12" 12XR

Woofer

REDCATT

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,Äôt 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"
Rated Impedance:	8 ohm

Power handling	
AES Power:	500 watts
Program Power:	1000 watts
Peak Power:	2000 watts

Voice Coil	
Diameter:	2.5 in.
Winding wire:	Copper
Former:	Glass Fiber
Winding height:	12.6 mm

T/S Parameters	
Resonant frequency:	35 Hz
Re:	5.7 ohm
Qes:	0.73
Qms:	10.5
Qts:	0.68
Vas:	89.7 liters
Sd:	531 cm2
Sensitivity:	91 dB
Mms:	88.3 grams
Bl:	12.3
Le:	0.24 mH

Design details	
Surround Material:	Rubber
Cone material:	Paper
Spider:	Nomex
Plate thickness:	31 mm
Peak to peak linear cone displacement	28.2 mm
Overall diameter:	320 mm
Bolt circle diameter:	299 mm
Baffle cutout dia.:	281 mm
Number of mounting holes:	8
Depth (flange to rear):	172.5 mm
Net weight:	5.7kg

Ordering codes:

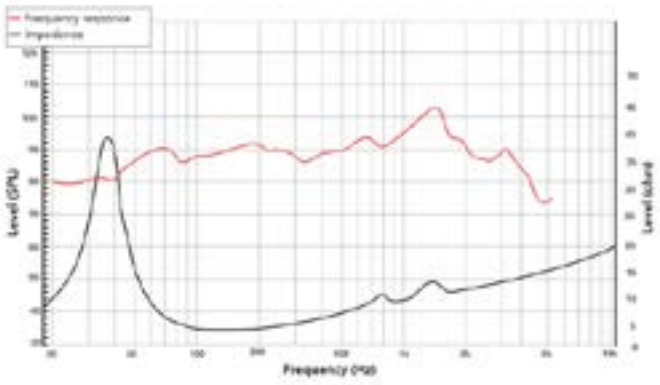
12XR-X8 ohm-270

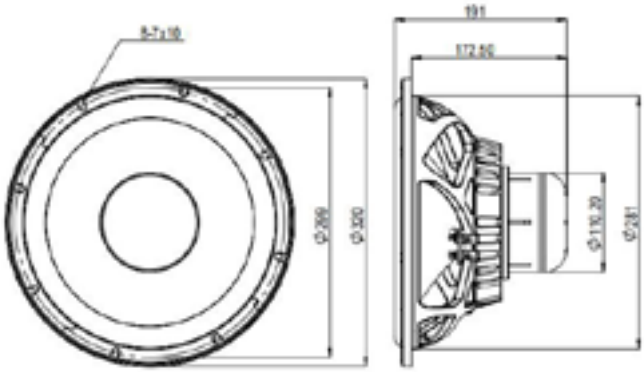
Recone kits:

RC12XRX-270

In many cases REDCATT produces 4 ohms, 8 ohms and 16 ohms versions. Indicate what impedance do you need in your request.

Frequency response & Impedance



Frequency response measured on IAC baffle

2D drawing