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PROFESSIONAL LOUDSPEAKERS
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# 15XA38Nd
## COAXIAL TRANSDUCER

## KEY FEATURES

- High power handling: 350 / 90 $W_{AES}$ (LF / HF)
- High sensitivity: 99 / 105 dB (LF / HF)
- Low resonant frequency: 38 Hz
- Low weight and compact common magnet system design
- Demodulating rings in LF and HF units
- Composite Titanium / Polyester HF diaphragm
- 80º coverage horn for HF dispersion control



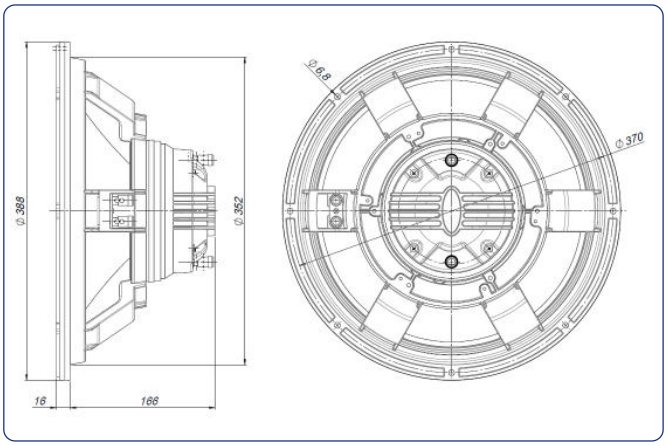
## TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| **Nominal diameter** | 380 mm | 15 in |
| **Rated impedance** (LF/HF) | | 8 / 16 Ω |
| **Minimum impedance** (LF/HF) | | 8,4 / 12,6 Ω |
| **Power capacity*** (LF/HF) | | 350 / 90 $W_{AES}$ |
| **Program power** (LF/HF) | | 700 / 180 W |
| **Sensitivity** (LF/HF**) | 99 dB | 1W / 1m @ $Z_N$ |
| | 105 dB | 1W / 1m @ $Z_N$ |
| **Frequency range** | | 40 - 20.000 Hz |
| **Recom. HF crossover** | | 1,5 kHz or higher (12 dB/oct min slope) |
| **Voice coil diameter** (LF/HF) | 101,6 mm | 4 in |
| | 72,4 mm | 2,85 in |
| **BL factor** | | 20,4 N/A |
| **Moving mass** | | 0,082 kg |
| **Voice coil length** | | 16 mm |
| **Air gap height** | | 9 mm |
| **$X_{damage}$ (peak to peak)** | | 28 mm |

## THIELE-SMALL PARAMETERS***

| | |
|---|---|
| **Resonant frequency, $f_s$** | 38 Hz |
| **D.C. Voice coil resistance, $R_e$** | 6,7 Ω |
| **Mechanical Quality Factor, $Q_{ms}$** | 6,4 |
| **Electrical Quality Factor, $Q_{es}$** | 0,31 |
| **Total Quality Factor, $Q_{ts}$** | 0,30 |
| **Equivalent Air Volume to $C_{ms}$, $V_{as}$** | 238 l |
| **Mechanical Compliance, $C_{ms}$** | 217 μm / N |
| **Mechanical Resistance, $R_{ms}$** | 3 kg / s |
| **Efficiency, $\eta_0$** | 3,9 % |
| **Effective Surface Area, $S_d$** | 0,088 $m^2$ |
| **Maximum Displacement, $X_{max}$ ****** | 6 mm |
| **Displacement Volume, $V_d$** | 528 $cm^3$ |
| **Voice Coil Inductance, $L_e$ @ 1 kHz** | 1 mH |

## DIMENSION DRAWINGS




## MOUNTING INFORMATION

| | | |
|---|---|---|
| **Overall diameter** | 388 mm | 15,28 in |
| **Bolt circle diameter** | 370 mm | 14,57 in |
| **Baffle cutout diameter:** | | |
| **- Front mount** | 352 mm | 13,85 in |
| **Depth** | 182 mm | 7,17 in |
| **Net weight** | 6,8 kg | 14,96 lb |
| **Shipping weight** | 7,4 kg | 16,28 lb |

**Notes**:

* The power capaticty is determined according to AES2-1984 (r2003) standard. Program power is defined as the transducer's ability to handle normal music program material.

