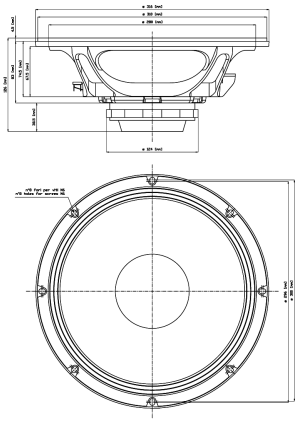
12NMB420 8Ω

LF drivers - 12.0 Inches



- 100,5 dB SPL 1W / 1m average sensitivity
- 65 mm (2,5 in) Interleaved Sandwich Voice coil (ISV)
- 300 W AES power handling
- Single Demodulating Ring (SDR) for lower distortion
- External neodymium magnet assembly
- Weather protected cone and plates for outdoor usage
- Specially designed for compact two way systems

The 12NMB420 is a 12 inch neodymium mid-bass transducer designed for professional monitoring and sound reinforcement. At the heart of this speaker is a carefully engineered drive system, designed to assure linear, low-distortion output, high power capability and efficient heat transfer. The most extended bass, lowest distortion and best control is usually realized in properly designed vented enclosures. In such designs, the vent, or port, actually provides the lowest octave of output. The excursion of the 12NMB420 at these frequencies is much reduced compared to sealed enclosures, directly reducing harmonic distortion and the possibility of speaker bottoming. Typical vented enclosure sizes range from 40lit up with tunings from 50 to 60Hz. Low frequency equalization is suggested and normally added, in order to improve the bass output if the system will work without subwoofer. The recommended amplifier size ranges from 250 up to 500W. The onboard copper sleeve positioned in the gap and coupled with SDR (Single Demodulating Ring) results in optimum balance for reproducing instantaneous peaks on mid frequencies, reducing intermodulation distortion. The external magnet typology neodymium magnet assembly assures high flux concentration, low power compression and excellent heat exchange since the external magnet configuration is considerably more efficient than the traditional under - pole magnet topology. This allows to obtain high levels of force factor and power handling with a power to weight ratio at the upper level. The high quality paper cone has a smooth, curvilinear profile design that eliminates bell-mode resonances within the intended frequency range. This is carried by a specially treated and damped double triple-roll linen suspension designed to control excursion maintaining the piston action linearity. The 12NMB420 employs a 64mm Interleaved Sandwich Voice coil (ISV), in which a high strength fiberglass former carries windings on both the outer and inner surfaces to achieve a mass balanced coil, resulting in an extremely linear motor assembly with reduced tendency to eccentric behavior when driven hard.

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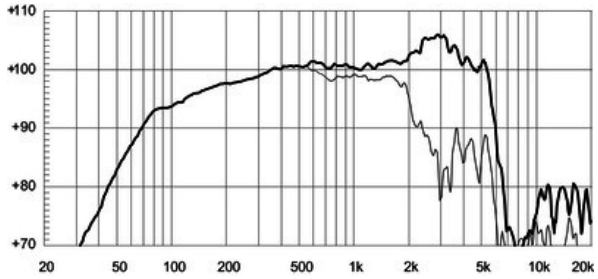

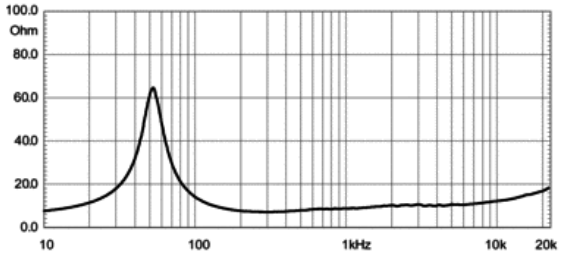

SPECIFICATIONS

Nominal Diameter	300 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	6.9 Ω
Nominal Power Handling[1]	300 W
Continuous Power Handling[2]	450 W
Sensitivity[3]	100.5 dB
Frequency Range	55 - 6000 Hz
Voice Coil Diameter	65 mm (2.5 in)
Winding Material	aluminum

DESIGN

Surround Shape	Triple roll
Cone Shape	Curvilinear
Magnet Material	Neo
Woofer Cone Treatment	Weather protected
Recommended Enclosure	70.0 dm^3 (2.47 ft^3)
Recommended Tuning	58 Hz

PARAMETERS[4]

Resonance Frequency	53 Hz
Re	5.2 Ω
Qes	0.3
Qms	3.6
Qts	0.28
Vas	105.0 dm^3 (3.71 ft^3)
Sd	531.0 cm^2 (82.31 in^2)
Xmax	4.0 mm
Mms	33.5 g
Bl	13.9 Txm
Le	0.2 mH
EBP	176 Hz

MOUNTING AND SHIPPING INFO

Overall Diameter	315 mm (12.4 in)
Bolt Circle Diameter	296 mm (11.65 in)
Baffle Cutout Diameter	282.0 mm (11.1 in)
Depth	127 mm (5.0 in)
Flange and Gasket Thickness	11 mm (0.43 in)
Net Weight	3.0 kg (6.61 lb)
Shipping Weight	3.75 kg (8.27 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.

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