

# XD120

## Constant Coverage Horn

### Key Features

- 108 dB SPL 1W / 1m average sensitivity
- 1 inch HD driver exit throat
- 1 inch voice coil diameter
- 50 Watt program power handling
- 90° x 60° Coverage
- Constant Directivity Pattern
- Unique Eighteen Sound elliptical shape horn
- Usable in two way or multiway systems



### General Description

The XD120 has been designed for 2-way or 3-way systems. It delivers an unmatched combination of extended linear frequency response and very high efficiency.

The diaphragm and its polyester surround allow the best movement and stress control; the special radial ribs increase stiffness avoiding uncontrolled vibration modes in the usable frequency range.

An edgewound aluminum voice coil wound on proprietary treated nomex completes the diaphragm assembly. Thanks to its physical properties, the proprietary treated Nomex former shows 30% higher value of tensile elongation at working operative temperature (200°C) when compared to Kapton. This plus is capable to keep properly energy transfer control to the dome in real working conditions. Moreover, this proprietary former material is suitable to work also in higher moisture contents environments.

The polypropylene phase plug is the result of a meticulous design exercise. Its shape assures the correct acoustic impedance of the radiating dome reducing distortion levels across a very wide range of frequencies. The final result is a smooth coherent wavefront in the horn entrance, high thermal stability and manufacturing consistency.

The XD120 compact size and lightweight ceramic magnet assembly is designed to obtain 16KGauss in the gap.

The XD120 high-pressure die-cast polyurethane foam horn maintains constant nominal 90° Horizontal x 60° Vertical pattern control, providing consistent on-axis and off-axis frequency response from 2kHz to 16kHz in the horizontal plane and from 2,5kHz to 16kHz in the vertical plane. Horn directivity is constant from 2,5kHz. Computer Aided Finite Element Analysis and extensive testing were used to obtain the horn contours. The horn is designed to be free of resonance and vibrations assuring maximum strength.

042108XD10 8ohm

FERRITE HF DRIVERS

# XD120

Constant Coverage Horn

## GENERAL SPECIFICATIONS

THROAT DIAMETER	25,4 mm (1 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	5,7 Ohm
MINIMUM IMPEDANCE	6,6 ohms at 6500 Hz
AES POWER (1)	25 W above 2,5 kHz
CONTINUOUS PROGRAM POWER	50 W above 2,5 kHz
SENSITIVITY(1W@1M) (3)	108 dB
FREQUENCY RANGE	2 kHz ÷ 18 kHz
RECOMM. XOVER FREQUENCY	3000 Hz (12dB/oct slope)
NOMINAL COVERAGE: HORIZONTAL	90°
NOMINAL COVERAGE: VERTICAL	60°
DIAPHRAGM MATERIAL	Polyester
VOICE COIL DIAMETER	25,4 mm (1 in)
VOICE COIL WINDING MATERIAL	Edge-wound aluminum
MAGNET MATERIAL	Ceramic
FLUX DENSITY	1,65 T
BL FACTOR	3,5 N/A
POLARITY	Positive voltage on red terminal gives positive pressure in the throat

## MOUNTING INFORMATION

Mouth Height	150 mm (5,9 in)
Mouth Width	200 mm (7,9 in)
Depth	149 mm (5,87 in)
Mouth mounting dimension	4 Ø 6 holes on the edge of rectangle with 165 mm x 115 mm sides
HF unit diameter	87 mm (3,4 in)
Net weight	1,3 Kg (2,87 lb)
Shipping weight	1,6 Kg (3,53 lb)
CardBoard Packaging dimensions	205x152x155 mm(8,1x6x6,1 in)

XD120 MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1M DISTANCE ON AXIS FROM THE MOUTH OF HORN.



FREE AIR IMPEDANCE MAGNITUDE CURVE.



### NOTES

- (1) AES power rating is tested with a pink noise input having a 6 dB crest factor for two hours duration within the specified range. Power calculated on minimum impedance.
- (2) Continuous program power is defined as 3dB greater than AES and is a conservative expression of the transducer ability to handle music program material
- (3) Sensitivity is measured on 1 W input on rated impedance at 1 m on axis from the mouth of the horn averaged in the 3 kHz octave band

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.