Colossus 18-1000 Preliminary Specifications

The Colossus 18-1000 is intended for use as a high-output sub-bass driver either singly or in multiway systems. It is suitable for loading in a variety of enclosure types since it allows enclosure designers considerably more freedom with specialised loading techniques without having to make allowances for physical characteristics or power handling limitations. The unit features a 4-inch 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 curvilinear Polycellulose cone is reinforced with high strength Fibrulated Nylon 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 heatsink coupled with increased motor system and voice coil venting. These measures effectively remove heat from the voice coil resulting in extremely low-power compression. The Colossus 18-1000 is designed for use in 100 to 250 litre ported enclosures.

Electro Mechanical Specifications

Nominal Chassis Diameter	18 inch/457 mm
Impedance	8 Ω[1]
Power Handling	1000 (A.E.S.)[2]
Maximum Output Continuous/Peak	120/126 dB
Usable Frequency Range (-6 dB)	27 Hz-1 kHz
Average Sensitivity (in above range) 1 W/1 m	98 dB
Resonance	32 Hz
Moving Mass inc. Air Load	144 grams
BL Product (Newtons/amp)	20.6
Minimum Impedance (Zmin)	7 Ω
Effective Piston Diameter	386 mm
Flux Density	1.0 Tesla
Magnetic Gap Depth	0.43 inch/11 mm
Coil Winding Height	0.98 inch/25 mm
Voice Coil Length	118 feet/36 mMagnet Weight 97 oz
Voice Coil Diameter	4.0 inch/102 mm

Thiele & Small Parameters

Resonant Frequency fs	32 Hz
D.C Resistance Re	5.8 Ω
Qts	0.363
Qes	0.395
Qms	4.567
Mms (grams)	144
Cms (microns per Newton)	166
BL Product	20.62 Tesla metres
Vas	323.1 litres
Piston Area Sd	1178 cm2
Xmax	12.75 mm

Mounting Information

Overall Diameter	19.1"/485 mm
Width Across Flats	18"/457 mm
Flange Thickness	0.465"/11.8 mm
Baffle Hole Diameter, Front Mount	16.53"/420 mm
Baffle Hole Diameter, Rear Mount	16.33"/414 mm
Gasket Supplied	Front & Rear
Fixing Holes	8 x 7 diam on 468 PCD 8 x 7 diam on 438.15 PCD
Depth	8.5"/205 mm
Weight	32.00 lb/14.5 kg
Recommended Enclosure Volume	3.5-8.8 cu ft/100-250 litres
Volume Displaced by Driver	0.269 cu ft/7.6 litres
Shipping Weight	36.37 lb/16.5 kg
Packing Carton Dimensions	485 x 485 x 276 mm

Materials of Construction

Coil Former	Fibreglass
Voice Coil	Copper
Magnet Material	Ferrite
Chassis	Die-cast Aluminium
Cone	Curvilinear Polycellulose
Surround/Edge Termination	Polyvinyl Damped Multi Roll HG poly/cotton
Dust Dome	Solid Paper
Connectors	Push-button Spring Terminals
Polarity	Positive Voltage at Red Terminal Causes Forward Motion of Cone

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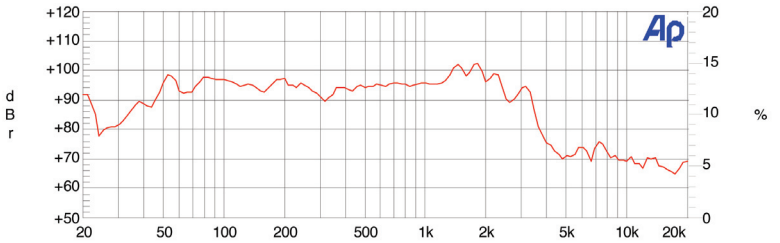
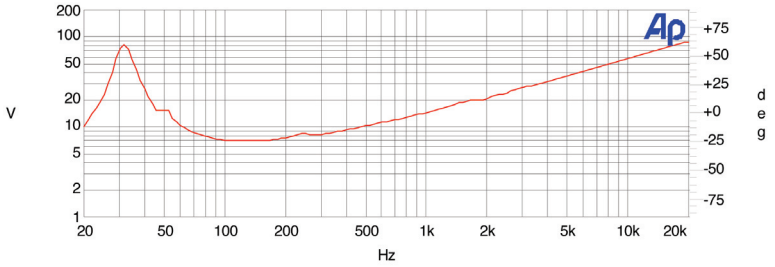
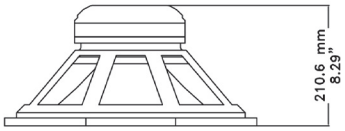
Response Detail

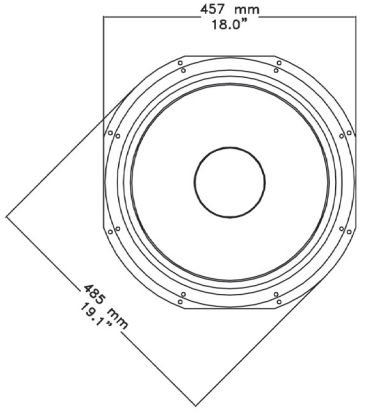


Half space response measured in a 975 Litre sealed chamber

Impedance Detail







1 Please inquire 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.