** Sensitivity was measured at 1m distance, on axis, with 1W input, averaged in the range 1 - 7 kHz.

*** T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

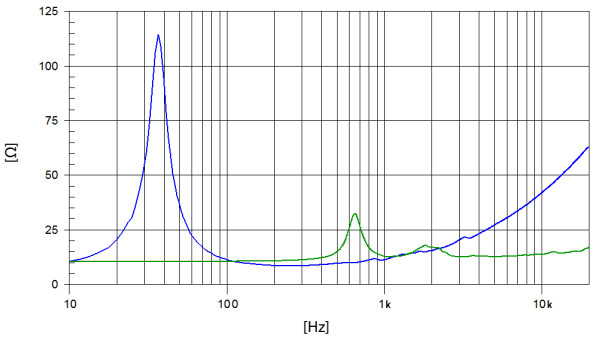
**** The $X_{max}$ is calculated as $(L_{vc} - H_{ag})/2 + (H_{ag}/3,5)$, where $L_{vc}$ is the voice coil length and $H_{ag}$ is the air gap height.

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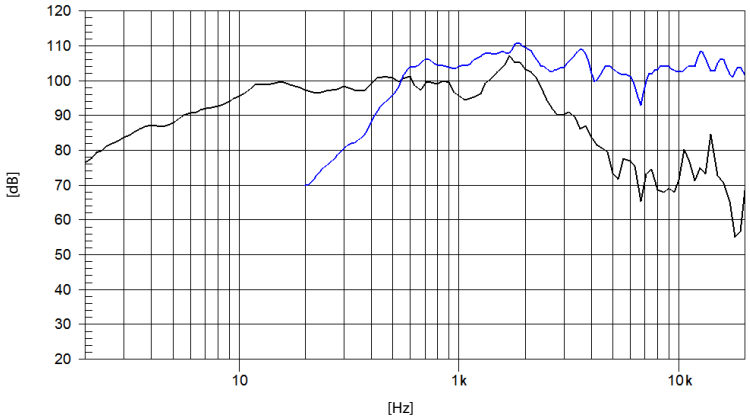
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## FREE AIR IMPEDANCE CURVE

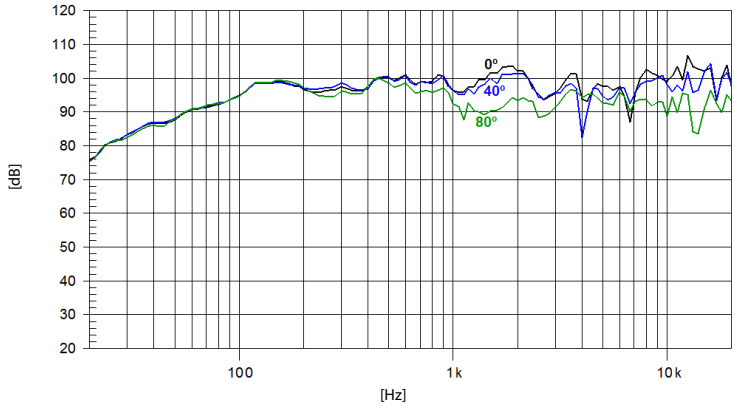



## FREQUENCY RESPONSE CURVE




**Note:** On axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m

## FILTERED AND OFF-AXIS FREQUENCY RESPONSE




**Note:** Filtered frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1W @ 1m with FD-2XA

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Polígono Industrial Moncada II ▪ C/. Pont Sec, 1c ▪ 46113 MONCADA - Valencia (Spain)
▪ Tel.: (34) 96 130 13 75 ▪ Fax: (34) 96 130 15 07 ▪ http://www.beyma.com ▪ E-mail: beyma@beyma.com ▪