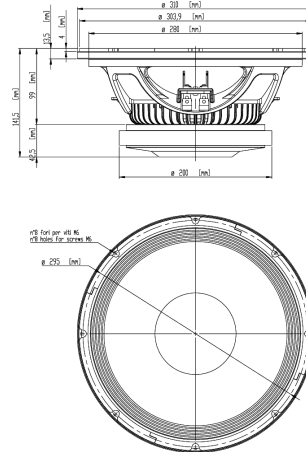
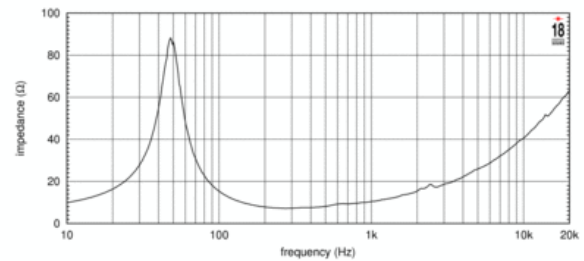
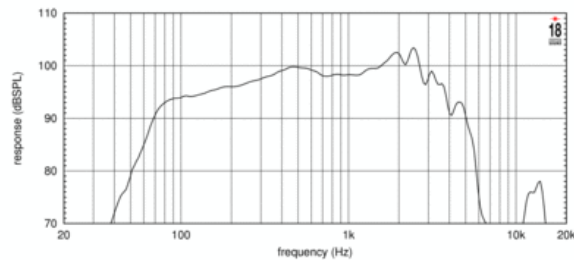




- 98 dB SPL 1W / 1m sensitivity
- 65 mm (2.5 in) Edgewound Aluminum Voice coil (EWAL)
- 800W program power handling
- Improved heat dissipation via proprietary basket design
- Weather protected cone and plates for outdoor usage
- Ideal for high quality two way and stage monitor applications

The 12MB650 is a high sensitivity midbass driver with 800W program power handling capabilities. The 12MB650 can be used as either a bass/mid driver in compact 2-way reflex enclosures or in high quality stage monitor applications. Eighteen Sound engineers have obtained the best possible results with today's available materials in terms of clean and undistorted LF reproduction at a ultra high SPL, with the lowest possible power compression figure. Its curvilinear paper cone made from a special high strength wood pulp, has been designed to achieve the best possible linearity within its intended frequency range and to control bell-mode resonances around the cone circumference. The cone is carried by a triple roll suspension formed of a linen-like material, which is more resistant to aging and fatigue than traditional materials. The 65 mm (2.5 in) diameter state-of-the-art voice coil is made with edgewound aluminum wire wound over a high strength fiberglass former. This results in an extremely linear motor assembly with a reduced tendency for eccentric behavior when driven hard. Voice coil cooling has been achieved by incorporating airways between the chassis back plate and the top plate of the magnet, allowing heated air from the voice coil and gap to be channeled away and dissipated by the chassis basket. Special attention was given to the optimization of air flow into the gap without introducing audible noise. A special low-density material air diffractor placed into the heatsink acts as a cooling system, increasing the power handling capability and lowering the power compression figure. The magnetic structure has been optimized using FEA CAD resource, maximizing the flux density in the voice coil gap. Due to the increasing use of high power audio systems at outdoor events or in marine environments, the ability to perform properly under inclement weather conditions is a key feature in Eighteen Sound philosophy. Hence, an exclusive treatment has been applied to the cone giving it water repellent properties. In addition, another special treatment has been applied to the top and back plates making the transducer far more resistant to the corrosive effects of salts and oxidization.



SPECIFICATIONS

Nominal Diameter	300 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	7.2 Ω
Nominal Power Handling ¹	400 W
Continuous Power Handling ²	800 W
Sensitivity ³	98.0 dB
Frequency Range	45 - 5000 Hz
Voice Coil Diameter	65 mm (2.5 in)
Winding Material	aluminum

DESIGN

Surround Shape	Triple roll
Cone Shape	Curvilinear
Magnet Material	Ferrite
Woofer Cone Treatment	Weather protected
Recommended Enclosure	100.0 dm ³ (3.53 ft ³)
Recommended Tuning	53 Hz

PARAMETERS⁴

Resonance Frequency	48 Hz
Re	6.0 Ω
Qes	0.24
Qms	3.2
Qts	0.23
Vas	90.0 dm ³ (3.18 ft ³)
Sd	531.0 cm ² (82.31 in ²)
Xmax	5.5 mm
Mms	48.0 g
Bl	19.0 Txm
Le	0.83 mH
EBP	200 Hz

MOUNTING AND SHIPPING INFO

Overall Diameter	310 mm (12.2 in)
Bolt Circle Diameter	295 mm (11.61 in)
Baffle Cutout Diameter	280.0 mm (11.02 in)
Depth	143 mm (5.63 in)
Flange and Gasket Thickness	14 mm (0.55 in)
Net Weight	6.8 kg (14.99 lb)
Shipping Weight	7.5 kg (lb)
Shipping Box	332 x 332 x 184 mm (13.07x13.07x7.24 in)

1. 2 hours test made with continuous pink noise signal within the range Fs-10Fs. Power calculated on rated minimum impedance. Loudspeaker in free air.
2. Power on Continuous Program is defined as 3 dB greater than the Nominal rating.
3. Applied RMS Voltage is set to 2.83 V for 8 ohms Nominal Impedance.
4. Thiele-Small parameters are measured after a high level 20 Hz sine wave preconditioning test.