, durability and performance.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

FREQUENCY RESPONSE DATA*

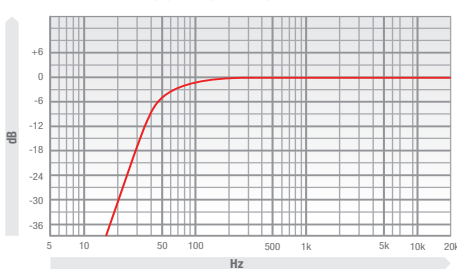


* Half space response measured in a 975 litre sealed box.

IMPEDANCE



PREDICTED BASS RESPONSE



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

ELECTRO ACOUSTIC SPECIFICATIONS

Nominal Chassis Diameter	12" / 304.8 mm
Impedance	8 Ω
Power Handling	500 w (A.E.S.)
Peak Power (6dB Crest Factor)	2000 w (A.E.S.)
Usable Frequency Range -6dB	40 Hz - 4 kHz
Sensitivity (1 w - 1 m)	98.5 dB
Moving Mass inc. Air Load	59 grams
Minimum Impedance Zmin	7.5 Ω
Effective Piston Diameter	10.24" / 260.09 mm
Peak Displacement Volume of Cone Vd	0.29 litres
Magnetic Gap Depth	0.39" / 10 mm
Flux Density	1.1 Tesla
Coil Winding Height	0.70" / 18 mm
Voice Coil Diameter	3.0" / 76.2 mm

MOUNTING / SHIPPING INFORMATION

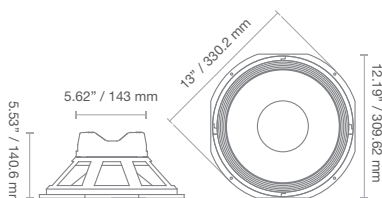
Overall Diameter	13" / 330.2 mm
Width Across Flats	12.19" / 309.62 mm
Flange Height	0.305" / 7.8 mm
Baffle Hole Diameter F/M	11.03" / 280.16 mm
Baffle Hole Diameter R/M	10.13" / 257.30 mm
Gasket Supplied	Front & Rear
Fixing Holes	4x 0.218" diam on 12.5 PCD 4x 5.5 mm diam on 317.5 PCD
Depth	5.53" / 140.6 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

THIELE SMALL PARAMETERS

FS Hz	55 Hz
RE Ohms	5.5 Ω
Qms	4.13
Qes	0.438
Qts	0.396
Vas Ltr	56 litres
Vd litres	0.296 litres
CMS (mm/N)	0.142 mm/N
BL T/m	16.6 T/m
Mms (grms)	59 grams
Xmax (mm)	5.5 mm
Sd (cm²)	530 cm²
Efficiency %	2.30%
Le (1k Hz)	1.39 mH

MATERIALS OF CONSTRUCTION

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



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