

12" | 12XR

Neodymium Woofer



Key features:

- VERY HIGH CONE EXCURSION, WITH VERY LOW THD
- CAPABLE TO HANDLE VERY LOW FREQUENCIES
- HIGH POWER HANDLING, COPPER CAP, STITCHED TINSEL WIRES

Design notes:

The 12XR was designed around our new approach to the magnetic system. Our XR series speaker motors were designed so the voice coil winding doesn't leave the gap for most of the cone excursion. The desired cone excursion is carefully evaluated and incorporated into the design. The 12XR allows the designer to design sub-woofers with very large cone excursions, without the otherwise present harmonic distortion due to the voice coil leaving the magnetic gap. If you like the sound of a clean, undistorted bass, then the 12XR is the right transducer for

your application.

Motor Design

The magnetic design incorporates large neodymium magnets placed along the voice coil winding. This has allowed us to push the cone excursion to 28mm peak to peak. Unique gap venting ensures good air circulation and greatly improves the reliability of this driver. We have also developed a new technique for manufacturing deep copper caps.

The design further sports a large spider on top of which is hot-pressed tinsel wires. Cone is carbon fiber reinforced, with a lightweight foamed rubber surround. The suspension was designed for large excursions.

Specifications:

General specs

| | |
|-------------------|--------|
| Nominal Diameter: | 12 in. |
| Rated Impedance: | 8 Ohm |

Power handling

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|----------------|------------|
| AES Power: | 500 Watts |
| Program Power: | 1000 Watts |
| Peak Power: | 2000 Watts |

Voice Coil

| | |
|-----------------|---------|
| Diameter: | 2.5 in. |
| Winding wire: | Copper |
| Former: | TIL |
| Winding height: | 17 mm |

T/S Parameters

| | |
|---------------------|---------------------|
| Resonant frequency: | 35 Hz |
| Re: | 5,7 Ohm |
| Qes: | 0,73 |
| Qms: | 10,5 |
| Qts: | 0,68 |
| Vas: | 89,7 L |
| Sd: | 531 cm ² |
| Sensitivity: | 90,75 dB |
| Mms: | 88,3 g |
| Bl: | 12,3 |
| Le: | 0,24 mH |

Design details

| | |
|--|---------------|
| Surround Material: | Foam |
| Cone material: | Paper with CF |
| Spider: | Single nomex |
| Plate thickness: | 31 mm |
| Peak to peak linear cone Displacement: | 28 mm |
| Overall diameter: | 320 mm |
| Bolt circle diameter: | 299 mm |
| Baffle cutout dia.: | 281 mm |
| Number of mounting holes: | 8 |
| Depth (flange to rear): | 172 mm |
| Net weight: | 5,7 kg |

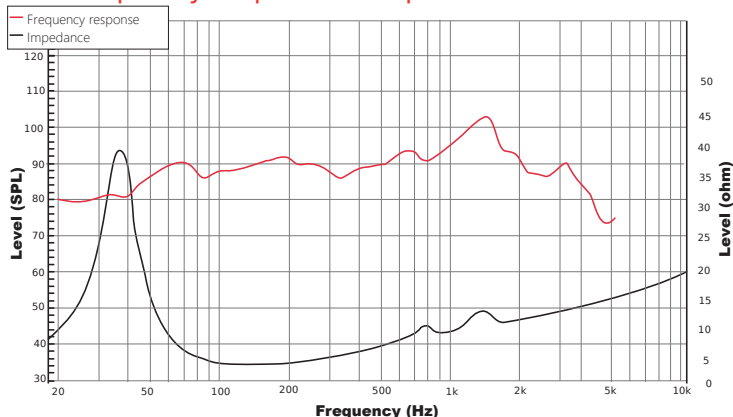
Ordering codes:

| | |
|-----------------|-----------|
| 4 ohm version: | 12XR4-270 |
| 8 ohm version: | 12XR8-270 |
| 16 ohm version: | -NA- |

Recone kits:

| | |
|-----------------|-------------|
| 4 ohm version: | RC12XR4-270 |
| 8 ohm version: | RC12XR8-270 |
| 16 ohm version: | -NA- |

Frequency response & Impedance



2D drawing

