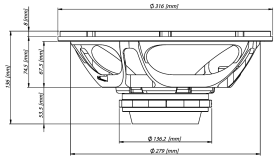
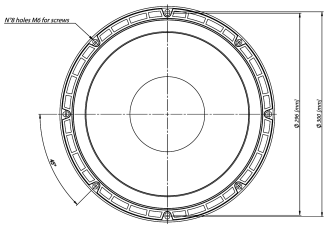
12NW530 8Ω

LF drivers - 12.0 Inches





- 96 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) ISV voice coil
- 500 W AES power handling
- External neodymium magnet assembly
- Double Silicon Spider (DSS) for improved excursion control and linearity
- Single Demodulating Ring (SDR) for lower distortion
- High excursion damped rubber roll surround
- Specific for compact subwoofer usage

The 12NW530 low frequency neodymium transducer has been specifically developed for high power, low distortion, very compact subwoofer applications. The transducer finds its main application on compact vented subwoofers as small as 40 liters. The neodymium magnet assembly developed by Eighteen Sound engineers assures high flux concentration, low power compression and excellent heat exchange, since the external magnet configuration is considerably more efficient than traditional under-pole magnet topology. This results in high levels of force factor and power handling with an optimum power to weight ratio. A state-of-the-art Interleaved Sandwich Voice coil (ISV) copper wire voice coil provides high levels of thermal stability and durability. The transducer incorporates Eighteen Sound DSS technology (Double Silicon Spider), in combination with a single roll highly damped surround, that has been designed to provide symmetric large signal behaviour throughout the whole working range, providing low harmonic distortion at different excitation levels. The already low distortion and sound quality are further improved by properly positioned Single Demodulating Ring (SDR), that flattens impedance and phase curves helping a constant power transfer from the amplifier. The deep profile curvilinear cone, created from a special high strength wood pulp, has been designed to achieve the best possible linearity. The humidity repellent cone treatment significantly dampens bell mode resonances. A special coating applied to both the top and back plates makes the 12NW530 far more resistant to the corrosive effects of salts and oxidization.

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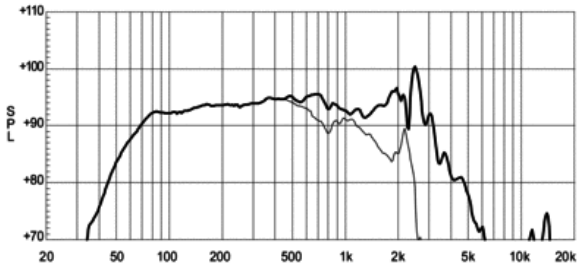

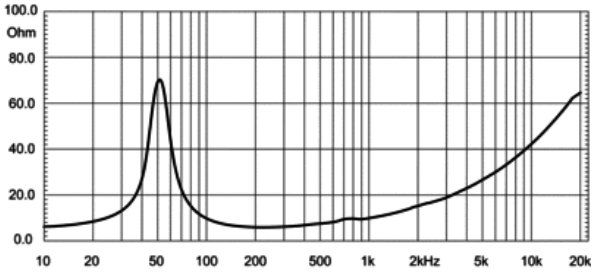

SPECIFICATIONS

Nominal Diameter	300 mm (in)
Nominal Impedance	8 Ω
Minimum Impedance	6.3 Ω
Nominal Power Handling[1]	500 W
Continuous Power Handling[2]	800 W
Sensitivity[3]	96.0 dB
Frequency Range	48 - 3200 Hz
Voice Coil Diameter	75 mm (3.0 in)
Winding Material	copper

DESIGN

Surround Shape	Single roll - Rubber
Cone Shape	Curvilinear
Magnet Material	Neo
Woofer Cone Treatment	Water,UV repellent
Recommended Enclosure	50.0 dm^3 (1.77 ft^3)
Recommended Tuning	55 Hz

PARAMETERS[4]

Resonance Frequency	55 Hz
Re	4.9 Ω
Qes	0.38
Qms	9.7
Qts	0.37
Vas	36.0 dm^3 (1.27 ft^3)
Sd	530.0 cm^2 (82.15 in^2)
Xmax	8.0 mm
Mms	93.0 g
Bl	19.7 Txm
Le	0.9 mH
EBP	144 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	136 mm (5.35 in)
Flange and Gasket Thickness	11 mm (0.43 in)
Net Weight	4.0 kg (8.82 lb)
Shipping Weight	4.8 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.

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